

sharman architecture

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Project:	Land at Blackbird Close, Crowland.
Planning:	Planning conditions.
Date:	22 nd July 2026.

Planning permission reference no:
H02-0128-26
Dated 28 th APRIL 2026

Condition C10:

Before any development is commenced, full details of the proposed means of foul and surface water disposal shall be submitted to and approved in writing by the Local Planning Authority and the details so approved shall be implemented in full before there are any flows into the receiving systems.

Answer.

Please refer to enclosed Infrastructures Engineers details as supplied by;
MTC Engineering of Cambridge.

ANGLIAN WATER NOTES

ALL SECTION 104 ADAPTABLE DRAINAGE SHALL CONFORM TO THE DESIGN AND CONSTRUCTION GUIDE (DCG) FOR DEVELOPERS (SEWERAGE SECTION GUIDANCE APPENDIX C, NOVEMBER 2023) CURRENT AT THE TIME OF EXECUTION.

ALL COVERS AND FRAMES ON ADAPTABLE HW SEWERS ARE TO BE ADO, ITEM MARKED AND BE SLOTTED TWY OR SW ACCORDINGLY. SUPPLIERS SHALL BE STANTON, PAUL SAVAGE, NORRIDGE OR WISSEN.

ADAPTABLE PIPEWORK SHALL BE TO THE FOLLOWING SPECIFICATION:

- CLAYWARE: BS EN 295-1:1991 #150 DIA. CRUSHING STRENGTH 340kN/m² #225 DIA. CLASS 160
- CONCRETE: BS EN 591-1:2002 #150 DIA. CLASS 120
- PLASTIC: BS EN 12479-1:2002 #150 DIA. CLASS 120

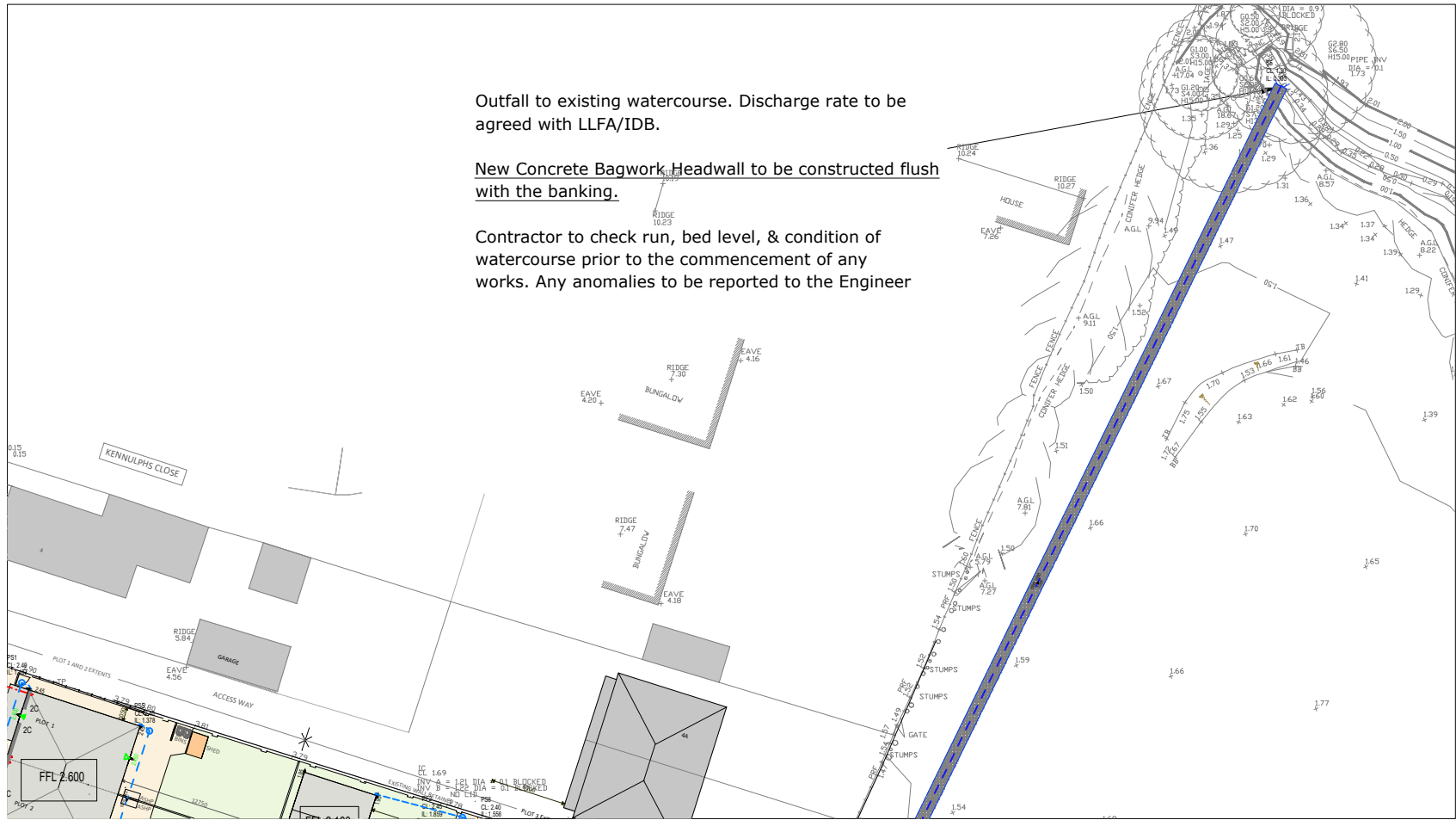
FURNISH HS PIPEWORK 160kN/m² POLYPIPE POLYSEWER (#150 - #300mm) POLYPIPE RIGIDSEWER (#400 - #600mm) POLYPIPE RIGIDSEWER (#675 - #800mm) VERULITE APPROVED PIPEWORK

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH "MTC STANDARD DETAIL 1: ADAPTABLE DRAINAGE CONSTRUCTION DETAILS (DCG APPENDIX C 2023)".

PHASE 0							
MH No.	MANHOLE DIMENSION (mm)	MANHOLE TYPE	COVER TYPE	COVER LEVEL (m)	INVERT LEVEL (m)	DEPTH TO SOFFIT (m)	EASTING (m)
S1	1200x	Type E		2.118	0.788	1.125	524132.838
S3	1200x	Type E		1.882	0.722	1.010	524175.013
S4	900x675	Type D		1.486	0.653	0.683	524192.316
S5	10	Unknown		1.300	0.303	0.847	524230.727
							509800.113

PHASE 0 (PRIVATE)							
MH No.	MANHOLE DIMENSION (mm)	MANHOLE TYPE	COVER TYPE	COVER LEVEL (m)	INVERT LEVEL (m)	DEPTH TO SOFFIT (m)	EASTING (m)
PS1	450x	450 Inspection		2.400	1.457	0.943	524131.204
PS2	450x	450 Inspection		2.400	1.156	1.144	524127.400
PS3	450x	450 Inspection		2.400	0.989	1.311	524134.023
PS4	450x	450 Inspection		2.400	1.090	1.210	524137.701
PS5	450x	450 Inspection		2.400	1.378	0.922	524141.295
PS6	450x	450 Inspection	B125	2.400	0.876	1.424	524176.287
PS7	450x	450 Inspection		2.400	1.246	1.054	524162.217
PS8	450x	450 Inspection		2.400	1.156	1.144	524166.035
PS9	450x	450 Inspection	B125	2.400	1.140	1.160	524179.309
PS10	450x	450 Inspection		2.400	1.477	0.823	524181.466
PF1	250x	250 Inspection		2.450	2.000	0.350	524174.656
PF2	250x	250 Inspection		2.450	1.859	0.491	524168.588
PF3	450x	450 Inspection		2.450	1.665	0.685	524163.007
PF4	450x	450 Inspection	B125	2.450	1.497	0.853	524153.115
PF5	450x	450 Inspection		2.450	1.021	1.328	524125.913
PF7	450x	450 Inspection		2.450	1.317	1.033	524129.561
PF8	450x	450 Inspection		2.450	1.176	1.174	524127.824
PF9	450x	450 Inspection		2.450	2.000	0.350	524171.244
							509728.197

ATTENUATION	AT-01
Lowest Cover Level (m)	1.882
Level top of Cells (m)	1.122
Base level of Cells (m)	0.722
Pipe invert (m)	0.722
Contributing area (m ²)	900
Dimension on Plan (m)	40 x 3.0 x 0.4 (d)
Cell Thickness (m)	0.
Void Space (%)	95
Maximum Storage Volume (m ³)	45.6



INSET PLAN - STORM OUTFALL TO EXISTING WATERCOURSE
SCALE 1:500

Foul water to ultimately discharge to Anglian Water foul sewer via a new junction connection. To be Approved by Anglian Water under S106 Agreement. The invert level shown is based on utility mapping provided by Anglian Water. This is to be confirmed by the contractor prior to any works at site.

Permeable paving to be provided in parking area.

Total Area: 130m²
Sub-base Depth: 0.3m
Porosity: 30%
Total Attenuation: 11.7m³

Permeable paving to be provided in parking area.

Total Area: 50m²
Sub-base Depth: 0.3m
Porosity: 30%
Total Attenuation: 4.5m³

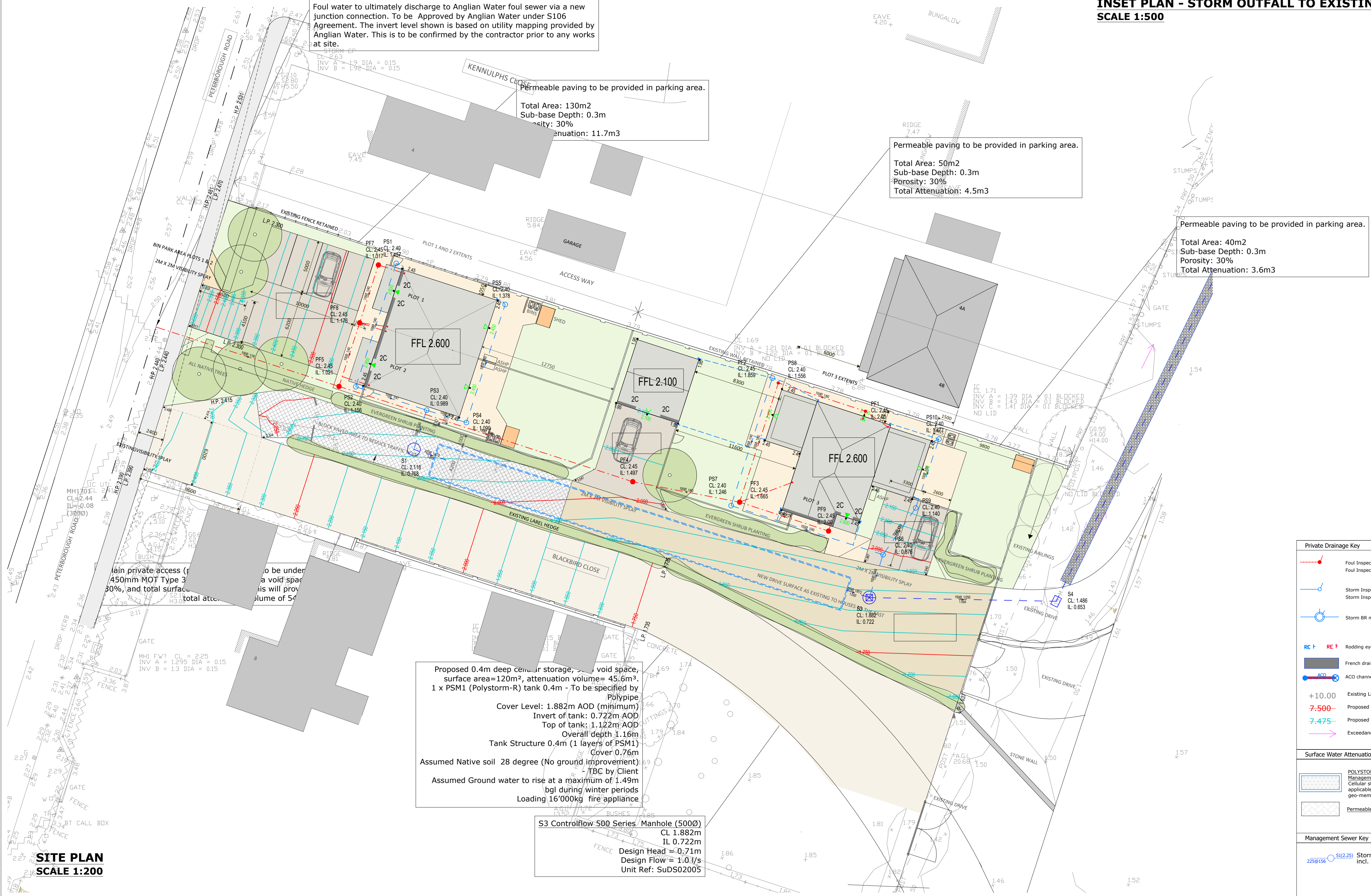
Permeable paving to be provided in parking area.

Total Area: 40m²
Sub-base Depth: 0.3m
Porosity: 30%
Total Attenuation: 3.6m³

SOAKAWAY PROTECTION:
Please ensure that during the construction phase all soakaways, gullies and gully laterals are protected from the ingress of silt or grit from the site. Placing a fine heavy duty geotextile under the gully grating, between it and the frame should suffice.

NOTE:
At the location of the proposed lateral connection the contractor shall establish the position and depth of any existing services to prevent any clash in level and abortive costs.

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION



SITE PLAN
SCALE 1:200

Proposed 0.4m deep cellular storage, void space, surface area=120m², attenuation volume= 45.6m³.
1 x PSM1 (Polystorm-R) tank 0.4m - To be specified by
Cover Level: 1.882m AOD (minimum)
Invert of tank: 0.722m AOD
Top of tank: 1.122m AOD
Overall depth 1.16m
Tank Structure 0.4m (1 layers of PSM1)
Cover 0.76m
Assumed Native soil 28 degree (No ground improvement)
TBC by Client
Assumed Ground water to rise at a maximum of 1.49m
bgl during winter periods
Loading 16'000kg fire/appliance

S3 Contralflow 500 Series Manhole (5000)
CL 1.882m
IL 0.722m
Design Head = 0.71m
Design Flow = 1.0 l/s
Unit Ref: SuD502005

Private Drainage Key			
	Foul Inspection Chamber (Depth <0.6m [1 side connection])		
	Foul Inspection Chamber (Depth <1.2m [2 side connections])		
	Storm Inspection Chamber (Depth <0.6m [1 side connection])		
	Storm Inspection Chamber (Depth <1.2m [2 side connections])		
	Storm BR manhole PCC Ring (1.2-1.5m)		
	Rodding eye with Invert Level		
	French drain / Filter trench		
	ACO channel or similar with gully and rodding point.		
	Existing Levels		
	Proposed Levels - Major Contour		
	Proposed Levels - Minor Contour		
	Exceedance Flow Routes		
Surface Water Attenuation			
	POLYSTORM-R (PSM1) Cellular Storage Storm Water Management System		
	Cellular storage tanks suitable for vehicular loading (where applicable) with 95% voids wrapped in an impermeable geo-membrane.		
	Permeable Block Paving		
Management Sewer Key			
	Storm sewer with pipe dia. & gradient incl. adoptable SWMH with reference & Invert.		

REV	DATE	DESCRIPTION/REASON FOR ISSUE	APPR
 ENGINEERING MTC Engineering (Cambridge) Ltd. Ground Floor, 24 High Street Whittlesford, Cambridgeshire, CB22 4LT Tel (01223) 837270, fax (01223) 835648 E-mail office@mtcengineering.co.uk			
PROJECT			
Land at Blackbird Close Crowland, Peterborough			
TITLE			
Proposed Drainage Plan			
ORIG		DATE	
JTC		07.07.2026	
CHKD		SCALE	
		As Shown @ A1	
APPR		DRAWING NO	
		3736-02	
		REV -	
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North Arrow

NOTES

1. The contractor shall check all tie-ins for line and level with existing before commencing any works. The Engineer shall be notified immediately, in writing, should any errors be found.

2. Any discrepancies, of whatever nature, must be reported to the Engineer prior to the commencement or continuance of any further works.

3. All private drainage works to be in accordance with the requirements of Building Regulations 2010, Part H, "Drainage and waste disposal", (01st October 2015).

4. All pipes to be bedded and backfilled in accordance with Part H, Diagram 10. Shallow pipes shall be protected in accordance with Part H, Diagram 11.

5. Unless otherwise stated, all private drainage to be 100mm diameter. Gradients have been shown where there are pipe capacity issues and these should be regarded as minimums. Unless there are constraints dictating otherwise, gradients shall generally be 1 in 60. 100mm diameter pipes shall not be laid flatter than 1 in 80, 150mm diameter pipes shall not be laid flatter than 1 in 150.

6. All pipes, chambers and fittings to be installed strictly in accordance with the manufacturers instructions.

7. Pipes which run adjacent to buildings shall be installed in strict accordance with Part H, Clauses 2.23 to 2.25 and Diagram 6.

8. All private manholes, inspection chambers and drainage channels to comply with BS EN124. Cover strengths to be:
Class D400 in heavy trafficked areas (access roads, service yards etc.)
Class C250 in lightly trafficked areas (car parks, driveways etc)
Class B125 in Non trafficked areas
Class A15 in landscaping areas

9. All drains in the vicinity of existing or proposed trees to be constructed in accordance with the requirements of NHBC Practice Note 3.

10. Private drainage frames must be tied to manhole risers by use of manufacturers ties (e.g. Polypipe ref. FRK500 Tying kit and FRK501 black ties.) The ground works contractor will be held fully responsible for any accidents due to incorrect fitting or failure to use the correct manufacturers fixing equipment.

11. All existing land drains encountered on site during construction to be re-connected.

12. Should any departure from the slab level be considered, agreement shall be sought from the Engineer immediately and prior to commencement or continuance of any works, and should take full account of all restrictions to the slab level.

13. Garage slabs relate to the finished level of the concrete at the front entrance of the garage.

14. Where a drive slopes towards a garage there is to be a 75mm ramp up to the garage slab.

15. Maximum gradients of gardens to be 1 in 6 (unless stated otherwise), except for designed banking works.

16. All dimensions in metres unless otherwise stated.

17. As underlying ground conditions may be variable across the site the Contractor shall undertake onsite percolity tests at the location and depth of each soakaway. Tests should be undertaken in accordance with BRE365 and results forwarded to the Engineers to allow verification of designs.

18. All existing services, sewers and drains indicated on this drawing and any other related drawings are shown only indicatively, and shall have their positions and level confirmed on site by the Contractor.

19. The invert levels of all existing sewers, drains, ditches, tanks or other features and apparatus where a new connection is to be made shall have their precise position and level confirmed on site by the Contractor prior to commencement of any construction work. The results of the investigations shall be confirmed to MTC Engineering (Cambridge) Ltd so that the design can be verified.

PRELIMINARY DESIGN

NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION/REASON FOR ISSUE	APPR

MTC

ENGINEERING

MTC Engineering (Cambridge) Ltd.
Ground Floor, 24 High Street
Whittesford, Cambridgeshire, CB22 4LT
Tel (01223) 837270, fax (01223) 835648
E-mail office@mtcengineering.co.uk

PROJECT

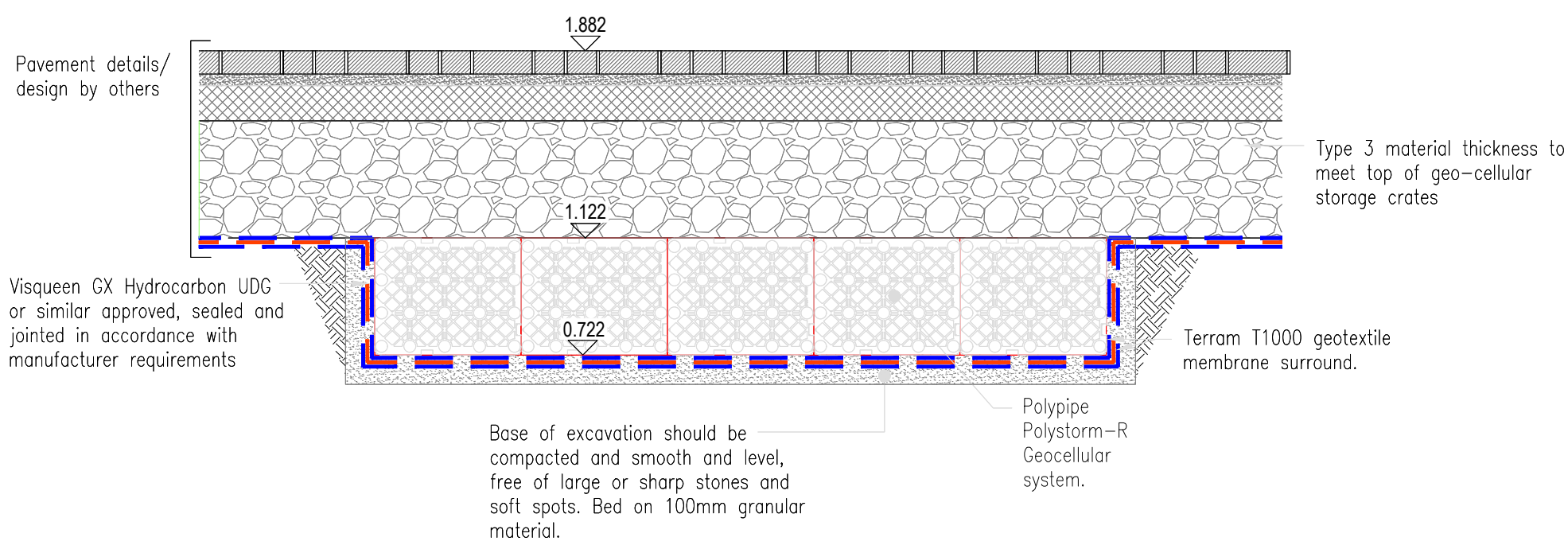
Land at Blackbird Close
Crowland, Peterborough

TITLE

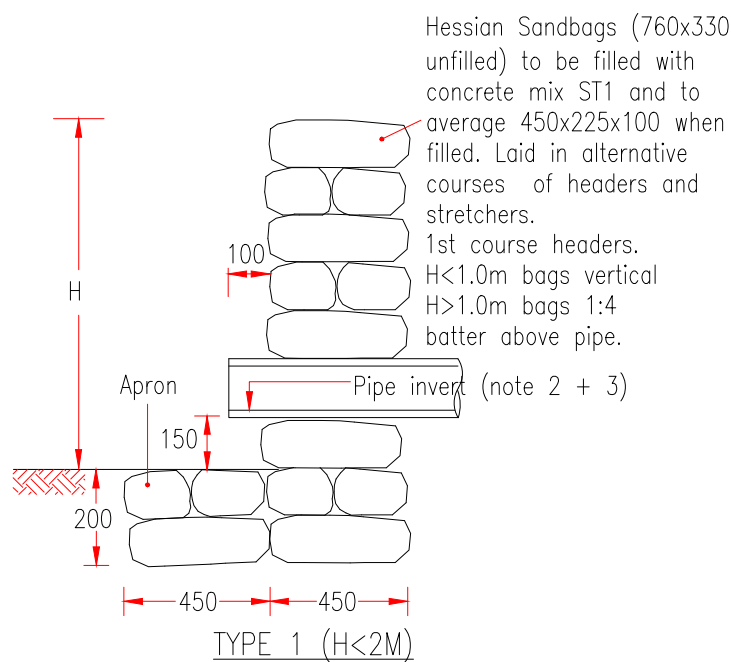
Proposed Drainage Area Plan

ORIG	JTC	DATE	07.07.2026
CHKD		SCALE	1:200 @ A1
APPR		DRAWING NO	3736-03
		REV -	

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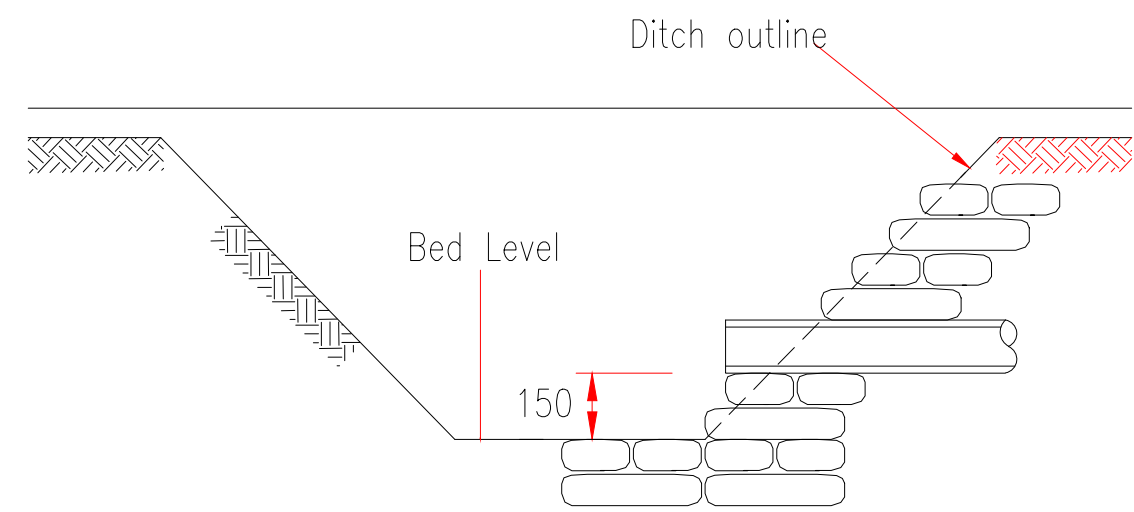


Section A-A - Typical Geo-Cellular Tank Detail (1:20)

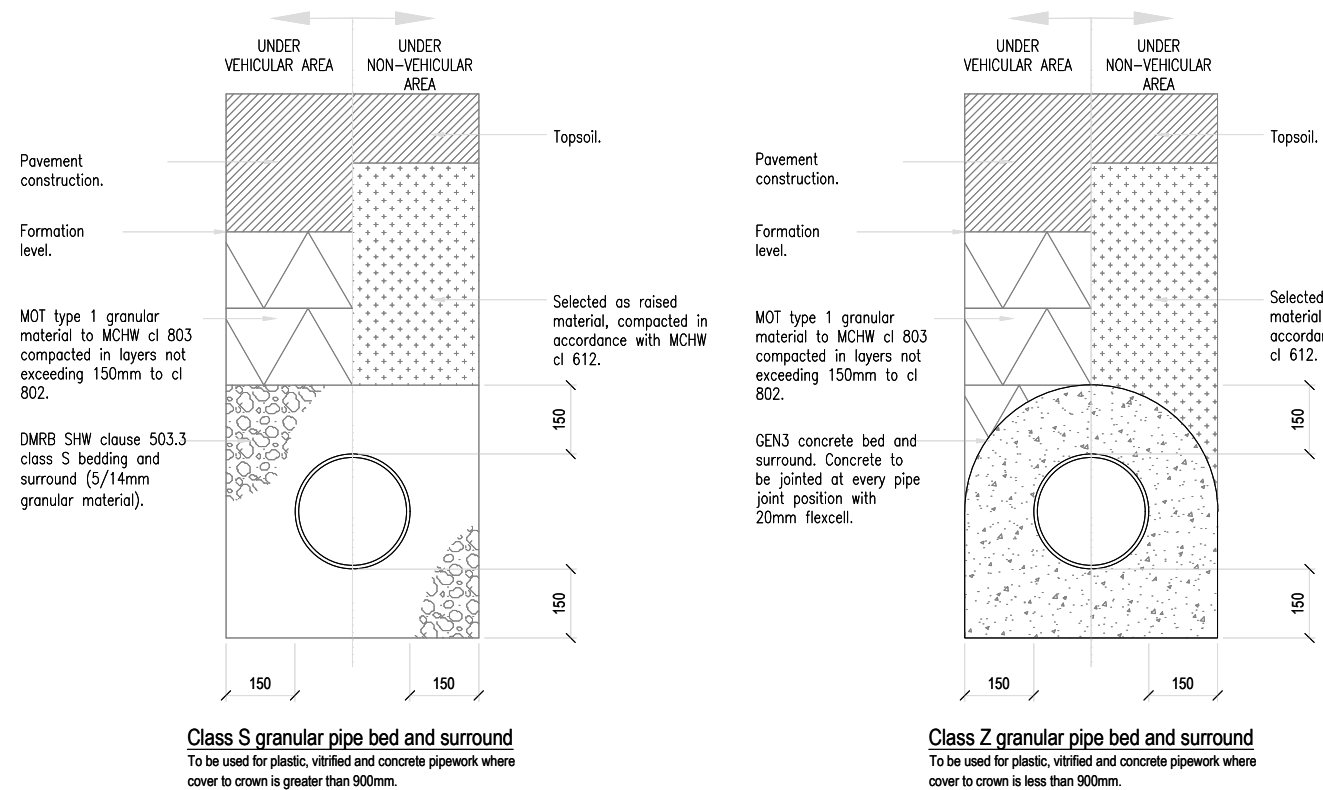


NOTES

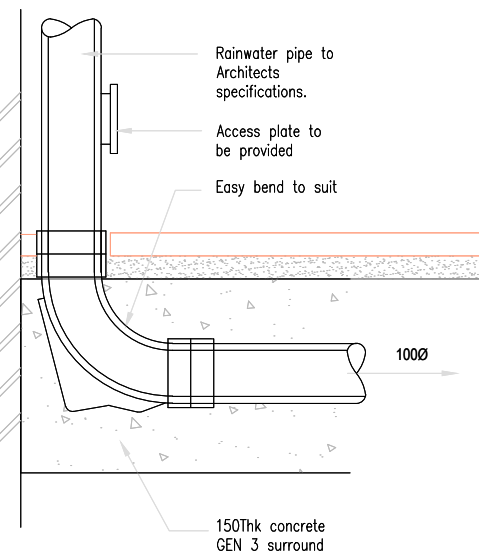
- Dimensions H and W as specified by Overseeing Organisation. Side slopes to ditches either as existing or as specified otherwise by Overseeing Organisation.
- The first pipe joint shall be flexible and located not more than 300mm from the back of the headwall.
- Where the ditch outfalls into the pipe the invert of the pipe shall be level with the top of the apron.
- All dimensions in millimetres unless otherwise stated.



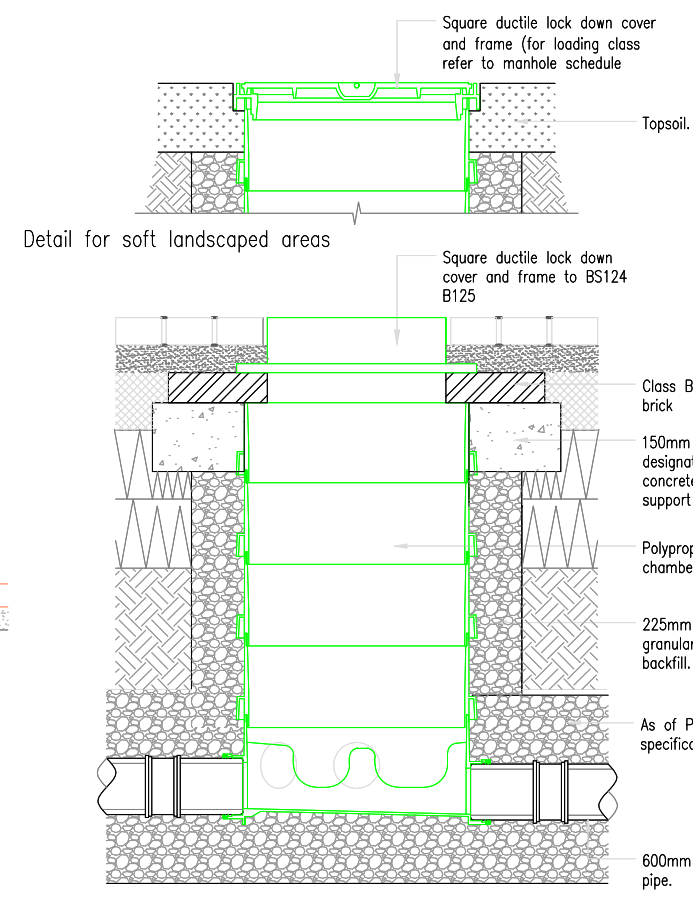
HEADWALL SIDE ENTRY TO DITCH



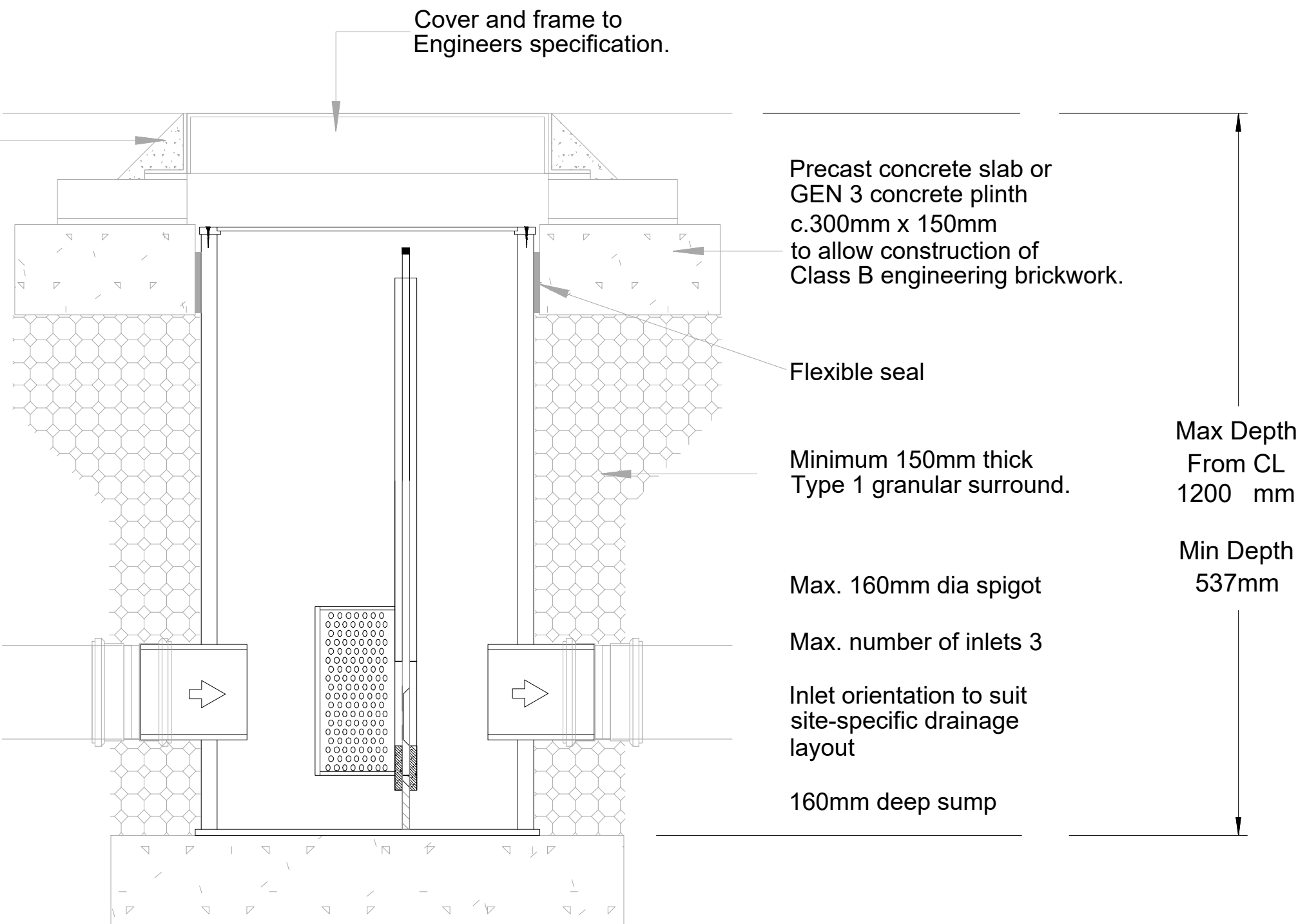
Pipe Bedding Details (1:15)



RWP Detail (1:15)

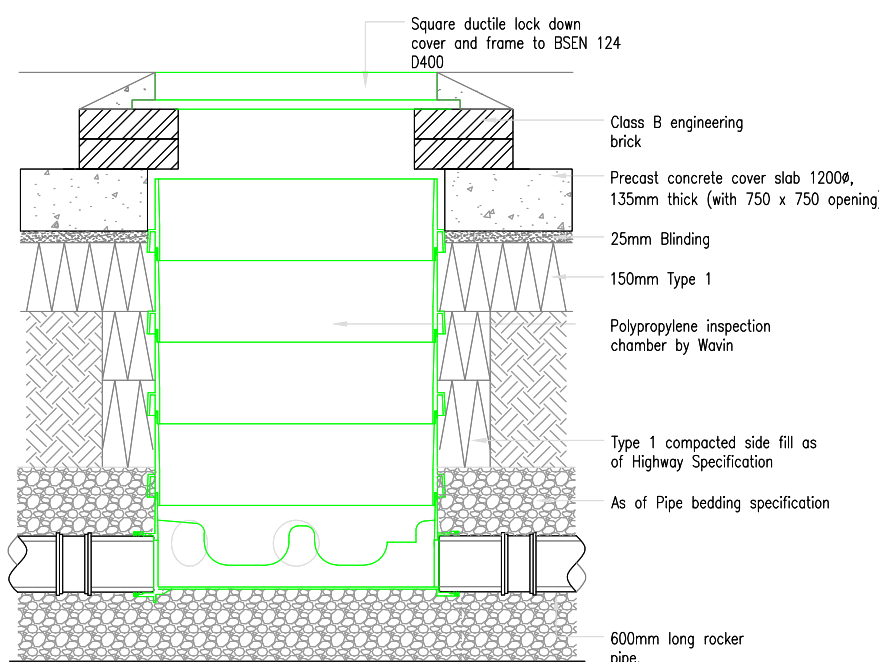


Typical Wavin PPIC Manhole Detail (1:15)

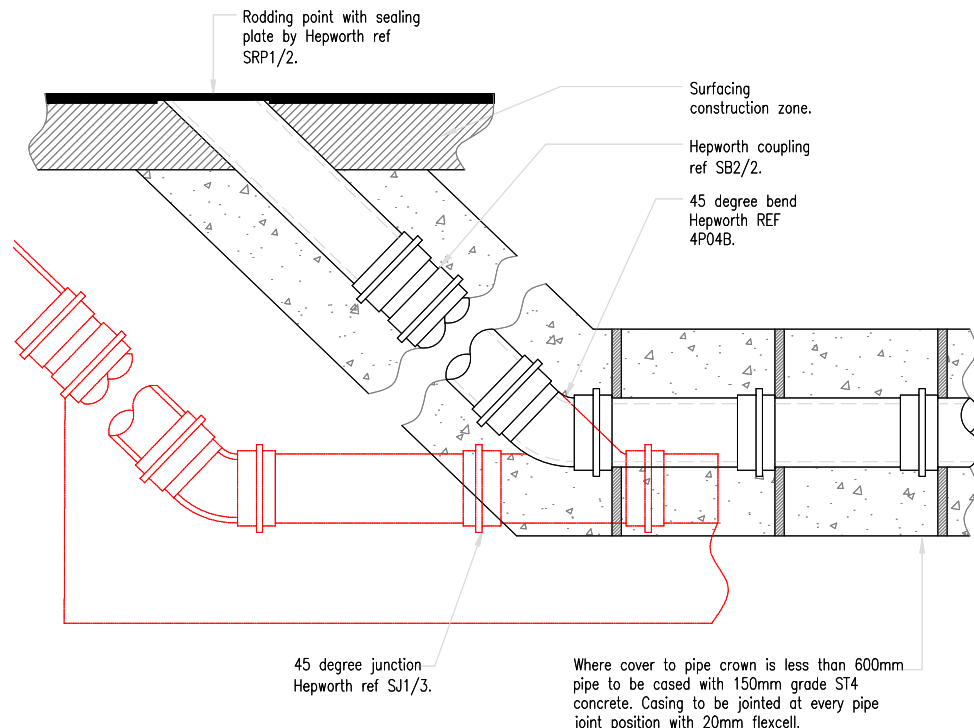


SUDS02005

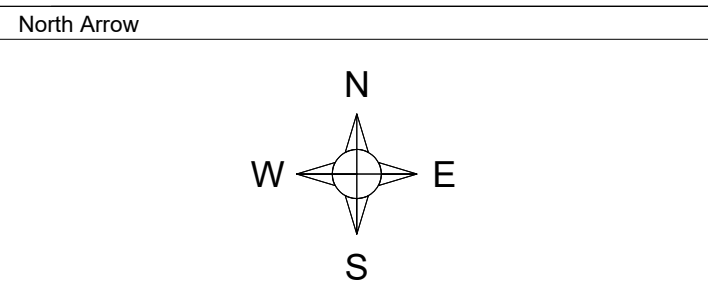
Controflow 500 Series
Level Invert
Flow Control



Typical Wavin PPIC Manhole Detail (1:15)



Rodding Eye Detail at Head of Run/On Branch Drain (1:15)

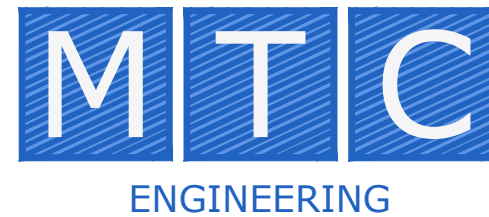


NOTES

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- All pipes, chambers and fittings to be installed strictly in accordance with the manufacturers instructions.
- Pipes which run adjacent to buildings shall be installed in strict accordance with Part H, Clauses 2.23 to 2.25 and Diagram 8.
- All private manholes, inspection chambers and drainage channels to comply with BS EN124. Cover strengths to be:
Class D400 in heavily trafficked areas (access roads, service yards etc.)
Class C250 in lightly trafficked areas (car parks, driveways etc)
Class B125 in Non trafficked areas
Class A15 in landscaping areas
- All drains in the vicinity of existing or proposed trees to be constructed in accordance with the requirements of NHBC Practice Note 3.
- Private drainage frames must be tied to manhole risers by use of manufacturers ties (e.g. Polypipe ref. FRX500 fixing kit and FRX501 black ties.) The ground works contractor will be held fully responsible for any accidents due to incorrect fitting or failure to use the correct manufacturers fixing equipment.
- All existing land drains encountered on site during construction to be re-connected.
- Should any departure from the slab level be considered, agreement shall be sought from the Engineer immediately and prior to commencement or continuance of any works, and should take full account of all restrictions to the slab level.
- Garage slabs relate to the finished level of the concrete at the front entrance of the garage.
- Where a drive slopes towards a garage there is to be a 75mm ramp up to the garage slab.
- Maximum gradients of gardens to be 1 in 6 (unless stated otherwise), except for designed banking works.
- All dimensions in metres unless otherwise stated.
- As underlying ground conditions may be variable across the site the Contractor shall undertake onsite percolation tests at the location and depth of each soakaway. Tests should be undertaken in accordance with BRE365 and results forwarded to the Engineers to allow verification of designs.
- All existing services, sewers and drains indicated on this drawing and any other related drawings are shown only indicatively, and shall have their positions and level confirmed on site by the Contractor.
- The invert levels of all existing sewers, drains, ditches, tanks or other features and apparatus where a new connection is to be made shall have their precise position and level confirmed on site by the Contractor prior to commencement of any construction work. The results of the investigations shall be confirmed to MTC Engineering (Cambridge) Ltd so that the design can be verified.

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION/REASON FOR ISSUE	APPR
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MTC Engineering (Cambridge) Ltd.
Ground Floor, 24 High Street
Whittesford, Cambridgeshire, CB22 4LT
Tel (01223) 837270, fax (01223) 835648
E-mail office@mtcengineering.co.uk

PROJECT
**Land at Blackbird Close
Crowland, Peterborough**

TITLE
Proposed Drainage Specification

ORIG **JTC** DATE **07.07.2026**

CHKD SCALE **As Shown @ A1**

APPR DRAWING NO **3736-04**

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ENGINEERING

SuDS & Drainage Strategy

Land at Blackbird Close, Crowland, Peterborough (PE6 0BA)

Prepared for Planning Submission

1. Introduction

This SuDS & Drainage Strategy supports the proposed development of three bungalows with garages at Blackbird Close, Crowland. The strategy demonstrates that surface water and foul water can be managed sustainably, in accordance with:

- NPPF & Planning Practice Guidance
- SuDS Manual (CIRIA C753)
- Building Regulations Part H
- North Level IDB byelaws & discharge requirements
- LLFA (Lincolnshire County Council) SuDS policy
- BRE Digest 365
- FEH-22 rainfall methodology

All design inputs are taken directly from the site-specific infiltration testing (Ground Force, 21 May 2026), the detailed drainage drawings (MTC Engineering, 3736 series), and the hydraulic modelling (Causeway Flow+, file 3736-SWS Calcs).

2. Site Description & Constraints

The site lies east of Peterborough Road and within Flood Zones 1–2. The FRA confirms:

“The predicted maximum flood level in a 1 in 1000 year event in 2115 is above 2.57 m OD.” “Ground floor levels should be set at a minimum of 2.60 m OD.” (2022 FRA)

Ground levels across the site range from approx. 1.80–2.10 m OD, rising toward Peterborough Road.

A watercourse (Greenbank Drain) lies northwest of the site. The drainage drawings confirm:

“Outfall to existing watercourse. Discharge rate to be agreed with LLFA/IDB.” (3736-02)

Ground conditions from BRE365 testing:

“Water encountered at 1490 mm... water level rose to 265 mm within the pit.” “No full BRE365 test was completed... results should be treated as indicative only.” (BRE365 Report)

This confirms groundwater is a constraint and infiltration is not suitable for primary drainage.

3. Drainage Hierarchy Assessment

1. Infiltration – Not suitable due to groundwater strike at 1.49 m and incomplete BRE365 results.
2. Discharge to watercourse – Available and appropriate (existing ditch/watercourse).
3. Discharge to surface water sewer – Not required.
4. Discharge to combined sewer – Avoided.

Conclusion: Surface water will be managed using attenuation + controlled discharge to the adjacent watercourse, subject to IDB approval.

4. Proposed Surface Water Drainage Strategy

4.1 Overview

Surface water runoff from roofs, drives, and access areas will be managed using:

- Primary attenuation tank (AT-01)
- Permeable paving storage zones
- Filter trench / French drain
- Flow control chamber (Controflow 500 Series)
- Headwall & outfall to watercourse
- Exceedance routing to landscaped areas

All SuDS components are fully contained within the site boundary.

4.2 Attenuation Tank AT-01 (Primary Storage)

Specification:

- Type: Polystorm-R geo-cellular tank
- Dimensions: 40 m × 3 m × 0.4 m
- Storage volume: 45.6 m³
- Void ratio: 95%
- Cover depth: 0.75 m
- Vehicle loading: Suitable for fire appliance (16,000 kg)
- Wrapped in impermeable geomembrane
- Sited within access road / parking zone

4.3 Permeable Paving Storage

Three permeable paving zones are provided:

Area	Surface Area	Sub-base Depth	Porosity	Storage
Zone A	130 m ²	0.3 m	30%	11.7 m ³
Zone B	50 m ²	0.3 m	30%	3.28 m ³
Zone C	40 m ²	0.3 m	30%	3.6 m ³

Total permeable paving storage: 18.58 m³

4.4 Filter Trench / French Drain

“French drain / Filter trench... surface area = 80 m², attenuation volume = 24 m³.”

This trench provides additional conveyance and treatment.

4.5 Flow Control Chamber

- Controflow 500 Series
- Orifice diameter: **0.023 m**
- Design flow: **1.0 l/s**
- Invert level: **0.722 m**

4.6 Outfall to Watercourse

- A new headwall will discharge to the existing ditch/watercourse.
- The discharge will be limited to 1.0 l/s via the flow control.

5. Hydraulic Modelling Summary (FEH-22)

Hydraulic modelling (Causeway Flow+) confirms:

2-year event

- No surcharge
- No flooding
- System operates freely

30-year +35% CC

- Surcharge at nodes S1, S2, S3
- No flooding
- Attenuation tank contains all flows

100-year +40% CC

- Surcharge at S1, S2, S3
- No flooding from the attenuation tank
- Controlled discharge maintained at 1.0 l/s
- Exceedance routes remain within site

Attenuation performance

- Time to half-empty (tank): **735 minutes**
- No uncontrolled overflow
- No discharge above 1.0 l/s

6. Exceedance Routing

Exceedance flows are directed:

- Away from buildings
- Toward landscaped areas
- Toward the access road
- Toward the watercourse corridor (but not into properties)

This is shown on drawing 3736-02 ("Exceedance Flow Routes").

7. Foul Water Strategy

Foul water to ultimately discharge to Anglian Water foul sewer via a new junction connection... To be approved under S106 Agreement.

Key points:

- New foul sewer connection to Anglian Water
- Invert level based on AW mapping (to be confirmed on site)

- All private foul drainage to Part H
- Manholes to B125 / D400 depending on location
- No surface water to foul sewer

8. Maintenance & Management

8.1 Controflow Chamber

From manufacturer guidance:

“Recommended inspection after heavy rainfall... remove filter and wash away debris... inspect every three months.”

8.2 Attenuation Tank

- Annual inspection of inlet/outlet
- Check for silt accumulation
- Jetting if required
- Maintain cover depth and surface integrity

8.3 Permeable Paving

- Annual vacuum sweep
- Remove sediment from joints
- Maintain infiltration capacity

8.4 Filter Trench

- Inspect for silt build-up
- Maintain vegetation
- Remove debris

8.5 Watercourse Outfall

- Inspect headwall annually
- Remove vegetation and debris
- Ensure flap valve (if fitted) operates freely

9. Compliance Statement

This SuDS & Drainage Strategy:

- Complies with **NPPF, SuDS Manual, Part H, LLFA policy, and IDB requirements**
- Provides **64.18 m³** total attenuation (tank + permeable paving)
- Limits discharge to **1.0 l/s**
- Ensures **no flooding** in the 1:100 +40% CC event
- Provides robust exceedance routing

- Avoids infiltration due to groundwater constraints
- Provides a maintainable long-term SuDS system
- Aligns with FRA recommendations for flood resilience

10. Conclusion

The proposed SuDS and drainage arrangements at Blackbird Close provide a **fully compliant, sustainable, and robust** solution for managing surface water and foul water.

The strategy:

- Uses attenuation + controlled discharge
- Avoids infiltration due to groundwater
- Meets all hydraulic performance criteria
- Protects the development from flood risk
- Provides long-term maintainability
- Is suitable for planning approval and IDB consent



ENGINEERING

Operation & Maintenance Report Surface Water Drainage & SuDS Features Land at Blackbird Close, Crowland – July 2026

1. System Overview

The approved surface water drainage strategy for Blackbird Close is based on **attenuation and controlled discharge** to the adjacent watercourse, in accordance with:

- SuDS Manual (CIRIA C753)
- Lincolnshire County Council LLFA SuDS Guidance
- North Level IDB byelaws
- FEH-22 hydraulic modelling
- Building Regulations Part H

No infiltration drainage is used due to groundwater constraints confirmed in the BRE365 report:

“Water encountered at 1490 mm... water level rose to 265 mm within the pit.” “No full BRE365 test was completed... results should be treated as indicative only.”

The system comprises:

- **Attenuation Tank AT-01** (45.6 m³ geo-cellular storage)
- **Permeable paving storage zones** (three areas totalling 18.58 m³)
- **Filter trench / French drain**
- **Controflow flow control chamber** (1.0 l/s discharge)
- **Private surface water pipework**
- **Headwall and outfall to watercourse**
- **Exceedance routing** away from buildings

This plan sets out the long-term maintenance responsibilities required to ensure the SuDS system continues to operate effectively for the lifetime of the development.

2. Asset Register

Asset	Description	Location	Levels	Notes
Attenuation Tank AT-01	Polystorm-R geo-cellular tank wrapped in impermeable geomembrane	Access road / parking area	Base 0.722 m AOD; Top 1.122 m AOD; Cover 1.882 m AOD	45.6 m ³ storage; vehicle-loading compliant
Flow Control Chamber (Controflow 500 Series)	Flow control with removable filter and 1.0 l/s orifice	Downstream of AT-01	IL 0.722 m AOD	Limits discharge to watercourse
Permeable Paving Zone A	130 m ² permeable paving	Plot access/parking	Sub-base 0.3 m	Storage 11.7 m ³
Permeable Paving Zone B	50 m ² permeable paving	Plot parking	Sub-base 0.3 m	Storage 3.28 m ³
Permeable Paving Zone C	40 m ² permeable paving	Plot parking	Sub-base 0.3 m	Storage 3.6 m ³
Filter Trench / French Drain	Gravel trench with perforated pipe	Boundary	N/A	Conveyance & treatment
Private SW Pipework	150–225 mm pipes	Various	As per drawing	Installed to Part H
Headwall & Outfall	Concrete headwall with flap valve (if fitted)	Existing watercourse	As per drawing	Discharge subject to IDB approval

3. Maintenance Schedule

Maintenance follows CIRIA C753, manufacturer guidance, and LLFA/IDB expectations.

Monthly

- Remove litter/debris from chambers, covers, permeable paving and headwall.
- Check for standing water on permeable paving or above attenuation tank.
- Inspect visible pipework for blockages.

Six-Monthly

- Remove nuisance vegetation around chambers, headwall, filter trench and paving.
- Inspect permeable paving for silt accumulation or clogging.
- Check flow control chamber for debris around the filter.
- Inspect filter trench for silt build-up.

Annually

- Empty and clean the Controflow chamber filter.
- Inspect attenuation tank performance (modelling shows half-empty time approx. 735 minutes).
- Inspect headwall and outfall for debris, vegetation, erosion or blockage.
- Vacuum-sweep permeable paving to restore porosity.
- Check for settlement, erosion, or changes in ground levels.
- Inspect pipework for structural integrity and jet if required.

As Required

- Jet or rod pipework if blockages occur.
- Replace damaged permeable paving blocks or reinstate jointing material.
- Repair erosion or reinstatement of levels around headwall or filter trench.
- Replace damaged geomembrane or geotextile if performance declines.

4. Performance Checks

Performance checks ensure long-term SuDS functionality:

- Confirm discharge rate remains at 1.0 l/s (no blockage of orifice).
- Inspect attenuation tank inlet/outlet for sediment build-up.
- Ensure permeable paving infiltrates effectively (no ponding).
- Check filter trench for smearing or clogging.
- Confirm headwall outfall is free-flowing and unobstructed.
- Ensure exceedance routes remain clear and unobstructed.

5. Health & Safety

All maintenance must comply with CDM 2015:

- Use safe access techniques when opening chambers.
- Avoid confined space entry unless trained and equipped.
- Use PPE when handling sediment.
- Avoid herbicides near SuDS features.
- Ensure safe manual handling of chamber covers and paving blocks.

6. Record Keeping

The following records should be maintained:

- Dates and outcomes of inspections
- Sediment removal logs
- Photographic evidence
- Notes on attenuation performance
- Any remedial works undertaken

These records demonstrate compliance with LLFA and IDB expectations for lifetime maintenance.

7. LLFA & IDB Compliance

This maintenance plan aligns with:

- CIRIA SuDS Manual
- LLFA SuDS policy
- North Level IDB discharge requirements
- FEH-22 hydraulic modelling
- Building Regulations Part H

The system:

- Provides full attenuation for the 1:100 +40% CC event
- Limits discharge to **1.0 l/s**
- Avoids infiltration due to groundwater constraints
- Provides robust exceedance routing
- Ensures lifetime maintainability

8. Adoption & Responsibilities

- The drainage system is **privately owned and maintained**.
- No adoption by Anglian Water, LLFA, or North Level IDB.
- Access must be maintained to all chambers, permeable paving, filter trench, and the attenuation tank.

9. Emergency Procedures

In the event of failure or flooding:

- Inspect flow control chamber for blockage.
- Check attenuation tank inlet/outlet for silt.
- Inspect permeable paving for clogging.
- Check headwall for obstruction.
- Manage exceedance flows within the site boundary.
- Contact North Level IDB if outfall performance is affected.

10. Conclusion

This condition-discharge maintenance plan provides a clear, LLFA-compliant framework for the long-term operation of the SuDS and drainage system at Blackbird Close. The system is robust, maintainable, and designed to function effectively with routine inspection and maintenance.

BRE DIGEST 365 TESTING



GROUNDFORCE



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COMPLETION OF BRE DIGEST 365 TESTS

CLIENT: Mr & Mrs Blackbird

SITE ADDRESS: Land at Blackbird Close, Crowland, Peterborough, PE6 0BA

DATE OF TEST: 21st May 2026

ENGINEERS ON SITE: William Hazlegreaves & Kobi Faulkes

WEATHER: Cloudy

INTRODUCTION

This document presents the results of on-site infiltration testing carried out on land at Blackbird Close, Crowland, Peterborough, PE6 0BA. The works were undertaken by Ground Force (ELY) Limited in accordance with the procedures set out in BRE Digest 365: Soakaway Design. All site observations, test data, and results are detailed within this report.

SCOPE OF WORKS

- Excavate 1 x trial pit to confirm water table check
- Excavate 2 x trial pit at proposed soakaway locations
- Record groundwater observations
- Undertake infiltration tests in accordance with BRE 365

TRIAL PIT INFORMATION – water table check

Trial Pit No – WATER TABLE CHECK

Trial pit dimensions – 300mm width x 1000mm length x 1490mm depth

Ground conditions: First 300mm topsoil / made up ground (hardcore) then subsoil / clay to full depth

Ground water – water encountered at 1490mm

Ground water level within water table check pit:

8:30am – Water confirmed	9:00am – 85mm
9:30am – 110mm	10:00am – 130mm
10:30am – 150mm	11:00am – 165mm
11:30am – 180mm	12:30pm – 205mm
16:10pm – 265mm	

The photographs below show the depth to which the groundwater check was completed too. The soils comprised of topsoil / made ground (hardcore) for 300mm then subsoil / clay as highlighted within the photos below. Water was encountered and continued to rise within the pit. The water level was 265mm within the pit at 16:10pm giving a possible water table level of 1225mm from ground level.



Water encountered



Trial pit showing soils conditions

Photos below show the depth of water table pit and water level



TRIAL PIT INFORMATION – trial pit 1

Trial Pit No – TP1

Trial pit dimensions – 300mm width x 1000mm length x 500mm depth

Water fill depth in trench – 500mm

Ground conditions: 300mm of topsoil / made up ground (hardcore) then subsoil / clay

Ground water – No water encountered

Photos below show the Trial pit 1



TRIAL PIT INFORMATION – trial pit 2

Trial Pit No – TP2

Trial pit dimensions – 300mm width x 1000mm length x 500mm depth

Water fill depth in trench – 500mm

Ground conditions: 300mm of topsoil / made up ground (hardcore) then subsoil / clay

Ground water – No water encountered

Photos below show the pit



LOCATION OF TRIAL PITS



BRE DIGEST 365 TESTING

TEST RESULTS – Trial Pit 1

Test 1					
Time (minutes)	Water level (mm)	Time (minutes)	Water level (mm)	Time (minutes)	Water level (mm)
0	500				
2	480				
4	480				
6	475				
8	470				
10	470				
12	465				
14	460				
16	460				
18	460				
20	460				
40	445				
60	430				
80	430				
100	410				
120	400				
140	395				
160	390				
180	380				
200	375				
220					
240					

TEST RESULTS – Trial Pit 2

Test 1					
Time (minutes)	Water level (mm)	Time (minutes)	Water level (mm)	Time (minutes)	Water level (mm)
0	500				
2	480				
4	470				
6	460				
8	450				
10	445				
12	440				
14	435				
16	435				
18	430				
20	425				
40	375				
60	340				
80	325				
100	300				
120	285				
140	275				
160	270				
180	260				
200	255				
220					
240					

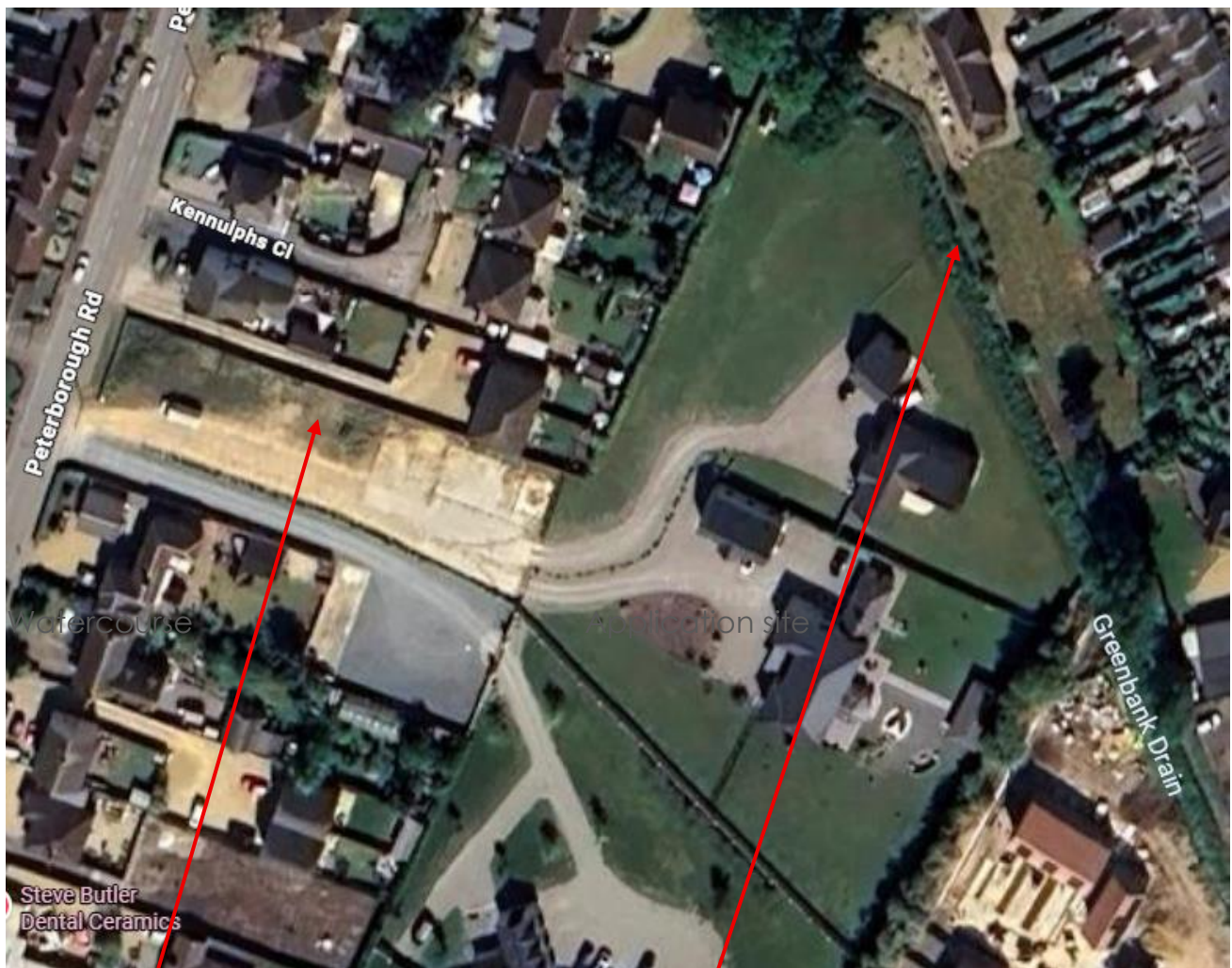
Important Limitation

One test was undertaken on site within each trial pit. However, due to slow infiltration, the full BRE 365 test sequence was not completed, and the required three test fills were not undertaken. This represents a limitation of the testing when compared with the standard BRE 365 repeat-test procedure. The results should therefore be interpreted using appropriate engineering judgement by the appointed drainage engineer and agreed with the relevant approving authority, where required.

It is recommended that further infiltration testing is undertaken within both trial pits to complete the BRE 365 test procedure. This would allow the infiltration rate to be assessed in accordance with the BRE 365 repeat-test methodology and enable the design infiltration rate to be based on the lowest result obtained from the completed test series. The additional testing should be carried out prior to final drainage design, where practicable, with the results reviewed by the appointed drainage engineer and agreed with the relevant approving authority.

SITE OBSERVATIONS

During the site inspection, observations were made in respect of nearby watercourses and possible surface water drainage infrastructure. A watercourse was observed at the rear of the site as highlighted within the photographs below.



Application site

Watercourse

BRE DIGEST 365 TESTING



Existing drainage infrastructure



Existing ditch



Existing inspection chamber



Existing inspection chamber

RECOMMENDATIONS

It is recommended that the appointed drainage engineer carries out a site visit to assess the existing site conditions. This should include, but not be limited to, the observed watercourse, existing inspection chambers, highway drainage infrastructure, and any other relevant surface water or foul drainage systems in the vicinity of the site.

In view of the current infiltration testing results, the presence of nearby watercourses, and the existing drainage infrastructure, the final surface water drainage strategy should be determined by the appointed drainage engineer. The engineer should review all available site information, confirm whether further BRE 365 testing is required, and identify the most appropriate drainage solution for the site.

Where infiltration drainage remains a potential option, it is recommended that full BRE 365 testing is completed for each trial pit in accordance with the relevant guidance. This will allow the infiltration rate to be confirmed using the lowest result from the completed test series. The final drainage design, including whether infiltration, discharge to a watercourse, connection to an existing drainage system, or an alternative drainage solution is most appropriate, should be confirmed by the appointed drainage engineer and agreed with the relevant approving authority, where required.

CONCLUSION

BRE Digest 365 infiltration testing was undertaken at Blackbird Close, Crowland to assess the suitability of the ground for infiltration-based surface water drainage.

A groundwater check was undertaken on site, which confirmed the presence of water at approximately 1.5 m below ground level. The water level was subsequently observed to rise within the trial pit to approximately 265 mm within around 8 hours. This indicates that groundwater conditions are a relevant constraint to the use of infiltration drainage at this site.

Two trial pits were excavated to approximately 0.5 m depth and filled with water for infiltration testing. Infiltration rates were recorded from the observed water level changes; however, no full BRE Digest 365 test was completed, and the required repeated test fills were not achieved. The recorded results should therefore be treated as indicative infiltration observations only and should not be presented or relied upon as a completed BRE Digest 365 test series.

BRE Digest 365 sets out a methodology for determining soil infiltration rates using field soakage testing in trial pits. The infiltration rate is normally calculated from the time taken for the water level to fall between 75% and 25% of the effective test depth, using the outflow volume and effective wetted surface area of the trial pit. BRE Digest 365 also requires repeated filling and draining of the trial pit so that infiltration performance can be assessed over multiple test runs. The design infiltration rate is typically taken as the most conservative valid result from the completed test series.

At this site, infiltration observations were recorded from the two 0.5 m trial pits; however, no completed BRE Digest 365 test was achieved. The recorded infiltration rates have therefore not been derived from a full BRE Digest 365 repeat-test procedure and should not be used as confirmed design infiltration rates without appropriate review by the appointed drainage engineer. This represents a limitation of the investigation when compared with the standard BRE Digest 365 methodology.

Groundwater conditions are also a significant design consideration. Any proposed soakaway or infiltration device should be positioned and detailed to maintain an appropriate unsaturated zone between the base of the infiltration system and the highest anticipated groundwater level. The observed water level rise within the trial pit should therefore be considered by the appointed drainage engineer, together with potential seasonal groundwater variation, when assessing the suitability of infiltration drainage.

Based on the site observations and the incomplete infiltration testing undertaken, the suitability of infiltration drainage at Blackbird Close, Crowland remains subject to further assessment. While the recorded infiltration observations provide useful site-specific information, they do not constitute a completed BRE Digest 365 test result or a final drainage design basis.

It is recommended that the appointed drainage engineer reviews the recorded infiltration data, groundwater observations, site levels, proposed development layout, nearby watercourses, existing inspection chambers, highway drainage infrastructure, available discharge options, separation distances, and the requirements of the relevant approving authority.

Where infiltration drainage remains a potential option, it is recommended that further infiltration testing is undertaken in accordance with BRE Digest 365 so that a full repeated test series can be completed. This would allow the infiltration performance to be assessed in accordance with the BRE Digest 365 methodology and enable the design infiltration rate to be based on the most conservative valid result obtained from the completed testing.

For clarity, the scope of this investigation was to provide site observations and infiltration testing data. The findings do not constitute a final drainage design. The final drainage strategy, including whether to use infiltration, discharge to a watercourse, connection to an existing drainage system, or an alternative drainage solution, should be determined by the appointed drainage engineer and agreed with the relevant approving authority where required.

LIMITATIONS

The findings and recommendations presented in this report are based solely on the trial pit locations, depths, ground conditions and site circumstances encountered at the time of the investigation. Ground conditions, groundwater levels and infiltration characteristics may vary across the site and with seasonal or climatic change. The strata and infiltration performance recorded within the trial pits should not be assumed to be representative of areas or depths not investigated.

The infiltration testing was undertaken with reference to BRE Digest 365 methodology. BRE365 testing is normally based on repeated filling and draining of a trial pit, with the design infiltration rate typically derived from the most conservative valid result obtained from the completed test series. Where only a single infiltration test has been successfully completed, the calculated infiltration rate should be treated as an indicative, site-specific result for that trial pit only and should not be regarded as a full repeated BRE365 test series.

The recorded infiltration rate is dependent upon the soil conditions, groundwater conditions, antecedent weather, moisture content, pit geometry, excavation stability, test depth, water level fall, and prevailing site conditions at the time of testing. Any groundwater level observed during the investigation should be regarded as an indicative groundwater strike or standing water level at the time of the works only. It should not be taken as the maximum, highest seasonal, or long-term groundwater level.

This report does not comprise a full geotechnical assessment, hydrogeological assessment, flood risk assessment, drainage strategy, or final drainage design. The final suitability, sizing, positioning, invert level, storage requirement and construction detailing of any soakaway or infiltration drainage system must be confirmed by the appointed drainage engineer, taking account of the test results, groundwater observations, proposed development levels, nearby watercourses, existing drainage infrastructure, separation distances, site constraints and the requirements of the relevant approving authority.

No responsibility is accepted for the use of this report outside its stated scope, or for reliance upon the findings by parties other than the client, unless expressly agreed in writing. The company's liability is limited to the reasonable skill and care expected for the agreed scope of works. Nothing within this report should be interpreted as excluding or limiting liability where such exclusion or limitation would be unlawful.

Where infiltration drainage is proposed, it is recommended that the drainage engineer reviews whether further BRE365 testing is required to complete the repeated test procedure and to confirm the most appropriate design basis before finalising the surface water drainage strategy.

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	1	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	1.000
CV	1.000	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	100.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)	Invert Level (m)
S1	0.033	5.00	1.962	1350	524126.333	309740.263	0.836	1.126
S2	0.057	5.00	1.691	1350	524161.558	309729.245	0.811	0.880
S3			1.889	1350	524184.191	309721.991	1.167	0.722
S4			1.486	1350	524192.316	309721.690	0.797	0.689
S5			1.300	1	524230.727	309800.113	0.960	0.340

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	S1	S2	36.909	0.600	1.126	0.880	0.246	150.0	225	5.58	29.6
1.001	S2	S3	23.767	0.600	0.880	0.722	0.158	150.0	225	5.95	28.6
1.002	S3	S4	8.131	0.600	0.722	0.689	0.033	246.4	150	6.16	28.2
1.003	S4	S5	87.324	0.600	0.689	0.340	0.349	250.2	150	8.47	24.1

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	1.065	42.3	3.6	0.611	0.586	0.033	0.0	44	0.655
1.001	1.065	42.3	9.4	0.586	0.942	0.090	0.0	72	0.859
1.002	0.636	11.2	9.2	1.017	0.647	0.090	0.0	103	0.708
1.003	0.631	11.1	7.9	0.647	0.810	0.090	0.0	93	0.684

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	36.909	150.0	225	Circular	1.962	1.126	0.611	1.691	0.880	0.586
1.001	23.767	150.0	225	Circular	1.691	0.880	0.586	1.889	0.722	0.942
1.002	8.131	246.4	150	Circular	1.889	0.722	1.017	1.486	0.689	0.647
1.003	87.324	250.2	150	Circular	1.486	0.689	0.647	1.300	0.340	0.810

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	S1	1350	Manhole	Adoptable	S2	1350	Manhole	Adoptable
1.001	S2	1350	Manhole	Adoptable	S3	1350	Manhole	Adoptable
1.002	S3	1350	Manhole	Adoptable	S4	1350	Manhole	Adoptable
1.003	S4	1350	Manhole	Adoptable	S5	1	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S1	524126.333	309740.263	1.962	0.836	1350	 0	1.000	1.126	225
S2	524161.558	309729.245	1.691	0.811	1350	 1	1.000	0.880	225
						0	1.001	0.880	225
S3	524184.191	309721.991	1.889	1.167	1350	 1	1.001	0.722	225
						0	1.002	0.722	150
S4	524192.316	309721.690	1.486	0.797	1350	 1	1.002	0.689	150
						0	1.003	0.689	150
S5	524230.727	309800.113	1.300	0.960	1	 1	1.003	0.340	150

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Normal	Starting Level (m)	
Rainfall Events	Singular	Skip Steady State	x	Check Discharge Rate(s)	x
Summer CV	1.000	Drain Down Time (mins)	1440	Check Discharge Volume	x
Winter CV	1.000	Additional Storage (m³/ha)	0.0		

Storm Durations

15	60	180	360	600	960	2160	4320	7200	10080
30	120	240	480	720	1440	2880	5760	8640	

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0
30	35	0	0
100	40	0	0

Node S3 Online Orifice Control

Flap Valve	x	Design Depth (m)	0.710	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Flow (l/s)	1.0		
Invert Level (m)	0.722	Diameter (m)	0.023		

Node S3 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	0.722
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	735

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	120.0	120.0	0.400	120.0	135.5	0.401	0.0	135.5

Node S3 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	1.122	Slope (1:X)	500.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	195	Depth (m)	
Safety Factor	2.0	Width (m)	5.000	Inf Depth (m)	
Porosity	0.30	Length (m)	77.000		

Results for 2 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S1	10	1.181	0.055	5.8	0.0788	0.0000	OK
15 minute summer	S2	10	0.997	0.117	15.4	0.1677	0.0000	OK
600 minute summer	S3	450	0.870	0.148	2.5	17.1232	0.0000	OK
600 minute summer	S4	450	0.709	0.020	0.4	0.0285	0.0000	OK
600 minute summer	S5	450	0.357	0.017	0.4	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S1	1.000	S2	5.6	0.424	0.133	0.5242	
15 minute summer	S2	1.001	S3	16.1	1.556	0.380	0.2682	
600 minute summer	S3	1.002	S4	0.4	0.292	0.035	0.0111	
600 minute summer	S4	1.003	S5	0.4	0.316	0.036	0.1097	24.0

Results for 30 year +35% CC Critical Storm Duration. Lowest mass balance: 99.58%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S1	11	1.393	0.267	23.6	0.3823	0.0000	SURCHARGED
15 minute summer	S2	11	1.313	0.433	61.1	0.6191	0.0000	SURCHARGED
480 minute winter	S3	464	1.279	0.557	6.0	55.7107	0.0000	SURCHARGED
480 minute winter	S4	464	0.717	0.028	0.8	0.0398	0.0000	OK
480 minute winter	S5	464	0.365	0.025	0.8	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S1	1.000	S2	22.5	0.634	0.533	1.4679	
15 minute summer	S2	1.001	S3	60.2	1.748	1.421	0.8670	
480 minute winter	S3	1.002	S4	0.8	0.359	0.072	0.0182	
480 minute winter	S4	1.003	S5	0.8	0.385	0.072	0.1825	60.7

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 98.52%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S1	11	1.819	0.693	31.8	0.9916	0.0000	FLOOD RISK
15 minute summer	S2	11	1.670	0.790	82.3	1.1304	0.0000	FLOOD RISK
600 minute winter	S3	585	1.478	0.756	6.9	78.9480	0.0000	SURCHARGED
600 minute winter	S4	585	0.719	0.030	0.9	0.0429	0.0000	OK
600 minute winter	S5	585	0.367	0.027	0.9	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S1	1.000	S2	30.4	0.764	0.717	1.4679	
15 minute summer	S2	1.001	S3	82.3	2.215	1.942	0.9452	
600 minute winter	S3	1.002	S4	0.9	0.376	0.084	0.0204	
600 minute winter	S4	1.003	S5	0.9	0.402	0.084	0.2043	80.8

Results for 2 year 15 minute summer. 1455 minute analysis at 1 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S1	10	1.181	0.055	5.8	0.0788	0.0000	OK
15 minute summer	S2	10	0.997	0.117	15.4	0.1677	0.0000	OK
15 minute summer	S3	23	0.778	0.056	16.1	6.4595	0.0000	OK
15 minute summer	S4	31	0.704	0.015	0.2	0.0218	0.0000	OK
15 minute summer	S5	31	0.353	0.013	0.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S1	1.000	S2	5.6	0.424	0.133	0.5242	
15 minute summer	S2	1.001	S3	16.1	1.556	0.380	0.2682	
15 minute summer	S3	1.002	S4	0.2	0.353	0.020	0.0074	
15 minute summer	S4	1.003	S5	0.2	0.265	0.020	0.0736	6.1

Results for 2 year 15 minute winter. 1455 minute analysis at 1 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S1	10	1.179	0.053	5.4	0.0759	0.0000	OK
15 minute winter	S2	9	0.991	0.111	14.4	0.1589	0.0000	OK
15 minute winter	S3	22	0.778	0.056	14.9	6.4556	0.0000	OK
15 minute winter	S4	31	0.704	0.015	0.2	0.0218	0.0000	OK
15 minute winter	S5	31	0.353	0.013	0.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S1	1.000	S2	5.2	0.418	0.123	0.4909	
15 minute winter	S2	1.001	S3	14.9	1.532	0.352	0.2521	
15 minute winter	S3	1.002	S4	0.2	0.350	0.020	0.0074	
15 minute winter	S4	1.003	S5	0.2	0.265	0.020	0.0735	6.1

Results for 2 year 30 minute summer. 1470 minute analysis at 1 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	S1	18	1.178	0.052	5.0	0.0741	0.0000	OK
30 minute summer	S2	18	0.979	0.099	13.6	0.1421	0.0000	OK
30 minute summer	S3	37	0.792	0.070	13.7	8.1189	0.0000	OK
30 minute summer	S4	42	0.705	0.016	0.3	0.0234	0.0000	OK
30 minute summer	S5	42	0.354	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	S1	1.000	S2	5.0	0.429	0.118	0.4384	
30 minute summer	S2	1.001	S3	13.7	1.437	0.324	0.2450	
30 minute summer	S3	1.002	S4	0.3	0.317	0.023	0.0082	
30 minute summer	S4	1.003	S5	0.3	0.277	0.023	0.0810	7.9

Results for 2 year 30 minute winter. 1470 minute analysis at 1 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	S1	18	1.173	0.047	4.1	0.0671	0.0000	OK
30 minute winter	S2	18	0.967	0.087	11.0	0.1251	0.0000	OK
30 minute winter	S3	36	0.792	0.070	11.1	8.0947	0.0000	OK
30 minute winter	S4	42	0.705	0.016	0.3	0.0233	0.0000	OK
30 minute winter	S5	42	0.354	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute winter	S1	1.000	S2	4.1	0.411	0.096	0.3732	
30 minute winter	S2	1.001	S3	11.1	1.337	0.262	0.2159	
30 minute winter	S3	1.002	S4	0.3	0.312	0.023	0.0082	
30 minute winter	S4	1.003	S5	0.3	0.277	0.023	0.0809	7.9

Results for 2 year 60 minute summer. 1500 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 ³)	Flood (m ³)	Status
60 minute summer	S1	33	1.171	0.045	3.7	0.0638	0.0000	OK
60 minute summer	S2	33	0.960	0.080	9.9	0.1147	0.0000	OK
60 minute summer	S3	66	0.806	0.084	9.9	9.7051	0.0000	OK
60 minute summer	S4	69	0.706	0.017	0.3	0.0246	0.0000	OK
60 minute summer	S5	70	0.355	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
60 minute summer	S1	1.000	S2	3.7	0.412	0.087	0.3363	
60 minute summer	S2	1.001	S3	9.9	1.183	0.234	0.2165	
60 minute summer	S3	1.002	S4	0.3	0.265	0.026	0.0088	
60 minute summer	S4	1.003	S5	0.3	0.287	0.026	0.0873	9.8

Results for 2 year 60 minute winter. 1500 minute analysis at 1 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	S1	34	1.164	0.038	2.6	0.0538	0.0000	OK
60 minute winter	S2	32	0.947	0.067	7.1	0.0955	0.0000	OK
60 minute winter	S3	65	0.806	0.084	7.2	9.6426	0.0000	OK
60 minute winter	S4	69	0.706	0.017	0.3	0.0245	0.0000	OK
60 minute winter	S5	69	0.355	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute winter	S1	1.000	S2	2.6	0.381	0.061	0.2616	
60 minute winter	S2	1.001	S3	7.2	1.058	0.169	0.1914	
60 minute winter	S3	1.002	S4	0.3	0.265	0.025	0.0088	
60 minute winter	S4	1.003	S5	0.3	0.287	0.026	0.0871	9.7

Results for 2 year 120 minute summer. 1560 minute analysis at 2 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute summer	S1	64	1.165	0.039	2.8	0.0558	0.0000	OK
120 minute summer	S2	64	0.946	0.066	7.5	0.0944	0.0000	OK
120 minute summer	S3	126	0.837	0.115	7.5	13.2283	0.0000	OK
120 minute summer	S4	128	0.708	0.019	0.3	0.0267	0.0000	OK
120 minute summer	S5	128	0.356	0.016	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute summer	S1	1.000	S2	2.8	0.399	0.066	0.2632	
120 minute summer	S2	1.001	S3	7.5	0.871	0.178	0.2607	
120 minute summer	S3	1.002	S4	0.3	0.279	0.031	0.0100	
120 minute summer	S4	1.003	S5	0.3	0.303	0.031	0.0989	14.0

Results for 2 year 120 minute winter. 1560 minute analysis at 2 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	S1	66	1.158	0.032	1.9	0.0462	0.0000	OK
120 minute winter	S2	62	0.934	0.054	5.2	0.0770	0.0000	OK
120 minute winter	S3	122	0.838	0.116	5.2	13.3861	0.0000	OK
120 minute winter	S4	126	0.708	0.019	0.3	0.0268	0.0000	OK
120 minute winter	S5	126	0.356	0.016	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute winter	S1	1.000	S2	1.9	0.366	0.045	0.1985	
120 minute winter	S2	1.001	S3	5.2	0.784	0.123	0.2654	
120 minute winter	S3	1.002	S4	0.3	0.280	0.031	0.0100	
120 minute winter	S4	1.003	S5	0.3	0.304	0.031	0.0993	14.1

Results for 2 year 180 minute summer. 1620 minute analysis at 4 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	S1	96	1.161	0.035	2.2	0.0496	0.0000	OK
180 minute summer	S2	92	0.937	0.057	5.9	0.0809	0.0000	OK
180 minute summer	S3	184	0.851	0.129	5.9	14.9434	0.0000	OK
180 minute summer	S4	188	0.708	0.019	0.4	0.0276	0.0000	OK
180 minute summer	S5	188	0.357	0.017	0.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
180 minute summer	S1	1.000	S2	2.2	0.384	0.052	0.2148	
180 minute summer	S2	1.001	S3	5.9	0.703	0.140	0.2977	
180 minute summer	S3	1.002	S4	0.4	0.285	0.033	0.0105	
180 minute summer	S4	1.003	S5	0.4	0.309	0.033	0.1038	16.6

Results for 2 year 180 minute winter. 1620 minute analysis at 4 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	S1	100	1.155	0.029	1.5	0.0413	0.0000	OK
180 minute winter	S2	96	0.927	0.047	4.1	0.0673	0.0000	OK
180 minute winter	S3	180	0.853	0.131	4.1	15.1651	0.0000	OK
180 minute winter	S4	184	0.708	0.019	0.4	0.0277	0.0000	OK
180 minute winter	S5	184	0.357	0.017	0.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
180 minute winter	S1	1.000	S2	1.5	0.344	0.035	0.1653	
180 minute winter	S2	1.001	S3	4.1	0.706	0.097	0.3039	
180 minute winter	S3	1.002	S4	0.4	0.286	0.033	0.0105	
180 minute winter	S4	1.003	S5	0.4	0.310	0.033	0.1044	16.7

Results for 2 year 240 minute summer. 1680 minute analysis at 4 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute summer	S1	124	1.158	0.032	1.9	0.0460	0.0000	OK
240 minute summer	S2	124	0.932	0.052	5.1	0.0745	0.0000	OK
240 minute summer	S3	244	0.861	0.139	5.0	16.0441	0.0000	OK
240 minute summer	S4	244	0.709	0.020	0.4	0.0281	0.0000	OK
240 minute summer	S5	244	0.357	0.017	0.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
240 minute summer	S1	1.000	S2	1.9	0.367	0.044	0.1921	
240 minute summer	S2	1.001	S3	5.0	0.644	0.119	0.3220	
240 minute summer	S3	1.002	S4	0.4	0.289	0.034	0.0108	
240 minute summer	S4	1.003	S5	0.4	0.313	0.034	0.1068	18.5

Results for 2 year 240 minute winter. 1680 minute analysis at 4 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	S1	128	1.153	0.027	1.3	0.0386	0.0000	OK
240 minute winter	S2	124	0.923	0.043	3.5	0.0621	0.0000	OK
240 minute winter	S3	236	0.861	0.139	3.5	16.0723	0.0000	OK
240 minute winter	S4	240	0.709	0.020	0.4	0.0281	0.0000	OK
240 minute winter	S5	240	0.357	0.017	0.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
240 minute winter	S1	1.000	S2	1.3	0.332	0.031	0.1481	
240 minute winter	S2	1.001	S3	3.5	0.656	0.082	0.3229	
240 minute winter	S3	1.002	S4	0.4	0.289	0.034	0.0108	
240 minute winter	S4	1.003	S5	0.4	0.313	0.034	0.1069	18.5

Results for 2 year 360 minute summer. 1800 minute analysis at 8 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute summer	S1	184	1.155	0.029	1.5	0.0411	0.0000	OK
360 minute summer	S2	184	0.926	0.046	4.0	0.0660	0.0000	OK
360 minute summer	S3	320	0.867	0.145	3.9	16.7728	0.0000	OK
360 minute summer	S4	320	0.709	0.020	0.4	0.0284	0.0000	OK
360 minute summer	S5	320	0.357	0.017	0.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
360 minute summer	S1	1.000	S2	1.5	0.343	0.035	0.1618	
360 minute summer	S2	1.001	S3	3.9	0.561	0.093	0.3380	
360 minute summer	S3	1.002	S4	0.4	0.291	0.035	0.0110	
360 minute summer	S4	1.003	S5	0.4	0.315	0.035	0.1088	20.8

Results for 2 year 360 minute winter. 1800 minute analysis at 8 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	S1	184	1.150	0.024	1.0	0.0339	0.0000	OK
360 minute winter	S2	184	0.917	0.037	2.6	0.0536	0.0000	OK
360 minute winter	S3	344	0.870	0.148	2.6	17.0410	0.0000	OK
360 minute winter	S4	344	0.709	0.020	0.4	0.0285	0.0000	OK
360 minute winter	S5	344	0.357	0.017	0.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
360 minute winter	S1	1.000	S2	1.0	0.307	0.023	0.1208	
360 minute winter	S2	1.001	S3	2.6	0.601	0.061	0.3440	
360 minute winter	S3	1.002	S4	0.4	0.292	0.035	0.0110	
360 minute winter	S4	1.003	S5	0.4	0.315	0.035	0.1095	21.2

Results for 2 year 480 minute summer. 1920 minute analysis at 8 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute summer	S1	248	1.152	0.026	1.2	0.0372	0.0000	OK
480 minute summer	S2	248	0.922	0.042	3.2	0.0596	0.0000	OK
480 minute summer	S3	384	0.870	0.148	3.2	17.0561	0.0000	OK
480 minute summer	S4	384	0.709	0.020	0.4	0.0285	0.0000	OK
480 minute summer	S5	384	0.357	0.017	0.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute summer	S1	1.000	S2	1.2	0.322	0.028	0.1397	
480 minute summer	S2	1.001	S3	3.2	0.561	0.076	0.3443	
480 minute summer	S3	1.002	S4	0.4	0.292	0.035	0.0110	
480 minute summer	S4	1.003	S5	0.4	0.315	0.035	0.1095	22.6



Results for 2 year 480 minute winter. 1920 minute analysis at 8 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	S1	248	1.147	0.021	0.8	0.0307	0.0000	OK
480 minute winter	S2	248	0.914	0.034	2.1	0.0485	0.0000	OK
480 minute winter	S3	392	0.867	0.145	2.1	16.7367	0.0000	OK
480 minute winter	S4	392	0.709	0.020	0.4	0.0284	0.0000	OK
480 minute winter	S5	392	0.357	0.017	0.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute winter	S1	1.000	S2	0.8	0.287	0.019	0.1043	
480 minute winter	S2	1.001	S3	2.1	0.556	0.050	0.3372	
480 minute winter	S3	1.002	S4	0.4	0.291	0.035	0.0110	
480 minute winter	S4	1.003	S5	0.4	0.315	0.035	0.1087	22.1

**Results for 2 year 600 minute summer. 2040 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 ³)	Flood (m ³)	Status
600 minute summer	S1	315	1.149	0.023	0.9	0.0324	0.0000	OK
600 minute summer	S2	315	0.917	0.037	2.5	0.0528	0.0000	OK
600 minute summer	S3	450	0.870	0.148	2.5	17.1232	0.0000	OK
600 minute summer	S4	450	0.709	0.020	0.4	0.0285	0.0000	OK
600 minute summer	S5	450	0.357	0.017	0.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
600 minute summer	S1	1.000	S2	0.9	0.291	0.021	0.1164	
600 minute summer	S2	1.001	S3	2.5	0.525	0.059	0.3457	
600 minute summer	S3	1.002	S4	0.4	0.292	0.035	0.0111	
600 minute summer	S4	1.003	S5	0.4	0.316	0.036	0.1097	24.0

Results for 2 year 600 minute winter. 2040 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	S1	285	1.145	0.019	0.6	0.0268	0.0000	OK
600 minute winter	S2	315	0.911	0.031	1.7	0.0439	0.0000	OK
600 minute winter	S3	465	0.867	0.145	1.7	16.7302	0.0000	OK
600 minute winter	S4	465	0.709	0.020	0.4	0.0284	0.0000	OK
600 minute winter	S5	465	0.357	0.017	0.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute winter	S1	1.000	S2	0.6	0.262	0.014	0.0884	
600 minute winter	S2	1.001	S3	1.7	0.545	0.040	0.3363	
600 minute winter	S3	1.002	S4	0.4	0.291	0.035	0.0110	
600 minute winter	S4	1.003	S5	0.4	0.315	0.035	0.1087	23.6

Results for 2 year 720 minute summer. 2160 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute summer	S1	375	1.147	0.021	0.8	0.0307	0.0000	OK
720 minute summer	S2	375	0.915	0.035	2.2	0.0497	0.0000	OK
720 minute summer	S3	510	0.868	0.146	2.2	16.8652	0.0000	OK
720 minute summer	S4	510	0.709	0.020	0.4	0.0284	0.0000	OK
720 minute summer	S5	510	0.357	0.017	0.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute summer	S1	1.000	S2	0.8	0.282	0.019	0.1066	
720 minute summer	S2	1.001	S3	2.2	0.504	0.052	0.3391	
720 minute summer	S3	1.002	S4	0.4	0.291	0.035	0.0110	
720 minute summer	S4	1.003	S5	0.4	0.315	0.035	0.1090	24.8

Results for 2 year 720 minute winter. 2160 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	S1	375	1.145	0.019	0.6	0.0268	0.0000	OK
720 minute winter	S2	375	0.910	0.030	1.6	0.0426	0.0000	OK
720 minute winter	S3	555	0.870	0.148	1.6	17.0325	0.0000	OK
720 minute winter	S4	555	0.709	0.020	0.4	0.0285	0.0000	OK
720 minute winter	S5	555	0.357	0.017	0.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute winter	S1	1.000	S2	0.6	0.262	0.014	0.0859	
720 minute winter	S2	1.001	S3	1.6	0.504	0.038	0.3437	
720 minute winter	S3	1.002	S4	0.4	0.292	0.035	0.0110	
720 minute winter	S4	1.003	S5	0.4	0.315	0.035	0.1095	25.6

Results for 2 year 960 minute summer. 2400 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute summer	S1	495	1.146	0.020	0.7	0.0288	0.0000	OK
960 minute summer	S2	495	0.911	0.031	1.8	0.0451	0.0000	OK
960 minute summer	S3	660	0.867	0.145	1.8	16.7735	0.0000	OK
960 minute summer	S4	660	0.709	0.020	0.4	0.0284	0.0000	OK
960 minute summer	S5	660	0.357	0.017	0.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
960 minute summer	S1	1.000	S2	0.7	0.279	0.017	0.0941	
960 minute summer	S2	1.001	S3	1.8	0.504	0.043	0.3379	
960 minute summer	S3	1.002	S4	0.4	0.291	0.035	0.0110	
960 minute summer	S4	1.003	S5	0.4	0.315	0.035	0.1088	27.2

Results for 2 year 960 minute winter. 2400 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	S1	450	1.142	0.016	0.4	0.0223	0.0000	OK
960 minute winter	S2	495	0.906	0.026	1.2	0.0372	0.0000	OK
960 minute winter	S3	690	0.860	0.138	1.2	15.9491	0.0000	OK
960 minute winter	S4	705	0.709	0.020	0.4	0.0280	0.0000	OK
960 minute winter	S5	705	0.357	0.017	0.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
960 minute winter	S1	1.000	S2	0.4	0.238	0.009	0.0686	
960 minute winter	S2	1.001	S3	1.2	0.474	0.028	0.3184	
960 minute winter	S3	1.002	S4	0.4	0.288	0.034	0.0108	
960 minute winter	S4	1.003	S5	0.4	0.312	0.034	0.1066	26.4

Results for 2 year 1440 minute summer. 2880 minute analysis at 30 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute summer	S1	750	1.143	0.017	0.5	0.0246	0.0000	OK
1440 minute summer	S2	750	0.907	0.027	1.3	0.0386	0.0000	OK
1440 minute summer	S3	930	0.860	0.138	1.3	15.8739	0.0000	OK
1440 minute summer	S4	930	0.709	0.020	0.4	0.0280	0.0000	OK
1440 minute summer	S5	930	0.357	0.017	0.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
1440 minute summer	S1	1.000	S2	0.5	0.250	0.012	0.0749	
1440 minute summer	S2	1.001	S3	1.3	0.402	0.031	0.3171	
1440 minute summer	S3	1.002	S4	0.4	0.288	0.034	0.0107	
1440 minute summer	S4	1.003	S5	0.4	0.312	0.034	0.1064	29.4

Results for 2 year 1440 minute winter. 2880 minute analysis at 30 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	S1	660	1.140	0.014	0.3	0.0195	0.0000	OK
1440 minute winter	S2	660	0.901	0.021	0.8	0.0307	0.0000	OK
1440 minute winter	S3	990	0.850	0.128	0.8	14.7432	0.0000	OK
1440 minute winter	S4	990	0.708	0.019	0.4	0.0275	0.0000	OK
1440 minute winter	S5	990	0.357	0.017	0.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
1440 minute winter	S1	1.000	S2	0.3	0.212	0.007	0.0531	
1440 minute winter	S2	1.001	S3	0.8	0.410	0.019	0.2906	
1440 minute winter	S3	1.002	S4	0.4	0.284	0.032	0.0104	
1440 minute winter	S4	1.003	S5	0.4	0.309	0.033	0.1033	29.8

Results for 2 year 2160 minute summer. 3600 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
2160 minute summer	S1	1080	1.140	0.014	0.3	0.0195	0.0000	OK
2160 minute summer	S2	1140	0.903	0.023	0.9	0.0324	0.0000	OK
2160 minute summer	S3	1380	0.845	0.123	0.9	14.2003	0.0000	OK
2160 minute summer	S4	1380	0.708	0.019	0.4	0.0272	0.0000	OK
2160 minute summer	S5	1380	0.356	0.016	0.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
2160 minute summer	S1	1.000	S2	0.3	0.224	0.007	0.0562	
2160 minute summer	S2	1.001	S3	0.9	0.349	0.021	0.2760	
2160 minute summer	S3	1.002	S4	0.4	0.282	0.032	0.0103	
2160 minute summer	S4	1.003	S5	0.4	0.307	0.032	0.1017	32.3

Results for 2 year 2160 minute winter. 3600 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
2160 minute winter	S1	960	1.137	0.011	0.2	0.0161	0.0000	OK
2160 minute winter	S2	1080	0.899	0.019	0.6	0.0268	0.0000	OK
2160 minute winter	S3	1380	0.829	0.107	0.6	12.3530	0.0000	OK
2160 minute winter	S4	1380	0.707	0.018	0.3	0.0262	0.0000	OK
2160 minute winter	S5	1380	0.356	0.016	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
2160 minute winter	S1	1.000	S2	0.2	0.193	0.005	0.0423	
2160 minute winter	S2	1.001	S3	0.6	0.394	0.014	0.2328	
2160 minute winter	S3	1.002	S4	0.3	0.276	0.029	0.0097	
2160 minute winter	S4	1.003	S5	0.3	0.300	0.030	0.0963	30.4

Results for 2 year 2880 minute summer. 4320 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
2880 minute summer	S1	1500	1.140	0.014	0.3	0.0195	0.0000	OK
2880 minute summer	S2	1500	0.901	0.021	0.8	0.0307	0.0000	OK
2880 minute summer	S3	1740	0.837	0.115	0.8	13.2526	0.0000	OK
2880 minute summer	S4	1740	0.708	0.019	0.3	0.0267	0.0000	OK
2880 minute summer	S5	1740	0.356	0.016	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
2880 minute summer	S1	1.000	S2	0.3	0.212	0.007	0.0531	
2880 minute summer	S2	1.001	S3	0.8	0.394	0.019	0.2537	
2880 minute summer	S3	1.002	S4	0.3	0.279	0.031	0.0100	
2880 minute summer	S4	1.003	S5	0.3	0.303	0.031	0.0990	31.2

Results for 2 year 2880 minute winter. 4320 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
2880 minute winter	S1	1320	1.137	0.011	0.2	0.0161	0.0000	OK
2880 minute winter	S2	1320	0.897	0.017	0.5	0.0246	0.0000	OK
2880 minute winter	S3	1740	0.823	0.101	0.5	11.6021	0.0000	OK
2880 minute winter	S4	1740	0.707	0.018	0.3	0.0258	0.0000	OK
2880 minute winter	S5	1740	0.356	0.016	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
2880 minute winter	S1	1.000	S2	0.2	0.193	0.005	0.0389	
2880 minute winter	S2	1.001	S3	0.5	0.394	0.012	0.2155	
2880 minute winter	S3	1.002	S4	0.3	0.273	0.028	0.0095	
2880 minute winter	S4	1.003	S5	0.3	0.297	0.029	0.0939	34.1

Results for 2 year 4320 minute summer. 5760 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
4320 minute summer	S1	2100	1.137	0.011	0.2	0.0161	0.0000	OK
4320 minute summer	S2	2220	0.899	0.019	0.6	0.0268	0.0000	OK
4320 minute summer	S3	2400	0.816	0.094	0.6	10.8786	0.0000	OK
4320 minute summer	S4	2400	0.707	0.018	0.3	0.0254	0.0000	OK
4320 minute summer	S5	2400	0.355	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
4320 minute summer	S1	1.000	S2	0.2	0.193	0.005	0.0423	
4320 minute summer	S2	1.001	S3	0.6	0.394	0.014	0.1989	
4320 minute summer	S3	1.002	S4	0.3	0.270	0.027	0.0092	
4320 minute summer	S4	1.003	S5	0.3	0.294	0.028	0.0915	30.7

Results for 2 year 4320 minute winter. 5760 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
4320 minute winter	S1	1440	1.134	0.008	0.1	0.0118	0.0000	OK
4320 minute winter	S2	1740	0.894	0.014	0.3	0.0195	0.0000	OK
4320 minute winter	S3	2700	0.794	0.072	0.3	8.2660	0.0000	OK
4320 minute winter	S4	2700	0.705	0.016	0.3	0.0235	0.0000	OK
4320 minute winter	S5	2700	0.354	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
4320 minute winter	S1	1.000	S2	0.1	0.173	0.002	0.0262	
4320 minute winter	S2	1.001	S3	0.3	0.394	0.007	0.1405	
4320 minute winter	S3	1.002	S4	0.3	0.257	0.023	0.0082	
4320 minute winter	S4	1.003	S5	0.3	0.278	0.023	0.0818	30.7

Results for 2 year 5760 minute summer. 7200 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
5760 minute summer	S1	2880	1.137	0.011	0.2	0.0161	0.0000	OK
5760 minute summer	S2	2880	0.897	0.017	0.5	0.0246	0.0000	OK
5760 minute summer	S3	3360	0.806	0.084	0.5	9.6841	0.0000	OK
5760 minute summer	S4	3360	0.706	0.017	0.3	0.0246	0.0000	OK
5760 minute summer	S5	3360	0.355	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
5760 minute summer	S1	1.000	S2	0.2	0.193	0.005	0.0389	
5760 minute summer	S2	1.001	S3	0.5	0.394	0.012	0.1717	
5760 minute summer	S3	1.002	S4	0.3	0.265	0.026	0.0088	
5760 minute summer	S4	1.003	S5	0.3	0.287	0.026	0.0873	31.5

Results for 2 year 5760 minute winter. 7200 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
5760 minute winter	S1	1980	1.134	0.008	0.1	0.0118	0.0000	OK
5760 minute winter	S2	2520	0.894	0.014	0.3	0.0195	0.0000	OK
5760 minute winter	S3	3360	0.793	0.071	0.3	8.1616	0.0000	OK
5760 minute winter	S4	3360	0.705	0.016	0.3	0.0234	0.0000	OK
5760 minute winter	S5	3360	0.354	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
5760 minute winter	S1	1.000	S2	0.1	0.173	0.002	0.0262	
5760 minute winter	S2	1.001	S3	0.3	0.394	0.007	0.1382	
5760 minute winter	S3	1.002	S4	0.3	0.257	0.023	0.0082	
5760 minute winter	S4	1.003	S5	0.3	0.278	0.023	0.0813	34.4

Results for 2 year 7200 minute summer. 8640 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
7200 minute summer	S1	3660	1.137	0.011	0.2	0.0161	0.0000	OK
7200 minute summer	S2	3660	0.897	0.017	0.5	0.0246	0.0000	OK
7200 minute summer	S3	4080	0.799	0.077	0.5	8.8870	0.0000	OK
7200 minute summer	S4	4080	0.706	0.017	0.3	0.0240	0.0000	OK
7200 minute summer	S5	4080	0.354	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
7200 minute summer	S1	1.000	S2	0.2	0.193	0.005	0.0389	
7200 minute summer	S2	1.001	S3	0.5	0.394	0.012	0.1540	
7200 minute summer	S3	1.002	S4	0.3	0.261	0.024	0.0085	
7200 minute summer	S4	1.003	S5	0.3	0.282	0.024	0.0842	32.2



Results for 2 year 7200 minute winter. 8640 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
7200 minute winter	S1	2640	1.134	0.008	0.1	0.0118	0.0000	OK
7200 minute winter	S2	3360	0.894	0.014	0.3	0.0195	0.0000	OK
7200 minute winter	S3	4020	0.788	0.066	0.3	7.6728	0.0000	OK
7200 minute winter	S4	4020	0.705	0.016	0.2	0.0230	0.0000	OK
7200 minute winter	S5	4020	0.354	0.014	0.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
7200 minute winter	S1	1.000	S2	0.1	0.173	0.002	0.0262	
7200 minute winter	S2	1.001	S3	0.3	0.394	0.007	0.1276	
7200 minute winter	S3	1.002	S4	0.2	0.254	0.022	0.0080	
7200 minute winter	S4	1.003	S5	0.2	0.274	0.022	0.0794	36.5

Results for 2 year 8640 minute summer. 10080 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
8640 minute summer	S1	3480	1.134	0.008	0.1	0.0118	0.0000	OK
8640 minute summer	S2	4020	0.894	0.014	0.3	0.0195	0.0000	OK
8640 minute summer	S3	4740	0.790	0.068	0.3	7.8640	0.0000	OK
8640 minute summer	S4	4800	0.705	0.016	0.3	0.0232	0.0000	OK
8640 minute summer	S5	4800	0.354	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
8640 minute summer	S1	1.000	S2	0.1	0.173	0.002	0.0262	
8640 minute summer	S2	1.001	S3	0.3	0.394	0.007	0.1318	
8640 minute summer	S3	1.002	S4	0.3	0.255	0.023	0.0081	
8640 minute summer	S4	1.003	S5	0.3	0.276	0.023	0.0802	33.0

Results for 2 year 8640 minute winter. 10080 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
8640 minute winter	S1	3240	1.134	0.008	0.1	0.0118	0.0000	OK
8640 minute winter	S2	3240	0.891	0.011	0.2	0.0161	0.0000	OK
8640 minute winter	S3	5520	0.768	0.046	0.2	5.3006	0.0000	OK
8640 minute winter	S4	5520	0.703	0.014	0.2	0.0207	0.0000	OK
8640 minute winter	S5	5520	0.352	0.012	0.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
8640 minute winter	S1	1.000	S2	0.1	0.173	0.002	0.0217	
8640 minute winter	S2	1.001	S3	0.2	0.394	0.005	0.0776	
8640 minute winter	S3	1.002	S4	0.2	0.237	0.018	0.0068	
8640 minute winter	S4	1.003	S5	0.2	0.258	0.018	0.0673	35.9

Results for 2 year 10080 minute summer. 11520 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
10080 minute summer	S1	4140	1.134	0.008	0.1	0.0118	0.0000	OK
10080 minute summer	S2	4740	0.894	0.014	0.3	0.0195	0.0000	OK
10080 minute summer	S3	5460	0.791	0.069	0.3	7.9171	0.0000	OK
10080 minute summer	S4	5520	0.705	0.016	0.3	0.0232	0.0000	OK
10080 minute summer	S5	5520	0.354	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
10080 minute summer	S1	1.000	S2	0.1	0.173	0.002	0.0262	
10080 minute summer	S2	1.001	S3	0.3	0.394	0.007	0.1330	
10080 minute summer	S3	1.002	S4	0.3	0.255	0.023	0.0081	
10080 minute summer	S4	1.003	S5	0.3	0.276	0.023	0.0804	35.2

Results for 2 year 10080 minute winter. 11520 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
10080 minute winter	S1	3900	1.134	0.008	0.1	0.0118	0.0000	OK
10080 minute winter	S2	3900	0.891	0.011	0.2	0.0161	0.0000	OK
10080 minute winter	S3	6300	0.768	0.046	0.2	5.3170	0.0000	OK
10080 minute winter	S4	6300	0.703	0.014	0.2	0.0207	0.0000	OK
10080 minute winter	S5	6300	0.352	0.012	0.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
10080 minute winter	S1	1.000	S2	0.1	0.173	0.002	0.0217	
10080 minute winter	S2	1.001	S3	0.2	0.394	0.005	0.0779	
10080 minute winter	S3	1.002	S4	0.2	0.237	0.018	0.0068	
10080 minute winter	S4	1.003	S5	0.2	0.258	0.018	0.0674	38.8

Results for 30 year +35% CC 15 minute summer. 1455 minute analysis at 1 minute timestep. Mass balance: 99.58%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S1	11	1.393	0.267	23.6	0.3823	0.0000	SURCHARGED
15 minute summer	S2	11	1.313	0.433	61.1	0.6191	0.0000	SURCHARGED
15 minute summer	S3	21	0.950	0.228	60.2	26.2741	0.0000	SURCHARGED
15 minute summer	S4	27	0.711	0.022	0.5	0.0317	0.0000	OK
15 minute summer	S5	27	0.360	0.020	0.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S1	1.000	S2	22.5	0.634	0.533	1.4679	
15 minute summer	S2	1.001	S3	60.2	1.748	1.421	0.8670	
15 minute summer	S3	1.002	S4	0.5	0.395	0.045	0.0130	
15 minute summer	S4	1.003	S5	0.5	0.335	0.045	0.1302	25.4

**Results for 30 year +35% CC 15 minute winter. 1455 minute analysis at 1 minute timestep. Mass balance: 99.84%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S1	11	1.298	0.172	22.1	0.2457	0.0000	OK
15 minute winter	S2	11	1.246	0.366	56.2	0.5236	0.0000	SURCHARGED
15 minute winter	S3	21	0.950	0.228	56.0	26.3571	0.0000	SURCHARGED
15 minute winter	S4	27	0.711	0.022	0.5	0.0317	0.0000	OK
15 minute winter	S5	27	0.360	0.020	0.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S1	1.000	S2	21.6	0.585	0.509	1.3341	
15 minute winter	S2	1.001	S3	56.0	1.746	1.321	0.8633	
15 minute winter	S3	1.002	S4	0.5	0.397	0.045	0.0130	
15 minute winter	S4	1.003	S5	0.5	0.335	0.045	0.1304	25.5

Results for 30 year +35% CC 30 minute summer. 1470 minute analysis at 1 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	S1	19	1.256	0.130	20.9	0.1862	0.0000	OK
30 minute summer	S2	18	1.211	0.331	55.5	0.4734	0.0000	SURCHARGED
30 minute summer	S3	35	1.011	0.289	53.9	33.3804	0.0000	SURCHARGED
30 minute summer	S4	39	0.713	0.024	0.6	0.0337	0.0000	OK
30 minute summer	S5	40	0.361	0.021	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	S1	1.000	S2	20.3	0.610	0.479	1.1727	
30 minute summer	S2	1.001	S3	53.9	1.607	1.272	0.9056	
30 minute summer	S3	1.002	S4	0.6	0.331	0.051	0.0142	
30 minute summer	S4	1.003	S5	0.6	0.349	0.051	0.1424	31.8

Results for 30 year +35% CC 30 minute winter. 1470 minute analysis at 1 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	S1	18	1.224	0.098	16.9	0.1401	0.0000	OK
30 minute winter	S2	19	1.085	0.205	45.6	0.2928	0.0000	OK
30 minute winter	S3	34	1.012	0.290	45.1	33.4528	0.0000	SURCHARGED
30 minute winter	S4	39	0.713	0.024	0.6	0.0338	0.0000	OK
30 minute winter	S5	39	0.361	0.021	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute winter	S1	1.000	S2	16.9	0.604	0.399	1.0046	
30 minute winter	S2	1.001	S3	45.1	1.571	1.066	0.8566	
30 minute winter	S3	1.002	S4	0.6	0.339	0.051	0.0143	
30 minute winter	S4	1.003	S5	0.6	0.349	0.051	0.1426	31.8

Results for 30 year +35% CC 60 minute summer. 1500 minute analysis at 1 minute timestep. Mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S1	33	1.219	0.093	15.3	0.1326	0.0000	OK
60 minute summer	S2	33	1.073	0.193	41.3	0.2758	0.0000	OK
60 minute summer	S3	65	1.071	0.349	40.6	40.2904	0.0000	SURCHARGED
60 minute summer	S4	68	0.714	0.025	0.6	0.0354	0.0000	OK
60 minute summer	S5	68	0.362	0.022	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute summer	S1	1.000	S2	15.3	0.591	0.361	0.9527	
60 minute summer	S2	1.001	S3	40.6	1.259	0.959	0.9000	
60 minute summer	S3	1.002	S4	0.6	0.334	0.056	0.0153	
60 minute summer	S4	1.003	S5	0.6	0.360	0.056	0.1529	37.6

**Results for 30 year +35% CC 60 minute winter. 1500 minute analysis at 1 minute timestep. Mass balance: 99.91%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
60 minute winter	S1	33	1.204	0.078	11.0	0.1111	0.0000	OK
60 minute winter	S2	64	1.071	0.191	29.8	0.2736	0.0000	OK
60 minute winter	S3	64	1.071	0.349	29.9	40.3393	0.0000	SURCHARGED
60 minute winter	S4	67	0.714	0.025	0.6	0.0354	0.0000	OK
60 minute winter	S5	67	0.362	0.022	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
60 minute winter	S1	1.000	S2	11.0	0.564	0.260	0.7313	
60 minute winter	S2	1.001	S3	29.9	1.227	0.707	0.9001	
60 minute winter	S3	1.002	S4	0.6	0.334	0.056	0.0153	
60 minute winter	S4	1.003	S5	0.6	0.360	0.056	0.1530	37.6

Results for 30 year +35% CC 120 minute summer. 1560 minute analysis at 2 minute timestep. Mass balance: 99.89%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute summer	S1	64	1.199	0.073	9.9	0.1051	0.0000	OK
120 minute summer	S2	124	1.182	0.302	26.8	0.4317	0.0000	SURCHARGED
120 minute summer	S3	124	1.182	0.460	26.8	47.6690	0.0000	SURCHARGED
120 minute summer	S4	126	0.716	0.027	0.7	0.0380	0.0000	OK
120 minute summer	S5	126	0.364	0.024	0.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute summer	S1	1.000	S2	9.9	0.570	0.234	0.8744	
120 minute summer	S2	1.001	S3	26.8	1.008	0.632	0.9452	
120 minute summer	S3	1.002	S4	0.7	0.349	0.065	0.0170	
120 minute summer	S4	1.003	S5	0.7	0.374	0.065	0.1695	44.4

Results for 30 year +35% CC 120 minute winter. 1560 minute analysis at 2 minute timestep. Mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	S1	64	1.187	0.061	6.8	0.0866	0.0000	OK
120 minute winter	S2	122	1.182	0.302	18.4	0.4327	0.0000	SURCHARGED
120 minute winter	S3	122	1.183	0.461	18.4	47.6954	0.0000	SURCHARGED
120 minute winter	S4	124	0.716	0.027	0.7	0.0380	0.0000	OK
120 minute winter	S5	124	0.364	0.024	0.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute winter	S1	1.000	S2	6.8	0.523	0.161	0.8764	
120 minute winter	S2	1.001	S3	18.4	1.042	0.434	0.9452	
120 minute winter	S3	1.002	S4	0.7	0.349	0.065	0.0170	
120 minute winter	S4	1.003	S5	0.7	0.375	0.065	0.1696	44.4

Results for 30 year +35% CC 180 minute summer. 1620 minute analysis at 4 minute timestep. Mass balance: 99.89%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	S1	184	1.233	0.107	7.3	0.1536	0.0000	OK
180 minute summer	S2	184	1.233	0.353	19.8	0.5058	0.0000	SURCHARGED
180 minute summer	S3	184	1.234	0.512	19.3	51.0669	0.0000	SURCHARGED
180 minute summer	S4	188	0.716	0.027	0.8	0.0390	0.0000	OK
180 minute summer	S5	188	0.364	0.024	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
180 minute summer	S1	1.000	S2	7.3	0.531	0.172	1.0787	
180 minute summer	S2	1.001	S3	19.3	0.920	0.456	0.9452	
180 minute summer	S3	1.002	S4	0.8	0.354	0.068	0.0177	
180 minute summer	S4	1.003	S5	0.8	0.380	0.069	0.1766	48.6

Results for 30 year +35% CC 180 minute winter. 1620 minute analysis at 4 minute timestep. Mass balance: 99.91%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	S1	180	1.233	0.107	5.1	0.1538	0.0000	OK
180 minute winter	S2	180	1.234	0.354	13.7	0.5059	0.0000	SURCHARGED
180 minute winter	S3	180	1.234	0.512	13.6	51.0675	0.0000	SURCHARGED
180 minute winter	S4	184	0.716	0.027	0.8	0.0390	0.0000	OK
180 minute winter	S5	184	0.364	0.024	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
180 minute winter	S1	1.000	S2	5.1	0.486	0.120	1.0792	
180 minute winter	S2	1.001	S3	13.6	0.928	0.321	0.9452	
180 minute winter	S3	1.002	S4	0.8	0.354	0.068	0.0177	
180 minute winter	S4	1.003	S5	0.8	0.380	0.069	0.1767	48.6

Results for 30 year +35% CC 240 minute summer. 1680 minute analysis at 4 minute timestep. Mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute summer	S1	244	1.256	0.130	6.2	0.1864	0.0000	OK
240 minute summer	S2	244	1.256	0.376	16.6	0.5384	0.0000	SURCHARGED
240 minute summer	S3	244	1.256	0.534	15.2	53.1970	0.0000	SURCHARGED
240 minute summer	S4	244	0.717	0.028	0.8	0.0394	0.0000	OK
240 minute summer	S5	244	0.365	0.025	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
240 minute summer	S1	1.000	S2	6.1	0.497	0.145	1.1733	
240 minute summer	S2	1.001	S3	15.2	0.856	0.360	0.9452	
240 minute summer	S3	1.002	S4	0.8	0.356	0.070	0.0179	
240 minute summer	S4	1.003	S5	0.8	0.383	0.071	0.1796	51.9

Results for 30 year +35% CC 240 minute winter. 1680 minute analysis at 4 minute timestep. Mass balance: 99.92%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	S1	236	1.256	0.130	4.1	0.1858	0.0000	OK
240 minute winter	S2	240	1.256	0.376	11.1	0.5379	0.0000	SURCHARGED
240 minute winter	S3	240	1.256	0.534	10.8	53.1645	0.0000	SURCHARGED
240 minute winter	S4	240	0.717	0.028	0.8	0.0394	0.0000	OK
240 minute winter	S5	240	0.365	0.025	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
240 minute winter	S1	1.000	S2	4.1	0.452	0.097	1.1717	
240 minute winter	S2	1.001	S3	10.8	0.869	0.256	0.9452	
240 minute winter	S3	1.002	S4	0.8	0.356	0.070	0.0179	
240 minute winter	S4	1.003	S5	0.8	0.383	0.071	0.1796	51.8

Results for 30 year +35% CC 360 minute summer. 1800 minute analysis at 8 minute timestep. Mass balance: 99.92%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute summer	S1	360	1.273	0.147	4.6	0.2101	0.0000	OK
360 minute summer	S2	360	1.273	0.393	12.3	0.5621	0.0000	SURCHARGED
360 minute summer	S3	360	1.273	0.551	11.5	54.9678	0.0000	SURCHARGED
360 minute summer	S4	360	0.717	0.028	0.8	0.0397	0.0000	OK
360 minute summer	S5	368	0.365	0.025	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
360 minute summer	S1	1.000	S2	4.6	0.453	0.108	1.2403	
360 minute summer	S2	1.001	S3	11.5	0.798	0.272	0.9452	
360 minute summer	S3	1.002	S4	0.8	0.358	0.071	0.0181	
360 minute summer	S4	1.003	S5	0.8	0.385	0.072	0.1817	56.8

**Results for 30 year +35% CC 360 minute winter. 1800 minute analysis at 8 minute timestep. Mass balance: 99.93%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
360 minute winter	S1	352	1.272	0.146	3.0	0.2086	0.0000	OK
360 minute winter	S2	352	1.272	0.392	8.1	0.5607	0.0000	SURCHARGED
360 minute winter	S3	352	1.272	0.550	7.6	54.8647	0.0000	SURCHARGED
360 minute winter	S4	352	0.717	0.028	0.8	0.0397	0.0000	OK
360 minute winter	S5	352	0.365	0.025	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
360 minute winter	S1	1.000	S2	3.0	0.403	0.071	1.2362	
360 minute winter	S2	1.001	S3	7.6	0.769	0.180	0.9452	
360 minute winter	S3	1.002	S4	0.8	0.358	0.071	0.0181	
360 minute winter	S4	1.003	S5	0.8	0.384	0.072	0.1816	56.5

Results for 30 year +35% CC 480 minute summer. 1920 minute analysis at 8 minute timestep. Mass balance: 99.93%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute summer	S1	480	1.273	0.147	3.5	0.2102	0.0000	OK
480 minute summer	S2	480	1.273	0.393	9.5	0.5622	0.0000	SURCHARGED
480 minute summer	S3	480	1.273	0.551	8.9	54.9790	0.0000	SURCHARGED
480 minute summer	S4	480	0.717	0.028	0.8	0.0397	0.0000	OK
480 minute summer	S5	480	0.365	0.025	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute summer	S1	1.000	S2	3.5	0.422	0.083	1.2404	
480 minute summer	S2	1.001	S3	8.9	0.724	0.211	0.9452	
480 minute summer	S3	1.002	S4	0.8	0.358	0.071	0.0181	
480 minute summer	S4	1.003	S5	0.8	0.385	0.072	0.1817	60.4

Results for 30 year +35% CC 480 minute winter. 1920 minute analysis at 8 minute timestep. Mass balance: 99.93%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	S1	464	1.279	0.153	2.4	0.2191	0.0000	OK
480 minute winter	S2	464	1.279	0.399	6.4	0.5711	0.0000	SURCHARGED
480 minute winter	S3	464	1.279	0.557	6.0	55.7107	0.0000	SURCHARGED
480 minute winter	S4	464	0.717	0.028	0.8	0.0398	0.0000	OK
480 minute winter	S5	464	0.365	0.025	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute winter	S1	1.000	S2	2.4	0.379	0.057	1.2649	
480 minute winter	S2	1.001	S3	6.0	0.715	0.142	0.9452	
480 minute winter	S3	1.002	S4	0.8	0.359	0.072	0.0182	
480 minute winter	S4	1.003	S5	0.8	0.385	0.072	0.1825	60.7

Results for 30 year +35% CC 600 minute summer. 2040 minute analysis at 15 minute timestep. Mass balance: 99.92%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute summer	S1	570	1.266	0.140	2.8	0.2008	0.0000	OK
600 minute summer	S2	570	1.266	0.386	7.6	0.5528	0.0000	SURCHARGED
600 minute summer	S3	570	1.266	0.544	7.2	54.2422	0.0000	SURCHARGED
600 minute summer	S4	570	0.717	0.028	0.8	0.0396	0.0000	OK
600 minute summer	S5	570	0.365	0.025	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute summer	S1	1.000	S2	2.8	0.387	0.066	1.2142	
600 minute summer	S2	1.001	S3	7.2	0.684	0.169	0.9452	
600 minute summer	S3	1.002	S4	0.8	0.357	0.071	0.0181	
600 minute summer	S4	1.003	S5	0.8	0.384	0.071	0.1809	63.4

Results for 30 year +35% CC 600 minute winter. 2040 minute analysis at 15 minute timestep. Mass balance: 99.93%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	S1	570	1.271	0.145	1.9	0.2082	0.0000	OK
600 minute winter	S2	570	1.271	0.391	5.2	0.5602	0.0000	SURCHARGED
600 minute winter	S3	570	1.271	0.549	4.9	54.8216	0.0000	SURCHARGED
600 minute winter	S4	570	0.717	0.028	0.8	0.0397	0.0000	OK
600 minute winter	S5	570	0.365	0.025	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute winter	S1	1.000	S2	1.9	0.355	0.045	1.2349	
600 minute winter	S2	1.001	S3	4.9	0.655	0.116	0.9452	
600 minute winter	S3	1.002	S4	0.8	0.358	0.071	0.0181	
600 minute winter	S4	1.003	S5	0.8	0.384	0.072	0.1816	63.5

Results for 30 year +35% CC 720 minute summer. 2160 minute analysis at 15 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute summer	S1	615	1.266	0.140	2.5	0.2004	0.0000	OK
720 minute summer	S2	615	1.266	0.386	6.8	0.5524	0.0000	SURCHARGED
720 minute summer	S3	615	1.266	0.544	6.4	54.2155	0.0000	SURCHARGED
720 minute summer	S4	615	0.717	0.028	0.8	0.0396	0.0000	OK
720 minute summer	S5	615	0.365	0.025	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute summer	S1	1.000	S2	2.5	0.355	0.059	1.2132	
720 minute summer	S2	1.001	S3	6.4	0.658	0.152	0.9452	
720 minute summer	S3	1.002	S4	0.8	0.357	0.071	0.0181	
720 minute summer	S4	1.003	S5	0.8	0.384	0.071	0.1809	66.4

Results for 30 year +35% CC 720 minute winter. 2160 minute analysis at 15 minute timestep. Mass balance: 99.93%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	S1	675	1.270	0.144	1.7	0.2063	0.0000	OK
720 minute winter	S2	675	1.270	0.390	4.6	0.5583	0.0000	SURCHARGED
720 minute winter	S3	675	1.270	0.548	4.4	54.6697	0.0000	SURCHARGED
720 minute winter	S4	675	0.717	0.028	0.8	0.0397	0.0000	OK
720 minute winter	S5	675	0.365	0.025	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute winter	S1	1.000	S2	1.7	0.335	0.040	1.2296	
720 minute winter	S2	1.001	S3	4.4	0.626	0.103	0.9452	
720 minute winter	S3	1.002	S4	0.8	0.358	0.071	0.0181	
720 minute winter	S4	1.003	S5	0.8	0.384	0.071	0.1814	66.9

Results for 30 year +35% CC 960 minute summer. 2400 minute analysis at 15 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute summer	S1	735	1.255	0.129	2.0	0.1849	0.0000	OK
960 minute summer	S2	735	1.255	0.375	5.4	0.5369	0.0000	SURCHARGED
960 minute summer	S3	735	1.255	0.533	5.1	53.0723	0.0000	SURCHARGED
960 minute summer	S4	735	0.717	0.028	0.8	0.0394	0.0000	OK
960 minute summer	S5	735	0.365	0.025	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
960 minute summer	S1	1.000	S2	2.0	0.340	0.047	1.1690	
960 minute summer	S2	1.001	S3	5.1	0.632	0.120	0.9452	
960 minute summer	S3	1.002	S4	0.8	0.356	0.070	0.0179	
960 minute summer	S4	1.003	S5	0.8	0.383	0.070	0.1795	71.4

Results for 30 year +35% CC 960 minute winter. 2400 minute analysis at 15 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	S1	750	1.256	0.130	1.3	0.1863	0.0000	OK
960 minute winter	S2	750	1.256	0.376	3.6	0.5383	0.0000	SURCHARGED
960 minute winter	S3	750	1.256	0.534	3.4	53.1754	0.0000	SURCHARGED
960 minute winter	S4	750	0.717	0.028	0.8	0.0394	0.0000	OK
960 minute winter	S5	750	0.365	0.025	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
960 minute winter	S1	1.000	S2	1.3	0.310	0.031	1.1732	
960 minute winter	S2	1.001	S3	3.4	0.596	0.081	0.9452	
960 minute winter	S3	1.002	S4	0.8	0.356	0.070	0.0179	
960 minute winter	S4	1.003	S5	0.8	0.383	0.071	0.1796	71.6

Results for 30 year +35% CC 1440 minute summer. 2880 minute analysis at 30 minute timestep. Mass balance: 99.96%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute summer	S1	990	1.229	0.103	1.4	0.1469	0.0000	OK
1440 minute summer	S2	990	1.229	0.349	3.8	0.4990	0.0000	SURCHARGED
1440 minute summer	S3	990	1.229	0.507	3.6	50.6513	0.0000	SURCHARGED
1440 minute summer	S4	990	0.716	0.027	0.8	0.0389	0.0000	OK
1440 minute summer	S5	990	0.364	0.024	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
1440 minute summer	S1	1.000	S2	1.4	0.308	0.033	1.0594	
1440 minute summer	S2	1.001	S3	3.6	0.504	0.085	0.9452	
1440 minute summer	S3	1.002	S4	0.8	0.354	0.068	0.0176	
1440 minute summer	S4	1.003	S5	0.8	0.380	0.069	0.1760	78.4

Results for 30 year +35% CC 1440 minute winter. 2880 minute analysis at 30 minute timestep. Mass balance: 99.96%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	S1	1050	1.218	0.092	0.9	0.1321	0.0000	OK
1440 minute winter	S2	1050	1.218	0.338	2.5	0.4841	0.0000	SURCHARGED
1440 minute winter	S3	1050	1.218	0.496	2.4	49.8459	0.0000	SURCHARGED
1440 minute winter	S4	1080	0.716	0.027	0.8	0.0387	0.0000	OK
1440 minute winter	S5	1080	0.364	0.024	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
1440 minute winter	S1	1.000	S2	0.9	0.287	0.021	1.0167	
1440 minute winter	S2	1.001	S3	2.4	0.529	0.056	0.9452	
1440 minute winter	S3	1.002	S4	0.8	0.352	0.067	0.0175	
1440 minute winter	S4	1.003	S5	0.8	0.379	0.068	0.1746	80.0

Results for 30 year +35% CC 2160 minute summer. 3600 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
2160 minute summer	S1	1140	1.150	0.024	1.0	0.0341	0.0000	OK
2160 minute summer	S2	1440	1.141	0.261	2.6	0.3729	0.0000	SURCHARGED
2160 minute summer	S3	1440	1.141	0.419	2.5	46.3871	0.0000	SURCHARGED
2160 minute summer	S4	1440	0.715	0.026	0.7	0.0371	0.0000	OK
2160 minute summer	S5	1440	0.363	0.023	0.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
2160 minute summer	S1	1.000	S2	1.0	0.266	0.024	0.7559	
2160 minute summer	S2	1.001	S3	2.5	0.423	0.058	0.9452	
2160 minute summer	S3	1.002	S4	0.7	0.343	0.062	0.0164	
2160 minute summer	S4	1.003	S5	0.7	0.370	0.062	0.1637	86.2

Results for 30 year +35% CC 2160 minute winter. 3600 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
2160 minute winter	S1	1140	1.146	0.020	0.7	0.0288	0.0000	OK
2160 minute winter	S2	1560	1.112	0.232	1.8	0.3316	0.0000	SURCHARGED
2160 minute winter	S3	1560	1.112	0.390	1.7	44.9828	0.0000	SURCHARGED
2160 minute winter	S4	1560	0.714	0.025	0.7	0.0364	0.0000	OK
2160 minute winter	S5	1560	0.363	0.023	0.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
2160 minute winter	S1	1.000	S2	0.7	0.269	0.017	0.7518	
2160 minute winter	S2	1.001	S3	1.7	0.418	0.041	0.9452	
2160 minute winter	S3	1.002	S4	0.7	0.340	0.059	0.0160	
2160 minute winter	S4	1.003	S5	0.7	0.366	0.060	0.1593	86.4

Results for 30 year +35% CC 2880 minute summer. 4320 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
2880 minute summer	S1	1500	1.147	0.021	0.8	0.0307	0.0000	OK
2880 minute summer	S2	1860	1.101	0.221	2.1	0.3159	0.0000	OK
2880 minute summer	S3	1860	1.101	0.379	2.0	43.7161	0.0000	SURCHARGED
2880 minute summer	S4	1860	0.714	0.025	0.7	0.0362	0.0000	OK
2880 minute summer	S5	1860	0.363	0.023	0.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
2880 minute summer	S1	1.000	S2	0.8	0.256	0.019	0.7466	
2880 minute summer	S2	1.001	S3	2.0	0.387	0.047	0.9428	
2880 minute summer	S3	1.002	S4	0.7	0.338	0.058	0.0158	
2880 minute summer	S4	1.003	S5	0.7	0.364	0.059	0.1577	93.9

Results for 30 year +35% CC 2880 minute winter. 4320 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
2880 minute winter	S1	1380	1.143	0.017	0.5	0.0246	0.0000	OK
2880 minute winter	S2	1980	1.075	0.195	1.4	0.2793	0.0000	OK
2880 minute winter	S3	1980	1.075	0.353	1.3	40.7608	0.0000	SURCHARGED
2880 minute winter	S4	1980	0.714	0.025	0.6	0.0355	0.0000	OK
2880 minute winter	S5	1980	0.362	0.022	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
2880 minute winter	S1	1.000	S2	0.5	0.250	0.012	0.6916	
2880 minute winter	S2	1.001	S3	1.3	0.457	0.032	0.9075	
2880 minute winter	S3	1.002	S4	0.6	0.335	0.056	0.0154	
2880 minute winter	S4	1.003	S5	0.6	0.361	0.057	0.1536	95.0

Results for 30 year +35% CC 4320 minute summer. 5760 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
4320 minute summer	S1	2220	1.145	0.019	0.6	0.0268	0.0000	OK
4320 minute summer	S2	2640	1.045	0.165	1.5	0.2361	0.0000	OK
4320 minute summer	S3	2640	1.045	0.323	1.4	37.2788	0.0000	SURCHARGED
4320 minute summer	S4	2640	0.713	0.024	0.6	0.0348	0.0000	OK
4320 minute summer	S5	2640	0.362	0.022	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
4320 minute summer	S1	1.000	S2	0.6	0.250	0.014	0.5894	
4320 minute summer	S2	1.001	S3	1.4	0.349	0.034	0.8434	
4320 minute summer	S3	1.002	S4	0.6	0.330	0.054	0.0149	
4320 minute summer	S4	1.003	S5	0.6	0.356	0.054	0.1486	103.2

Results for 30 year +35% CC 4320 minute winter. 5760 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
4320 minute winter	S1	2160	1.142	0.016	0.4	0.0223	0.0000	OK
4320 minute winter	S2	2760	1.009	0.129	1.0	0.1849	0.0000	OK
4320 minute winter	S3	2760	1.009	0.287	1.0	33.1535	0.0000	SURCHARGED
4320 minute winter	S4	2760	0.713	0.024	0.6	0.0337	0.0000	OK
4320 minute winter	S5	2760	0.361	0.021	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
4320 minute winter	S1	1.000	S2	0.4	0.223	0.009	0.4487	
4320 minute winter	S2	1.001	S3	1.0	0.394	0.023	0.7529	
4320 minute winter	S3	1.002	S4	0.6	0.325	0.051	0.0142	
4320 minute winter	S4	1.003	S5	0.6	0.349	0.051	0.1422	101.0

Results for 30 year +35% CC 5760 minute summer. 7200 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
5760 minute summer	S1	2940	1.143	0.017	0.5	0.0246	0.0000	OK
5760 minute summer	S2	3420	1.015	0.135	1.3	0.1937	0.0000	OK
5760 minute summer	S3	3420	1.015	0.293	1.3	33.8611	0.0000	SURCHARGED
5760 minute summer	S4	3420	0.713	0.024	0.6	0.0339	0.0000	OK
5760 minute summer	S5	3420	0.361	0.021	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
5760 minute summer	S1	1.000	S2	0.5	0.238	0.012	0.4738	
5760 minute summer	S2	1.001	S3	1.3	0.349	0.030	0.7690	
5760 minute summer	S3	1.002	S4	0.6	0.326	0.051	0.0143	
5760 minute summer	S4	1.003	S5	0.6	0.350	0.051	0.1433	108.7

Results for 30 year +35% CC 5760 minute winter. 7200 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
5760 minute winter	S1	2640	1.140	0.014	0.3	0.0195	0.0000	OK
5760 minute winter	S2	3540	0.974	0.094	0.8	0.1339	0.0000	OK
5760 minute winter	S3	3540	0.974	0.252	0.8	29.0397	0.0000	SURCHARGED
5760 minute winter	S4	3540	0.712	0.023	0.5	0.0326	0.0000	OK
5760 minute winter	S5	3540	0.360	0.020	0.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
5760 minute winter	S1	1.000	S2	0.3	0.223	0.007	0.3015	
5760 minute winter	S2	1.001	S3	0.8	0.394	0.019	0.6581	
5760 minute winter	S3	1.002	S4	0.5	0.318	0.047	0.0135	
5760 minute winter	S4	1.003	S5	0.5	0.341	0.047	0.1354	111.7

Results for 30 year +35% CC 7200 minute summer. 8640 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
7200 minute summer	S1	3600	1.142	0.016	0.4	0.0223	0.0000	OK
7200 minute summer	S2	4200	0.987	0.107	1.0	0.1528	0.0000	OK
7200 minute summer	S3	4200	0.987	0.265	1.0	30.5621	0.0000	SURCHARGED
7200 minute summer	S4	4200	0.712	0.023	0.5	0.0330	0.0000	OK
7200 minute summer	S5	4200	0.361	0.021	0.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
7200 minute summer	S1	1.000	S2	0.4	0.238	0.009	0.3558	
7200 minute summer	S2	1.001	S3	1.0	0.349	0.024	0.6931	
7200 minute summer	S3	1.002	S4	0.5	0.321	0.048	0.0138	
7200 minute summer	S4	1.003	S5	0.5	0.344	0.049	0.1379	113.8

Results for 30 year +35% CC 7200 minute winter. 8640 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
7200 minute winter	S1	2820	1.137	0.011	0.2	0.0161	0.0000	OK
7200 minute winter	S2	4500	0.927	0.047	0.6	0.0674	0.0000	OK
7200 minute winter	S3	4500	0.927	0.205	0.6	23.6729	0.0000	SURCHARGED
7200 minute winter	S4	4500	0.711	0.022	0.5	0.0309	0.0000	OK
7200 minute winter	S5	4500	0.359	0.019	0.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
7200 minute winter	S1	1.000	S2	0.2	0.193	0.005	0.1245	
7200 minute winter	S2	1.001	S3	0.6	0.394	0.014	0.5231	
7200 minute winter	S3	1.002	S4	0.5	0.308	0.042	0.0125	
7200 minute winter	S4	1.003	S5	0.5	0.331	0.042	0.1252	109.1

Results for 30 year +35% CC 8640 minute summer. 10080 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
8640 minute summer	S1	4140	1.140	0.014	0.3	0.0195	0.0000	OK
8640 minute summer	S2	4860	0.957	0.077	0.9	0.1103	0.0000	OK
8640 minute summer	S3	4860	0.957	0.235	0.9	27.1357	0.0000	SURCHARGED
8640 minute summer	S4	4860	0.711	0.022	0.5	0.0320	0.0000	OK
8640 minute summer	S5	4860	0.360	0.020	0.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
8640 minute summer	S1	1.000	S2	0.3	0.223	0.007	0.2352	
8640 minute summer	S2	1.001	S3	0.9	0.394	0.021	0.6154	
8640 minute summer	S3	1.002	S4	0.5	0.315	0.045	0.0132	
8640 minute summer	S4	1.003	S5	0.5	0.337	0.046	0.1321	114.9

Results for 30 year +35% CC 8640 minute winter. 10080 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
8640 minute winter	S1	3540	1.137	0.011	0.2	0.0161	0.0000	OK
8640 minute winter	S2	5220	0.915	0.035	0.6	0.0495	0.0000	OK
8640 minute winter	S3	5220	0.915	0.193	0.6	22.2308	0.0000	SURCHARGED
8640 minute winter	S4	5220	0.710	0.021	0.5	0.0305	0.0000	OK
8640 minute winter	S5	5220	0.359	0.019	0.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
8640 minute winter	S1	1.000	S2	0.2	0.193	0.005	0.0846	
8640 minute winter	S2	1.001	S3	0.6	0.394	0.014	0.4760	
8640 minute winter	S3	1.002	S4	0.5	0.305	0.041	0.0122	
8640 minute winter	S4	1.003	S5	0.5	0.328	0.041	0.1221	117.0

Results for 30 year +35% CC 10080 minute summer. 11520 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
10080 minute summer	S1	4920	1.140	0.014	0.3	0.0195	0.0000	OK
10080 minute summer	S2	5820	0.947	0.067	0.8	0.0956	0.0000	OK
10080 minute summer	S3	5820	0.947	0.225	0.8	25.9491	0.0000	SURCHARGED
10080 minute summer	S4	5820	0.711	0.022	0.5	0.0316	0.0000	OK
10080 minute summer	S5	5820	0.360	0.020	0.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
10080 minute summer	S1	1.000	S2	0.3	0.223	0.007	0.1954	
10080 minute summer	S2	1.001	S3	0.8	0.394	0.019	0.5893	
10080 minute summer	S3	1.002	S4	0.5	0.313	0.044	0.0129	
10080 minute summer	S4	1.003	S5	0.5	0.335	0.045	0.1299	113.6

Results for 30 year +35% CC 10080 minute winter. 11520 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
10080 minute winter	S1	4320	1.137	0.011	0.2	0.0161	0.0000	OK
10080 minute winter	S2	5940	0.900	0.020	0.5	0.0284	0.0000	OK
10080 minute winter	S3	5940	0.900	0.178	0.5	20.5207	0.0000	SURCHARGED
10080 minute winter	S4	5940	0.710	0.021	0.4	0.0299	0.0000	OK
10080 minute winter	S5	5940	0.358	0.018	0.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
10080 minute winter	S1	1.000	S2	0.2	0.193	0.005	0.0438	
10080 minute winter	S2	1.001	S3	0.5	0.394	0.012	0.4201	
10080 minute winter	S3	1.002	S4	0.4	0.301	0.039	0.0119	
10080 minute winter	S4	1.003	S5	0.4	0.325	0.039	0.1182	122.9

Results for 100 year +40% CC 15 minute summer. 1455 minute analysis at 1 minute timestep. Mass balance: 98.52%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S1	11	1.819	0.693	31.8	0.9916	0.0000	FLOOD RISK
15 minute summer	S2	11	1.670	0.790	82.3	1.1304	0.0000	FLOOD RISK
15 minute summer	S3	20	1.023	0.301	82.3	34.6893	0.0000	SURCHARGED
15 minute summer	S4	28	0.713	0.024	0.6	0.0341	0.0000	OK
15 minute summer	S5	28	0.361	0.021	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S1	1.000	S2	30.4	0.764	0.717	1.4679	
15 minute summer	S2	1.001	S3	82.3	2.215	1.942	0.9452	
15 minute summer	S3	1.002	S4	0.6	0.405	0.052	0.0144	
15 minute summer	S4	1.003	S5	0.6	0.351	0.052	0.1444	32.5

Results for 100 year +40% CC 15 minute winter. 1455 minute analysis at 1 minute timestep. Mass balance: 98.81%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S1	11	1.708	0.582	29.9	0.8326	0.0000	FLOOD RISK
15 minute winter	S2	11	1.576	0.696	77.2	0.9962	0.0000	FLOOD RISK
15 minute winter	S3	20	1.024	0.302	77.3	34.8218	0.0000	SURCHARGED
15 minute winter	S4	27	0.713	0.024	0.6	0.0341	0.0000	OK
15 minute winter	S5	27	0.361	0.021	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S1	1.000	S2	28.6	0.719	0.676	1.4679	
15 minute winter	S2	1.001	S3	77.3	2.095	1.826	0.9452	
15 minute winter	S3	1.002	S4	0.6	0.410	0.052	0.0145	
15 minute winter	S4	1.003	S5	0.6	0.351	0.052	0.1446	32.6

Results for 100 year +40% CC 30 minute summer. 1470 minute analysis at 1 minute timestep. Mass balance: 99.59%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	S1	18	1.599	0.473	28.3	0.6771	0.0000	SURCHARGED
30 minute summer	S2	18	1.482	0.602	74.6	0.8612	0.0000	FLOOD RISK
30 minute summer	S3	35	1.112	0.390	72.8	44.9763	0.0000	SURCHARGED
30 minute summer	S4	39	0.714	0.025	0.7	0.0364	0.0000	OK
30 minute summer	S5	39	0.363	0.023	0.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	S1	1.000	S2	26.9	0.677	0.636	1.4679	
30 minute summer	S2	1.001	S3	72.8	1.854	1.718	0.9452	
30 minute summer	S3	1.002	S4	0.7	0.344	0.059	0.0159	
30 minute summer	S4	1.003	S5	0.7	0.366	0.060	0.1592	40.2

Results for 100 year +40% CC 30 minute winter. 1470 minute analysis at 1 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	S1	19	1.348	0.222	22.8	0.3174	0.0000	OK
30 minute winter	S2	20	1.282	0.402	59.4	0.5758	0.0000	SURCHARGED
30 minute winter	S3	35	1.114	0.392	58.5	45.2069	0.0000	SURCHARGED
30 minute winter	S4	39	0.714	0.025	0.7	0.0365	0.0000	OK
30 minute winter	S5	39	0.363	0.023	0.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute winter	S1	1.000	S2	20.8	0.612	0.490	1.4652	
30 minute winter	S2	1.001	S3	58.5	1.582	1.382	0.9452	
30 minute winter	S3	1.002	S4	0.7	0.350	0.060	0.0160	
30 minute winter	S4	1.003	S5	0.7	0.366	0.060	0.1595	40.3

Results for 100 year +40% CC 60 minute summer. 1500 minute analysis at 1 minute timestep. Mass balance: 99.87%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S1	35	1.323	0.197	20.9	0.2814	0.0000	OK
60 minute summer	S2	35	1.275	0.395	53.8	0.5659	0.0000	SURCHARGED
60 minute summer	S3	65	1.270	0.548	51.4	54.6449	0.0000	SURCHARGED
60 minute summer	S4	67	0.717	0.028	0.8	0.0397	0.0000	OK
60 minute summer	S5	67	0.365	0.025	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute summer	S1	1.000	S2	19.1	0.595	0.450	1.4134	
60 minute summer	S2	1.001	S3	51.4	1.294	1.215	0.9452	
60 minute summer	S3	1.002	S4	0.8	0.358	0.071	0.0181	
60 minute summer	S4	1.003	S5	0.8	0.384	0.071	0.1813	47.8

**Results for 100 year +40% CC 60 minute winter. 1500 minute analysis at 1 minute timestep. Mass balance: 99.83%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	S1	66	1.270	0.144	15.1	0.2058	0.0000	OK
60 minute winter	S2	64	1.270	0.390	40.7	0.5574	0.0000	SURCHARGED
60 minute winter	S3	63	1.270	0.548	39.3	54.6954	0.0000	SURCHARGED
60 minute winter	S4	66	0.717	0.028	0.8	0.0397	0.0000	OK
60 minute winter	S5	66	0.365	0.025	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute winter	S1	1.000	S2	15.1	0.572	0.357	1.2282	
60 minute winter	S2	1.001	S3	39.3	1.320	0.927	0.9452	
60 minute winter	S3	1.002	S4	0.8	0.358	0.071	0.0181	
60 minute winter	S4	1.003	S5	0.8	0.384	0.071	0.1813	47.8

Results for 100 year +40% CC 120 minute summer. 1560 minute analysis at 2 minute timestep. Mass balance: 99.78%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute summer	S1	124	1.350	0.224	13.3	0.3208	0.0000	OK
120 minute summer	S2	124	1.350	0.470	36.0	0.6728	0.0000	SURCHARGED
120 minute summer	S3	124	1.350	0.628	35.1	64.0529	0.0000	SURCHARGED
120 minute summer	S4	126	0.718	0.029	0.9	0.0410	0.0000	OK
120 minute summer	S5	126	0.366	0.026	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute summer	S1	1.000	S2	13.3	0.574	0.314	1.4671	
120 minute summer	S2	1.001	S3	35.1	1.099	0.828	0.9452	
120 minute summer	S3	1.002	S4	0.9	0.366	0.076	0.0190	
120 minute summer	S4	1.003	S5	0.9	0.391	0.077	0.1910	55.5

Results for 100 year +40% CC 120 minute winter. 1560 minute analysis at 2 minute timestep. Mass balance: 99.85%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	S1	122	1.350	0.224	9.2	0.3210	0.0000	OK
120 minute winter	S2	122	1.351	0.471	24.8	0.6733	0.0000	SURCHARGED
120 minute winter	S3	122	1.351	0.629	23.2	64.0958	0.0000	SURCHARGED
120 minute winter	S4	124	0.718	0.029	0.9	0.0410	0.0000	OK
120 minute winter	S5	124	0.366	0.026	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute winter	S1	1.000	S2	9.2	0.555	0.217	1.4671	
120 minute winter	S2	1.001	S3	23.2	1.116	0.547	0.9452	
120 minute winter	S3	1.002	S4	0.9	0.366	0.076	0.0190	
120 minute winter	S4	1.003	S5	0.9	0.391	0.077	0.1911	55.5

Results for 100 year +40% CC 180 minute summer. 1620 minute analysis at 4 minute timestep. Mass balance: 99.92%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	S1	184	1.394	0.268	9.8	0.3828	0.0000	SURCHARGED
180 minute summer	S2	184	1.394	0.514	26.5	0.7351	0.0000	FLOOD RISK
180 minute summer	S3	184	1.394	0.672	25.7	69.1340	0.0000	SURCHARGED
180 minute summer	S4	188	0.718	0.029	0.9	0.0417	0.0000	OK
180 minute summer	S5	188	0.366	0.026	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
180 minute summer	S1	1.000	S2	9.8	0.550	0.231	1.4679	
180 minute summer	S2	1.001	S3	25.7	1.004	0.607	0.9452	
180 minute summer	S3	1.002	S4	0.9	0.369	0.079	0.0195	
180 minute summer	S4	1.003	S5	0.9	0.395	0.079	0.1959	60.5

Results for 100 year +40% CC 180 minute winter. 1620 minute analysis at 4 minute timestep. Mass balance: 99.87%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	S1	180	1.395	0.269	6.8	0.3851	0.0000	SURCHARGED
180 minute winter	S2	180	1.395	0.515	18.3	0.7372	0.0000	FLOOD RISK
180 minute winter	S3	180	1.395	0.673	17.2	69.2908	0.0000	SURCHARGED
180 minute winter	S4	184	0.718	0.029	0.9	0.0417	0.0000	OK
180 minute winter	S5	184	0.367	0.027	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
180 minute winter	S1	1.000	S2	6.8	0.509	0.161	1.4679	
180 minute winter	S2	1.001	S3	17.2	1.005	0.406	0.9452	
180 minute winter	S3	1.002	S4	0.9	0.369	0.079	0.0195	
180 minute winter	S4	1.003	S5	0.9	0.395	0.080	0.1960	60.5

Results for 100 year +40% CC 240 minute summer. 1680 minute analysis at 4 minute timestep. Mass balance: 99.95%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute summer	S1	244	1.422	0.296	8.2	0.4229	0.0000	SURCHARGED
240 minute summer	S2	244	1.422	0.542	22.1	0.7750	0.0000	FLOOD RISK
240 minute summer	S3	244	1.422	0.700	20.6	72.3903	0.0000	SURCHARGED
240 minute summer	S4	248	0.718	0.029	0.9	0.0421	0.0000	OK
240 minute summer	S5	248	0.367	0.027	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
240 minute summer	S1	1.000	S2	8.1	0.499	0.192	1.4679	
240 minute summer	S2	1.001	S3	20.6	0.930	0.486	0.9452	
240 minute summer	S3	1.002	S4	0.9	0.372	0.081	0.0198	
240 minute summer	S4	1.003	S5	0.9	0.397	0.081	0.1987	64.4

Results for 100 year +40% CC 240 minute winter. 1680 minute analysis at 4 minute timestep. Mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	S1	240	1.426	0.300	5.5	0.4293	0.0000	SURCHARGED
240 minute winter	S2	240	1.426	0.546	14.8	0.7815	0.0000	FLOOD RISK
240 minute winter	S3	240	1.426	0.704	14.1	72.9138	0.0000	SURCHARGED
240 minute winter	S4	240	0.718	0.029	0.9	0.0422	0.0000	OK
240 minute winter	S5	240	0.367	0.027	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
240 minute winter	S1	1.000	S2	5.5	0.475	0.130	1.4679	
240 minute winter	S2	1.001	S3	14.1	0.932	0.332	0.9452	
240 minute winter	S3	1.002	S4	0.9	0.372	0.081	0.0198	
240 minute winter	S4	1.003	S5	0.9	0.398	0.081	0.1992	64.6

Results for 100 year +40% CC 360 minute summer. 1800 minute analysis at 8 minute timestep. Mass balance: 99.92%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute summer	S1	360	1.455	0.329	6.2	0.4701	0.0000	SURCHARGED
360 minute summer	S2	360	1.454	0.574	16.6	0.8221	0.0000	FLOOD RISK
360 minute summer	S3	360	1.454	0.732	16.0	76.1964	0.0000	SURCHARGED
360 minute summer	S4	368	0.719	0.030	0.9	0.0426	0.0000	OK
360 minute summer	S5	368	0.367	0.027	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
360 minute summer	S1	1.000	S2	6.2	0.440	0.145	1.4679	
360 minute summer	S2	1.001	S3	16.0	0.859	0.377	0.9452	
360 minute summer	S3	1.002	S4	0.9	0.374	0.082	0.0201	
360 minute summer	S4	1.003	S5	0.9	0.400	0.083	0.2020	70.8

Results for 100 year +40% CC 360 minute winter. 1800 minute analysis at 8 minute timestep. Mass balance: 99.95%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	S1	352	1.459	0.333	4.0	0.4764	0.0000	SURCHARGED
360 minute winter	S2	352	1.459	0.579	10.9	0.8285	0.0000	FLOOD RISK
360 minute winter	S3	352	1.459	0.737	10.4	76.7350	0.0000	SURCHARGED
360 minute winter	S4	352	0.719	0.030	0.9	0.0427	0.0000	OK
360 minute winter	S5	360	0.367	0.027	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
360 minute winter	S1	1.000	S2	4.0	0.421	0.094	1.4679	
360 minute winter	S2	1.001	S3	10.4	0.840	0.246	0.9452	
360 minute winter	S3	1.002	S4	0.9	0.374	0.083	0.0202	
360 minute winter	S4	1.003	S5	0.9	0.401	0.083	0.2024	71.0

Results for 100 year +40% CC 480 minute summer. 1920 minute analysis at 8 minute timestep. Mass balance: 99.95%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute summer	S1	480	1.470	0.344	4.8	0.4920	0.0000	SURCHARGED
480 minute summer	S2	480	1.470	0.590	13.0	0.8440	0.0000	FLOOD RISK
480 minute summer	S3	480	1.470	0.748	12.6	77.9931	0.0000	SURCHARGED
480 minute summer	S4	480	0.719	0.030	0.9	0.0428	0.0000	OK
480 minute summer	S5	480	0.367	0.027	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute summer	S1	1.000	S2	4.8	0.408	0.113	1.4679	
480 minute summer	S2	1.001	S3	12.6	0.798	0.299	0.9452	
480 minute summer	S3	1.002	S4	0.9	0.375	0.083	0.0203	
480 minute summer	S4	1.003	S5	0.9	0.402	0.084	0.2035	76.2

Results for 100 year +40% CC 480 minute winter. 1920 minute analysis at 8 minute timestep. Mass balance: 99.95%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	S1	464	1.477	0.351	3.2	0.5021	0.0000	SURCHARGED
480 minute winter	S2	464	1.477	0.597	8.7	0.8542	0.0000	FLOOD RISK
480 minute winter	S3	464	1.477	0.755	8.5	78.8299	0.0000	SURCHARGED
480 minute winter	S4	472	0.719	0.030	0.9	0.0429	0.0000	OK
480 minute winter	S5	472	0.367	0.027	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute winter	S1	1.000	S2	3.2	0.381	0.076	1.4679	
480 minute winter	S2	1.001	S3	8.5	0.769	0.200	0.9452	
480 minute winter	S3	1.002	S4	0.9	0.376	0.084	0.0204	
480 minute winter	S4	1.003	S5	0.9	0.402	0.084	0.2042	76.6

Results for 100 year +40% CC 600 minute summer. 2040 minute analysis at 15 minute timestep. Mass balance: 99.93%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute summer	S1	600	1.474	0.348	3.9	0.4977	0.0000	SURCHARGED
600 minute summer	S2	600	1.474	0.594	10.5	0.8497	0.0000	FLOOD RISK
600 minute summer	S3	600	1.474	0.752	9.9	78.4686	0.0000	SURCHARGED
600 minute summer	S4	600	0.719	0.030	0.9	0.0429	0.0000	OK
600 minute summer	S5	600	0.367	0.027	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute summer	S1	1.000	S2	3.9	0.372	0.091	1.4679	
600 minute summer	S2	1.001	S3	9.9	0.736	0.235	0.9452	
600 minute summer	S3	1.002	S4	0.9	0.375	0.084	0.0203	
600 minute summer	S4	1.003	S5	0.9	0.402	0.084	0.2039	80.7

Results for 100 year +40% CC 600 minute winter. 2040 minute analysis at 15 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	S1	585	1.478	0.352	2.7	0.5035	0.0000	SURCHARGED
600 minute winter	S2	585	1.478	0.598	7.2	0.8555	0.0000	FLOOD RISK
600 minute winter	S3	585	1.478	0.756	6.9	78.9480	0.0000	SURCHARGED
600 minute winter	S4	585	0.719	0.030	0.9	0.0429	0.0000	OK
600 minute winter	S5	585	0.367	0.027	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute winter	S1	1.000	S2	2.7	0.360	0.064	1.4679	
600 minute winter	S2	1.001	S3	6.9	0.710	0.162	0.9452	
600 minute winter	S3	1.002	S4	0.9	0.376	0.084	0.0204	
600 minute winter	S4	1.003	S5	0.9	0.402	0.084	0.2043	80.8

Results for 100 year +40% CC 720 minute summer. 2160 minute analysis at 15 minute timestep. Mass balance: 99.96%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute summer	S1	645	1.470	0.344	3.4	0.4920	0.0000	SURCHARGED
720 minute summer	S2	645	1.470	0.590	9.3	0.8441	0.0000	FLOOD RISK
720 minute summer	S3	645	1.470	0.748	8.9	78.0079	0.0000	SURCHARGED
720 minute summer	S4	645	0.719	0.030	0.9	0.0428	0.0000	OK
720 minute summer	S5	645	0.367	0.027	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute summer	S1	1.000	S2	3.4	0.349	0.080	1.4679	
720 minute summer	S2	1.001	S3	8.9	0.703	0.209	0.9452	
720 minute summer	S3	1.002	S4	0.9	0.375	0.083	0.0203	
720 minute summer	S4	1.003	S5	0.9	0.402	0.084	0.2035	84.6

Results for 100 year +40% CC 720 minute winter. 2160 minute analysis at 15 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	S1	690	1.473	0.347	2.3	0.4960	0.0000	SURCHARGED
720 minute winter	S2	690	1.473	0.593	6.2	0.8480	0.0000	FLOOD RISK
720 minute winter	S3	690	1.473	0.751	6.0	78.3296	0.0000	SURCHARGED
720 minute winter	S4	690	0.719	0.030	0.9	0.0429	0.0000	OK
720 minute winter	S5	690	0.367	0.027	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute winter	S1	1.000	S2	2.3	0.353	0.054	1.4679	
720 minute winter	S2	1.001	S3	6.0	0.664	0.141	0.9452	
720 minute winter	S3	1.002	S4	0.9	0.375	0.083	0.0203	
720 minute winter	S4	1.003	S5	0.9	0.402	0.084	0.2038	84.6

Results for 100 year +40% CC 960 minute summer. 2400 minute analysis at 15 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute summer	S1	765	1.465	0.339	2.8	0.4848	0.0000	SURCHARGED
960 minute summer	S2	765	1.465	0.585	7.5	0.8369	0.0000	FLOOD RISK
960 minute summer	S3	765	1.465	0.743	7.2	77.4183	0.0000	SURCHARGED
960 minute summer	S4	765	0.719	0.030	0.9	0.0428	0.0000	OK
960 minute summer	S5	765	0.367	0.027	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
960 minute summer	S1	1.000	S2	2.8	0.338	0.066	1.4679	
960 minute summer	S2	1.001	S3	7.2	0.658	0.171	0.9452	
960 minute summer	S3	1.002	S4	0.9	0.375	0.083	0.0202	
960 minute summer	S4	1.003	S5	0.9	0.401	0.084	0.2030	92.1

Results for 100 year +40% CC 960 minute winter. 2400 minute analysis at 15 minute timestep. Mass balance: 99.95%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	S1	780	1.460	0.334	1.8	0.4786	0.0000	SURCHARGED
960 minute winter	S2	780	1.460	0.580	4.9	0.8306	0.0000	FLOOD RISK
960 minute winter	S3	780	1.460	0.738	4.8	76.9064	0.0000	SURCHARGED
960 minute winter	S4	780	0.719	0.030	0.9	0.0427	0.0000	OK
960 minute winter	S5	780	0.367	0.027	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
960 minute winter	S1	1.000	S2	1.8	0.318	0.043	1.4679	
960 minute winter	S2	1.001	S3	4.8	0.628	0.112	0.9452	
960 minute winter	S3	1.002	S4	0.9	0.374	0.083	0.0202	
960 minute winter	S4	1.003	S5	0.9	0.401	0.083	0.2026	91.9

Results for 100 year +40% CC 1440 minute summer. 2880 minute analysis at 30 minute timestep. Mass balance: 99.95%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute summer	S1	1020	1.438	0.312	1.9	0.4469	0.0000	SURCHARGED
1440 minute summer	S2	1020	1.438	0.558	5.2	0.7989	0.0000	FLOOD RISK
1440 minute summer	S3	1020	1.438	0.716	5.0	74.3167	0.0000	SURCHARGED
1440 minute summer	S4	1020	0.719	0.030	0.9	0.0424	0.0000	OK
1440 minute summer	S5	1020	0.367	0.027	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
1440 minute summer	S1	1.000	S2	1.9	0.296	0.045	1.4679	
1440 minute summer	S2	1.001	S3	5.0	0.543	0.118	0.9452	
1440 minute summer	S3	1.002	S4	0.9	0.373	0.081	0.0200	
1440 minute summer	S4	1.003	S5	0.9	0.399	0.082	0.2004	103.5

Results for 100 year +40% CC 1440 minute winter. 2880 minute analysis at 30 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	S1	1080	1.434	0.308	1.3	0.4411	0.0000	SURCHARGED
1440 minute winter	S2	1080	1.434	0.554	3.5	0.7931	0.0000	FLOOD RISK
1440 minute winter	S3	1080	1.434	0.712	3.4	73.8367	0.0000	SURCHARGED
1440 minute winter	S4	1110	0.719	0.030	0.9	0.0423	0.0000	OK
1440 minute winter	S5	1110	0.367	0.027	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
1440 minute winter	S1	1.000	S2	1.3	0.296	0.031	1.4679	
1440 minute winter	S2	1.001	S3	3.4	0.529	0.080	0.9452	
1440 minute winter	S3	1.002	S4	0.9	0.373	0.081	0.0199	
1440 minute winter	S4	1.003	S5	0.9	0.398	0.082	0.2000	103.6

Results for 100 year +40% CC 2160 minute summer. 3600 minute analysis at 60 minute timestep. Mass balance: 99.96%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
2160 minute summer	S1	1440	1.392	0.266	1.3	0.3804	0.0000	SURCHARGED
2160 minute summer	S2	1440	1.392	0.512	3.6	0.7324	0.0000	FLOOD RISK
2160 minute summer	S3	1440	1.392	0.670	3.4	68.8865	0.0000	SURCHARGED
2160 minute summer	S4	1440	0.718	0.029	0.9	0.0416	0.0000	OK
2160 minute summer	S5	1440	0.366	0.026	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
2160 minute summer	S1	1.000	S2	1.3	0.262	0.031	1.4679	
2160 minute summer	S2	1.001	S3	3.4	0.394	0.081	0.9452	
2160 minute summer	S3	1.002	S4	0.9	0.369	0.079	0.0195	
2160 minute summer	S4	1.003	S5	0.9	0.395	0.079	0.1957	115.5

Results for 100 year +40% CC 2160 minute winter. 3600 minute analysis at 60 minute timestep. Mass balance: 99.96%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
2160 minute winter	S1	1560	1.386	0.260	0.9	0.3717	0.0000	SURCHARGED
2160 minute winter	S2	1560	1.386	0.506	2.5	0.7237	0.0000	SURCHARGED
2160 minute winter	S3	1560	1.386	0.664	2.4	68.1724	0.0000	SURCHARGED
2160 minute winter	S4	1560	0.718	0.029	0.9	0.0415	0.0000	OK
2160 minute winter	S5	1560	0.366	0.026	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
2160 minute winter	S1	1.000	S2	0.9	0.262	0.021	1.4679	
2160 minute winter	S2	1.001	S3	2.4	0.455	0.057	0.9452	
2160 minute winter	S3	1.002	S4	0.9	0.369	0.078	0.0194	
2160 minute winter	S4	1.003	S5	0.9	0.394	0.079	0.1950	118.5

Results for 100 year +40% CC 2880 minute summer. 4320 minute analysis at 60 minute timestep. Mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
2880 minute summer	S1	1860	1.340	0.214	1.1	0.3060	0.0000	OK
2880 minute summer	S2	1860	1.340	0.460	2.9	0.6580	0.0000	SURCHARGED
2880 minute summer	S3	1860	1.340	0.618	2.8	62.8093	0.0000	SURCHARGED
2880 minute summer	S4	1860	0.718	0.029	0.8	0.0408	0.0000	OK
2880 minute summer	S5	1860	0.366	0.026	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
2880 minute summer	S1	1.000	S2	1.1	0.262	0.026	1.4540	
2880 minute summer	S2	1.001	S3	2.8	0.394	0.067	0.9452	
2880 minute summer	S3	1.002	S4	0.8	0.364	0.075	0.0189	
2880 minute summer	S4	1.003	S5	0.8	0.390	0.076	0.1898	125.2

Results for 100 year +40% CC 2880 minute winter. 4320 minute analysis at 60 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
2880 minute winter	S1	1980	1.308	0.182	0.7	0.2608	0.0000	OK
2880 minute winter	S2	1980	1.308	0.428	1.9	0.6129	0.0000	SURCHARGED
2880 minute winter	S3	1980	1.308	0.586	1.8	59.1173	0.0000	SURCHARGED
2880 minute winter	S4	1980	0.717	0.028	0.8	0.0403	0.0000	OK
2880 minute winter	S5	1980	0.365	0.025	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
2880 minute winter	S1	1.000	S2	0.7	0.250	0.017	1.3700	
2880 minute winter	S2	1.001	S3	1.8	0.457	0.044	0.9452	
2880 minute winter	S3	1.002	S4	0.8	0.361	0.073	0.0186	
2880 minute winter	S4	1.003	S5	0.8	0.388	0.074	0.1861	124.1

Results for 100 year +40% CC 4320 minute summer. 5760 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
4320 minute summer	S1	2640	1.269	0.143	0.8	0.2045	0.0000	OK
4320 minute summer	S2	2640	1.269	0.389	2.1	0.5565	0.0000	SURCHARGED
4320 minute summer	S3	2640	1.269	0.547	2.0	54.5297	0.0000	SURCHARGED
4320 minute summer	S4	2640	0.717	0.028	0.8	0.0396	0.0000	OK
4320 minute summer	S5	2640	0.365	0.025	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
4320 minute summer	S1	1.000	S2	0.8	0.250	0.019	1.2246	
4320 minute summer	S2	1.001	S3	2.0	0.387	0.048	0.9452	
4320 minute summer	S3	1.002	S4	0.8	0.358	0.071	0.0181	
4320 minute summer	S4	1.003	S5	0.8	0.384	0.071	0.1812	137.5

Results for 100 year +40% CC 4320 minute winter. 5760 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
4320 minute winter	S1	2820	1.213	0.087	0.5	0.1241	0.0000	OK
4320 minute winter	S2	2820	1.213	0.333	1.3	0.4761	0.0000	SURCHARGED
4320 minute winter	S3	2820	1.213	0.491	1.3	49.4475	0.0000	SURCHARGED
4320 minute winter	S4	2820	0.716	0.027	0.8	0.0386	0.0000	OK
4320 minute winter	S5	2820	0.364	0.024	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
4320 minute winter	S1	1.000	S2	0.5	0.238	0.012	0.9941	
4320 minute winter	S2	1.001	S3	1.3	0.394	0.030	0.9452	
4320 minute winter	S3	1.002	S4	0.8	0.352	0.067	0.0174	
4320 minute winter	S4	1.003	S5	0.8	0.378	0.067	0.1738	137.8

Results for 100 year +40% CC 5760 minute summer. 7200 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
5760 minute summer	S1	3420	1.173	0.047	0.6	0.0672	0.0000	OK
5760 minute summer	S2	3420	1.173	0.293	1.6	0.4192	0.0000	SURCHARGED
5760 minute summer	S3	3420	1.173	0.451	1.5	47.2768	0.0000	SURCHARGED
5760 minute summer	S4	3420	0.715	0.026	0.7	0.0378	0.0000	OK
5760 minute summer	S5	3420	0.364	0.024	0.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
5760 minute summer	S1	1.000	S2	0.6	0.238	0.014	0.8444	
5760 minute summer	S2	1.001	S3	1.5	0.418	0.036	0.9452	
5760 minute summer	S3	1.002	S4	0.7	0.347	0.064	0.0168	
5760 minute summer	S4	1.003	S5	0.7	0.373	0.065	0.1683	145.8

Results for 100 year +40% CC 5760 minute winter. 7200 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
5760 minute winter	S1	2700	1.142	0.016	0.4	0.0223	0.0000	OK
5760 minute winter	S2	3660	1.092	0.212	1.1	0.3029	0.0000	OK
5760 minute winter	S3	3660	1.092	0.370	1.1	42.6655	0.0000	SURCHARGED
5760 minute winter	S4	3660	0.714	0.025	0.6	0.0360	0.0000	OK
5760 minute winter	S5	3660	0.362	0.022	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
5760 minute winter	S1	1.000	S2	0.4	0.223	0.009	0.7333	
5760 minute winter	S2	1.001	S3	1.1	0.394	0.025	0.9335	
5760 minute winter	S3	1.002	S4	0.6	0.337	0.058	0.0156	
5760 minute winter	S4	1.003	S5	0.6	0.363	0.058	0.1563	144.6

Results for 100 year +40% CC 7200 minute summer. 8640 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
7200 minute summer	S1	3600	1.143	0.017	0.5	0.0246	0.0000	OK
7200 minute summer	S2	4260	1.094	0.214	1.3	0.3065	0.0000	OK
7200 minute summer	S3	4260	1.094	0.372	1.3	42.9564	0.0000	SURCHARGED
7200 minute summer	S4	4260	0.714	0.025	0.7	0.0360	0.0000	OK
7200 minute summer	S5	4260	0.362	0.022	0.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
7200 minute summer	S1	1.000	S2	0.5	0.238	0.012	0.7383	
7200 minute summer	S2	1.001	S3	1.3	0.349	0.030	0.9366	
7200 minute summer	S3	1.002	S4	0.7	0.337	0.058	0.0157	
7200 minute summer	S4	1.003	S5	0.7	0.363	0.058	0.1566	148.3

Results for 100 year +40% CC 7200 minute winter. 8640 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
7200 minute winter	S1	3120	1.140	0.014	0.3	0.0195	0.0000	OK
7200 minute winter	S2	4440	1.027	0.147	0.8	0.2106	0.0000	OK
7200 minute winter	S3	4440	1.027	0.305	0.8	35.2199	0.0000	SURCHARGED
7200 minute winter	S4	4440	0.713	0.024	0.6	0.0342	0.0000	OK
7200 minute winter	S5	4440	0.361	0.021	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
7200 minute winter	S1	1.000	S2	0.3	0.223	0.007	0.5210	
7200 minute winter	S2	1.001	S3	0.8	0.394	0.019	0.7994	
7200 minute winter	S3	1.002	S4	0.6	0.328	0.052	0.0145	
7200 minute winter	S4	1.003	S5	0.6	0.352	0.053	0.1455	150.6

Results for 100 year +40% CC 8640 minute summer. 10080 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
8640 minute summer	S1	4200	1.142	0.016	0.4	0.0223	0.0000	OK
8640 minute summer	S2	4920	1.057	0.177	1.1	0.2532	0.0000	OK
8640 minute summer	S3	4920	1.057	0.335	1.1	38.6604	0.0000	SURCHARGED
8640 minute summer	S4	4920	0.714	0.025	0.6	0.0351	0.0000	OK
8640 minute summer	S5	4920	0.362	0.022	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
8640 minute summer	S1	1.000	S2	0.4	0.223	0.009	0.6324	
8640 minute summer	S2	1.001	S3	1.1	0.349	0.025	0.8708	
8640 minute summer	S3	1.002	S4	0.6	0.332	0.055	0.0151	
8640 minute summer	S4	1.003	S5	0.6	0.358	0.055	0.1506	151.3

Results for 100 year +40% CC 8640 minute winter. 10080 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
8640 minute winter	S1	4020	1.140	0.014	0.3	0.0195	0.0000	OK
8640 minute winter	S2	5160	0.992	0.112	0.8	0.1608	0.0000	OK
8640 minute winter	S3	5160	0.992	0.270	0.8	31.2105	0.0000	SURCHARGED
8640 minute winter	S4	5160	0.712	0.023	0.5	0.0332	0.0000	OK
8640 minute winter	S5	5160	0.361	0.021	0.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
8640 minute winter	S1	1.000	S2	0.3	0.224	0.007	0.3791	
8640 minute winter	S2	1.001	S3	0.8	0.394	0.018	0.7081	
8640 minute winter	S3	1.002	S4	0.5	0.322	0.049	0.0139	
8640 minute winter	S4	1.003	S5	0.5	0.345	0.049	0.1390	149.4

Results for 100 year +40% CC 10080 minute summer. 11520 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
10080 minute summer	S1	5040	1.142	0.016	0.4	0.0223	0.0000	OK
10080 minute summer	S2	5760	1.021	0.141	1.0	0.2022	0.0000	OK
10080 minute summer	S3	5760	1.021	0.299	1.0	34.5453	0.0000	SURCHARGED
10080 minute summer	S4	5760	0.713	0.024	0.6	0.0341	0.0000	OK
10080 minute summer	S5	5760	0.361	0.021	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
10080 minute summer	S1	1.000	S2	0.4	0.223	0.009	0.4977	
10080 minute summer	S2	1.001	S3	1.0	0.349	0.023	0.7845	
10080 minute summer	S3	1.002	S4	0.6	0.327	0.052	0.0144	
10080 minute summer	S4	1.003	S5	0.6	0.351	0.052	0.1444	155.6

Results for 100 year +40% CC 10080 minute winter. 11520 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
10080 minute winter	S1	3900	1.137	0.011	0.2	0.0161	0.0000	OK
10080 minute winter	S2	6300	0.946	0.066	0.6	0.0947	0.0000	OK
10080 minute winter	S3	6300	0.946	0.224	0.6	25.8739	0.0000	SURCHARGED
10080 minute winter	S4	6300	0.711	0.022	0.5	0.0316	0.0000	OK
10080 minute winter	S5	6300	0.360	0.020	0.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
10080 minute winter	S1	1.000	S2	0.2	0.193	0.005	0.1929	
10080 minute winter	S2	1.001	S3	0.6	0.394	0.014	0.5876	
10080 minute winter	S3	1.002	S4	0.5	0.312	0.044	0.0129	
10080 minute winter	S4	1.003	S5	0.5	0.334	0.045	0.1297	150.9