C1876/RBG/2026127

30/06/2026

Application number: 143777/FO/2025

bzarkhosh@sgiconsulting.co.uk
www.shepherd-gilmour.co.uk
--
T (44)0161 837 1513
--
3rd Floor
Phoenix House
Cross Street
Manchester M2 4JF

Julie Roscoe
Director of Planning, Building Control and Licensing
Manchester City Council
PO Box 532
Town Hall
Manchester
M60 2LA

Dear Julie,

**Re: Erection of six residential blocks, following demolition of existing buildings and structures, to provide a total of 212 dwellings (Use Class C3) comprising: one 10-storey building accommodating 86 apartments; four buildings of 5 to 6 storeys (including attic storeys) accommodating a total of 119 apartments; and 7 three-storey townhouses; together with ancillary communal facilities, associated access, car and cycle parking, refuse storage, landscaping, amenity space, signage, and other associated works**

This Technical Note has been prepared in support of the discharge of Planning Condition no 8 relating to the proposed surface water drainage strategy.

The proposed drainage design has been developed in accordance with:

- Non-Statutory Technical Standards for Sustainable Drainage Systems (March 2015);
- Manchester, Trafford and Salford Strategic Flood Risk Assessment;
- CIRIA SuDS Manual (C753);
- Manchester City Council Surface Water Drainage Guidance; and
- Relevant United Utilities design requirements.

This submission should be read alongside the accompanying drainage drawings, hydraulic calculations and supporting information.

The following documents accompany this submission:

- Proposed Surface Water Drainage Layout
- Hydraulic Calculations
- Surface Water Exceedance Plan
- Flow Control and SuDS Construction Details
- CCTV Drainage Survey

ace consultancy engineering business environment member

Registered in UK as Shepherd Gilmour Infrastructure Ltd. No. 2713508
Registered address: Maxwell House, Liverpool Innovation Park, Edge Lane, Liverpool L7 9NJ

- United Utilities Correspondence
- Easement Plan

## 1. Existing Site Drainage

The site is an existing brownfield site with an established drainage network.

As part of the detailed design, a CCTV survey was undertaken to confirm the existing drainage arrangement and identify the point of discharge.

The survey traced the existing drainage network through the accessible chambers and pipework and confirmed that the existing brownfield site drainage discharges into the United Utilities public sewer network. No evidence of alternative discharge routes, such as soakaways, watercourses or private drainage systems, was identified.

The proposed drainage strategy was submitted to United Utilities as part of a Pre-Development Enquiry. Following their review, United Utilities confirmed that they have no objection in principle to the proposed surface water discharge, subject to confirmation of the existing drainage connection to their public sewer. The CCTV survey has been undertaken to satisfy this requirement and confirms that the existing drainage from the site is conveyed to the United Utilities sewer network.

In accordance with Manchester City Council's requirements, the proposed discharge rate has been calculated using a hybrid approach that reflects the existing site conditions. The existing developed (brownfield) area has been assessed using the current brownfield runoff rate with the required 50% betterment applied, whilst the remaining undeveloped areas have been assessed using greenfield runoff rates. This provides an appropriate restricted discharge rate for the redevelopment and aligns with the principles agreed with United Utilities during the Pre-Development Enquiry.

The hydraulic calculations, CCTV survey and survey findings drawings are appended to this submission. Together, these documents demonstrate the existing drainage arrangement, justify the proposed discharge rate and provide the information requested by United Utilities in support of the proposed connection.

Appendices:

- C1876-SK100 CCTV Connection Review
- EN25167 MSV Moss Side - CCTV Report
- SW Discharge Rate Calculations

## 2. Proposed Surface Water Discharge

Surface water runoff from the proposed development will discharge to the existing public combined sewer utilising the established drainage connection currently serving the site.

United Utilities have provided agreement in principle to accept the proposed discharge, subject to confirmation that the existing on-site drainage connects to their public sewer network.

The CCTV investigation undertaken as part of the drainage design has demonstrated that the existing drainage network appears to discharge to the United Utilities sewer system. The survey identified continuous downstream connectivity from the site drainage with no evidence of an alternative receiving system.

The United Utilities correspondence confirming agreement in principle is included within the appendices.

Appendices:

- United Utilities email correspondence

## 3. Surface Water Attenuation

The site is partially classified as previously developed (brownfield) land.

In accordance with the Manchester, Trafford and Salford Strategic Flood Risk Assessment, the proposed drainage system incorporates attenuation storage to significantly reduce runoff rates from the site.

The system has been designed to provide a minimum 50% betterment over the existing brownfield runoff rate, with discharge restricted as close as reasonably practicable towards the equivalent greenfield runoff rate.

Surface water discharge is controlled via a hydrobrake flow control located within the proposed drainage network.

Attenuation storage has been sized to accommodate the required design storm events while ensuring compliance with the relevant drainage standards.

Appendices:

- C1876-002-001-P07-Proposed Drainage Layout
- C1876-002-002-P07-Proposed Drainage Layout
- C1876-002-014-P01-Typical Attenuation Tank Details

## 4. Proposed Drainage Layout

The accompanying drainage layout drawing illustrates the complete proposed drainage network, including:

- Proposed surface water pipework;
- Pipe diameters, gradients and materials;
- Inspection chambers;
- Flow control chamber;
- Attenuation storage;
- Existing and proposed drainage connectivity;
- Finished cover levels and invert levels; and
- Final outfall arrangement.

The drainage layout demonstrates a fully connected drainage network designed in accordance with current industry standards.

Appendices:

- C1876-002-001-P07-Proposed Drainage Layout
- C1876-002-002-P07-Proposed Drainage Layout
- C1876-002-009-P01-Proposed Drainage Details
- Hydrobrake Details

## 5. Hydraulic Design

Hydraulic modelling has been undertaken using industry standard drainage modelling software.

The drainage system has been assessed for the following critical storm events:

- 1 in 2 year rainfall event;
- 1 in 30 year rainfall event; and
- 1 in 100 year rainfall event including a 45% allowance for climate change.

The modelling demonstrates that:

- No surcharge occurs during the 1 in 2 year event;
- No flooding occurs during the 1 in 30 year event; and
- No flooding of buildings occurs during the 1 in 100 year plus 45% climate change event.

The accompanying hydraulic calculations demonstrate compliance with the Non-Statutory Technical Standards for Sustainable Drainage Systems.

Appendices:

- Hydraulic Calculations

## 6. Exceedance Flow Routing

An exceedance flow plan has been prepared illustrating the routing of overland flows during rainfall events exceeding the design capacity of the drainage network.

The proposed site levels direct exceedance flows away from existing and proposed buildings and safely convey surface water through external hard landscaped areas, ensuring that flood risk to property is not increased.

The exceedance routing has been considered as part of the overall drainage design and provides a safe management strategy for extreme rainfall events.

Appendices:

- C1876-002-007-P01-Overland Flow Route

## 7. Sustainable Drainage Components

The proposed drainage system incorporates sustainable drainage measures comprising:

- Flow control chamber;
- Attenuation storage;
- Surface water drainage network providing conveyance and storage.

Construction details for all drainage components, including the flow control chamber and attenuation system, are included within the accompanying engineering drawings.

## 8. Easements and Future Maintenance

The drainage layout has been designed to ensure appropriate access for future inspection, maintenance and repair.

Drainage infrastructure has been positioned to maintain:

- A minimum 2.5 m easement from the adopted highway where applicable; and
- A minimum 5 m offset from residential buildings where practicable.

These arrangements are consistent with the recommendations contained within CIRIA C753 and ensure adequate access for future maintenance and contingency works.

The submitted easement drawing identifies maintenance corridors and access arrangements.

Appendices:

- C1876-002-016-P01-Proposed Easement Layout

## 9. Conclusion

This submission demonstrates that the proposed surface water drainage strategy has been designed in accordance with the requirements of the planning condition and relevant national and local guidance.

The submitted information includes:

- Agreement in principle from United Utilities for the proposed discharge to the public sewer.
- CCTV survey evidence demonstrating that the existing drainage network serving the site exhibits continuous downstream connectivity consistent with discharge to the United Utilities sewer network.
- Surface water attenuation providing at least a 50% betterment in runoff rate over the existing brownfield condition.
- A fully detailed drainage layout.
- Hydraulic calculations demonstrating satisfactory performance for the 1 in 2, 1 in 30 and 1 in 100 year plus 45% climate change events.
- Surface water exceedance routing.
- Construction details for the proposed flow control and SuDS components.

- Easement arrangements to facilitate long-term maintenance.

It is therefore considered that sufficient information has been provided to demonstrate compliance with the requirements of the planning condition, and it is respectfully requested that the condition relating to the submission of the surface water drainage scheme be discharged.

# APPENDIX

## Renata Bochenek-Gasiorkiewicz

**From:** seweradoptions@uuplc.co.uk
**Sent:** 15 April 2025 15:29
**To:** Renata Bochenek-Gasiorkiewicz
**Cc:** Phillip Makinde-Barth
**Subject:** RE: FW: C1876 - UU REF 07174355- Pre dev-CA28 Barnhill Street, Manchester

**Caution:** Email originated from outside the SGi Network.

Good Afternoon Renata

I hope you're well

Are you able to provide an existing drainage plan for the brownfield portion of the development?

Kind Regards
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United Utilities
Water for the North West

**Conor Donaghy**
Developer Engineer
Developer Services & Metering
**T:** 01925 429097
unitedutilities.com

---------- Original Message ----------
**From:** seweradoptions@uuplc.co.uk [seweradoptions@uuplc.co.uk]
**Sent:** 15/04/2025 10:32
**To:** renata@sgiconsulting.co.uk
**Cc:** pmakinde@sgiconsulting.co.uk
**Subject:** RE: FW: C1876 - UU REF 07174355- Pre dev-CA28 Barnhill Street, Manchester

Good morning,

Thank you for your contact regarding: Pre dev-CA28 Barnhill Street, Manchester

I can confirm I have sent your query over to Conor, who is aiming to respond on or before 1 May 2025.

Please note, the timescales may seem longer due to bank holidays.

I trust the information provided has been of assistance.

Many Thanks

**Sewer Adoptions Mailbox**
Developer Services & Metering
**T:** 0345 072 6067
unitedutilities.com

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## Renata Bochenek-Gasiorkiewicz

**From:** Renata Bochenek-Gasiorkiewicz
**Sent:** 15 April 2025 09:07
**To:** seweradoptions@uuplc.co.uk
**Cc:** Phillip Makinde-Barth
**Subject:** FW: C1876 - UU REF 07174355- Pre dev-CA28 Barnhill Street, Manchester
**Attachments:** Barnhill Street, Manchester, M14 4SY PDE - 18.03.25.pdf; PDE Guidance.pdf; SW Discharge rate calculation.docx; C1876-001-P01-Existing Site Analysis.pdf

Good Morning Conor,

In response to your advice on the discharge rate for the post development SW run off, we have carried out hydraulic calculations to establish the current flows and the proposed rate post-development that includes the required 50% betterment.

The total size of the site is 0.6452 ha with the majority of the site (0.5616 ha) is classed as Greenfield. The small parcel at the south east corner of the site is currently built over with the occupied residential dwellings and is classed as brownfield.

We have carried out the hydraulic calculations based on the catchment area and size of the private drainage pipes to assess the current runoff from the brownfield area – please see the attached calculation sheet.

We established that the total flow from the site is as below:

1. Greenfield Area – 3.2l/s
2. Brownfield Area – 17 l/s

Therefore, the proposed discharge rate for the post-development SW run-off is as follow:

1. Greenfield Area - 3.2l/s
2. Brownfield Area with 50% betterment – 8.5 l/s

The total discharge rate proposed for the site is 3.2l/s + 8.5l/s = **11.7 l/s**

Could you please advise if you agree with the approach and we can use the 11.7 l/s discharge rate for the proposed development?

Kind regards,

**Renata Bochenek-Gasiorkiewicz**
**Associate Civil Director**

**T:** (44) 0161 837 1500

Consulting Engineers




**From:** seweradoptions@uuplc.co.uk <seweradoptions@uuplc.co.uk>
**Sent:** 18 March 2025 09:38
**To:** Nikola Urbaczka <nurbaczka@sgiconsulting.co.uk>
**Subject:** RE: UU REF 07174355- Pre dev-CA28 Barnhill Street, Manchester

**Caution:** Email originated from outside the SGi Network.

Good Morning Nikola

I hope you're well

Thank you for your Pre-Development application, please find the Pre-Development response attached which contains information such as discharge rates and connection points.

If I can be of any further assistance please do get in touch.

Kind Regards
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United Utilities
Water for the North West

**Conor Donaghy**
Developer Engineer
Developer Services & Metering
**T:** 01925 429097
unitedutilities.com

---------- Original Message ----------
**From:** seweradoptions@uuplc.co.uk [seweradoptions@uuplc.co.uk]
**Sent:** 13/03/2025 09:45
**To:** nurbaczka@sgiconsulting.co.uk

**Subject:** UU REF 07174355- Pre dev-CA28 Barnhill Street, Manchester

Good Morning,

**PRE DEVELOPMENT APPLICATION AT: – UU Ref 07174355**

Please accept this email as receipt of your application received on **12/03/2025** for the above development. This has now been logged on our system and the job reference is **07174355** we would ask that you quote this reference in all future correspondence.

I have reviewed your application (and attachments) and can confirm this is suitable to be passed to **Conor Donaghy** for technical assessment. His contact number is **01925 429097** You will receive their response before the **26/03/2025**
Kind regards


United Utilities
Water for the North West

**Luke Fearn**
Customer Service Advanced
Developer Services & Metering
Customer Services
unitedutilities.com
**Tel:** 0345 026 8989 option 4



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---------- Original Message ----------
**From:** [donotreply@uu-web.co.uk]
**Sent:** 12/03/2025 09:56
**To:** seweradoptions@uuplc.co.uk; webmaster@uuplc.co.uk
**Subject:** Wastewater Pre-Development Enquiry Submission

| Question | Answer |
|---|---|
| **Section 1 - Your Details** | |
| Developer/Consultant/Land owner/Other | Consultant |
| Name | Nikola Urbaczka |
| Company Name | SGi Consulting Engineers |
| Address | 3rd Floor, Phoenix House 45 Cross Street Manchester M2 4JF |
| Contact Number | 01618371519 |
| Email Address | nurbaczka@sgiconsulting.co.uk |
| **Section 2 - Development Details** | |
| Do you intend to offer any of the sewers for adoption by United Utilities under S104? | No |
| Site Address | Barnhill Street, Manchester M14 4SY |

| Question | Answer |
|---|---|
| Site Postcode | #Development postcode# |
| Site Name | Moss Side Site 1 |
| Grid Reference Number | SJ 83865 95775 |
| Development Type | Residential |
| Approx. Number Units | 215 |
| Total Site Area (hectares) | 0.65 |
| Does this site have planning permission? | No |
| Planning Reference Number | |
| Council Area | Manchester |
| Have you approached us about this site previously? | No |
| If yes, please provide reference number | |
| Is the development part of a larger site that will be developed in phases? | No |
| Location Plan | C1876-100 - Site Location Plan.pdf |

**Section 3: Previous Land Use**

| | |
|---|---|
| Please confirm what the land was previously used for: | Greenfield |
| Brownfield evidence of positive drainage to the public sewer | |

**Section 4 - Drainage Strategy**

| | |
|---|---|
| Foul connection: How are you proposing to drain foul flows from the site? | Via a new connection to the public sewer |
| Via an existing connection to the public sewer? | No |
| Surface water connection: How are you proposing to drain your site, following the surface water hierarchy, as outlined in National Planning Policy Guidance? | Combined sewer |
| SuDS: Have SuDS features been considered in the surface water drainage strategy? | Yes |

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# Pre Development Enquiry Guidance

**Version 1 (September 24)**

**(This document should be read in conjunction with PDE response letter)**

United Utilities
Water for the North West

| Comment no. | Technical Guidance |
|---|---|
| **General Guidance** | |
| **1** | **Sewer Access**<br><br>If your investigations require access to our public sewer network, we ask that you contact our network engineers with a request for an access certificate via our main contact telephone number 0345 6723 723 or refer to the link below:<br><br>https://www.unitedutilities.com/builders-developers/working-near-our-assets/<br><br>**Sewer Adoption Under S104**<br><br>If you intend to offer sewers for adoption, design per current Design and Construction and local practices which have now replaced Sewers for Adoption 6th Edition..<br><br>**S104 Pre-Design Assessment**<br><br>We recommend submitting a pre-design assessment. This is a free service to discuss the high level design and potential challenges. Please see link to application form in guidance sheet.<br><br>**Adoption of Sewers**<br><br>• Designs must comply with current Design & Construction Guidance.<br>• S104 1b Pre-design assessment, and S104 for adoption of new sewers applications can be found at Sewer adoptions - United Utilities<br>• Submit pre-design assessment to SewerAdoptions@uuplc.co.uk.<br>• No construction should commence until detailed design is approved in writing.<br><br>**Sewer Connections:**<br><br>• Formal S106 application required for sewer connections. Application details available at: www.unitedutilities.com/builders-developers/wastewater-services/sewer-connections/<br><br>**Water Assets**<br>• Contact DeveloperServicesWater@uuplc.co.uk regarding clean water assets on site.<br>• Further information: Water pre-development - United Utilities<br><br>**Additional Considerations**<br>• Land drainage, overland flows, and track drainage are not accepted into public sewer network.<br><br>**Useful Resources:**<br>• Codes for Adoption: www.water.org.uk/technical-guidance/developers-services/codes-for-adoption/<br>• Design & Construction Guidance: www.water.org.uk/sewerage-sector-guidance-approved-documents/<br>• United Utilities website: www.unitedutilities.com/builders-developers/<br><br>**Contact Information:**<br>• Main contact number: 0345 6723 723<br>• Sewer Adoptions and Pre-Development: SewerAdoptions@uuplc.co.uk |
| **2** | **Flooding Events**<br><br>Please note that United Utilities Water Limited (UUW) can only record and check flooding events which are reported to us, and we must comply with our Regulators instructions on the qualification of flooding events.<br><br>Our response does not include:<br><br>• any sewer flooding events caused by blockages or collapses which are the result of third-party actions, natural events, or other actions over which UUW has no control and not a facet of sewer capacity; or<br>• any historical sewer flooding events that have been resolved from investment in our infrastructure. |

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| | |
|---|---|
| | **Further consideration.**<br><br>• For low-lying sites, care should be taken to ensure that the property is not at increased risk of flooding. It could affect the detailed design of your site and result in the need to incorporate appropriate mitigating measures in your drainage scheme.<br>• Consult Lead Local Flood Authority (LLFA) for surface water drainage concerns.<br>• Check Environment Agency guidelines if site is in a Groundwater Source Protection Zone. |
| **3** | **Asset Protection**<br><br>• Due to the accuracy of the records and the public sewer transfer legislation in 2011, not all public sewers are shown on our records. We ask that you proceed with caution and conduct adequate site investigation works. If any uncharted sewers are identified while conducting your investigation, we ask that you contact United Utilities at the earliest opportunity so that we can offer guidance and update our records.<br>• Obtain asset data records before planning development United Utilities - Property Search :<br>• Please be aware that any proposed diversion may require modelling. This process may take up to 6 months to reach an acceptable design.<br>• Maintain minimum easement in line with our easement local practice, unless there is a formal easement in place, in which case the specified easement width would apply. easement-local-practice.pdf (unitedutilities.com)<br>• Contact United Utilities for guidance on work near assets or if diversion is necessary. |
| **4** | **Surface Water Drainage Hierarchy**<br><br>Follow the hierarchy as per National Planning Practice Guidance:<br>**1.** Infiltration<br>**2.** Discharge to waterbody<br>**3.** Discharge to surface water sewer or highway drain<br>**4.** Discharge to combined sewer (last resort)<br><br>For guidance, The Northwest SuDS Pro-Forma provides information on the appropriate evidence required at each stage of the hierarchy, to demonstrate how each level has been discounted.<br>The Lead Local Flood Authority has responsibility for all surface water drainage concerns and their input to your proposal is critical. You should also consider whether it is necessary to discuss your proposal with the Environment Agency, or Internal Drainage Board (if operating in your area).<br><br>The Local Planning Authority are the determining authority for any application for planning permission and the appropriate authority for determining the cost viability of a proposed drainage scheme, such assessments are outside of the jurisdiction of United Utilities.<br><br>**SuDS (Sustainable Drainage Systems)**<br>• Prioritise multi-functional SuDS in accordance with national planning policy.<br>• Design SuDS components as per CIRIA SuDS Manual (C753).<br>• Consult the North West SuDS Pro-Forma for required evidence at each stage of the drainage hierarchy.<br><br>**Infiltration**<br>Surface water runoff generated from this development should discharge to the ground via infiltration system where feasible.<br>A detailed evidence-based feasibility assessment must be carried out in line with Chapter 25 of the CIRIA SuDS Manual 2015 to determine whether infiltration is a suitable method of surface water disposal.<br>Particular attention must be paid to Ground Water Source Protection Zones to ensure that the risk of pollution to these valuable resources is not compromised. Details can be obtained from the government website:<br>https://www.gov.uk/guidance/groundwater-source-protection-zones-spzs#find-groundwater-spzs<br><br>If your site is in a Groundwater Source Protection Zone, you should have regard to the Environment Agency's approach to Groundwater Protection. Information on this is available via the link below:<br>https://www.gov.uk/government/publications/groundwater-protection-position-statements<br><br>Please note that such a location could have implications for the principle of your development and the need for additional mitigating measures to protect the groundwater environment and public water supply in the detailed design of your site.<br><br>**Surface Water Discharge Rates**<br>Please note the given discharge rate is based on the site area believed to be developed. If there are significant areas of the site that will not be developed, the discharge rate should be reduced accordingly. |
| **5** | Please note that this guidance is current as of the date of issue. Always check for the most up-to-date regulations and guidelines when planning your development. |

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# WASTEWATER PRE-DEVELOPMENT ENQUIRY

United Utilities Grasmere House, 2nd Floor
Lingley Mere Business Park
Great Sankey
Warrington
WA5 3LP

**Response Date:** 18/03/2025

Dear Nikola

**Pre-Development Enquiry for Barnhill Street, Manchester, M14 4SY**

**UU Reference Number: 07174355**

We have assessed your application based on the information provided. This pre-development advice on your drainage strategy will be valid for 12 months. Your strategy will need review by other authorities as part of the planning process. We advise conducting necessary site investigations to confirm viability of your proposals.

## Modelled Flood Risk

I can confirm that we do not have modelled flood risk within the vicinity of the proposed development.

Please note that our modelling data is indicative, and only representative of the 1:100year storm event.

Please see **comment 2** of the attached guidance sheet

## Asset Protection

1. We have reviewed our records and can confirm that there does not appear to be any charted public sewers located within the boundary of the proposed development.

   Please see **comment 3** of the attached guidance sheet and **Working Near Our Pipelines Guidance document**

## Foul Water

Foul flow from this site will be allowed to drain into the public combined sewer system.

Our preferred point of discharge would be to the 450mm combined sewer within Barnhill Street located East of your proposed development at an unrestricted rate.

**Manhole reference** SJ83958703, **Grid reference** 383895, 395793

Please see the images on **page 3** for clarification

# WASTEWATER PRE-DEVELOPMENT ENQUIRY

United Utilities
Water for the North West

## Surface Water

Follow the National Planning Policy Guidance drainage hierarchy andPpovide evidence for discounting higher options before considering public sewer discharge. Consult the Lead Local Flood Authority regarding surface water concerns.

Please see comment **4** within the guidance sheet

## Infiltration

Please see comment **4** within the guidance sheet

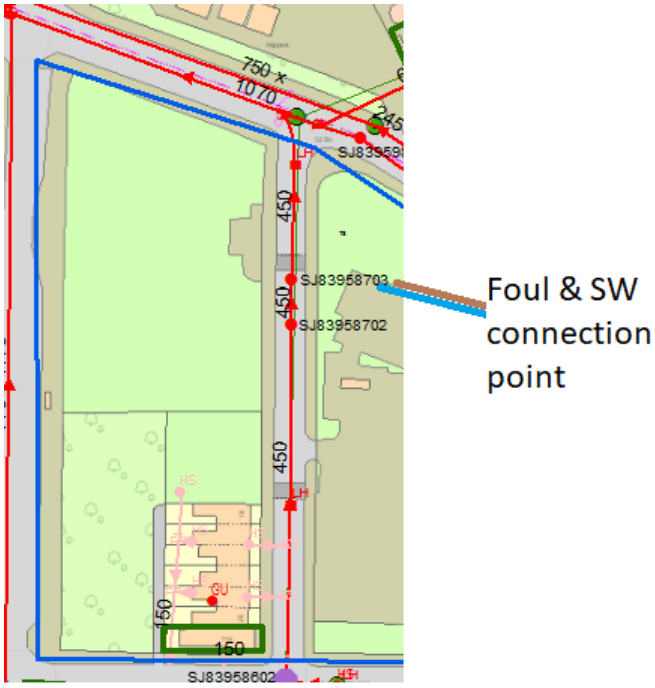
## Public Sewer

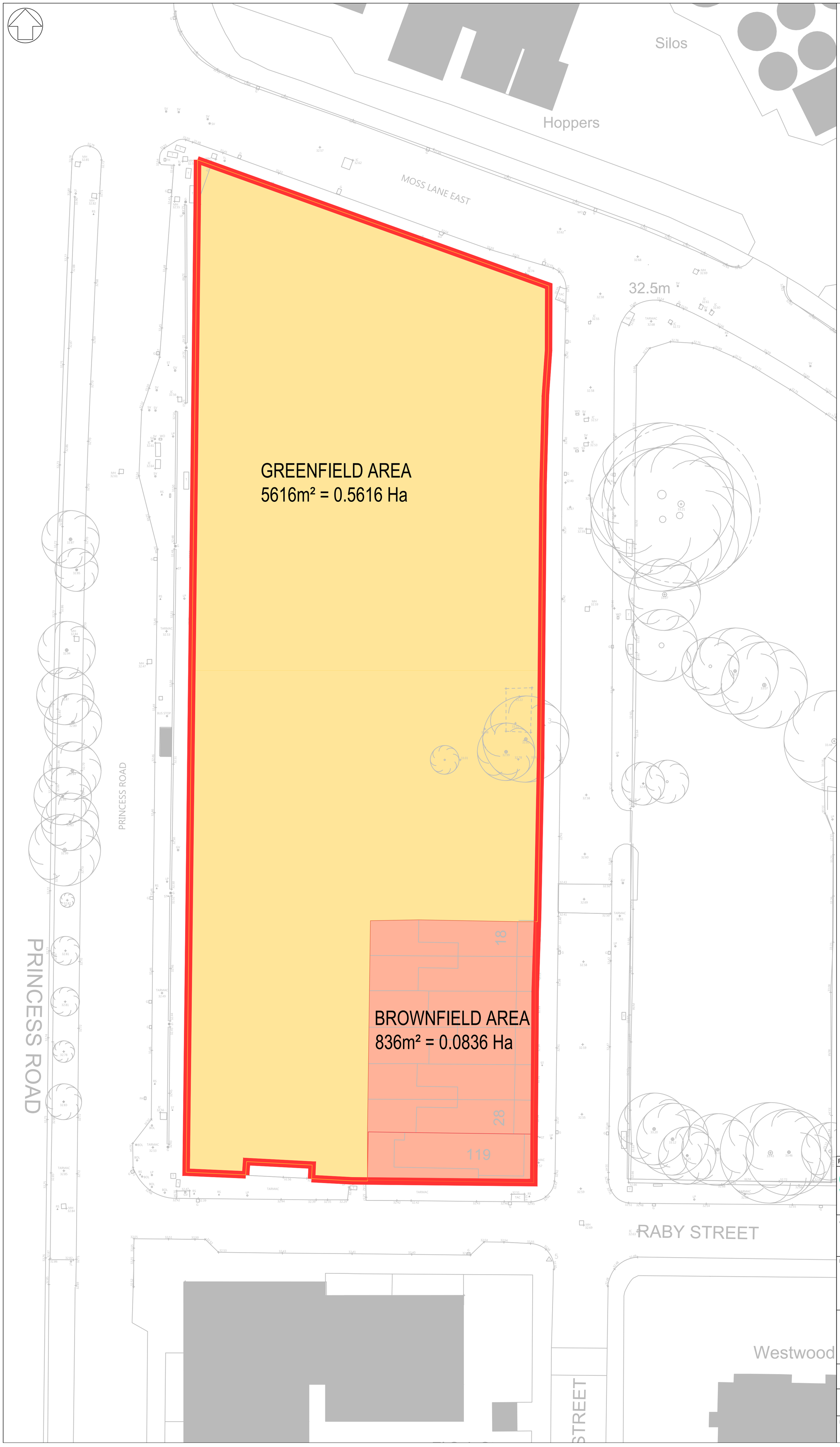
United Utilities will consider a connection to the 450mm diameter public combined sewer within Barnhill Street located East of the proposed site at a pass forward flow to be agreed by the Lead Local Flood Authority. United Utilities requests that any agreed rate does not exceed **5**l/s.

**Manhole reference** SJ83958703, **Grid reference** 383895, 395793

Please see images on **page 3** for clarification

## Site Images






## NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S, ENGINEER'S DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON THE DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED AND VERIFIED ON-SITE BEFORE CONSTRUCTION COMMENCES.

## KEY

- PROPOSED SITE BOUNDARY
- EXISTING GREENFIELD AREA
- EXISTING BROWNFIELD AREA

| Rev. | Description | By | Date |
|---|---|---|---|


Shepherd Gilmour Consulting Engineers
Phoenix House, 45 Cross Street, Manchester, M2 4JF
t: 0161 837 1500 w: www.sgiconsulting.co.uk


Client
**MSV / MCC**

Project
**MOSS SIDE MANCHESTER**

Title
**EXISTING SITE ANALYSIS**

| | | | |
|---|---|---|---|
| Date | 20-03-2025 | Drawn By | PMB |
| Size | A1 | Checked By | RBG |
| Scale | 1:250 | Approved By | EAJ |

| SGi Proj No. | RIBA | Status Code | Issue Status |
|---|---|---|---|
| C1876 | 01 | 01 | PRELIMINARY |

| Dwg No. | Ref. |
|---|---|
| 001 | P01 |

# SECTION 6 SUSTAINABLE DRAINAGE STRATEGY

6.1. The general requirement set out by the NSSDS 2011 and NSTSSD 2015 technical documents is that 'the development must not increase the risk of flooding elsewhere.' In practical terms this means that the proposed development runoff rate must provide a betterment or be equal to the calculated greenfield rate.

## EXISTING PEAK RUNOFF RATE

6.2. The current status of the site is Brownfield. However, in order to calculate the post-development surface water runoff, in line with the United Utilities Guidance and Regulations, the northern part of the site will be assessed as Greenfield. This is due to the UU Greenfield site definition stating that if a previously developed site has been demolished 5 years ago or longer, the site is classed as greenfield for the purpose of calculating the post-development run-off. The southeast part of the site is currently overbuilt therefore it is classed as brownfield.

6.3. For the northern portion of the site the Institute of Hydrology Report 124 Flood Estimation for Small Catchments has been used to calculate the mean annual flood flow from the catchment.

6.4. The Modified Rational Method has been used to calculate the existing runoff rate of the southern part of the site. It requires the existing hardstanding areas, an approximate time of concentration and variables from the Wallingford Procedure.

| Volume Wallingford Variables | Value |
|---|---|
| M5-60 minute rainfall depth | 18mm |
| Ratio of M5-60 to M5-2 day rainfalls | 0.364mm |
| Average Annual Rainfall (SAAR) | 860mm |
| Winter Rain Acceptance Potential (SOIL) | Soil Type 4 (0.47) |
| Urban Catchment Wetness Index (UCWI) | 90 |
| Time of Concentration (mins) | 5 |

**Table 6.1 Wallingford Procedure Volume 3 Variables**

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| | m² | ha |
|---|---|---|
| Red Line Boundary | Circa 6469 | 0.647 |
| Greenfield Area* | 5628 | 0.563 |
| Brownfield Area* | 841 | 0.084 |
| *Areas used in these calculations has been taken from the Architects outline proposals. This calculation is therefore only a guide/proof of concept and must be updated to reflect the actual proposals during the full application/detailed design stage. | | |

**Table 6.2 Site Analysis**

## Institute of Hydrology Report 124 Flood Estimation for Small Catchments

*QBAR rural* = $1.08 (AREA/100)^{0.89} \times SAAR^{1.17} \times SOIL^{2.17}$

*Where;* *AREA* = *50 ha (to be scaled to 0.563ha)*

*SAAR* = *860mm*

*SOIL* = *Type 4 (0.47)*

*QBAR rural* = $1.08 (AREA/100)^{0.89} * SAAR^{1.17} * SOIL^{2.17}$

= $1.08 (50/100)^{0.89} * 860^{1.17} * 0.47^{2.17}$

= *307.1 (50-hectare site)*

*Therefore* *QBAR* = *(307.1 / 50) * 0.563*

= ***3.5***

## Growth Curve Factor

6.5. Growth curve factors have been derived for each of the 10 hydrological regions of the UK. These are based on the work carried out by the Flood Studies research and assists in calculating multiple peak runoff rates for different events using the estimate QBAR value.

6.6. The Microdrainage calculations are shown below in **Table 6.3**.

| Hydrological Region | 10 | | | | |
|---|---|---|---|---|---|
| Estimated QBAR Value | 3.5 | | | | |
| Growth Curve Year | 1 | 2 | 5 | 30 | 100 |
| Total Greenfield Peak Runoff (l/s) | 3 | 3.2 | 3.7 | 5.9 | 7.2 |

**Table 6.3 Peak Greenfield Runoff Rates**

## Modified Rational Method

$Q_{Brownfield}$ *(l/s)* = $2.78 \times C_v \times C_r \times R_i \times Area$

*Where; PIMP* = *(Percentage of impermeable area)* = *100%*

$P_r = 0.829PIMP + 25SOIL + 0.078UCWI - 20.7$ = *80.97%*

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$C_v$ = *Volumetric runoff coefficient* $= P_r/PIMP$ = *0.81*

$C_r$ = *Routing coefficient (Urban Areas)* = *1.3*

$R_i$ = *Rainfall Intensity 1 Year* = *42*

*Area = Impermeable Area* = *0.084ha*

$Q_{Brownfield}$ *(l/s)* = *2.78 x 0.81 x 1.3 x 42 x 0.084* = ***10.3l/s***

| Return Period (Years) | 1 | 2 | 5 | 30 | 100 |
|---|---|---|---|---|---|
| Rainfall Intensity (mm/h) | 42 | 54 | 70 | 99 | 122 |

**Table 6.4 Return Period Rainfall Intensity**

| Return Period (Years) | 1 | 2 | 5 | 30 | 100 |
|---|---|---|---|---|---|
| Peak Runoff Rate (l/s) | 10.3 | 13.3 | 17.2 | 24.3 | 30.0 |

**Table 6.5 Existing Peak Brownfield Runoff Rates**

## Colebrook Formula

6.7. Following on from a consultation with UU, three surface water pipes have been identified from the existing properties into the combined sewer in Barhill Street (**Figure 6.1**).

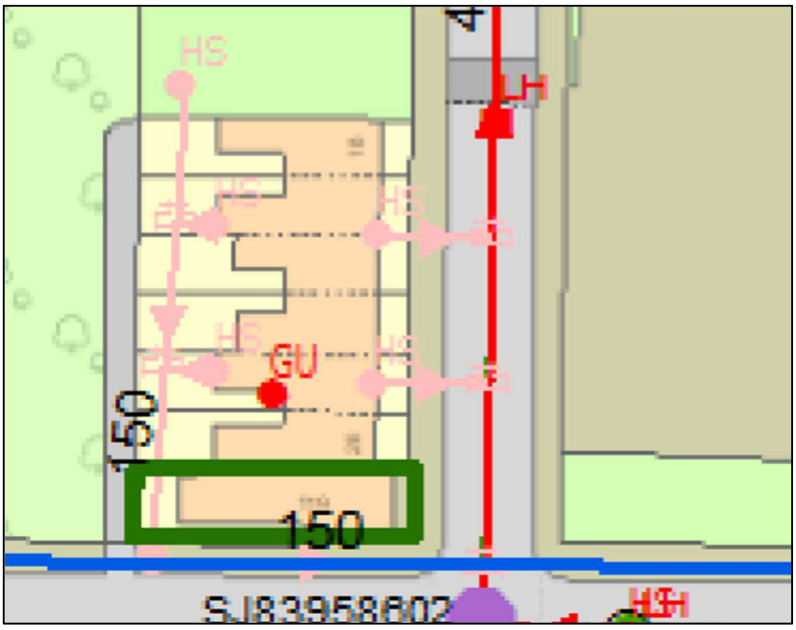



**Figure 6.1 UU Private Drainage**

6.8. After receiving advice from UU, a CCTV survey was undertaken which identified 6 connections from the existing properties into the combined sewer (**Appendix F**).

6.9. For the purpose of the brownfield, surface water runoff calculations, we have assumed that the 150mm pipe has a gradient of 1 in 150. Based on the Colebrook Formula the

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flow capacity of this pipe is 12.6 l/s, as there are 6 such pipes, the total runoff from the existing site is assumed to be 75.6 l/s.

### Allowable Runoff Rate

6.10. The flow rates in **Table 6.5** indicate the peak runoff that could be generated in each return period. However, it is unlikely that the underground network was designed to serve the more extreme events.

6.11. Based on the age of the existing buildings, it is assumed that the underground network could have been designed for the 5-year event. The flow rate from the PDS will therefore be restricted to this flow rate with the required betterment (**Figure 3.3**).

| **5 Year Peak Runoff Rate (l/s)** | 17.2 l/s |
|---|---|
| Required Betterment | 50% Minimum |
| Proposed Brownfield Peak Runoff (l/s) | 8.6 l/s |
| Proposed Brownfield Peak Runoff (l/s)<br>*(Q Greenfield + Q Brownfield)* | 3.5 + 8.6<br>**12.1 l/s** |

**Table 6.6 Proposed Peak Runoff Rates**

## PROPOSED RUNOFF DESTINATION

### Surface Water Hierarchy

6.12. Paragraph 080 of the Flood Risk and Coastal Change Guidance within the Planning Practice Guidance sets out the following hierarchy of surface water runoff destinations:

i. Discharge into the ground (infiltration),

ii. Discharge to a surface waterbody,

iii. Discharge to a surface water sewer,

iv. Discharge to a combined sewer.

### Discharge into the ground

6.13. There are five bands of soil classes in England which roughly describe the infiltration potential of an area. It is derived from factors such as, soil permeability, topography, and the likelihood of impermeable layers.

6.14. The soil classification for the PDS is Type 4, see table below. The Phase 1 E3P site assessment states that soakaways are unlikely to be effective due to the potential of cohesive deposits and underlying clay.

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CCTV Inspection Report

**MSV Moss Side**
**Barnhill Street,**
**Moss Side,**
**Manchester,**
**M14 4SY**

**21/06/2025**

**Job Number: EN25167**

CMS Surveys

308 Longmoor Lane, Liverpool, L9 9BZ
Tel: 0151 474 3992

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308 Longmoor Lane
Liverpool
L99BZ

# Project Information

| Job Number | Surveyed by (Operator) | Base Unit | Date |
|---|---|---|---|
| **KM-17137** | **John Brooks** | **8NN3QCV1BU** | **21/06/2025** |

Client Details:

Caddick Construction (NW) Ltd
Chepstow House,
Trident Business Park,
Warrington
WA3 6BX

Site Details:

MSV Moss Side
Barnhill Street,
Moss Side,
Manchester,
M14 4SY

Contractor Details:

CMS Surveys Limited
308 Longmoor Lane
Liverpool
L99BZ

Office Contact Number: 0151 474 3992

Purpose of Survey:

## Report Contents


| | | |
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| Page 1 | Cover Page | |
| Page 2 | Job Overview | |
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| Page 4 | Grade Defect Descriptions | |
| Page 5 | Job Summary | |
| Page 6 | Survey Run Sheet(Survey 1 - MH1 to Main) | View via iTouch Live |
| Page 8 | Survey Run Sheet(Survey 2 - MH1 to MH2) | View via iTouch Live |
| Page 10 | Survey Run Sheet(Survey 3 - MH1 to LEG B) | View via iTouch Live |
| Page 12 | Survey Run Sheet(Survey 4 - MH2 to MH1) | View via iTouch Live |
| Page 15 | Survey Run Sheet(Survey 5 - MH2 to MH3) | View via iTouch Live |
| Page 22 | Grading Overview | |

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# Defect Grade Descriptions

| Job Number | Surveyed by (Operator) | Base Unit | Date |
|---|---|---|---|
| **KM-17137** | **John Brooks** | **8NN3QCV1BU** | **21/06/2025** |

1: Occurences without damage. For example, laterals, joints,etc.

NO DEFECTS WERE DETECTED.

2: Constructional deficiencies or occurences with insignificant influence to tightness, hydraulic or static pressure or pipe: Eg. wide joints, badly torched intakes, minor deformation of plastic pipes, minor erosions etc.

REHABILITATION CAN BE SCHEDULED LONG-TERM.

3: Constructional deficiencies diminishing static, hydraulic and tightness: Eg. untorched intakes, cracks, minor drainage obstructions such as calcite build ups, protruding laterals, minor damages to pipe wall, individual root penetrations, corroded pipe walls etc.

REHABILITATION IS NECESSARY MEDIUM-TERM WITHIN 3 TO 5 YEARS.

4: Constructional damages with insufficent static safety, hydraulic or tightness: Eg. axial/radial pipe bursts, pipe deformations, visually noticeable infiltration/exfiltration, cavities, in pipe-wall, severe protruding, laterals severe root penetrations, severe corrosion of pipe wall etc.

REHABILITATION PROCEDURE IS URGENT AND HAS TO BE COMPLETED WITHIN 1 TO 2 YEARS. NECESSITY FOR EMERGENCY OPERATIONS HAS TO BE EXAMINED.

5: Pipe is already or will shortly be impermeable: Eg. collapsed pipe, deeply rooted pipe or other drainage obstructions. Pipe loses water or danger of backwater in basements etc.

REHABILITATION IS URGENT AND SHORT-TERM. IN ORDER TO PREVENT FURTHER DAMAGE, NECESSARY TEMPORARY SPOT REPAIR HAS TO BE CONDUCTED ON EMERGENCY LEVEL.

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# Report Summary

| Job Number | Surveyed by (Operator) | Base Unit | Date |
|---|---|---|---|
| **KM-17137** | **John Brooks** | **8NN3QCV1BU** | **21/06/2025** |

## Job Information

Total Distance Surveyed: **212.98 meters**
Engineer: **John Brooks**
Number of Surveys: **5**
Number of Surveys grade 4 or above: **1**

## Section 1 Overview (21/06/2025)

Manholes: **MH1 to Main**
Pipe Length: **30 metres**
Structural Grade: **0**
Service Grade: **5**
Material: **Vitrified clay**
Pipe Size: **450mm**
Use: **Combined**

## Section 2 Overview (21/06/2025)

Manholes: **MH1 to MH2**
Pipe Length: **60 metres**
Structural Grade: **0**
Service Grade: **5**
Material: **Vitrified clay**
Pipe Size: **450mm**
Use: **Combined**

## Section 3 Overview (21/06/2025)

Manholes: **MH1 to LEG B**
Pipe Length: **10 metres**
Structural Grade: **0**
Service Grade: **5**
Material: **Vitrified clay**
Pipe Size: **225mm**
Use: **Combined**

## Section 4 Overview (21/06/2025)

Manholes: **MH2 to MH1**
Pipe Length: **30 metres**
Structural Grade: **2**
Service Grade: **5**
Material: **Vitrified clay**
Pipe Size: **450mm**
Use: **Combined**

## Section 5 Overview (21/06/2025)

Manholes: **MH2 to MH3**
Pipe Length: **82.98 metres**
Structural Grade: **4**
Service Grade: **2**
Material: **Vitrified clay**
Pipe Size: **450mm**
Use: **Combined**

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# CCTV Inspection Report

| Surveyed by (Operator) | Job Number | Pipe Length Reference(PLR) | Date | Pre Cleaned |
|---|---|---|---|---|
| **John Brooks** | **KM-17137** | **MH1 X** | **21/06/2025** | **Flushed through to enable survey** |
| Weather | Customer Present | Service Grade/Structural Grade | Base Unit | Section Number |
| **1 - Dry** | | **5/0** | **8NN3QCV1BU** | **1** |

Road **Barnhill Street M144SY**
Place
Location

Division
District
Location Details

Purpose
Duty **Combined**
Catchment

Shape/Size **450mm**
Material **Vitrified clay**
Category

Start Node **MH1**
End Node **Main**
Total length **30 metres**

Scale **1:1.57**
Direction **Downstream**

View via iTouch Live | Download

Start Node Ref:MH1 | I/L :mm | Depth: 3.3mm

| Position | Code | Description | Photo | Type/Grade |
|---|---|---|---|---|
| 0.00 | MH | Start node type, manhole, reference MH1 | 12455462 | Comment / 0 |
| 0.00 | WL | Water level 15% height/diameter | 12455463 | Comment / 0 |
| 0.00 | RM | Roots mass 75% cross-sectional area loss | 12455464 | Service / 5 |
| 0.27 | SA | Survey abandoned - Remark: mass roots | 12455465 | Comment / 0 |

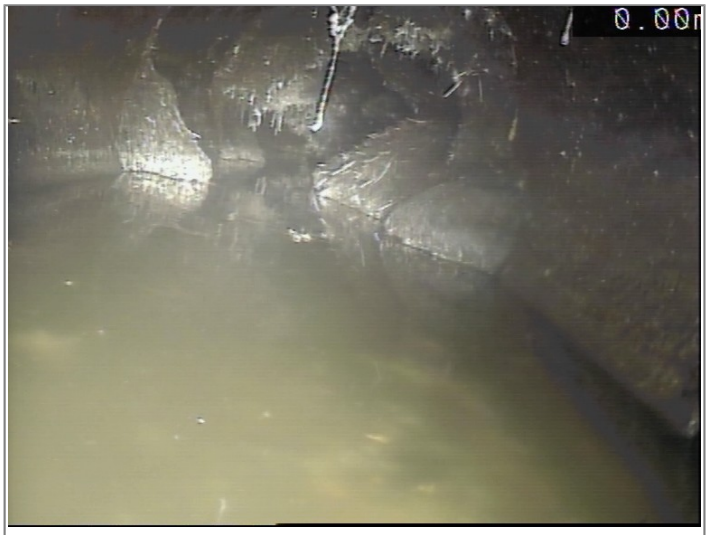


End Node Ref:Main | I/L :mm

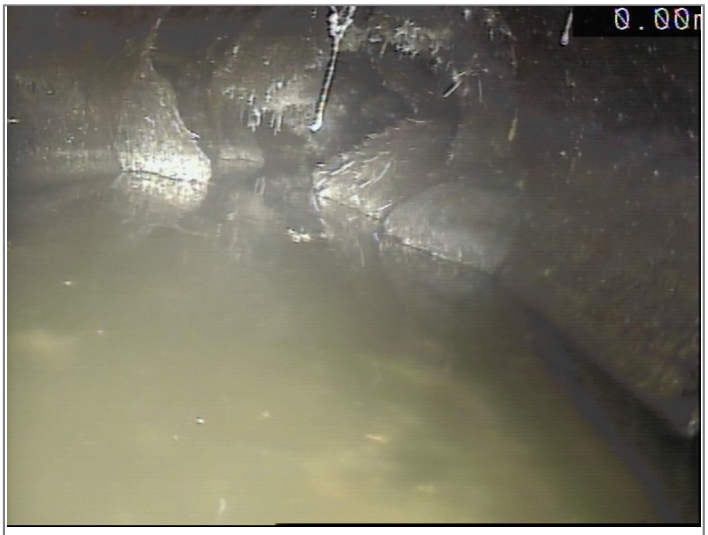
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# CCTV Inspection Photos

| Job Number | Surveyed by (Operator) | Base Unit | Date |
|---|---|---|---|
| **KM-17137** | **John Brooks** | **8NN3QCV1BU** | **21/06/2025** |




Start node type, manhole, reference MH1




Water level 15% height/diameter




Roots mass 75% cross-sectional area loss




Survey abandoned - Remark: mass roots

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# CCTV Inspection Report

| Surveyed by (Operator) | Job Number | Pipe Length Reference(PLR) | Date | Pre Cleaned |
|---|---|---|---|---|
| **John Brooks** | **KM-17137** | **MH2 X** | **21/06/2025** | **Not Cleaned** |
| Weather | Customer Present | Service Grade/Structural Grade | Base Unit | Section Number |
| **1 - Dry** | | **5/0** | **8NN3QCV1BU** | **2** |

Road **Barnhill Street M144SY**
Place
Location

Division
District
Location Details

Purpose
Duty **Combined**
Catchment

Shape/Size **450mm**
Material **Vitrified clay**
Category

Start Node **MH1**
End Node **MH2**
Total length **60 metres**

Scale **1:3.15**
Direction **Upstream**

View via iTouch Live | Download

Start Node Ref:MH1 | I/L :mm | Depth: 3.3mm

| Position | Code | Description | Photo | Type/Grade |
|---|---|---|---|---|
| 0.00 | MH | Start node type, manhole, reference MH1 | 12455482 | Comment / 0 |
| 0.00 | WL | Water level 15% height/diameter | 12455483 | Comment / 0 |
| 0.00 | RM | Roots mass 50% cross-sectional area loss | 12455489 | Service / 5 |
| 0.65 | SA | Survey abandoned - Remark: Root mass | 12455490 | Comment / 0 |

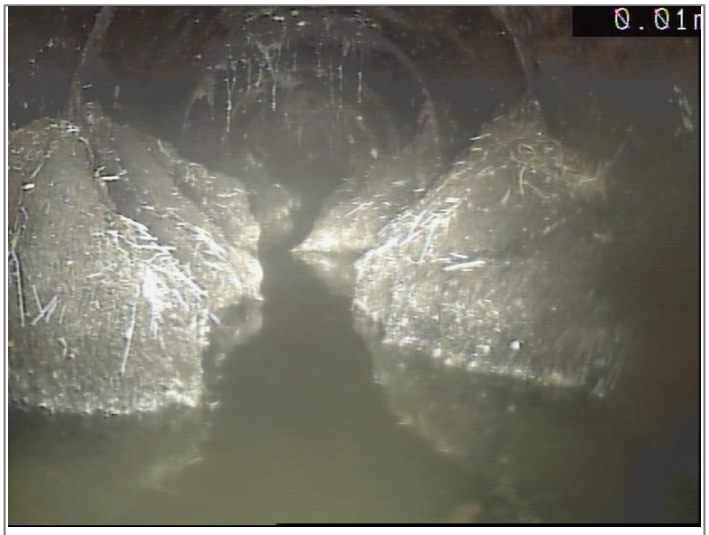


End Node Ref:MH2 | I/L :mm

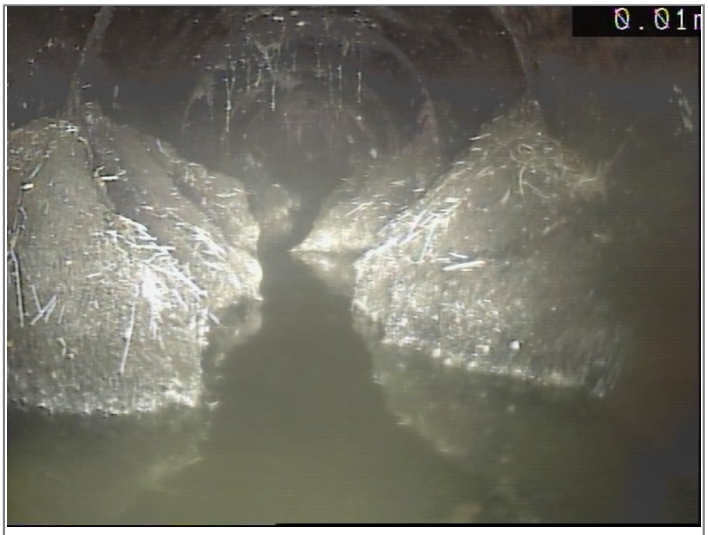
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# CCTV Inspection Photos

| Job Number | Surveyed by (Operator) | Base Unit | Date |
|---|---|---|---|
| **KM-17137** | **John Brooks** | **8NN3QCV1BU** | **21/06/2025** |




Start node type, manhole, reference MH1




Water level 15% height/diameter




Roots mass 50% cross-sectional area loss




Survey abandoned - Remark: Root mass

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# CCTV Inspection Report

| Surveyed by (Operator) | Job Number | Pipe Length Reference(PLR) | Date | Pre Cleaned |
|---|---|---|---|---|
| **John Brooks** | **KM-17137** | **LEG B X** | **21/06/2025** | **Not Cleaned** |
| Weather | Customer Present | Service Grade/Structural Grade | Base Unit | Section Number |
| **1 - Dry** | | **5/0** | **8NN3QCV1BU** | **3** |

Road **Barnhill Street M144SY**
Place
Location

Division
District
Location Details

Purpose
Duty **Combined**
Catchment

Shape/Size **225mm**
Material **Vitrified clay**
Category

Start Node **MH1**
End Node **LEG B**
Total length **10 metres**

Scale **1:0.52**
Direction **Upstream**

View via iTouch Live | Download

Start Node Ref:MH1 | I/L :mm | Depth: 3.3mm

| Position | Code | Description | Photo | Type/Grade |
|---|---|---|---|---|
| 0.00 | MH | Start node type, manhole, reference MH1 | 12455587 | Comment / 0 |
| 0.00 | WL | Water level 5% height/diameter | 12455588 | Comment / 0 |
| 0.00 | RM | Roots mass 10% cross-sectional area loss | 12455589 | Service / 3 |
| 0.12 | RM | Roots mass 50% cross-sectional area loss | 12455590 | Service / 5 |
| 0.12 | SA | Survey abandoned - Remark: MASS ROOTS | 12455596 | Comment / 0 |



End Node Ref:LEG B | I/L :mm

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# CCTV Inspection Photos

| Job Number | Surveyed by (Operator) | Base Unit | Date |
|---|---|---|---|
| **KM-17137** | **John Brooks** | **8NN3QCV1BU** | **21/06/2025** |



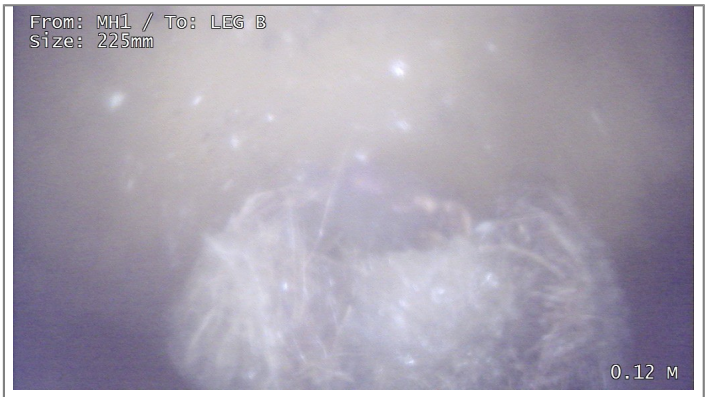

Start node type, manhole, reference MH1



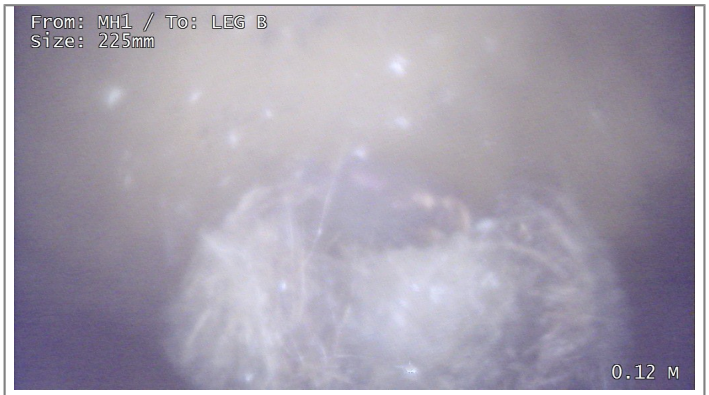

Water level 5% height/diameter




Roots mass 10% cross-sectional area loss




Roots mass 50% cross-sectional area loss




Survey abandoned - Remark: MASS ROOTS

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# CCTV Inspection Report

| Surveyed by (Operator) | Job Number | Pipe Length Reference(PLR) | Date | Pre Cleaned |
|---|---|---|---|---|
| **John Brooks** | **KM-17137** | **MH2 X** | **21/06/2025** | **HPWJ to clean prior to survey** |
| Weather | Customer Present | Service Grade/Structural Grade | Base Unit | Section Number |
| **1 - Dry** | | **5/2** | **8NN3QCV1BU** | **4** |

Road **Barnhill Street M144SY**
Place
Location

Division
District
Location Details

Purpose
Duty **Combined**
Catchment

Shape/Size **450mm**
Material **Vitrified clay**
Category

Start Node **MH2**
End Node **MH1**
Total length **30 metres**

Scale **1:1.57**
Direction **Downstream**

View via iTouch Live | Download

Start Node Ref:MH2 | I/L :mm

| Position | Code | Description | Photo | Type/Grade |
|---|---|---|---|---|
| 0.00 | MH | Start node type, manhole, reference MH2 | 12455711 | Comment / 0 |
| 0.00 | WL | Water level 10% height/diameter | 12455714 | Comment / 0 |
| 0.00 | JN | Junction at 10 o'clock, diameter 150mm | 12455715 | Comment / 0 |
| 0.00 | CL | Crack longitudinal at 12 o'clock | 12455717 | Structural / 2 |
| 0.86 | JDM | Joint displaced medium | 12455718 | Structural / 1 |
| 1.04 | RF | Roots fine | 12455721 | Service / 2 |
| 1.04 | CN | Connection other than junction at 3 o'clock, diameter 225mm | 12455722 | Comment / 0 |
| 4.97 | RM | Roots mass 25% cross-sectional area loss | 12455726 | Service / 5 |
| 4.97 | SA | Survey abandoned - Remark: Mass roots | 12455727 | Comment / 0 |



End Node Ref:MH1 | I/L :mm | Depth: 3.3mm

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# CCTV Inspection Photos

| Job Number | Surveyed by (Operator) | Base Unit | Date |
|---|---|---|---|
| **KM-17137** | **John Brooks** | **8NN3QCV1BU** | **21/06/2025** |




Start node type, manhole, reference MH2




Water level 10% height/diameter




Junction at 10 o'clock, diameter 150mm




Crack longitudinal at 12 o'clock




Joint displaced medium




Roots fine

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# CCTV Inspection Photos

| Job Number | Surveyed by (Operator) | Base Unit | Date |
|---|---|---|---|
| **KM-17137** | **John Brooks** | **8NN3QCV1BU** | **21/06/2025** |




Connection other than junction at 3 o'clock, diameter 225mm




Roots mass 25% cross-sectional area loss




Survey abandoned - Remark: Mass roots

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Liverpool
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# CCTV Inspection Report

| Surveyed by (Operator) | Job Number | Pipe Length Reference(PLR) | Date | Pre Cleaned |
|---|---|---|---|---|
| **John Brooks** | **KM-17137** | **MH3 X** | **21/06/2025** | **HPWJ to clean prior to survey** |
| Weather | Customer Present | Service Grade/Structural Grade | Base Unit | Section Number |
| **1 - Dry** | | **2/4** | **8NN3QCV1BU** | **5** |

Road **Barnhill Street M144SY**
Place
Location

Division
District
Location Details

Purpose
Duty **Combined**
Catchment

Shape/Size **450mm**
Material **Vitrified clay**
Category

Start Node **MH2**
End Node **MH3**
Total length **82.98 metres**

Scale **1:4.36**
Direction **Upstream**

View via iTouch Live | Download

Start Node Ref:MH2 | I/L :mm

| Position | Code | Description | Photo | Type/Grade |
|---|---|---|---|---|
| 0.00 | MH | Start node type, manhole, reference MH2 | 12455741 | Comment / 0 |
| 0.00 | WL | Water level 10% height/diameter | 12455742 | Comment / 0 |
| 0.00 | RF (S01) | Roots fine, Start | 12455745 | Service / 2 |
| 0.87 | JN | Junction at 3 o'clock, diameter 225mm | 12455749 | Comment / 0 |
| 1.29 | JN | Junction at 10 o'clock, diameter 150mm | 12455750 | Comment / 0 |
| 1.84 | JN | Junction at 10 o'clock, diameter 150mm | 12455751 | Comment / 0 |
| 2.82 | RF (F01) | Roots fine, Finished | 12455757 | Service / 2 |
| 5.21 | JN | Junction at 10 o'clock, diameter 150mm | 12455759 | Comment / 0 |
| 14.60 | JN | Junction at 3 o'clock, diameter 225mm | 12455765 | Comment / 0 |
| 16.94 | JN | Junction at 10 o'clock, diameter 150mm | 12455766 | Comment / 0 |
| 22.00 | JN | Junction at 1 o'clock, diameter 100mm | 12455787 | Comment / 0 |
| 22.60 | JN | Junction at 10 o'clock, diameter 150mm | 12455789 | Comment / 0 |
| 23.36 | JN | Junction at 10 o'clock, diameter 150mm | 12455803 | Comment / 0 |
| 29.13 | JN | Junction at 2 o'clock, diameter 150mm | 12455804 | Comment / 0 |
| 39.73 | FL | Fracture longitudinal at 3 o'clock | 12455814 | Structural / 3 |
| 39.75 | JX | Junction defective at 12 o'clock, diameter 100mm | 12455826 | Structural / 4 |
| 41.16 | JN | Junction at 3 o'clock, diameter 150mm | 12455827 | Comment / 0 |
| 41.59 | JN | Junction at 10 o'clock, diameter 100mm | 12455828 | Comment / 0 |
| 43.72 | JN | Junction at 3 o'clock, diameter 100mm | 12455835 | Comment / 0 |
| 44.31 | JDM | Joint displaced medium | 12455836 | Structural / 1 |
| 44.32 | JN | Junction at 3 o'clock, diameter 150mm | 12455837 | Comment / 0 |
| 48.09 | JN | Junction at 3 o'clock, diameter 150mm | 12455842 | Comment / 0 |
| 50.41 | JN | Junction at 9 o'clock, diameter 225mm | 12455843 | Comment / 0 |
| 65.17 | JN | Junction at 2 o'clock, diameter 150mm | 12455850 | Comment / 0 |
| 65.59 | JDM | Joint displaced medium | 12455851 | Structural / 1 |
| 66.97 | JN | Junction at 2 o'clock, diameter 150mm | 12455855 | Comment / 0 |
| 68.90 | JN | Junction at 10 o'clock, diameter 150mm | 12455857 | Comment / 0 |
| 69.73 | JN | Junction at 2 o'clock, diameter 100mm | 12455873 | Comment / 0 |
| 70.05 | JN | Junction at 10 o'clock, diameter 100mm | 12455875 | Comment / 0 |
| 75.81 | JN | Junction at 2 o'clock, diameter 150mm | 12455886 | Comment / 0 |
| 76.86 | JN | Junction at 9 o'clock, diameter 225mm | 12455887 | Comment / 0 |
| 78.00 | JDM | Joint displaced medium | 12455888 | Structural / 1 |
| 81.46 | JN | Junction at 2 o'clock, diameter 150mm | 12455889 | Comment / 0 |
| 82.98 | MHF | Finish node type, manhole, reference MH3 | 12455899 | Comment / 0 |

End Node Ref:MH3 | I/L :mm

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308 Longmoor Lane
Liverpool
L99BZ

# CCTV Inspection Photos

| Job Number | Surveyed by (Operator) | Base Unit | Date |
|---|---|---|---|
| **KM-17137** | **John Brooks** | **8NN3QCV1BU** | **21/06/2025** |




Start node type, manhole, reference MH2




Water level 10% height/diameter




Roots fine, Start




Junction at 3 o'clock, diameter 225mm




Junction at 10 o'clock, diameter 150mm




Junction at 10 o'clock, diameter 150mm

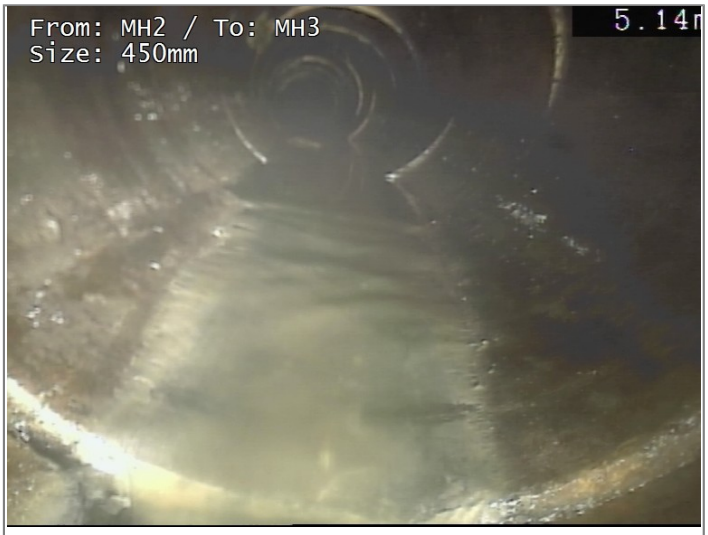
CMS Surveys Limited
308 Longmoor Lane
Liverpool
L99BZ

# CCTV Inspection Photos

| Job Number | Surveyed by (Operator) | Base Unit | Date |
|---|---|---|---|
| **KM-17137** | **John Brooks** | **8NN3QCV1BU** | **21/06/2025** |




Roots fine, Finished




Junction at 10 o'clock, diameter 150mm




Junction at 3 o'clock, diameter 225mm




Junction at 10 o'clock, diameter 150mm




Junction at 1 o'clock, diameter 100mm




Junction at 10 o'clock, diameter 150mm

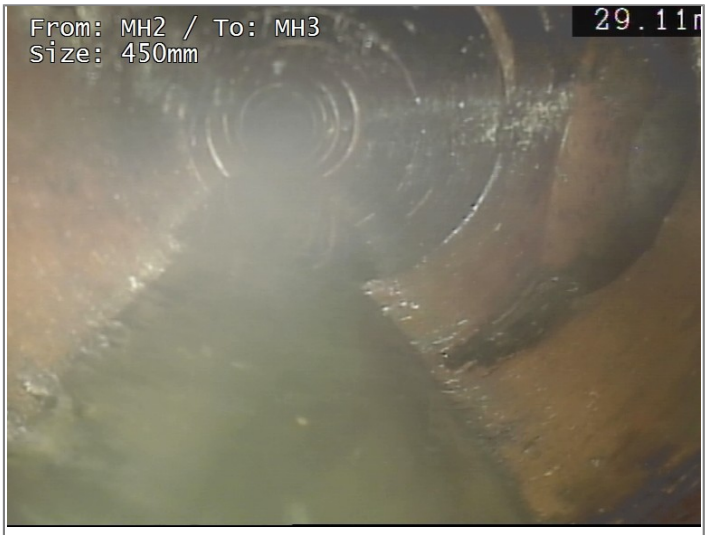
CMS Surveys Limited
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Liverpool
L99BZ

# CCTV Inspection Photos

| Job Number | Surveyed by (Operator) | Base Unit | Date |
|---|---|---|---|
| **KM-17137** | **John Brooks** | **8NN3QCV1BU** | **21/06/2025** |



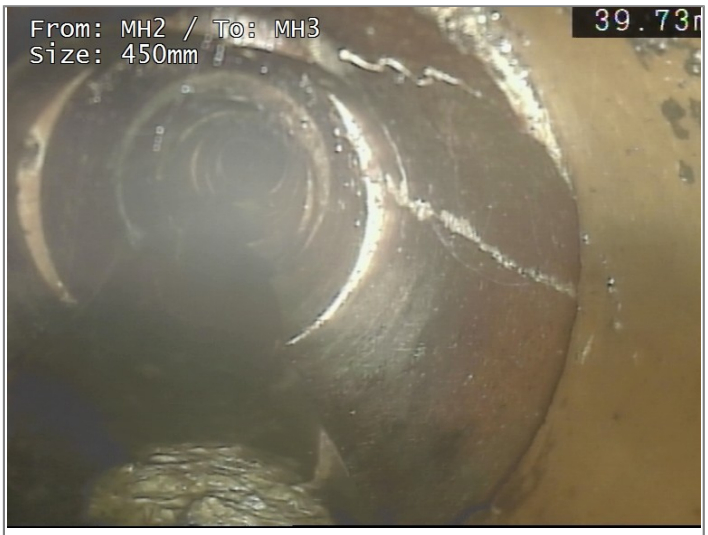

Junction at 10 o'clock, diameter 150mm




Junction at 2 o'clock, diameter 150mm




Fracture longitudinal at 3 o'clock




Junction defective at 12 o'clock, diameter 100mm




Junction at 3 o'clock, diameter 150mm




Junction at 10 o'clock, diameter 100mm

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L99BZ

# CCTV Inspection Photos

| Job Number | Surveyed by (Operator) | Base Unit | Date |
|---|---|---|---|
| **KM-17137** | **John Brooks** | **8NN3QCV1BU** | **21/06/2025** |




Junction at 3 o'clock, diameter 100mm




Joint displaced medium




Junction at 3 o'clock, diameter 150mm




Junction at 3 o'clock, diameter 150mm




Junction at 9 o'clock, diameter 225mm




Junction at 2 o'clock, diameter 150mm

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# CCTV Inspection Photos

| Job Number | Surveyed by (Operator) | Base Unit | Date |
|---|---|---|---|
| **KM-17137** | **John Brooks** | **8NN3QCV1BU** | **21/06/2025** |




Joint displaced medium




Junction at 2 o'clock, diameter 150mm




Junction at 10 o'clock, diameter 150mm




Junction at 2 o'clock, diameter 100mm




Junction at 10 o'clock, diameter 100mm




Junction at 2 o'clock, diameter 150mm

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# CCTV Inspection Photos

| Job Number | Surveyed by (Operator) | Base Unit | Date |
|---|---|---|---|
| **KM-17137** | **John Brooks** | **8NN3QCV1BU** | **21/06/2025** |




Junction at 9 o'clock, diameter 225mm




Joint displaced medium




Junction at 2 o'clock, diameter 150mm




Finish node type, manhole, reference MH3

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# Structural Defects (SRM 4)

| Job Number | Surveyed by (Operator) | Base Unit | Date |
|---|---|---|---|
| **KM-17137** | **John Brooks** | **8NN3QCV1BU** | **21/06/2025** |

| No. | PLR | Dir. | Use | Shape/Size | Date | Mat. | Total Length | Inspection Length | Cat. | Peak Score | Grade | Mean Score | Total Score |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MH1 X | D | C | 450 | 21/06/2025 | Vitrified clay | 30 metres | 0.27 | | 0 | 1 | 0 | 0 |
| 2 | MH2 X | U | C | 450 | 21/06/2025 | Vitrified clay | 60 metres | 0.65 | | 0 | 1 | 0 | 0 |
| 3 | LEG B X | U | C | 225 | 21/06/2025 | Vitrified clay | 10 metres | 0.12 | | 0 | 1 | 0 | 0 |
| 4 | MH2 X | D | C | 450 | 21/06/2025 | Vitrified clay | 30 metres | 4.97 | | 10 | 2 | 2.21 | 11 |
| 5 | MH3 X | U | C | 450 | 21/06/2025 | Vitrified clay | 82.98 metres | 82.98 | | 80 | 4 | 1.48 | 123 |

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# Service Defects (SRM 4)

| Job Number | Surveyed by (Operator) | Base Unit | Date |
|---|---|---|---|
| **KM-17137** | **John Brooks** | **8NN3QCV1BU** | **21/06/2025** |

| No. | PLR | Dir. | Use | Shape/Size | Date | Mat. | Total Length | Inspection Length | Cat. | Peak Score | Grade | Mean Score | Total Score |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MH1 X | D | C | 450 | 21/06/2025 | Vitrified clay | 30 metres | 0.27 | | 15 | 5 | 55.56 | 15 |
| 2 | MH2 X | U | C | 450 | 21/06/2025 | Vitrified clay | 60 metres | 0.65 | | 10 | 5 | 15.38 | 10 |
| 3 | LEG B X | U | C | 225 | 21/06/2025 | Vitrified clay | 10 metres | 0.12 | | 10 | 5 | 116.67 | 14 |
| 4 | MH2 X | D | C | 450 | 21/06/2025 | Vitrified clay | 30 metres | 4.97 | | 10 | 5 | 2.21 | 11 |
| 5 | MH3 X | U | C | 450 | 21/06/2025 | Vitrified clay | 82.98 metres | 82.98 | | 1 | 2 | 0.02 | 2 |

EXISTING PUBLIC COMBINED 1070Ø

UU MH8802
CL: 32.72m
IL: N/A (1070)

EXISTING PUBLIC COMBINED 2450Ø

EXISTING PUBLIC COMBINED 750Ø

UU MH9802
CL: 32.60m
IL: 29.02m (750)

EXISTING PUBLIC COMBINED 4500

UU MH8703
CL: 32.43m
IL: 29.16m (450)

EXISTING PUBLIC COMBINED 4500

UU MH8702
CL: 32.41m
IL: 29.22m (450)

EXISTING PUBLIC COMBINED 750Ø

EXISTING PUBLIC COMBINED 4500

UU MH8603
CL: 32.47m
IL: N/A (770)

UU MH8602
CL: 32.50m
IL: 29.53m (450)

225mm connection
150mm connection
150mm connection
225mm connection
150mm connection
100mm connection
150mm connection
150mm connection
150mm connection
100mm connection
150mm connection
150mm connection
225mm connection
150mm connection
150mm connection
150mm connection
100mm connection
150mm connection
225mm connection

Silos
FB
Hoppers
MOSS LANE EAST
32.5m
Support 4 Progress
Shelter
130
140
PRINCESS ROAD
PRINCESS ROAD
West Indian Sports
and Social Club
Support 4 Progress
WESTWOOD STREET
Shelter
RABY STREET
33.7m
Westwood Cottages
Church
151
119
28
9
17

| Rev. | Description | Rev. by | Date |
|---|---|---|---|

Shepherd Gilmour
Consulting Engineers
3rd Floor Phoenix House,
45 Cross Street,
Manchester, M2 4JF
T: 0161 837 1500 W: www.sginfrastructure.co.uk

Client
MSV / MCC

Architect
MCAU

Project
MOSS SIDE
MANCHESTER

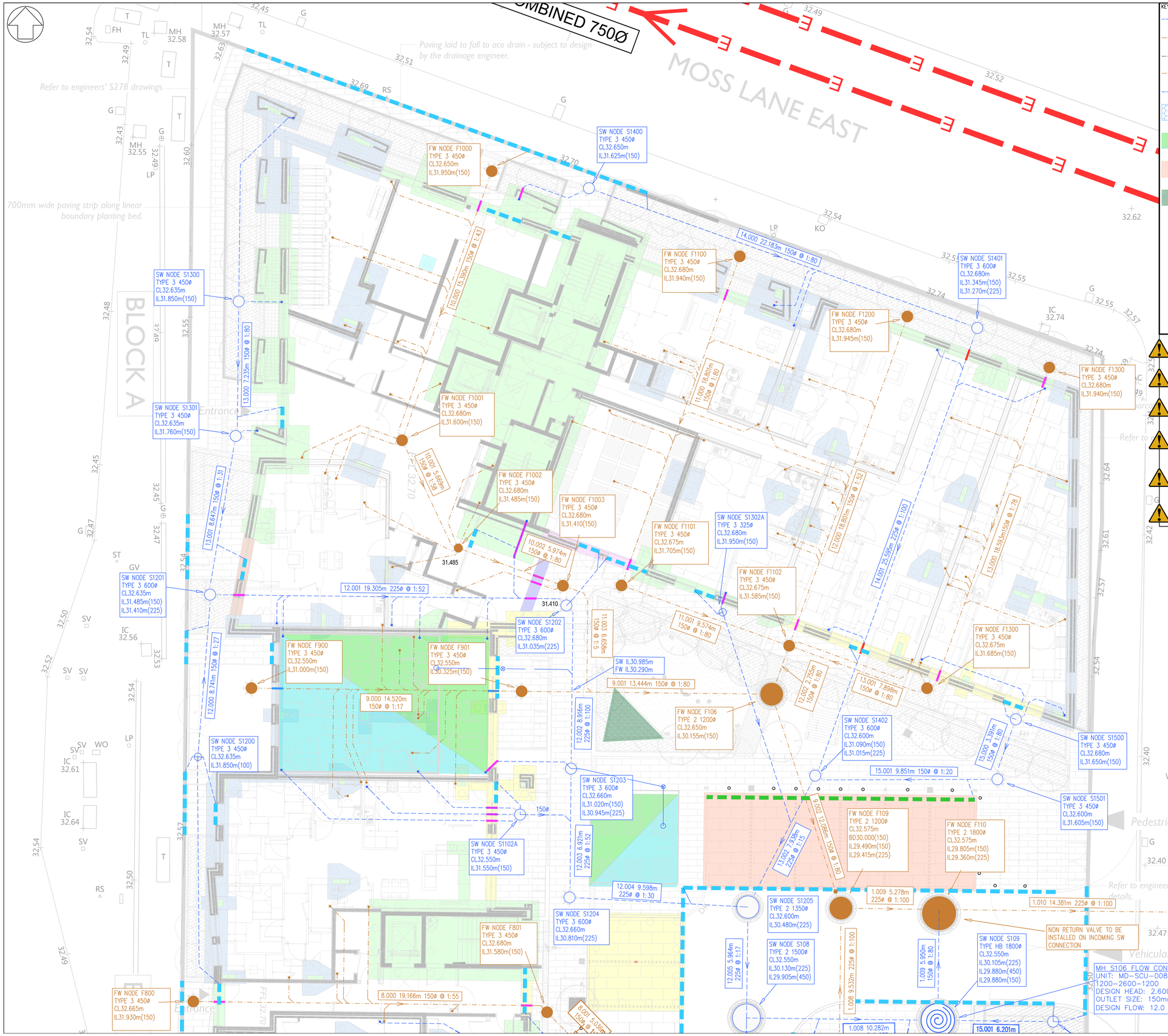
Title
CCTV CONNECTIONS REVIEW

| | | | |
|---|---|---|---|
| Date | 08.07.2025 | Drawn By | NU |
| Size | A0 | Checked By | RBG |
| Scale | 1:250 | Approved By | RBG |

Dwg. No.
C1876-SK100

Rev
P01

Plotted: 08 Jul 2025 - 11:02:51 AM
File Name: C:\Users\NU\Shepherd Gilmour\Projects - Documents\C1876 - MSV - MCAU - Moss Side\Drawings\C1876-SK100 - CCTV CONNECTIONS REVIEW.dwg




KEYS:

- PROPOSED SURFACE WATER PIPE/ MANHOLE
- PROPOSED FOUL WATER PIPE/ MANHOLE
- EXISTING COMBINED WATER DRAIN
- PROPOSED FOUL SEWER PPIC MANHOLE
- PROPOSED SURFACE WATER PPIC MANHOLE
- PROPOSED SURFACE WATER ATTENUATION
- PROPOSED GREEN/ BLUE ROOF
- PROPOSED PERMEABLE BLOCK PAVEMENT
- PROPOSED RAIN GARDENS
- PIPE SLEEVES THROUGH THE GROUND BEAM
- PIPE PASSES UNDER THE GROUND BEAM
- PIPE PASSES ABOVE GROUND BEAM
- CONNECTION POINT OF BLUE/ GREEN ROOF
- PROPOSED CHANNEL DRAIN
- PROPOSED FLOW CONTROL MANHOLE
- PROPOSED BACK INLET GULLY
- PROPOSED PERFORATED PIPE

**Surface Level Drainage**
External works drainage such as gullies, linear channel and kerb drains are shown indicatively. The position, number and type is subject to the Landscape Architect external level design.

**Manhole/Ironwork Cover Levels**
The proposed manhole cover levels and based on the Landscape Architects planning stage drawings. Drainage installed prior to receiving construction status finished levels are at risk and may require adjustment once available i.e., brickwork adjusted and/or manhole ring removed/replaced.

**Foul & Surface Water Pop-ups**
All foul and surface water pop-ups within the proposed building footprint have been provided by the Architect. The pop-up position and sizes require approval from the M&E consultant.

**Tree Pit Coordination**
There could be clashes in the scheme between the proposed trees (pits), landscape elements and drainage/service infrastructure. Coordination between these elements is required to prevent additional works/costs at a later stage of the scheme.

**Tree Pit Drainage**
At this stage there has been no allowance made for any tree pit/soft landscape drainage. Should these elements require a positive drainage Connection then the onsite surface water drainage will need to be reviewed/redesigned. Note: Some of the drains within tree pits can be up to 1.5m deep and this can have a significant knock-on effect with the depth of the site wide drainage if not coordinated correctly.

**Tree Pit Protection**
Where the proposed drainage and services pass next to/are adjacent to proposed tree pit(s). The drainage and services are to be adequately protected with a root barrier system.

**Drainage notes**

1. This drainage drawing is to be read in conjunction with all relevant Architect's, Engineer's drawings and specifications.
2. Do not scale this drawing. Any ambiguities, omissions and errors on the drawings shall be brought to the Engineer's attention immediately. All dimensions must be checked and verified on-site before construction commences.
3. All external underground drainage works are to be constructed in accordance with the Civil Engineering Specification for the Water Industry 7th Edition (CESWI), Sewers for Adoption 7th Edition (SFA) and any site-specific details provided on the contract drawings.
4. All internal underground drainage works are to be constructed in accordance with the Building Regulations Approved Document H (2015 Edition) and any site-specific details provided on the contract drawings.
5. The contractor must survey any retained drainage on-site and report the line, level and condition of the existing drainage to the engineer. We would recommend that the existing drainage is cleansed before any surveying and that these works are undertaken before the contractor commences on-site.
6. Any redundant manholes are to be broken out to at least 600mm below formation level and backfilled with an approved compacted granular material.
7. Any redundant pipes up to and including 300mm diameter are to be filled with a 10:1 PFA/cement mix or broken out and backfilled with an approved compacted granular material. Any redundant pipes over 300mm diameter are to be broken out and backfilled with an approved compacted granular material.
8. Adoptable Drainage Pipes:– All foul and surface water pipes up to and including 300mm diameter are to be Vitrified Clay in accordance with BS EN 295–1. All pipes greater than 300mm diameter to be Concrete Class 120 in accordance with BS EN 1916:2002.
9. Private Drainage Pipes:– All foul and surface water pipes up to and including 100mm diameter are to be Vitrified Clay in accordance with BS EN 295–1 or Solid Walled PVC–U in accordance with BS EN 1401. All foul and surface water pipes greater than 100mm diameter are to be Vitrified Clay in accordance with BS EN 295–1, Concrete Class 120 in accordance with BS EN 1916:2002 or Structural Walled PVC–U in accordance with WIS 4–35–01 and BS EN 13476.
10. All concrete manholes are to be in accordance with BS EN 1917. All plastic inspection chambers are to be in accordance with BS EN 13598.
11. All pipes laid within vehicle trafficked areas with less than 900mm of cover shall be surrounded in Class Z bedding. All pipes less than 300mm below the underside of a ground floor slab shall be surrounded in Class Z bedding. Where Class Z bedding is used as a surround a compressible material must be placed at every pipe joint to provide flexibility. All other pipes are to be laid in a Class S bedding.
12. All underground drainage must be protected during the construction phase where intermediate cover is less than 900mm.
13. Where foul and surface drains and/or sewers cross within 100mm of each other then concrete protection (Class Z bedding) may be required to prevent any potential cross–contamination.
14. All cover levels shown are approximate only. All manhole covers are to be set at the proposed finished pavement or floor level provided by the Architect.
15. For typical manhole construction details, pipe bedding/trench details and typical drainage details refer to SGI typical details drawing.
16. The internal foul and surface water pop–up positions and sizes shown are indicative only. The internal pop–up positions and pop–up sizes are to be confirmed by the architect/M&E consultant and cross referenced by the contractor before the works commence. Any errors are to be reported to the Engineer as soon as possible.
17. The external gully connections and channel drain connections are to be 150mm diameter unless otherwise stated. All gully and channel drain outlets to be trapped and roddable. All internal gullies and channel drains to be specified by others.
18. Channel drains to have a 200mm minimum concrete bed and haunch and be fitted with a heal guard cast iron grating. Gratings to be to load Class D400 specification unless otherwise agreed.
19. All foul water stacks and RWP's to have low level rodding access plates unless an alternative means of access or maintenance is agreed. The access plate size must be in accordance with Document H and sited above any connected ground floor appliance spill level.
20. All drainage connections passing through foundation bases and/or edge beams to be located within sealed sleeves. With the approval of the Engineer, drainage connections may be cast–in with flexible joints either side. Flexible joints to be no greater than 150mm from face of the concrete.
21. All manhole covers located within the road and car parking areas shall be Class D400. Covers within hard and soft landscaped areas with pedestrian traffic only shall be Class B125. Covers located within block/slab paving areas are to be recessed to suit the proposed paving and of the appropriate grade. All internal covers are to be recessed, double sealed bolt down type such as howe green 5000 series or similar approved.
22. Channels within Type 1 & 2 manholes must use pre–formed using cloyware sections for pipes up to and including 300mm diameter. All manhole channels to be set at the appropriate level for the incoming and outgoing pipe gradients.
23. All manholes connections to be formed at soffit to soffit unless otherwise stated. All internal branch connections to be made with swept bends in the direction of flow in the main pipe.

PROPOSED FFL MAY CHANGED

| Rev. | Description | By | Date |
|---|---|---|---|
| P07 | UPDATED DRAINAGE TO SUIT NEW LAYOUT | PMB | 03-07-2026 |
| T02 | UPDATED TANK VOLUME | PMB | 12-06-2026 |
| T01 | REDESIGNED DRAINAGE AND CHANGED DRAWING NUMBER & PAPER | PMB | 05-06-2026 |
| P06 | UPDATED DRAINAGE TO SUIT NEW LAYOUT & CLIENT'S COMMENTS | PMB | 27-05-2026 |
| P05 | UPDATED DRAINAGE TO SUIT M & E DRAWING | PMB | 29-04-2026 |
| P04 | UPDATED DRAINAGE TO SUIT FOUNDATION DESIGN | PMB | 13-08-2025 |
| P03 | UPDATED DRAINAGE TO SUIT NEW LAYOUT | PMB | 21-07-2025 |
| P02 | UPDATED DRAINAGE TO SUIT NEW LAYOUT | PMB | 26-06-2025 |


Shepherd Gilmour Consulting Engineers
Phoenix House, 45 Cross Street, Manchester, M2 4JF
t: 0161 837 1500 w: www.sgiconsulting.co.uk


Client
MOSSCARE ST VINCENT'S HOUSING GROUP LIMITED

Architect

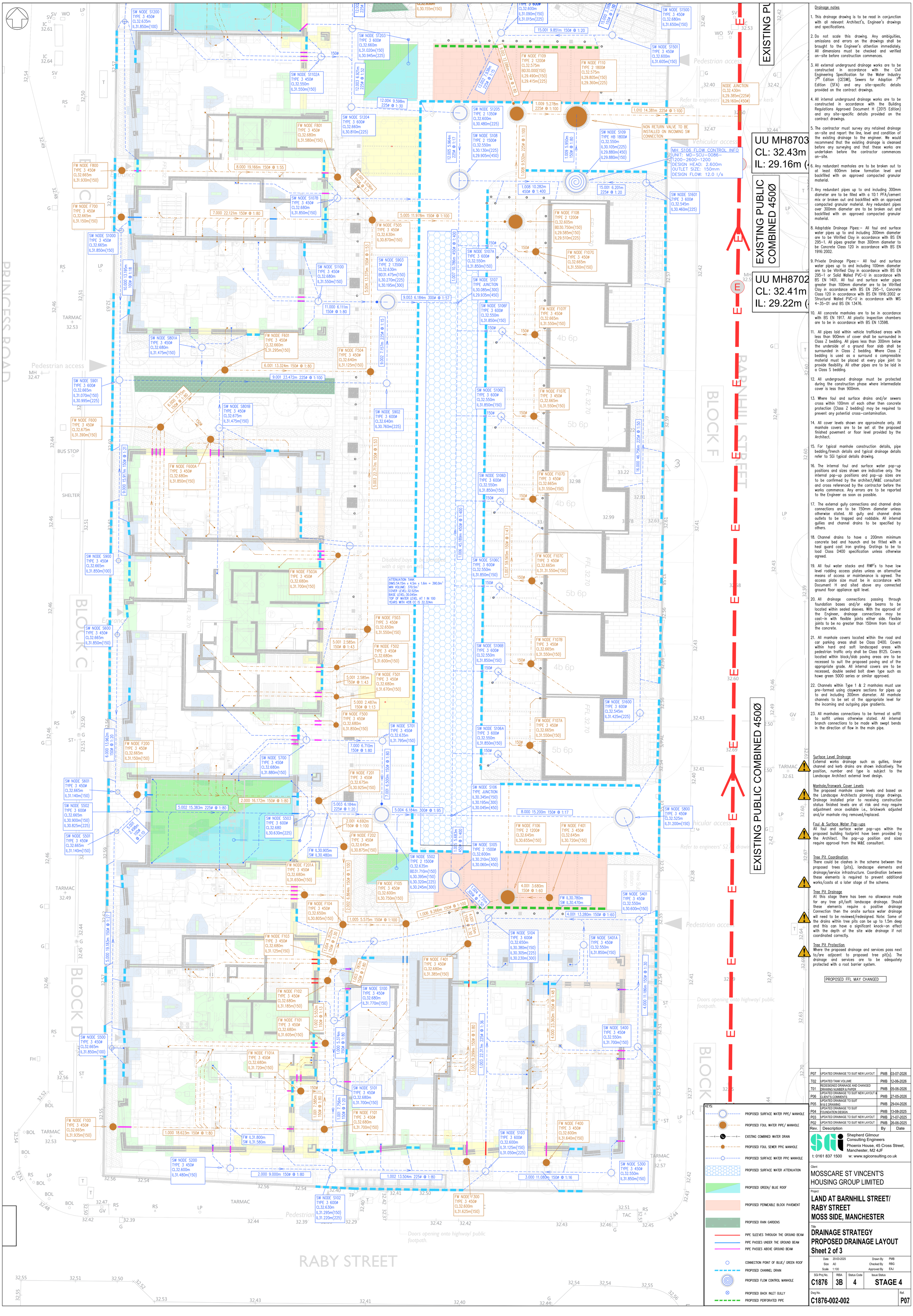
Project
LAND AT BARNHILL STREET/ RABY STREET MOSS SIDE, MANCHESTER

Title
DRAINAGE STRATEGY
PROPOSED DRAINAGE LAYOUT
Sheet 1 of 3

| | | | |
|---|---|---|---|
| Date | 20-03-2025 | Drawn By | PMB |
| Size | A1 | Checked By | RBG |
| Scale | 1:100 | Approved By | EAJ |

| SGi Proj No. | RIBA | Status Code | Issue Status |
|---|---|---|---|
| C1876 | 4 | C3 | STAGE 4 |

Dwg No. C1876-002-001 Rev. P07




Drainage notes

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6. Any redundant manholes are to be broken out to at least 600mm below formation level and backfilled with an approved compacted granular material.
7. Any redundant pipes up to and including 300mm diameter are to be filled with a 10:1 PFA/cement mix or broken out and backfilled with an approved compacted granular material. Any redundant pipes over 300mm diameter are to be broken out and backfilled with an approved compacted granular material.
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Where the proposed drainage and services pass next to/are adjacent to proposed tree pit(s). The drainage and services are to be adequately protected with a root barrier system.

PROPOSED FFL MAY CHANGED

KEYS:
- PROPOSED SURFACE WATER PIPE/ MANHOLE
- PROPOSED FOUL WATER PIPE/ MANHOLE
- EXISTING COMBINED WATER DRAIN
- PROPOSED FOUL SEWER PPIC MANHOLE
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- PIPE PASSES UNDER THE GROUND BEAM
- PIPE PASSES ABOVE GROUND BEAM
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- PROPOSED CHANNEL DRAIN
- PROPOSED FLOW CONTROL MANHOLE
- PROPOSED BACK INLET GULLY
- PROPOSED PERFORATED PIPE

| Rev. | Description | By | Date |
|---|---|---|---|
| P07 | UPDATED DRAINAGE TO SUIT NEW LAYOUT | PMB | 03-07-2026 |
| T02 | UPDATED TANK VOLUME | PMB | 12-06-2026 |
| T01 | REDESIGNED DRAINAGE AND CHANGED DRAWING NUMBER & PAPER | PMB | 05-06-2026 |
| P06 | UPDATED DRAINAGE TO SUIT NEW LAYOUT & CLIENT'S COMMENTS | PMB | 27-05-2026 |
| P05 | UPDATED DRAINAGE TO SUIT M & E DRAWING | PMB | 29-04-2026 |
| P04 | UPDATED DRAINAGE TO SUIT FOUNDATION DESIGN | PMB | 13-08-2025 |
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t: 0161 837 1500 w: www.sgiconsulting.co.uk

Client
MOSSCARE ST VINCENT'S HOUSING GROUP LIMITED

Project
LAND AT BARNHILL STREET/ RABY STREET MOSS SIDE, MANCHESTER

Title
DRAINAGE STRATEGY PROPOSED DRAINAGE LAYOUT Sheet 2 of 3

| | | | |
|---|---|---|---|
| Date | 20-03-2025 | Drawn By | PMB |
| Size | A0 | Checked By | RBG |
| Scale | 1:100 | Approved By | EAJ |

| SGi Proj No. | RIBA | Status Code | Issue Status |
|---|---|---|---|
| C1876 | 3B | 4 | STAGE 4 |

Dwg No. C1876-002-002 Ref. P07

## STORM SEWER DESIGN by the Modified Rational Method

### Design Criteria for Storm

Pipe Sizes STANDARD Manhole Sizes STANDARD

FSR Rainfall Model - England and Wales

| | | | |
|---|---|---|---|
| Return Period (years) | 100 | PIMP (%) | 100 |
| M5-60 (mm) | 18.000 | Add Flow / Climate Change (%) | 0 |
| Ratio R | 0.360 | Minimum Backdrop Height (m) | 0.200 |
| Maximum Rainfall (mm/hr) | 50 | Maximum Backdrop Height (m) | 1.500 |
| Maximum Time of Concentration (mins) | 30 | Min Design Depth for Optimisation (m) | 1.200 |
| Foul Sewage (l/s/ha) | 0.000 | Min Vel for Auto Design only (m/s) | 1.00 |
| Volumetric Runoff Coeff. | 1.000 | Min Slope for Optimisation (1:X) | 500 |

Designed with Level Soffits

### Time Area Diagram for Storm

| Time (mins) | Area (ha) | Time (mins) | Area (ha) |
|---|---|---|---|
| 0-4 | 0.424 | 4-8 | 0.224 |

Total Area Contributing (ha) = 0.648

Total Pipe Volume (m³) = 387.060

### Network Design Table for Storm

« - Indicates pipe capacity < flow

| PN | Length (m) | Fall (m) | Slope (1:X) | I.Area (ha) | T.E. (mins) | Base Flow (l/s) | k (mm) | n | HYD SECT | DIA (mm) | Section Type | Auto Design |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.000 | 5.374 | 0.070 | 76.8 | 0.013 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 1.001 | 7.756 | 0.405 | 19.2 | 0.007 | 0.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 2.000 | 9.000 | 0.185 | 48.6 | 0.013 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |

### Network Results Table

| PN | Rain (mm/hr) | T.C. (mins) | US/IL (m) | Σ I.Area (ha) | Σ Base Flow (l/s) | Foul (l/s) | Add Flow (l/s) | Vel (m/s) | Cap (l/s) | Flow (l/s) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.000 | 50.00 | 5.08 | 31.770 | 0.013 | 0.0 | 0.0 | 0.0 | 1.15 | 20.3 | 2.3 |
| 1.001 | 50.00 | 5.13 | 31.700 | 0.020 | 0.0 | 0.0 | 0.0 | 2.31 | 40.9 | 3.6 |
| 2.000 | 50.00 | 5.10 | 31.480 | 0.013 | 0.0 | 0.0 | 0.0 | 1.45 | 25.6 | 2.3 |

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## Network Design Table for Storm

| PN | Length (m) | Fall (m) | Slope (1:X) | I.Area (ha) | T.E. (mins) | Base Flow (l/s) | k (mm) | n | HYD SECT | DIA (mm) | Section Type | Auto Design |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.002 | 13.504 | 0.170 | 79.4 | 0.007 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 3.000 | 11.080 | 0.725 | 15.3 | 0.008 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 1.003 | 22.317 | 0.745 | 30.0 | 0.025 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 4.000 | 11.186 | 1.100 | 10.2 | 0.015 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 4.001 | 13.280 | 0.220 | 60.4 | 0.006 | 0.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 1.004 | 4.731 | 0.020 | 236.6 | 0.010 | 0.00 | 0.0 | 0.600 | | o | 300 | Pipe/Conduit | |
| 1.005 | 5.683 | 0.015 | 378.9 | 0.005 | 0.00 | 0.0 | 0.600 | | o | 450 | Pipe/Conduit | |
| 5.000 | 19.097 | 0.710 | 26.9 | 0.014 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 5.001 | 2.498 | 0.240 | 10.4 | 0.000 | 0.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 6.000 | 13.877 | 0.710 | 19.5 | 0.002 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 6.001 | 2.416 | 0.240 | 10.1 | 0.000 | 0.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 5.002 | 15.383 | 0.195 | 78.9 | 0.037 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 5.003 | 6.184 | 0.310 | 19.9 | 0.007 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 7.000 | 6.710 | 0.085 | 78.9 | 0.026 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |

## Network Results Table

| PN | Rain (mm/hr) | T.C. (mins) | US/IL (m) | Σ I.Area (ha) | Σ Base Flow (l/s) | Foul (l/s) | Add Flow (l/s) | Vel (m/s) | Cap (l/s) | Flow (l/s) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.002 | 50.00 | 5.29 | 31.220 | 0.040 | 0.0 | 0.0 | 0.0 | 1.47 | 58.4 | 7.2 |
| 3.000 | 50.00 | 5.07 | 31.850 | 0.008 | 0.0 | 0.0 | 0.0 | 2.59 | 45.8 | 1.4 |
| 1.003 | 50.00 | 5.44 | 31.050 | 0.073 | 0.0 | 0.0 | 0.0 | 2.40 | 95.4 | 13.2 |
| 4.000 | 50.00 | 5.06 | 31.700 | 0.015 | 0.0 | 0.0 | 0.0 | 3.18 | 56.2 | 2.7 |
| 4.001 | 50.00 | 5.23 | 30.600 | 0.021 | 0.0 | 0.0 | 0.0 | 1.30 | 22.9 | 3.8 |
| 1.004 | 50.00 | 5.52 | 30.230 | 0.104 | 0.0 | 0.0 | 0.0 | 1.02 | 72.0 | 18.8 |
| 1.005 | 50.00 | 5.61 | 30.060 | 0.109 | 0.0 | 0.0 | 0.0 | 1.04 | 165.2 | 19.7 |
| 5.000 | 50.00 | 5.16 | 31.850 | 0.014 | 0.0 | 0.0 | 0.0 | 1.95 | 34.4 | 2.5 |
| 5.001 | 50.00 | 5.18 | 31.140 | 0.014 | 0.0 | 0.0 | 0.0 | 3.14 | 55.5 | 2.5 |
| 6.000 | 50.00 | 5.10 | 31.850 | 0.002 | 0.0 | 0.0 | 0.0 | 2.29 | 40.4 | 0.4 |
| 6.001 | 50.00 | 5.11 | 31.140 | 0.002 | 0.0 | 0.0 | 0.0 | 3.19 | 56.4 | 0.4 |
| 5.002 | 50.00 | 5.35 | 30.825 | 0.053 | 0.0 | 0.0 | 0.0 | 1.47 | 58.6 | 9.6 |
| 5.003 | 50.00 | 5.39 | 30.630 | 0.060 | 0.0 | 0.0 | 0.0 | 2.94 | 117.0 | 10.8 |
| 7.000 | 50.00 | 5.10 | 31.880 | 0.026 | 0.0 | 0.0 | 0.0 | 1.13 | 20.0 | 4.7 |

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## Network Design Table for Storm

| PN | Length (m) | Fall (m) | Slope (1:X) | I.Area (ha) | T.E. (mins) | Base Flow (l/s) | k (mm) | n | HYD SECT | DIA (mm) | Section Type | Auto Design |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.001 | 6.500 | 0.085 | 76.5 | 0.013 | 0.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 5.004 | 6.184 | 0.050 | 123.7 | 0.000 | 0.00 | 0.0 | 0.600 | | o | 300 | Pipe/Conduit | |
| 8.000 | 15.200 | 0.855 | 17.8 | 0.005 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 1.006 | 45.189 | 0.110 | 410.8 | 0.068 | 0.00 | 0.0 | | 0.050 | →[↓] | | Cellular Storage | |
| 9.000 | 15.917 | 0.780 | 20.4 | 0.003 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 10.000 | 13.195 | 0.780 | 16.9 | 0.002 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 9.001 | 23.561 | 0.235 | 100.3 | 0.047 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 9.002 | 7.157 | 0.490 | 14.6 | 0.017 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 11.000 | 6.111 | 0.075 | 81.5 | 0.015 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 9.003 | 6.184 | 0.110 | 56.2 | 0.005 | 0.00 | 0.0 | 0.600 | | o | 300 | Pipe/Conduit | |
| 1.007 | 10.786 | 0.030 | 359.5 | 0.014 | 0.00 | 0.0 | | 0.050 | →[↓] | | Cellular Storage | |
| 12.000 | 8.740 | 0.365 | 23.9 | 0.004 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |

## Network Results Table

| PN | Rain (mm/hr) | T.C. (mins) | US/IL (m) | Σ I.Area (ha) | Σ Base Flow (l/s) | Foul (l/s) | Add Flow (l/s) | Vel (m/s) | Cap (l/s) | Flow (l/s) |
|---|---|---|---|---|---|---|---|---|---|---|
| 7.001 | 50.00 | 5.19 | 31.795 | 0.039 | 0.0 | 0.0 | 0.0 | 1.15 | 20.3 | 7.0 |
| 5.004 | 50.00 | 5.46 | 30.245 | 0.099 | 0.0 | 0.0 | 0.0 | 1.41 | 99.8 | 17.9 |
| 8.000 | 50.00 | 5.11 | 31.200 | 0.005 | 0.0 | 0.0 | 0.0 | 2.40 | 42.4 | 0.9 |
| 1.006 | 50.00 | 6.86 | 30.045 | 0.281 | 0.0 | 0.0 | 0.0 | 0.60 | 2469.0 | 50.7 |
| 9.000 | 50.00 | 5.12 | 31.850 | 0.003 | 0.0 | 0.0 | 0.0 | 2.24 | 39.6 | 0.5 |
| 10.000 | 50.00 | 5.09 | 31.850 | 0.002 | 0.0 | 0.0 | 0.0 | 2.46 | 43.5 | 0.4 |
| 9.001 | 50.00 | 5.42 | 30.995 | 0.052 | 0.0 | 0.0 | 0.0 | 1.31 | 51.9 | 9.4 |
| 9.002 | 50.00 | 5.45 | 30.760 | 0.069 | 0.0 | 0.0 | 0.0 | 3.44 | 136.8 | 12.5 |
| 11.000 | 50.00 | 5.09 | 31.550 | 0.015 | 0.0 | 0.0 | 0.0 | 1.11 | 19.7 | 2.7 |
| 9.003 | 50.00 | 5.50 | 30.195 | 0.089 | 0.0 | 0.0 | 0.0 | 2.10 | 148.5 | 16.1 |
| 1.007 | 50.00 | 7.08 | 29.935 | 0.384 | 0.0 | 0.0 | 0.0 | 0.80 | 13810.0 | 69.3 |
| 12.000 | 50.00 | 5.07 | 31.850 | 0.004 | 0.0 | 0.0 | 0.0 | 2.07 | 36.5 | 0.7 |

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## Network Design Table for Storm

| PN | Length (m) | Fall (m) | Slope (1:X) | I.Area (ha) | T.E. (mins) | Base Flow (l/s) | k (mm) | n | HYD SECT | DIA (mm) | Section Type | Auto Design |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13.000 | 7.229 | 0.090 | 80.3 | 0.023 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 13.001 | 8.641 | 0.275 | 31.4 | 0.013 | 0.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 12.001 | 19.161 | 0.375 | 51.1 | 0.030 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 12.002 | 8.777 | 0.090 | 97.5 | 0.026 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 12.003 | 6.920 | 0.135 | 51.3 | 0.000 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 12.004 | 9.598 | 0.330 | 29.1 | 0.020 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 14.000 | 22.183 | 0.280 | 79.2 | 0.024 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 14.001 | 25.590 | 0.255 | 100.4 | 0.019 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 15.000 | 3.368 | 0.045 | 74.8 | 0.009 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 15.001 | 9.798 | 0.515 | 19.0 | 0.015 | 0.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 14.002 | 7.938 | 0.535 | 14.8 | 0.013 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 12.005 | 5.964 | 0.350 | 17.0 | 0.022 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 1.008 | 10.282 | 0.025 | 411.3 | 0.008 | 0.00 | 0.0 | 0.600 | | o | 450 | Pipe/Conduit | |
| 16.000 | 46.756 | 0.965 | 48.5 | 0.034 | 5.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |

## Network Results Table

| PN | Rain (mm/hr) | T.C. (mins) | US/IL (m) | Σ I.Area (ha) | Σ Base Flow (l/s) | Foul (l/s) | Add Flow (l/s) | Vel (m/s) | Cap (l/s) | Flow (l/s) |
|---|---|---|---|---|---|---|---|---|---|---|
| 13.000 | 50.00 | 5.11 | 31.850 | 0.023 | 0.0 | 0.0 | 0.0 | 1.12 | 19.8 | 4.2 |
| 13.001 | 50.00 | 5.19 | 31.760 | 0.036 | 0.0 | 0.0 | 0.0 | 1.80 | 31.9 | 6.5 |
| 12.001 | 50.00 | 5.36 | 31.410 | 0.070 | 0.0 | 0.0 | 0.0 | 1.83 | 72.9 | 12.6 |
| 12.002 | 50.00 | 5.47 | 31.035 | 0.096 | 0.0 | 0.0 | 0.0 | 1.32 | 52.6 | 17.3 |
| 12.003 | 50.00 | 5.53 | 30.945 | 0.096 | 0.0 | 0.0 | 0.0 | 1.83 | 72.8 | 17.3 |
| 12.004 | 50.00 | 5.60 | 30.810 | 0.116 | 0.0 | 0.0 | 0.0 | 2.44 | 96.8 | 20.9 |
| 14.000 | 50.00 | 5.33 | 31.625 | 0.024 | 0.0 | 0.0 | 0.0 | 1.13 | 20.0 | 4.3 |
| 14.001 | 50.00 | 5.65 | 31.270 | 0.043 | 0.0 | 0.0 | 0.0 | 1.31 | 51.9 | 7.8 |
| 15.000 | 50.00 | 5.05 | 31.650 | 0.009 | 0.0 | 0.0 | 0.0 | 1.16 | 20.6 | 1.6 |
| 15.001 | 50.00 | 5.12 | 31.605 | 0.024 | 0.0 | 0.0 | 0.0 | 2.32 | 41.0 | 4.3 |
| 14.002 | 50.00 | 5.69 | 31.015 | 0.080 | 0.0 | 0.0 | 0.0 | 3.41 | 135.8 | 14.4 |
| 12.005 | 50.00 | 5.72 | 30.480 | 0.218 | 0.0 | 0.0 | 0.0 | 3.19 | 126.7 | 39.4 |
| 1.008 | 50.00 | 7.26 | 29.905 | 0.610 | 0.0 | 0.0 | 0.0 | 1.00 | 158.4 | 110.1 |
| 16.000 | 50.00 | 5.41 | 31.425 | 0.034 | 0.0 | 0.0 | 0.0 | 1.88 | 74.9 | 6.1 |

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## Network Design Table for Storm

| PN | Length (m) | Fall (m) | Slope (1:X) | I.Area (ha) | T.E. (mins) | Base Flow (l/s) | k (mm) | n | HYD SECT | DIA (mm) | Section Type | Auto Design |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16.001 | 6.201 | 0.355 | 17.5 | 0.004 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 1.009 | 5.950 | 0.075 | 79.3 | 0.000 | 0.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |

## Network Results Table

| PN | Rain (mm/hr) | T.C. (mins) | US/IL (m) | Σ I.Area (ha) | Σ Base Flow (l/s) | Foul (l/s) | Add Flow (l/s) | Vel (m/s) | Cap (l/s) | Flow (l/s) |
|---|---|---|---|---|---|---|---|---|---|---|
| 16.001 | 50.00 | 5.45 | 30.460 | 0.038 | 0.0 | 0.0 | 0.0 | 3.15 | 125.1 | 6.9 |
| 1.009 | 50.00 | 7.34 | 29.880 | 0.648 | 0.0 | 0.0 | 0.0 | 1.13 | 20.0« | 117.0 |

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## Manhole Schedules for Storm

| MH Name | MH CL (m) | MH Depth (m) | MH Connection | MH Diam.,L*W (mm) | Pipe Out PN | Pipe Out Invert Level (m) | Pipe Out Diameter (mm) | Pipes In PN | Pipes In Invert Level (m) | Pipes In Diameter (mm) | Backdrop (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| S100 | 32.680 | 0.910 | Open Manhole | 450 | 1.000 | 31.770 | 150 | | | | |
| S101 | 32.680 | 0.980 | Open Manhole | 450 | 1.001 | 31.700 | 150 | 1.000 | 31.700 | 150 | |
| S200 | 32.600 | 1.120 | Open Manhole | 450 | 2.000 | 31.480 | 150 | | | | |
| S102 | 32.630 | 1.410 | Open Manhole | 600 | 1.002 | 31.220 | 225 | 1.001 | 31.295 | 150 | |
| | | | | | | | | 2.000 | 31.295 | 150 | |
| S300 | 32.550 | 0.700 | Open Manhole | 450 | 3.000 | 31.850 | 150 | | | | |
| S103 | 32.600 | 1.550 | Open Manhole | 600 | 1.003 | 31.050 | 225 | 1.002 | 31.050 | 225 | |
| | | | | | | | | 3.000 | 31.125 | 150 | |
| S400 | 32.550 | 0.850 | Open Manhole | 450 | 4.000 | 31.700 | 150 | | | | |
| S401 | 32.550 | 1.950 | Open Manhole | 450 | 4.001 | 30.600 | 150 | 4.000 | 30.600 | 150 | |
| S104 | 32.600 | 2.370 | Open Manhole | 600 | 1.004 | 30.230 | 300 | 1.003 | 30.305 | 225 | |
| | | | | | | | | 4.001 | 30.380 | 150 | |
| S105 | 32.600 | 2.540 | Open Manhole | 1500 | 1.005 | 30.060 | 450 | 1.004 | 30.210 | 300 | |
| S500 | 32.550 | 0.700 | Open Manhole | 450 | 5.000 | 31.850 | 150 | | | | |
| S501 | 32.665 | 1.525 | Open Manhole | 450 | 5.001 | 31.140 | 150 | 5.000 | 31.140 | 150 | |
| S600 | 32.665 | 0.815 | Open Manhole | 450 | 6.000 | 31.850 | 150 | | | | |
| S601 | 32.665 | 1.525 | Open Manhole | 450 | 6.001 | 31.140 | 150 | 6.000 | 31.140 | 150 | |
| S502 | 32.665 | 1.840 | Open Manhole | 600 | 5.002 | 30.825 | 225 | 5.001 | 30.900 | 150 | |
| | | | | | | | | 6.001 | 30.900 | 150 | |
| S503 | 32.680 | 2.050 | Open Manhole | 600 | 5.003 | 30.630 | 225 | 5.002 | 30.630 | 225 | |
| S700 | 32.680 | 0.800 | Open Manhole | 450 | 7.000 | 31.880 | 150 | | | | |
| S701 | 32.635 | 0.840 | Open Manhole | 450 | 7.001 | 31.795 | 150 | 7.000 | 31.795 | 150 | |
| S504 | 32.635 | 2.390 | Open Manhole | 1500 | 5.004 | 30.245 | 300 | 5.003 | 30.320 | 225 | |
| | | | | | | | | 7.001 | 31.710 | 150 | 1315 |
| S800 | 32.525 | 1.325 | Open Manhole | 1200 | 8.000 | 31.200 | 150 | | | | |
| S106 | 32.500 | 2.455 | Open Manhole | 1 | 1.006 | 30.045 | | 1.005 | 30.045 | 450 | |
| | | | | | | | | 5.004 | 30.195 | 300 | |
| | | | | | | | | 8.000 | 30.345 | 150 | |
| S900 | 32.665 | 0.815 | Open Manhole | 450 | 9.000 | 31.850 | 150 | | | | |
| S901 | 32.665 | 0.815 | Open Manhole | 450 | 10.000 | 31.850 | 150 | | | | |
| S901 | 32.665 | 1.670 | Open Manhole | 600 | 9.001 | 30.995 | 225 | 9.000 | 31.070 | 150 | |
| | | | | | | | | 10.000 | 31.070 | 150 | |
| S902 | 32.640 | 1.880 | Open Manhole | 600 | 9.002 | 30.760 | 225 | 9.001 | 30.760 | 225 | |
| S1100 | 32.680 | 1.130 | Open Manhole | 450 | 11.000 | 31.550 | 150 | | | | |
| S903 | 32.630 | 2.435 | Open Manhole | 1350 | 9.003 | 30.195 | 300 | 9.002 | 30.270 | 225 | |
| | | | | | | | | 11.000 | 31.475 | 150 | 1130 |
| S107 | 32.500 | 2.565 | Open Manhole | 1 | 1.007 | 29.935 | | 1.006 | 29.935 | | |
| | | | | | | | | 9.003 | 30.085 | 300 | |

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## Manhole Schedules for Storm

| MH Name | MH CL (m) | MH Depth (m) | MH Connection | MH Diam.,L*W (mm) | Pipe Out PN | Pipe Out Invert Level (m) | Pipe Out Diameter (mm) | Pipes In PN | Pipes In Invert Level (m) | Pipes In Diameter (mm) | Backdrop (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| S1200 | 32.635 | 0.785 | Open Manhole | 450 | 12.000 | 31.850 | 150 | | | | |
| S1300 | 32.635 | 0.785 | Open Manhole | 450 | 13.000 | 31.850 | 150 | | | | |
| S1301 | 32.635 | 0.875 | Open Manhole | 450 | 13.001 | 31.760 | 150 | 13.000 | 31.760 | 150 | |
| S1201 | 32.635 | 1.225 | Open Manhole | 600 | 12.001 | 31.410 | 225 | 12.000 | 31.485 | 150 | |
| | | | | | | | | 13.001 | 31.485 | 150 | |
| S1202 | 32.680 | 1.645 | Open Manhole | 600 | 12.002 | 31.035 | 225 | 12.001 | 31.035 | 225 | |
| S1203 | 32.660 | 1.715 | Open Manhole | 600 | 12.003 | 30.945 | 225 | 12.002 | 30.945 | 225 | |
| S1204 | 32.660 | 1.850 | Open Manhole | 600 | 12.004 | 30.810 | 225 | 12.003 | 30.810 | 225 | |
| S1400 | 32.650 | 1.025 | Open Manhole | 450 | 14.000 | 31.625 | 150 | | | | |
| S1401 | 32.680 | 1.410 | Open Manhole | 600 | 14.001 | 31.270 | 225 | 14.000 | 31.345 | 150 | |
| S1500 | 32.680 | 1.030 | Open Manhole | 450 | 15.000 | 31.650 | 150 | | | | |
| S1501 | 32.600 | 0.995 | Open Manhole | 450 | 15.001 | 31.605 | 150 | 15.000 | 31.605 | 150 | |
| S1402 | 32.600 | 1.585 | Open Manhole | 600 | 14.002 | 31.015 | 225 | 14.001 | 31.015 | 225 | |
| | | | | | | | | 15.001 | 31.090 | 150 | |
| 1205 | 32.600 | 2.120 | Open Manhole | 1350 | 12.005 | 30.480 | 225 | 12.004 | 30.480 | 225 | |
| | | | | | | | | 14.002 | 30.480 | 225 | |
| S108 | 32.550 | 2.645 | Open Manhole | 1500 | 1.008 | 29.905 | 450 | 1.007 | 29.905 | | |
| | | | | | | | | 12.005 | 30.130 | 225 | |
| S1600 | 32.545 | 1.120 | Open Manhole | 600 | 16.000 | 31.425 | 225 | | | | |
| S1601 | 32.545 | 2.085 | Open Manhole | 600 | 16.001 | 30.460 | 225 | 16.000 | 30.460 | 225 | |
| S109 | 32.500 | 2.620 | Open Manhole | 1800 | 1.009 | 29.880 | 150 | 1.008 | 29.880 | 450 | |
| | | | | | | | | 16.001 | 30.105 | 225 | 300 |
| | 32.550 | 2.745 | Open Manhole | 0 | | OUTFALL | | 1.009 | 29.805 | 150 | |

| MH Name | Manhole Easting (m) | Manhole Northing (m) | Intersection Easting (m) | Intersection Northing (m) | Manhole Access | Layout (North) |
|---|---|---|---|---|---|---|
| S100 | 383859.784 | 395717.514 | 383859.784 | 395717.514 | Required | |
| S101 | 383859.721 | 395712.141 | 383859.721 | 395712.141 | Required | |
| S200 | 383850.631 | 395704.491 | 383850.631 | 395704.491 | Required | |
| S102 | 383859.630 | 395704.385 | 383859.630 | 395704.385 | Required | |



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## Manhole Schedules for Storm

| MH Name | Manhole Easting (m) | Manhole Northing (m) | Intersection Easting (m) | Intersection Northing (m) | Manhole Access | Layout (North) |
|---|---|---|---|---|---|---|
| S300 | 383884.212 | 395704.099 | 383884.212 | 395704.099 | Required | |
| S103 | 383873.132 | 395704.229 | 383873.132 | 395704.229 | Required | |
| S400 | 383886.542 | 395715.203 | 383886.542 | 395715.203 | Required | |
| S401 | 383886.674 | 395726.387 | 383886.674 | 395726.387 | Required | |
| S104 | 383873.395 | 395726.544 | 383873.395 | 395726.544 | Required | |
| S105 | 383870.089 | 395729.929 | 383870.089 | 395729.929 | Required | |
| S500 | 383840.186 | 395715.101 | 383840.186 | 395715.101 | Required | |
| S501 | 383840.620 | 395734.193 | 383840.620 | 395734.193 | Required | |
| S600 | 383840.673 | 395751.543 | 383840.673 | 395751.543 | Required | |
| S601 | 383840.719 | 395737.667 | 383840.719 | 395737.667 | Required | |
| S502 | 383842.407 | 395735.938 | 383842.407 | 395735.938 | Required | |
| S503 | 383857.789 | 395735.757 | 383857.789 | 395735.757 | Required | |
| S700 | 383857.339 | 395742.263 | 383857.339 | 395742.263 | Required | |
| S701 | 383864.049 | 395742.184 | 383864.049 | 395742.184 | Required | |
| S504 | 383863.972 | 395735.684 | 383863.972 | 395735.684 | Required | |

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## Manhole Schedules for Storm

| MH Name | Manhole Easting (m) | Manhole Northing (m) | Intersection Easting (m) | Intersection Northing (m) | Manhole Access | Layout (North) |
|---|---|---|---|---|---|---|
| S800 | 383885.355 | 395735.436 | 383885.355 | 395735.436 | Required | |
| S106 | 383870.156 | 395735.612 | 383870.156 | 395735.612 | Required | |
| S900 | 383840.775 | 395758.074 | 383840.775 | 395758.074 | Required | |
| S901 | 383841.016 | 395787.185 | 383841.016 | 395787.185 | Required | |
| S901 | 383840.861 | 395773.991 | 383840.861 | 395773.991 | Required | |
| S902 | 383864.420 | 395773.713 | 383864.420 | 395773.713 | Required | |
| S1100 | 383858.393 | 395780.942 | 383858.393 | 395780.942 | Required | |
| S903 | 383864.504 | 395780.870 | 383864.504 | 395780.870 | Required | |
| S107 | 383870.688 | 395780.797 | 383870.688 | 395780.797 | Required | |
| S1200 | 383841.324 | 395805.623 | 383841.324 | 395805.623 | Required | |
| S1300 | 383843.520 | 395830.096 | 383843.520 | 395830.096 | Required | |
| S1301 | 383843.359 | 395822.869 | 383843.359 | 395822.869 | Required | |
| S1201 | 383841.979 | 395814.338 | 383841.979 | 395814.338 | Required | |
| S1202 | 383861.132 | 395813.759 | 383861.132 | 395813.759 | Required | |
| S1203 | 383861.382 | 395804.986 | 383861.382 | 395804.986 | Required | |

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## Manhole Schedules for Storm

| MH Name | Manhole Easting (m) | Manhole Northing (m) | Intersection Easting (m) | Intersection Northing (m) | Manhole Access | Layout (North) |
|---|---|---|---|---|---|---|
| S1204 | 383861.301 | 395798.066 | 383861.301 | 395798.066 | Required | |
| S1400 | 383862.345 | 395836.184 | 383862.345 | 395836.184 | Required | |
| S1401 | 383883.217 | 395828.672 | 383883.217 | 395828.672 | Required | |
| S1500 | 383885.286 | 395807.635 | 383885.286 | 395807.635 | Required | |
| S1501 | 383884.303 | 395804.414 | 383884.303 | 395804.414 | Required | |
| S1402 | 383874.507 | 395804.609 | 383874.507 | 395804.609 | Required | |
| 1205 | 383870.885 | 395797.546 | 383870.885 | 395797.546 | Required | |
| S108 | 383870.812 | 395791.583 | 383870.812 | 395791.583 | Required | |
| S1600 | 383886.745 | 395744.636 | 383886.745 | 395744.636 | Required | |
| S1601 | 383887.293 | 395791.389 | 383887.293 | 395791.389 | Required | |
| S109 | 383881.093 | 395791.462 | 383881.093 | 395791.462 | Required | |
| | 383881.165 | 395797.411 | | | No Entry | |

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## PIPELINE SCHEDULES for Storm

### Upstream Manhole

| PN | Hyd Sect | Diam (mm) | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | o | 150 | S100 | 32.680 | 31.770 | 0.760 | Open Manhole | 450 |
| 1.001 | o | 150 | S101 | 32.680 | 31.700 | 0.830 | Open Manhole | 450 |
| 2.000 | o | 150 | S200 | 32.600 | 31.480 | 0.970 | Open Manhole | 450 |
| 1.002 | o | 225 | S102 | 32.630 | 31.220 | 1.185 | Open Manhole | 600 |
| 3.000 | o | 150 | S300 | 32.550 | 31.850 | 0.550 | Open Manhole | 450 |
| 1.003 | o | 225 | S103 | 32.600 | 31.050 | 1.325 | Open Manhole | 600 |
| 4.000 | o | 150 | S400 | 32.550 | 31.700 | 0.700 | Open Manhole | 450 |
| 4.001 | o | 150 | S401 | 32.550 | 30.600 | 1.800 | Open Manhole | 450 |
| 1.004 | o | 300 | S104 | 32.600 | 30.230 | 2.070 | Open Manhole | 600 |
| 1.005 | o | 450 | S105 | 32.600 | 30.060 | 2.090 | Open Manhole | 1500 |
| 5.000 | o | 150 | S500 | 32.550 | 31.850 | 0.550 | Open Manhole | 450 |
| 5.001 | o | 150 | S501 | 32.665 | 31.140 | 1.375 | Open Manhole | 450 |
| 6.000 | o | 150 | S600 | 32.665 | 31.850 | 0.665 | Open Manhole | 450 |

### Downstream Manhole

| PN | Length (m) | Slope (1:X) | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | 5.374 | 76.8 | S101 | 32.680 | 31.700 | 0.830 | Open Manhole | 450 |
| 1.001 | 7.756 | 19.2 | S102 | 32.630 | 31.295 | 1.185 | Open Manhole | 600 |
| 2.000 | 9.000 | 48.6 | S102 | 32.630 | 31.295 | 1.185 | Open Manhole | 600 |
| 1.002 | 13.504 | 79.4 | S103 | 32.600 | 31.050 | 1.325 | Open Manhole | 600 |
| 3.000 | 11.080 | 15.3 | S103 | 32.600 | 31.125 | 1.325 | Open Manhole | 600 |
| 1.003 | 22.317 | 30.0 | S104 | 32.600 | 30.305 | 2.070 | Open Manhole | 600 |
| 4.000 | 11.186 | 10.2 | S401 | 32.550 | 30.600 | 1.800 | Open Manhole | 450 |
| 4.001 | 13.280 | 60.4 | S104 | 32.600 | 30.380 | 2.070 | Open Manhole | 600 |
| 1.004 | 4.731 | 236.6 | S105 | 32.600 | 30.210 | 2.090 | Open Manhole | 1500 |
| 1.005 | 5.683 | 378.9 | S106 | 32.500 | 30.045 | 2.005 | Open Manhole | 1 |
| 5.000 | 19.097 | 26.9 | S501 | 32.665 | 31.140 | 1.375 | Open Manhole | 450 |
| 5.001 | 2.498 | 10.4 | S502 | 32.665 | 30.900 | 1.615 | Open Manhole | 600 |
| 6.000 | 13.877 | 19.5 | S601 | 32.665 | 31.140 | 1.375 | Open Manhole | 450 |

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## PIPELINE SCHEDULES for Storm

### Upstream Manhole

| PN | Hyd Sect | Diam (mm) | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |
|---|---|---|---|---|---|---|---|---|
| 6.001 | o | 150 | S601 | 32.665 | 31.140 | 1.375 | Open Manhole | 450 |
| 5.002 | o | 225 | S502 | 32.665 | 30.825 | 1.615 | Open Manhole | 600 |
| 5.003 | o | 225 | S503 | 32.680 | 30.630 | 1.825 | Open Manhole | 600 |
| 7.000 | o | 150 | S700 | 32.680 | 31.880 | 0.650 | Open Manhole | 450 |
| 7.001 | o | 150 | S701 | 32.635 | 31.795 | 0.690 | Open Manhole | 450 |
| 5.004 | o | 300 | S504 | 32.635 | 30.245 | 2.090 | Open Manhole | 1500 |
| 8.000 | o | 150 | S800 | 32.525 | 31.200 | 1.175 | Open Manhole | 1200 |
| 1.006 | →[↓] | | S106 | 32.500 | 30.045 | 0.854 | Open Manhole | 1 |
| 9.000 | o | 150 | S900 | 32.665 | 31.850 | 0.665 | Open Manhole | 450 |
| 10.000 | o | 150 | S901 | 32.665 | 31.850 | 0.665 | Open Manhole | 450 |
| 9.001 | o | 225 | S901 | 32.665 | 30.995 | 1.445 | Open Manhole | 600 |
| 9.002 | o | 225 | S902 | 32.640 | 30.760 | 1.655 | Open Manhole | 600 |

### Downstream Manhole

| PN | Length (m) | Slope (1:X) | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |
|---|---|---|---|---|---|---|---|---|
| 6.001 | 2.416 | 10.1 | S502 | 32.665 | 30.900 | 1.615 | Open Manhole | 600 |
| 5.002 | 15.383 | 78.9 | S503 | 32.680 | 30.630 | 1.825 | Open Manhole | 600 |
| 5.003 | 6.184 | 19.9 | S504 | 32.635 | 30.320 | 2.090 | Open Manhole | 1500 |
| 7.000 | 6.710 | 78.9 | S701 | 32.635 | 31.795 | 0.690 | Open Manhole | 450 |
| 7.001 | 6.500 | 76.5 | S504 | 32.635 | 31.710 | 0.775 | Open Manhole | 1500 |
| 5.004 | 6.184 | 123.7 | S106 | 32.500 | 30.195 | 2.005 | Open Manhole | 1 |
| 8.000 | 15.200 | 17.8 | S106 | 32.500 | 30.345 | 2.005 | Open Manhole | 1 |
| 1.006 | 45.189 | 410.8 | S107 | 32.500 | 29.935 | 0.964 | Open Manhole | 1 |
| 9.000 | 15.917 | 20.4 | S901 | 32.665 | 31.070 | 1.445 | Open Manhole | 600 |
| 10.000 | 13.195 | 16.9 | S901 | 32.665 | 31.070 | 1.445 | Open Manhole | 600 |
| 9.001 | 23.561 | 100.3 | S902 | 32.640 | 30.760 | 1.655 | Open Manhole | 600 |
| 9.002 | 7.157 | 14.6 | S903 | 32.630 | 30.270 | 2.135 | Open Manhole | 1350 |

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## PIPELINE SCHEDULES for Storm

### Upstream Manhole

| PN | Hyd Sect | Diam (mm) | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |
|---|---|---|---|---|---|---|---|---|
| 11.000 | o | 150 | S1100 | 32.680 | 31.550 | 0.980 | Open Manhole | 450 |
| 9.003 | o | | S903 | 32.630 | 30.195 | 2.135 | Open Manhole | 1350 |
| 1.007 | →[↓] | | S107 | 32.500 | 29.935 | 0.964 | Open Manhole | 1 |
| 12.000 | o | 150 | S1200 | 32.635 | 31.850 | 0.635 | Open Manhole | 450 |
| 13.000 | o | 150 | S1300 | 32.635 | 31.850 | 0.635 | Open Manhole | 450 |
| 13.001 | o | 150 | S1301 | 32.635 | 31.760 | 0.725 | Open Manhole | 450 |
| 12.001 | o | 225 | S1201 | 32.635 | 31.410 | 1.000 | Open Manhole | 600 |
| 12.002 | o | 225 | S1202 | 32.680 | 31.035 | 1.420 | Open Manhole | 600 |
| 12.003 | o | 225 | S1203 | 32.660 | 30.945 | 1.490 | Open Manhole | 600 |
| 12.004 | o | 225 | S1204 | 32.660 | 30.810 | 1.625 | Open Manhole | 600 |
| 14.000 | o | 150 | S1400 | 32.650 | 31.625 | 0.875 | Open Manhole | 450 |
| 14.001 | o | 225 | S1401 | 32.680 | 31.270 | 1.185 | Open Manhole | 600 |
| 15.000 | o | 150 | S1500 | 32.680 | 31.650 | 0.880 | Open Manhole | 450 |
| 15.001 | o | 150 | S1501 | 32.600 | 31.605 | 0.845 | Open Manhole | 450 |

### Downstream Manhole

| PN | Length (m) | Slope (1:X) | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |
|---|---|---|---|---|---|---|---|---|
| 11.000 | 6.111 | 81.5 | S903 | 32.630 | 31.475 | 1.005 | Open Manhole | 1350 |
| 9.003 | 6.184 | 56.2 | S107 | 32.500 | 30.085 | 2.115 | Open Manhole | 1 |
| 1.007 | 10.786 | 359.5 | S108 | 32.550 | 29.905 | 1.044 | Open Manhole | 1500 |
| 12.000 | 8.740 | 23.9 | S1201 | 32.635 | 31.485 | 1.000 | Open Manhole | 600 |
| 13.000 | 7.229 | 80.3 | S1301 | 32.635 | 31.760 | 0.725 | Open Manhole | 450 |
| 13.001 | 8.641 | 31.4 | S1201 | 32.635 | 31.485 | 1.000 | Open Manhole | 600 |
| 12.001 | 19.161 | 51.1 | S1202 | 32.680 | 31.035 | 1.420 | Open Manhole | 600 |
| 12.002 | 8.777 | 97.5 | S1203 | 32.660 | 30.945 | 1.490 | Open Manhole | 600 |
| 12.003 | 6.920 | 51.3 | S1204 | 32.660 | 30.810 | 1.625 | Open Manhole | 600 |
| 12.004 | 9.598 | 29.1 | 1205 | 32.600 | 30.480 | 1.895 | Open Manhole | 1350 |
| 14.000 | 22.183 | 79.2 | S1401 | 32.680 | 31.345 | 1.185 | Open Manhole | 600 |
| 14.001 | 25.590 | 100.4 | S1402 | 32.600 | 31.015 | 1.360 | Open Manhole | 600 |
| 15.000 | 3.368 | 74.8 | S1501 | 32.600 | 31.605 | 0.845 | Open Manhole | 450 |
| 15.001 | 9.798 | 19.0 | S1402 | 32.600 | 31.090 | 1.360 | Open Manhole | 600 |

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## PIPELINE SCHEDULES for Storm

### Upstream Manhole

| PN | Hyd Sect | Diam (mm) | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |
|---|---|---|---|---|---|---|---|---|
| 14.002 | o | 225 | S1402 | 32.600 | 31.015 | 1.360 | Open Manhole | 600 |
| 12.005 | o | 225 | 1205 | 32.600 | 30.480 | 1.895 | Open Manhole | 1350 |
| 1.008 | o | 450 | S108 | 32.550 | 29.905 | 2.195 | Open Manhole | 1500 |
| 16.000 | o | 225 | S1600 | 32.545 | 31.425 | 0.895 | Open Manhole | 600 |
| 16.001 | o | 225 | S1601 | 32.545 | 30.460 | 1.860 | Open Manhole | 600 |
| 1.009 | o | 150 | S109 | 32.500 | 29.880 | 2.470 | Open Manhole | 1800 |

### Downstream Manhole

| PN | Length (m) | Slope (1:X) | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |
|---|---|---|---|---|---|---|---|---|
| 14.002 | 7.938 | 14.8 | 1205 | 32.600 | 30.480 | 1.895 | Open Manhole | 1350 |
| 12.005 | 5.964 | 17.0 | S108 | 32.550 | 30.130 | 2.195 | Open Manhole | 1500 |
| 1.008 | 10.282 | 411.3 | S109 | 32.500 | 29.880 | 2.170 | Open Manhole | 1800 |
| 16.000 | 46.756 | 48.5 | S1601 | 32.545 | 30.460 | 1.860 | Open Manhole | 600 |
| 16.001 | 6.201 | 17.5 | S109 | 32.500 | 30.105 | 2.170 | Open Manhole | 1800 |
| 1.009 | 5.950 | 79.3 | | 32.550 | 29.805 | 2.595 | Open Manhole | 0 |

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## Area Summary for Storm

| Pipe Number | PIMP Type | PIMP Name | PIMP (%) | Gross Area (ha) | Imp. Area (ha) | Pipe Total (ha) |
|---|---|---|---|---|---|---|
| 1.000 | - | - | 100 | 0.013 | 0.013 | 0.013 |
| 1.001 | - | - | 100 | 0.007 | 0.007 | 0.007 |
| 2.000 | - | - | 100 | 0.013 | 0.013 | 0.013 |
| 1.002 | - | - | 100 | 0.007 | 0.007 | 0.007 |
| 3.000 | - | - | 100 | 0.008 | 0.008 | 0.008 |
| 1.003 | - | - | 100 | 0.025 | 0.025 | 0.025 |
| 4.000 | - | - | 100 | 0.015 | 0.015 | 0.015 |
| 4.001 | - | - | 100 | 0.006 | 0.006 | 0.006 |
| 1.004 | - | - | 100 | 0.010 | 0.010 | 0.010 |
| 1.005 | - | - | 100 | 0.005 | 0.005 | 0.005 |
| 5.000 | - | - | 100 | 0.014 | 0.014 | 0.014 |
| 5.001 | - | - | 100 | 0.000 | 0.000 | 0.000 |
| 6.000 | - | - | 100 | 0.002 | 0.002 | 0.002 |
| 6.001 | - | - | 100 | 0.000 | 0.000 | 0.000 |
| 5.002 | - | - | 100 | 0.037 | 0.037 | 0.037 |
| 5.003 | - | - | 100 | 0.007 | 0.007 | 0.007 |
| 7.000 | - | - | 100 | 0.026 | 0.026 | 0.026 |
| 7.001 | - | - | 100 | 0.013 | 0.013 | 0.013 |
| 5.004 | - | - | 100 | 0.000 | 0.000 | 0.000 |
| 8.000 | - | - | 100 | 0.005 | 0.005 | 0.005 |
| 1.006 | - | - | 100 | 0.068 | 0.068 | 0.068 |
| 9.000 | - | - | 100 | 0.003 | 0.003 | 0.003 |
| 10.000 | - | - | 100 | 0.002 | 0.002 | 0.002 |
| 9.001 | - | - | 100 | 0.047 | 0.047 | 0.047 |
| 9.002 | - | - | 100 | 0.017 | 0.017 | 0.017 |
| 11.000 | - | - | 100 | 0.015 | 0.015 | 0.015 |
| 9.003 | - | - | 100 | 0.005 | 0.005 | 0.005 |
| 1.007 | - | - | 100 | 0.014 | 0.014 | 0.014 |
| 12.000 | - | - | 100 | 0.004 | 0.004 | 0.004 |
| 13.000 | - | - | 100 | 0.023 | 0.023 | 0.023 |
| 13.001 | - | - | 100 | 0.013 | 0.013 | 0.013 |
| 12.001 | - | - | 100 | 0.030 | 0.030 | 0.030 |
| 12.002 | - | - | 100 | 0.026 | 0.026 | 0.026 |
| 12.003 | - | - | 100 | 0.000 | 0.000 | 0.000 |
| 12.004 | - | - | 100 | 0.020 | 0.020 | 0.020 |
| 14.000 | - | - | 100 | 0.024 | 0.024 | 0.024 |
| 14.001 | - | - | 100 | 0.019 | 0.019 | 0.019 |
| 15.000 | - | - | 100 | 0.009 | 0.009 | 0.009 |
| 15.001 | - | - | 100 | 0.015 | 0.015 | 0.015 |
| 14.002 | - | - | 100 | 0.013 | 0.013 | 0.013 |
| 12.005 | - | - | 100 | 0.022 | 0.022 | 0.022 |
| 1.008 | - | - | 100 | 0.008 | 0.008 | 0.008 |
| 16.000 | - | - | 100 | 0.034 | 0.034 | 0.034 |
| 16.001 | - | - | 100 | 0.004 | 0.004 | 0.004 |
| 1.009 | - | - | 100 | 0.000 | 0.000 | 0.000 |
| | | | | Total | Total | Total |
| | | | | 0.648 | 0.648 | 0.648 |

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## Network Classifications for Storm

| PN | USMH Name | Pipe Dia (mm) | Min Cover Depth (m) | Max Cover Depth (m) | Pipe Type | MH Dia (mm) | MH Width (mm) | MH Ring Depth (m) | MH Type |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 150 | 0.760 | 0.830 | Unclassified | 450 | 0 | 0.760 | Unclassified |
| 1.001 | S101 | 150 | 0.830 | 1.185 | Unclassified | 450 | 0 | 0.830 | Unclassified |
| 2.000 | S200 | 150 | 0.970 | 1.185 | Unclassified | 450 | 0 | 0.970 | Unclassified |
| 1.002 | S102 | 225 | 1.185 | 1.325 | Unclassified | 600 | 0 | 1.185 | Unclassified |
| 3.000 | S300 | 150 | 0.550 | 1.325 | Unclassified | 450 | 0 | 0.550 | Unclassified |
| 1.003 | S103 | 225 | 1.325 | 2.070 | Unclassified | 600 | 0 | 1.325 | Unclassified |
| 4.000 | S400 | 150 | 0.700 | 1.800 | Unclassified | 450 | 0 | 0.700 | Unclassified |
| 4.001 | S401 | 150 | 1.800 | 2.070 | Unclassified | 450 | 0 | 1.800 | Unclassified |
| 1.004 | S104 | 300 | 2.070 | 2.090 | Unclassified | 600 | 0 | 2.070 | Unclassified |
| 1.005 | S105 | 450 | 2.005 | 2.090 | Unclassified | 1500 | 0 | 2.090 | Unclassified |
| 5.000 | S500 | 150 | 0.550 | 1.375 | Unclassified | 450 | 0 | 0.550 | Unclassified |
| 5.001 | S501 | 150 | 1.375 | 1.615 | Unclassified | 450 | 0 | 1.375 | Unclassified |
| 6.000 | S600 | 150 | 0.665 | 1.375 | Unclassified | 450 | 0 | 0.665 | Unclassified |
| 6.001 | S601 | 150 | 1.375 | 1.615 | Unclassified | 450 | 0 | 1.375 | Unclassified |
| 5.002 | S502 | 225 | 1.615 | 1.825 | Unclassified | 600 | 0 | 1.615 | Unclassified |
| 5.003 | S503 | 225 | 1.825 | 2.090 | Unclassified | 600 | 0 | 1.825 | Unclassified |
| 7.000 | S700 | 150 | 0.650 | 0.690 | Unclassified | 450 | 0 | 0.650 | Unclassified |
| 7.001 | S701 | 150 | 0.690 | 0.775 | Unclassified | 450 | 0 | 0.690 | Unclassified |
| 5.004 | S504 | 300 | 2.005 | 2.090 | Unclassified | 1500 | 0 | 2.090 | Unclassified |
| 8.000 | S800 | 150 | 1.175 | 2.005 | Unclassified | 1200 | 0 | 1.175 | Unclassified |
| 1.006 | S106 | | | | Cellular Storage | 1 | 0 | 0.854 | Unclassified |
| 9.000 | S900 | 150 | 0.665 | 1.445 | Unclassified | 450 | 0 | 0.665 | Unclassified |
| 10.000 | S901 | 150 | 0.665 | 1.445 | Unclassified | 450 | 0 | 0.665 | Unclassified |
| 9.001 | S901 | 225 | 1.445 | 1.655 | Unclassified | 600 | 0 | 1.445 | Unclassified |
| 9.002 | S902 | 225 | 1.655 | 2.135 | Unclassified | 600 | 0 | 1.655 | Unclassified |
| 11.000 | S1100 | 150 | 0.980 | 1.005 | Unclassified | 450 | 0 | 0.980 | Unclassified |
| 9.003 | S903 | 300 | 2.115 | 2.135 | Unclassified | 1350 | 0 | 2.135 | Unclassified |
| 1.007 | S107 | | | | Cellular Storage | 1 | 0 | 0.964 | Unclassified |
| 12.000 | S1200 | 150 | 0.635 | 1.000 | Unclassified | 450 | 0 | 0.635 | Unclassified |
| 13.000 | S1300 | 150 | 0.635 | 0.725 | Unclassified | 450 | 0 | 0.635 | Unclassified |
| 13.001 | S1301 | 150 | 0.725 | 1.000 | Unclassified | 450 | 0 | 0.725 | Unclassified |
| 12.001 | S1201 | 225 | 1.000 | 1.420 | Unclassified | 600 | 0 | 1.000 | Unclassified |
| 12.002 | S1202 | 225 | 1.420 | 1.490 | Unclassified | 600 | 0 | 1.420 | Unclassified |
| 12.003 | S1203 | 225 | 1.490 | 1.625 | Unclassified | 600 | 0 | 1.490 | Unclassified |
| 12.004 | S1204 | 225 | 1.625 | 1.895 | Unclassified | 600 | 0 | 1.625 | Unclassified |
| 14.000 | S1400 | 150 | 0.875 | 1.185 | Unclassified | 450 | 0 | 0.875 | Unclassified |
| 14.001 | S1401 | 225 | 1.185 | 1.360 | Unclassified | 600 | 0 | 1.185 | Unclassified |
| 15.000 | S1500 | 150 | 0.845 | 0.880 | Unclassified | 450 | 0 | 0.880 | Unclassified |
| 15.001 | S1501 | 150 | 0.845 | 1.360 | Unclassified | 450 | 0 | 0.845 | Unclassified |
| 14.002 | S1402 | 225 | 1.360 | 1.895 | Unclassified | 600 | 0 | 1.360 | Unclassified |
| 12.005 | 1205 | 225 | 1.895 | 2.195 | Unclassified | 1350 | 0 | 1.895 | Unclassified |
| 1.008 | S108 | 450 | 2.170 | 2.195 | Unclassified | 1500 | 0 | 2.195 | Unclassified |
| 16.000 | S1600 | 225 | 0.895 | 1.860 | Unclassified | 600 | 0 | 0.895 | Unclassified |
| 16.001 | S1601 | 225 | 1.860 | 2.170 | Unclassified | 600 | 0 | 1.860 | Unclassified |
| 1.009 | S109 | 150 | 2.470 | 2.595 | Unclassified | 1800 | 0 | 2.470 | Unclassified |

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## Free Flowing Outfall Details for Storm

| Outfall Pipe Number | Outfall Name | C. Level (m) | I. Level (m) | Min I. Level (m) | D,L (mm) | W (mm) |
|---|---|---|---|---|---|---|
| 1.009 | | 32.550 | 29.805 | 0.000 | 0 | 0 |

## Simulation Criteria for Storm

| | | | |
|---|---|---|---|
| Volumetric Runoff Coeff | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Areal Reduction Factor | 1.000 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start (mins) | 0 | Inlet Coeffiecient | 0.800 |
| Hot Start Level (mm) | 0 | Flow per Person per Day (l/per/day) | 0.000 |
| Manhole Headloss Coeff (Global) | 0.500 | Run Time (mins) | 60 |
| Foul Sewage per hectare (l/s) | 0.000 | Output Interval (mins) | 1 |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

## Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | FSR | Profile Type | Winter |
| Return Period (years) | 100 | Cv (Summer) | 1.000 |
| Region | England and Wales | Cv (Winter) | 1.000 |
| M5-60 (mm) | 18.000 | Storm Duration (mins) | 30 |
| Ratio R | 0.360 | | |

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## Online Controls for Storm

### Hydro-Brake® Optimum Manhole: S109, DS/PN: 1.009, Volume (m³): 8.2

| | |
|---|---|
| Unit Reference | MD-SCU-0086-1200-2600-1200 |
| Design Head (m) | 2.600 |
| Design Flow (l/s) | 12.0 |
| Flush-Flo™ | Calculated |
| Objective | Linear discharge profile |
| Application | Surface |
| Sump Available | Yes |
| Diameter (mm) | 86 |
| Invert Level (m) | 29.880 |
| Minimum Outlet Pipe Diameter (mm) | 100 |
| Suggested Manhole Diameter (mm) | 1200 |

| Control Points | Head (m) | Flow (l/s) |
|---|---|---|
| Design Point (Calculated) | 2.600 | 12.0 |
| Flush-Flo™ | 0.106 | 3.0 |
| Kick-Flo® | 0.130 | 3.0 |
| Mean Flow over Head Range | - | 8.1 |

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

| Depth (m) | Flow (l/s) | Depth (m) | Flow (l/s) | Depth (m) | Flow (l/s) | Depth (m) | Flow (l/s) |
|---|---|---|---|---|---|---|---|
| 0.100 | 2.9 | 1.200 | 8.3 | 3.000 | 12.8 | 7.000 | 19.3 |
| 0.200 | 3.6 | 1.400 | 8.9 | 3.500 | 13.8 | 7.500 | 19.9 |
| 0.300 | 4.4 | 1.600 | 9.5 | 4.000 | 14.7 | 8.000 | 20.6 |
| 0.400 | 5.0 | 1.800 | 10.1 | 4.500 | 15.6 | 8.500 | 21.2 |
| 0.500 | 5.5 | 2.000 | 10.6 | 5.000 | 16.4 | 9.000 | 21.8 |
| 0.600 | 6.0 | 2.200 | 11.1 | 5.500 | 17.2 | 9.500 | 22.4 |
| 0.800 | 6.9 | 2.400 | 11.6 | 6.000 | 17.9 | | |
| 1.000 | 7.6 | 2.600 | 12.0 | 6.500 | 18.6 | | |

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## Storage Structures for Storm

### Cellular Storage Pipe: 1.006

| | | | |
|---|---|---|---|
| Manning's N | 0.050 | Infiltration Coefficient Side (m/hr) | 0.00000 |
| Invert Level (m) | 30.045 | Safety Factor | 1.0 |
| Infiltration Coefficient Base (m/hr) | 0.00000 | Porosity | 0.95 |

| Depth (m) | Area (m²) | Inf. Area (m²) | Depth (m) | Area (m²) | Inf. Area (m²) |
|---|---|---|---|---|---|
| 0.000 | 121.8 | 0.0 | 1.601 | 0.0 | 0.0 |
| 1.600 | 121.8 | 0.0 | | | |

### Cellular Storage Pipe: 1.007

| | | | |
|---|---|---|---|
| Manning's N | 0.050 | Infiltration Coefficient Side (m/hr) | 0.00000 |
| Invert Level (m) | 29.935 | Safety Factor | 1.0 |
| Infiltration Coefficient Base (m/hr) | 0.00000 | Porosity | 0.95 |

| Depth (m) | Area (m²) | Inf. Area (m²) | Depth (m) | Area (m²) | Inf. Area (m²) |
|---|---|---|---|---|---|
| 0.000 | 121.8 | 0.0 | 1.601 | 0.0 | 0.0 |
| 1.600 | 121.8 | 0.0 | | | |

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## Volume Summary (Static)

Length Calculations based on Centre-Centre

| Pipe Number | USMH Name | Manhole Volume (m³) | Pipe Volume (m³) | Storage Structure Volume (m³) | Total Volume (m³) |
|---|---|---|---|---|---|
| 1.000 | S100 | 0.145 | 0.095 | 0.000 | 0.240 |
| 1.001 | S101 | 0.156 | 0.137 | 0.000 | 0.293 |
| 2.000 | S200 | 0.178 | 0.159 | 0.000 | 0.337 |
| 1.002 | S102 | 0.399 | 0.537 | 0.000 | 0.936 |
| 3.000 | S300 | 0.111 | 0.196 | 0.000 | 0.307 |
| 1.003 | S103 | 0.438 | 0.887 | 0.000 | 1.326 |
| 4.000 | S400 | 0.135 | 0.198 | 0.000 | 0.333 |
| 4.001 | S401 | 0.310 | 0.235 | 0.000 | 0.545 |
| 1.004 | S104 | 0.670 | 0.334 | 0.000 | 1.005 |
| 1.005 | S105 | 4.489 | 0.904 | 0.000 | 5.392 |
| 5.000 | S500 | 0.111 | 0.337 | 0.000 | 0.449 |
| 5.001 | S501 | 0.243 | 0.044 | 0.000 | 0.287 |
| 6.000 | S600 | 0.130 | 0.245 | 0.000 | 0.375 |
| 6.001 | S601 | 0.243 | 0.043 | 0.000 | 0.285 |
| 5.002 | S502 | 0.520 | 0.612 | 0.000 | 1.132 |
| 5.003 | S503 | 0.580 | 0.246 | 0.000 | 0.826 |
| 7.000 | S700 | 0.127 | 0.119 | 0.000 | 0.246 |
| 7.001 | S701 | 0.134 | 0.115 | 0.000 | 0.248 |
| 5.004 | S504 | 4.223 | 0.437 | 0.000 | 4.661 |
| 8.000 | S800 | 1.499 | 0.269 | 0.000 | 1.767 |
| 1.006 | S106 | 0.000 | 185.194 | 0.000 | 185.194 |
| 9.000 | S900 | 0.130 | 0.281 | 0.000 | 0.411 |
| 10.000 | S901 | 0.130 | 0.233 | 0.000 | 0.363 |
| 9.001 | S901 | 0.472 | 0.937 | 0.000 | 1.409 |
| 9.002 | S902 | 0.532 | 0.285 | 0.000 | 0.816 |
| 11.000 | S1100 | 0.180 | 0.108 | 0.000 | 0.288 |
| 9.003 | S903 | 3.485 | 0.437 | 0.000 | 3.923 |
| 1.007 | S107 | 0.000 | 185.194 | 0.000 | 185.194 |
| 12.000 | S1200 | 0.125 | 0.154 | 0.000 | 0.279 |
| 13.000 | S1300 | 0.125 | 0.128 | 0.000 | 0.253 |
| 13.001 | S1301 | 0.139 | 0.153 | 0.000 | 0.292 |
| 12.001 | S1201 | 0.346 | 0.762 | 0.000 | 1.108 |
| 12.002 | S1202 | 0.465 | 0.349 | 0.000 | 0.814 |
| 12.003 | S1203 | 0.485 | 0.275 | 0.000 | 0.760 |
| 12.004 | S1204 | 0.523 | 0.382 | 0.000 | 0.905 |
| 14.000 | S1400 | 0.163 | 0.392 | 0.000 | 0.555 |
| 14.001 | S1401 | 0.399 | 1.017 | 0.000 | 1.416 |
| 15.000 | S1500 | 0.164 | 0.060 | 0.000 | 0.223 |
| 15.001 | S1501 | 0.158 | 0.173 | 0.000 | 0.331 |
| 14.002 | S1402 | 0.448 | 0.316 | 0.000 | 0.764 |
| 12.005 | 1205 | 3.035 | 0.237 | 0.000 | 3.272 |
| 1.008 | S108 | 4.674 | 1.635 | 0.000 | 6.309 |
| 16.000 | S1600 | 0.317 | 1.859 | 0.000 | 2.176 |
| 16.001 | S1601 | 0.590 | 0.247 | 0.000 | 0.836 |
| 1.009 | S109 | 6.667 | 0.105 | 0.000 | 6.772 |
| Total | | 38.590 | 387.060 | 0.000 | 425.650 |

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## Volume Summary (Static)

Length Calculations based on True Length

| Pipe Number | USMH Name | Manhole Volume (m³) | Pipe Volume (m³) | Storage Structure Volume (m³) | Total Volume (m³) |
|---|---|---|---|---|---|
| 1.000 | S100 | 0.145 | 0.087 | 0.000 | 0.232 |
| 1.001 | S101 | 0.156 | 0.128 | 0.000 | 0.284 |
| 2.000 | S200 | 0.178 | 0.150 | 0.000 | 0.328 |
| 1.002 | S102 | 0.399 | 0.513 | 0.000 | 0.912 |
| 3.000 | S300 | 0.111 | 0.187 | 0.000 | 0.298 |
| 1.003 | S103 | 0.438 | 0.863 | 0.000 | 1.302 |
| 4.000 | S400 | 0.135 | 0.190 | 0.000 | 0.325 |
| 4.001 | S401 | 0.310 | 0.225 | 0.000 | 0.536 |
| 1.004 | S104 | 0.670 | 0.260 | 0.000 | 0.930 |
| 1.005 | S105 | 4.489 | 0.784 | 0.000 | 5.273 |
| 5.000 | S500 | 0.111 | 0.330 | 0.000 | 0.441 |
| 5.001 | S501 | 0.243 | 0.035 | 0.000 | 0.277 |
| 6.000 | S600 | 0.130 | 0.237 | 0.000 | 0.367 |
| 6.001 | S601 | 0.243 | 0.033 | 0.000 | 0.276 |
| 5.002 | S502 | 0.520 | 0.588 | 0.000 | 1.108 |
| 5.003 | S503 | 0.580 | 0.204 | 0.000 | 0.784 |
| 7.000 | S700 | 0.127 | 0.111 | 0.000 | 0.238 |
| 7.001 | S701 | 0.134 | 0.098 | 0.000 | 0.231 |
| 5.004 | S504 | 4.223 | 0.384 | 0.000 | 4.608 |
| 8.000 | S800 | 1.499 | 0.258 | 0.000 | 1.757 |
| 1.006 | S106 | 0.000 | 185.190 | 0.000 | 185.190 |
| 9.000 | S900 | 0.130 | 0.272 | 0.000 | 0.402 |
| 10.000 | S901 | 0.130 | 0.224 | 0.000 | 0.354 |
| 9.001 | S901 | 0.472 | 0.913 | 0.000 | 1.385 |
| 9.002 | S902 | 0.532 | 0.246 | 0.000 | 0.777 |
| 11.000 | S1100 | 0.180 | 0.092 | 0.000 | 0.272 |
| 9.003 | S903 | 3.485 | 0.389 | 0.000 | 3.875 |
| 1.007 | S107 | 0.000 | 172.308 | 0.000 | 172.308 |
| 12.000 | S1200 | 0.125 | 0.145 | 0.000 | 0.270 |
| 13.000 | S1300 | 0.125 | 0.120 | 0.000 | 0.245 |
| 13.001 | S1301 | 0.139 | 0.143 | 0.000 | 0.283 |
| 12.001 | S1201 | 0.346 | 0.738 | 0.000 | 1.084 |
| 12.002 | S1202 | 0.465 | 0.325 | 0.000 | 0.790 |
| 12.003 | S1203 | 0.485 | 0.251 | 0.000 | 0.736 |
| 12.004 | S1204 | 0.523 | 0.343 | 0.000 | 0.866 |
| 14.000 | S1400 | 0.163 | 0.383 | 0.000 | 0.546 |
| 14.001 | S1401 | 0.399 | 0.994 | 0.000 | 1.392 |
| 15.000 | S1500 | 0.164 | 0.052 | 0.000 | 0.215 |
| 15.001 | S1501 | 0.158 | 0.164 | 0.000 | 0.322 |
| 14.002 | S1402 | 0.448 | 0.277 | 0.000 | 0.725 |
| 12.005 | 1205 | 3.035 | 0.180 | 0.000 | 3.215 |
| 1.008 | S108 | 4.674 | 1.373 | 0.000 | 6.047 |
| 16.000 | S1600 | 0.317 | 1.835 | 0.000 | 2.152 |
| 16.001 | S1601 | 0.590 | 0.199 | 0.000 | 0.788 |
| 1.009 | S109 | 6.667 | 0.089 | 0.000 | 6.756 |
| Total | | 38.590 | 372.909 | 0.000 | 411.499 |

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## Summary Wizard of 15 minute 1 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 15 minute 1 year Summer I+0% | 15 | 36 | 32.680 | 31.805 | -0.115 | 0.000 |
| 1.001 | S101 | 15 minute 1 year Summer I+0% | 15 | 36 | 32.680 | 31.729 | -0.121 | 0.000 |
| 2.000 | S200 | 15 minute 1 year Summer I+0% | 15 | 38 | 32.600 | 31.510 | -0.120 | 0.000 |
| 1.002 | S102 | 15 minute 1 year Summer I+0% | 15 | 40 | 32.630 | 31.271 | -0.174 | 0.000 |
| 3.000 | S300 | 15 minute 1 year Summer I+0% | 15 | 35 | 32.550 | 31.867 | -0.133 | 0.000 |
| 1.003 | S103 | 15 minute 1 year Summer I+0% | 15 | 40 | 32.600 | 31.101 | -0.174 | 0.000 |
| 4.000 | S400 | 15 minute 1 year Summer I+0% | 15 | 36 | 32.550 | 31.721 | -0.129 | 0.000 |
| 4.001 | S401 | 15 minute 1 year Summer I+0% | 15 | 55 | 32.550 | 30.638 | -0.112 | 0.000 |
| 1.004 | S104 | 15 minute 1 year Summer I+0% | 15 | 82 | 32.600 | 30.345 | -0.185 | 0.000 |
| 1.005 | S105 | 15 minute 1 year Summer I+0% | 15 | 118 | 32.600 | 30.170 | -0.340 | 0.000 |
| 5.000 | S500 | 15 minute 1 year Summer I+0% | 15 | 35 | 32.550 | 31.875 | -0.125 | 0.000 |
| 5.001 | S501 | 15 minute 1 year Summer I+0% | 15 | 40 | 32.665 | 31.166 | -0.124 | 0.000 |
| 6.000 | S600 | 15 minute 1 year Summer I+0% | 15 | 36 | 32.665 | 31.856 | -0.144 | 0.000 |
| 6.001 | S601 | 15 minute 1 year Summer I+0% | 15 | 40 | 32.665 | 31.147 | -0.143 | 0.000 |
| 5.002 | S502 | 15 minute 1 year Summer I+0% | 15 | 41 | 32.665 | 30.881 | -0.169 | 0.000 |
| 5.003 | S503 | 15 minute 1 year Summer I+0% | 15 | 55 | 32.680 | 30.678 | -0.177 | 0.000 |
| 7.000 | S700 | 15 minute 1 year Summer I+0% | 15 | 35 | 32.680 | 31.929 | -0.101 | 0.000 |
| 7.001 | S701 | 15 minute 1 year Summer I+0% | 15 | 36 | 32.635 | 31.855 | -0.090 | 0.000 |
| 5.004 | S504 | 15 minute 1 year Summer I+0% | 15 | 83 | 32.635 | 30.342 | -0.203 | 0.000 |

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## Summary Wizard of 15 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.12 | | 0.005 | 0.872 | 0.7 | 2.0 | OK |
| 1.001 | S101 | 0.08 | | 0.012 | 1.342 | 1.2 | 2.9 | OK |
| 2.000 | S200 | 0.09 | | 0.004 | 0.872 | 0.8 | 2.0 | OK |
| 1.002 | S102 | 0.11 | | 0.013 | 2.683 | 0.9 | 5.8 | OK |
| 3.000 | S300 | 0.03 | | 0.002 | 0.537 | 1.1 | 1.2 | OK |
| 1.003 | S103 | 0.12 | | 0.039 | 4.897 | 1.5 | 10.2 | OK |
| 4.000 | S400 | 0.05 | | 0.002 | 1.006 | 1.6 | 2.3 | OK |
| 4.001 | S401 | 0.15 | | 0.007 | 1.409 | 0.9 | 3.1 | OK |
| 1.004 | S104 | 0.31 | | 0.036 | 6.977 | 0.6 | 14.4 | OK |
| 1.005 | S105 | 0.14 | | 0.186 | 7.260 | 0.5 | 15.2 | OK |
| 5.000 | S500 | 0.07 | | 0.003 | 0.939 | 1.1 | 2.2 | OK |
| 5.001 | S501 | 0.07 | | 0.006 | 0.939 | 1.1 | 2.1 | OK |
| 6.000 | S600 | 0.01 | | 0.000 | 0.134 | 0.7 | 0.3 | OK |
| 6.001 | S601 | 0.01 | | 0.001 | 0.134 | 0.7 | 0.3 | OK |
| 5.002 | S502 | 0.14 | | 0.015 | 3.555 | 0.9 | 7.2 | OK |
| 5.003 | S503 | 0.10 | | 0.036 | 4.025 | 1.3 | 8.1 | OK |
| 7.000 | S700 | 0.24 | | 0.007 | 1.744 | 0.8 | 4.0 | OK |
| 7.001 | S701 | 0.33 | | 0.030 | 2.616 | 0.9 | 5.6 | OK |
| 5.004 | S504 | 0.22 | | 0.162 | 6.641 | 0.7 | 13.7 | OK |

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## Summary Wizard of 15 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 15 minute 1 year Summer I+0% | 15 | 40 | 32.525 | 31.214 | -0.136 | 0.000 |
| 1.006 | S106 | 15 minute 1 year Summer I+0% | 15 | 119 | 32.500 | 30.132 | -1.514 | 0.000 |
| 9.000 | S900 | 15 minute 1 year Summer I+0% | 15 | 36 | 32.665 | 31.859 | -0.141 | 0.000 |
| 10.000 | S901 | 15 minute 1 year Summer I+0% | 15 | 36 | 32.665 | 31.856 | -0.144 | 0.000 |
| 9.001 | S901 | 15 minute 1 year Summer I+0% | 15 | 42 | 32.665 | 31.052 | -0.168 | 0.000 |
| 9.002 | S902 | 15 minute 1 year Summer I+0% | 15 | 42 | 32.640 | 30.806 | -0.179 | 0.000 |
| 11.000 | S1100 | 15 minute 1 year Summer I+0% | 15 | 37 | 32.680 | 31.587 | -0.113 | 0.000 |
| 9.003 | S903 | 15 minute 1 year Summer I+0% | 15 | 94 | 32.630 | 30.271 | -0.224 | 0.000 |
| 1.007 | S107 | 15 minute 1 year Summer I+0% | 15 | 119 | 32.500 | 30.132 | -1.404 | 0.000 |
| 12.000 | S1200 | 15 minute 1 year Summer I+0% | 15 | 36 | 32.635 | 31.864 | -0.136 | 0.000 |
| 13.000 | S1300 | 15 minute 1 year Summer I+0% | 15 | 35 | 32.635 | 31.896 | -0.104 | 0.000 |
| 13.001 | S1301 | 15 minute 1 year Summer I+0% | 15 | 36 | 32.635 | 31.804 | -0.106 | 0.000 |
| 12.001 | S1201 | 15 minute 1 year Summer I+0% | 15 | 38 | 32.635 | 31.468 | -0.167 | 0.000 |
| 12.002 | S1202 | 15 minute 1 year Summer I+0% | 15 | 41 | 32.680 | 31.121 | -0.139 | 0.000 |
| 12.003 | S1203 | 15 minute 1 year Summer I+0% | 15 | 41 | 32.660 | 31.022 | -0.148 | 0.000 |
| 12.004 | S1204 | 15 minute 1 year Summer I+0% | 15 | 42 | 32.660 | 30.878 | -0.157 | 0.000 |
| 14.000 | S1400 | 15 minute 1 year Summer I+0% | 15 | 36 | 32.650 | 31.670 | -0.105 | 0.000 |
| 14.001 | S1401 | 15 minute 1 year Summer I+0% | 15 | 40 | 32.680 | 31.323 | -0.172 | 0.000 |
| 15.000 | S1500 | 15 minute 1 year Summer I+0% | 15 | 36 | 32.680 | 31.682 | -0.118 | 0.000 |
| 15.001 | S1501 | 15 minute 1 year Summer I+0% | 15 | 37 | 32.600 | 31.636 | -0.119 | 0.000 |
| 14.002 | S1402 | 15 minute 1 year Summer I+0% | 15 | 40 | 32.600 | 31.064 | -0.176 | 0.000 |
| 12.005 | 1205 | 15 minute 1 year Summer I+0% | 15 | 57 | 32.600 | 30.573 | -0.132 | 0.000 |
| 1.008 | S108 | 15 minute 1 year Summer I+0% | 15 | 120 | 32.550 | 30.132 | -0.223 | 0.000 |
| 16.000 | S1600 | 15 minute 1 year Summer I+0% | 15 | 38 | 32.545 | 31.465 | -0.185 | 0.000 |
| 16.001 | S1601 | 15 minute 1 year Summer I+0% | 15 | 57 | 32.545 | 30.498 | -0.187 | 0.000 |
| 1.009 | S109 | 15 minute 1 year Summer I+0% | 15 | 119 | 32.500 | 30.131 | 0.101 | 0.000 |

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.02 | | 0.010 | 0.335 | 1.0 | 0.8 | OK |
| 1.006 | S106 | 0.01 | | 0.048 | 14.551 | 0.3 | 27.7 | OK |
| 9.000 | S900 | 0.01 | | 0.001 | 0.201 | 1.0 | 0.5 | OK |
| 10.000 | S901 | 0.01 | | 0.000 | 0.134 | 0.7 | 0.3 | OK |
| 9.001 | S901 | 0.14 | | 0.015 | 3.488 | 0.9 | 6.8 | OK |
| 9.002 | S902 | 0.09 | | 0.040 | 4.628 | 1.6 | 9.0 | OK |
| 11.000 | S1100 | 0.14 | | 0.005 | 1.006 | 0.7 | 2.3 | OK |
| 9.003 | S903 | 0.14 | | 0.102 | 5.970 | 0.9 | 11.8 | OK |
| 1.007 | S107 | 0.00 | | 15.863 | 14.046 | 0.1 | 18.8 | OK |
| 12.000 | S1200 | 0.02 | | 0.001 | 0.268 | 0.9 | 0.6 | OK |
| 13.000 | S1300 | 0.21 | | 0.007 | 1.543 | 0.8 | 3.5 | OK |
| 13.001 | S1301 | 0.19 | | 0.022 | 2.415 | 1.2 | 5.2 | OK |
| 12.001 | S1201 | 0.15 | | 0.015 | 4.695 | 1.2 | 9.7 | OK |
| 12.002 | S1202 | 0.31 | | 0.052 | 6.439 | 0.9 | 13.0 | OK |
| 12.003 | S1203 | 0.25 | | 0.067 | 6.439 | 1.1 | 12.9 | OK |
| 12.004 | S1204 | 0.19 | | 0.039 | 7.781 | 1.6 | 15.5 | OK |
| 14.000 | S1400 | 0.19 | | 0.006 | 1.610 | 0.8 | 3.7 | OK |

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## Summary Wizard of 15 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.13 | | 0.014 | 2.884 | 0.9 | 6.0 | OK |
| 15.000 | S1500 | 0.10 | | 0.004 | 0.604 | 0.5 | 1.4 | OK |
| 15.001 | S1501 | 0.09 | | 0.011 | 1.610 | 1.3 | 3.3 | OK |
| 14.002 | S1402 | 0.11 | | 0.044 | 5.366 | 1.7 | 11.0 | OK |
| 12.005 | 1205 | 0.35 | | 0.150 | 14.622 | 1.9 | 29.4 | OK |
| 1.008 | S108 | 0.04 | | 22.696 | 10.643 | 0.1 | 4.0 | OK |
| 16.000 | S1600 | 0.07 | | 0.010 | 2.280 | 1.1 | 5.1 | OK |
| 16.001 | S1601 | 0.07 | | 0.021 | 2.549 | 1.3 | 5.6 | OK |
| 1.009 | S109 | 0.24 | | 1.226 | 12.177 | 0.9 | 4.0 | SURCHARGED |

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## Summary Wizard of 30 minute 1 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 30 minute 1 year Summer I+0% | 30 | 39 | 32.680 | 31.803 | -0.117 | 0.000 |
| 1.001 | S101 | 30 minute 1 year Summer I+0% | 30 | 40 | 32.680 | 31.727 | -0.123 | 0.000 |
| 2.000 | S200 | 30 minute 1 year Summer I+0% | 30 | 41 | 32.600 | 31.508 | -0.122 | 0.000 |
| 1.002 | S102 | 30 minute 1 year Summer I+0% | 30 | 44 | 32.630 | 31.269 | -0.176 | 0.000 |
| 3.000 | S300 | 30 minute 1 year Summer I+0% | 30 | 38 | 32.550 | 31.866 | -0.134 | 0.000 |
| 1.003 | S103 | 30 minute 1 year Summer I+0% | 30 | 45 | 32.600 | 31.099 | -0.176 | 0.000 |
| 4.000 | S400 | 30 minute 1 year Summer I+0% | 30 | 39 | 32.550 | 31.720 | -0.130 | 0.000 |
| 4.001 | S401 | 30 minute 1 year Summer I+0% | 30 | 58 | 32.550 | 30.637 | -0.113 | 0.000 |
| 1.004 | S104 | 30 minute 1 year Summer I+0% | 30 | 88 | 32.600 | 30.340 | -0.190 | 0.000 |
| 1.005 | S105 | 30 minute 1 year Summer I+0% | 30 | 117 | 32.600 | 30.180 | -0.330 | 0.000 |
| 5.000 | S500 | 30 minute 1 year Summer I+0% | 30 | 38 | 32.550 | 31.874 | -0.126 | 0.000 |
| 5.001 | S501 | 30 minute 1 year Summer I+0% | 30 | 43 | 32.665 | 31.165 | -0.125 | 0.000 |
| 6.000 | S600 | 30 minute 1 year Summer I+0% | 30 | 39 | 32.665 | 31.855 | -0.145 | 0.000 |
| 6.001 | S601 | 30 minute 1 year Summer I+0% | 30 | 43 | 32.665 | 31.146 | -0.144 | 0.000 |
| 5.002 | S502 | 30 minute 1 year Summer I+0% | 30 | 45 | 32.665 | 30.879 | -0.171 | 0.000 |
| 5.003 | S503 | 30 minute 1 year Summer I+0% | 30 | 58 | 32.680 | 30.677 | -0.178 | 0.000 |
| 7.000 | S700 | 30 minute 1 year Summer I+0% | 30 | 38 | 32.680 | 31.927 | -0.103 | 0.000 |
| 7.001 | S701 | 30 minute 1 year Summer I+0% | 30 | 40 | 32.635 | 31.852 | -0.093 | 0.000 |
| 5.004 | S504 | 30 minute 1 year Summer I+0% | 30 | 88 | 32.635 | 30.338 | -0.207 | 0.000 |

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Summary Wizard of 30 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.11 | | 0.004 | 1.151 | 0.6 | 1.8 | OK |
| 1.001 | S101 | 0.08 | | 0.012 | 1.771 | 1.2 | 2.7 | OK |
| 2.000 | S200 | 0.08 | | 0.004 | 1.151 | 0.8 | 1.8 | OK |
| 1.002 | S102 | 0.11 | | 0.013 | 3.541 | 0.8 | 5.4 | OK |
| 3.000 | S300 | 0.03 | | 0.002 | 0.708 | 1.1 | 1.1 | OK |
| 1.003 | S103 | 0.11 | | 0.037 | 6.462 | 1.5 | 9.5 | OK |
| 4.000 | S400 | 0.04 | | 0.002 | 1.328 | 1.6 | 2.1 | OK |
| 4.001 | S401 | 0.14 | | 0.007 | 1.859 | 0.9 | 2.8 | OK |
| 1.004 | S104 | 0.29 | | 0.032 | 9.207 | 0.6 | 13.6 | OK |
| 1.005 | S105 | 0.13 | | 0.204 | 9.491 | 0.5 | 14.1 | OK |
| 5.000 | S500 | 0.06 | | 0.003 | 1.239 | 1.1 | 2.0 | OK |
| 5.001 | S501 | 0.06 | | 0.006 | 1.240 | 1.0 | 2.0 | OK |
| 6.000 | S600 | 0.01 | | 0.000 | 0.177 | 0.6 | 0.3 | OK |
| 6.001 | S601 | 0.01 | | 0.000 | 0.177 | 0.6 | 0.3 | OK |
| 5.002 | S502 | 0.13 | | 0.014 | 4.692 | 0.9 | 6.8 | OK |
| 5.003 | S503 | 0.10 | | 0.035 | 5.312 | 1.3 | 7.6 | OK |
| 7.000 | S700 | 0.21 | | 0.007 | 2.302 | 0.8 | 3.6 | OK |
| 7.001 | S701 | 0.30 | | 0.029 | 3.452 | 0.9 | 5.2 | OK |
| 5.004 | S504 | 0.21 | | 0.156 | 8.764 | 0.7 | 12.8 | OK |

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## Summary Wizard of 30 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 30 minute 1 year Summer I+0% | 30 | 43 | 32.525 | 31.213 | -0.137 | 0.000 |
| 1.006 | S106 | 30 minute 1 year Summer I+0% | 30 | 117 | 32.500 | 30.180 | -1.466 | 0.000 |
| 9.000 | S900 | 30 minute 1 year Summer I+0% | 30 | 39 | 32.665 | 31.858 | -0.142 | 0.000 |
| 10.000 | S901 | 30 minute 1 year Summer I+0% | 30 | 39 | 32.665 | 31.855 | -0.145 | 0.000 |
| 9.001 | S901 | 30 minute 1 year Summer I+0% | 30 | 45 | 32.665 | 31.050 | -0.170 | 0.000 |
| 9.002 | S902 | 30 minute 1 year Summer I+0% | 30 | 45 | 32.640 | 30.804 | -0.181 | 0.000 |
| 11.000 | S1100 | 30 minute 1 year Summer I+0% | 30 | 40 | 32.680 | 31.585 | -0.115 | 0.000 |
| 9.003 | S903 | 30 minute 1 year Summer I+0% | 30 | 98 | 32.630 | 30.268 | -0.227 | 0.000 |
| 1.007 | S107 | 30 minute 1 year Summer I+0% | 30 | 117 | 32.500 | 30.180 | -1.356 | 0.000 |
| 12.000 | S1200 | 30 minute 1 year Summer I+0% | 30 | 39 | 32.635 | 31.862 | -0.138 | 0.000 |
| 13.000 | S1300 | 30 minute 1 year Summer I+0% | 30 | 38 | 32.635 | 31.894 | -0.106 | 0.000 |
| 13.001 | S1301 | 30 minute 1 year Summer I+0% | 30 | 40 | 32.635 | 31.802 | -0.108 | 0.000 |
| 12.001 | S1201 | 30 minute 1 year Summer I+0% | 30 | 43 | 32.635 | 31.465 | -0.170 | 0.000 |
| 12.002 | S1202 | 30 minute 1 year Summer I+0% | 30 | 45 | 32.680 | 31.117 | -0.143 | 0.000 |
| 12.003 | S1203 | 30 minute 1 year Summer I+0% | 30 | 45 | 32.660 | 31.019 | -0.151 | 0.000 |
| 12.004 | S1204 | 30 minute 1 year Summer I+0% | 30 | 45 | 32.660 | 30.875 | -0.160 | 0.000 |
| 14.000 | S1400 | 30 minute 1 year Summer I+0% | 30 | 39 | 32.650 | 31.667 | -0.108 | 0.000 |
| 14.001 | S1401 | 30 minute 1 year Summer I+0% | 30 | 45 | 32.680 | 31.321 | -0.174 | 0.000 |
| 15.000 | S1500 | 30 minute 1 year Summer I+0% | 30 | 39 | 32.680 | 31.681 | -0.119 | 0.000 |
| 15.001 | S1501 | 30 minute 1 year Summer I+0% | 30 | 42 | 32.600 | 31.634 | -0.121 | 0.000 |
| 14.002 | S1402 | 30 minute 1 year Summer I+0% | 30 | 45 | 32.600 | 31.063 | -0.177 | 0.000 |
| 12.005 | 1205 | 30 minute 1 year Summer I+0% | 30 | 60 | 32.600 | 30.569 | -0.136 | 0.000 |
| 1.008 | S108 | 30 minute 1 year Summer I+0% | 30 | 117 | 32.550 | 30.180 | -0.175 | 0.000 |
| 16.000 | S1600 | 30 minute 1 year Summer I+0% | 30 | 41 | 32.545 | 31.463 | -0.187 | 0.000 |
| 16.001 | S1601 | 30 minute 1 year Summer I+0% | 30 | 60 | 32.545 | 30.496 | -0.189 | 0.000 |
| 1.009 | S109 | 30 minute 1 year Summer I+0% | 30 | 117 | 32.500 | 30.179 | 0.149 | 0.000 |

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.02 | | 0.009 | 0.443 | 1.1 | 0.7 | OK |
| 1.006 | S106 | 0.01 | | 0.117 | 16.973 | 0.2 | 23.0 | OK |
| 9.000 | S900 | 0.01 | | 0.001 | 0.266 | 0.9 | 0.4 | OK |
| 10.000 | S901 | 0.01 | | 0.000 | 0.177 | 0.6 | 0.3 | OK |
| 9.001 | S901 | 0.14 | | 0.014 | 4.603 | 0.9 | 6.4 | OK |
| 9.002 | S902 | 0.09 | | 0.039 | 6.108 | 1.5 | 8.5 | OK |
| 11.000 | S1100 | 0.13 | | 0.005 | 1.328 | 0.7 | 2.1 | OK |
| 9.003 | S903 | 0.13 | | 0.098 | 7.879 | 0.8 | 11.2 | OK |
| 1.007 | S107 | 0.00 | | 21.406 | 15.310 | 0.1 | 14.1 | OK |
| 12.000 | S1200 | 0.02 | | 0.001 | 0.354 | 0.9 | 0.6 | OK |
| 13.000 | S1300 | 0.19 | | 0.006 | 2.036 | 0.7 | 3.2 | OK |
| 13.001 | S1301 | 0.17 | | 0.021 | 3.187 | 1.2 | 4.8 | OK |
| 12.001 | S1201 | 0.14 | | 0.015 | 6.197 | 1.2 | 9.1 | OK |
| 12.002 | S1202 | 0.29 | | 0.049 | 8.498 | 0.9 | 12.2 | OK |
| 12.003 | S1203 | 0.24 | | 0.064 | 8.498 | 1.1 | 12.2 | OK |
| 12.004 | S1204 | 0.18 | | 0.037 | 10.268 | 1.6 | 14.6 | OK |
| 14.000 | S1400 | 0.18 | | 0.006 | 2.124 | 0.8 | 3.4 | OK |

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Summary Wizard of 30 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.12 | | 0.014 | 3.806 | 0.8 | 5.7 | OK |
| 15.000 | S1500 | 0.09 | | 0.004 | 0.797 | 0.5 | 1.3 | OK |
| 15.001 | S1501 | 0.09 | | 0.010 | 2.125 | 1.3 | 3.1 | OK |
| 14.002 | S1402 | 0.10 | | 0.042 | 7.082 | 1.7 | 10.3 | OK |
| 12.005 | 1205 | 0.33 | | 0.145 | 19.297 | 1.9 | 27.4 | OK |
| 1.008 | S108 | 0.05 | | 27.904 | 10.170 | 0.1 | 4.3 | OK |
| 16.000 | S1600 | 0.07 | | 0.009 | 3.010 | 1.1 | 4.8 | OK |
| 16.001 | S1601 | 0.06 | | 0.020 | 3.363 | 1.3 | 5.2 | OK |
| 1.009 | S109 | 0.26 | | 1.529 | 12.130 | 0.9 | 4.3 | SURCHARGED |

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## Summary Wizard of 60 minute 1 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 60 minute 1 year Summer I+0% | 60 | 47 | 32.680 | 31.799 | -0.121 | 0.000 |
| 1.001 | S101 | 60 minute 1 year Summer I+0% | 60 | 47 | 32.680 | 31.723 | -0.127 | 0.000 |
| 2.000 | S200 | 60 minute 1 year Summer I+0% | 60 | 49 | 32.600 | 31.504 | -0.126 | 0.000 |
| 1.002 | S102 | 60 minute 1 year Summer I+0% | 60 | 51 | 32.630 | 31.263 | -0.182 | 0.000 |
| 3.000 | S300 | 60 minute 1 year Summer I+0% | 60 | 47 | 32.550 | 31.865 | -0.135 | 0.000 |
| 1.003 | S103 | 60 minute 1 year Summer I+0% | 60 | 51 | 32.600 | 31.094 | -0.181 | 0.000 |
| 4.000 | S400 | 60 minute 1 year Summer I+0% | 60 | 47 | 32.550 | 31.717 | -0.133 | 0.000 |
| 4.001 | S401 | 60 minute 1 year Summer I+0% | 60 | 63 | 32.550 | 30.632 | -0.118 | 0.000 |
| 1.004 | S104 | 60 minute 1 year Summer I+0% | 60 | 92 | 32.600 | 30.327 | -0.203 | 0.000 |
| 1.005 | S105 | 60 minute 1 year Summer I+0% | 60 | 108 | 32.600 | 30.223 | -0.287 | 0.000 |
| 5.000 | S500 | 60 minute 1 year Summer I+0% | 60 | 46 | 32.550 | 31.871 | -0.129 | 0.000 |
| 5.001 | S501 | 60 minute 1 year Summer I+0% | 60 | 51 | 32.665 | 31.161 | -0.129 | 0.000 |
| 6.000 | S600 | 60 minute 1 year Summer I+0% | 60 | 47 | 32.665 | 31.854 | -0.146 | 0.000 |
| 6.001 | S601 | 60 minute 1 year Summer I+0% | 60 | 51 | 32.665 | 31.145 | -0.145 | 0.000 |
| 5.002 | S502 | 60 minute 1 year Summer I+0% | 60 | 51 | 32.665 | 30.873 | -0.177 | 0.000 |
| 5.003 | S503 | 60 minute 1 year Summer I+0% | 60 | 62 | 32.680 | 30.671 | -0.184 | 0.000 |
| 7.000 | S700 | 60 minute 1 year Summer I+0% | 60 | 46 | 32.680 | 31.920 | -0.110 | 0.000 |
| 7.001 | S701 | 60 minute 1 year Summer I+0% | 60 | 47 | 32.635 | 31.844 | -0.101 | 0.000 |
| 5.004 | S504 | 60 minute 1 year Summer I+0% | 60 | 92 | 32.635 | 30.327 | -0.218 | 0.000 |

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Summary Wizard of 60 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.08 | | 0.004 | 1.479 | 0.6 | 1.4 | OK |
| 1.001 | S101 | 0.06 | | 0.010 | 2.275 | 1.2 | 2.1 | OK |
| 2.000 | S200 | 0.06 | | 0.003 | 1.479 | 0.8 | 1.4 | OK |
| 1.002 | S102 | 0.08 | | 0.011 | 4.551 | 0.8 | 4.2 | OK |
| 3.000 | S300 | 0.02 | | 0.002 | 0.910 | 1.2 | 0.9 | OK |
| 1.003 | S103 | 0.09 | | 0.033 | 8.305 | 1.4 | 7.5 | OK |
| 4.000 | S400 | 0.03 | | 0.002 | 1.707 | 1.4 | 1.6 | OK |
| 4.001 | S401 | 0.11 | | 0.006 | 2.389 | 0.8 | 2.2 | OK |
| 1.004 | S104 | 0.23 | | 0.027 | 11.832 | 0.5 | 10.7 | OK |
| 1.005 | S105 | 0.10 | | 0.286 | 12.228 | 0.5 | 11.2 | OK |
| 5.000 | S500 | 0.05 | | 0.002 | 1.593 | 1.0 | 1.5 | OK |
| 5.001 | S501 | 0.05 | | 0.005 | 1.593 | 1.0 | 1.5 | OK |
| 6.000 | S600 | 0.01 | | 0.000 | 0.227 | 0.5 | 0.2 | OK |
| 6.001 | S601 | 0.01 | | 0.000 | 0.227 | 0.5 | 0.2 | OK |
| 5.002 | S502 | 0.10 | | 0.012 | 6.029 | 0.9 | 5.4 | OK |
| 5.003 | S503 | 0.08 | | 0.030 | 6.826 | 1.2 | 6.1 | OK |
| 7.000 | S700 | 0.16 | | 0.006 | 2.958 | 0.7 | 2.8 | OK |
| 7.001 | S701 | 0.24 | | 0.025 | 4.437 | 0.8 | 4.1 | OK |
| 5.004 | S504 | 0.17 | | 0.136 | 11.263 | 0.7 | 10.1 | OK |

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## Summary Wizard of 60 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 60 minute 1 year Summer I+0% | 60 | 51 | 32.525 | 31.210 | -0.140 | 0.000 |
| 1.006 | S106 | 60 minute 1 year Summer I+0% | 60 | 108 | 32.500 | 30.223 | -1.423 | 0.000 |
| 9.000 | S900 | 60 minute 1 year Summer I+0% | 60 | 47 | 32.665 | 31.856 | -0.144 | 0.000 |
| 10.000 | S901 | 60 minute 1 year Summer I+0% | 60 | 47 | 32.665 | 31.854 | -0.146 | 0.000 |
| 9.001 | S901 | 60 minute 1 year Summer I+0% | 60 | 51 | 32.665 | 31.044 | -0.176 | 0.000 |
| 9.002 | S902 | 60 minute 1 year Summer I+0% | 60 | 51 | 32.640 | 30.799 | -0.186 | 0.000 |
| 11.000 | S1100 | 60 minute 1 year Summer I+0% | 60 | 48 | 32.680 | 31.581 | -0.119 | 0.000 |
| 9.003 | S903 | 60 minute 1 year Summer I+0% | 60 | 106 | 32.630 | 30.261 | -0.234 | 0.000 |
| 1.007 | S107 | 60 minute 1 year Summer I+0% | 60 | 108 | 32.500 | 30.223 | -1.313 | 0.000 |
| 12.000 | S1200 | 60 minute 1 year Summer I+0% | 60 | 47 | 32.635 | 31.860 | -0.140 | 0.000 |
| 13.000 | S1300 | 60 minute 1 year Summer I+0% | 60 | 46 | 32.635 | 31.888 | -0.112 | 0.000 |
| 13.001 | S1301 | 60 minute 1 year Summer I+0% | 60 | 47 | 32.635 | 31.796 | -0.114 | 0.000 |
| 12.001 | S1201 | 60 minute 1 year Summer I+0% | 60 | 49 | 32.635 | 31.459 | -0.176 | 0.000 |
| 12.002 | S1202 | 60 minute 1 year Summer I+0% | 60 | 51 | 32.680 | 31.108 | -0.152 | 0.000 |
| 12.003 | S1203 | 60 minute 1 year Summer I+0% | 60 | 51 | 32.660 | 31.011 | -0.159 | 0.000 |
| 12.004 | S1204 | 60 minute 1 year Summer I+0% | 60 | 51 | 32.660 | 30.867 | -0.168 | 0.000 |
| 14.000 | S1400 | 60 minute 1 year Summer I+0% | 60 | 47 | 32.650 | 31.662 | -0.113 | 0.000 |
| 14.001 | S1401 | 60 minute 1 year Summer I+0% | 60 | 51 | 32.680 | 31.316 | -0.179 | 0.000 |
| 15.000 | S1500 | 60 minute 1 year Summer I+0% | 60 | 47 | 32.680 | 31.676 | -0.124 | 0.000 |
| 15.001 | S1501 | 60 minute 1 year Summer I+0% | 60 | 48 | 32.600 | 31.630 | -0.125 | 0.000 |
| 14.002 | S1402 | 60 minute 1 year Summer I+0% | 60 | 51 | 32.600 | 31.057 | -0.183 | 0.000 |
| 12.005 | 1205 | 60 minute 1 year Summer I+0% | 60 | 64 | 32.600 | 30.559 | -0.146 | 0.000 |
| 1.008 | S108 | 60 minute 1 year Summer I+0% | 60 | 108 | 32.550 | 30.223 | -0.132 | 0.000 |
| 16.000 | S1600 | 60 minute 1 year Summer I+0% | 60 | 49 | 32.545 | 31.457 | -0.193 | 0.000 |
| 16.001 | S1601 | 60 minute 1 year Summer I+0% | 60 | 65 | 32.545 | 30.492 | -0.193 | 0.000 |
| 1.009 | S109 | 60 minute 1 year Summer I+0% | 60 | 108 | 32.500 | 30.222 | 0.192 | 0.000 |

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.01 | | 0.005 | 0.569 | 1.1 | 0.5 | OK |
| 1.006 | S106 | 0.01 | | 0.203 | 23.608 | 0.2 | 16.1 | OK |
| 9.000 | S900 | 0.01 | | 0.000 | 0.341 | 0.7 | 0.3 | OK |
| 10.000 | S901 | 0.01 | | 0.000 | 0.227 | 0.5 | 0.2 | OK |
| 9.001 | S901 | 0.11 | | 0.013 | 5.915 | 0.8 | 5.2 | OK |
| 9.002 | S902 | 0.07 | | 0.033 | 7.849 | 1.5 | 6.9 | OK |
| 11.000 | S1100 | 0.10 | | 0.004 | 1.707 | 0.6 | 1.6 | OK |
| 9.003 | S903 | 0.11 | | 0.087 | 10.125 | 0.8 | 9.0 | OK |
| 1.007 | S107 | 0.00 | | 26.496 | 23.983 | 0.1 | 10.2 | OK |
| 12.000 | S1200 | 0.01 | | 0.001 | 0.455 | 0.9 | 0.4 | OK |
| 13.000 | S1300 | 0.15 | | 0.005 | 2.617 | 0.7 | 2.5 | OK |
| 13.001 | S1301 | 0.13 | | 0.018 | 4.096 | 1.1 | 3.8 | OK |
| 12.001 | S1201 | 0.11 | | 0.013 | 7.964 | 1.1 | 7.2 | OK |
| 12.002 | S1202 | 0.23 | | 0.043 | 10.921 | 0.9 | 9.8 | OK |
| 12.003 | S1203 | 0.19 | | 0.057 | 10.921 | 1.0 | 9.7 | OK |
| 12.004 | S1204 | 0.15 | | 0.032 | 13.197 | 1.5 | 11.7 | OK |
| 14.000 | S1400 | 0.14 | | 0.005 | 2.730 | 0.8 | 2.6 | OK |

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Summary Wizard of 60 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.09 | | 0.012 | 4.892 | 0.8 | 4.5 | OK |
| 15.000 | S1500 | 0.07 | | 0.003 | 1.024 | 0.5 | 1.0 | OK |
| 15.001 | S1501 | 0.07 | | 0.009 | 2.730 | 1.2 | 2.5 | OK |
| 14.002 | S1402 | 0.08 | | 0.037 | 9.101 | 1.6 | 8.2 | OK |
| 12.005 | 1205 | 0.26 | | 0.126 | 24.800 | 1.8 | 22.1 | OK |
| 1.008 | S108 | 0.05 | | 32.693 | 23.709 | 0.2 | 4.5 | OK |
| 16.000 | S1600 | 0.05 | | 0.008 | 3.868 | 1.0 | 3.6 | OK |
| 16.001 | S1601 | 0.05 | | 0.017 | 4.322 | 1.2 | 4.0 | OK |
| 1.009 | S109 | 0.28 | | 1.809 | 26.579 | 0.9 | 4.6 | SURCHARGED |

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## Summary Wizard of 120 minute 1 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 120 minute 1 year Summer I+0% | 120 | 56 | 32.680 | 31.793 | -0.127 | 0.000 |
| 1.001 | S101 | 120 minute 1 year Summer I+0% | 120 | 57 | 32.680 | 31.720 | -0.130 | 0.000 |
| 2.000 | S200 | 120 minute 1 year Summer I+0% | 120 | 58 | 32.600 | 31.500 | -0.130 | 0.000 |
| 1.002 | S102 | 120 minute 1 year Summer I+0% | 120 | 60 | 32.630 | 31.255 | -0.190 | 0.000 |
| 3.000 | S300 | 120 minute 1 year Summer I+0% | 120 | 56 | 32.550 | 31.860 | -0.140 | 0.000 |
| 1.003 | S103 | 120 minute 1 year Summer I+0% | 120 | 60 | 32.600 | 31.086 | -0.189 | 0.000 |
| 4.000 | S400 | 120 minute 1 year Summer I+0% | 120 | 56 | 32.550 | 31.715 | -0.135 | 0.000 |
| 4.001 | S401 | 120 minute 1 year Summer I+0% | 120 | 70 | 32.550 | 30.627 | -0.123 | 0.000 |
| 1.004 | S104 | 120 minute 1 year Summer I+0% | 120 | 97 | 32.600 | 30.310 | -0.220 | 0.000 |
| 1.005 | S105 | 120 minute 1 year Summer I+0% | 120 | 98 | 32.600 | 30.254 | -0.256 | 0.000 |
| 5.000 | S500 | 120 minute 1 year Summer I+0% | 120 | 55 | 32.550 | 31.867 | -0.133 | 0.000 |
| 5.001 | S501 | 120 minute 1 year Summer I+0% | 120 | 60 | 32.665 | 31.158 | -0.132 | 0.000 |
| 6.000 | S600 | 120 minute 1 year Summer I+0% | 120 | 56 | 32.665 | 31.853 | -0.147 | 0.000 |
| 6.001 | S601 | 120 minute 1 year Summer I+0% | 120 | 60 | 32.665 | 31.143 | -0.147 | 0.000 |
| 5.002 | S502 | 120 minute 1 year Summer I+0% | 120 | 61 | 32.665 | 30.865 | -0.185 | 0.000 |
| 5.003 | S503 | 120 minute 1 year Summer I+0% | 120 | 69 | 32.680 | 30.664 | -0.191 | 0.000 |
| 7.000 | S700 | 120 minute 1 year Summer I+0% | 120 | 55 | 32.680 | 31.913 | -0.117 | 0.000 |
| 7.001 | S701 | 120 minute 1 year Summer I+0% | 120 | 57 | 32.635 | 31.836 | -0.109 | 0.000 |
| 5.004 | S504 | 120 minute 1 year Summer I+0% | 120 | 97 | 32.635 | 30.313 | -0.232 | 0.000 |

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## Summary Wizard of 120 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.06 | | 0.003 | 1.870 | 0.6 | 1.0 | OK |
| 1.001 | S101 | 0.04 | | 0.008 | 2.876 | 1.1 | 1.5 | OK |
| 2.000 | S200 | 0.04 | | 0.002 | 1.870 | 0.7 | 1.0 | OK |
| 1.002 | S102 | 0.06 | | 0.009 | 5.753 | 0.8 | 2.9 | OK |
| 3.000 | S300 | 0.01 | | 0.001 | 1.151 | 1.2 | 0.6 | OK |
| 1.003 | S103 | 0.06 | | 0.026 | 10.498 | 1.3 | 5.3 | OK |
| 4.000 | S400 | 0.02 | | 0.002 | 2.157 | 1.4 | 1.1 | OK |
| 4.001 | S401 | 0.07 | | 0.005 | 3.020 | 0.7 | 1.5 | OK |
| 1.004 | S104 | 0.16 | | 0.022 | 14.956 | 0.5 | 7.5 | OK |
| 1.005 | S105 | 0.07 | | 0.342 | 15.570 | 0.4 | 7.7 | OK |
| 5.000 | S500 | 0.03 | | 0.002 | 2.013 | 0.9 | 1.0 | OK |
| 5.001 | S501 | 0.03 | | 0.004 | 2.013 | 0.9 | 1.0 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.287 | 0.3 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.287 | 0.3 | 0.1 | OK |
| 5.002 | S502 | 0.07 | | 0.010 | 7.622 | 0.8 | 3.8 | OK |
| 5.003 | S503 | 0.06 | | 0.024 | 8.628 | 1.2 | 4.3 | OK |
| 7.000 | S700 | 0.11 | | 0.005 | 3.739 | 0.7 | 1.9 | OK |
| 7.001 | S701 | 0.17 | | 0.020 | 5.609 | 0.7 | 2.9 | OK |
| 5.004 | S504 | 0.12 | | 0.112 | 14.237 | 0.6 | 7.2 | OK |

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## Summary Wizard of 120 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 120 minute 1 year Summer I+0% | 120 | 60 | 32.525 | 31.207 | -0.143 |
| 1.006 | S106 | 120 minute 1 year Summer I+0% | 120 | 98 | 32.500 | 30.253 | -1.393 |
| 9.000 | S900 | 120 minute 1 year Summer I+0% | 120 | 56 | 32.665 | 31.854 | -0.146 |
| 10.000 | S901 | 120 minute 1 year Summer I+0% | 120 | 56 | 32.665 | 31.853 | -0.147 |
| 9.001 | S901 | 120 minute 1 year Summer I+0% | 120 | 61 | 32.665 | 31.037 | -0.183 |
| 9.002 | S902 | 120 minute 1 year Summer I+0% | 120 | 61 | 32.640 | 30.792 | -0.193 |
| 11.000 | S1100 | 120 minute 1 year Summer I+0% | 120 | 57 | 32.680 | 31.575 | -0.125 |
| 9.003 | S903 | 120 minute 1 year Summer I+0% | 120 | 109 | 32.630 | 30.254 | -0.241 |
| 1.007 | S107 | 120 minute 1 year Summer I+0% | 120 | 98 | 32.500 | 30.253 | -1.283 |
| 12.000 | S1200 | 120 minute 1 year Summer I+0% | 120 | 56 | 32.635 | 31.857 | -0.143 |
| 13.000 | S1300 | 120 minute 1 year Summer I+0% | 120 | 55 | 32.635 | 31.882 | -0.118 |
| 13.001 | S1301 | 120 minute 1 year Summer I+0% | 120 | 57 | 32.635 | 31.791 | -0.119 |
| 12.001 | S1201 | 120 minute 1 year Summer I+0% | 120 | 60 | 32.635 | 31.451 | -0.184 |
| 12.002 | S1202 | 120 minute 1 year Summer I+0% | 120 | 61 | 32.680 | 31.096 | -0.164 |
| 12.003 | S1203 | 120 minute 1 year Summer I+0% | 120 | 61 | 32.660 | 30.999 | -0.171 |
| 12.004 | S1204 | 120 minute 1 year Summer I+0% | 120 | 61 | 32.660 | 30.858 | -0.177 |
| 14.000 | S1400 | 120 minute 1 year Summer I+0% | 120 | 56 | 32.650 | 31.656 | -0.119 |
| 14.001 | S1401 | 120 minute 1 year Summer I+0% | 120 | 60 | 32.680 | 31.307 | -0.188 |
| 15.000 | S1500 | 120 minute 1 year Summer I+0% | 120 | 56 | 32.680 | 31.671 | -0.129 |
| 15.001 | S1501 | 120 minute 1 year Summer I+0% | 120 | 58 | 32.600 | 31.626 | -0.129 |
| 14.002 | S1402 | 120 minute 1 year Summer I+0% | 120 | 61 | 32.600 | 31.049 | -0.191 |
| 12.005 | 1205 | 120 minute 1 year Summer I+0% | 120 | 72 | 32.600 | 30.546 | -0.159 |
| 1.008 | S108 | 120 minute 1 year Summer I+0% | 120 | 98 | 32.550 | 30.254 | -0.101 |
| 16.000 | S1600 | 120 minute 1 year Summer I+0% | 120 | 58 | 32.545 | 31.452 | -0.198 |
| 16.001 | S1601 | 120 minute 1 year Summer I+0% | 120 | 72 | 32.545 | 30.487 | -0.198 |
| 1.009 | S109 | 120 minute 1 year Summer I+0% | 120 | 98 | 32.500 | 30.252 | 0.222 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.002 | 0.719 | 0.8 | 0.4 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.266 | 34.460 | 0.2 | 10.2 | OK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.000 | 0.431 | 0.5 | 0.2 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.287 | 0.3 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.08 | | 0.011 | 7.478 | 0.7 | 3.7 | OK |
| 9.002 | S902 | 0.000 | 0.05 | | 0.027 | 9.923 | 1.4 | 4.9 | OK |
| 11.000 | S1100 | 0.000 | 0.07 | | 0.003 | 2.157 | 0.6 | 1.1 | OK |
| 9.003 | S903 | 0.000 | 0.08 | | 0.077 | 12.799 | 0.7 | 6.4 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 30.010 | 40.265 | 0.1 | 6.7 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 0.575 | 0.7 | 0.3 | OK |
| 13.000 | S1300 | 0.000 | 0.10 | | 0.004 | 3.308 | 0.6 | 1.7 | OK |
| 13.001 | S1301 | 0.000 | 0.09 | | 0.015 | 5.177 | 1.0 | 2.6 | OK |
| 12.001 | S1201 | 0.000 | 0.08 | | 0.011 | 10.067 | 1.0 | 5.1 | OK |
| 12.002 | S1202 | 0.000 | 0.16 | | 0.036 | 13.806 | 0.8 | 6.9 | OK |
| 12.003 | S1203 | 0.000 | 0.13 | | 0.046 | 13.806 | 0.9 | 6.9 | OK |
| 12.004 | S1204 | 0.000 | 0.10 | | 0.027 | 16.682 | 1.3 | 8.3 | OK |
| 14.000 | S1400 | 0.000 | 0.09 | | 0.004 | 3.451 | 0.7 | 1.8 | OK |

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## Summary Wizard of 120 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.07 | | 0.010 | 6.184 | 0.7 | 3.1 | OK |
| 15.000 | S1500 | 0.000 | 0.05 | | 0.003 | 1.294 | 0.4 | 0.7 | OK |
| 15.001 | S1501 | 0.000 | 0.05 | | 0.007 | 3.451 | 1.2 | 1.7 | OK |
| 14.002 | S1402 | 0.000 | 0.06 | | 0.029 | 11.505 | 1.5 | 5.8 | OK |
| 12.005 | 1205 | 0.000 | 0.19 | | 0.104 | 31.351 | 1.6 | 15.7 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 35.991 | 50.913 | 0.2 | 4.7 | OK |
| 16.000 | S1600 | 0.000 | 0.04 | | 0.006 | 4.890 | 0.9 | 2.5 | OK |
| 16.001 | S1601 | 0.000 | 0.03 | | 0.014 | 5.464 | 1.1 | 2.8 | OK |
| 1.009 | S109 | 0.000 | 0.29 | | 2.003 | 55.168 | 0.9 | 4.8 | SURCHARGED |

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## Summary Wizard of 180 minute 1 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 180 minute 1 year Summer I+0% | 180 | 64 | 32.680 | 31.790 | -0.130 | 0.000 |
| 1.001 | S101 | 180 minute 1 year Summer I+0% | 180 | 64 | 32.680 | 31.718 | -0.132 | 0.000 |
| 2.000 | S200 | 180 minute 1 year Summer I+0% | 180 | 65 | 32.600 | 31.498 | -0.132 | 0.000 |
| 1.002 | S102 | 180 minute 1 year Summer I+0% | 180 | 67 | 32.630 | 31.251 | -0.194 | 0.000 |
| 3.000 | S300 | 180 minute 1 year Summer I+0% | 180 | 64 | 32.550 | 31.858 | -0.142 | 0.000 |
| 1.003 | S103 | 180 minute 1 year Summer I+0% | 180 | 67 | 32.600 | 31.081 | -0.194 | 0.000 |
| 4.000 | S400 | 180 minute 1 year Summer I+0% | 180 | 64 | 32.550 | 31.712 | -0.138 | 0.000 |
| 4.001 | S401 | 180 minute 1 year Summer I+0% | 180 | 75 | 32.550 | 30.623 | -0.127 | 0.000 |
| 1.004 | S104 | 180 minute 1 year Summer I+0% | 180 | 99 | 32.600 | 30.301 | -0.229 | 0.000 |
| 1.005 | S105 | 180 minute 1 year Summer I+0% | 180 | 93 | 32.600 | 30.264 | -0.246 | 0.000 |
| 5.000 | S500 | 180 minute 1 year Summer I+0% | 180 | 64 | 32.550 | 31.866 | -0.134 | 0.000 |
| 5.001 | S501 | 180 minute 1 year Summer I+0% | 180 | 67 | 32.665 | 31.156 | -0.134 | 0.000 |
| 6.000 | S600 | 180 minute 1 year Summer I+0% | 180 | 64 | 32.665 | 31.852 | -0.148 | 0.000 |
| 6.001 | S601 | 180 minute 1 year Summer I+0% | 180 | 67 | 32.665 | 31.143 | -0.147 | 0.000 |
| 5.002 | S502 | 180 minute 1 year Summer I+0% | 180 | 67 | 32.665 | 30.860 | -0.190 | 0.000 |
| 5.003 | S503 | 180 minute 1 year Summer I+0% | 180 | 74 | 32.680 | 30.660 | -0.195 | 0.000 |
| 7.000 | S700 | 180 minute 1 year Summer I+0% | 180 | 64 | 32.680 | 31.910 | -0.120 | 0.000 |
| 7.001 | S701 | 180 minute 1 year Summer I+0% | 180 | 64 | 32.635 | 31.831 | -0.114 | 0.000 |
| 5.004 | S504 | 180 minute 1 year Summer I+0% | 180 | 98 | 32.635 | 30.306 | -0.239 | 0.000 |

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## Summary Wizard of 180 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.05 | | 0.002 | 2.135 | 0.5 | 0.8 | OK |
| 1.001 | S101 | 0.03 | | 0.007 | 3.285 | 1.0 | 1.2 | OK |
| 2.000 | S200 | 0.03 | | 0.002 | 2.135 | 0.6 | 0.8 | OK |
| 1.002 | S102 | 0.05 | | 0.008 | 6.570 | 0.7 | 2.3 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 1.314 | 1.0 | 0.5 | OK |
| 1.003 | S103 | 0.05 | | 0.022 | 11.990 | 1.2 | 4.2 | OK |
| 4.000 | S400 | 0.02 | | 0.001 | 2.464 | 1.4 | 0.9 | OK |
| 4.001 | S401 | 0.06 | | 0.004 | 3.449 | 0.7 | 1.2 | OK |
| 1.004 | S104 | 0.13 | | 0.019 | 17.082 | 0.5 | 6.0 | OK |
| 1.005 | S105 | 0.05 | | 0.361 | 17.895 | 0.4 | 6.1 | OK |
| 5.000 | S500 | 0.03 | | 0.002 | 2.300 | 0.9 | 0.8 | OK |
| 5.001 | S501 | 0.03 | | 0.003 | 2.300 | 0.9 | 0.8 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.328 | 0.3 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.328 | 0.3 | 0.1 | OK |
| 5.002 | S502 | 0.06 | | 0.009 | 8.705 | 0.8 | 3.0 | OK |
| 5.003 | S503 | 0.04 | | 0.021 | 9.855 | 1.1 | 3.4 | OK |
| 7.000 | S700 | 0.09 | | 0.004 | 4.271 | 0.6 | 1.5 | OK |
| 7.001 | S701 | 0.13 | | 0.017 | 6.406 | 0.7 | 2.2 | OK |
| 5.004 | S504 | 0.09 | | 0.099 | 16.260 | 0.5 | 5.7 | OK |

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## Summary Wizard of 180 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 180 minute 1 year Summer I+0% | 180 | 67 | 32.525 | 31.205 | -0.145 |
| 1.006 | S106 | 180 minute 1 year Summer I+0% | 180 | 93 | 32.500 | 30.264 | -1.382 |
| 9.000 | S900 | 180 minute 1 year Summer I+0% | 180 | 64 | 32.665 | 31.853 | -0.147 |
| 10.000 | S901 | 180 minute 1 year Summer I+0% | 180 | 64 | 32.665 | 31.852 | -0.148 |
| 9.001 | S901 | 180 minute 1 year Summer I+0% | 180 | 67 | 32.665 | 31.031 | -0.189 |
| 9.002 | S902 | 180 minute 1 year Summer I+0% | 180 | 67 | 32.640 | 30.789 | -0.196 |
| 11.000 | S1100 | 180 minute 1 year Summer I+0% | 180 | 64 | 32.680 | 31.572 | -0.128 |
| 9.003 | S903 | 180 minute 1 year Summer I+0% | 180 | 102 | 32.630 | 30.264 | -0.231 |
| 1.007 | S107 | 180 minute 1 year Summer I+0% | 180 | 93 | 32.500 | 30.264 | -1.272 |
| 12.000 | S1200 | 180 minute 1 year Summer I+0% | 180 | 64 | 32.635 | 31.855 | -0.145 |
| 13.000 | S1300 | 180 minute 1 year Summer I+0% | 180 | 64 | 32.635 | 31.878 | -0.122 |
| 13.001 | S1301 | 180 minute 1 year Summer I+0% | 180 | 64 | 32.635 | 31.787 | -0.123 |
| 12.001 | S1201 | 180 minute 1 year Summer I+0% | 180 | 66 | 32.635 | 31.446 | -0.189 |
| 12.002 | S1202 | 180 minute 1 year Summer I+0% | 180 | 67 | 32.680 | 31.089 | -0.171 |
| 12.003 | S1203 | 180 minute 1 year Summer I+0% | 180 | 67 | 32.660 | 30.994 | -0.176 |
| 12.004 | S1204 | 180 minute 1 year Summer I+0% | 180 | 67 | 32.660 | 30.853 | -0.182 |
| 14.000 | S1400 | 180 minute 1 year Summer I+0% | 180 | 64 | 32.650 | 31.652 | -0.123 |
| 14.001 | S1401 | 180 minute 1 year Summer I+0% | 180 | 67 | 32.680 | 31.303 | -0.192 |
| 15.000 | S1500 | 180 minute 1 year Summer I+0% | 180 | 64 | 32.680 | 31.669 | -0.131 |
| 15.001 | S1501 | 180 minute 1 year Summer I+0% | 180 | 64 | 32.600 | 31.624 | -0.131 |
| 14.002 | S1402 | 180 minute 1 year Summer I+0% | 180 | 67 | 32.600 | 31.045 | -0.195 |
| 12.005 | 1205 | 180 minute 1 year Summer I+0% | 180 | 77 | 32.600 | 30.538 | -0.167 |
| 1.008 | S108 | 180 minute 1 year Summer I+0% | 180 | 93 | 32.550 | 30.264 | -0.091 |
| 16.000 | S1600 | 180 minute 1 year Summer I+0% | 180 | 66 | 32.545 | 31.450 | -0.200 |
| 16.001 | S1601 | 180 minute 1 year Summer I+0% | 180 | 77 | 32.545 | 30.484 | -0.201 |
| 1.009 | S109 | 180 minute 1 year Summer I+0% | 180 | 93 | 32.500 | 30.263 | 0.233 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.000 | 0.821 | 0.6 | 0.3 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.302 | 43.125 | 0.2 | 7.7 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.493 | 0.4 | 0.2 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.328 | 0.3 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.06 | | 0.009 | 8.540 | 0.7 | 2.9 | OK |
| 9.002 | S902 | 0.000 | 0.04 | | 0.023 | 11.333 | 1.3 | 3.9 | OK |
| 11.000 | S1100 | 0.000 | 0.05 | | 0.003 | 2.464 | 0.5 | 0.9 | OK |
| 9.003 | S903 | 0.000 | 0.06 | | 0.092 | 14.618 | 0.7 | 5.1 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 31.216 | 54.431 | 0.0 | 5.5 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 0.657 | 0.5 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.08 | | 0.004 | 3.778 | 0.6 | 1.3 | OK |
| 13.001 | S1301 | 0.000 | 0.07 | | 0.012 | 5.913 | 1.0 | 2.1 | OK |
| 12.001 | S1201 | 0.000 | 0.06 | | 0.009 | 11.497 | 1.0 | 4.0 | OK |
| 12.002 | S1202 | 0.000 | 0.13 | | 0.031 | 15.768 | 0.8 | 5.5 | OK |
| 12.003 | S1203 | 0.000 | 0.11 | | 0.041 | 15.768 | 0.9 | 5.5 | OK |
| 12.004 | S1204 | 0.000 | 0.08 | | 0.024 | 19.053 | 1.2 | 6.6 | OK |
| 14.000 | S1400 | 0.000 | 0.07 | | 0.003 | 3.942 | 0.7 | 1.4 | OK |

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## Summary Wizard of 180 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.05 | | 0.008 | 7.063 | 0.7 | 2.5 | OK |
| 15.000 | S1500 | 0.000 | 0.04 | | 0.002 | 1.478 | 0.4 | 0.5 | OK |
| 15.001 | S1501 | 0.000 | 0.04 | | 0.006 | 3.942 | 1.1 | 1.4 | OK |
| 14.002 | S1402 | 0.000 | 0.04 | | 0.025 | 13.140 | 1.4 | 4.6 | OK |
| 12.005 | 1205 | 0.000 | 0.15 | | 0.090 | 35.806 | 1.5 | 12.4 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 37.123 | 76.136 | 0.2 | 4.7 | OK |
| 16.000 | S1600 | 0.000 | 0.03 | | 0.006 | 5.584 | 0.9 | 2.0 | OK |
| 16.001 | S1601 | 0.000 | 0.03 | | 0.012 | 6.241 | 1.1 | 2.2 | OK |
| 1.009 | S109 | 0.000 | 0.29 | | 2.069 | 81.534 | 0.9 | 4.9 | SURCHARGED |

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## Summary Wizard of 240 minute 1 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 240 minute 1 year Summer I+0% | 240 | 71 | 32.680 | 31.789 | -0.131 | 0.000 |
| 1.001 | S101 | 240 minute 1 year Summer I+0% | 240 | 72 | 32.680 | 31.716 | -0.134 | 0.000 |
| 2.000 | S200 | 240 minute 1 year Summer I+0% | 240 | 72 | 32.600 | 31.497 | -0.133 | 0.000 |
| 1.002 | S102 | 240 minute 1 year Summer I+0% | 240 | 74 | 32.630 | 31.248 | -0.197 | 0.000 |
| 3.000 | S300 | 240 minute 1 year Summer I+0% | 240 | 71 | 32.550 | 31.857 | -0.143 | 0.000 |
| 1.003 | S103 | 240 minute 1 year Summer I+0% | 240 | 74 | 32.600 | 31.079 | -0.196 | 0.000 |
| 4.000 | S400 | 240 minute 1 year Summer I+0% | 240 | 71 | 32.550 | 31.710 | -0.140 | 0.000 |
| 4.001 | S401 | 240 minute 1 year Summer I+0% | 240 | 80 | 32.550 | 30.621 | -0.129 | 0.000 |
| 1.004 | S104 | 240 minute 1 year Summer I+0% | 240 | 103 | 32.600 | 30.295 | -0.235 | 0.000 |
| 1.005 | S105 | 240 minute 1 year Summer I+0% | 240 | 89 | 32.600 | 30.269 | -0.241 | 0.000 |
| 5.000 | S500 | 240 minute 1 year Summer I+0% | 240 | 71 | 32.550 | 31.865 | -0.135 | 0.000 |
| 5.001 | S501 | 240 minute 1 year Summer I+0% | 240 | 73 | 32.665 | 31.155 | -0.135 | 0.000 |
| 6.000 | S600 | 240 minute 1 year Summer I+0% | 240 | 71 | 32.665 | 31.852 | -0.148 | 0.000 |
| 6.001 | S601 | 240 minute 1 year Summer I+0% | 240 | 73 | 32.665 | 31.142 | -0.148 | 0.000 |
| 5.002 | S502 | 240 minute 1 year Summer I+0% | 240 | 74 | 32.665 | 30.857 | -0.193 | 0.000 |
| 5.003 | S503 | 240 minute 1 year Summer I+0% | 240 | 78 | 32.680 | 30.658 | -0.197 | 0.000 |
| 7.000 | S700 | 240 minute 1 year Summer I+0% | 240 | 71 | 32.680 | 31.907 | -0.123 | 0.000 |
| 7.001 | S701 | 240 minute 1 year Summer I+0% | 240 | 72 | 32.635 | 31.828 | -0.117 | 0.000 |
| 5.004 | S504 | 240 minute 1 year Summer I+0% | 240 | 101 | 32.635 | 30.300 | -0.245 | 0.000 |

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## Summary Wizard of 240 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.04 | | 0.002 | 2.344 | 0.5 | 0.6 | OK |
| 1.001 | S101 | 0.03 | | 0.006 | 3.607 | 1.0 | 1.0 | OK |
| 2.000 | S200 | 0.03 | | 0.002 | 2.344 | 0.6 | 0.6 | OK |
| 1.002 | S102 | 0.04 | | 0.007 | 7.213 | 0.7 | 1.9 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 1.443 | 0.9 | 0.4 | OK |
| 1.003 | S103 | 0.04 | | 0.020 | 13.164 | 1.2 | 3.5 | OK |
| 4.000 | S400 | 0.01 | | 0.001 | 2.705 | 1.5 | 0.7 | OK |
| 4.001 | S401 | 0.05 | | 0.003 | 3.787 | 0.7 | 1.0 | OK |
| 1.004 | S104 | 0.11 | | 0.017 | 18.755 | 0.4 | 5.0 | OK |
| 1.005 | S105 | 0.05 | | 0.373 | 19.657 | 0.4 | 5.1 | OK |
| 5.000 | S500 | 0.02 | | 0.002 | 2.525 | 0.9 | 0.7 | OK |
| 5.001 | S501 | 0.02 | | 0.003 | 2.525 | 0.9 | 0.7 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.360 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.360 | 0.2 | 0.1 | OK |
| 5.002 | S502 | 0.05 | | 0.008 | 9.557 | 0.7 | 2.5 | OK |
| 5.003 | S503 | 0.04 | | 0.019 | 10.820 | 1.0 | 2.9 | OK |
| 7.000 | S700 | 0.07 | | 0.003 | 4.689 | 0.6 | 1.3 | OK |
| 7.001 | S701 | 0.11 | | 0.016 | 7.033 | 0.7 | 1.9 | OK |
| 5.004 | S504 | 0.08 | | 0.089 | 17.853 | 0.5 | 4.7 | OK |

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## Summary Wizard of 240 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 240 minute 1 year Summer I+0% | 240 | 73 | 32.525 | 31.204 | -0.146 |
| 1.006 | S106 | 240 minute 1 year Summer I+0% | 240 | 89 | 32.500 | 30.268 | -1.378 |
| 9.000 | S900 | 240 minute 1 year Summer I+0% | 240 | 71 | 32.665 | 31.853 | -0.147 |
| 10.000 | S901 | 240 minute 1 year Summer I+0% | 240 | 71 | 32.665 | 31.852 | -0.148 |
| 9.001 | S901 | 240 minute 1 year Summer I+0% | 240 | 74 | 32.665 | 31.028 | -0.192 |
| 9.002 | S902 | 240 minute 1 year Summer I+0% | 240 | 74 | 32.640 | 30.787 | -0.198 |
| 11.000 | S1100 | 240 minute 1 year Summer I+0% | 240 | 71 | 32.680 | 31.570 | -0.130 |
| 9.003 | S903 | 240 minute 1 year Summer I+0% | 240 | 96 | 32.630 | 30.269 | -0.226 |
| 1.007 | S107 | 240 minute 1 year Summer I+0% | 240 | 89 | 32.500 | 30.269 | -1.267 |
| 12.000 | S1200 | 240 minute 1 year Summer I+0% | 240 | 71 | 32.635 | 31.854 | -0.146 |
| 13.000 | S1300 | 240 minute 1 year Summer I+0% | 240 | 71 | 32.635 | 31.875 | -0.125 |
| 13.001 | S1301 | 240 minute 1 year Summer I+0% | 240 | 72 | 32.635 | 31.784 | -0.126 |
| 12.001 | S1201 | 240 minute 1 year Summer I+0% | 240 | 73 | 32.635 | 31.443 | -0.192 |
| 12.002 | S1202 | 240 minute 1 year Summer I+0% | 240 | 74 | 32.680 | 31.084 | -0.176 |
| 12.003 | S1203 | 240 minute 1 year Summer I+0% | 240 | 74 | 32.660 | 30.990 | -0.180 |
| 12.004 | S1204 | 240 minute 1 year Summer I+0% | 240 | 74 | 32.660 | 30.849 | -0.186 |
| 14.000 | S1400 | 240 minute 1 year Summer I+0% | 240 | 71 | 32.650 | 31.649 | -0.126 |
| 14.001 | S1401 | 240 minute 1 year Summer I+0% | 240 | 74 | 32.680 | 31.300 | -0.195 |
| 15.000 | S1500 | 240 minute 1 year Summer I+0% | 240 | 71 | 32.680 | 31.668 | -0.132 |
| 15.001 | S1501 | 240 minute 1 year Summer I+0% | 240 | 72 | 32.600 | 31.622 | -0.133 |
| 14.002 | S1402 | 240 minute 1 year Summer I+0% | 240 | 74 | 32.600 | 31.043 | -0.197 |
| 12.005 | 1205 | 240 minute 1 year Summer I+0% | 240 | 81 | 32.600 | 30.533 | -0.172 |
| 1.008 | S108 | 240 minute 1 year Summer I+0% | 240 | 89 | 32.550 | 30.269 | -0.086 |
| 16.000 | S1600 | 240 minute 1 year Summer I+0% | 240 | 72 | 32.545 | 31.448 | -0.202 |
| 16.001 | S1601 | 240 minute 1 year Summer I+0% | 240 | 81 | 32.545 | 30.483 | -0.202 |
| 1.009 | S109 | 240 minute 1 year Summer I+0% | 240 | 89 | 32.500 | 30.267 | 0.237 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.000 | 0.901 | 0.5 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.319 | 50.369 | 0.1 | 6.6 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.541 | 0.3 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.360 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.05 | | 0.008 | 9.377 | 0.7 | 2.5 | OK |
| 9.002 | S902 | 0.000 | 0.03 | | 0.021 | 12.442 | 1.3 | 3.3 | OK |
| 11.000 | S1100 | 0.000 | 0.04 | | 0.002 | 2.705 | 0.5 | 0.7 | OK |
| 9.003 | S903 | 0.000 | 0.05 | | 0.099 | 16.049 | 0.7 | 4.2 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 31.774 | 66.359 | 0.0 | 4.9 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 0.721 | 0.4 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.07 | | 0.003 | 4.148 | 0.6 | 1.1 | OK |
| 13.001 | S1301 | 0.000 | 0.06 | | 0.011 | 6.492 | 0.9 | 1.7 | OK |
| 12.001 | S1201 | 0.000 | 0.05 | | 0.008 | 12.623 | 0.9 | 3.4 | OK |
| 12.002 | S1202 | 0.000 | 0.11 | | 0.028 | 17.312 | 0.7 | 4.6 | OK |
| 12.003 | S1203 | 0.000 | 0.09 | | 0.037 | 17.312 | 0.8 | 4.6 | OK |
| 12.004 | S1204 | 0.000 | 0.07 | | 0.021 | 20.919 | 1.2 | 5.5 | OK |
| 14.000 | S1400 | 0.000 | 0.06 | | 0.003 | 4.328 | 0.6 | 1.2 | OK |

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## Summary Wizard of 240 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.04 | | 0.007 | 7.754 | 0.7 | 2.1 | OK |
| 15.000 | S1500 | 0.000 | 0.03 | | 0.002 | 1.623 | 0.4 | 0.4 | OK |
| 15.001 | S1501 | 0.000 | 0.03 | | 0.005 | 4.328 | 1.0 | 1.2 | OK |
| 14.002 | S1402 | 0.000 | 0.04 | | 0.023 | 14.427 | 1.4 | 3.8 | OK |
| 12.005 | 1205 | 0.000 | 0.13 | | 0.082 | 39.313 | 1.5 | 10.4 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 37.644 | 98.592 | 0.2 | 4.6 | OK |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.005 | 6.131 | 0.9 | 1.7 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 0.011 | 6.852 | 1.1 | 1.8 | OK |
| 1.009 | S109 | 0.000 | 0.29 | | 2.099 | 104.986 | 0.9 | 4.9 | SURCHARGED |

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## Summary Wizard of 360 minute 1 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.680 | 31.787 | -0.133 | 0.000 |
| 1.001 | S101 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.680 | 31.715 | -0.135 | 0.000 |
| 2.000 | S200 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.600 | 31.495 | -0.135 | 0.000 |
| 1.002 | S102 | 360 minute 1 year Summer I+0% | 360 | 83 | 32.630 | 31.245 | -0.200 | 0.000 |
| 3.000 | S300 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.550 | 31.855 | -0.145 | 0.000 |
| 1.003 | S103 | 360 minute 1 year Summer I+0% | 360 | 83 | 32.600 | 31.076 | -0.199 | 0.000 |
| 4.000 | S400 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.550 | 31.708 | -0.142 | 0.000 |
| 4.001 | S401 | 360 minute 1 year Summer I+0% | 360 | 87 | 32.550 | 30.619 | -0.131 | 0.000 |
| 1.004 | S104 | 360 minute 1 year Summer I+0% | 360 | 105 | 32.600 | 30.287 | -0.243 | 0.000 |
| 1.005 | S105 | 360 minute 1 year Summer I+0% | 360 | 88 | 32.600 | 30.269 | -0.241 | 0.000 |
| 5.000 | S500 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.550 | 31.861 | -0.139 | 0.000 |
| 5.001 | S501 | 360 minute 1 year Summer I+0% | 360 | 83 | 32.665 | 31.152 | -0.138 | 0.000 |
| 6.000 | S600 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 360 minute 1 year Summer I+0% | 360 | 83 | 32.665 | 31.142 | -0.148 | 0.000 |
| 5.002 | S502 | 360 minute 1 year Summer I+0% | 360 | 84 | 32.665 | 30.853 | -0.197 | 0.000 |
| 5.003 | S503 | 360 minute 1 year Summer I+0% | 360 | 87 | 32.680 | 30.655 | -0.200 | 0.000 |
| 7.000 | S700 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.680 | 31.903 | -0.127 | 0.000 |
| 7.001 | S701 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.635 | 31.824 | -0.121 | 0.000 |
| 5.004 | S504 | 360 minute 1 year Summer I+0% | 360 | 105 | 32.635 | 30.292 | -0.253 | 0.000 |

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## Summary Wizard of 360 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.03 | | 0.002 | 2.672 | 0.5 | 0.5 | OK |
| 1.001 | S101 | 0.02 | | 0.005 | 4.110 | 1.0 | 0.7 | OK |
| 2.000 | S200 | 0.02 | | 0.002 | 2.672 | 0.6 | 0.5 | OK |
| 1.002 | S102 | 0.03 | | 0.006 | 8.221 | 0.6 | 1.5 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 1.644 | 0.7 | 0.3 | OK |
| 1.003 | S103 | 0.03 | | 0.017 | 15.002 | 1.1 | 2.7 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 3.083 | 1.2 | 0.6 | OK |
| 4.001 | S401 | 0.04 | | 0.003 | 4.316 | 0.6 | 0.8 | OK |
| 1.004 | S104 | 0.08 | | 0.015 | 21.373 | 0.4 | 3.9 | OK |
| 1.005 | S105 | 0.03 | | 0.375 | 22.401 | 0.4 | 3.9 | OK |
| 5.000 | S500 | 0.02 | | 0.001 | 2.877 | 0.9 | 0.5 | OK |
| 5.001 | S501 | 0.02 | | 0.002 | 2.877 | 0.9 | 0.5 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.411 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.409 | 0.2 | 0.1 | OK |
| 5.002 | S502 | 0.04 | | 0.007 | 10.890 | 0.7 | 2.0 | OK |
| 5.003 | S503 | 0.03 | | 0.016 | 12.329 | 1.0 | 2.2 | OK |
| 7.000 | S700 | 0.06 | | 0.003 | 5.343 | 0.6 | 1.0 | OK |
| 7.001 | S701 | 0.08 | | 0.013 | 8.015 | 0.6 | 1.4 | OK |
| 5.004 | S504 | 0.06 | | 0.075 | 20.344 | 0.5 | 3.7 | OK |

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## Summary Wizard of 360 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 360 minute 1 year Summer I+0% | 360 | 83 | 32.525 | 31.203 | -0.147 |
| 1.006 | S106 | 360 minute 1 year Summer I+0% | 360 | 88 | 32.500 | 30.269 | -1.377 |
| 9.000 | S900 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 360 minute 1 year Summer I+0% | 360 | 84 | 32.665 | 31.024 | -0.196 |
| 9.002 | S902 | 360 minute 1 year Summer I+0% | 360 | 84 | 32.640 | 30.784 | -0.201 |
| 11.000 | S1100 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.680 | 31.568 | -0.132 |
| 9.003 | S903 | 360 minute 1 year Summer I+0% | 360 | 95 | 32.630 | 30.270 | -0.225 |
| 1.007 | S107 | 360 minute 1 year Summer I+0% | 360 | 88 | 32.500 | 30.269 | -1.267 |
| 12.000 | S1200 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.635 | 31.853 | -0.147 |
| 13.000 | S1300 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.635 | 31.872 | -0.128 |
| 13.001 | S1301 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.635 | 31.781 | -0.129 |
| 12.001 | S1201 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.635 | 31.439 | -0.196 |
| 12.002 | S1202 | 360 minute 1 year Summer I+0% | 360 | 84 | 32.680 | 31.079 | -0.181 |
| 12.003 | S1203 | 360 minute 1 year Summer I+0% | 360 | 84 | 32.660 | 30.983 | -0.187 |
| 12.004 | S1204 | 360 minute 1 year Summer I+0% | 360 | 84 | 32.660 | 30.843 | -0.192 |
| 14.000 | S1400 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.650 | 31.646 | -0.129 |
| 14.001 | S1401 | 360 minute 1 year Summer I+0% | 360 | 83 | 32.680 | 31.297 | -0.198 |
| 15.000 | S1500 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.680 | 31.666 | -0.134 |
| 15.001 | S1501 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.600 | 31.621 | -0.134 |
| 14.002 | S1402 | 360 minute 1 year Summer I+0% | 360 | 83 | 32.600 | 31.040 | -0.200 |
| 12.005 | 1205 | 360 minute 1 year Summer I+0% | 360 | 89 | 32.600 | 30.527 | -0.178 |
| 1.008 | S108 | 360 minute 1 year Summer I+0% | 360 | 88 | 32.550 | 30.269 | -0.086 |
| 16.000 | S1600 | 360 minute 1 year Summer I+0% | 360 | 82 | 32.545 | 31.444 | -0.206 |
| 16.001 | S1601 | 360 minute 1 year Summer I+0% | 360 | 88 | 32.545 | 30.478 | -0.207 |
| 1.009 | S109 | 360 minute 1 year Summer I+0% | 360 | 88 | 32.500 | 30.268 | 0.238 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.027 | 0.4 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.322 | 57.615 | 0.1 | 5.3 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.616 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.410 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.04 | | 0.007 | 10.686 | 0.6 | 1.9 | OK |
| 9.002 | S902 | 0.000 | 0.03 | | 0.019 | 14.179 | 1.3 | 2.6 | OK |
| 11.000 | S1100 | 0.000 | 0.03 | | 0.002 | 3.083 | 0.5 | 0.6 | OK |
| 9.003 | S903 | 0.000 | 0.04 | | 0.100 | 18.290 | 0.6 | 3.3 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 31.874 | 78.817 | 0.0 | 4.2 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 0.822 | 0.3 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.05 | | 0.003 | 4.727 | 0.6 | 0.9 | OK |
| 13.001 | S1301 | 0.000 | 0.05 | | 0.009 | 7.399 | 0.9 | 1.3 | OK |
| 12.001 | S1201 | 0.000 | 0.04 | | 0.007 | 14.386 | 0.9 | 2.6 | OK |
| 12.002 | S1202 | 0.000 | 0.08 | | 0.025 | 19.729 | 0.7 | 3.6 | OK |
| 12.003 | S1203 | 0.000 | 0.07 | | 0.031 | 19.729 | 0.8 | 3.6 | OK |
| 12.004 | S1204 | 0.000 | 0.05 | | 0.018 | 23.839 | 1.2 | 4.3 | OK |
| 14.000 | S1400 | 0.000 | 0.05 | | 0.003 | 4.932 | 0.6 | 0.9 | OK |

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## Summary Wizard of 360 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.03 | | 0.006 | 8.837 | 0.6 | 1.6 | OK |
| 15.000 | S1500 | 0.000 | 0.03 | | 0.002 | 1.850 | 0.4 | 0.3 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.005 | 4.932 | 1.0 | 0.9 | OK |
| 14.002 | S1402 | 0.000 | 0.03 | | 0.020 | 16.441 | 1.3 | 3.0 | OK |
| 12.005 | 1205 | 0.000 | 0.10 | | 0.072 | 44.802 | 1.4 | 8.1 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 37.738 | 124.710 | 0.2 | 4.7 | OK |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.004 | 6.987 | 0.9 | 1.3 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 0.008 | 7.809 | 1.1 | 1.4 | OK |
| 1.009 | S109 | 0.000 | 0.29 | | 2.105 | 132.461 | 0.9 | 4.9 | SURCHARGED |

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## Summary Wizard of 480 minute 1 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.680 | 31.786 | -0.134 | 0.000 |
| 1.001 | S101 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.680 | 31.712 | -0.138 | 0.000 |
| 2.000 | S200 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.600 | 31.493 | -0.137 | 0.000 |
| 1.002 | S102 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.630 | 31.243 | -0.202 | 0.000 |
| 3.000 | S300 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.550 | 31.854 | -0.146 | 0.000 |
| 1.003 | S103 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.600 | 31.074 | -0.201 | 0.000 |
| 4.000 | S400 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.550 | 31.706 | -0.144 | 0.000 |
| 4.001 | S401 | 480 minute 1 year Summer I+0% | 480 | 93 | 32.550 | 30.617 | -0.133 | 0.000 |
| 1.004 | S104 | 480 minute 1 year Summer I+0% | 480 | 107 | 32.600 | 30.281 | -0.249 | 0.000 |
| 1.005 | S105 | 480 minute 1 year Summer I+0% | 480 | 94 | 32.600 | 30.262 | -0.248 | 0.000 |
| 5.000 | S500 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.550 | 31.859 | -0.141 | 0.000 |
| 5.001 | S501 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.665 | 31.150 | -0.140 | 0.000 |
| 6.000 | S600 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.665 | 30.851 | -0.199 | 0.000 |
| 5.003 | S503 | 480 minute 1 year Summer I+0% | 480 | 92 | 32.680 | 30.653 | -0.202 | 0.000 |
| 7.000 | S700 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.680 | 31.901 | -0.129 | 0.000 |
| 7.001 | S701 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.635 | 31.821 | -0.124 | 0.000 |
| 5.004 | S504 | 480 minute 1 year Summer I+0% | 480 | 107 | 32.635 | 30.287 | -0.258 | 0.000 |

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## Summary Wizard of 480 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.02 | | 0.002 | 2.912 | 0.5 | 0.4 | OK |
| 1.001 | S101 | 0.02 | | 0.004 | 4.480 | 1.0 | 0.6 | OK |
| 2.000 | S200 | 0.02 | | 0.001 | 2.912 | 0.6 | 0.4 | OK |
| 1.002 | S102 | 0.02 | | 0.005 | 8.960 | 0.6 | 1.2 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 1.792 | 0.5 | 0.2 | OK |
| 1.003 | S103 | 0.03 | | 0.016 | 16.351 | 1.1 | 2.2 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 3.360 | 1.0 | 0.5 | OK |
| 4.001 | S401 | 0.03 | | 0.003 | 4.704 | 0.6 | 0.6 | OK |
| 1.004 | S104 | 0.07 | | 0.013 | 23.295 | 0.4 | 3.2 | OK |
| 1.005 | S105 | 0.03 | | 0.357 | 24.415 | 0.4 | 3.2 | OK |
| 5.000 | S500 | 0.01 | | 0.001 | 3.136 | 0.9 | 0.4 | OK |
| 5.001 | S501 | 0.01 | | 0.001 | 3.136 | 0.9 | 0.4 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.447 | 0.1 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.439 | 0.1 | 0.1 | OK |
| 5.002 | S502 | 0.03 | | 0.006 | 11.863 | 0.7 | 1.6 | OK |
| 5.003 | S503 | 0.02 | | 0.015 | 13.431 | 1.0 | 1.8 | OK |
| 7.000 | S700 | 0.05 | | 0.003 | 5.824 | 0.5 | 0.8 | OK |
| 7.001 | S701 | 0.07 | | 0.012 | 8.736 | 0.6 | 1.2 | OK |
| 5.004 | S504 | 0.05 | | 0.066 | 22.166 | 0.5 | 3.0 | OK |

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## Summary Wizard of 480 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.525 | 31.203 | -0.147 |
| 1.006 | S106 | 480 minute 1 year Summer I+0% | 480 | 94 | 32.500 | 30.262 | -1.384 |
| 9.000 | S900 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.665 | 31.022 | -0.198 |
| 9.002 | S902 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.640 | 30.783 | -0.202 |
| 11.000 | S1100 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.680 | 31.566 | -0.134 |
| 9.003 | S903 | 480 minute 1 year Summer I+0% | 480 | 104 | 32.630 | 30.262 | -0.233 |
| 1.007 | S107 | 480 minute 1 year Summer I+0% | 480 | 94 | 32.500 | 30.262 | -1.274 |
| 12.000 | S1200 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.635 | 31.853 | -0.147 |
| 13.000 | S1300 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.635 | 31.869 | -0.131 |
| 13.001 | S1301 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.635 | 31.779 | -0.131 |
| 12.001 | S1201 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.635 | 31.436 | -0.199 |
| 12.002 | S1202 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.680 | 31.074 | -0.186 |
| 12.003 | S1203 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.660 | 30.979 | -0.191 |
| 12.004 | S1204 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.660 | 30.840 | -0.195 |
| 14.000 | S1400 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.650 | 31.644 | -0.131 |
| 14.001 | S1401 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.680 | 31.295 | -0.200 |
| 15.000 | S1500 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.680 | 31.665 | -0.135 |
| 15.001 | S1501 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.600 | 31.619 | -0.136 |
| 14.002 | S1402 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.600 | 31.038 | -0.202 |
| 12.005 | 1205 | 480 minute 1 year Summer I+0% | 480 | 94 | 32.600 | 30.522 | -0.183 |
| 1.008 | S108 | 480 minute 1 year Summer I+0% | 480 | 94 | 32.550 | 30.262 | -0.093 |
| 16.000 | S1600 | 480 minute 1 year Summer I+0% | 480 | 91 | 32.545 | 31.440 | -0.210 |
| 16.001 | S1601 | 480 minute 1 year Summer I+0% | 480 | 94 | 32.545 | 30.475 | -0.210 |
| 1.009 | S109 | 480 minute 1 year Summer I+0% | 480 | 94 | 32.500 | 30.261 | 0.231 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.120 | 0.3 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.295 | 62.929 | 0.1 | 4.6 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.671 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.429 | 0.1 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.03 | | 0.006 | 11.628 | 0.6 | 1.6 | OK |
| 9.002 | S902 | 0.000 | 0.02 | | 0.017 | 15.436 | 1.3 | 2.1 | OK |
| 11.000 | S1100 | 0.000 | 0.03 | | 0.002 | 3.360 | 0.5 | 0.5 | OK |
| 9.003 | S903 | 0.000 | 0.03 | | 0.089 | 19.916 | 0.6 | 2.7 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 30.983 | 85.854 | 0.0 | 3.8 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 0.896 | 0.3 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.04 | | 0.002 | 5.152 | 0.5 | 0.7 | OK |
| 13.001 | S1301 | 0.000 | 0.04 | | 0.008 | 8.064 | 0.8 | 1.1 | OK |
| 12.001 | S1201 | 0.000 | 0.03 | | 0.006 | 15.679 | 0.8 | 2.1 | OK |
| 12.002 | S1202 | 0.000 | 0.07 | | 0.021 | 21.503 | 0.6 | 2.9 | OK |
| 12.003 | S1203 | 0.000 | 0.06 | | 0.027 | 21.503 | 0.8 | 2.9 | OK |
| 12.004 | S1204 | 0.000 | 0.04 | | 0.016 | 25.982 | 1.1 | 3.5 | OK |
| 14.000 | S1400 | 0.000 | 0.04 | | 0.002 | 5.376 | 0.6 | 0.7 | OK |

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## Summary Wizard of 480 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.03 | | 0.006 | 9.632 | 0.6 | 1.3 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.002 | 2.016 | 0.4 | 0.3 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.004 | 5.376 | 1.0 | 0.7 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.018 | 17.919 | 1.3 | 2.4 | OK |
| 12.005 | 1205 | 0.000 | 0.08 | | 0.064 | 48.829 | 1.3 | 6.6 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 36.896 | 136.465 | 0.2 | 4.6 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.003 | 7.616 | 0.9 | 1.0 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.006 | 8.511 | 1.1 | 1.2 | OK |
| 1.009 | S109 | 0.000 | 0.29 | | 2.056 | 144.967 | 0.9 | 4.9 | SURCHARGED |

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## Summary Wizard of 600 minute 1 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.680 | 31.785 | -0.135 | 0.000 |
| 1.001 | S101 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.680 | 31.710 | -0.140 | 0.000 |
| 2.000 | S200 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.600 | 31.491 | -0.139 | 0.000 |
| 1.002 | S102 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.630 | 31.242 | -0.203 | 0.000 |
| 3.000 | S300 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.550 | 31.854 | -0.146 | 0.000 |
| 1.003 | S103 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.600 | 31.073 | -0.202 | 0.000 |
| 4.000 | S400 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.550 | 31.705 | -0.145 | 0.000 |
| 4.001 | S401 | 600 minute 1 year Summer I+0% | 600 | 98 | 32.550 | 30.616 | -0.134 | 0.000 |
| 1.004 | S104 | 600 minute 1 year Summer I+0% | 600 | 108 | 32.600 | 30.276 | -0.254 | 0.000 |
| 1.005 | S105 | 600 minute 1 year Summer I+0% | 600 | 99 | 32.600 | 30.253 | -0.257 | 0.000 |
| 5.000 | S500 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.550 | 31.858 | -0.142 | 0.000 |
| 5.001 | S501 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.665 | 31.148 | -0.142 | 0.000 |
| 6.000 | S600 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.665 | 30.849 | -0.201 | 0.000 |
| 5.003 | S503 | 600 minute 1 year Summer I+0% | 600 | 98 | 32.680 | 30.651 | -0.204 | 0.000 |
| 7.000 | S700 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.680 | 31.899 | -0.131 | 0.000 |
| 7.001 | S701 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.635 | 31.818 | -0.127 | 0.000 |
| 5.004 | S504 | 600 minute 1 year Summer I+0% | 600 | 108 | 32.635 | 30.284 | -0.261 | 0.000 |

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## Summary Wizard of 600 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.02 | | 0.002 | 3.113 | 0.5 | 0.3 | OK |
| 1.001 | S101 | 0.01 | | 0.003 | 4.789 | 1.0 | 0.5 | OK |
| 2.000 | S200 | 0.02 | | 0.001 | 3.113 | 0.6 | 0.3 | OK |
| 1.002 | S102 | 0.02 | | 0.005 | 9.578 | 0.7 | 1.0 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 1.915 | 0.5 | 0.2 | OK |
| 1.003 | S103 | 0.02 | | 0.015 | 17.480 | 1.1 | 1.9 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 3.592 | 0.9 | 0.4 | OK |
| 4.001 | S401 | 0.03 | | 0.002 | 5.028 | 0.6 | 0.5 | OK |
| 1.004 | S104 | 0.06 | | 0.012 | 24.902 | 0.4 | 2.7 | OK |
| 1.005 | S105 | 0.02 | | 0.341 | 26.100 | 0.4 | 2.8 | OK |
| 5.000 | S500 | 0.01 | | 0.000 | 3.352 | 0.8 | 0.4 | OK |
| 5.001 | S501 | 0.01 | | 0.001 | 3.352 | 0.8 | 0.4 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.450 | 0.1 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.437 | 0.1 | 0.1 | OK |
| 5.002 | S502 | 0.03 | | 0.006 | 12.649 | 0.7 | 1.4 | OK |
| 5.003 | S503 | 0.02 | | 0.013 | 14.325 | 1.0 | 1.6 | OK |
| 7.000 | S700 | 0.04 | | 0.002 | 6.226 | 0.5 | 0.7 | OK |
| 7.001 | S701 | 0.06 | | 0.010 | 9.339 | 0.6 | 1.0 | OK |
| 5.004 | S504 | 0.04 | | 0.061 | 23.664 | 0.5 | 2.6 | OK |

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## Summary Wizard of 600 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.525 | 31.202 | -0.148 |
| 1.006 | S106 | 600 minute 1 year Summer I+0% | 600 | 99 | 32.500 | 30.253 | -1.393 |
| 9.000 | S900 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.665 | 31.020 | -0.200 |
| 9.002 | S902 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.640 | 30.779 | -0.206 |
| 11.000 | S1100 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.680 | 31.566 | -0.134 |
| 9.003 | S903 | 600 minute 1 year Summer I+0% | 600 | 110 | 32.630 | 30.253 | -0.242 |
| 1.007 | S107 | 600 minute 1 year Summer I+0% | 600 | 99 | 32.500 | 30.253 | -1.283 |
| 12.000 | S1200 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.635 | 31.852 | -0.148 |
| 13.000 | S1300 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.635 | 31.868 | -0.132 |
| 13.001 | S1301 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.635 | 31.778 | -0.132 |
| 12.001 | S1201 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.635 | 31.435 | -0.200 |
| 12.002 | S1202 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.680 | 31.070 | -0.190 |
| 12.003 | S1203 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.660 | 30.977 | -0.193 |
| 12.004 | S1204 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.660 | 30.838 | -0.197 |
| 14.000 | S1400 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.650 | 31.643 | -0.132 |
| 14.001 | S1401 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.680 | 31.293 | -0.202 |
| 15.000 | S1500 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.680 | 31.663 | -0.137 |
| 15.001 | S1501 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.600 | 31.617 | -0.138 |
| 14.002 | S1402 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.600 | 31.037 | -0.203 |
| 12.005 | 1205 | 600 minute 1 year Summer I+0% | 600 | 99 | 32.600 | 30.518 | -0.187 |
| 1.008 | S108 | 600 minute 1 year Summer I+0% | 600 | 99 | 32.550 | 30.253 | -0.102 |
| 16.000 | S1600 | 600 minute 1 year Summer I+0% | 600 | 97 | 32.545 | 31.438 | -0.212 |
| 16.001 | S1601 | 600 minute 1 year Summer I+0% | 600 | 99 | 32.545 | 30.473 | -0.212 |
| 1.009 | S109 | 600 minute 1 year Summer I+0% | 600 | 99 | 32.500 | 30.252 | 0.222 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.197 | 0.3 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.266 | 67.246 | 0.1 | 4.1 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.718 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.445 | 0.1 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.03 | | 0.006 | 12.417 | 0.6 | 1.4 | OK |
| 9.002 | S902 | 0.000 | 0.02 | | 0.014 | 16.487 | 1.3 | 1.8 | OK |
| 11.000 | S1100 | 0.000 | 0.02 | | 0.002 | 3.592 | 0.5 | 0.4 | OK |
| 9.003 | S903 | 0.000 | 0.03 | | 0.077 | 21.276 | 0.6 | 2.3 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 29.970 | 91.726 | 0.0 | 3.6 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 0.958 | 0.2 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.04 | | 0.002 | 5.507 | 0.5 | 0.6 | OK |
| 13.001 | S1301 | 0.000 | 0.03 | | 0.007 | 8.620 | 0.8 | 0.9 | OK |
| 12.001 | S1201 | 0.000 | 0.03 | | 0.006 | 16.761 | 0.8 | 1.8 | OK |
| 12.002 | S1202 | 0.000 | 0.06 | | 0.019 | 22.987 | 0.6 | 2.5 | OK |
| 12.003 | S1203 | 0.000 | 0.05 | | 0.025 | 22.987 | 0.7 | 2.5 | OK |
| 12.004 | S1204 | 0.000 | 0.04 | | 0.014 | 27.776 | 1.1 | 3.0 | OK |
| 14.000 | S1400 | 0.000 | 0.03 | | 0.002 | 5.747 | 0.5 | 0.6 | OK |

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## Summary Wizard of 600 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.02 | | 0.005 | 10.296 | 0.6 | 1.1 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.001 | 2.155 | 0.4 | 0.2 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.003 | 5.747 | 1.1 | 0.6 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.016 | 19.156 | 1.3 | 2.1 | OK |
| 12.005 | 1205 | 0.000 | 0.07 | | 0.057 | 52.200 | 1.3 | 5.7 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 35.947 | 145.841 | 0.2 | 4.6 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.002 | 8.141 | 0.9 | 0.9 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.005 | 9.099 | 1.0 | 1.0 | OK |
| 1.009 | S109 | 0.000 | 0.29 | | 2.000 | 154.938 | 0.9 | 4.8 | SURCHARGED |

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## Summary Wizard of 720 minute 1 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.680 | 31.783 | -0.137 | 0.000 |
| 1.001 | S101 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.680 | 31.709 | -0.141 | 0.000 |
| 2.000 | S200 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.600 | 31.489 | -0.141 | 0.000 |
| 1.002 | S102 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.630 | 31.239 | -0.206 | 0.000 |
| 3.000 | S300 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.550 | 31.853 | -0.147 | 0.000 |
| 1.003 | S103 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.600 | 31.070 | -0.205 | 0.000 |
| 4.000 | S400 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.550 | 31.705 | -0.145 | 0.000 |
| 4.001 | S401 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.550 | 30.615 | -0.135 | 0.000 |
| 1.004 | S104 | 720 minute 1 year Summer I+0% | 720 | 110 | 32.600 | 30.273 | -0.257 | 0.000 |
| 1.005 | S105 | 720 minute 1 year Summer I+0% | 720 | 105 | 32.600 | 30.244 | -0.266 | 0.000 |
| 5.000 | S500 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.550 | 31.857 | -0.143 | 0.000 |
| 5.001 | S501 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.665 | 31.147 | -0.143 | 0.000 |
| 6.000 | S600 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.665 | 30.848 | -0.202 | 0.000 |
| 5.003 | S503 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.680 | 30.649 | -0.206 | 0.000 |
| 7.000 | S700 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.680 | 31.898 | -0.132 | 0.000 |
| 7.001 | S701 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.635 | 31.817 | -0.128 | 0.000 |
| 5.004 | S504 | 720 minute 1 year Summer I+0% | 720 | 110 | 32.635 | 30.282 | -0.263 | 0.000 |

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## Summary Wizard of 720 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.02 | | 0.001 | 3.288 | 0.5 | 0.3 | OK |
| 1.001 | S101 | 0.01 | | 0.002 | 5.058 | 1.0 | 0.5 | OK |
| 2.000 | S200 | 0.01 | | 0.001 | 3.288 | 0.6 | 0.3 | OK |
| 1.002 | S102 | 0.02 | | 0.004 | 10.115 | 0.6 | 0.9 | OK |
| 3.000 | S300 | 0.00 | | 0.000 | 2.023 | 0.4 | 0.2 | OK |
| 1.003 | S103 | 0.02 | | 0.013 | 18.460 | 1.1 | 1.7 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 3.793 | 0.8 | 0.3 | OK |
| 4.001 | S401 | 0.02 | | 0.002 | 5.310 | 0.6 | 0.5 | OK |
| 1.004 | S104 | 0.05 | | 0.011 | 26.299 | 0.4 | 2.4 | OK |
| 1.005 | S105 | 0.02 | | 0.324 | 27.564 | 0.4 | 2.4 | OK |
| 5.000 | S500 | 0.01 | | 0.000 | 3.540 | 0.7 | 0.3 | OK |
| 5.001 | S501 | 0.01 | | 0.001 | 3.540 | 0.7 | 0.3 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.463 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.450 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.02 | | 0.005 | 13.348 | 0.7 | 1.2 | OK |
| 5.003 | S503 | 0.02 | | 0.011 | 15.118 | 1.0 | 1.4 | OK |
| 7.000 | S700 | 0.04 | | 0.002 | 6.575 | 0.5 | 0.6 | OK |
| 7.001 | S701 | 0.05 | | 0.009 | 9.863 | 0.6 | 0.9 | OK |
| 5.004 | S504 | 0.04 | | 0.057 | 24.980 | 0.5 | 2.3 | OK |

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## Summary Wizard of 720 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.525 | 31.202 | -0.148 |
| 1.006 | S106 | 720 minute 1 year Summer I+0% | 720 | 105 | 32.500 | 30.244 | -1.402 |
| 9.000 | S900 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.665 | 31.019 | -0.201 |
| 9.002 | S902 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.640 | 30.777 | -0.208 |
| 11.000 | S1100 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.680 | 31.565 | -0.135 |
| 9.003 | S903 | 720 minute 1 year Summer I+0% | 720 | 113 | 32.630 | 30.244 | -0.251 |
| 1.007 | S107 | 720 minute 1 year Summer I+0% | 720 | 105 | 32.500 | 30.244 | -1.292 |
| 12.000 | S1200 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.635 | 31.852 | -0.148 |
| 13.000 | S1300 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.635 | 31.867 | -0.133 |
| 13.001 | S1301 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.635 | 31.777 | -0.133 |
| 12.001 | S1201 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.635 | 31.434 | -0.201 |
| 12.002 | S1202 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.680 | 31.068 | -0.192 |
| 12.003 | S1203 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.660 | 30.975 | -0.195 |
| 12.004 | S1204 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.660 | 30.837 | -0.198 |
| 14.000 | S1400 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.650 | 31.642 | -0.133 |
| 14.001 | S1401 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.680 | 31.292 | -0.203 |
| 15.000 | S1500 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.680 | 31.661 | -0.139 |
| 15.001 | S1501 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.600 | 31.616 | -0.139 |
| 14.002 | S1402 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.600 | 31.034 | -0.206 |
| 12.005 | 1205 | 720 minute 1 year Summer I+0% | 720 | 103 | 32.600 | 30.515 | -0.190 |
| 1.008 | S108 | 720 minute 1 year Summer I+0% | 720 | 105 | 32.550 | 30.244 | -0.111 |
| 16.000 | S1600 | 720 minute 1 year Summer I+0% | 720 | 102 | 32.545 | 31.437 | -0.213 |
| 16.001 | S1601 | 720 minute 1 year Summer I+0% | 720 | 103 | 32.545 | 30.471 | -0.214 |
| 1.009 | S109 | 720 minute 1 year Summer I+0% | 720 | 105 | 32.500 | 30.243 | 0.213 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.264 | 0.3 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.242 | 71.072 | 0.1 | 3.7 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.758 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.459 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.03 | | 0.005 | 13.103 | 0.6 | 1.2 | OK |
| 9.002 | S902 | 0.000 | 0.02 | | 0.012 | 17.402 | 1.3 | 1.6 | OK |
| 11.000 | S1100 | 0.000 | 0.02 | | 0.002 | 3.793 | 0.5 | 0.3 | OK |
| 9.003 | S903 | 0.000 | 0.02 | | 0.063 | 22.459 | 0.6 | 2.0 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 28.872 | 96.913 | 0.0 | 3.4 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.011 | 0.2 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.03 | | 0.002 | 5.816 | 0.5 | 0.5 | OK |
| 13.001 | S1301 | 0.000 | 0.03 | | 0.007 | 9.104 | 0.8 | 0.8 | OK |
| 12.001 | S1201 | 0.000 | 0.02 | | 0.005 | 17.702 | 0.8 | 1.6 | OK |
| 12.002 | S1202 | 0.000 | 0.05 | | 0.018 | 24.277 | 0.6 | 2.2 | OK |
| 12.003 | S1203 | 0.000 | 0.04 | | 0.023 | 24.277 | 0.7 | 2.2 | OK |
| 12.004 | S1204 | 0.000 | 0.03 | | 0.013 | 29.334 | 1.0 | 2.7 | OK |
| 14.000 | S1400 | 0.000 | 0.03 | | 0.002 | 6.069 | 0.5 | 0.6 | OK |

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## Summary Wizard of 720 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.02 | | 0.005 | 10.874 | 0.6 | 1.0 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.001 | 2.276 | 0.4 | 0.2 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.002 | 6.069 | 1.1 | 0.6 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.014 | 20.231 | 1.3 | 1.8 | OK |
| 12.005 | 1205 | 0.000 | 0.06 | | 0.052 | 55.128 | 1.2 | 5.0 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 34.924 | 154.065 | 0.2 | 4.5 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.002 | 8.598 | 0.8 | 0.8 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.004 | 9.610 | 0.9 | 0.9 | OK |
| 1.009 | S109 | 0.000 | 0.29 | | 1.940 | 163.671 | 0.9 | 4.8 | SURCHARGED |

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## Summary Wizard of 960 minute 1 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.680 | 31.780 | -0.140 | 0.000 |
| 1.001 | S101 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.680 | 31.708 | -0.142 | 0.000 |
| 2.000 | S200 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.600 | 31.488 | -0.142 | 0.000 |
| 1.002 | S102 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.630 | 31.236 | -0.209 | 0.000 |
| 3.000 | S300 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.550 | 31.853 | -0.147 | 0.000 |
| 1.003 | S103 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.600 | 31.067 | -0.208 | 0.000 |
| 4.000 | S400 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.550 | 31.704 | -0.146 | 0.000 |
| 4.001 | S401 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.550 | 30.613 | -0.137 | 0.000 |
| 1.004 | S104 | 960 minute 1 year Summer I+0% | 960 | 112 | 32.600 | 30.269 | -0.261 | 0.000 |
| 1.005 | S105 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.600 | 30.223 | -0.287 | 0.000 |
| 5.000 | S500 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.550 | 31.856 | -0.144 | 0.000 |
| 5.001 | S501 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.665 | 31.146 | -0.144 | 0.000 |
| 6.000 | S600 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.665 | 30.845 | -0.205 | 0.000 |
| 5.003 | S503 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.680 | 30.645 | -0.210 | 0.000 |
| 7.000 | S700 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.680 | 31.897 | -0.133 | 0.000 |
| 7.001 | S701 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.635 | 31.815 | -0.130 | 0.000 |
| 5.004 | S504 | 960 minute 1 year Summer I+0% | 960 | 112 | 32.635 | 30.279 | -0.266 | 0.000 |

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## Summary Wizard of 960 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.01 | | 0.001 | 3.584 | 0.5 | 0.2 | OK |
| 1.001 | S101 | 0.01 | | 0.001 | 5.514 | 0.8 | 0.4 | OK |
| 2.000 | S200 | 0.01 | | 0.000 | 3.584 | 0.5 | 0.2 | OK |
| 1.002 | S102 | 0.01 | | 0.003 | 11.027 | 0.6 | 0.8 | OK |
| 3.000 | S300 | 0.00 | | 0.000 | 2.205 | 0.3 | 0.2 | OK |
| 1.003 | S103 | 0.02 | | 0.010 | 20.124 | 1.1 | 1.4 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 4.135 | 0.6 | 0.3 | OK |
| 4.001 | S401 | 0.02 | | 0.002 | 5.789 | 0.6 | 0.4 | OK |
| 1.004 | S104 | 0.04 | | 0.010 | 28.670 | 0.4 | 2.0 | OK |
| 1.005 | S105 | 0.02 | | 0.285 | 30.048 | 0.4 | 2.0 | OK |
| 5.000 | S500 | 0.01 | | 0.000 | 3.859 | 0.6 | 0.3 | OK |
| 5.001 | S501 | 0.01 | | 0.000 | 3.859 | 0.6 | 0.3 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.489 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.478 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.02 | | 0.004 | 14.537 | 0.7 | 1.0 | OK |
| 5.003 | S503 | 0.01 | | 0.009 | 16.467 | 1.0 | 1.1 | OK |
| 7.000 | S700 | 0.03 | | 0.002 | 7.168 | 0.5 | 0.5 | OK |
| 7.001 | S701 | 0.04 | | 0.008 | 10.752 | 0.5 | 0.7 | OK |
| 5.004 | S504 | 0.03 | | 0.052 | 27.219 | 0.4 | 1.9 | OK |

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## Summary Wizard of 960 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.525 | 31.202 | -0.148 |
| 1.006 | S106 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.500 | 30.223 | -1.423 |
| 9.000 | S900 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.665 | 31.017 | -0.203 |
| 9.002 | S902 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.640 | 30.774 | -0.211 |
| 11.000 | S1100 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.680 | 31.562 | -0.138 |
| 9.003 | S903 | 960 minute 1 year Summer I+0% | 960 | 115 | 32.630 | 30.226 | -0.269 |
| 1.007 | S107 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.500 | 30.223 | -1.313 |
| 12.000 | S1200 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.635 | 31.852 | -0.148 |
| 13.000 | S1300 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.635 | 31.866 | -0.134 |
| 13.001 | S1301 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.635 | 31.776 | -0.134 |
| 12.001 | S1201 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.635 | 31.431 | -0.204 |
| 12.002 | S1202 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.680 | 31.065 | -0.195 |
| 12.003 | S1203 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.660 | 30.972 | -0.198 |
| 12.004 | S1204 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.660 | 30.835 | -0.200 |
| 14.000 | S1400 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.650 | 31.641 | -0.134 |
| 14.001 | S1401 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.680 | 31.288 | -0.207 |
| 15.000 | S1500 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.680 | 31.659 | -0.141 |
| 15.001 | S1501 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.600 | 31.614 | -0.141 |
| 14.002 | S1402 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.600 | 31.031 | -0.209 |
| 12.005 | 1205 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.600 | 30.512 | -0.193 |
| 1.008 | S108 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.550 | 30.223 | -0.132 |
| 16.000 | S1600 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.545 | 31.434 | -0.216 |
| 16.001 | S1601 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.545 | 30.469 | -0.216 |
| 1.009 | S109 | 960 minute 1 year Summer I+0% | 960 | 109 | 32.500 | 30.222 | 0.192 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.370 | 0.2 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.202 | 77.314 | 0.1 | 3.3 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.790 | 0.1 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.485 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.02 | | 0.005 | 14.232 | 0.6 | 1.0 | OK |
| 9.002 | S902 | 0.000 | 0.01 | | 0.009 | 18.919 | 1.3 | 1.3 | OK |
| 11.000 | S1100 | 0.000 | 0.02 | | 0.001 | 4.135 | 0.5 | 0.3 | OK |
| 9.003 | S903 | 0.000 | 0.02 | | 0.037 | 24.432 | 0.6 | 1.7 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 26.489 | 105.499 | 0.0 | 3.2 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.102 | 0.2 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.03 | | 0.002 | 6.341 | 0.5 | 0.4 | OK |
| 13.001 | S1301 | 0.000 | 0.02 | | 0.006 | 9.925 | 0.8 | 0.7 | OK |
| 12.001 | S1201 | 0.000 | 0.02 | | 0.005 | 19.297 | 0.8 | 1.3 | OK |
| 12.002 | S1202 | 0.000 | 0.04 | | 0.016 | 26.465 | 0.6 | 1.8 | OK |
| 12.003 | S1203 | 0.000 | 0.03 | | 0.021 | 26.465 | 0.7 | 1.8 | OK |
| 12.004 | S1204 | 0.000 | 0.03 | | 0.012 | 31.979 | 1.0 | 2.2 | OK |
| 14.000 | S1400 | 0.000 | 0.02 | | 0.002 | 6.616 | 0.5 | 0.5 | OK |

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## Summary Wizard of 960 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.02 | | 0.004 | 11.854 | 0.6 | 0.8 | OK |
| 15.000 | S1500 | 0.000 | 0.01 | | 0.001 | 2.481 | 0.4 | 0.2 | OK |
| 15.001 | S1501 | 0.000 | 0.01 | | 0.002 | 6.616 | 1.0 | 0.5 | OK |
| 14.002 | S1402 | 0.000 | 0.01 | | 0.010 | 22.054 | 1.3 | 1.5 | OK |
| 12.005 | 1205 | 0.000 | 0.05 | | 0.046 | 60.098 | 1.2 | 4.1 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 32.681 | 167.803 | 0.2 | 4.4 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.001 | 9.373 | 0.6 | 0.6 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.003 | 10.476 | 0.7 | 0.7 | OK |
| 1.009 | S109 | 0.000 | 0.28 | | 1.809 | 178.276 | 0.9 | 4.6 | SURCHARGED |

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## Summary Wizard of 1440 minute 1 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.680 | 31.778 | -0.142 |
| 1.001 | S101 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.680 | 31.706 | -0.144 |
| 2.000 | S200 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.600 | 31.486 | -0.144 |
| 1.002 | S102 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.630 | 31.232 | -0.213 |
| 3.000 | S300 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.550 | 31.852 | -0.148 |
| 1.003 | S103 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.600 | 31.063 | -0.212 |
| 4.000 | S400 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.550 | 31.703 | -0.147 |
| 4.001 | S401 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.550 | 30.610 | -0.140 |
| 1.004 | S104 | 1440 minute 1 year Summer I+0% | 1440 | 117 | 32.600 | 30.265 | -0.265 |
| 1.005 | S105 | 1440 minute 1 year Summer I+0% | 1440 | 113 | 32.600 | 30.187 | -0.323 |
| 5.000 | S500 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.550 | 31.854 | -0.146 |
| 5.001 | S501 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.665 | 31.145 | -0.145 |
| 6.000 | S600 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.665 | 31.851 | -0.149 |
| 6.001 | S601 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.665 | 31.141 | -0.149 |
| 5.002 | S502 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.665 | 30.840 | -0.210 |
| 5.003 | S503 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.680 | 30.642 | -0.213 |
| 7.000 | S700 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.680 | 31.895 | -0.135 |
| 7.001 | S701 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.635 | 31.812 | -0.133 |
| 5.004 | S504 | 1440 minute 1 year Summer I+0% | 1440 | 117 | 32.635 | 30.276 | -0.269 |

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## Summary Wizard of 1440 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.01 | | 0.000 | 4.050 | 0.4 | 0.2 | OK |
| 1.001 | S101 | 0.000 | 0.01 | | 0.000 | 6.230 | 0.6 | 0.3 | OK |
| 2.000 | S200 | 0.000 | 0.01 | | 0.000 | 4.050 | 0.4 | 0.2 | OK |
| 1.002 | S102 | 0.000 | 0.01 | | 0.002 | 12.461 | 0.6 | 0.6 | OK |
| 3.000 | S300 | 0.000 | 0.00 | | 0.000 | 2.492 | 0.3 | 0.1 | OK |
| 1.003 | S103 | 0.000 | 0.01 | | 0.006 | 22.740 | 1.0 | 1.0 | OK |
| 4.000 | S400 | 0.000 | 0.00 | | 0.000 | 4.673 | 0.5 | 0.2 | OK |
| 4.001 | S401 | 0.000 | 0.01 | | 0.001 | 6.542 | 0.6 | 0.3 | OK |
| 1.004 | S104 | 0.000 | 0.03 | | 0.009 | 32.397 | 0.3 | 1.5 | OK |
| 1.005 | S105 | 0.000 | 0.01 | | 0.217 | 33.955 | 0.3 | 1.5 | OK |
| 5.000 | S500 | 0.000 | 0.01 | | 0.000 | 4.361 | 0.4 | 0.2 | OK |
| 5.001 | S501 | 0.000 | 0.01 | | 0.000 | 4.361 | 0.4 | 0.2 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 0.530 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.000 | 0.520 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.000 | 0.01 | | 0.003 | 16.408 | 0.7 | 0.7 | OK |
| 5.003 | S503 | 0.000 | 0.01 | | 0.005 | 18.588 | 0.8 | 0.8 | OK |
| 7.000 | S700 | 0.000 | 0.02 | | 0.002 | 8.100 | 0.5 | 0.4 | OK |
| 7.001 | S701 | 0.000 | 0.03 | | 0.007 | 12.149 | 0.5 | 0.6 | OK |
| 5.004 | S504 | 0.000 | 0.02 | | 0.046 | 30.738 | 0.4 | 1.4 | OK |

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## Summary Wizard of 1440 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.525 | 31.201 | -0.149 |
| 1.006 | S106 | 1440 minute 1 year Summer I+0% | 1440 | 112 | 32.500 | 30.187 | -1.459 |
| 9.000 | S900 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.665 | 31.011 | -0.209 |
| 9.002 | S902 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.640 | 30.771 | -0.214 |
| 11.000 | S1100 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.680 | 31.559 | -0.141 |
| 9.003 | S903 | 1440 minute 1 year Summer I+0% | 1440 | 117 | 32.630 | 30.216 | -0.279 |
| 1.007 | S107 | 1440 minute 1 year Summer I+0% | 1440 | 112 | 32.500 | 30.187 | -1.349 |
| 12.000 | S1200 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.635 | 31.851 | -0.149 |
| 13.000 | S1300 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.635 | 31.864 | -0.136 |
| 13.001 | S1301 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.635 | 31.773 | -0.137 |
| 12.001 | S1201 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.635 | 31.426 | -0.209 |
| 12.002 | S1202 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.680 | 31.061 | -0.199 |
| 12.003 | S1203 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.660 | 30.969 | -0.201 |
| 12.004 | S1204 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.660 | 30.832 | -0.203 |
| 14.000 | S1400 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.650 | 31.638 | -0.137 |
| 14.001 | S1401 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.680 | 31.283 | -0.212 |
| 15.000 | S1500 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.680 | 31.657 | -0.143 |
| 15.001 | S1501 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.600 | 31.612 | -0.143 |
| 14.002 | S1402 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.600 | 31.027 | -0.213 |
| 12.005 | 1205 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.600 | 30.508 | -0.197 |
| 1.008 | S108 | 1440 minute 1 year Summer I+0% | 1440 | 112 | 32.550 | 30.187 | -0.168 |
| 16.000 | S1600 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.545 | 31.432 | -0.218 |
| 16.001 | S1601 | 1440 minute 1 year Summer I+0% | 1440 | 116 | 32.545 | 30.467 | -0.218 |
| 1.009 | S109 | 1440 minute 1 year Summer I+0% | 1440 | 112 | 32.500 | 30.186 | 0.156 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.511 | 0.2 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.131 | 87.338 | 0.1 | 2.9 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.846 | 0.1 | 0.0 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.527 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.02 | | 0.003 | 16.015 | 0.6 | 0.7 | OK |
| 9.002 | S902 | 0.000 | 0.01 | | 0.005 | 21.311 | 1.0 | 1.0 | OK |
| 11.000 | S1100 | 0.000 | 0.01 | | 0.001 | 4.673 | 0.5 | 0.2 | OK |
| 9.003 | S903 | 0.000 | 0.02 | | 0.024 | 27.541 | 0.6 | 1.3 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 22.209 | 119.153 | 0.0 | 2.9 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.210 | 0.1 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.02 | | 0.001 | 7.165 | 0.5 | 0.3 | OK |
| 13.001 | S1301 | 0.000 | 0.02 | | 0.005 | 11.215 | 0.8 | 0.5 | OK |
| 12.001 | S1201 | 0.000 | 0.02 | | 0.003 | 21.771 | 0.8 | 1.0 | OK |
| 12.002 | S1202 | 0.000 | 0.03 | | 0.014 | 29.870 | 0.5 | 1.4 | OK |
| 12.003 | S1203 | 0.000 | 0.03 | | 0.018 | 29.870 | 0.7 | 1.4 | OK |
| 12.004 | S1204 | 0.000 | 0.02 | | 0.010 | 36.100 | 1.0 | 1.6 | OK |
| 14.000 | S1400 | 0.000 | 0.02 | | 0.001 | 7.477 | 0.5 | 0.3 | OK |

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## Summary Wizard of 1440 minute 1 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.01 | | 0.003 | 13.395 | 0.6 | 0.6 | OK |
| 15.000 | S1500 | 0.000 | 0.01 | | 0.000 | 2.804 | 0.3 | 0.1 | OK |
| 15.001 | S1501 | 0.000 | 0.01 | | 0.001 | 7.476 | 0.8 | 0.3 | OK |
| 14.002 | S1402 | 0.000 | 0.01 | | 0.007 | 24.922 | 1.1 | 1.1 | OK |
| 12.005 | 1205 | 0.000 | 0.04 | | 0.039 | 67.875 | 1.1 | 3.1 | OK |
| 1.008 | S108 | 0.000 | 0.04 | | 28.664 | 189.521 | 0.2 | 4.2 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.001 | 10.592 | 0.5 | 0.5 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.001 | 11.838 | 0.5 | 0.5 | OK |
| 1.009 | S109 | 0.000 | 0.26 | | 1.574 | 201.356 | 0.9 | 4.4 | SURCHARGED |

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## Summary Wizard of 15 minute 2 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 15 minute 2 year Summer I+0% | 15 | 29 | 32.680 | 31.809 | -0.111 | 0.000 |
| 1.001 | S101 | 15 minute 2 year Summer I+0% | 15 | 29 | 32.680 | 31.733 | -0.117 | 0.000 |
| 2.000 | S200 | 15 minute 2 year Summer I+0% | 15 | 31 | 32.600 | 31.514 | -0.116 | 0.000 |
| 1.002 | S102 | 15 minute 2 year Summer I+0% | 15 | 33 | 32.630 | 31.278 | -0.167 | 0.000 |
| 3.000 | S300 | 15 minute 2 year Summer I+0% | 15 | 28 | 32.550 | 31.869 | -0.131 | 0.000 |
| 1.003 | S103 | 15 minute 2 year Summer I+0% | 15 | 34 | 32.600 | 31.109 | -0.166 | 0.000 |
| 4.000 | S400 | 15 minute 2 year Summer I+0% | 15 | 29 | 32.550 | 31.724 | -0.126 | 0.000 |
| 4.001 | S401 | 15 minute 2 year Summer I+0% | 15 | 49 | 32.550 | 30.644 | -0.106 | 0.000 |
| 1.004 | S104 | 15 minute 2 year Summer I+0% | 15 | 70 | 32.600 | 30.363 | -0.167 | 0.000 |
| 1.005 | S105 | 15 minute 2 year Summer I+0% | 15 | 112 | 32.600 | 30.187 | -0.323 | 0.000 |
| 5.000 | S500 | 15 minute 2 year Summer I+0% | 15 | 28 | 32.550 | 31.880 | -0.120 | 0.000 |
| 5.001 | S501 | 15 minute 2 year Summer I+0% | 15 | 33 | 32.665 | 31.170 | -0.120 | 0.000 |
| 6.000 | S600 | 15 minute 2 year Summer I+0% | 15 | 29 | 32.665 | 31.858 | -0.142 | 0.000 |
| 6.001 | S601 | 15 minute 2 year Summer I+0% | 15 | 33 | 32.665 | 31.149 | -0.141 | 0.000 |
| 5.002 | S502 | 15 minute 2 year Summer I+0% | 15 | 34 | 32.665 | 30.890 | -0.160 | 0.000 |
| 5.003 | S503 | 15 minute 2 year Summer I+0% | 15 | 49 | 32.680 | 30.685 | -0.170 | 0.000 |
| 7.000 | S700 | 15 minute 2 year Summer I+0% | 15 | 28 | 32.680 | 31.937 | -0.093 | 0.000 |
| 7.001 | S701 | 15 minute 2 year Summer I+0% | 15 | 28 | 32.635 | 31.864 | -0.081 | 0.000 |
| 5.004 | S504 | 15 minute 2 year Summer I+0% | 15 | 71 | 32.635 | 30.356 | -0.189 | 0.000 |

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Summary Wizard of 15 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.16 | | 0.005 | 1.129 | 0.7 | 2.6 | OK |
| 1.001 | S101 | 0.11 | | 0.014 | 1.736 | 1.3 | 3.7 | OK |
| 2.000 | S200 | 0.11 | | 0.005 | 1.129 | 0.9 | 2.6 | OK |
| 1.002 | S102 | 0.15 | | 0.016 | 3.473 | 0.9 | 7.5 | OK |
| 3.000 | S300 | 0.04 | | 0.002 | 0.695 | 1.2 | 1.6 | OK |
| 1.003 | S103 | 0.15 | | 0.045 | 6.337 | 1.6 | 13.2 | OK |
| 4.000 | S400 | 0.06 | | 0.003 | 1.303 | 1.7 | 3.0 | OK |
| 4.001 | S401 | 0.19 | | 0.008 | 1.823 | 0.9 | 4.0 | OK |
| 1.004 | S104 | 0.40 | | 0.048 | 9.029 | 0.6 | 18.7 | OK |
| 1.005 | S105 | 0.17 | | 0.218 | 9.322 | 0.5 | 19.7 | OK |
| 5.000 | S500 | 0.09 | | 0.004 | 1.216 | 1.1 | 2.8 | OK |
| 5.001 | S501 | 0.09 | | 0.008 | 1.216 | 1.1 | 2.8 | OK |
| 6.000 | S600 | 0.01 | | 0.000 | 0.174 | 0.9 | 0.4 | OK |
| 6.001 | S601 | 0.01 | | 0.001 | 0.174 | 0.9 | 0.4 | OK |
| 5.002 | S502 | 0.18 | | 0.017 | 4.601 | 1.0 | 9.4 | OK |
| 5.003 | S503 | 0.13 | | 0.041 | 5.209 | 1.4 | 10.5 | OK |
| 7.000 | S700 | 0.30 | | 0.008 | 2.257 | 0.9 | 5.2 | OK |
| 7.001 | S701 | 0.43 | | 0.036 | 3.386 | 0.9 | 7.3 | OK |
| 5.004 | S504 | 0.29 | | 0.189 | 8.595 | 0.8 | 17.7 | OK |

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## Summary Wizard of 15 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 15 minute 2 year Summer I+0% | 15 | 33 | 32.525 | 31.216 | -0.134 | 0.000 |
| 1.006 | S106 | 15 minute 2 year Summer I+0% | 15 | 115 | 32.500 | 30.184 | -1.462 | 0.000 |
| 9.000 | S900 | 15 minute 2 year Summer I+0% | 15 | 29 | 32.665 | 31.862 | -0.138 | 0.000 |
| 10.000 | S901 | 15 minute 2 year Summer I+0% | 15 | 29 | 32.665 | 31.857 | -0.143 | 0.000 |
| 9.001 | S901 | 15 minute 2 year Summer I+0% | 15 | 36 | 32.665 | 31.061 | -0.159 | 0.000 |
| 9.002 | S902 | 15 minute 2 year Summer I+0% | 15 | 36 | 32.640 | 30.812 | -0.173 | 0.000 |
| 11.000 | S1100 | 15 minute 2 year Summer I+0% | 15 | 30 | 32.680 | 31.593 | -0.107 | 0.000 |
| 9.003 | S903 | 15 minute 2 year Summer I+0% | 15 | 90 | 32.630 | 30.283 | -0.212 | 0.000 |
| 1.007 | S107 | 15 minute 2 year Summer I+0% | 15 | 115 | 32.500 | 30.185 | -1.351 | 0.000 |
| 12.000 | S1200 | 15 minute 2 year Summer I+0% | 15 | 29 | 32.635 | 31.866 | -0.134 | 0.000 |
| 13.000 | S1300 | 15 minute 2 year Summer I+0% | 15 | 28 | 32.635 | 31.903 | -0.097 | 0.000 |
| 13.001 | S1301 | 15 minute 2 year Summer I+0% | 15 | 29 | 32.635 | 31.810 | -0.100 | 0.000 |
| 12.001 | S1201 | 15 minute 2 year Summer I+0% | 15 | 32 | 32.635 | 31.477 | -0.158 | 0.000 |
| 12.002 | S1202 | 15 minute 2 year Summer I+0% | 15 | 35 | 32.680 | 31.134 | -0.126 | 0.000 |
| 12.003 | S1203 | 15 minute 2 year Summer I+0% | 15 | 35 | 32.660 | 31.034 | -0.136 | 0.000 |
| 12.004 | S1204 | 15 minute 2 year Summer I+0% | 15 | 36 | 32.660 | 30.887 | -0.148 | 0.000 |
| 14.000 | S1400 | 15 minute 2 year Summer I+0% | 15 | 29 | 32.650 | 31.676 | -0.099 | 0.000 |
| 14.001 | S1401 | 15 minute 2 year Summer I+0% | 15 | 34 | 32.680 | 31.331 | -0.164 | 0.000 |
| 15.000 | S1500 | 15 minute 2 year Summer I+0% | 15 | 29 | 32.680 | 31.687 | -0.113 | 0.000 |
| 15.001 | S1501 | 15 minute 2 year Summer I+0% | 15 | 31 | 32.600 | 31.639 | -0.116 | 0.000 |
| 14.002 | S1402 | 15 minute 2 year Summer I+0% | 15 | 34 | 32.600 | 31.071 | -0.169 | 0.000 |
| 12.005 | 1205 | 15 minute 2 year Summer I+0% | 15 | 52 | 32.600 | 30.587 | -0.118 | 0.000 |
| 1.008 | S108 | 15 minute 2 year Summer I+0% | 15 | 115 | 32.550 | 30.185 | -0.170 | 0.000 |
| 16.000 | S1600 | 15 minute 2 year Summer I+0% | 15 | 31 | 32.545 | 31.471 | -0.179 | 0.000 |
| 16.001 | S1601 | 15 minute 2 year Summer I+0% | 15 | 52 | 32.545 | 30.505 | -0.180 | 0.000 |
| 1.009 | S109 | 15 minute 2 year Summer I+0% | 15 | 115 | 32.500 | 30.183 | 0.153 | 0.000 |

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.03 | | 0.012 | 0.434 | 1.0 | 1.0 | OK |
| 1.006 | S106 | 0.01 | | 0.126 | 17.111 | 0.3 | 34.3 | OK |
| 9.000 | S900 | 0.02 | | 0.001 | 0.261 | 1.0 | 0.6 | OK |
| 10.000 | S901 | 0.01 | | 0.000 | 0.174 | 0.9 | 0.4 | OK |
| 9.001 | S901 | 0.19 | | 0.018 | 4.514 | 0.9 | 8.8 | OK |
| 9.002 | S902 | 0.12 | | 0.046 | 5.990 | 1.7 | 11.6 | OK |
| 11.000 | S1100 | 0.18 | | 0.006 | 1.302 | 0.7 | 3.0 | OK |
| 9.003 | S903 | 0.18 | | 0.119 | 7.726 | 0.9 | 15.3 | OK |
| 1.007 | S107 | 0.00 | | 21.961 | 15.801 | 0.1 | 20.3 | OK |
| 12.000 | S1200 | 0.02 | | 0.002 | 0.347 | 0.9 | 0.8 | OK |
| 13.000 | S1300 | 0.27 | | 0.008 | 1.997 | 0.8 | 4.6 | OK |
| 13.001 | S1301 | 0.24 | | 0.026 | 3.125 | 1.3 | 6.7 | OK |
| 12.001 | S1201 | 0.19 | | 0.018 | 6.077 | 1.3 | 12.5 | OK |
| 12.002 | S1202 | 0.40 | | 0.060 | 8.333 | 1.0 | 16.8 | OK |
| 12.003 | S1203 | 0.32 | | 0.078 | 8.334 | 1.2 | 16.7 | OK |
| 12.004 | S1204 | 0.25 | | 0.044 | 10.070 | 1.7 | 20.1 | OK |
| 14.000 | S1400 | 0.25 | | 0.007 | 2.083 | 0.9 | 4.7 | OK |

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Summary Wizard of 15 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.16 | | 0.017 | 3.732 | 0.9 | 7.8 | OK |
| 15.000 | S1500 | 0.13 | | 0.005 | 0.781 | 0.5 | 1.8 | OK |
| 15.001 | S1501 | 0.12 | | 0.013 | 2.084 | 1.4 | 4.3 | OK |
| 14.002 | S1402 | 0.14 | | 0.050 | 6.945 | 1.9 | 14.2 | OK |
| 12.005 | 1205 | 0.46 | | 0.177 | 18.924 | 2.1 | 38.0 | OK |
| 1.008 | S108 | 0.05 | | 28.438 | 11.400 | 0.0 | 4.4 | OK |
| 16.000 | S1600 | 0.09 | | 0.012 | 2.951 | 1.2 | 6.7 | OK |
| 16.001 | S1601 | 0.09 | | 0.025 | 3.298 | 1.3 | 7.3 | OK |
| 1.009 | S109 | 0.26 | | 1.561 | 13.362 | 0.9 | 4.4 | SURCHARGED |

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## Summary Wizard of 30 minute 2 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 30 minute 2 year Summer I+0% | 30 | 33 | 32.680 | 31.807 | -0.113 | 0.000 |
| 1.001 | S101 | 30 minute 2 year Summer I+0% | 30 | 34 | 32.680 | 31.731 | -0.119 | 0.000 |
| 2.000 | S200 | 30 minute 2 year Summer I+0% | 30 | 35 | 32.600 | 31.512 | -0.118 | 0.000 |
| 1.002 | S102 | 30 minute 2 year Summer I+0% | 30 | 38 | 32.630 | 31.275 | -0.170 | 0.000 |
| 3.000 | S300 | 30 minute 2 year Summer I+0% | 30 | 32 | 32.550 | 31.868 | -0.132 | 0.000 |
| 1.003 | S103 | 30 minute 2 year Summer I+0% | 30 | 38 | 32.600 | 31.106 | -0.169 | 0.000 |
| 4.000 | S400 | 30 minute 2 year Summer I+0% | 30 | 33 | 32.550 | 31.722 | -0.128 | 0.000 |
| 4.001 | S401 | 30 minute 2 year Summer I+0% | 30 | 53 | 32.550 | 30.642 | -0.108 | 0.000 |
| 1.004 | S104 | 30 minute 2 year Summer I+0% | 30 | 74 | 32.600 | 30.357 | -0.173 | 0.000 |
| 1.005 | S105 | 30 minute 2 year Summer I+0% | 30 | 104 | 32.600 | 30.246 | -0.264 | 0.000 |
| 5.000 | S500 | 30 minute 2 year Summer I+0% | 30 | 32 | 32.550 | 31.878 | -0.122 | 0.000 |
| 5.001 | S501 | 30 minute 2 year Summer I+0% | 30 | 37 | 32.665 | 31.169 | -0.121 | 0.000 |
| 6.000 | S600 | 30 minute 2 year Summer I+0% | 30 | 33 | 32.665 | 31.857 | -0.143 | 0.000 |
| 6.001 | S601 | 30 minute 2 year Summer I+0% | 30 | 37 | 32.665 | 31.148 | -0.142 | 0.000 |
| 5.002 | S502 | 30 minute 2 year Summer I+0% | 30 | 39 | 32.665 | 30.887 | -0.163 | 0.000 |
| 5.003 | S503 | 30 minute 2 year Summer I+0% | 30 | 53 | 32.680 | 30.683 | -0.172 | 0.000 |
| 7.000 | S700 | 30 minute 2 year Summer I+0% | 30 | 32 | 32.680 | 31.934 | -0.096 | 0.000 |
| 7.001 | S701 | 30 minute 2 year Summer I+0% | 30 | 34 | 32.635 | 31.860 | -0.085 | 0.000 |
| 5.004 | S504 | 30 minute 2 year Summer I+0% | 30 | 79 | 32.635 | 30.351 | -0.194 | 0.000 |

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## Summary Wizard of 30 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.14 | | 0.005 | 1.486 | 0.7 | 2.4 | OK |
| 1.001 | S101 | 0.10 | | 0.014 | 2.286 | 1.3 | 3.5 | OK |
| 2.000 | S200 | 0.10 | | 0.004 | 1.486 | 0.8 | 2.4 | OK |
| 1.002 | S102 | 0.14 | | 0.015 | 4.571 | 0.9 | 6.9 | OK |
| 3.000 | S300 | 0.04 | | 0.002 | 0.914 | 1.2 | 1.4 | OK |
| 1.003 | S103 | 0.14 | | 0.042 | 8.343 | 1.6 | 12.3 | OK |
| 4.000 | S400 | 0.05 | | 0.003 | 1.714 | 1.7 | 2.7 | OK |
| 4.001 | S401 | 0.17 | | 0.008 | 2.400 | 0.9 | 3.7 | OK |
| 1.004 | S104 | 0.37 | | 0.044 | 11.885 | 0.6 | 17.5 | OK |
| 1.005 | S105 | 0.16 | | 0.329 | 12.179 | 0.5 | 18.2 | OK |
| 5.000 | S500 | 0.08 | | 0.004 | 1.600 | 1.1 | 2.5 | OK |
| 5.001 | S501 | 0.08 | | 0.007 | 1.600 | 1.1 | 2.5 | OK |
| 6.000 | S600 | 0.01 | | 0.000 | 0.229 | 0.8 | 0.4 | OK |
| 6.001 | S601 | 0.01 | | 0.001 | 0.229 | 0.8 | 0.4 | OK |
| 5.002 | S502 | 0.17 | | 0.016 | 6.057 | 1.0 | 8.8 | OK |
| 5.003 | S503 | 0.13 | | 0.040 | 6.857 | 1.4 | 9.8 | OK |
| 7.000 | S700 | 0.28 | | 0.008 | 2.971 | 0.8 | 4.7 | OK |
| 7.001 | S701 | 0.39 | | 0.034 | 4.457 | 0.9 | 6.8 | OK |
| 5.004 | S504 | 0.27 | | 0.179 | 11.314 | 0.7 | 16.6 | OK |

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## Summary Wizard of 30 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 30 minute 2 year Summer I+0% | 30 | 37 | 32.525 | 31.215 | -0.135 | 0.000 |
| 1.006 | S106 | 30 minute 2 year Summer I+0% | 30 | 104 | 32.500 | 30.246 | -1.400 | 0.000 |
| 9.000 | S900 | 30 minute 2 year Summer I+0% | 30 | 33 | 32.665 | 31.861 | -0.139 | 0.000 |
| 10.000 | S901 | 30 minute 2 year Summer I+0% | 30 | 33 | 32.665 | 31.856 | -0.144 | 0.000 |
| 9.001 | S901 | 30 minute 2 year Summer I+0% | 30 | 39 | 32.665 | 31.058 | -0.162 | 0.000 |
| 9.002 | S902 | 30 minute 2 year Summer I+0% | 30 | 39 | 32.640 | 30.810 | -0.175 | 0.000 |
| 11.000 | S1100 | 30 minute 2 year Summer I+0% | 30 | 34 | 32.680 | 31.591 | -0.109 | 0.000 |
| 9.003 | S903 | 30 minute 2 year Summer I+0% | 30 | 92 | 32.630 | 30.279 | -0.216 | 0.000 |
| 1.007 | S107 | 30 minute 2 year Summer I+0% | 30 | 104 | 32.500 | 30.247 | -1.289 | 0.000 |
| 12.000 | S1200 | 30 minute 2 year Summer I+0% | 30 | 33 | 32.635 | 31.865 | -0.135 | 0.000 |
| 13.000 | S1300 | 30 minute 2 year Summer I+0% | 30 | 32 | 32.635 | 31.900 | -0.100 | 0.000 |
| 13.001 | S1301 | 30 minute 2 year Summer I+0% | 30 | 34 | 32.635 | 31.808 | -0.102 | 0.000 |
| 12.001 | S1201 | 30 minute 2 year Summer I+0% | 30 | 36 | 32.635 | 31.474 | -0.161 | 0.000 |
| 12.002 | S1202 | 30 minute 2 year Summer I+0% | 30 | 39 | 32.680 | 31.130 | -0.130 | 0.000 |
| 12.003 | S1203 | 30 minute 2 year Summer I+0% | 30 | 39 | 32.660 | 31.030 | -0.140 | 0.000 |
| 12.004 | S1204 | 30 minute 2 year Summer I+0% | 30 | 39 | 32.660 | 30.884 | -0.151 | 0.000 |
| 14.000 | S1400 | 30 minute 2 year Summer I+0% | 30 | 33 | 32.650 | 31.673 | -0.102 | 0.000 |
| 14.001 | S1401 | 30 minute 2 year Summer I+0% | 30 | 38 | 32.680 | 31.328 | -0.167 | 0.000 |
| 15.000 | S1500 | 30 minute 2 year Summer I+0% | 30 | 33 | 32.680 | 31.685 | -0.115 | 0.000 |
| 15.001 | S1501 | 30 minute 2 year Summer I+0% | 30 | 35 | 32.600 | 31.638 | -0.117 | 0.000 |
| 14.002 | S1402 | 30 minute 2 year Summer I+0% | 30 | 38 | 32.600 | 31.069 | -0.171 | 0.000 |
| 12.005 | 1205 | 30 minute 2 year Summer I+0% | 30 | 55 | 32.600 | 30.583 | -0.122 | 0.000 |
| 1.008 | S108 | 30 minute 2 year Summer I+0% | 30 | 104 | 32.550 | 30.247 | -0.108 | 0.000 |
| 16.000 | S1600 | 30 minute 2 year Summer I+0% | 30 | 35 | 32.545 | 31.469 | -0.181 | 0.000 |
| 16.001 | S1601 | 30 minute 2 year Summer I+0% | 30 | 55 | 32.545 | 30.502 | -0.183 | 0.000 |
| 1.009 | S109 | 30 minute 2 year Summer I+0% | 30 | 104 | 32.500 | 30.245 | 0.215 | 0.000 |

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.02 | | 0.012 | 0.571 | 1.1 | 0.9 | OK |
| 1.006 | S106 | 0.01 | | 0.248 | 20.198 | 0.2 | 26.2 | OK |
| 9.000 | S900 | 0.01 | | 0.001 | 0.343 | 1.0 | 0.5 | OK |
| 10.000 | S901 | 0.01 | | 0.000 | 0.229 | 0.8 | 0.4 | OK |
| 9.001 | S901 | 0.17 | | 0.017 | 5.942 | 0.9 | 8.3 | OK |
| 9.002 | S902 | 0.11 | | 0.044 | 7.885 | 1.7 | 11.0 | OK |
| 11.000 | S1100 | 0.16 | | 0.006 | 1.714 | 0.7 | 2.7 | OK |
| 9.003 | S903 | 0.17 | | 0.113 | 10.144 | 0.9 | 14.4 | OK |
| 1.007 | S107 | 0.00 | | 29.203 | 17.237 | 0.1 | 15.7 | OK |
| 12.000 | S1200 | 0.02 | | 0.002 | 0.457 | 0.9 | 0.7 | OK |
| 13.000 | S1300 | 0.24 | | 0.007 | 2.629 | 0.8 | 4.2 | OK |
| 13.001 | S1301 | 0.22 | | 0.024 | 4.114 | 1.3 | 6.2 | OK |
| 12.001 | S1201 | 0.18 | | 0.017 | 8.000 | 1.3 | 11.7 | OK |
| 12.002 | S1202 | 0.37 | | 0.058 | 10.971 | 1.0 | 15.8 | OK |
| 12.003 | S1203 | 0.30 | | 0.075 | 10.971 | 1.2 | 15.7 | OK |
| 12.004 | S1204 | 0.23 | | 0.043 | 13.256 | 1.7 | 18.8 | OK |
| 14.000 | S1400 | 0.23 | | 0.007 | 2.743 | 0.9 | 4.3 | OK |

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Summary Wizard of 30 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.15 | | 0.016 | 4.914 | 0.9 | 7.3 | OK |
| 15.000 | S1500 | 0.12 | | 0.005 | 1.029 | 0.5 | 1.6 | OK |
| 15.001 | S1501 | 0.11 | | 0.012 | 2.743 | 1.4 | 4.0 | OK |
| 14.002 | S1402 | 0.13 | | 0.048 | 9.142 | 1.8 | 13.3 | OK |
| 12.005 | 1205 | 0.42 | | 0.168 | 24.913 | 2.0 | 35.4 | OK |
| 1.008 | S108 | 0.05 | | 35.238 | 10.863 | 0.1 | 4.7 | OK |
| 16.000 | S1600 | 0.09 | | 0.011 | 3.885 | 1.1 | 6.1 | OK |
| 16.001 | S1601 | 0.08 | | 0.023 | 4.342 | 1.3 | 6.8 | OK |
| 1.009 | S109 | 0.29 | | 1.958 | 13.387 | 0.9 | 4.8 | SURCHARGED |

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## Summary Wizard of 60 minute 2 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 60 minute 2 year Summer I+0% | 60 | 40 | 32.680 | 31.803 | -0.117 | 0.000 |
| 1.001 | S101 | 60 minute 2 year Summer I+0% | 60 | 41 | 32.680 | 31.727 | -0.123 | 0.000 |
| 2.000 | S200 | 60 minute 2 year Summer I+0% | 60 | 42 | 32.600 | 31.508 | -0.122 | 0.000 |
| 1.002 | S102 | 60 minute 2 year Summer I+0% | 60 | 45 | 32.630 | 31.269 | -0.176 | 0.000 |
| 3.000 | S300 | 60 minute 2 year Summer I+0% | 60 | 39 | 32.550 | 31.866 | -0.134 | 0.000 |
| 1.003 | S103 | 60 minute 2 year Summer I+0% | 60 | 44 | 32.600 | 31.100 | -0.175 | 0.000 |
| 4.000 | S400 | 60 minute 2 year Summer I+0% | 60 | 40 | 32.550 | 31.719 | -0.131 | 0.000 |
| 4.001 | S401 | 60 minute 2 year Summer I+0% | 60 | 59 | 32.550 | 30.636 | -0.114 | 0.000 |
| 1.004 | S104 | 60 minute 2 year Summer I+0% | 60 | 87 | 32.600 | 30.340 | -0.190 | 0.000 |
| 1.005 | S105 | 60 minute 2 year Summer I+0% | 60 | 84 | 32.600 | 30.302 | -0.208 | 0.000 |
| 5.000 | S500 | 60 minute 2 year Summer I+0% | 60 | 39 | 32.550 | 31.874 | -0.126 | 0.000 |
| 5.001 | S501 | 60 minute 2 year Summer I+0% | 60 | 44 | 32.665 | 31.164 | -0.126 | 0.000 |
| 6.000 | S600 | 60 minute 2 year Summer I+0% | 60 | 40 | 32.665 | 31.855 | -0.145 | 0.000 |
| 6.001 | S601 | 60 minute 2 year Summer I+0% | 60 | 44 | 32.665 | 31.146 | -0.144 | 0.000 |
| 5.002 | S502 | 60 minute 2 year Summer I+0% | 60 | 43 | 32.665 | 30.879 | -0.171 | 0.000 |
| 5.003 | S503 | 60 minute 2 year Summer I+0% | 60 | 56 | 32.680 | 30.677 | -0.178 | 0.000 |
| 7.000 | S700 | 60 minute 2 year Summer I+0% | 60 | 39 | 32.680 | 31.926 | -0.104 | 0.000 |
| 7.001 | S701 | 60 minute 2 year Summer I+0% | 60 | 41 | 32.635 | 31.851 | -0.094 | 0.000 |
| 5.004 | S504 | 60 minute 2 year Summer I+0% | 60 | 87 | 32.635 | 30.338 | -0.207 | 0.000 |

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Summary Wizard of 60 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.11 | | 0.004 | 1.886 | 0.6 | 1.8 | OK |
| 1.001 | S101 | 0.08 | | 0.012 | 2.902 | 1.2 | 2.7 | OK |
| 2.000 | S200 | 0.08 | | 0.004 | 1.886 | 0.8 | 1.8 | OK |
| 1.002 | S102 | 0.11 | | 0.013 | 5.804 | 0.8 | 5.3 | OK |
| 3.000 | S300 | 0.03 | | 0.002 | 1.161 | 1.2 | 1.1 | OK |
| 1.003 | S103 | 0.11 | | 0.037 | 10.591 | 1.5 | 9.6 | OK |
| 4.000 | S400 | 0.04 | | 0.002 | 2.176 | 1.5 | 2.1 | OK |
| 4.001 | S401 | 0.13 | | 0.007 | 3.047 | 0.9 | 2.8 | OK |
| 1.004 | S104 | 0.29 | | 0.033 | 15.088 | 0.6 | 13.7 | OK |
| 1.005 | S105 | 0.13 | | 0.461 | 15.503 | 0.5 | 14.2 | OK |
| 5.000 | S500 | 0.06 | | 0.003 | 2.031 | 1.1 | 1.9 | OK |
| 5.001 | S501 | 0.06 | | 0.006 | 2.031 | 1.0 | 1.9 | OK |
| 6.000 | S600 | 0.01 | | 0.000 | 0.290 | 0.6 | 0.3 | OK |
| 6.001 | S601 | 0.01 | | 0.000 | 0.290 | 0.6 | 0.3 | OK |
| 5.002 | S502 | 0.13 | | 0.014 | 7.690 | 0.9 | 6.9 | OK |
| 5.003 | S503 | 0.10 | | 0.035 | 8.705 | 1.3 | 7.8 | OK |
| 7.000 | S700 | 0.21 | | 0.007 | 3.772 | 0.8 | 3.6 | OK |
| 7.001 | S701 | 0.30 | | 0.029 | 5.658 | 0.9 | 5.2 | OK |
| 5.004 | S504 | 0.21 | | 0.156 | 14.364 | 0.7 | 12.9 | OK |

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## Summary Wizard of 60 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 60 minute 2 year Summer I+0% | 60 | 44 | 32.525 | 31.212 | -0.138 | 0.000 |
| 1.006 | S106 | 60 minute 2 year Summer I+0% | 60 | 84 | 32.500 | 30.302 | -1.344 | 0.000 |
| 9.000 | S900 | 60 minute 2 year Summer I+0% | 60 | 40 | 32.665 | 31.858 | -0.142 | 0.000 |
| 10.000 | S901 | 60 minute 2 year Summer I+0% | 60 | 40 | 32.665 | 31.855 | -0.145 | 0.000 |
| 9.001 | S901 | 60 minute 2 year Summer I+0% | 60 | 43 | 32.665 | 31.051 | -0.169 | 0.000 |
| 9.002 | S902 | 60 minute 2 year Summer I+0% | 60 | 43 | 32.640 | 30.805 | -0.180 | 0.000 |
| 11.000 | S1100 | 60 minute 2 year Summer I+0% | 60 | 41 | 32.680 | 31.585 | -0.115 | 0.000 |
| 9.003 | S903 | 60 minute 2 year Summer I+0% | 60 | 84 | 32.630 | 30.302 | -0.193 | 0.000 |
| 1.007 | S107 | 60 minute 2 year Summer I+0% | 60 | 84 | 32.500 | 30.302 | -1.234 | 0.000 |
| 12.000 | S1200 | 60 minute 2 year Summer I+0% | 60 | 40 | 32.635 | 31.862 | -0.138 | 0.000 |
| 13.000 | S1300 | 60 minute 2 year Summer I+0% | 60 | 39 | 32.635 | 31.893 | -0.107 | 0.000 |
| 13.001 | S1301 | 60 minute 2 year Summer I+0% | 60 | 41 | 32.635 | 31.802 | -0.108 | 0.000 |
| 12.001 | S1201 | 60 minute 2 year Summer I+0% | 60 | 42 | 32.635 | 31.466 | -0.169 | 0.000 |
| 12.002 | S1202 | 60 minute 2 year Summer I+0% | 60 | 43 | 32.680 | 31.118 | -0.142 | 0.000 |
| 12.003 | S1203 | 60 minute 2 year Summer I+0% | 60 | 43 | 32.660 | 31.020 | -0.150 | 0.000 |
| 12.004 | S1204 | 60 minute 2 year Summer I+0% | 60 | 43 | 32.660 | 30.876 | -0.159 | 0.000 |
| 14.000 | S1400 | 60 minute 2 year Summer I+0% | 60 | 40 | 32.650 | 31.667 | -0.108 | 0.000 |
| 14.001 | S1401 | 60 minute 2 year Summer I+0% | 60 | 44 | 32.680 | 31.321 | -0.174 | 0.000 |
| 15.000 | S1500 | 60 minute 2 year Summer I+0% | 60 | 40 | 32.680 | 31.681 | -0.119 | 0.000 |
| 15.001 | S1501 | 60 minute 2 year Summer I+0% | 60 | 41 | 32.600 | 31.635 | -0.120 | 0.000 |
| 14.002 | S1402 | 60 minute 2 year Summer I+0% | 60 | 44 | 32.600 | 31.063 | -0.177 | 0.000 |
| 12.005 | 1205 | 60 minute 2 year Summer I+0% | 60 | 58 | 32.600 | 30.570 | -0.135 | 0.000 |
| 1.008 | S108 | 60 minute 2 year Summer I+0% | 60 | 84 | 32.550 | 30.302 | -0.053 | 0.000 |
| 16.000 | S1600 | 60 minute 2 year Summer I+0% | 60 | 42 | 32.545 | 31.462 | -0.188 | 0.000 |
| 16.001 | S1601 | 60 minute 2 year Summer I+0% | 60 | 61 | 32.545 | 30.496 | -0.189 | 0.000 |
| 1.009 | S109 | 60 minute 2 year Summer I+0% | 60 | 84 | 32.500 | 30.301 | 0.271 | 0.000 |

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.02 | | 0.008 | 0.725 | 1.1 | 0.7 | OK |
| 1.006 | S106 | 0.01 | | 0.436 | 27.823 | 0.2 | 16.8 | OK |
| 9.000 | S900 | 0.01 | | 0.000 | 0.435 | 0.9 | 0.4 | OK |
| 10.000 | S901 | 0.01 | | 0.000 | 0.290 | 0.6 | 0.3 | OK |
| 9.001 | S901 | 0.14 | | 0.015 | 7.544 | 0.9 | 6.6 | OK |
| 9.002 | S902 | 0.09 | | 0.040 | 10.011 | 1.5 | 8.8 | OK |
| 11.000 | S1100 | 0.12 | | 0.005 | 2.176 | 0.7 | 2.1 | OK |
| 9.003 | S903 | 0.14 | | 0.147 | 12.861 | 0.9 | 11.4 | OK |
| 1.007 | S107 | 0.00 | | 35.722 | 27.088 | 0.1 | 10.2 | OK |
| 12.000 | S1200 | 0.02 | | 0.001 | 0.580 | 0.9 | 0.5 | OK |
| 13.000 | S1300 | 0.19 | | 0.006 | 3.337 | 0.7 | 3.1 | OK |
| 13.001 | S1301 | 0.17 | | 0.021 | 5.223 | 1.2 | 4.8 | OK |
| 12.001 | S1201 | 0.14 | | 0.015 | 10.156 | 1.2 | 9.2 | OK |
| 12.002 | S1202 | 0.29 | | 0.050 | 13.928 | 0.9 | 12.4 | OK |
| 12.003 | S1203 | 0.24 | | 0.065 | 13.928 | 1.1 | 12.4 | OK |
| 12.004 | S1204 | 0.19 | | 0.038 | 16.830 | 1.6 | 14.9 | OK |
| 14.000 | S1400 | 0.17 | | 0.006 | 3.482 | 0.8 | 3.3 | OK |

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## Summary Wizard of 60 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.12 | | 0.014 | 6.238 | 0.8 | 5.7 | OK |
| 15.000 | S1500 | 0.09 | | 0.004 | 1.306 | 0.5 | 1.2 | OK |
| 15.001 | S1501 | 0.09 | | 0.010 | 3.482 | 1.3 | 3.1 | OK |
| 14.002 | S1402 | 0.10 | | 0.042 | 11.607 | 1.7 | 10.4 | OK |
| 12.005 | 1205 | 0.34 | | 0.146 | 31.628 | 1.9 | 28.1 | OK |
| 1.008 | S108 | 0.05 | | 41.342 | 25.819 | 0.2 | 5.0 | OK |
| 16.000 | S1600 | 0.06 | | 0.009 | 4.933 | 1.1 | 4.6 | OK |
| 16.001 | S1601 | 0.06 | | 0.019 | 5.513 | 1.3 | 5.1 | OK |
| 1.009 | S109 | 0.31 | | 2.292 | 29.403 | 0.9 | 5.1 | SURCHARGED |

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## Summary Wizard of 120 minute 2 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 120 minute 2 year Summer I+0% | 120 | 49 | 32.680 | 31.797 | -0.123 | 0.000 |
| 1.001 | S101 | 120 minute 2 year Summer I+0% | 120 | 49 | 32.680 | 31.722 | -0.128 | 0.000 |
| 2.000 | S200 | 120 minute 2 year Summer I+0% | 120 | 51 | 32.600 | 31.502 | -0.128 | 0.000 |
| 1.002 | S102 | 120 minute 2 year Summer I+0% | 120 | 53 | 32.630 | 31.260 | -0.185 | 0.000 |
| 3.000 | S300 | 120 minute 2 year Summer I+0% | 120 | 49 | 32.550 | 31.863 | -0.137 | 0.000 |
| 1.003 | S103 | 120 minute 2 year Summer I+0% | 120 | 53 | 32.600 | 31.091 | -0.184 | 0.000 |
| 4.000 | S400 | 120 minute 2 year Summer I+0% | 120 | 49 | 32.550 | 31.716 | -0.134 | 0.000 |
| 4.001 | S401 | 120 minute 2 year Summer I+0% | 120 | 65 | 32.550 | 30.631 | -0.119 | 0.000 |
| 1.004 | S104 | 120 minute 2 year Summer I+0% | 120 | 86 | 32.600 | 30.340 | -0.190 | 0.000 |
| 1.005 | S105 | 120 minute 2 year Summer I+0% | 120 | 76 | 32.600 | 30.340 | -0.170 | 0.000 |
| 5.000 | S500 | 120 minute 2 year Summer I+0% | 120 | 48 | 32.550 | 31.869 | -0.131 | 0.000 |
| 5.001 | S501 | 120 minute 2 year Summer I+0% | 120 | 53 | 32.665 | 31.160 | -0.130 | 0.000 |
| 6.000 | S600 | 120 minute 2 year Summer I+0% | 120 | 49 | 32.665 | 31.854 | -0.146 | 0.000 |
| 6.001 | S601 | 120 minute 2 year Summer I+0% | 120 | 53 | 32.665 | 31.144 | -0.146 | 0.000 |
| 5.002 | S502 | 120 minute 2 year Summer I+0% | 120 | 53 | 32.665 | 30.871 | -0.179 | 0.000 |
| 5.003 | S503 | 120 minute 2 year Summer I+0% | 120 | 64 | 32.680 | 30.669 | -0.186 | 0.000 |
| 7.000 | S700 | 120 minute 2 year Summer I+0% | 120 | 48 | 32.680 | 31.917 | -0.113 | 0.000 |
| 7.001 | S701 | 120 minute 2 year Summer I+0% | 120 | 49 | 32.635 | 31.841 | -0.104 | 0.000 |
| 5.004 | S504 | 120 minute 2 year Summer I+0% | 120 | 85 | 32.635 | 30.340 | -0.205 | 0.000 |

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## Summary Wizard of 120 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.07 | | 0.003 | 2.347 | 0.6 | 1.2 | OK |
| 1.001 | S101 | 0.05 | | 0.009 | 3.611 | 1.2 | 1.8 | OK |
| 2.000 | S200 | 0.05 | | 0.003 | 2.347 | 0.7 | 1.2 | OK |
| 1.002 | S102 | 0.07 | | 0.010 | 7.222 | 0.8 | 3.7 | OK |
| 3.000 | S300 | 0.02 | | 0.001 | 1.444 | 1.2 | 0.7 | OK |
| 1.003 | S103 | 0.08 | | 0.030 | 13.179 | 1.3 | 6.6 | OK |
| 4.000 | S400 | 0.03 | | 0.002 | 2.708 | 1.4 | 1.4 | OK |
| 4.001 | S401 | 0.09 | | 0.005 | 3.791 | 0.7 | 1.9 | OK |
| 1.004 | S104 | 0.20 | | 0.033 | 18.776 | 0.5 | 9.5 | OK |
| 1.005 | S105 | 0.09 | | 0.561 | 19.437 | 0.4 | 9.6 | OK |
| 5.000 | S500 | 0.04 | | 0.002 | 2.528 | 1.0 | 1.3 | OK |
| 5.001 | S501 | 0.04 | | 0.004 | 2.528 | 0.9 | 1.3 | OK |
| 6.000 | S600 | 0.01 | | 0.000 | 0.361 | 0.4 | 0.2 | OK |
| 6.001 | S601 | 0.01 | | 0.000 | 0.361 | 0.4 | 0.2 | OK |
| 5.002 | S502 | 0.09 | | 0.012 | 9.568 | 0.8 | 4.8 | OK |
| 5.003 | S503 | 0.07 | | 0.028 | 10.832 | 1.2 | 5.4 | OK |
| 7.000 | S700 | 0.14 | | 0.005 | 4.694 | 0.7 | 2.4 | OK |
| 7.001 | S701 | 0.21 | | 0.023 | 7.041 | 0.8 | 3.6 | OK |
| 5.004 | S504 | 0.15 | | 0.160 | 17.873 | 0.6 | 9.0 | OK |

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## Summary Wizard of 120 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 120 minute 2 year Summer I+0% | 120 | 53 | 32.525 | 31.208 | -0.142 |
| 1.006 | S106 | 120 minute 2 year Summer I+0% | 120 | 76 | 32.500 | 30.340 | -1.306 |
| 9.000 | S900 | 120 minute 2 year Summer I+0% | 120 | 49 | 32.665 | 31.855 | -0.145 |
| 10.000 | S901 | 120 minute 2 year Summer I+0% | 120 | 49 | 32.665 | 31.853 | -0.147 |
| 9.001 | S901 | 120 minute 2 year Summer I+0% | 120 | 53 | 32.665 | 31.042 | -0.178 |
| 9.002 | S902 | 120 minute 2 year Summer I+0% | 120 | 53 | 32.640 | 30.796 | -0.189 |
| 11.000 | S1100 | 120 minute 2 year Summer I+0% | 120 | 50 | 32.680 | 31.579 | -0.121 |
| 9.003 | S903 | 120 minute 2 year Summer I+0% | 120 | 76 | 32.630 | 30.340 | -0.155 |
| 1.007 | S107 | 120 minute 2 year Summer I+0% | 120 | 76 | 32.500 | 30.340 | -1.196 |
| 12.000 | S1200 | 120 minute 2 year Summer I+0% | 120 | 49 | 32.635 | 31.858 | -0.142 |
| 13.000 | S1300 | 120 minute 2 year Summer I+0% | 120 | 48 | 32.635 | 31.885 | -0.115 |
| 13.001 | S1301 | 120 minute 2 year Summer I+0% | 120 | 49 | 32.635 | 31.794 | -0.116 |
| 12.001 | S1201 | 120 minute 2 year Summer I+0% | 120 | 52 | 32.635 | 31.457 | -0.178 |
| 12.002 | S1202 | 120 minute 2 year Summer I+0% | 120 | 53 | 32.680 | 31.104 | -0.156 |
| 12.003 | S1203 | 120 minute 2 year Summer I+0% | 120 | 53 | 32.660 | 31.006 | -0.164 |
| 12.004 | S1204 | 120 minute 2 year Summer I+0% | 120 | 53 | 32.660 | 30.864 | -0.171 |
| 14.000 | S1400 | 120 minute 2 year Summer I+0% | 120 | 49 | 32.650 | 31.659 | -0.116 |
| 14.001 | S1401 | 120 minute 2 year Summer I+0% | 120 | 53 | 32.680 | 31.313 | -0.182 |
| 15.000 | S1500 | 120 minute 2 year Summer I+0% | 120 | 49 | 32.680 | 31.674 | -0.126 |
| 15.001 | S1501 | 120 minute 2 year Summer I+0% | 120 | 50 | 32.600 | 31.629 | -0.126 |
| 14.002 | S1402 | 120 minute 2 year Summer I+0% | 120 | 53 | 32.600 | 31.054 | -0.186 |
| 12.005 | 1205 | 120 minute 2 year Summer I+0% | 120 | 66 | 32.600 | 30.554 | -0.151 |
| 1.008 | S108 | 120 minute 2 year Summer I+0% | 120 | 76 | 32.550 | 30.340 | -0.015 |
| 16.000 | S1600 | 120 minute 2 year Summer I+0% | 120 | 51 | 32.545 | 31.455 | -0.195 |
| 16.001 | S1601 | 120 minute 2 year Summer I+0% | 120 | 67 | 32.545 | 30.489 | -0.196 |
| 1.009 | S109 | 120 minute 2 year Summer I+0% | 120 | 76 | 32.500 | 30.335 | 0.305 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.004 | 0.903 | 1.0 | 0.5 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.567 | 40.068 | 0.2 | 11.4 | OK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.000 | 0.542 | 0.6 | 0.3 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.361 | 0.4 | 0.2 | OK |
| 9.001 | S901 | 0.000 | 0.10 | | 0.012 | 9.388 | 0.8 | 4.7 | OK |
| 9.002 | S902 | 0.000 | 0.06 | | 0.031 | 12.457 | 1.5 | 6.2 | OK |
| 11.000 | S1100 | 0.000 | 0.08 | | 0.004 | 2.708 | 0.6 | 1.4 | OK |
| 9.003 | S903 | 0.000 | 0.10 | | 0.207 | 16.063 | 0.8 | 8.0 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 40.146 | 45.261 | 0.1 | 7.2 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.001 | 0.722 | 0.8 | 0.4 | OK |
| 13.000 | S1300 | 0.000 | 0.13 | | 0.005 | 4.152 | 0.7 | 2.1 | OK |
| 13.001 | S1301 | 0.000 | 0.12 | | 0.017 | 6.499 | 1.1 | 3.3 | OK |
| 12.001 | S1201 | 0.000 | 0.10 | | 0.012 | 12.638 | 1.1 | 6.4 | OK |
| 12.002 | S1202 | 0.000 | 0.21 | | 0.041 | 17.332 | 0.8 | 8.7 | OK |
| 12.003 | S1203 | 0.000 | 0.17 | | 0.053 | 17.332 | 1.0 | 8.7 | OK |
| 12.004 | S1204 | 0.000 | 0.13 | | 0.030 | 20.942 | 1.4 | 10.4 | OK |
| 14.000 | S1400 | 0.000 | 0.12 | | 0.005 | 4.333 | 0.7 | 2.2 | OK |

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## Summary Wizard of 120 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.08 | | 0.011 | 7.763 | 0.7 | 3.9 | OK |
| 15.000 | S1500 | 0.000 | 0.06 | | 0.003 | 1.625 | 0.4 | 0.8 | OK |
| 15.001 | S1501 | 0.000 | 0.06 | | 0.008 | 4.333 | 1.2 | 2.2 | OK |
| 14.002 | S1402 | 0.000 | 0.07 | | 0.034 | 14.443 | 1.6 | 7.3 | OK |
| 12.005 | 1205 | 0.000 | 0.24 | | 0.118 | 39.357 | 1.7 | 19.7 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 45.484 | 55.999 | 0.2 | 5.2 | OK |
| 16.000 | S1600 | 0.000 | 0.04 | | 0.007 | 6.138 | 1.0 | 3.2 | OK |
| 16.001 | S1601 | 0.000 | 0.04 | | 0.015 | 6.860 | 1.1 | 3.5 | OK |
| 1.009 | S109 | 0.000 | 0.32 | | 2.470 | 61.166 | 1.0 | 5.3 | SURCHARGED |

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## Summary Wizard of 180 minute 2 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 180 minute 2 year Summer I+0% | 180 | 59 | 32.680 | 31.793 | -0.127 | 0.000 |
| 1.001 | S101 | 180 minute 2 year Summer I+0% | 180 | 59 | 32.680 | 31.719 | -0.131 | 0.000 |
| 2.000 | S200 | 180 minute 2 year Summer I+0% | 180 | 60 | 32.600 | 31.500 | -0.130 | 0.000 |
| 1.002 | S102 | 180 minute 2 year Summer I+0% | 180 | 62 | 32.630 | 31.254 | -0.191 | 0.000 |
| 3.000 | S300 | 180 minute 2 year Summer I+0% | 180 | 59 | 32.550 | 31.860 | -0.140 | 0.000 |
| 1.003 | S103 | 180 minute 2 year Summer I+0% | 180 | 62 | 32.600 | 31.085 | -0.190 | 0.000 |
| 4.000 | S400 | 180 minute 2 year Summer I+0% | 180 | 59 | 32.550 | 31.715 | -0.135 | 0.000 |
| 4.001 | S401 | 180 minute 2 year Summer I+0% | 180 | 71 | 32.550 | 30.626 | -0.124 | 0.000 |
| 1.004 | S104 | 180 minute 2 year Summer I+0% | 180 | 79 | 32.600 | 30.352 | -0.178 | 0.000 |
| 1.005 | S105 | 180 minute 2 year Summer I+0% | 180 | 72 | 32.600 | 30.351 | -0.159 | 0.000 |
| 5.000 | S500 | 180 minute 2 year Summer I+0% | 180 | 58 | 32.550 | 31.867 | -0.133 | 0.000 |
| 5.001 | S501 | 180 minute 2 year Summer I+0% | 180 | 62 | 32.665 | 31.158 | -0.132 | 0.000 |
| 6.000 | S600 | 180 minute 2 year Summer I+0% | 180 | 59 | 32.665 | 31.853 | -0.147 | 0.000 |
| 6.001 | S601 | 180 minute 2 year Summer I+0% | 180 | 62 | 32.665 | 31.143 | -0.147 | 0.000 |
| 5.002 | S502 | 180 minute 2 year Summer I+0% | 180 | 62 | 32.665 | 30.865 | -0.185 | 0.000 |
| 5.003 | S503 | 180 minute 2 year Summer I+0% | 180 | 70 | 32.680 | 30.664 | -0.191 | 0.000 |
| 7.000 | S700 | 180 minute 2 year Summer I+0% | 180 | 58 | 32.680 | 31.913 | -0.117 | 0.000 |
| 7.001 | S701 | 180 minute 2 year Summer I+0% | 180 | 59 | 32.635 | 31.835 | -0.110 | 0.000 |
| 5.004 | S504 | 180 minute 2 year Summer I+0% | 180 | 78 | 32.635 | 30.352 | -0.193 | 0.000 |

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## Summary Wizard of 180 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.06 | | 0.003 | 2.654 | 0.6 | 0.9 | OK |
| 1.001 | S101 | 0.04 | | 0.008 | 4.083 | 1.1 | 1.4 | OK |
| 2.000 | S200 | 0.04 | | 0.002 | 2.654 | 0.7 | 0.9 | OK |
| 1.002 | S102 | 0.06 | | 0.009 | 8.166 | 0.7 | 2.9 | OK |
| 3.000 | S300 | 0.01 | | 0.001 | 1.633 | 1.2 | 0.6 | OK |
| 1.003 | S103 | 0.06 | | 0.025 | 14.902 | 1.3 | 5.2 | OK |
| 4.000 | S400 | 0.02 | | 0.002 | 3.062 | 1.5 | 1.1 | OK |
| 4.001 | S401 | 0.07 | | 0.005 | 4.287 | 0.7 | 1.5 | OK |
| 1.004 | S104 | 0.16 | | 0.041 | 21.231 | 0.5 | 7.4 | OK |
| 1.005 | S105 | 0.07 | | 0.592 | 22.122 | 0.4 | 7.5 | OK |
| 5.000 | S500 | 0.03 | | 0.002 | 2.858 | 0.9 | 1.0 | OK |
| 5.001 | S501 | 0.03 | | 0.004 | 2.858 | 0.9 | 1.0 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.408 | 0.3 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.408 | 0.3 | 0.1 | OK |
| 5.002 | S502 | 0.07 | | 0.010 | 10.819 | 0.8 | 3.8 | OK |
| 5.003 | S503 | 0.05 | | 0.024 | 12.248 | 1.1 | 4.2 | OK |
| 7.000 | S700 | 0.11 | | 0.004 | 5.308 | 0.7 | 1.9 | OK |
| 7.001 | S701 | 0.16 | | 0.020 | 7.962 | 0.7 | 2.8 | OK |
| 5.004 | S504 | 0.11 | | 0.180 | 20.210 | 0.6 | 7.0 | OK |

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## Summary Wizard of 180 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 180 minute 2 year Summer I+0% | 180 | 62 | 32.525 | 31.207 | -0.143 |
| 1.006 | S106 | 180 minute 2 year Summer I+0% | 180 | 72 | 32.500 | 30.351 | -1.295 |
| 9.000 | S900 | 180 minute 2 year Summer I+0% | 180 | 59 | 32.665 | 31.854 | -0.146 |
| 10.000 | S901 | 180 minute 2 year Summer I+0% | 180 | 59 | 32.665 | 31.853 | -0.147 |
| 9.001 | S901 | 180 minute 2 year Summer I+0% | 180 | 62 | 32.665 | 31.036 | -0.184 |
| 9.002 | S902 | 180 minute 2 year Summer I+0% | 180 | 62 | 32.640 | 30.792 | -0.193 |
| 11.000 | S1100 | 180 minute 2 year Summer I+0% | 180 | 59 | 32.680 | 31.575 | -0.125 |
| 9.003 | S903 | 180 minute 2 year Summer I+0% | 180 | 72 | 32.630 | 30.352 | -0.143 |
| 1.007 | S107 | 180 minute 2 year Summer I+0% | 180 | 72 | 32.500 | 30.351 | -1.185 |
| 12.000 | S1200 | 180 minute 2 year Summer I+0% | 180 | 59 | 32.635 | 31.856 | -0.144 |
| 13.000 | S1300 | 180 minute 2 year Summer I+0% | 180 | 58 | 32.635 | 31.881 | -0.119 |
| 13.001 | S1301 | 180 minute 2 year Summer I+0% | 180 | 59 | 32.635 | 31.791 | -0.119 |
| 12.001 | S1201 | 180 minute 2 year Summer I+0% | 180 | 61 | 32.635 | 31.451 | -0.184 |
| 12.002 | S1202 | 180 minute 2 year Summer I+0% | 180 | 62 | 32.680 | 31.095 | -0.165 |
| 12.003 | S1203 | 180 minute 2 year Summer I+0% | 180 | 62 | 32.660 | 30.999 | -0.171 |
| 12.004 | S1204 | 180 minute 2 year Summer I+0% | 180 | 62 | 32.660 | 30.858 | -0.177 |
| 14.000 | S1400 | 180 minute 2 year Summer I+0% | 180 | 59 | 32.650 | 31.655 | -0.120 |
| 14.001 | S1401 | 180 minute 2 year Summer I+0% | 180 | 62 | 32.680 | 31.307 | -0.188 |
| 15.000 | S1500 | 180 minute 2 year Summer I+0% | 180 | 59 | 32.680 | 31.671 | -0.129 |
| 15.001 | S1501 | 180 minute 2 year Summer I+0% | 180 | 59 | 32.600 | 31.626 | -0.129 |
| 14.002 | S1402 | 180 minute 2 year Summer I+0% | 180 | 62 | 32.600 | 31.049 | -0.191 |
| 12.005 | 1205 | 180 minute 2 year Summer I+0% | 180 | 73 | 32.600 | 30.545 | -0.160 |
| 1.008 | S108 | 180 minute 2 year Summer I+0% | 180 | 72 | 32.550 | 30.351 | -0.004 |
| 16.000 | S1600 | 180 minute 2 year Summer I+0% | 180 | 60 | 32.545 | 31.452 | -0.198 |
| 16.001 | S1601 | 180 minute 2 year Summer I+0% | 180 | 73 | 32.545 | 30.486 | -0.199 |
| 1.009 | S109 | 180 minute 2 year Summer I+0% | 180 | 72 | 32.500 | 30.343 | 0.313 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.002 | 1.021 | 0.8 | 0.4 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.607 | 50.508 | 0.1 | 9.1 | OK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.000 | 0.612 | 0.5 | 0.2 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.408 | 0.3 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.08 | | 0.010 | 10.615 | 0.7 | 3.7 | OK |
| 9.002 | S902 | 0.000 | 0.05 | | 0.027 | 14.085 | 1.4 | 4.9 | OK |
| 11.000 | S1100 | 0.000 | 0.07 | | 0.003 | 3.062 | 0.6 | 1.1 | OK |
| 9.003 | S903 | 0.000 | 0.08 | | 0.225 | 18.168 | 0.7 | 6.3 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 41.475 | 61.712 | 0.1 | 6.2 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 0.817 | 0.6 | 0.3 | OK |
| 13.000 | S1300 | 0.000 | 0.10 | | 0.004 | 4.695 | 0.6 | 1.7 | OK |
| 13.001 | S1301 | 0.000 | 0.09 | | 0.015 | 7.349 | 1.0 | 2.6 | OK |
| 12.001 | S1201 | 0.000 | 0.08 | | 0.010 | 14.290 | 1.0 | 5.0 | OK |
| 12.002 | S1202 | 0.000 | 0.16 | | 0.035 | 19.597 | 0.8 | 6.8 | OK |
| 12.003 | S1203 | 0.000 | 0.13 | | 0.046 | 19.597 | 0.9 | 6.8 | OK |
| 12.004 | S1204 | 0.000 | 0.10 | | 0.027 | 23.680 | 1.3 | 8.2 | OK |
| 14.000 | S1400 | 0.000 | 0.09 | | 0.004 | 4.899 | 0.7 | 1.7 | OK |

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## Summary Wizard of 180 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.06 | | 0.010 | 8.778 | 0.7 | 3.1 | OK |
| 15.000 | S1500 | 0.000 | 0.05 | | 0.003 | 1.837 | 0.4 | 0.7 | OK |
| 15.001 | S1501 | 0.000 | 0.05 | | 0.007 | 4.899 | 1.2 | 1.7 | OK |
| 14.002 | S1402 | 0.000 | 0.06 | | 0.029 | 16.331 | 1.5 | 5.7 | OK |
| 12.005 | 1205 | 0.000 | 0.19 | | 0.103 | 44.502 | 1.6 | 15.4 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 46.736 | 84.473 | 0.2 | 5.2 | OK |
| 16.000 | S1600 | 0.000 | 0.03 | | 0.006 | 6.941 | 0.9 | 2.5 | OK |
| 16.001 | S1601 | 0.000 | 0.03 | | 0.013 | 7.757 | 1.1 | 2.7 | OK |
| 1.009 | S109 | 0.000 | 0.32 | | 2.511 | 90.931 | 1.0 | 5.3 | SURCHARGED |

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## Summary Wizard of 240 minute 2 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 240 minute 2 year Summer I+0% | 240 | 62 | 32.680 | 31.791 | -0.129 | 0.000 |
| 1.001 | S101 | 240 minute 2 year Summer I+0% | 240 | 62 | 32.680 | 31.718 | -0.132 | 0.000 |
| 2.000 | S200 | 240 minute 2 year Summer I+0% | 240 | 63 | 32.600 | 31.498 | -0.132 | 0.000 |
| 1.002 | S102 | 240 minute 2 year Summer I+0% | 240 | 65 | 32.630 | 31.251 | -0.194 | 0.000 |
| 3.000 | S300 | 240 minute 2 year Summer I+0% | 240 | 62 | 32.550 | 31.858 | -0.142 | 0.000 |
| 1.003 | S103 | 240 minute 2 year Summer I+0% | 240 | 66 | 32.600 | 31.082 | -0.193 | 0.000 |
| 4.000 | S400 | 240 minute 2 year Summer I+0% | 240 | 62 | 32.550 | 31.713 | -0.137 | 0.000 |
| 4.001 | S401 | 240 minute 2 year Summer I+0% | 240 | 73 | 32.550 | 30.624 | -0.126 | 0.000 |
| 1.004 | S104 | 240 minute 2 year Summer I+0% | 240 | 75 | 32.600 | 30.356 | -0.174 | 0.000 |
| 1.005 | S105 | 240 minute 2 year Summer I+0% | 240 | 68 | 32.600 | 30.355 | -0.155 | 0.000 |
| 5.000 | S500 | 240 minute 2 year Summer I+0% | 240 | 62 | 32.550 | 31.866 | -0.134 | 0.000 |
| 5.001 | S501 | 240 minute 2 year Summer I+0% | 240 | 65 | 32.665 | 31.156 | -0.134 | 0.000 |
| 6.000 | S600 | 240 minute 2 year Summer I+0% | 240 | 62 | 32.665 | 31.852 | -0.148 | 0.000 |
| 6.001 | S601 | 240 minute 2 year Summer I+0% | 240 | 65 | 32.665 | 31.143 | -0.147 | 0.000 |
| 5.002 | S502 | 240 minute 2 year Summer I+0% | 240 | 66 | 32.665 | 30.861 | -0.189 | 0.000 |
| 5.003 | S503 | 240 minute 2 year Summer I+0% | 240 | 73 | 32.680 | 30.661 | -0.194 | 0.000 |
| 7.000 | S700 | 240 minute 2 year Summer I+0% | 240 | 61 | 32.680 | 31.910 | -0.120 | 0.000 |
| 7.001 | S701 | 240 minute 2 year Summer I+0% | 240 | 62 | 32.635 | 31.831 | -0.114 | 0.000 |
| 5.004 | S504 | 240 minute 2 year Summer I+0% | 240 | 72 | 32.635 | 30.356 | -0.189 | 0.000 |

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## Summary Wizard of 240 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.05 | | 0.003 | 2.892 | 0.5 | 0.8 | OK |
| 1.001 | S101 | 0.03 | | 0.007 | 4.449 | 1.0 | 1.2 | OK |
| 2.000 | S200 | 0.03 | | 0.002 | 2.892 | 0.6 | 0.8 | OK |
| 1.002 | S102 | 0.05 | | 0.008 | 8.898 | 0.7 | 2.4 | OK |
| 3.000 | S300 | 0.01 | | 0.001 | 1.780 | 1.1 | 0.5 | OK |
| 1.003 | S103 | 0.05 | | 0.022 | 16.239 | 1.2 | 4.3 | OK |
| 4.000 | S400 | 0.02 | | 0.001 | 3.337 | 1.5 | 0.9 | OK |
| 4.001 | S401 | 0.06 | | 0.004 | 4.672 | 0.7 | 1.3 | OK |
| 1.004 | S104 | 0.13 | | 0.043 | 23.135 | 0.5 | 6.2 | OK |
| 1.005 | S105 | 0.06 | | 0.602 | 24.233 | 0.4 | 6.2 | OK |
| 5.000 | S500 | 0.03 | | 0.002 | 3.114 | 0.9 | 0.8 | OK |
| 5.001 | S501 | 0.03 | | 0.003 | 3.114 | 0.9 | 0.8 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.445 | 0.3 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.445 | 0.3 | 0.1 | OK |
| 5.002 | S502 | 0.06 | | 0.009 | 11.790 | 0.8 | 3.1 | OK |
| 5.003 | S503 | 0.05 | | 0.021 | 13.347 | 1.1 | 3.5 | OK |
| 7.000 | S700 | 0.09 | | 0.004 | 5.784 | 0.6 | 1.6 | OK |
| 7.001 | S701 | 0.14 | | 0.018 | 8.676 | 0.7 | 2.3 | OK |
| 5.004 | S504 | 0.10 | | 0.188 | 22.022 | 0.6 | 5.9 | OK |

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## Summary Wizard of 240 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 240 minute 2 year Summer I+0% | 240 | 65 | 32.525 | 31.205 | -0.145 |
| 1.006 | S106 | 240 minute 2 year Summer I+0% | 240 | 68 | 32.500 | 30.355 | -1.291 |
| 9.000 | S900 | 240 minute 2 year Summer I+0% | 240 | 62 | 32.665 | 31.853 | -0.147 |
| 10.000 | S901 | 240 minute 2 year Summer I+0% | 240 | 62 | 32.665 | 31.852 | -0.148 |
| 9.001 | S901 | 240 minute 2 year Summer I+0% | 240 | 66 | 32.665 | 31.032 | -0.188 |
| 9.002 | S902 | 240 minute 2 year Summer I+0% | 240 | 66 | 32.640 | 30.789 | -0.196 |
| 11.000 | S1100 | 240 minute 2 year Summer I+0% | 240 | 62 | 32.680 | 31.572 | -0.128 |
| 9.003 | S903 | 240 minute 2 year Summer I+0% | 240 | 68 | 32.630 | 30.356 | -0.139 |
| 1.007 | S107 | 240 minute 2 year Summer I+0% | 240 | 68 | 32.500 | 30.355 | -1.181 |
| 12.000 | S1200 | 240 minute 2 year Summer I+0% | 240 | 62 | 32.635 | 31.855 | -0.145 |
| 13.000 | S1300 | 240 minute 2 year Summer I+0% | 240 | 61 | 32.635 | 31.878 | -0.122 |
| 13.001 | S1301 | 240 minute 2 year Summer I+0% | 240 | 62 | 32.635 | 31.787 | -0.123 |
| 12.001 | S1201 | 240 minute 2 year Summer I+0% | 240 | 65 | 32.635 | 31.447 | -0.188 |
| 12.002 | S1202 | 240 minute 2 year Summer I+0% | 240 | 66 | 32.680 | 31.089 | -0.171 |
| 12.003 | S1203 | 240 minute 2 year Summer I+0% | 240 | 66 | 32.660 | 30.994 | -0.176 |
| 12.004 | S1204 | 240 minute 2 year Summer I+0% | 240 | 66 | 32.660 | 30.854 | -0.181 |
| 14.000 | S1400 | 240 minute 2 year Summer I+0% | 240 | 62 | 32.650 | 31.652 | -0.123 |
| 14.001 | S1401 | 240 minute 2 year Summer I+0% | 240 | 65 | 32.680 | 31.303 | -0.192 |
| 15.000 | S1500 | 240 minute 2 year Summer I+0% | 240 | 62 | 32.680 | 31.669 | -0.131 |
| 15.001 | S1501 | 240 minute 2 year Summer I+0% | 240 | 63 | 32.600 | 31.624 | -0.131 |
| 14.002 | S1402 | 240 minute 2 year Summer I+0% | 240 | 66 | 32.600 | 31.046 | -0.194 |
| 12.005 | 1205 | 240 minute 2 year Summer I+0% | 240 | 76 | 32.600 | 30.539 | -0.166 |
| 1.008 | S108 | 240 minute 2 year Summer I+0% | 240 | 68 | 32.550 | 30.355 | 0.000 |
| 16.000 | S1600 | 240 minute 2 year Summer I+0% | 240 | 63 | 32.545 | 31.450 | -0.200 |
| 16.001 | S1601 | 240 minute 2 year Summer I+0% | 240 | 75 | 32.545 | 30.484 | -0.201 |
| 1.009 | S109 | 240 minute 2 year Summer I+0% | 240 | 68 | 32.500 | 30.354 | 0.324 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.001 | 1.112 | 0.7 | 0.3 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.621 | 59.241 | 0.1 | 7.8 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.667 | 0.4 | 0.2 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.445 | 0.3 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.06 | | 0.009 | 11.567 | 0.7 | 3.1 | OK |
| 9.002 | S902 | 0.000 | 0.04 | | 0.024 | 15.349 | 1.3 | 4.1 | OK |
| 11.000 | S1100 | 0.000 | 0.05 | | 0.003 | 3.337 | 0.5 | 0.9 | OK |
| 9.003 | S903 | 0.000 | 0.06 | | 0.231 | 19.798 | 0.7 | 5.2 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 41.935 | 76.011 | 0.0 | 5.5 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 0.890 | 0.5 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.08 | | 0.004 | 5.116 | 0.6 | 1.4 | OK |
| 13.001 | S1301 | 0.000 | 0.08 | | 0.013 | 8.008 | 1.0 | 2.1 | OK |
| 12.001 | S1201 | 0.000 | 0.06 | | 0.009 | 15.571 | 1.0 | 4.1 | OK |
| 12.002 | S1202 | 0.000 | 0.13 | | 0.032 | 21.355 | 0.8 | 5.7 | OK |
| 12.003 | S1203 | 0.000 | 0.11 | | 0.041 | 21.355 | 0.9 | 5.7 | OK |
| 12.004 | S1204 | 0.000 | 0.09 | | 0.024 | 25.804 | 1.2 | 6.8 | OK |
| 14.000 | S1400 | 0.000 | 0.08 | | 0.004 | 5.339 | 0.7 | 1.4 | OK |

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## Summary Wizard of 240 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.05 | | 0.008 | 9.565 | 0.7 | 2.6 | OK |
| 15.000 | S1500 | 0.000 | 0.04 | | 0.002 | 2.002 | 0.4 | 0.5 | OK |
| 15.001 | S1501 | 0.000 | 0.04 | | 0.006 | 5.339 | 1.1 | 1.4 | OK |
| 14.002 | S1402 | 0.000 | 0.05 | | 0.026 | 17.796 | 1.4 | 4.7 | OK |
| 12.005 | 1205 | 0.000 | 0.15 | | 0.092 | 48.494 | 1.6 | 12.9 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 47.169 | 110.345 | 0.2 | 5.5 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.03 | | 0.006 | 7.563 | 0.9 | 2.0 | OK |
| 16.001 | S1601 | 0.000 | 0.03 | | 0.012 | 8.453 | 1.1 | 2.3 | OK |
| 1.009 | S109 | 0.000 | 0.32 | | 2.567 | 117.926 | 1.0 | 5.4 | SURCHARGED |

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## Summary Wizard of 360 minute 2 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.680 | 31.788 | -0.132 | 0.000 |
| 1.001 | S101 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.680 | 31.716 | -0.134 | 0.000 |
| 2.000 | S200 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.600 | 31.496 | -0.134 | 0.000 |
| 1.002 | S102 | 360 minute 2 year Summer I+0% | 360 | 77 | 32.630 | 31.247 | -0.198 | 0.000 |
| 3.000 | S300 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.550 | 31.856 | -0.144 | 0.000 |
| 1.003 | S103 | 360 minute 2 year Summer I+0% | 360 | 77 | 32.600 | 31.078 | -0.197 | 0.000 |
| 4.000 | S400 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.550 | 31.710 | -0.140 | 0.000 |
| 4.001 | S401 | 360 minute 2 year Summer I+0% | 360 | 83 | 32.550 | 30.620 | -0.130 | 0.000 |
| 1.004 | S104 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.600 | 30.355 | -0.175 | 0.000 |
| 1.005 | S105 | 360 minute 2 year Summer I+0% | 360 | 69 | 32.600 | 30.355 | -0.155 | 0.000 |
| 5.000 | S500 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.550 | 31.864 | -0.136 | 0.000 |
| 5.001 | S501 | 360 minute 2 year Summer I+0% | 360 | 77 | 32.665 | 31.155 | -0.135 | 0.000 |
| 6.000 | S600 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.665 | 31.852 | -0.148 | 0.000 |
| 6.001 | S601 | 360 minute 2 year Summer I+0% | 360 | 77 | 32.665 | 31.142 | -0.148 | 0.000 |
| 5.002 | S502 | 360 minute 2 year Summer I+0% | 360 | 77 | 32.665 | 30.856 | -0.194 | 0.000 |
| 5.003 | S503 | 360 minute 2 year Summer I+0% | 360 | 81 | 32.680 | 30.657 | -0.198 | 0.000 |
| 7.000 | S700 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.680 | 31.906 | -0.124 | 0.000 |
| 7.001 | S701 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.635 | 31.827 | -0.118 | 0.000 |
| 5.004 | S504 | 360 minute 2 year Summer I+0% | 360 | 73 | 32.635 | 30.355 | -0.190 | 0.000 |

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## Summary Wizard of 360 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.04 | | 0.002 | 3.260 | 0.5 | 0.6 | OK |
| 1.001 | S101 | 0.03 | | 0.006 | 5.015 | 1.0 | 0.9 | OK |
| 2.000 | S200 | 0.03 | | 0.002 | 3.260 | 0.6 | 0.6 | OK |
| 1.002 | S102 | 0.04 | | 0.007 | 10.030 | 0.7 | 1.8 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 2.006 | 0.8 | 0.4 | OK |
| 1.003 | S103 | 0.04 | | 0.019 | 18.305 | 1.2 | 3.3 | OK |
| 4.000 | S400 | 0.01 | | 0.001 | 3.761 | 1.5 | 0.7 | OK |
| 4.001 | S401 | 0.05 | | 0.003 | 5.266 | 0.7 | 1.0 | OK |
| 1.004 | S104 | 0.10 | | 0.043 | 26.079 | 0.4 | 4.7 | OK |
| 1.005 | S105 | 0.04 | | 0.601 | 27.333 | 0.4 | 4.7 | OK |
| 5.000 | S500 | 0.02 | | 0.001 | 3.511 | 0.9 | 0.6 | OK |
| 5.001 | S501 | 0.02 | | 0.003 | 3.511 | 0.9 | 0.6 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.501 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.501 | 0.2 | 0.1 | OK |
| 5.002 | S502 | 0.05 | | 0.007 | 13.290 | 0.7 | 2.4 | OK |
| 5.003 | S503 | 0.03 | | 0.018 | 15.045 | 1.0 | 2.7 | OK |
| 7.000 | S700 | 0.07 | | 0.003 | 6.520 | 0.6 | 1.2 | OK |
| 7.001 | S701 | 0.10 | | 0.015 | 9.780 | 0.6 | 1.8 | OK |
| 5.004 | S504 | 0.07 | | 0.187 | 24.825 | 0.5 | 4.5 | OK |

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## Summary Wizard of 360 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 360 minute 2 year Summer I+0% | 360 | 77 | 32.525 | 31.204 | -0.146 |
| 1.006 | S106 | 360 minute 2 year Summer I+0% | 360 | 69 | 32.500 | 30.355 | -1.291 |
| 9.000 | S900 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.665 | 31.853 | -0.147 |
| 10.000 | S901 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.665 | 31.852 | -0.148 |
| 9.001 | S901 | 360 minute 2 year Summer I+0% | 360 | 77 | 32.665 | 31.027 | -0.193 |
| 9.002 | S902 | 360 minute 2 year Summer I+0% | 360 | 77 | 32.640 | 30.786 | -0.199 |
| 11.000 | S1100 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.680 | 31.570 | -0.130 |
| 9.003 | S903 | 360 minute 2 year Summer I+0% | 360 | 70 | 32.630 | 30.355 | -0.140 |
| 1.007 | S107 | 360 minute 2 year Summer I+0% | 360 | 69 | 32.500 | 30.355 | -1.181 |
| 12.000 | S1200 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.635 | 31.854 | -0.146 |
| 13.000 | S1300 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.635 | 31.874 | -0.126 |
| 13.001 | S1301 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.635 | 31.783 | -0.127 |
| 12.001 | S1201 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.635 | 31.442 | -0.193 |
| 12.002 | S1202 | 360 minute 2 year Summer I+0% | 360 | 77 | 32.680 | 31.083 | -0.177 |
| 12.003 | S1203 | 360 minute 2 year Summer I+0% | 360 | 77 | 32.660 | 30.988 | -0.182 |
| 12.004 | S1204 | 360 minute 2 year Summer I+0% | 360 | 77 | 32.660 | 30.847 | -0.188 |
| 14.000 | S1400 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.650 | 31.648 | -0.127 |
| 14.001 | S1401 | 360 minute 2 year Summer I+0% | 360 | 77 | 32.680 | 31.299 | -0.196 |
| 15.000 | S1500 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.680 | 31.667 | -0.133 |
| 15.001 | S1501 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.600 | 31.622 | -0.133 |
| 14.002 | S1402 | 360 minute 2 year Summer I+0% | 360 | 77 | 32.600 | 31.042 | -0.198 |
| 12.005 | 1205 | 360 minute 2 year Summer I+0% | 360 | 84 | 32.600 | 30.531 | -0.174 |
| 1.008 | S108 | 360 minute 2 year Summer I+0% | 360 | 69 | 32.550 | 30.355 | 0.000 |
| 16.000 | S1600 | 360 minute 2 year Summer I+0% | 360 | 76 | 32.545 | 31.448 | -0.202 |
| 16.001 | S1601 | 360 minute 2 year Summer I+0% | 360 | 84 | 32.545 | 30.482 | -0.203 |
| 1.009 | S109 | 360 minute 2 year Summer I+0% | 360 | 69 | 32.500 | 30.353 | 0.323 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.000 | 1.254 | 0.5 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.620 | 70.462 | 0.1 | 6.2 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.752 | 0.3 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.501 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.05 | | 0.008 | 13.039 | 0.7 | 2.3 | OK |
| 9.002 | S902 | 0.000 | 0.03 | | 0.021 | 17.301 | 1.3 | 3.1 | OK |
| 11.000 | S1100 | 0.000 | 0.04 | | 0.002 | 3.761 | 0.5 | 0.7 | OK |
| 9.003 | S903 | 0.000 | 0.05 | | 0.231 | 22.317 | 0.7 | 4.0 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 41.901 | 96.333 | 0.0 | 4.8 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 1.003 | 0.4 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.06 | | 0.003 | 5.768 | 0.6 | 1.0 | OK |
| 13.001 | S1301 | 0.000 | 0.06 | | 0.010 | 9.027 | 0.9 | 1.6 | OK |
| 12.001 | S1201 | 0.000 | 0.05 | | 0.008 | 17.553 | 0.9 | 3.2 | OK |
| 12.002 | S1202 | 0.000 | 0.10 | | 0.027 | 24.073 | 0.7 | 4.3 | OK |
| 12.003 | S1203 | 0.000 | 0.08 | | 0.036 | 24.073 | 0.8 | 4.3 | OK |
| 12.004 | S1204 | 0.000 | 0.07 | | 0.020 | 29.088 | 1.2 | 5.2 | OK |
| 14.000 | S1400 | 0.000 | 0.06 | | 0.003 | 6.018 | 0.6 | 1.1 | OK |

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## Summary Wizard of 360 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.04 | | 0.007 | 10.783 | 0.6 | 1.9 | OK |
| 15.000 | S1500 | 0.000 | 0.03 | | 0.002 | 2.257 | 0.4 | 0.4 | OK |
| 15.001 | S1501 | 0.000 | 0.03 | | 0.005 | 6.018 | 1.1 | 1.1 | OK |
| 14.002 | S1402 | 0.000 | 0.04 | | 0.022 | 20.061 | 1.3 | 3.6 | OK |
| 12.005 | 1205 | 0.000 | 0.12 | | 0.079 | 54.665 | 1.4 | 9.8 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 47.135 | 150.282 | 0.2 | 5.3 | OK |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.005 | 8.526 | 0.9 | 1.5 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 0.011 | 9.529 | 1.1 | 1.7 | OK |
| 1.009 | S109 | 0.000 | 0.32 | | 2.560 | 159.657 | 1.0 | 5.4 | SURCHARGED |

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## Summary Wizard of 480 minute 2 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.680 | 31.787 | -0.133 | 0.000 |
| 1.001 | S101 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.680 | 31.715 | -0.135 | 0.000 |
| 2.000 | S200 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.600 | 31.495 | -0.135 | 0.000 |
| 1.002 | S102 | 480 minute 2 year Summer I+0% | 480 | 84 | 32.630 | 31.245 | -0.200 | 0.000 |
| 3.000 | S300 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.550 | 31.855 | -0.145 | 0.000 |
| 1.003 | S103 | 480 minute 2 year Summer I+0% | 480 | 84 | 32.600 | 31.076 | -0.199 | 0.000 |
| 4.000 | S400 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.550 | 31.708 | -0.142 | 0.000 |
| 4.001 | S401 | 480 minute 2 year Summer I+0% | 480 | 88 | 32.550 | 30.619 | -0.131 | 0.000 |
| 1.004 | S104 | 480 minute 2 year Summer I+0% | 480 | 81 | 32.600 | 30.347 | -0.183 | 0.000 |
| 1.005 | S105 | 480 minute 2 year Summer I+0% | 480 | 74 | 32.600 | 30.346 | -0.164 | 0.000 |
| 5.000 | S500 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.550 | 31.861 | -0.139 | 0.000 |
| 5.001 | S501 | 480 minute 2 year Summer I+0% | 480 | 84 | 32.665 | 31.152 | -0.138 | 0.000 |
| 6.000 | S600 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 480 minute 2 year Summer I+0% | 480 | 84 | 32.665 | 31.142 | -0.148 | 0.000 |
| 5.002 | S502 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.665 | 30.853 | -0.197 | 0.000 |
| 5.003 | S503 | 480 minute 2 year Summer I+0% | 480 | 86 | 32.680 | 30.655 | -0.200 | 0.000 |
| 7.000 | S700 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.680 | 31.903 | -0.127 | 0.000 |
| 7.001 | S701 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.635 | 31.824 | -0.121 | 0.000 |
| 5.004 | S504 | 480 minute 2 year Summer I+0% | 480 | 81 | 32.635 | 30.347 | -0.198 | 0.000 |

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## Summary Wizard of 480 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.03 | | 0.002 | 3.538 | 0.5 | 0.5 | OK |
| 1.001 | S101 | 0.02 | | 0.005 | 5.443 | 1.0 | 0.7 | OK |
| 2.000 | S200 | 0.02 | | 0.002 | 3.538 | 0.6 | 0.5 | OK |
| 1.002 | S102 | 0.03 | | 0.006 | 10.885 | 0.6 | 1.5 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 2.177 | 0.7 | 0.3 | OK |
| 1.003 | S103 | 0.03 | | 0.017 | 19.866 | 1.1 | 2.7 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 4.082 | 1.2 | 0.6 | OK |
| 4.001 | S401 | 0.04 | | 0.003 | 5.715 | 0.6 | 0.8 | OK |
| 1.004 | S104 | 0.08 | | 0.037 | 28.302 | 0.4 | 3.9 | OK |
| 1.005 | S105 | 0.03 | | 0.579 | 29.663 | 0.4 | 3.9 | OK |
| 5.000 | S500 | 0.02 | | 0.001 | 3.810 | 0.9 | 0.5 | OK |
| 5.001 | S501 | 0.02 | | 0.002 | 3.810 | 0.9 | 0.5 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.544 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.541 | 0.2 | 0.1 | OK |
| 5.002 | S502 | 0.04 | | 0.007 | 14.420 | 0.7 | 2.0 | OK |
| 5.003 | S503 | 0.03 | | 0.016 | 16.325 | 1.0 | 2.2 | OK |
| 7.000 | S700 | 0.06 | | 0.003 | 7.076 | 0.6 | 1.0 | OK |
| 7.001 | S701 | 0.08 | | 0.013 | 10.613 | 0.6 | 1.4 | OK |
| 5.004 | S504 | 0.06 | | 0.171 | 26.939 | 0.5 | 3.7 | OK |

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## Summary Wizard of 480 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 480 minute 2 year Summer I+0% | 480 | 84 | 32.525 | 31.203 | -0.147 |
| 1.006 | S106 | 480 minute 2 year Summer I+0% | 480 | 74 | 32.500 | 30.346 | -1.300 |
| 9.000 | S900 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.665 | 31.024 | -0.196 |
| 9.002 | S902 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.640 | 30.784 | -0.201 |
| 11.000 | S1100 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.680 | 31.568 | -0.132 |
| 9.003 | S903 | 480 minute 2 year Summer I+0% | 480 | 74 | 32.630 | 30.347 | -0.148 |
| 1.007 | S107 | 480 minute 2 year Summer I+0% | 480 | 74 | 32.500 | 30.346 | -1.190 |
| 12.000 | S1200 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.635 | 31.853 | -0.147 |
| 13.000 | S1300 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.635 | 31.871 | -0.129 |
| 13.001 | S1301 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.635 | 31.781 | -0.129 |
| 12.001 | S1201 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.635 | 31.439 | -0.196 |
| 12.002 | S1202 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.680 | 31.079 | -0.181 |
| 12.003 | S1203 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.660 | 30.983 | -0.187 |
| 12.004 | S1204 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.660 | 30.843 | -0.192 |
| 14.000 | S1400 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.650 | 31.646 | -0.129 |
| 14.001 | S1401 | 480 minute 2 year Summer I+0% | 480 | 84 | 32.680 | 31.297 | -0.198 |
| 15.000 | S1500 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.680 | 31.666 | -0.134 |
| 15.001 | S1501 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.600 | 31.621 | -0.134 |
| 14.002 | S1402 | 480 minute 2 year Summer I+0% | 480 | 84 | 32.600 | 31.040 | -0.200 |
| 12.005 | 1205 | 480 minute 2 year Summer I+0% | 480 | 88 | 32.600 | 30.527 | -0.178 |
| 1.008 | S108 | 480 minute 2 year Summer I+0% | 480 | 74 | 32.550 | 30.346 | -0.009 |
| 16.000 | S1600 | 480 minute 2 year Summer I+0% | 480 | 83 | 32.545 | 31.444 | -0.206 |
| 16.001 | S1601 | 480 minute 2 year Summer I+0% | 480 | 89 | 32.545 | 30.478 | -0.207 |
| 1.009 | S109 | 480 minute 2 year Summer I+0% | 480 | 74 | 32.500 | 30.340 | 0.310 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.360 | 0.4 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.589 | 76.302 | 0.1 | 5.3 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.816 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.544 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.04 | | 0.007 | 14.150 | 0.6 | 1.9 | OK |
| 9.002 | S902 | 0.000 | 0.03 | | 0.019 | 18.776 | 1.3 | 2.6 | OK |
| 11.000 | S1100 | 0.000 | 0.03 | | 0.002 | 4.082 | 0.5 | 0.6 | OK |
| 9.003 | S903 | 0.000 | 0.04 | | 0.217 | 24.219 | 0.6 | 3.3 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 40.900 | 104.455 | 0.0 | 4.4 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.088 | 0.3 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.05 | | 0.003 | 6.259 | 0.5 | 0.9 | OK |
| 13.001 | S1301 | 0.000 | 0.05 | | 0.009 | 9.797 | 0.9 | 1.3 | OK |
| 12.001 | S1201 | 0.000 | 0.04 | | 0.007 | 19.049 | 0.9 | 2.6 | OK |
| 12.002 | S1202 | 0.000 | 0.08 | | 0.025 | 26.125 | 0.7 | 3.6 | OK |
| 12.003 | S1203 | 0.000 | 0.07 | | 0.031 | 26.125 | 0.8 | 3.6 | OK |
| 12.004 | S1204 | 0.000 | 0.05 | | 0.018 | 31.568 | 1.2 | 4.3 | OK |
| 14.000 | S1400 | 0.000 | 0.05 | | 0.003 | 6.531 | 0.6 | 0.9 | OK |

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## Summary Wizard of 480 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.03 | | 0.006 | 11.702 | 0.6 | 1.6 | OK |
| 15.000 | S1500 | 0.000 | 0.03 | | 0.002 | 2.449 | 0.4 | 0.3 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.005 | 6.531 | 1.1 | 0.9 | OK |
| 14.002 | S1402 | 0.000 | 0.03 | | 0.020 | 21.771 | 1.3 | 3.0 | OK |
| 12.005 | 1205 | 0.000 | 0.10 | | 0.072 | 59.325 | 1.4 | 8.1 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 46.194 | 165.878 | 0.2 | 5.0 | OK |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.004 | 9.253 | 0.9 | 1.3 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 0.008 | 10.341 | 1.1 | 1.4 | OK |
| 1.009 | S109 | 0.000 | 0.32 | | 2.495 | 176.196 | 1.0 | 5.3 | SURCHARGED |

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## Summary Wizard of 600 minute 2 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.680 | 31.786 | -0.134 | 0.000 |
| 1.001 | S101 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.680 | 31.713 | -0.137 | 0.000 |
| 2.000 | S200 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.600 | 31.493 | -0.137 | 0.000 |
| 1.002 | S102 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.630 | 31.244 | -0.201 | 0.000 |
| 3.000 | S300 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.550 | 31.854 | -0.146 | 0.000 |
| 1.003 | S103 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.600 | 31.074 | -0.201 | 0.000 |
| 4.000 | S400 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.550 | 31.707 | -0.143 | 0.000 |
| 4.001 | S401 | 600 minute 2 year Summer I+0% | 600 | 92 | 32.550 | 30.617 | -0.133 | 0.000 |
| 1.004 | S104 | 600 minute 2 year Summer I+0% | 600 | 89 | 32.600 | 30.336 | -0.194 | 0.000 |
| 1.005 | S105 | 600 minute 2 year Summer I+0% | 600 | 77 | 32.600 | 30.336 | -0.174 | 0.000 |
| 5.000 | S500 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.550 | 31.860 | -0.140 | 0.000 |
| 5.001 | S501 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.665 | 31.150 | -0.140 | 0.000 |
| 6.000 | S600 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 600 minute 2 year Summer I+0% | 600 | 89 | 32.665 | 30.851 | -0.199 | 0.000 |
| 5.003 | S503 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.680 | 30.654 | -0.201 | 0.000 |
| 7.000 | S700 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.680 | 31.901 | -0.129 | 0.000 |
| 7.001 | S701 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.635 | 31.821 | -0.124 | 0.000 |
| 5.004 | S504 | 600 minute 2 year Summer I+0% | 600 | 89 | 32.635 | 30.336 | -0.209 | 0.000 |

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## Summary Wizard of 600 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.02 | | 0.002 | 3.769 | 0.5 | 0.4 | OK |
| 1.001 | S101 | 0.02 | | 0.004 | 5.798 | 1.0 | 0.6 | OK |
| 2.000 | S200 | 0.02 | | 0.001 | 3.769 | 0.6 | 0.4 | OK |
| 1.002 | S102 | 0.02 | | 0.006 | 11.596 | 0.6 | 1.3 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 2.319 | 0.6 | 0.3 | OK |
| 1.003 | S103 | 0.03 | | 0.016 | 21.163 | 1.1 | 2.3 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 4.349 | 1.1 | 0.5 | OK |
| 4.001 | S401 | 0.03 | | 0.003 | 6.088 | 0.6 | 0.7 | OK |
| 1.004 | S104 | 0.07 | | 0.030 | 30.150 | 0.4 | 3.3 | OK |
| 1.005 | S105 | 0.03 | | 0.551 | 31.599 | 0.4 | 3.3 | OK |
| 5.000 | S500 | 0.01 | | 0.001 | 4.059 | 0.9 | 0.4 | OK |
| 5.001 | S501 | 0.01 | | 0.002 | 4.059 | 0.9 | 0.4 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.564 | 0.1 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.550 | 0.1 | 0.1 | OK |
| 5.002 | S502 | 0.03 | | 0.006 | 15.335 | 0.7 | 1.7 | OK |
| 5.003 | S503 | 0.02 | | 0.015 | 17.365 | 1.0 | 1.9 | OK |
| 7.000 | S700 | 0.05 | | 0.003 | 7.538 | 0.5 | 0.8 | OK |
| 7.001 | S701 | 0.07 | | 0.012 | 11.306 | 0.6 | 1.2 | OK |
| 5.004 | S504 | 0.05 | | 0.153 | 28.671 | 0.5 | 3.1 | OK |

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## Summary Wizard of 600 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.525 | 31.203 | -0.147 |
| 1.006 | S106 | 600 minute 2 year Summer I+0% | 600 | 77 | 32.500 | 30.336 | -1.310 |
| 9.000 | S900 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 600 minute 2 year Summer I+0% | 600 | 89 | 32.665 | 31.022 | -0.198 |
| 9.002 | S902 | 600 minute 2 year Summer I+0% | 600 | 89 | 32.640 | 30.783 | -0.202 |
| 11.000 | S1100 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.680 | 31.567 | -0.133 |
| 9.003 | S903 | 600 minute 2 year Summer I+0% | 600 | 77 | 32.630 | 30.336 | -0.159 |
| 1.007 | S107 | 600 minute 2 year Summer I+0% | 600 | 77 | 32.500 | 30.336 | -1.200 |
| 12.000 | S1200 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.635 | 31.853 | -0.147 |
| 13.000 | S1300 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.635 | 31.870 | -0.130 |
| 13.001 | S1301 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.635 | 31.779 | -0.131 |
| 12.001 | S1201 | 600 minute 2 year Summer I+0% | 600 | 89 | 32.635 | 31.437 | -0.198 |
| 12.002 | S1202 | 600 minute 2 year Summer I+0% | 600 | 89 | 32.680 | 31.074 | -0.186 |
| 12.003 | S1203 | 600 minute 2 year Summer I+0% | 600 | 89 | 32.660 | 30.980 | -0.190 |
| 12.004 | S1204 | 600 minute 2 year Summer I+0% | 600 | 89 | 32.660 | 30.841 | -0.194 |
| 14.000 | S1400 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.650 | 31.644 | -0.131 |
| 14.001 | S1401 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.680 | 31.295 | -0.200 |
| 15.000 | S1500 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.680 | 31.665 | -0.135 |
| 15.001 | S1501 | 600 minute 2 year Summer I+0% | 600 | 89 | 32.600 | 31.620 | -0.135 |
| 14.002 | S1402 | 600 minute 2 year Summer I+0% | 600 | 89 | 32.600 | 31.039 | -0.201 |
| 12.005 | 1205 | 600 minute 2 year Summer I+0% | 600 | 92 | 32.600 | 30.523 | -0.182 |
| 1.008 | S108 | 600 minute 2 year Summer I+0% | 600 | 77 | 32.550 | 30.336 | -0.019 |
| 16.000 | S1600 | 600 minute 2 year Summer I+0% | 600 | 90 | 32.545 | 31.441 | -0.209 |
| 16.001 | S1601 | 600 minute 2 year Summer I+0% | 600 | 93 | 32.545 | 30.475 | -0.210 |
| 1.009 | S109 | 600 minute 2 year Summer I+0% | 600 | 77 | 32.500 | 30.332 | 0.302 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.449 | 0.4 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.553 | 81.352 | 0.1 | 4.7 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.869 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.559 | 0.1 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.03 | | 0.006 | 15.054 | 0.6 | 1.6 | OK |
| 9.002 | S902 | 0.000 | 0.02 | | 0.018 | 19.982 | 1.3 | 2.2 | OK |
| 11.000 | S1100 | 0.000 | 0.03 | | 0.002 | 4.349 | 0.5 | 0.5 | OK |
| 9.003 | S903 | 0.000 | 0.03 | | 0.201 | 25.780 | 0.6 | 2.8 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 39.675 | 111.171 | 0.0 | 4.0 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.159 | 0.3 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.04 | | 0.002 | 6.668 | 0.5 | 0.7 | OK |
| 13.001 | S1301 | 0.000 | 0.04 | | 0.008 | 10.437 | 0.9 | 1.1 | OK |
| 12.001 | S1201 | 0.000 | 0.03 | | 0.006 | 20.293 | 0.8 | 2.2 | OK |
| 12.002 | S1202 | 0.000 | 0.07 | | 0.022 | 27.831 | 0.6 | 3.0 | OK |
| 12.003 | S1203 | 0.000 | 0.06 | | 0.028 | 27.830 | 0.8 | 3.0 | OK |
| 12.004 | S1204 | 0.000 | 0.05 | | 0.016 | 33.629 | 1.1 | 3.7 | OK |
| 14.000 | S1400 | 0.000 | 0.04 | | 0.002 | 6.958 | 0.6 | 0.8 | OK |

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## Summary Wizard of 600 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.03 | | 0.006 | 12.466 | 0.6 | 1.4 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.002 | 2.609 | 0.4 | 0.3 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.004 | 6.958 | 1.1 | 0.8 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.018 | 23.192 | 1.3 | 2.5 | OK |
| 12.005 | 1205 | 0.000 | 0.08 | | 0.065 | 63.199 | 1.3 | 6.9 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 45.040 | 176.688 | 0.2 | 5.0 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.003 | 9.857 | 0.9 | 1.1 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.006 | 11.016 | 1.1 | 1.2 | OK |
| 1.009 | S109 | 0.000 | 0.32 | | 2.453 | 187.701 | 1.0 | 5.3 | SURCHARGED |

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## Summary Wizard of 720 minute 2 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.680 | 31.785 | -0.135 | 0.000 |
| 1.001 | S101 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.680 | 31.711 | -0.139 | 0.000 |
| 2.000 | S200 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.600 | 31.491 | -0.139 | 0.000 |
| 1.002 | S102 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.630 | 31.243 | -0.202 | 0.000 |
| 3.000 | S300 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.550 | 31.854 | -0.146 | 0.000 |
| 1.003 | S103 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.600 | 31.073 | -0.202 | 0.000 |
| 4.000 | S400 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.550 | 31.706 | -0.144 | 0.000 |
| 4.001 | S401 | 720 minute 2 year Summer I+0% | 720 | 96 | 32.550 | 30.616 | -0.134 | 0.000 |
| 1.004 | S104 | 720 minute 2 year Summer I+0% | 720 | 93 | 32.600 | 30.325 | -0.205 | 0.000 |
| 1.005 | S105 | 720 minute 2 year Summer I+0% | 720 | 81 | 32.600 | 30.325 | -0.185 | 0.000 |
| 5.000 | S500 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.550 | 31.859 | -0.141 | 0.000 |
| 5.001 | S501 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.665 | 31.149 | -0.141 | 0.000 |
| 6.000 | S600 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.665 | 30.850 | -0.200 | 0.000 |
| 5.003 | S503 | 720 minute 2 year Summer I+0% | 720 | 96 | 32.680 | 30.653 | -0.202 | 0.000 |
| 7.000 | S700 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.680 | 31.900 | -0.130 | 0.000 |
| 7.001 | S701 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.635 | 31.819 | -0.126 | 0.000 |
| 5.004 | S504 | 720 minute 2 year Summer I+0% | 720 | 93 | 32.635 | 30.325 | -0.220 | 0.000 |

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## Summary Wizard of 720 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.02 | | 0.002 | 3.968 | 0.5 | 0.4 | OK |
| 1.001 | S101 | 0.02 | | 0.003 | 6.105 | 1.0 | 0.6 | OK |
| 2.000 | S200 | 0.02 | | 0.001 | 3.968 | 0.6 | 0.4 | OK |
| 1.002 | S102 | 0.02 | | 0.005 | 12.210 | 0.6 | 1.1 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 2.442 | 0.5 | 0.2 | OK |
| 1.003 | S103 | 0.02 | | 0.015 | 22.283 | 1.1 | 2.0 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 4.579 | 0.9 | 0.4 | OK |
| 4.001 | S401 | 0.03 | | 0.002 | 6.410 | 0.6 | 0.6 | OK |
| 1.004 | S104 | 0.06 | | 0.026 | 31.746 | 0.4 | 2.9 | OK |
| 1.005 | S105 | 0.03 | | 0.522 | 33.273 | 0.4 | 2.9 | OK |
| 5.000 | S500 | 0.01 | | 0.001 | 4.274 | 0.9 | 0.4 | OK |
| 5.001 | S501 | 0.01 | | 0.001 | 4.274 | 0.9 | 0.4 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.581 | 0.1 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.563 | 0.1 | 0.1 | OK |
| 5.002 | S502 | 0.03 | | 0.006 | 16.131 | 0.7 | 1.5 | OK |
| 5.003 | S503 | 0.02 | | 0.015 | 18.268 | 1.0 | 1.7 | OK |
| 7.000 | S700 | 0.04 | | 0.002 | 7.937 | 0.5 | 0.7 | OK |
| 7.001 | S701 | 0.06 | | 0.011 | 11.905 | 0.6 | 1.1 | OK |
| 5.004 | S504 | 0.04 | | 0.134 | 30.173 | 0.5 | 2.7 | OK |

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## Summary Wizard of 720 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.525 | 31.203 | -0.147 |
| 1.006 | S106 | 720 minute 2 year Summer I+0% | 720 | 81 | 32.500 | 30.325 | -1.321 |
| 9.000 | S900 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.665 | 31.021 | -0.199 |
| 9.002 | S902 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.640 | 30.781 | -0.204 |
| 11.000 | S1100 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.680 | 31.566 | -0.134 |
| 9.003 | S903 | 720 minute 2 year Summer I+0% | 720 | 81 | 32.630 | 30.325 | -0.170 |
| 1.007 | S107 | 720 minute 2 year Summer I+0% | 720 | 81 | 32.500 | 30.325 | -1.211 |
| 12.000 | S1200 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.635 | 31.852 | -0.148 |
| 13.000 | S1300 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.635 | 31.869 | -0.131 |
| 13.001 | S1301 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.635 | 31.778 | -0.132 |
| 12.001 | S1201 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.635 | 31.435 | -0.200 |
| 12.002 | S1202 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.680 | 31.071 | -0.189 |
| 12.003 | S1203 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.660 | 30.978 | -0.192 |
| 12.004 | S1204 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.660 | 30.839 | -0.196 |
| 14.000 | S1400 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.650 | 31.643 | -0.132 |
| 14.001 | S1401 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.680 | 31.294 | -0.201 |
| 15.000 | S1500 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.680 | 31.663 | -0.137 |
| 15.001 | S1501 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.600 | 31.618 | -0.137 |
| 14.002 | S1402 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.600 | 31.038 | -0.202 |
| 12.005 | 1205 | 720 minute 2 year Summer I+0% | 720 | 97 | 32.600 | 30.520 | -0.185 |
| 1.008 | S108 | 720 minute 2 year Summer I+0% | 720 | 81 | 32.550 | 30.325 | -0.030 |
| 16.000 | S1600 | 720 minute 2 year Summer I+0% | 720 | 95 | 32.545 | 31.439 | -0.211 |
| 16.001 | S1601 | 720 minute 2 year Summer I+0% | 720 | 97 | 32.545 | 30.473 | -0.212 |
| 1.009 | S109 | 720 minute 2 year Summer I+0% | 720 | 81 | 32.500 | 30.322 | 0.292 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.526 | 0.3 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.515 | 85.769 | 0.1 | 4.3 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.915 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.574 | 0.1 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.03 | | 0.006 | 15.836 | 0.6 | 1.4 | OK |
| 9.002 | S902 | 0.000 | 0.02 | | 0.015 | 21.026 | 1.3 | 1.9 | OK |
| 11.000 | S1100 | 0.000 | 0.03 | | 0.002 | 4.579 | 0.5 | 0.4 | OK |
| 9.003 | S903 | 0.000 | 0.03 | | 0.184 | 27.131 | 0.6 | 2.5 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 38.407 | 117.205 | 0.0 | 3.8 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.221 | 0.2 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.04 | | 0.002 | 7.021 | 0.5 | 0.6 | OK |
| 13.001 | S1301 | 0.000 | 0.04 | | 0.008 | 10.989 | 0.8 | 1.0 | OK |
| 12.001 | S1201 | 0.000 | 0.03 | | 0.006 | 21.368 | 0.8 | 1.9 | OK |
| 12.002 | S1202 | 0.000 | 0.06 | | 0.020 | 29.304 | 0.6 | 2.7 | OK |
| 12.003 | S1203 | 0.000 | 0.05 | | 0.026 | 29.304 | 0.7 | 2.7 | OK |
| 12.004 | S1204 | 0.000 | 0.04 | | 0.015 | 35.409 | 1.1 | 3.2 | OK |
| 14.000 | S1400 | 0.000 | 0.04 | | 0.002 | 7.326 | 0.5 | 0.7 | OK |

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## Summary Wizard of 720 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.02 | | 0.006 | 13.126 | 0.6 | 1.2 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.001 | 2.747 | 0.4 | 0.2 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.003 | 7.326 | 1.1 | 0.7 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.017 | 24.420 | 1.3 | 2.2 | OK |
| 12.005 | 1205 | 0.000 | 0.07 | | 0.059 | 66.545 | 1.3 | 6.0 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 43.859 | 186.192 | 0.2 | 4.9 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.003 | 10.379 | 0.9 | 0.9 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.005 | 11.600 | 1.0 | 1.1 | OK |
| 1.009 | S109 | 0.000 | 0.31 | | 2.404 | 197.789 | 1.0 | 5.2 | SURCHARGED |

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## Summary Wizard of 960 minute 2 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.680 | 31.783 | -0.137 | 0.000 |
| 1.001 | S101 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.680 | 31.709 | -0.141 | 0.000 |
| 2.000 | S200 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.600 | 31.489 | -0.141 | 0.000 |
| 1.002 | S102 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.630 | 31.239 | -0.206 | 0.000 |
| 3.000 | S300 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.550 | 31.853 | -0.147 | 0.000 |
| 1.003 | S103 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.600 | 31.070 | -0.205 | 0.000 |
| 4.000 | S400 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.550 | 31.705 | -0.145 | 0.000 |
| 4.001 | S401 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.550 | 30.615 | -0.135 | 0.000 |
| 1.004 | S104 | 960 minute 2 year Summer I+0% | 960 | 98 | 32.600 | 30.302 | -0.228 | 0.000 |
| 1.005 | S105 | 960 minute 2 year Summer I+0% | 960 | 85 | 32.600 | 30.302 | -0.208 | 0.000 |
| 5.000 | S500 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.550 | 31.857 | -0.143 | 0.000 |
| 5.001 | S501 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.665 | 31.147 | -0.143 | 0.000 |
| 6.000 | S600 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.665 | 30.848 | -0.202 | 0.000 |
| 5.003 | S503 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.680 | 30.648 | -0.207 | 0.000 |
| 7.000 | S700 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.680 | 31.898 | -0.132 | 0.000 |
| 7.001 | S701 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.635 | 31.817 | -0.128 | 0.000 |
| 5.004 | S504 | 960 minute 2 year Summer I+0% | 960 | 99 | 32.635 | 30.302 | -0.243 | 0.000 |

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## Summary Wizard of 960 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.02 | | 0.001 | 4.305 | 0.5 | 0.3 | OK |
| 1.001 | S101 | 0.01 | | 0.002 | 6.622 | 1.0 | 0.5 | OK |
| 2.000 | S200 | 0.01 | | 0.001 | 4.305 | 0.7 | 0.3 | OK |
| 1.002 | S102 | 0.02 | | 0.004 | 13.245 | 0.7 | 0.9 | OK |
| 3.000 | S300 | 0.00 | | 0.000 | 2.649 | 0.4 | 0.2 | OK |
| 1.003 | S103 | 0.02 | | 0.013 | 24.172 | 1.1 | 1.6 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 4.967 | 0.8 | 0.3 | OK |
| 4.001 | S401 | 0.02 | | 0.002 | 6.953 | 0.6 | 0.5 | OK |
| 1.004 | S104 | 0.05 | | 0.020 | 34.436 | 0.4 | 2.3 | OK |
| 1.005 | S105 | 0.02 | | 0.461 | 36.092 | 0.4 | 2.4 | OK |
| 5.000 | S500 | 0.01 | | 0.000 | 4.636 | 0.7 | 0.3 | OK |
| 5.001 | S501 | 0.01 | | 0.001 | 4.636 | 0.7 | 0.3 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.604 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.589 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.02 | | 0.005 | 17.476 | 0.7 | 1.2 | OK |
| 5.003 | S503 | 0.02 | | 0.011 | 19.794 | 1.0 | 1.4 | OK |
| 7.000 | S700 | 0.03 | | 0.002 | 8.609 | 0.5 | 0.6 | OK |
| 7.001 | S701 | 0.05 | | 0.009 | 12.914 | 0.6 | 0.9 | OK |
| 5.004 | S504 | 0.04 | | 0.093 | 32.708 | 0.5 | 2.2 | OK |

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## Summary Wizard of 960 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.525 | 31.202 | -0.148 |
| 1.006 | S106 | 960 minute 2 year Summer I+0% | 960 | 85 | 32.500 | 30.302 | -1.344 |
| 9.000 | S900 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.665 | 31.019 | -0.201 |
| 9.002 | S902 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.640 | 30.777 | -0.208 |
| 11.000 | S1100 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.680 | 31.565 | -0.135 |
| 9.003 | S903 | 960 minute 2 year Summer I+0% | 960 | 85 | 32.630 | 30.302 | -0.193 |
| 1.007 | S107 | 960 minute 2 year Summer I+0% | 960 | 85 | 32.500 | 30.302 | -1.234 |
| 12.000 | S1200 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.635 | 31.852 | -0.148 |
| 13.000 | S1300 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.635 | 31.867 | -0.133 |
| 13.001 | S1301 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.635 | 31.777 | -0.133 |
| 12.001 | S1201 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.635 | 31.433 | -0.202 |
| 12.002 | S1202 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.680 | 31.068 | -0.192 |
| 12.003 | S1203 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.660 | 30.974 | -0.196 |
| 12.004 | S1204 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.660 | 30.836 | -0.199 |
| 14.000 | S1400 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.650 | 31.642 | -0.133 |
| 14.001 | S1401 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.680 | 31.292 | -0.203 |
| 15.000 | S1500 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.680 | 31.661 | -0.139 |
| 15.001 | S1501 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.600 | 31.616 | -0.139 |
| 14.002 | S1402 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.600 | 31.034 | -0.206 |
| 12.005 | 1205 | 960 minute 2 year Summer I+0% | 960 | 104 | 32.600 | 30.515 | -0.190 |
| 1.008 | S108 | 960 minute 2 year Summer I+0% | 960 | 85 | 32.550 | 30.302 | -0.053 |
| 16.000 | S1600 | 960 minute 2 year Summer I+0% | 960 | 103 | 32.545 | 31.436 | -0.214 |
| 16.001 | S1601 | 960 minute 2 year Summer I+0% | 960 | 104 | 32.545 | 30.471 | -0.214 |
| 1.009 | S109 | 960 minute 2 year Summer I+0% | 960 | 85 | 32.500 | 30.300 | 0.270 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.655 | 0.3 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.435 | 93.198 | 0.1 | 3.7 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.993 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.599 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.02 | | 0.005 | 17.155 | 0.6 | 1.2 | OK |
| 9.002 | S902 | 0.000 | 0.02 | | 0.012 | 22.784 | 1.3 | 1.6 | OK |
| 11.000 | S1100 | 0.000 | 0.02 | | 0.002 | 4.967 | 0.5 | 0.3 | OK |
| 9.003 | S903 | 0.000 | 0.02 | | 0.147 | 29.406 | 0.6 | 2.0 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 35.706 | 127.548 | 0.0 | 3.6 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.324 | 0.2 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.03 | | 0.002 | 7.616 | 0.5 | 0.5 | OK |
| 13.001 | S1301 | 0.000 | 0.03 | | 0.007 | 11.921 | 0.8 | 0.8 | OK |
| 12.001 | S1201 | 0.000 | 0.02 | | 0.005 | 23.179 | 0.8 | 1.6 | OK |
| 12.002 | S1202 | 0.000 | 0.05 | | 0.018 | 31.788 | 0.6 | 2.2 | OK |
| 12.003 | S1203 | 0.000 | 0.04 | | 0.023 | 31.788 | 0.7 | 2.2 | OK |
| 12.004 | S1204 | 0.000 | 0.03 | | 0.013 | 38.410 | 1.0 | 2.6 | OK |
| 14.000 | S1400 | 0.000 | 0.03 | | 0.002 | 7.947 | 0.5 | 0.5 | OK |

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## Summary Wizard of 960 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.02 | | 0.005 | 14.238 | 0.6 | 1.0 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.001 | 2.980 | 0.4 | 0.2 | OK |
| 15.001 | S1501 | 0.000 | 0.01 | | 0.002 | 7.947 | 1.1 | 0.5 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.013 | 26.490 | 1.3 | 1.8 | OK |
| 12.005 | 1205 | 0.000 | 0.06 | | 0.052 | 72.185 | 1.2 | 4.9 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 41.322 | 202.382 | 0.2 | 4.8 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.002 | 11.258 | 0.8 | 0.8 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.004 | 12.583 | 0.8 | 0.9 | OK |
| 1.009 | S109 | 0.000 | 0.31 | | 2.292 | 214.962 | 0.9 | 5.1 | SURCHARGED |

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## Summary Wizard of 1440 minute 2 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.680 | 31.779 | -0.141 |
| 1.001 | S101 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.680 | 31.707 | -0.143 |
| 2.000 | S200 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.600 | 31.487 | -0.143 |
| 1.002 | S102 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.630 | 31.234 | -0.211 |
| 3.000 | S300 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.550 | 31.852 | -0.148 |
| 1.003 | S103 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.600 | 31.065 | -0.210 |
| 4.000 | S400 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.550 | 31.704 | -0.146 |
| 4.001 | S401 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.550 | 30.612 | -0.138 |
| 1.004 | S104 | 1440 minute 2 year Summer I+0% | 1440 | 114 | 32.600 | 30.267 | -0.263 |
| 1.005 | S105 | 1440 minute 2 year Summer I+0% | 1440 | 96 | 32.600 | 30.258 | -0.252 |
| 5.000 | S500 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.550 | 31.855 | -0.145 |
| 5.001 | S501 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.665 | 31.145 | -0.145 |
| 6.000 | S600 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.665 | 31.851 | -0.149 |
| 6.001 | S601 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.665 | 31.141 | -0.149 |
| 5.002 | S502 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.665 | 30.843 | -0.207 |
| 5.003 | S503 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.680 | 30.644 | -0.211 |
| 7.000 | S700 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.680 | 31.896 | -0.134 |
| 7.001 | S701 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.635 | 31.814 | -0.131 |
| 5.004 | S504 | 1440 minute 2 year Summer I+0% | 1440 | 113 | 32.635 | 30.278 | -0.267 |

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## Summary Wizard of 1440 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.01 | | 0.001 | 4.828 | 0.5 | 0.2 | OK |
| 1.001 | S101 | 0.000 | 0.01 | | 0.001 | 7.427 | 0.7 | 0.3 | OK |
| 2.000 | S200 | 0.000 | 0.01 | | 0.000 | 4.828 | 0.5 | 0.2 | OK |
| 1.002 | S102 | 0.000 | 0.01 | | 0.003 | 14.854 | 0.6 | 0.7 | OK |
| 3.000 | S300 | 0.000 | 0.00 | | 0.000 | 2.971 | 0.3 | 0.1 | OK |
| 1.003 | S103 | 0.000 | 0.01 | | 0.008 | 27.109 | 1.1 | 1.2 | OK |
| 4.000 | S400 | 0.000 | 0.01 | | 0.000 | 5.570 | 0.6 | 0.3 | OK |
| 4.001 | S401 | 0.000 | 0.02 | | 0.001 | 7.798 | 0.6 | 0.4 | OK |
| 1.004 | S104 | 0.000 | 0.04 | | 0.009 | 38.621 | 0.3 | 1.8 | OK |
| 1.005 | S105 | 0.000 | 0.02 | | 0.351 | 40.478 | 0.3 | 1.8 | OK |
| 5.000 | S500 | 0.000 | 0.01 | | 0.000 | 5.199 | 0.5 | 0.2 | OK |
| 5.001 | S501 | 0.000 | 0.01 | | 0.000 | 5.199 | 0.5 | 0.2 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 0.649 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.000 | 0.636 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.000 | 0.02 | | 0.004 | 19.576 | 0.7 | 0.9 | OK |
| 5.003 | S503 | 0.000 | 0.01 | | 0.007 | 22.175 | 1.0 | 1.0 | OK |
| 7.000 | S700 | 0.000 | 0.03 | | 0.002 | 9.656 | 0.5 | 0.4 | OK |
| 7.001 | S701 | 0.000 | 0.04 | | 0.008 | 14.483 | 0.5 | 0.7 | OK |
| 5.004 | S504 | 0.000 | 0.03 | | 0.049 | 36.658 | 0.4 | 1.7 | OK |

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## Summary Wizard of 1440 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.525 | 31.202 | -0.148 |
| 1.006 | S106 | 1440 minute 2 year Summer I+0% | 1440 | 96 | 32.500 | 30.258 | -1.388 |
| 9.000 | S900 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.665 | 31.015 | -0.205 |
| 9.002 | S902 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.640 | 30.773 | -0.212 |
| 11.000 | S1100 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.680 | 31.561 | -0.139 |
| 9.003 | S903 | 1440 minute 2 year Summer I+0% | 1440 | 107 | 32.630 | 30.259 | -0.236 |
| 1.007 | S107 | 1440 minute 2 year Summer I+0% | 1440 | 96 | 32.500 | 30.258 | -1.278 |
| 12.000 | S1200 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.635 | 31.851 | -0.149 |
| 13.000 | S1300 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.635 | 31.865 | -0.135 |
| 13.001 | S1301 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.635 | 31.775 | -0.135 |
| 12.001 | S1201 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.635 | 31.429 | -0.206 |
| 12.002 | S1202 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.680 | 31.063 | -0.197 |
| 12.003 | S1203 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.660 | 30.971 | -0.199 |
| 12.004 | S1204 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.660 | 30.834 | -0.201 |
| 14.000 | S1400 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.650 | 31.640 | -0.135 |
| 14.001 | S1401 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.680 | 31.286 | -0.209 |
| 15.000 | S1500 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.680 | 31.658 | -0.142 |
| 15.001 | S1501 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.600 | 31.613 | -0.142 |
| 14.002 | S1402 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.600 | 31.029 | -0.211 |
| 12.005 | 1205 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.600 | 30.510 | -0.195 |
| 1.008 | S108 | 1440 minute 2 year Summer I+0% | 1440 | 96 | 32.550 | 30.258 | -0.097 |
| 16.000 | S1600 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.545 | 31.434 | -0.216 |
| 16.001 | S1601 | 1440 minute 2 year Summer I+0% | 1440 | 112 | 32.545 | 30.468 | -0.217 |
| 1.009 | S109 | 1440 minute 2 year Summer I+0% | 1440 | 96 | 32.500 | 30.257 | 0.227 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.833 | 0.2 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.284 | 104.236 | 0.1 | 3.0 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.045 | 0.1 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.643 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.02 | | 0.004 | 19.142 | 0.6 | 0.9 | OK |
| 9.002 | S902 | 0.000 | 0.01 | | 0.007 | 25.455 | 1.1 | 1.2 | OK |
| 11.000 | S1100 | 0.000 | 0.02 | | 0.001 | 5.570 | 0.5 | 0.3 | OK |
| 9.003 | S903 | 0.000 | 0.02 | | 0.084 | 32.882 | 0.6 | 1.5 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 30.594 | 142.225 | 0.0 | 3.2 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.485 | 0.1 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.02 | | 0.002 | 8.541 | 0.5 | 0.4 | OK |
| 13.001 | S1301 | 0.000 | 0.02 | | 0.006 | 13.369 | 0.8 | 0.6 | OK |
| 12.001 | S1201 | 0.000 | 0.02 | | 0.004 | 25.995 | 0.8 | 1.2 | OK |
| 12.002 | S1202 | 0.000 | 0.04 | | 0.015 | 35.651 | 0.6 | 1.6 | OK |
| 12.003 | S1203 | 0.000 | 0.03 | | 0.019 | 35.651 | 0.7 | 1.6 | OK |
| 12.004 | S1204 | 0.000 | 0.02 | | 0.012 | 43.078 | 1.0 | 2.0 | OK |
| 14.000 | S1400 | 0.000 | 0.02 | | 0.002 | 8.913 | 0.5 | 0.4 | OK |

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## Summary Wizard of 1440 minute 2 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.02 | | 0.003 | 15.969 | 0.6 | 0.7 | OK |
| 15.000 | S1500 | 0.000 | 0.01 | | 0.001 | 3.342 | 0.3 | 0.2 | OK |
| 15.001 | S1501 | 0.000 | 0.01 | | 0.001 | 8.913 | 0.9 | 0.4 | OK |
| 14.002 | S1402 | 0.000 | 0.01 | | 0.009 | 29.709 | 1.3 | 1.3 | OK |
| 12.005 | 1205 | 0.000 | 0.04 | | 0.043 | 80.956 | 1.2 | 3.7 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 36.535 | 226.152 | 0.2 | 4.6 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.001 | 12.626 | 0.6 | 0.6 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.002 | 14.112 | 0.6 | 0.6 | OK |
| 1.009 | S109 | 0.000 | 0.29 | | 2.035 | 240.261 | 0.9 | 4.8 | SURCHARGED |

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## Summary Wizard of 15 minute 5 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 15 minute 5 year Summer I+0% | 15 | 25 | 32.680 | 31.816 | -0.104 | 0.000 |
| 1.001 | S101 | 15 minute 5 year Summer I+0% | 15 | 25 | 32.680 | 31.737 | -0.113 | 0.000 |
| 2.000 | S200 | 15 minute 5 year Summer I+0% | 15 | 27 | 32.600 | 31.518 | -0.112 | 0.000 |
| 1.002 | S102 | 15 minute 5 year Summer I+0% | 15 | 30 | 32.630 | 31.287 | -0.158 | 0.000 |
| 3.000 | S300 | 15 minute 5 year Summer I+0% | 15 | 24 | 32.550 | 31.872 | -0.128 | 0.000 |
| 1.003 | S103 | 15 minute 5 year Summer I+0% | 15 | 30 | 32.600 | 31.118 | -0.157 | 0.000 |
| 4.000 | S400 | 15 minute 5 year Summer I+0% | 15 | 25 | 32.550 | 31.727 | -0.123 | 0.000 |
| 4.001 | S401 | 15 minute 5 year Summer I+0% | 15 | 46 | 32.550 | 30.650 | -0.100 | 0.000 |
| 1.004 | S104 | 15 minute 5 year Summer I+0% | 15 | 66 | 32.600 | 30.385 | -0.145 | 0.000 |
| 1.005 | S105 | 15 minute 5 year Summer I+0% | 15 | 100 | 32.600 | 30.252 | -0.258 | 0.000 |
| 5.000 | S500 | 15 minute 5 year Summer I+0% | 15 | 23 | 32.550 | 31.883 | -0.117 | 0.000 |
| 5.001 | S501 | 15 minute 5 year Summer I+0% | 15 | 30 | 32.665 | 31.174 | -0.116 | 0.000 |
| 6.000 | S600 | 15 minute 5 year Summer I+0% | 15 | 25 | 32.665 | 31.860 | -0.140 | 0.000 |
| 6.001 | S601 | 15 minute 5 year Summer I+0% | 15 | 30 | 32.665 | 31.152 | -0.138 | 0.000 |
| 5.002 | S502 | 15 minute 5 year Summer I+0% | 15 | 30 | 32.665 | 30.899 | -0.151 | 0.000 |
| 5.003 | S503 | 15 minute 5 year Summer I+0% | 15 | 45 | 32.680 | 30.693 | -0.162 | 0.000 |
| 7.000 | S700 | 15 minute 5 year Summer I+0% | 15 | 23 | 32.680 | 31.945 | -0.085 | 0.000 |
| 7.001 | S701 | 15 minute 5 year Summer I+0% | 15 | 24 | 32.635 | 31.875 | -0.070 | 0.000 |
| 5.004 | S504 | 15 minute 5 year Summer I+0% | 15 | 66 | 32.635 | 30.373 | -0.172 | 0.000 |

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## Summary Wizard of 15 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.20 | | 0.006 | 1.459 | 0.7 | 3.3 | OK |
| 1.001 | S101 | 0.14 | | 0.017 | 2.244 | 1.4 | 4.8 | OK |
| 2.000 | S200 | 0.15 | | 0.005 | 1.459 | 0.9 | 3.3 | OK |
| 1.002 | S102 | 0.19 | | 0.018 | 4.488 | 1.0 | 9.6 | OK |
| 3.000 | S300 | 0.05 | | 0.003 | 0.898 | 1.3 | 2.1 | OK |
| 1.003 | S103 | 0.20 | | 0.052 | 8.191 | 1.7 | 17.0 | OK |
| 4.000 | S400 | 0.08 | | 0.004 | 1.683 | 1.8 | 3.9 | OK |
| 4.001 | S401 | 0.25 | | 0.010 | 2.357 | 1.0 | 5.1 | OK |
| 1.004 | S104 | 0.51 | | 0.064 | 11.669 | 0.7 | 24.2 | OK |
| 1.005 | S105 | 0.23 | | 0.338 | 11.973 | 0.6 | 25.4 | OK |
| 5.000 | S500 | 0.11 | | 0.005 | 1.571 | 1.2 | 3.6 | OK |
| 5.001 | S501 | 0.12 | | 0.009 | 1.571 | 1.2 | 3.6 | OK |
| 6.000 | S600 | 0.01 | | 0.001 | 0.224 | 1.1 | 0.5 | OK |
| 6.001 | S601 | 0.02 | | 0.002 | 0.224 | 0.9 | 0.5 | OK |
| 5.002 | S502 | 0.23 | | 0.020 | 5.947 | 1.1 | 12.1 | OK |
| 5.003 | S503 | 0.17 | | 0.048 | 6.732 | 1.5 | 13.5 | OK |
| 7.000 | S700 | 0.39 | | 0.010 | 2.917 | 0.9 | 6.7 | OK |
| 7.001 | S701 | 0.55 | | 0.042 | 4.376 | 1.0 | 9.4 | OK |
| 5.004 | S504 | 0.37 | | 0.223 | 11.108 | 0.8 | 22.9 | OK |

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## Summary Wizard of 15 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 15 minute 5 year Summer I+0% | 15 | 30 | 32.525 | 31.218 | -0.132 | 0.000 |
| 1.006 | S106 | 15 minute 5 year Summer I+0% | 15 | 101 | 32.500 | 30.252 | -1.394 | 0.000 |
| 9.000 | S900 | 15 minute 5 year Summer I+0% | 15 | 25 | 32.665 | 31.865 | -0.135 | 0.000 |
| 10.000 | S901 | 15 minute 5 year Summer I+0% | 15 | 25 | 32.665 | 31.859 | -0.141 | 0.000 |
| 9.001 | S901 | 15 minute 5 year Summer I+0% | 15 | 30 | 32.665 | 31.070 | -0.150 | 0.000 |
| 9.002 | S902 | 15 minute 5 year Summer I+0% | 15 | 30 | 32.640 | 30.819 | -0.166 | 0.000 |
| 11.000 | S1100 | 15 minute 5 year Summer I+0% | 15 | 26 | 32.680 | 31.599 | -0.101 | 0.000 |
| 9.003 | S903 | 15 minute 5 year Summer I+0% | 15 | 88 | 32.630 | 30.295 | -0.200 | 0.000 |
| 1.007 | S107 | 15 minute 5 year Summer I+0% | 15 | 101 | 32.500 | 30.252 | -1.284 | 0.000 |
| 12.000 | S1200 | 15 minute 5 year Summer I+0% | 15 | 25 | 32.635 | 31.867 | -0.133 | 0.000 |
| 13.000 | S1300 | 15 minute 5 year Summer I+0% | 15 | 23 | 32.635 | 31.911 | -0.089 | 0.000 |
| 13.001 | S1301 | 15 minute 5 year Summer I+0% | 15 | 25 | 32.635 | 31.818 | -0.092 | 0.000 |
| 12.001 | S1201 | 15 minute 5 year Summer I+0% | 15 | 28 | 32.635 | 31.486 | -0.149 | 0.000 |
| 12.002 | S1202 | 15 minute 5 year Summer I+0% | 15 | 30 | 32.680 | 31.151 | -0.109 | 0.000 |
| 12.003 | S1203 | 15 minute 5 year Summer I+0% | 15 | 30 | 32.660 | 31.047 | -0.123 | 0.000 |
| 12.004 | S1204 | 15 minute 5 year Summer I+0% | 15 | 30 | 32.660 | 30.899 | -0.136 | 0.000 |
| 14.000 | S1400 | 15 minute 5 year Summer I+0% | 15 | 25 | 32.650 | 31.684 | -0.091 | 0.000 |
| 14.001 | S1401 | 15 minute 5 year Summer I+0% | 15 | 30 | 32.680 | 31.341 | -0.154 | 0.000 |
| 15.000 | S1500 | 15 minute 5 year Summer I+0% | 15 | 25 | 32.680 | 31.692 | -0.108 | 0.000 |
| 15.001 | S1501 | 15 minute 5 year Summer I+0% | 15 | 26 | 32.600 | 31.644 | -0.111 | 0.000 |
| 14.002 | S1402 | 15 minute 5 year Summer I+0% | 15 | 30 | 32.600 | 31.080 | -0.160 | 0.000 |
| 12.005 | 1205 | 15 minute 5 year Summer I+0% | 15 | 48 | 32.600 | 30.605 | -0.100 | 0.000 |
| 1.008 | S108 | 15 minute 5 year Summer I+0% | 15 | 101 | 32.550 | 30.252 | -0.103 | 0.000 |
| 16.000 | S1600 | 15 minute 5 year Summer I+0% | 15 | 28 | 32.545 | 31.477 | -0.173 | 0.000 |
| 16.001 | S1601 | 15 minute 5 year Summer I+0% | 15 | 49 | 32.545 | 30.511 | -0.174 | 0.000 |
| 1.009 | S109 | 15 minute 5 year Summer I+0% | 15 | 101 | 32.500 | 30.251 | 0.221 | 0.000 |

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.03 | | 0.014 | 0.561 | 1.1 | 1.3 | OK |
| 1.006 | S106 | 0.02 | | 0.260 | 20.297 | 0.3 | 40.2 | OK |
| 9.000 | S900 | 0.02 | | 0.002 | 0.337 | 1.0 | 0.8 | OK |
| 10.000 | S901 | 0.01 | | 0.001 | 0.224 | 1.1 | 0.5 | OK |
| 9.001 | S901 | 0.24 | | 0.020 | 5.834 | 1.0 | 11.4 | OK |
| 9.002 | S902 | 0.15 | | 0.053 | 7.741 | 1.8 | 15.0 | OK |
| 11.000 | S1100 | 0.23 | | 0.007 | 1.683 | 0.8 | 3.9 | OK |
| 9.003 | S903 | 0.24 | | 0.136 | 9.971 | 1.0 | 19.8 | OK |
| 1.007 | S107 | 0.00 | | 29.806 | 17.815 | 0.2 | 22.6 | OK |
| 12.000 | S1200 | 0.03 | | 0.002 | 0.449 | 0.9 | 1.0 | OK |
| 13.000 | S1300 | 0.35 | | 0.009 | 2.581 | 0.9 | 5.9 | OK |
| 13.001 | S1301 | 0.31 | | 0.030 | 4.039 | 1.4 | 8.7 | OK |
| 12.001 | S1201 | 0.25 | | 0.021 | 7.854 | 1.4 | 16.2 | OK |
| 12.002 | S1202 | 0.51 | | 0.082 | 10.770 | 1.1 | 21.7 | OK |
| 12.003 | S1203 | 0.42 | | 0.091 | 10.770 | 1.3 | 21.6 | OK |
| 12.004 | S1204 | 0.32 | | 0.052 | 13.014 | 1.8 | 25.9 | OK |
| 14.000 | S1400 | 0.32 | | 0.009 | 2.692 | 1.0 | 6.1 | OK |

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Summary Wizard of 15 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.21 | | 0.020 | 4.824 | 1.0 | 10.1 | OK |
| 15.000 | S1500 | 0.17 | | 0.006 | 1.010 | 0.6 | 2.3 | OK |
| 15.001 | S1501 | 0.15 | | 0.015 | 2.693 | 1.5 | 5.6 | OK |
| 14.002 | S1402 | 0.18 | | 0.059 | 8.975 | 2.0 | 18.3 | OK |
| 12.005 | 1205 | 0.59 | | 0.223 | 24.457 | 2.2 | 49.2 | OK |
| 1.008 | S108 | 0.05 | | 35.798 | 12.202 | 0.0 | 4.8 | OK |
| 16.000 | S1600 | 0.12 | | 0.013 | 3.814 | 1.3 | 8.6 | OK |
| 16.001 | S1601 | 0.11 | | 0.029 | 4.263 | 1.4 | 9.4 | OK |
| 1.009 | S109 | 0.29 | | 1.991 | 14.719 | 0.9 | 4.8 | SURCHARGED |

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## Summary Wizard of 30 minute 5 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 30 minute 5 year Summer I+0% | 30 | 27 | 32.680 | 31.813 | -0.107 | 0.000 |
| 1.001 | S101 | 30 minute 5 year Summer I+0% | 30 | 28 | 32.680 | 31.735 | -0.115 | 0.000 |
| 2.000 | S200 | 30 minute 5 year Summer I+0% | 30 | 29 | 32.600 | 31.516 | -0.114 | 0.000 |
| 1.002 | S102 | 30 minute 5 year Summer I+0% | 30 | 32 | 32.630 | 31.283 | -0.162 | 0.000 |
| 3.000 | S300 | 30 minute 5 year Summer I+0% | 30 | 26 | 32.550 | 31.870 | -0.130 | 0.000 |
| 1.003 | S103 | 30 minute 5 year Summer I+0% | 30 | 32 | 32.600 | 31.114 | -0.161 | 0.000 |
| 4.000 | S400 | 30 minute 5 year Summer I+0% | 30 | 27 | 32.550 | 31.726 | -0.124 | 0.000 |
| 4.001 | S401 | 30 minute 5 year Summer I+0% | 30 | 48 | 32.550 | 30.648 | -0.102 | 0.000 |
| 1.004 | S104 | 30 minute 5 year Summer I+0% | 30 | 68 | 32.600 | 30.376 | -0.154 | 0.000 |
| 1.005 | S105 | 30 minute 5 year Summer I+0% | 30 | 80 | 32.600 | 30.330 | -0.180 | 0.000 |
| 5.000 | S500 | 30 minute 5 year Summer I+0% | 30 | 26 | 32.550 | 31.882 | -0.118 | 0.000 |
| 5.001 | S501 | 30 minute 5 year Summer I+0% | 30 | 32 | 32.665 | 31.172 | -0.118 | 0.000 |
| 6.000 | S600 | 30 minute 5 year Summer I+0% | 30 | 27 | 32.665 | 31.859 | -0.141 | 0.000 |
| 6.001 | S601 | 30 minute 5 year Summer I+0% | 30 | 32 | 32.665 | 31.151 | -0.139 | 0.000 |
| 5.002 | S502 | 30 minute 5 year Summer I+0% | 30 | 32 | 32.665 | 30.896 | -0.154 | 0.000 |
| 5.003 | S503 | 30 minute 5 year Summer I+0% | 30 | 47 | 32.680 | 30.690 | -0.165 | 0.000 |
| 7.000 | S700 | 30 minute 5 year Summer I+0% | 30 | 26 | 32.680 | 31.942 | -0.088 | 0.000 |
| 7.001 | S701 | 30 minute 5 year Summer I+0% | 30 | 27 | 32.635 | 31.870 | -0.075 | 0.000 |
| 5.004 | S504 | 30 minute 5 year Summer I+0% | 30 | 69 | 32.635 | 30.367 | -0.178 | 0.000 |

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## Summary Wizard of 30 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.18 | | 0.006 | 1.906 | 0.7 | 3.0 | OK |
| 1.001 | S101 | 0.13 | | 0.016 | 2.932 | 1.4 | 4.4 | OK |
| 2.000 | S200 | 0.13 | | 0.005 | 1.906 | 0.9 | 3.0 | OK |
| 1.002 | S102 | 0.18 | | 0.017 | 5.864 | 1.0 | 8.9 | OK |
| 3.000 | S300 | 0.05 | | 0.002 | 1.173 | 1.3 | 1.9 | OK |
| 1.003 | S103 | 0.18 | | 0.049 | 10.701 | 1.7 | 15.8 | OK |
| 4.000 | S400 | 0.07 | | 0.003 | 2.199 | 1.7 | 3.5 | OK |
| 4.001 | S401 | 0.22 | | 0.009 | 3.079 | 1.0 | 4.7 | OK |
| 1.004 | S104 | 0.48 | | 0.058 | 15.226 | 0.7 | 22.5 | OK |
| 1.005 | S105 | 0.21 | | 0.535 | 15.501 | 0.6 | 23.4 | OK |
| 5.000 | S500 | 0.10 | | 0.004 | 2.053 | 1.2 | 3.2 | OK |
| 5.001 | S501 | 0.11 | | 0.008 | 2.053 | 1.2 | 3.2 | OK |
| 6.000 | S600 | 0.01 | | 0.001 | 0.293 | 1.0 | 0.5 | OK |
| 6.001 | S601 | 0.02 | | 0.002 | 0.293 | 0.9 | 0.5 | OK |
| 5.002 | S502 | 0.22 | | 0.019 | 7.770 | 1.0 | 11.2 | OK |
| 5.003 | S503 | 0.16 | | 0.046 | 8.796 | 1.5 | 12.6 | OK |
| 7.000 | S700 | 0.36 | | 0.009 | 3.812 | 0.9 | 6.0 | OK |
| 7.001 | S701 | 0.51 | | 0.039 | 5.717 | 1.0 | 8.7 | OK |
| 5.004 | S504 | 0.35 | | 0.210 | 14.424 | 0.8 | 21.2 | OK |

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## Summary Wizard of 30 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 30 minute 5 year Summer I+0% | 30 | 32 | 32.525 | 31.217 | -0.133 | 0.000 |
| 1.006 | S106 | 30 minute 5 year Summer I+0% | 30 | 80 | 32.500 | 30.330 | -1.316 | 0.000 |
| 9.000 | S900 | 30 minute 5 year Summer I+0% | 30 | 27 | 32.665 | 31.863 | -0.137 | 0.000 |
| 10.000 | S901 | 30 minute 5 year Summer I+0% | 30 | 27 | 32.665 | 31.858 | -0.142 | 0.000 |
| 9.001 | S901 | 30 minute 5 year Summer I+0% | 30 | 32 | 32.665 | 31.067 | -0.153 | 0.000 |
| 9.002 | S902 | 30 minute 5 year Summer I+0% | 30 | 32 | 32.640 | 30.816 | -0.169 | 0.000 |
| 11.000 | S1100 | 30 minute 5 year Summer I+0% | 30 | 28 | 32.680 | 31.597 | -0.103 | 0.000 |
| 9.003 | S903 | 30 minute 5 year Summer I+0% | 30 | 80 | 32.630 | 30.330 | -0.165 | 0.000 |
| 1.007 | S107 | 30 minute 5 year Summer I+0% | 30 | 80 | 32.500 | 30.330 | -1.206 | 0.000 |
| 12.000 | S1200 | 30 minute 5 year Summer I+0% | 30 | 27 | 32.635 | 31.867 | -0.133 | 0.000 |
| 13.000 | S1300 | 30 minute 5 year Summer I+0% | 30 | 26 | 32.635 | 31.907 | -0.093 | 0.000 |
| 13.001 | S1301 | 30 minute 5 year Summer I+0% | 30 | 28 | 32.635 | 31.814 | -0.096 | 0.000 |
| 12.001 | S1201 | 30 minute 5 year Summer I+0% | 30 | 30 | 32.635 | 31.483 | -0.152 | 0.000 |
| 12.002 | S1202 | 30 minute 5 year Summer I+0% | 30 | 32 | 32.680 | 31.145 | -0.115 | 0.000 |
| 12.003 | S1203 | 30 minute 5 year Summer I+0% | 30 | 32 | 32.660 | 31.043 | -0.127 | 0.000 |
| 12.004 | S1204 | 30 minute 5 year Summer I+0% | 30 | 32 | 32.660 | 30.895 | -0.140 | 0.000 |
| 14.000 | S1400 | 30 minute 5 year Summer I+0% | 30 | 27 | 32.650 | 31.680 | -0.095 | 0.000 |
| 14.001 | S1401 | 30 minute 5 year Summer I+0% | 30 | 32 | 32.680 | 31.337 | -0.158 | 0.000 |
| 15.000 | S1500 | 30 minute 5 year Summer I+0% | 30 | 27 | 32.680 | 31.690 | -0.110 | 0.000 |
| 15.001 | S1501 | 30 minute 5 year Summer I+0% | 30 | 29 | 32.600 | 31.642 | -0.113 | 0.000 |
| 14.002 | S1402 | 30 minute 5 year Summer I+0% | 30 | 32 | 32.600 | 31.076 | -0.164 | 0.000 |
| 12.005 | 1205 | 30 minute 5 year Summer I+0% | 30 | 50 | 32.600 | 30.599 | -0.106 | 0.000 |
| 1.008 | S108 | 30 minute 5 year Summer I+0% | 30 | 80 | 32.550 | 30.330 | -0.025 | 0.000 |
| 16.000 | S1600 | 30 minute 5 year Summer I+0% | 30 | 30 | 32.545 | 31.475 | -0.175 | 0.000 |
| 16.001 | S1601 | 30 minute 5 year Summer I+0% | 30 | 51 | 32.545 | 30.508 | -0.177 | 0.000 |
| 1.009 | S109 | 30 minute 5 year Summer I+0% | 30 | 80 | 32.500 | 30.326 | 0.296 | 0.000 |

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.03 | | 0.014 | 0.733 | 1.1 | 1.2 | OK |
| 1.006 | S106 | 0.01 | | 0.532 | 24.040 | 0.2 | 28.3 | OK |
| 9.000 | S900 | 0.02 | | 0.001 | 0.440 | 1.0 | 0.7 | OK |
| 10.000 | S901 | 0.01 | | 0.001 | 0.293 | 1.0 | 0.5 | OK |
| 9.001 | S901 | 0.22 | | 0.019 | 7.622 | 1.0 | 10.7 | OK |
| 9.002 | S902 | 0.14 | | 0.051 | 10.114 | 1.8 | 14.1 | OK |
| 11.000 | S1100 | 0.21 | | 0.007 | 2.199 | 0.7 | 3.5 | OK |
| 9.003 | S903 | 0.22 | | 0.191 | 12.901 | 1.0 | 18.5 | OK |
| 1.007 | S107 | 0.00 | | 38.991 | 19.532 | 0.1 | 16.0 | OK |
| 12.000 | S1200 | 0.03 | | 0.002 | 0.586 | 0.9 | 0.9 | OK |
| 13.000 | S1300 | 0.31 | | 0.008 | 3.372 | 0.9 | 5.3 | OK |
| 13.001 | S1301 | 0.29 | | 0.028 | 5.277 | 1.4 | 8.0 | OK |
| 12.001 | S1201 | 0.23 | | 0.020 | 10.261 | 1.4 | 15.0 | OK |
| 12.002 | S1202 | 0.48 | | 0.072 | 14.072 | 1.1 | 20.2 | OK |
| 12.003 | S1203 | 0.39 | | 0.086 | 14.073 | 1.2 | 20.2 | OK |
| 12.004 | S1204 | 0.30 | | 0.049 | 17.004 | 1.8 | 24.1 | OK |
| 14.000 | S1400 | 0.29 | | 0.008 | 3.518 | 0.9 | 5.6 | OK |

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## Summary Wizard of 30 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.20 | | 0.019 | 6.303 | 0.9 | 9.4 | OK |
| 15.000 | S1500 | 0.16 | | 0.005 | 1.319 | 0.6 | 2.1 | OK |
| 15.001 | S1501 | 0.14 | | 0.014 | 3.518 | 1.5 | 5.1 | OK |
| 14.002 | S1402 | 0.17 | | 0.056 | 11.727 | 2.0 | 17.1 | OK |
| 12.005 | 1205 | 0.54 | | 0.208 | 31.956 | 2.1 | 45.4 | OK |
| 1.008 | S108 | 0.05 | | 44.398 | 11.523 | 0.1 | 5.2 | OK |
| 16.000 | S1600 | 0.11 | | 0.013 | 4.984 | 1.2 | 7.9 | OK |
| 16.001 | S1601 | 0.10 | | 0.027 | 5.570 | 1.4 | 8.7 | OK |
| 1.009 | S109 | 0.31 | | 2.425 | 14.769 | 1.0 | 5.2 | SURCHARGED |

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## Summary Wizard of 60 minute 5 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 60 minute 5 year Summer I+0% | 60 | 35 | 32.680 | 31.807 | -0.113 | 0.000 |
| 1.001 | S101 | 60 minute 5 year Summer I+0% | 60 | 35 | 32.680 | 31.731 | -0.119 | 0.000 |
| 2.000 | S200 | 60 minute 5 year Summer I+0% | 60 | 37 | 32.600 | 31.512 | -0.118 | 0.000 |
| 1.002 | S102 | 60 minute 5 year Summer I+0% | 60 | 39 | 32.630 | 31.274 | -0.171 | 0.000 |
| 3.000 | S300 | 60 minute 5 year Summer I+0% | 60 | 34 | 32.550 | 31.868 | -0.132 | 0.000 |
| 1.003 | S103 | 60 minute 5 year Summer I+0% | 60 | 39 | 32.600 | 31.106 | -0.169 | 0.000 |
| 4.000 | S400 | 60 minute 5 year Summer I+0% | 60 | 35 | 32.550 | 31.722 | -0.128 | 0.000 |
| 4.001 | S401 | 60 minute 5 year Summer I+0% | 60 | 54 | 32.550 | 30.641 | -0.109 | 0.000 |
| 1.004 | S104 | 60 minute 5 year Summer I+0% | 60 | 65 | 32.600 | 30.402 | -0.128 | 0.000 |
| 1.005 | S105 | 60 minute 5 year Summer I+0% | 60 | 63 | 32.600 | 30.401 | -0.109 | 0.000 |
| 5.000 | S500 | 60 minute 5 year Summer I+0% | 60 | 34 | 32.550 | 31.877 | -0.123 | 0.000 |
| 5.001 | S501 | 60 minute 5 year Summer I+0% | 60 | 39 | 32.665 | 31.168 | -0.122 | 0.000 |
| 6.000 | S600 | 60 minute 5 year Summer I+0% | 60 | 35 | 32.665 | 31.857 | -0.143 | 0.000 |
| 6.001 | S601 | 60 minute 5 year Summer I+0% | 60 | 39 | 32.665 | 31.148 | -0.142 | 0.000 |
| 5.002 | S502 | 60 minute 5 year Summer I+0% | 60 | 38 | 32.665 | 30.887 | -0.163 | 0.000 |
| 5.003 | S503 | 60 minute 5 year Summer I+0% | 60 | 52 | 32.680 | 30.683 | -0.172 | 0.000 |
| 7.000 | S700 | 60 minute 5 year Summer I+0% | 60 | 34 | 32.680 | 31.932 | -0.098 | 0.000 |
| 7.001 | S701 | 60 minute 5 year Summer I+0% | 60 | 35 | 32.635 | 31.859 | -0.086 | 0.000 |
| 5.004 | S504 | 60 minute 5 year Summer I+0% | 60 | 65 | 32.635 | 30.402 | -0.143 | 0.000 |

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Summary Wizard of 60 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.14 | | 0.005 | 2.399 | 0.7 | 2.3 | OK |
| 1.001 | S101 | 0.10 | | 0.014 | 3.690 | 1.3 | 3.4 | OK |
| 2.000 | S200 | 0.10 | | 0.004 | 2.399 | 0.8 | 2.3 | OK |
| 1.002 | S102 | 0.13 | | 0.015 | 7.381 | 0.9 | 6.8 | OK |
| 3.000 | S300 | 0.03 | | 0.002 | 1.476 | 1.2 | 1.4 | OK |
| 1.003 | S103 | 0.14 | | 0.042 | 13.469 | 1.6 | 12.2 | OK |
| 4.000 | S400 | 0.05 | | 0.003 | 2.768 | 1.6 | 2.6 | OK |
| 4.001 | S401 | 0.17 | | 0.008 | 3.875 | 0.9 | 3.6 | OK |
| 1.004 | S104 | 0.37 | | 0.075 | 19.160 | 0.6 | 17.4 | OK |
| 1.005 | S105 | 0.16 | | 0.730 | 19.549 | 0.5 | 17.7 | OK |
| 5.000 | S500 | 0.08 | | 0.004 | 2.583 | 1.1 | 2.4 | OK |
| 5.001 | S501 | 0.08 | | 0.007 | 2.583 | 1.1 | 2.4 | OK |
| 6.000 | S600 | 0.01 | | 0.000 | 0.369 | 0.8 | 0.3 | OK |
| 6.001 | S601 | 0.01 | | 0.001 | 0.369 | 0.8 | 0.3 | OK |
| 5.002 | S502 | 0.17 | | 0.016 | 9.779 | 1.0 | 8.8 | OK |
| 5.003 | S503 | 0.13 | | 0.040 | 11.071 | 1.4 | 9.9 | OK |
| 7.000 | S700 | 0.27 | | 0.008 | 4.797 | 0.8 | 4.5 | OK |
| 7.001 | S701 | 0.39 | | 0.033 | 7.196 | 0.9 | 6.6 | OK |
| 5.004 | S504 | 0.27 | | 0.279 | 18.128 | 0.7 | 16.5 | OK |

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## Summary Wizard of 60 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 60 minute 5 year Summer I+0% | 60 | 39 | 32.525 | 31.215 | -0.135 | 0.000 |
| 1.006 | S106 | 60 minute 5 year Summer I+0% | 60 | 63 | 32.500 | 30.401 | -1.245 | 0.000 |
| 9.000 | S900 | 60 minute 5 year Summer I+0% | 60 | 35 | 32.665 | 31.860 | -0.140 | 0.000 |
| 10.000 | S901 | 60 minute 5 year Summer I+0% | 60 | 35 | 32.665 | 31.856 | -0.144 | 0.000 |
| 9.001 | S901 | 60 minute 5 year Summer I+0% | 60 | 37 | 32.665 | 31.059 | -0.161 | 0.000 |
| 9.002 | S902 | 60 minute 5 year Summer I+0% | 60 | 37 | 32.640 | 30.810 | -0.175 | 0.000 |
| 11.000 | S1100 | 60 minute 5 year Summer I+0% | 60 | 36 | 32.680 | 31.590 | -0.110 | 0.000 |
| 9.003 | S903 | 60 minute 5 year Summer I+0% | 60 | 63 | 32.630 | 30.402 | -0.093 | 0.000 |
| 1.007 | S107 | 60 minute 5 year Summer I+0% | 60 | 63 | 32.500 | 30.401 | -1.135 | 0.000 |
| 12.000 | S1200 | 60 minute 5 year Summer I+0% | 60 | 35 | 32.635 | 31.865 | -0.135 | 0.000 |
| 13.000 | S1300 | 60 minute 5 year Summer I+0% | 60 | 34 | 32.635 | 31.899 | -0.101 | 0.000 |
| 13.001 | S1301 | 60 minute 5 year Summer I+0% | 60 | 35 | 32.635 | 31.807 | -0.103 | 0.000 |
| 12.001 | S1201 | 60 minute 5 year Summer I+0% | 60 | 37 | 32.635 | 31.473 | -0.162 | 0.000 |
| 12.002 | S1202 | 60 minute 5 year Summer I+0% | 60 | 38 | 32.680 | 31.130 | -0.130 | 0.000 |
| 12.003 | S1203 | 60 minute 5 year Summer I+0% | 60 | 38 | 32.660 | 31.030 | -0.140 | 0.000 |
| 12.004 | S1204 | 60 minute 5 year Summer I+0% | 60 | 38 | 32.660 | 30.884 | -0.151 | 0.000 |
| 14.000 | S1400 | 60 minute 5 year Summer I+0% | 60 | 35 | 32.650 | 31.673 | -0.102 | 0.000 |
| 14.001 | S1401 | 60 minute 5 year Summer I+0% | 60 | 39 | 32.680 | 31.328 | -0.167 | 0.000 |
| 15.000 | S1500 | 60 minute 5 year Summer I+0% | 60 | 35 | 32.680 | 31.684 | -0.116 | 0.000 |
| 15.001 | S1501 | 60 minute 5 year Summer I+0% | 60 | 36 | 32.600 | 31.638 | -0.117 | 0.000 |
| 14.002 | S1402 | 60 minute 5 year Summer I+0% | 60 | 39 | 32.600 | 31.069 | -0.171 | 0.000 |
| 12.005 | 1205 | 60 minute 5 year Summer I+0% | 60 | 54 | 32.600 | 30.583 | -0.122 | 0.000 |
| 1.008 | S108 | 60 minute 5 year Summer I+0% | 60 | 63 | 32.550 | 30.401 | 0.046 | 0.000 |
| 16.000 | S1600 | 60 minute 5 year Summer I+0% | 60 | 37 | 32.545 | 31.468 | -0.182 | 0.000 |
| 16.001 | S1601 | 60 minute 5 year Summer I+0% | 60 | 56 | 32.545 | 30.502 | -0.183 | 0.000 |
| 1.009 | S109 | 60 minute 5 year Summer I+0% | 60 | 63 | 32.500 | 30.400 | 0.370 | 0.000 |

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.02 | | 0.012 | 0.923 | 1.1 | 0.9 | OK |
| 1.006 | S106 | 0.01 | | 0.792 | 32.825 | 0.2 | 20.3 | OK |
| 9.000 | S900 | 0.01 | | 0.001 | 0.554 | 1.0 | 0.5 | OK |
| 10.000 | S901 | 0.01 | | 0.000 | 0.369 | 0.8 | 0.3 | OK |
| 9.001 | S901 | 0.18 | | 0.017 | 9.594 | 0.9 | 8.4 | OK |
| 9.002 | S902 | 0.11 | | 0.045 | 12.731 | 1.7 | 11.2 | OK |
| 11.000 | S1100 | 0.16 | | 0.006 | 2.768 | 0.7 | 2.6 | OK |
| 9.003 | S903 | 0.17 | | 0.305 | 16.232 | 0.9 | 14.5 | OK |
| 1.007 | S107 | 0.00 | | 47.319 | 30.500 | 0.1 | 11.6 | OK |
| 12.000 | S1200 | 0.02 | | 0.002 | 0.738 | 0.9 | 0.7 | OK |
| 13.000 | S1300 | 0.24 | | 0.007 | 4.244 | 0.8 | 4.0 | OK |
| 13.001 | S1301 | 0.22 | | 0.024 | 6.643 | 1.3 | 6.1 | OK |
| 12.001 | S1201 | 0.18 | | 0.017 | 12.916 | 1.3 | 11.6 | OK |
| 12.002 | S1202 | 0.37 | | 0.058 | 17.713 | 1.0 | 15.8 | OK |
| 12.003 | S1203 | 0.30 | | 0.075 | 17.713 | 1.2 | 15.8 | OK |
| 12.004 | S1204 | 0.24 | | 0.043 | 21.403 | 1.7 | 19.0 | OK |
| 14.000 | S1400 | 0.22 | | 0.007 | 4.428 | 0.9 | 4.2 | OK |

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Summary Wizard of 60 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.15 | | 0.016 | 7.934 | 0.9 | 7.2 | OK |
| 15.000 | S1500 | 0.12 | | 0.005 | 1.661 | 0.5 | 1.6 | OK |
| 15.001 | S1501 | 0.11 | | 0.012 | 4.428 | 1.4 | 4.0 | OK |
| 14.002 | S1402 | 0.13 | | 0.048 | 14.761 | 1.8 | 13.3 | OK |
| 12.005 | 1205 | 0.43 | | 0.168 | 40.223 | 2.0 | 35.7 | OK |
| 1.008 | S108 | 0.06 | | 52.238 | 27.946 | 0.1 | 5.6 | SURCHARGED |
| 16.000 | S1600 | 0.08 | | 0.011 | 6.273 | 1.1 | 5.9 | OK |
| 16.001 | S1601 | 0.08 | | 0.023 | 7.011 | 1.3 | 6.5 | OK |
| 1.009 | S109 | 0.34 | | 2.775 | 32.493 | 1.0 | 5.6 | SURCHARGED |

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## Summary Wizard of 120 minute 5 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 120 minute 5 year Summer I+0% | 120 | 44 | 32.680 | 31.800 | -0.120 | 0.000 |
| 1.001 | S101 | 120 minute 5 year Summer I+0% | 120 | 44 | 32.680 | 31.725 | -0.125 | 0.000 |
| 2.000 | S200 | 120 minute 5 year Summer I+0% | 120 | 46 | 32.600 | 31.505 | -0.125 | 0.000 |
| 1.002 | S102 | 120 minute 5 year Summer I+0% | 120 | 48 | 32.630 | 31.266 | -0.179 | 0.000 |
| 3.000 | S300 | 120 minute 5 year Summer I+0% | 120 | 43 | 32.550 | 31.865 | -0.135 | 0.000 |
| 1.003 | S103 | 120 minute 5 year Summer I+0% | 120 | 48 | 32.600 | 31.097 | -0.178 | 0.000 |
| 4.000 | S400 | 120 minute 5 year Summer I+0% | 120 | 44 | 32.550 | 31.718 | -0.132 | 0.000 |
| 4.001 | S401 | 120 minute 5 year Summer I+0% | 120 | 61 | 32.550 | 30.634 | -0.116 | 0.000 |
| 1.004 | S104 | 120 minute 5 year Summer I+0% | 120 | 55 | 32.600 | 30.453 | -0.077 | 0.000 |
| 1.005 | S105 | 120 minute 5 year Summer I+0% | 120 | 55 | 32.600 | 30.453 | -0.057 | 0.000 |
| 5.000 | S500 | 120 minute 5 year Summer I+0% | 120 | 43 | 32.550 | 31.872 | -0.128 | 0.000 |
| 5.001 | S501 | 120 minute 5 year Summer I+0% | 120 | 48 | 32.665 | 31.162 | -0.128 | 0.000 |
| 6.000 | S600 | 120 minute 5 year Summer I+0% | 120 | 44 | 32.665 | 31.854 | -0.146 | 0.000 |
| 6.001 | S601 | 120 minute 5 year Summer I+0% | 120 | 48 | 32.665 | 31.145 | -0.145 | 0.000 |
| 5.002 | S502 | 120 minute 5 year Summer I+0% | 120 | 48 | 32.665 | 30.876 | -0.174 | 0.000 |
| 5.003 | S503 | 120 minute 5 year Summer I+0% | 120 | 60 | 32.680 | 30.675 | -0.180 | 0.000 |
| 7.000 | S700 | 120 minute 5 year Summer I+0% | 120 | 43 | 32.680 | 31.923 | -0.107 | 0.000 |
| 7.001 | S701 | 120 minute 5 year Summer I+0% | 120 | 44 | 32.635 | 31.847 | -0.098 | 0.000 |
| 5.004 | S504 | 120 minute 5 year Summer I+0% | 120 | 55 | 32.635 | 30.453 | -0.092 | 0.000 |

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## Summary Wizard of 120 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.09 | | 0.004 | 2.955 | 0.6 | 1.5 | OK |
| 1.001 | S101 | 0.07 | | 0.010 | 4.546 | 1.2 | 2.3 | OK |
| 2.000 | S200 | 0.07 | | 0.003 | 2.955 | 0.8 | 1.5 | OK |
| 1.002 | S102 | 0.09 | | 0.012 | 9.092 | 0.8 | 4.6 | OK |
| 3.000 | S300 | 0.02 | | 0.002 | 1.818 | 1.2 | 0.9 | OK |
| 1.003 | S103 | 0.10 | | 0.035 | 16.592 | 1.4 | 8.4 | OK |
| 4.000 | S400 | 0.03 | | 0.002 | 3.409 | 1.5 | 1.8 | OK |
| 4.001 | S401 | 0.12 | | 0.006 | 4.773 | 0.8 | 2.4 | OK |
| 1.004 | S104 | 0.25 | | 0.134 | 23.620 | 0.6 | 11.9 | OK |
| 1.005 | S105 | 0.11 | | 0.877 | 24.310 | 0.4 | 12.0 | OK |
| 5.000 | S500 | 0.05 | | 0.003 | 3.182 | 1.0 | 1.6 | OK |
| 5.001 | S501 | 0.05 | | 0.005 | 3.182 | 1.0 | 1.6 | OK |
| 6.000 | S600 | 0.01 | | 0.000 | 0.454 | 0.5 | 0.2 | OK |
| 6.001 | S601 | 0.01 | | 0.000 | 0.454 | 0.5 | 0.2 | OK |
| 5.002 | S502 | 0.12 | | 0.013 | 12.046 | 0.9 | 6.0 | OK |
| 5.003 | S503 | 0.09 | | 0.033 | 13.637 | 1.2 | 6.8 | OK |
| 7.000 | S700 | 0.18 | | 0.006 | 5.910 | 0.7 | 3.0 | OK |
| 7.001 | S701 | 0.26 | | 0.026 | 8.864 | 0.8 | 4.5 | OK |
| 5.004 | S504 | 0.18 | | 0.381 | 22.421 | 0.7 | 11.3 | OK |

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## Summary Wizard of 120 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 120 minute 5 year Summer I+0% | 120 | 48 | 32.525 | 31.211 | -0.139 |
| 1.006 | S106 | 120 minute 5 year Summer I+0% | 120 | 55 | 32.500 | 30.453 | -1.193 |
| 9.000 | S900 | 120 minute 5 year Summer I+0% | 120 | 44 | 32.665 | 31.857 | -0.143 |
| 10.000 | S901 | 120 minute 5 year Summer I+0% | 120 | 44 | 32.665 | 31.854 | -0.146 |
| 9.001 | S901 | 120 minute 5 year Summer I+0% | 120 | 48 | 32.665 | 31.047 | -0.173 |
| 9.002 | S902 | 120 minute 5 year Summer I+0% | 120 | 48 | 32.640 | 30.802 | -0.183 |
| 11.000 | S1100 | 120 minute 5 year Summer I+0% | 120 | 45 | 32.680 | 31.582 | -0.118 |
| 9.003 | S903 | 120 minute 5 year Summer I+0% | 120 | 55 | 32.630 | 30.453 | -0.042 |
| 1.007 | S107 | 120 minute 5 year Summer I+0% | 120 | 55 | 32.500 | 30.453 | -1.083 |
| 12.000 | S1200 | 120 minute 5 year Summer I+0% | 120 | 44 | 32.635 | 31.860 | -0.140 |
| 13.000 | S1300 | 120 minute 5 year Summer I+0% | 120 | 43 | 32.635 | 31.890 | -0.110 |
| 13.001 | S1301 | 120 minute 5 year Summer I+0% | 120 | 44 | 32.635 | 31.798 | -0.112 |
| 12.001 | S1201 | 120 minute 5 year Summer I+0% | 120 | 46 | 32.635 | 31.462 | -0.173 |
| 12.002 | S1202 | 120 minute 5 year Summer I+0% | 120 | 48 | 32.680 | 31.112 | -0.148 |
| 12.003 | S1203 | 120 minute 5 year Summer I+0% | 120 | 48 | 32.660 | 31.015 | -0.155 |
| 12.004 | S1204 | 120 minute 5 year Summer I+0% | 120 | 48 | 32.660 | 30.871 | -0.164 |
| 14.000 | S1400 | 120 minute 5 year Summer I+0% | 120 | 44 | 32.650 | 31.663 | -0.112 |
| 14.001 | S1401 | 120 minute 5 year Summer I+0% | 120 | 48 | 32.680 | 31.318 | -0.177 |
| 15.000 | S1500 | 120 minute 5 year Summer I+0% | 120 | 44 | 32.680 | 31.678 | -0.122 |
| 15.001 | S1501 | 120 minute 5 year Summer I+0% | 120 | 45 | 32.600 | 31.632 | -0.123 |
| 14.002 | S1402 | 120 minute 5 year Summer I+0% | 120 | 48 | 32.600 | 31.060 | -0.180 |
| 12.005 | 1205 | 120 minute 5 year Summer I+0% | 120 | 62 | 32.600 | 30.564 | -0.141 |
| 1.008 | S108 | 120 minute 5 year Summer I+0% | 120 | 55 | 32.550 | 30.453 | 0.098 |
| 16.000 | S1600 | 120 minute 5 year Summer I+0% | 120 | 46 | 32.545 | 31.459 | -0.191 |
| 16.001 | S1601 | 120 minute 5 year Summer I+0% | 120 | 63 | 32.545 | 30.493 | -0.192 |
| 1.009 | S109 | 120 minute 5 year Summer I+0% | 120 | 55 | 32.500 | 30.454 | 0.424 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.006 | 1.136 | 1.1 | 0.6 | OK |
| 1.006 | S106 | 0.000 | 0.01 | | 0.979 | 46.952 | 0.2 | 14.1 | OK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.000 | 0.682 | 0.8 | 0.4 | OK |
| 10.000 | S901 | 0.000 | 0.01 | | 0.000 | 0.454 | 0.5 | 0.2 | OK |
| 9.001 | S901 | 0.000 | 0.12 | | 0.014 | 11.819 | 0.8 | 5.9 | OK |
| 9.002 | S902 | 0.000 | 0.08 | | 0.036 | 15.683 | 1.5 | 7.8 | OK |
| 11.000 | S1100 | 0.000 | 0.11 | | 0.004 | 3.409 | 0.6 | 1.8 | OK |
| 9.003 | S903 | 0.000 | 0.12 | | 0.400 | 20.090 | 0.8 | 10.1 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 53.334 | 50.960 | 0.1 | 8.4 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.001 | 0.909 | 0.9 | 0.5 | OK |
| 13.000 | S1300 | 0.000 | 0.16 | | 0.006 | 5.228 | 0.7 | 2.7 | OK |
| 13.001 | S1301 | 0.000 | 0.15 | | 0.019 | 8.183 | 1.2 | 4.2 | OK |
| 12.001 | S1201 | 0.000 | 0.12 | | 0.014 | 15.910 | 1.2 | 8.0 | OK |
| 12.002 | S1202 | 0.000 | 0.26 | | 0.046 | 21.820 | 0.9 | 10.9 | OK |
| 12.003 | S1203 | 0.000 | 0.21 | | 0.060 | 21.820 | 1.0 | 10.9 | OK |
| 12.004 | S1204 | 0.000 | 0.16 | | 0.035 | 26.366 | 1.5 | 13.2 | OK |
| 14.000 | S1400 | 0.000 | 0.15 | | 0.005 | 5.455 | 0.8 | 2.8 | OK |

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## Summary Wizard of 120 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.10 | | 0.013 | 9.773 | 0.8 | 4.9 | OK |
| 15.000 | S1500 | 0.000 | 0.08 | | 0.004 | 2.046 | 0.5 | 1.1 | OK |
| 15.001 | S1501 | 0.000 | 0.08 | | 0.009 | 5.455 | 1.3 | 2.7 | OK |
| 14.002 | S1402 | 0.000 | 0.09 | | 0.040 | 18.183 | 1.6 | 9.1 | OK |
| 12.005 | 1205 | 0.000 | 0.30 | | 0.135 | 49.549 | 1.8 | 24.8 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 57.908 | 61.651 | 0.2 | 5.9 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.06 | | 0.008 | 7.728 | 1.1 | 4.0 | OK |
| 16.001 | S1601 | 0.000 | 0.05 | | 0.018 | 8.637 | 1.2 | 4.4 | OK |
| 1.009 | S109 | 0.000 | 0.35 | | 2.947 | 67.987 | 1.0 | 5.9 | SURCHARGED |

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## Summary Wizard of 180 minute 5 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 180 minute 5 year Summer I+0% | 180 | 50 | 32.680 | 31.796 | -0.124 | 0.000 |
| 1.001 | S101 | 180 minute 5 year Summer I+0% | 180 | 50 | 32.680 | 31.722 | -0.128 | 0.000 |
| 2.000 | S200 | 180 minute 5 year Summer I+0% | 180 | 52 | 32.600 | 31.502 | -0.128 | 0.000 |
| 1.002 | S102 | 180 minute 5 year Summer I+0% | 180 | 54 | 32.630 | 31.259 | -0.186 | 0.000 |
| 3.000 | S300 | 180 minute 5 year Summer I+0% | 180 | 50 | 32.550 | 31.862 | -0.138 | 0.000 |
| 1.003 | S103 | 180 minute 5 year Summer I+0% | 180 | 55 | 32.600 | 31.090 | -0.185 | 0.000 |
| 4.000 | S400 | 180 minute 5 year Summer I+0% | 180 | 50 | 32.550 | 31.716 | -0.134 | 0.000 |
| 4.001 | S401 | 180 minute 5 year Summer I+0% | 180 | 66 | 32.550 | 30.630 | -0.120 | 0.000 |
| 1.004 | S104 | 180 minute 5 year Summer I+0% | 180 | 51 | 32.600 | 30.467 | -0.063 | 0.000 |
| 1.005 | S105 | 180 minute 5 year Summer I+0% | 180 | 51 | 32.600 | 30.466 | -0.044 | 0.000 |
| 5.000 | S500 | 180 minute 5 year Summer I+0% | 180 | 49 | 32.550 | 31.869 | -0.131 | 0.000 |
| 5.001 | S501 | 180 minute 5 year Summer I+0% | 180 | 54 | 32.665 | 31.159 | -0.131 | 0.000 |
| 6.000 | S600 | 180 minute 5 year Summer I+0% | 180 | 50 | 32.665 | 31.853 | -0.147 | 0.000 |
| 6.001 | S601 | 180 minute 5 year Summer I+0% | 180 | 54 | 32.665 | 31.144 | -0.146 | 0.000 |
| 5.002 | S502 | 180 minute 5 year Summer I+0% | 180 | 55 | 32.665 | 30.871 | -0.179 | 0.000 |
| 5.003 | S503 | 180 minute 5 year Summer I+0% | 180 | 65 | 32.680 | 30.668 | -0.187 | 0.000 |
| 7.000 | S700 | 180 minute 5 year Summer I+0% | 180 | 49 | 32.680 | 31.917 | -0.113 | 0.000 |
| 7.001 | S701 | 180 minute 5 year Summer I+0% | 180 | 50 | 32.635 | 31.841 | -0.104 | 0.000 |
| 5.004 | S504 | 180 minute 5 year Summer I+0% | 180 | 51 | 32.635 | 30.467 | -0.078 | 0.000 |

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## Summary Wizard of 180 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.07 | | 0.003 | 3.318 | 0.6 | 1.2 | OK |
| 1.001 | S101 | 0.05 | | 0.009 | 5.105 | 1.1 | 1.8 | OK |
| 2.000 | S200 | 0.05 | | 0.003 | 3.318 | 0.7 | 1.2 | OK |
| 1.002 | S102 | 0.07 | | 0.010 | 10.210 | 0.8 | 3.6 | OK |
| 3.000 | S300 | 0.02 | | 0.001 | 2.042 | 1.2 | 0.7 | OK |
| 1.003 | S103 | 0.07 | | 0.029 | 18.634 | 1.3 | 6.5 | OK |
| 4.000 | S400 | 0.03 | | 0.002 | 3.829 | 1.5 | 1.4 | OK |
| 4.001 | S401 | 0.09 | | 0.005 | 5.360 | 0.7 | 1.9 | OK |
| 1.004 | S104 | 0.20 | | 0.160 | 26.546 | 0.5 | 9.3 | OK |
| 1.005 | S105 | 0.08 | | 0.914 | 27.520 | 0.4 | 9.3 | OK |
| 5.000 | S500 | 0.04 | | 0.002 | 3.574 | 1.0 | 1.3 | OK |
| 5.001 | S501 | 0.04 | | 0.004 | 3.574 | 0.9 | 1.3 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.510 | 0.4 | 0.2 | OK |
| 6.001 | S601 | 0.01 | | 0.000 | 0.510 | 0.4 | 0.2 | OK |
| 5.002 | S502 | 0.09 | | 0.012 | 13.528 | 0.8 | 4.7 | OK |
| 5.003 | S503 | 0.07 | | 0.027 | 15.315 | 1.2 | 5.3 | OK |
| 7.000 | S700 | 0.14 | | 0.005 | 6.637 | 0.7 | 2.4 | OK |
| 7.001 | S701 | 0.20 | | 0.023 | 9.955 | 0.8 | 3.5 | OK |
| 5.004 | S504 | 0.14 | | 0.412 | 25.270 | 0.6 | 8.8 | OK |

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## Summary Wizard of 180 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 180 minute 5 year Summer I+0% | 180 | 54 | 32.525 | 31.208 | -0.142 |
| 1.006 | S106 | 180 minute 5 year Summer I+0% | 180 | 51 | 32.500 | 30.466 | -1.180 |
| 9.000 | S900 | 180 minute 5 year Summer I+0% | 180 | 50 | 32.665 | 31.855 | -0.145 |
| 10.000 | S901 | 180 minute 5 year Summer I+0% | 180 | 50 | 32.665 | 31.853 | -0.147 |
| 9.001 | S901 | 180 minute 5 year Summer I+0% | 180 | 55 | 32.665 | 31.042 | -0.178 |
| 9.002 | S902 | 180 minute 5 year Summer I+0% | 180 | 55 | 32.640 | 30.796 | -0.189 |
| 11.000 | S1100 | 180 minute 5 year Summer I+0% | 180 | 51 | 32.680 | 31.579 | -0.121 |
| 9.003 | S903 | 180 minute 5 year Summer I+0% | 180 | 51 | 32.630 | 30.467 | -0.028 |
| 1.007 | S107 | 180 minute 5 year Summer I+0% | 180 | 51 | 32.500 | 30.466 | -1.070 |
| 12.000 | S1200 | 180 minute 5 year Summer I+0% | 180 | 50 | 32.635 | 31.858 | -0.142 |
| 13.000 | S1300 | 180 minute 5 year Summer I+0% | 180 | 49 | 32.635 | 31.885 | -0.115 |
| 13.001 | S1301 | 180 minute 5 year Summer I+0% | 180 | 50 | 32.635 | 31.794 | -0.116 |
| 12.001 | S1201 | 180 minute 5 year Summer I+0% | 180 | 54 | 32.635 | 31.456 | -0.179 |
| 12.002 | S1202 | 180 minute 5 year Summer I+0% | 180 | 55 | 32.680 | 31.103 | -0.157 |
| 12.003 | S1203 | 180 minute 5 year Summer I+0% | 180 | 55 | 32.660 | 31.006 | -0.164 |
| 12.004 | S1204 | 180 minute 5 year Summer I+0% | 180 | 55 | 32.660 | 30.863 | -0.172 |
| 14.000 | S1400 | 180 minute 5 year Summer I+0% | 180 | 50 | 32.650 | 31.659 | -0.116 |
| 14.001 | S1401 | 180 minute 5 year Summer I+0% | 180 | 55 | 32.680 | 31.312 | -0.183 |
| 15.000 | S1500 | 180 minute 5 year Summer I+0% | 180 | 50 | 32.680 | 31.674 | -0.126 |
| 15.001 | S1501 | 180 minute 5 year Summer I+0% | 180 | 52 | 32.600 | 31.628 | -0.127 |
| 14.002 | S1402 | 180 minute 5 year Summer I+0% | 180 | 55 | 32.600 | 31.054 | -0.186 |
| 12.005 | 1205 | 180 minute 5 year Summer I+0% | 180 | 68 | 32.600 | 30.553 | -0.152 |
| 1.008 | S108 | 180 minute 5 year Summer I+0% | 180 | 51 | 32.550 | 30.466 | 0.111 |
| 16.000 | S1600 | 180 minute 5 year Summer I+0% | 180 | 52 | 32.545 | 31.455 | -0.195 |
| 16.001 | S1601 | 180 minute 5 year Summer I+0% | 180 | 68 | 32.545 | 30.489 | -0.196 |
| 1.009 | S109 | 180 minute 5 year Summer I+0% | 180 | 51 | 32.500 | 30.468 | 0.438 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.004 | 1.276 | 1.0 | 0.5 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.009 | 59.096 | 0.1 | 11.2 | OK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.000 | 0.766 | 0.6 | 0.3 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.510 | 0.4 | 0.2 | OK |
| 9.001 | S901 | 0.000 | 0.10 | | 0.012 | 13.273 | 0.8 | 4.6 | OK |
| 9.002 | S902 | 0.000 | 0.06 | | 0.031 | 17.612 | 1.5 | 6.1 | OK |
| 11.000 | S1100 | 0.000 | 0.08 | | 0.004 | 3.829 | 0.6 | 1.4 | OK |
| 9.003 | S903 | 0.000 | 0.09 | | 0.425 | 22.671 | 0.7 | 7.8 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 54.873 | 69.904 | 0.1 | 7.0 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 1.021 | 0.8 | 0.4 | OK |
| 13.000 | S1300 | 0.000 | 0.12 | | 0.005 | 5.871 | 0.7 | 2.1 | OK |
| 13.001 | S1301 | 0.000 | 0.12 | | 0.016 | 9.189 | 1.1 | 3.2 | OK |
| 12.001 | S1201 | 0.000 | 0.09 | | 0.012 | 17.868 | 1.1 | 6.2 | OK |
| 12.002 | S1202 | 0.000 | 0.20 | | 0.040 | 24.505 | 0.8 | 8.5 | OK |
| 12.003 | S1203 | 0.000 | 0.16 | | 0.052 | 24.505 | 1.0 | 8.5 | OK |
| 12.004 | S1204 | 0.000 | 0.13 | | 0.030 | 29.610 | 1.4 | 10.3 | OK |
| 14.000 | S1400 | 0.000 | 0.11 | | 0.005 | 6.126 | 0.7 | 2.2 | OK |

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## Summary Wizard of 180 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.08 | | 0.011 | 10.976 | 0.7 | 3.8 | OK |
| 15.000 | S1500 | 0.000 | 0.06 | | 0.003 | 2.297 | 0.4 | 0.8 | OK |
| 15.001 | S1501 | 0.000 | 0.06 | | 0.008 | 6.126 | 1.2 | 2.1 | OK |
| 14.002 | S1402 | 0.000 | 0.07 | | 0.033 | 20.420 | 1.6 | 7.1 | OK |
| 12.005 | 1205 | 0.000 | 0.23 | | 0.117 | 55.646 | 1.7 | 19.3 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 59.372 | 93.928 | 0.2 | 6.0 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.04 | | 0.007 | 8.679 | 1.0 | 3.1 | OK |
| 16.001 | S1601 | 0.000 | 0.04 | | 0.015 | 9.700 | 1.1 | 3.4 | OK |
| 1.009 | S109 | 0.000 | 0.36 | | 2.992 | 101.722 | 1.0 | 5.9 | SURCHARGED |

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## Summary Wizard of 240 minute 5 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 240 minute 5 year Summer I+0% | 240 | 55 | 32.680 | 31.793 | -0.127 | 0.000 |
| 1.001 | S101 | 240 minute 5 year Summer I+0% | 240 | 55 | 32.680 | 31.720 | -0.130 | 0.000 |
| 2.000 | S200 | 240 minute 5 year Summer I+0% | 240 | 57 | 32.600 | 31.500 | -0.130 | 0.000 |
| 1.002 | S102 | 240 minute 5 year Summer I+0% | 240 | 59 | 32.630 | 31.255 | -0.190 | 0.000 |
| 3.000 | S300 | 240 minute 5 year Summer I+0% | 240 | 55 | 32.550 | 31.860 | -0.140 | 0.000 |
| 1.003 | S103 | 240 minute 5 year Summer I+0% | 240 | 59 | 32.600 | 31.086 | -0.189 | 0.000 |
| 4.000 | S400 | 240 minute 5 year Summer I+0% | 240 | 55 | 32.550 | 31.715 | -0.135 | 0.000 |
| 4.001 | S401 | 240 minute 5 year Summer I+0% | 240 | 69 | 32.550 | 30.627 | -0.123 | 0.000 |
| 1.004 | S104 | 240 minute 5 year Summer I+0% | 240 | 48 | 32.600 | 30.472 | -0.058 | 0.000 |
| 1.005 | S105 | 240 minute 5 year Summer I+0% | 240 | 48 | 32.600 | 30.472 | -0.038 | 0.000 |
| 5.000 | S500 | 240 minute 5 year Summer I+0% | 240 | 54 | 32.550 | 31.867 | -0.133 | 0.000 |
| 5.001 | S501 | 240 minute 5 year Summer I+0% | 240 | 59 | 32.665 | 31.158 | -0.132 | 0.000 |
| 6.000 | S600 | 240 minute 5 year Summer I+0% | 240 | 55 | 32.665 | 31.853 | -0.147 | 0.000 |
| 6.001 | S601 | 240 minute 5 year Summer I+0% | 240 | 59 | 32.665 | 31.143 | -0.147 | 0.000 |
| 5.002 | S502 | 240 minute 5 year Summer I+0% | 240 | 59 | 32.665 | 30.866 | -0.184 | 0.000 |
| 5.003 | S503 | 240 minute 5 year Summer I+0% | 240 | 68 | 32.680 | 30.664 | -0.191 | 0.000 |
| 7.000 | S700 | 240 minute 5 year Summer I+0% | 240 | 54 | 32.680 | 31.914 | -0.116 | 0.000 |
| 7.001 | S701 | 240 minute 5 year Summer I+0% | 240 | 55 | 32.635 | 31.836 | -0.109 | 0.000 |
| 5.004 | S504 | 240 minute 5 year Summer I+0% | 240 | 48 | 32.635 | 30.472 | -0.073 | 0.000 |

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## Summary Wizard of 240 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.06 | | 0.003 | 3.597 | 0.6 | 1.0 | OK |
| 1.001 | S101 | 0.04 | | 0.008 | 5.533 | 1.1 | 1.5 | OK |
| 2.000 | S200 | 0.04 | | 0.002 | 3.597 | 0.7 | 1.0 | OK |
| 1.002 | S102 | 0.06 | | 0.009 | 11.067 | 0.8 | 3.0 | OK |
| 3.000 | S300 | 0.01 | | 0.001 | 2.213 | 1.2 | 0.6 | OK |
| 1.003 | S103 | 0.06 | | 0.026 | 20.197 | 1.3 | 5.4 | OK |
| 4.000 | S400 | 0.02 | | 0.002 | 4.150 | 1.5 | 1.1 | OK |
| 4.001 | S401 | 0.07 | | 0.005 | 5.810 | 0.7 | 1.6 | OK |
| 1.004 | S104 | 0.16 | | 0.170 | 28.773 | 0.5 | 7.7 | OK |
| 1.005 | S105 | 0.07 | | 0.927 | 29.989 | 0.4 | 7.7 | OK |
| 5.000 | S500 | 0.03 | | 0.002 | 3.873 | 0.9 | 1.0 | OK |
| 5.001 | S501 | 0.03 | | 0.004 | 3.873 | 0.9 | 1.0 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.553 | 0.3 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.553 | 0.3 | 0.1 | OK |
| 5.002 | S502 | 0.08 | | 0.010 | 14.663 | 0.8 | 3.9 | OK |
| 5.003 | S503 | 0.06 | | 0.024 | 16.600 | 1.2 | 4.4 | OK |
| 7.000 | S700 | 0.11 | | 0.005 | 7.193 | 0.7 | 1.9 | OK |
| 7.001 | S701 | 0.17 | | 0.020 | 10.790 | 0.7 | 2.9 | OK |
| 5.004 | S504 | 0.12 | | 0.424 | 27.390 | 0.6 | 7.3 | OK |

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## Summary Wizard of 240 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 240 minute 5 year Summer I+0% | 240 | 59 | 32.525 | 31.207 | -0.143 |
| 1.006 | S106 | 240 minute 5 year Summer I+0% | 240 | 48 | 32.500 | 30.472 | -1.174 |
| 9.000 | S900 | 240 minute 5 year Summer I+0% | 240 | 55 | 32.665 | 31.854 | -0.146 |
| 10.000 | S901 | 240 minute 5 year Summer I+0% | 240 | 55 | 32.665 | 31.853 | -0.147 |
| 9.001 | S901 | 240 minute 5 year Summer I+0% | 240 | 59 | 32.665 | 31.037 | -0.183 |
| 9.002 | S902 | 240 minute 5 year Summer I+0% | 240 | 59 | 32.640 | 30.793 | -0.192 |
| 11.000 | S1100 | 240 minute 5 year Summer I+0% | 240 | 56 | 32.680 | 31.575 | -0.125 |
| 9.003 | S903 | 240 minute 5 year Summer I+0% | 240 | 48 | 32.630 | 30.472 | -0.023 |
| 1.007 | S107 | 240 minute 5 year Summer I+0% | 240 | 48 | 32.500 | 30.472 | -1.064 |
| 12.000 | S1200 | 240 minute 5 year Summer I+0% | 240 | 55 | 32.635 | 31.857 | -0.143 |
| 13.000 | S1300 | 240 minute 5 year Summer I+0% | 240 | 54 | 32.635 | 31.882 | -0.118 |
| 13.001 | S1301 | 240 minute 5 year Summer I+0% | 240 | 55 | 32.635 | 31.791 | -0.119 |
| 12.001 | S1201 | 240 minute 5 year Summer I+0% | 240 | 58 | 32.635 | 31.452 | -0.183 |
| 12.002 | S1202 | 240 minute 5 year Summer I+0% | 240 | 59 | 32.680 | 31.096 | -0.164 |
| 12.003 | S1203 | 240 minute 5 year Summer I+0% | 240 | 59 | 32.660 | 31.000 | -0.170 |
| 12.004 | S1204 | 240 minute 5 year Summer I+0% | 240 | 59 | 32.660 | 30.859 | -0.176 |
| 14.000 | S1400 | 240 minute 5 year Summer I+0% | 240 | 55 | 32.650 | 31.656 | -0.119 |
| 14.001 | S1401 | 240 minute 5 year Summer I+0% | 240 | 59 | 32.680 | 31.308 | -0.187 |
| 15.000 | S1500 | 240 minute 5 year Summer I+0% | 240 | 55 | 32.680 | 31.672 | -0.128 |
| 15.001 | S1501 | 240 minute 5 year Summer I+0% | 240 | 56 | 32.600 | 31.626 | -0.129 |
| 14.002 | S1402 | 240 minute 5 year Summer I+0% | 240 | 59 | 32.600 | 31.050 | -0.190 |
| 12.005 | 1205 | 240 minute 5 year Summer I+0% | 240 | 71 | 32.600 | 30.547 | -0.158 |
| 1.008 | S108 | 240 minute 5 year Summer I+0% | 240 | 48 | 32.550 | 30.472 | 0.117 |
| 16.000 | S1600 | 240 minute 5 year Summer I+0% | 240 | 57 | 32.545 | 31.452 | -0.198 |
| 16.001 | S1601 | 240 minute 5 year Summer I+0% | 240 | 71 | 32.545 | 30.487 | -0.198 |
| 1.009 | S109 | 240 minute 5 year Summer I+0% | 240 | 48 | 32.500 | 30.473 | 0.443 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.002 | 1.383 | 0.8 | 0.4 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.021 | 69.566 | 0.1 | 9.5 | OK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.000 | 0.830 | 0.5 | 0.2 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.553 | 0.3 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.08 | | 0.011 | 14.386 | 0.7 | 3.8 | OK |
| 9.002 | S902 | 0.000 | 0.05 | | 0.027 | 19.089 | 1.4 | 5.0 | OK |
| 11.000 | S1100 | 0.000 | 0.07 | | 0.003 | 4.150 | 0.6 | 1.1 | OK |
| 9.003 | S903 | 0.000 | 0.08 | | 0.434 | 24.623 | 0.7 | 6.4 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 55.481 | 86.989 | 0.0 | 6.3 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 1.107 | 0.7 | 0.3 | OK |
| 13.000 | S1300 | 0.000 | 0.10 | | 0.004 | 6.363 | 0.6 | 1.7 | OK |
| 13.001 | S1301 | 0.000 | 0.10 | | 0.015 | 9.960 | 1.0 | 2.7 | OK |
| 12.001 | S1201 | 0.000 | 0.08 | | 0.011 | 19.367 | 1.0 | 5.2 | OK |
| 12.002 | S1202 | 0.000 | 0.17 | | 0.036 | 26.560 | 0.8 | 7.0 | OK |
| 12.003 | S1203 | 0.000 | 0.14 | | 0.047 | 26.560 | 0.9 | 7.0 | OK |
| 12.004 | S1204 | 0.000 | 0.11 | | 0.027 | 32.093 | 1.3 | 8.5 | OK |
| 14.000 | S1400 | 0.000 | 0.09 | | 0.004 | 6.640 | 0.7 | 1.8 | OK |

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## Summary Wizard of 240 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.07 | | 0.010 | 11.897 | 0.7 | 3.2 | OK |
| 15.000 | S1500 | 0.000 | 0.05 | | 0.003 | 2.490 | 0.4 | 0.7 | OK |
| 15.001 | S1501 | 0.000 | 0.05 | | 0.007 | 6.640 | 1.2 | 1.8 | OK |
| 14.002 | S1402 | 0.000 | 0.06 | | 0.029 | 22.133 | 1.5 | 5.9 | OK |
| 12.005 | 1205 | 0.000 | 0.19 | | 0.105 | 60.313 | 1.6 | 16.0 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 59.948 | 123.820 | 0.2 | 6.0 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.04 | | 0.006 | 9.407 | 0.9 | 2.5 | OK |
| 16.001 | S1601 | 0.000 | 0.03 | | 0.014 | 10.513 | 1.1 | 2.8 | OK |
| 1.009 | S109 | 0.000 | 0.36 | | 3.009 | 132.899 | 1.0 | 6.0 | SURCHARGED |

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## Summary Wizard of 360 minute 5 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 360 minute 5 year Summer I+0% | 360 | 66 | 32.680 | 31.790 | -0.130 | 0.000 |
| 1.001 | S101 | 360 minute 5 year Summer I+0% | 360 | 66 | 32.680 | 31.717 | -0.133 | 0.000 |
| 2.000 | S200 | 360 minute 5 year Summer I+0% | 360 | 67 | 32.600 | 31.498 | -0.132 | 0.000 |
| 1.002 | S102 | 360 minute 5 year Summer I+0% | 360 | 69 | 32.630 | 31.250 | -0.195 | 0.000 |
| 3.000 | S300 | 360 minute 5 year Summer I+0% | 360 | 66 | 32.550 | 31.858 | -0.142 | 0.000 |
| 1.003 | S103 | 360 minute 5 year Summer I+0% | 360 | 69 | 32.600 | 31.081 | -0.194 | 0.000 |
| 4.000 | S400 | 360 minute 5 year Summer I+0% | 360 | 66 | 32.550 | 31.712 | -0.138 | 0.000 |
| 4.001 | S401 | 360 minute 5 year Summer I+0% | 360 | 76 | 32.550 | 30.623 | -0.127 | 0.000 |
| 1.004 | S104 | 360 minute 5 year Summer I+0% | 360 | 50 | 32.600 | 30.470 | -0.060 | 0.000 |
| 1.005 | S105 | 360 minute 5 year Summer I+0% | 360 | 50 | 32.600 | 30.470 | -0.040 | 0.000 |
| 5.000 | S500 | 360 minute 5 year Summer I+0% | 360 | 66 | 32.550 | 31.866 | -0.134 | 0.000 |
| 5.001 | S501 | 360 minute 5 year Summer I+0% | 360 | 69 | 32.665 | 31.156 | -0.134 | 0.000 |
| 6.000 | S600 | 360 minute 5 year Summer I+0% | 360 | 66 | 32.665 | 31.852 | -0.148 | 0.000 |
| 6.001 | S601 | 360 minute 5 year Summer I+0% | 360 | 69 | 32.665 | 31.143 | -0.147 | 0.000 |
| 5.002 | S502 | 360 minute 5 year Summer I+0% | 360 | 69 | 32.665 | 30.860 | -0.190 | 0.000 |
| 5.003 | S503 | 360 minute 5 year Summer I+0% | 360 | 75 | 32.680 | 30.660 | -0.195 | 0.000 |
| 7.000 | S700 | 360 minute 5 year Summer I+0% | 360 | 66 | 32.680 | 31.909 | -0.121 | 0.000 |
| 7.001 | S701 | 360 minute 5 year Summer I+0% | 360 | 66 | 32.635 | 31.830 | -0.115 | 0.000 |
| 5.004 | S504 | 360 minute 5 year Summer I+0% | 360 | 50 | 32.635 | 30.470 | -0.075 | 0.000 |

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## Summary Wizard of 360 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.04 | | 0.002 | 4.022 | 0.5 | 0.7 | OK |
| 1.001 | S101 | 0.03 | | 0.006 | 6.187 | 1.0 | 1.1 | OK |
| 2.000 | S200 | 0.03 | | 0.002 | 4.022 | 0.6 | 0.7 | OK |
| 1.002 | S102 | 0.04 | | 0.007 | 12.374 | 0.7 | 2.2 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 2.475 | 1.0 | 0.4 | OK |
| 1.003 | S103 | 0.05 | | 0.022 | 22.583 | 1.2 | 4.1 | OK |
| 4.000 | S400 | 0.02 | | 0.001 | 4.640 | 1.5 | 0.8 | OK |
| 4.001 | S401 | 0.06 | | 0.004 | 6.496 | 0.7 | 1.2 | OK |
| 1.004 | S104 | 0.12 | | 0.167 | 32.172 | 0.5 | 5.8 | OK |
| 1.005 | S105 | 0.05 | | 0.922 | 33.719 | 0.4 | 5.8 | OK |
| 5.000 | S500 | 0.02 | | 0.002 | 4.331 | 0.9 | 0.8 | OK |
| 5.001 | S501 | 0.03 | | 0.003 | 4.331 | 0.9 | 0.8 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.618 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.618 | 0.2 | 0.1 | OK |
| 5.002 | S502 | 0.06 | | 0.008 | 16.395 | 0.8 | 3.0 | OK |
| 5.003 | S503 | 0.04 | | 0.020 | 18.561 | 1.1 | 3.3 | OK |
| 7.000 | S700 | 0.09 | | 0.004 | 8.043 | 0.6 | 1.5 | OK |
| 7.001 | S701 | 0.13 | | 0.017 | 12.065 | 0.7 | 2.2 | OK |
| 5.004 | S504 | 0.09 | | 0.420 | 30.625 | 0.5 | 5.5 | OK |

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## Summary Wizard of 360 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 360 minute 5 year Summer I+0% | 360 | 69 | 32.525 | 31.205 | -0.145 |
| 1.006 | S106 | 360 minute 5 year Summer I+0% | 360 | 50 | 32.500 | 30.470 | -1.176 |
| 9.000 | S900 | 360 minute 5 year Summer I+0% | 360 | 66 | 32.665 | 31.853 | -0.147 |
| 10.000 | S901 | 360 minute 5 year Summer I+0% | 360 | 66 | 32.665 | 31.852 | -0.148 |
| 9.001 | S901 | 360 minute 5 year Summer I+0% | 360 | 69 | 32.665 | 31.031 | -0.189 |
| 9.002 | S902 | 360 minute 5 year Summer I+0% | 360 | 69 | 32.640 | 30.788 | -0.197 |
| 11.000 | S1100 | 360 minute 5 year Summer I+0% | 360 | 66 | 32.680 | 31.572 | -0.128 |
| 9.003 | S903 | 360 minute 5 year Summer I+0% | 360 | 50 | 32.630 | 30.470 | -0.025 |
| 1.007 | S107 | 360 minute 5 year Summer I+0% | 360 | 50 | 32.500 | 30.470 | -1.066 |
| 12.000 | S1200 | 360 minute 5 year Summer I+0% | 360 | 66 | 32.635 | 31.855 | -0.145 |
| 13.000 | S1300 | 360 minute 5 year Summer I+0% | 360 | 66 | 32.635 | 31.877 | -0.123 |
| 13.001 | S1301 | 360 minute 5 year Summer I+0% | 360 | 66 | 32.635 | 31.786 | -0.124 |
| 12.001 | S1201 | 360 minute 5 year Summer I+0% | 360 | 68 | 32.635 | 31.445 | -0.190 |
| 12.002 | S1202 | 360 minute 5 year Summer I+0% | 360 | 69 | 32.680 | 31.088 | -0.172 |
| 12.003 | S1203 | 360 minute 5 year Summer I+0% | 360 | 69 | 32.660 | 30.993 | -0.177 |
| 12.004 | S1204 | 360 minute 5 year Summer I+0% | 360 | 69 | 32.660 | 30.852 | -0.183 |
| 14.000 | S1400 | 360 minute 5 year Summer I+0% | 360 | 66 | 32.650 | 31.651 | -0.124 |
| 14.001 | S1401 | 360 minute 5 year Summer I+0% | 360 | 69 | 32.680 | 31.302 | -0.193 |
| 15.000 | S1500 | 360 minute 5 year Summer I+0% | 360 | 66 | 32.680 | 31.669 | -0.131 |
| 15.001 | S1501 | 360 minute 5 year Summer I+0% | 360 | 66 | 32.600 | 31.623 | -0.132 |
| 14.002 | S1402 | 360 minute 5 year Summer I+0% | 360 | 69 | 32.600 | 31.045 | -0.195 |
| 12.005 | 1205 | 360 minute 5 year Summer I+0% | 360 | 78 | 32.600 | 30.537 | -0.168 |
| 1.008 | S108 | 360 minute 5 year Summer I+0% | 360 | 50 | 32.550 | 30.470 | 0.115 |
| 16.000 | S1600 | 360 minute 5 year Summer I+0% | 360 | 68 | 32.545 | 31.449 | -0.201 |
| 16.001 | S1601 | 360 minute 5 year Summer I+0% | 360 | 78 | 32.545 | 30.484 | -0.201 |
| 1.009 | S109 | 360 minute 5 year Summer I+0% | 360 | 50 | 32.500 | 30.472 | 0.442 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.000 | 1.546 | 0.6 | 0.3 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.017 | 85.936 | 0.1 | 7.4 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.928 | 0.4 | 0.2 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.618 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.06 | | 0.009 | 16.086 | 0.7 | 2.9 | OK |
| 9.002 | S902 | 0.000 | 0.04 | | 0.023 | 21.345 | 1.3 | 3.8 | OK |
| 11.000 | S1100 | 0.000 | 0.05 | | 0.003 | 4.640 | 0.5 | 0.8 | OK |
| 9.003 | S903 | 0.000 | 0.06 | | 0.431 | 27.532 | 0.7 | 4.8 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 55.270 | 114.667 | 0.0 | 5.3 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 1.237 | 0.5 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.08 | | 0.004 | 7.115 | 0.6 | 1.3 | OK |
| 13.001 | S1301 | 0.000 | 0.07 | | 0.012 | 11.137 | 1.0 | 2.0 | OK |
| 12.001 | S1201 | 0.000 | 0.06 | | 0.009 | 21.654 | 1.0 | 3.9 | OK |
| 12.002 | S1202 | 0.000 | 0.13 | | 0.031 | 29.697 | 0.8 | 5.4 | OK |
| 12.003 | S1203 | 0.000 | 0.10 | | 0.040 | 29.697 | 0.9 | 5.4 | OK |
| 12.004 | S1204 | 0.000 | 0.08 | | 0.023 | 35.884 | 1.2 | 6.5 | OK |
| 14.000 | S1400 | 0.000 | 0.07 | | 0.003 | 7.424 | 0.7 | 1.3 | OK |

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## Summary Wizard of 360 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.05 | | 0.008 | 13.302 | 0.7 | 2.4 | OK |
| 15.000 | S1500 | 0.000 | 0.04 | | 0.002 | 2.784 | 0.4 | 0.5 | OK |
| 15.001 | S1501 | 0.000 | 0.04 | | 0.006 | 7.424 | 1.1 | 1.3 | OK |
| 14.002 | S1402 | 0.000 | 0.04 | | 0.025 | 24.748 | 1.4 | 4.5 | OK |
| 12.005 | 1205 | 0.000 | 0.15 | | 0.089 | 67.438 | 1.5 | 12.1 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 59.752 | 174.610 | 0.2 | 5.9 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.03 | | 0.005 | 10.518 | 0.9 | 1.9 | OK |
| 16.001 | S1601 | 0.000 | 0.03 | | 0.012 | 11.755 | 1.1 | 2.1 | OK |
| 1.009 | S109 | 0.000 | 0.36 | | 3.003 | 185.815 | 1.0 | 5.9 | SURCHARGED |

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## Summary Wizard of 480 minute 5 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.680 | 31.788 | -0.132 | 0.000 |
| 1.001 | S101 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.680 | 31.716 | -0.134 | 0.000 |
| 2.000 | S200 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.600 | 31.496 | -0.134 | 0.000 |
| 1.002 | S102 | 480 minute 5 year Summer I+0% | 480 | 76 | 32.630 | 31.247 | -0.198 | 0.000 |
| 3.000 | S300 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.550 | 31.856 | -0.144 | 0.000 |
| 1.003 | S103 | 480 minute 5 year Summer I+0% | 480 | 76 | 32.600 | 31.078 | -0.197 | 0.000 |
| 4.000 | S400 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.550 | 31.710 | -0.140 | 0.000 |
| 4.001 | S401 | 480 minute 5 year Summer I+0% | 480 | 82 | 32.550 | 30.620 | -0.130 | 0.000 |
| 1.004 | S104 | 480 minute 5 year Summer I+0% | 480 | 53 | 32.600 | 30.461 | -0.069 | 0.000 |
| 1.005 | S105 | 480 minute 5 year Summer I+0% | 480 | 53 | 32.600 | 30.461 | -0.049 | 0.000 |
| 5.000 | S500 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.550 | 31.864 | -0.136 | 0.000 |
| 5.001 | S501 | 480 minute 5 year Summer I+0% | 480 | 76 | 32.665 | 31.155 | -0.135 | 0.000 |
| 6.000 | S600 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.665 | 31.852 | -0.148 | 0.000 |
| 6.001 | S601 | 480 minute 5 year Summer I+0% | 480 | 76 | 32.665 | 31.142 | -0.148 | 0.000 |
| 5.002 | S502 | 480 minute 5 year Summer I+0% | 480 | 76 | 32.665 | 30.856 | -0.194 | 0.000 |
| 5.003 | S503 | 480 minute 5 year Summer I+0% | 480 | 80 | 32.680 | 30.657 | -0.198 | 0.000 |
| 7.000 | S700 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.680 | 31.906 | -0.124 | 0.000 |
| 7.001 | S701 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.635 | 31.827 | -0.118 | 0.000 |
| 5.004 | S504 | 480 minute 5 year Summer I+0% | 480 | 53 | 32.635 | 30.461 | -0.084 | 0.000 |

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## Summary Wizard of 480 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.04 | | 0.002 | 4.350 | 0.5 | 0.6 | OK |
| 1.001 | S101 | 0.03 | | 0.006 | 6.692 | 1.0 | 0.9 | OK |
| 2.000 | S200 | 0.03 | | 0.002 | 4.350 | 0.6 | 0.6 | OK |
| 1.002 | S102 | 0.04 | | 0.007 | 13.384 | 0.7 | 1.8 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 2.677 | 0.8 | 0.4 | OK |
| 1.003 | S103 | 0.04 | | 0.019 | 24.425 | 1.2 | 3.3 | OK |
| 4.000 | S400 | 0.01 | | 0.001 | 5.019 | 1.5 | 0.7 | OK |
| 4.001 | S401 | 0.05 | | 0.003 | 7.026 | 0.7 | 1.0 | OK |
| 1.004 | S104 | 0.10 | | 0.149 | 34.798 | 0.4 | 4.7 | OK |
| 1.005 | S105 | 0.04 | | 0.899 | 36.471 | 0.4 | 4.8 | OK |
| 5.000 | S500 | 0.02 | | 0.001 | 4.684 | 0.9 | 0.6 | OK |
| 5.001 | S501 | 0.02 | | 0.003 | 4.684 | 0.9 | 0.6 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.669 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.669 | 0.2 | 0.1 | OK |
| 5.002 | S502 | 0.05 | | 0.007 | 17.733 | 0.7 | 2.4 | OK |
| 5.003 | S503 | 0.03 | | 0.018 | 20.075 | 1.0 | 2.7 | OK |
| 7.000 | S700 | 0.07 | | 0.003 | 8.699 | 0.6 | 1.2 | OK |
| 7.001 | S701 | 0.10 | | 0.015 | 13.049 | 0.6 | 1.8 | OK |
| 5.004 | S504 | 0.07 | | 0.399 | 33.124 | 0.5 | 4.5 | OK |

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## Summary Wizard of 480 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 480 minute 5 year Summer I+0% | 480 | 76 | 32.525 | 31.204 | -0.146 |
| 1.006 | S106 | 480 minute 5 year Summer I+0% | 480 | 53 | 32.500 | 30.461 | -1.185 |
| 9.000 | S900 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.665 | 31.853 | -0.147 |
| 10.000 | S901 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.665 | 31.852 | -0.148 |
| 9.001 | S901 | 480 minute 5 year Summer I+0% | 480 | 76 | 32.665 | 31.027 | -0.193 |
| 9.002 | S902 | 480 minute 5 year Summer I+0% | 480 | 76 | 32.640 | 30.786 | -0.199 |
| 11.000 | S1100 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.680 | 31.570 | -0.130 |
| 9.003 | S903 | 480 minute 5 year Summer I+0% | 480 | 53 | 32.630 | 30.461 | -0.034 |
| 1.007 | S107 | 480 minute 5 year Summer I+0% | 480 | 53 | 32.500 | 30.461 | -1.075 |
| 12.000 | S1200 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.635 | 31.854 | -0.146 |
| 13.000 | S1300 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.635 | 31.874 | -0.126 |
| 13.001 | S1301 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.635 | 31.783 | -0.127 |
| 12.001 | S1201 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.635 | 31.442 | -0.193 |
| 12.002 | S1202 | 480 minute 5 year Summer I+0% | 480 | 76 | 32.680 | 31.083 | -0.177 |
| 12.003 | S1203 | 480 minute 5 year Summer I+0% | 480 | 76 | 32.660 | 30.989 | -0.181 |
| 12.004 | S1204 | 480 minute 5 year Summer I+0% | 480 | 76 | 32.660 | 30.847 | -0.188 |
| 14.000 | S1400 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.650 | 31.648 | -0.127 |
| 14.001 | S1401 | 480 minute 5 year Summer I+0% | 480 | 76 | 32.680 | 31.299 | -0.196 |
| 15.000 | S1500 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.680 | 31.667 | -0.133 |
| 15.001 | S1501 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.600 | 31.622 | -0.133 |
| 14.002 | S1402 | 480 minute 5 year Summer I+0% | 480 | 76 | 32.600 | 31.042 | -0.198 |
| 12.005 | 1205 | 480 minute 5 year Summer I+0% | 480 | 83 | 32.600 | 30.531 | -0.174 |
| 1.008 | S108 | 480 minute 5 year Summer I+0% | 480 | 53 | 32.550 | 30.461 | 0.106 |
| 16.000 | S1600 | 480 minute 5 year Summer I+0% | 480 | 75 | 32.545 | 31.448 | -0.202 |
| 16.001 | S1601 | 480 minute 5 year Summer I+0% | 480 | 83 | 32.545 | 30.482 | -0.203 |
| 1.009 | S109 | 480 minute 5 year Summer I+0% | 480 | 53 | 32.500 | 30.463 | 0.433 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.000 | 1.673 | 0.5 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.996 | 94.044 | 0.1 | 6.3 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.003 | 0.3 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.669 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.05 | | 0.008 | 17.398 | 0.7 | 2.4 | OK |
| 9.002 | S902 | 0.000 | 0.03 | | 0.021 | 23.086 | 1.3 | 3.1 | OK |
| 11.000 | S1100 | 0.000 | 0.04 | | 0.002 | 5.019 | 0.5 | 0.7 | OK |
| 9.003 | S903 | 0.000 | 0.05 | | 0.414 | 29.778 | 0.6 | 3.9 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 54.233 | 128.624 | 0.0 | 4.8 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 1.338 | 0.4 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.06 | | 0.003 | 7.696 | 0.6 | 1.0 | OK |
| 13.001 | S1301 | 0.000 | 0.06 | | 0.010 | 12.045 | 0.9 | 1.6 | OK |
| 12.001 | S1201 | 0.000 | 0.05 | | 0.008 | 23.421 | 0.9 | 3.2 | OK |
| 12.002 | S1202 | 0.000 | 0.10 | | 0.028 | 32.121 | 0.7 | 4.4 | OK |
| 12.003 | S1203 | 0.000 | 0.08 | | 0.036 | 32.121 | 0.8 | 4.4 | OK |
| 12.004 | S1204 | 0.000 | 0.07 | | 0.020 | 38.812 | 1.2 | 5.3 | OK |
| 14.000 | S1400 | 0.000 | 0.06 | | 0.003 | 8.030 | 0.6 | 1.1 | OK |

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## Summary Wizard of 480 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.04 | | 0.007 | 14.387 | 0.7 | 2.0 | OK |
| 15.000 | S1500 | 0.000 | 0.03 | | 0.002 | 3.011 | 0.4 | 0.4 | OK |
| 15.001 | S1501 | 0.000 | 0.03 | | 0.005 | 8.030 | 1.0 | 1.1 | OK |
| 14.002 | S1402 | 0.000 | 0.04 | | 0.022 | 26.767 | 1.3 | 3.6 | OK |
| 12.005 | 1205 | 0.000 | 0.12 | | 0.079 | 72.941 | 1.5 | 9.9 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 58.766 | 203.569 | 0.2 | 5.8 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.005 | 11.376 | 0.9 | 1.5 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 0.011 | 12.714 | 1.1 | 1.7 | OK |
| 1.009 | S109 | 0.000 | 0.35 | | 2.974 | 216.219 | 1.0 | 5.9 | SURCHARGED |

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## Summary Wizard of 600 minute 5 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.680 | 31.787 | -0.133 | 0.000 |
| 1.001 | S101 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.680 | 31.715 | -0.135 | 0.000 |
| 2.000 | S200 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.600 | 31.495 | -0.135 | 0.000 |
| 1.002 | S102 | 600 minute 5 year Summer I+0% | 600 | 81 | 32.630 | 31.246 | -0.199 | 0.000 |
| 3.000 | S300 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.550 | 31.855 | -0.145 | 0.000 |
| 1.003 | S103 | 600 minute 5 year Summer I+0% | 600 | 81 | 32.600 | 31.076 | -0.199 | 0.000 |
| 4.000 | S400 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.550 | 31.708 | -0.142 | 0.000 |
| 4.001 | S401 | 600 minute 5 year Summer I+0% | 600 | 85 | 32.550 | 30.619 | -0.131 | 0.000 |
| 1.004 | S104 | 600 minute 5 year Summer I+0% | 600 | 58 | 32.600 | 30.449 | -0.081 | 0.000 |
| 1.005 | S105 | 600 minute 5 year Summer I+0% | 600 | 57 | 32.600 | 30.449 | -0.061 | 0.000 |
| 5.000 | S500 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.550 | 31.862 | -0.138 | 0.000 |
| 5.001 | S501 | 600 minute 5 year Summer I+0% | 600 | 81 | 32.665 | 31.153 | -0.137 | 0.000 |
| 6.000 | S600 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 600 minute 5 year Summer I+0% | 600 | 81 | 32.665 | 31.142 | -0.148 | 0.000 |
| 5.002 | S502 | 600 minute 5 year Summer I+0% | 600 | 81 | 32.665 | 30.854 | -0.196 | 0.000 |
| 5.003 | S503 | 600 minute 5 year Summer I+0% | 600 | 84 | 32.680 | 30.655 | -0.200 | 0.000 |
| 7.000 | S700 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.680 | 31.903 | -0.127 | 0.000 |
| 7.001 | S701 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.635 | 31.825 | -0.120 | 0.000 |
| 5.004 | S504 | 600 minute 5 year Summer I+0% | 600 | 57 | 32.635 | 30.449 | -0.096 | 0.000 |

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## Summary Wizard of 600 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.03 | | 0.002 | 4.621 | 0.5 | 0.5 | OK |
| 1.001 | S101 | 0.02 | | 0.005 | 7.109 | 1.0 | 0.8 | OK |
| 2.000 | S200 | 0.02 | | 0.002 | 4.621 | 0.7 | 0.5 | OK |
| 1.002 | S102 | 0.03 | | 0.006 | 14.218 | 0.6 | 1.5 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 2.843 | 0.7 | 0.3 | OK |
| 1.003 | S103 | 0.03 | | 0.018 | 25.948 | 1.1 | 2.8 | OK |
| 4.000 | S400 | 0.01 | | 0.001 | 5.332 | 1.3 | 0.6 | OK |
| 4.001 | S401 | 0.04 | | 0.003 | 7.465 | 0.6 | 0.8 | OK |
| 1.004 | S104 | 0.09 | | 0.125 | 36.967 | 0.4 | 4.0 | OK |
| 1.005 | S105 | 0.04 | | 0.864 | 38.744 | 0.4 | 4.1 | OK |
| 5.000 | S500 | 0.02 | | 0.001 | 4.976 | 0.9 | 0.5 | OK |
| 5.001 | S501 | 0.02 | | 0.002 | 4.976 | 0.9 | 0.5 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.710 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.710 | 0.2 | 0.1 | OK |
| 5.002 | S502 | 0.04 | | 0.007 | 18.838 | 0.7 | 2.1 | OK |
| 5.003 | S503 | 0.03 | | 0.017 | 21.327 | 1.0 | 2.3 | OK |
| 7.000 | S700 | 0.06 | | 0.003 | 9.242 | 0.6 | 1.0 | OK |
| 7.001 | S701 | 0.09 | | 0.014 | 13.863 | 0.6 | 1.5 | OK |
| 5.004 | S504 | 0.06 | | 0.371 | 35.189 | 0.5 | 3.8 | OK |

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## Summary Wizard of 600 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 600 minute 5 year Summer I+0% | 600 | 81 | 32.525 | 31.204 | -0.146 |
| 1.006 | S106 | 600 minute 5 year Summer I+0% | 600 | 57 | 32.500 | 30.448 | -1.198 |
| 9.000 | S900 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 600 minute 5 year Summer I+0% | 600 | 81 | 32.665 | 31.025 | -0.195 |
| 9.002 | S902 | 600 minute 5 year Summer I+0% | 600 | 81 | 32.640 | 30.784 | -0.201 |
| 11.000 | S1100 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.680 | 31.568 | -0.132 |
| 9.003 | S903 | 600 minute 5 year Summer I+0% | 600 | 57 | 32.630 | 30.449 | -0.046 |
| 1.007 | S107 | 600 minute 5 year Summer I+0% | 600 | 57 | 32.500 | 30.448 | -1.088 |
| 12.000 | S1200 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.635 | 31.853 | -0.147 |
| 13.000 | S1300 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.635 | 31.872 | -0.128 |
| 13.001 | S1301 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.635 | 31.781 | -0.129 |
| 12.001 | S1201 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.635 | 31.439 | -0.196 |
| 12.002 | S1202 | 600 minute 5 year Summer I+0% | 600 | 81 | 32.680 | 31.080 | -0.180 |
| 12.003 | S1203 | 600 minute 5 year Summer I+0% | 600 | 81 | 32.660 | 30.984 | -0.186 |
| 12.004 | S1204 | 600 minute 5 year Summer I+0% | 600 | 81 | 32.660 | 30.844 | -0.191 |
| 14.000 | S1400 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.650 | 31.646 | -0.129 |
| 14.001 | S1401 | 600 minute 5 year Summer I+0% | 600 | 81 | 32.680 | 31.297 | -0.198 |
| 15.000 | S1500 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.680 | 31.666 | -0.134 |
| 15.001 | S1501 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.600 | 31.621 | -0.134 |
| 14.002 | S1402 | 600 minute 5 year Summer I+0% | 600 | 81 | 32.600 | 31.040 | -0.200 |
| 12.005 | 1205 | 600 minute 5 year Summer I+0% | 600 | 86 | 32.600 | 30.528 | -0.177 |
| 1.008 | S108 | 600 minute 5 year Summer I+0% | 600 | 57 | 32.550 | 30.448 | 0.093 |
| 16.000 | S1600 | 600 minute 5 year Summer I+0% | 600 | 80 | 32.545 | 31.445 | -0.205 |
| 16.001 | S1601 | 600 minute 5 year Summer I+0% | 600 | 86 | 32.545 | 30.479 | -0.206 |
| 1.009 | S109 | 600 minute 5 year Summer I+0% | 600 | 57 | 32.500 | 30.451 | 0.421 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.777 | 0.4 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.966 | 99.792 | 0.1 | 5.6 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.066 | 0.3 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.710 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.04 | | 0.007 | 18.482 | 0.7 | 2.0 | OK |
| 9.002 | S902 | 0.000 | 0.03 | | 0.019 | 24.525 | 1.3 | 2.7 | OK |
| 11.000 | S1100 | 0.000 | 0.04 | | 0.002 | 5.332 | 0.5 | 0.6 | OK |
| 9.003 | S903 | 0.000 | 0.04 | | 0.392 | 31.634 | 0.6 | 3.3 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 52.802 | 136.279 | 0.0 | 4.6 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.422 | 0.3 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.05 | | 0.003 | 8.175 | 0.6 | 0.9 | OK |
| 13.001 | S1301 | 0.000 | 0.05 | | 0.009 | 12.796 | 0.9 | 1.4 | OK |
| 12.001 | S1201 | 0.000 | 0.04 | | 0.007 | 24.881 | 0.9 | 2.7 | OK |
| 12.002 | S1202 | 0.000 | 0.09 | | 0.025 | 34.123 | 0.7 | 3.7 | OK |
| 12.003 | S1203 | 0.000 | 0.07 | | 0.032 | 34.123 | 0.8 | 3.7 | OK |
| 12.004 | S1204 | 0.000 | 0.06 | | 0.018 | 41.232 | 1.2 | 4.5 | OK |
| 14.000 | S1400 | 0.000 | 0.05 | | 0.003 | 8.531 | 0.6 | 0.9 | OK |

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## Summary Wizard of 600 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.03 | | 0.007 | 15.284 | 0.6 | 1.7 | OK |
| 15.000 | S1500 | 0.000 | 0.03 | | 0.002 | 3.199 | 0.4 | 0.3 | OK |
| 15.001 | S1501 | 0.000 | 0.03 | | 0.005 | 8.531 | 1.1 | 0.9 | OK |
| 14.002 | S1402 | 0.000 | 0.03 | | 0.020 | 28.436 | 1.3 | 3.1 | OK |
| 12.005 | 1205 | 0.000 | 0.10 | | 0.073 | 77.488 | 1.4 | 8.4 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 57.409 | 216.599 | 0.2 | 5.9 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.004 | 12.085 | 0.9 | 1.3 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 0.009 | 13.507 | 1.1 | 1.5 | OK |
| 1.009 | S109 | 0.000 | 0.35 | | 2.937 | 230.096 | 1.0 | 5.8 | SURCHARGED |

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## Summary Wizard of 720 minute 5 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.680 | 31.786 | -0.134 | 0.000 |
| 1.001 | S101 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.680 | 31.714 | -0.136 | 0.000 |
| 2.000 | S200 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.600 | 31.494 | -0.136 | 0.000 |
| 1.002 | S102 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.630 | 31.244 | -0.201 | 0.000 |
| 3.000 | S300 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.550 | 31.855 | -0.145 | 0.000 |
| 1.003 | S103 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.600 | 31.075 | -0.200 | 0.000 |
| 4.000 | S400 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.550 | 31.707 | -0.143 | 0.000 |
| 4.001 | S401 | 720 minute 5 year Summer I+0% | 720 | 90 | 32.550 | 30.618 | -0.132 | 0.000 |
| 1.004 | S104 | 720 minute 5 year Summer I+0% | 720 | 59 | 32.600 | 30.436 | -0.094 | 0.000 |
| 1.005 | S105 | 720 minute 5 year Summer I+0% | 720 | 58 | 32.600 | 30.436 | -0.074 | 0.000 |
| 5.000 | S500 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.550 | 31.860 | -0.140 | 0.000 |
| 5.001 | S501 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.665 | 31.151 | -0.139 | 0.000 |
| 6.000 | S600 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.665 | 31.142 | -0.148 | 0.000 |
| 5.002 | S502 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.665 | 30.852 | -0.198 | 0.000 |
| 5.003 | S503 | 720 minute 5 year Summer I+0% | 720 | 89 | 32.680 | 30.654 | -0.201 | 0.000 |
| 7.000 | S700 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.680 | 31.902 | -0.128 | 0.000 |
| 7.001 | S701 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.635 | 31.822 | -0.123 | 0.000 |
| 5.004 | S504 | 720 minute 5 year Summer I+0% | 720 | 58 | 32.635 | 30.436 | -0.109 | 0.000 |

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## Summary Wizard of 720 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.03 | | 0.002 | 4.854 | 0.5 | 0.4 | OK |
| 1.001 | S101 | 0.02 | | 0.005 | 7.468 | 1.0 | 0.7 | OK |
| 2.000 | S200 | 0.02 | | 0.001 | 4.854 | 0.6 | 0.4 | OK |
| 1.002 | S102 | 0.03 | | 0.006 | 14.935 | 0.6 | 1.4 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 2.987 | 0.6 | 0.3 | OK |
| 1.003 | S103 | 0.03 | | 0.017 | 27.257 | 1.1 | 2.5 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 5.601 | 1.1 | 0.5 | OK |
| 4.001 | S401 | 0.03 | | 0.003 | 7.841 | 0.6 | 0.7 | OK |
| 1.004 | S104 | 0.08 | | 0.101 | 38.832 | 0.4 | 3.5 | OK |
| 1.005 | S105 | 0.03 | | 0.828 | 40.699 | 0.4 | 3.6 | OK |
| 5.000 | S500 | 0.01 | | 0.001 | 5.227 | 0.9 | 0.5 | OK |
| 5.001 | S501 | 0.02 | | 0.002 | 5.227 | 0.9 | 0.5 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.746 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.739 | 0.2 | 0.1 | OK |
| 5.002 | S502 | 0.03 | | 0.006 | 19.782 | 0.7 | 1.8 | OK |
| 5.003 | S503 | 0.03 | | 0.016 | 22.395 | 1.0 | 2.0 | OK |
| 7.000 | S700 | 0.05 | | 0.003 | 9.708 | 0.6 | 0.9 | OK |
| 7.001 | S701 | 0.08 | | 0.013 | 14.562 | 0.6 | 1.3 | OK |
| 5.004 | S504 | 0.05 | | 0.346 | 36.957 | 0.5 | 3.4 | OK |

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## Summary Wizard of 720 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.525 | 31.203 | -0.147 |
| 1.006 | S106 | 720 minute 5 year Summer I+0% | 720 | 58 | 32.500 | 30.436 | -1.210 |
| 9.000 | S900 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.665 | 31.023 | -0.197 |
| 9.002 | S902 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.640 | 30.783 | -0.202 |
| 11.000 | S1100 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.680 | 31.567 | -0.133 |
| 9.003 | S903 | 720 minute 5 year Summer I+0% | 720 | 58 | 32.630 | 30.436 | -0.059 |
| 1.007 | S107 | 720 minute 5 year Summer I+0% | 720 | 58 | 32.500 | 30.436 | -1.100 |
| 12.000 | S1200 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.635 | 31.853 | -0.147 |
| 13.000 | S1300 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.635 | 31.870 | -0.130 |
| 13.001 | S1301 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.635 | 31.780 | -0.130 |
| 12.001 | S1201 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.635 | 31.437 | -0.198 |
| 12.002 | S1202 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.680 | 31.076 | -0.184 |
| 12.003 | S1203 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.660 | 30.981 | -0.189 |
| 12.004 | S1204 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.660 | 30.842 | -0.193 |
| 14.000 | S1400 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.650 | 31.645 | -0.130 |
| 14.001 | S1401 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.680 | 31.296 | -0.199 |
| 15.000 | S1500 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.680 | 31.665 | -0.135 |
| 15.001 | S1501 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.600 | 31.620 | -0.135 |
| 14.002 | S1402 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.600 | 31.039 | -0.201 |
| 12.005 | 1205 | 720 minute 5 year Summer I+0% | 720 | 91 | 32.600 | 30.525 | -0.180 |
| 1.008 | S108 | 720 minute 5 year Summer I+0% | 720 | 58 | 32.550 | 30.436 | 0.081 |
| 16.000 | S1600 | 720 minute 5 year Summer I+0% | 720 | 87 | 32.545 | 31.442 | -0.208 |
| 16.001 | S1601 | 720 minute 5 year Summer I+0% | 720 | 91 | 32.545 | 30.476 | -0.209 |
| 1.009 | S109 | 720 minute 5 year Summer I+0% | 720 | 58 | 32.500 | 30.438 | 0.408 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.867 | 0.4 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.919 | 104.964 | 0.1 | 5.0 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.120 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.727 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.04 | | 0.007 | 19.396 | 0.6 | 1.8 | OK |
| 9.002 | S902 | 0.000 | 0.02 | | 0.018 | 25.744 | 1.3 | 2.3 | OK |
| 11.000 | S1100 | 0.000 | 0.03 | | 0.002 | 5.601 | 0.5 | 0.5 | OK |
| 9.003 | S903 | 0.000 | 0.04 | | 0.368 | 33.211 | 0.6 | 2.9 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 51.341 | 143.498 | 0.0 | 4.2 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.493 | 0.3 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.05 | | 0.002 | 8.588 | 0.5 | 0.8 | OK |
| 13.001 | S1301 | 0.000 | 0.04 | | 0.009 | 13.442 | 0.9 | 1.2 | OK |
| 12.001 | S1201 | 0.000 | 0.04 | | 0.007 | 26.137 | 0.9 | 2.4 | OK |
| 12.002 | S1202 | 0.000 | 0.08 | | 0.023 | 35.845 | 0.7 | 3.3 | OK |
| 12.003 | S1203 | 0.000 | 0.06 | | 0.029 | 35.845 | 0.8 | 3.3 | OK |
| 12.004 | S1204 | 0.000 | 0.05 | | 0.017 | 43.312 | 1.1 | 3.9 | OK |
| 14.000 | S1400 | 0.000 | 0.04 | | 0.002 | 8.961 | 0.6 | 0.8 | OK |

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## Summary Wizard of 720 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.03 | | 0.006 | 16.055 | 0.6 | 1.5 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.002 | 3.360 | 0.4 | 0.3 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.004 | 8.961 | 1.1 | 0.8 | OK |
| 14.002 | S1402 | 0.000 | 0.03 | | 0.019 | 29.871 | 1.3 | 2.7 | OK |
| 12.005 | 1205 | 0.000 | 0.09 | | 0.069 | 81.398 | 1.3 | 7.4 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 56.025 | 227.882 | 0.2 | 5.8 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.003 | 12.695 | 0.9 | 1.2 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 0.007 | 14.188 | 1.1 | 1.3 | OK |
| 1.009 | S109 | 0.000 | 0.35 | | 2.897 | 242.068 | 1.0 | 5.8 | SURCHARGED |

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## Summary Wizard of 960 minute 5 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.680 | 31.785 | -0.135 | 0.000 |
| 1.001 | S101 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.680 | 31.711 | -0.139 | 0.000 |
| 2.000 | S200 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.600 | 31.491 | -0.139 | 0.000 |
| 1.002 | S102 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.630 | 31.243 | -0.202 | 0.000 |
| 3.000 | S300 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.550 | 31.854 | -0.146 | 0.000 |
| 1.003 | S103 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.600 | 31.073 | -0.202 | 0.000 |
| 4.000 | S400 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.550 | 31.706 | -0.144 | 0.000 |
| 4.001 | S401 | 960 minute 5 year Summer I+0% | 960 | 97 | 32.550 | 30.616 | -0.134 | 0.000 |
| 1.004 | S104 | 960 minute 5 year Summer I+0% | 960 | 63 | 32.600 | 30.409 | -0.121 | 0.000 |
| 1.005 | S105 | 960 minute 5 year Summer I+0% | 960 | 61 | 32.600 | 30.409 | -0.101 | 0.000 |
| 5.000 | S500 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.550 | 31.858 | -0.142 | 0.000 |
| 5.001 | S501 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.665 | 31.149 | -0.141 | 0.000 |
| 6.000 | S600 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.665 | 30.850 | -0.200 | 0.000 |
| 5.003 | S503 | 960 minute 5 year Summer I+0% | 960 | 97 | 32.680 | 30.652 | -0.203 | 0.000 |
| 7.000 | S700 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.680 | 31.900 | -0.130 | 0.000 |
| 7.001 | S701 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.635 | 31.819 | -0.126 | 0.000 |
| 5.004 | S504 | 960 minute 5 year Summer I+0% | 960 | 63 | 32.635 | 30.409 | -0.136 | 0.000 |

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## Summary Wizard of 960 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.02 | | 0.002 | 5.245 | 0.5 | 0.4 | OK |
| 1.001 | S101 | 0.02 | | 0.003 | 8.068 | 1.0 | 0.5 | OK |
| 2.000 | S200 | 0.02 | | 0.001 | 5.245 | 0.6 | 0.4 | OK |
| 1.002 | S102 | 0.02 | | 0.005 | 16.137 | 0.7 | 1.1 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 3.227 | 0.5 | 0.2 | OK |
| 1.003 | S103 | 0.02 | | 0.015 | 29.450 | 1.1 | 2.0 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 6.051 | 0.9 | 0.4 | OK |
| 4.001 | S401 | 0.03 | | 0.002 | 8.472 | 0.6 | 0.6 | OK |
| 1.004 | S104 | 0.06 | | 0.080 | 41.956 | 0.4 | 2.9 | OK |
| 1.005 | S105 | 0.03 | | 0.752 | 43.973 | 0.4 | 2.9 | OK |
| 5.000 | S500 | 0.01 | | 0.001 | 5.648 | 0.9 | 0.4 | OK |
| 5.001 | S501 | 0.01 | | 0.001 | 5.648 | 0.9 | 0.4 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.766 | 0.1 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.743 | 0.1 | 0.1 | OK |
| 5.002 | S502 | 0.03 | | 0.006 | 21.317 | 0.7 | 1.5 | OK |
| 5.003 | S503 | 0.02 | | 0.014 | 24.141 | 1.0 | 1.6 | OK |
| 7.000 | S700 | 0.04 | | 0.002 | 10.489 | 0.5 | 0.7 | OK |
| 7.001 | S701 | 0.06 | | 0.011 | 15.734 | 0.6 | 1.1 | OK |
| 5.004 | S504 | 0.04 | | 0.293 | 39.875 | 0.5 | 2.7 | OK |

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## Summary Wizard of 960 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.525 | 31.202 | -0.148 |
| 1.006 | S106 | 960 minute 5 year Summer I+0% | 960 | 61 | 32.500 | 30.409 | -1.237 |
| 9.000 | S900 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.665 | 31.020 | -0.200 |
| 9.002 | S902 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.640 | 30.780 | -0.205 |
| 11.000 | S1100 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.680 | 31.566 | -0.134 |
| 9.003 | S903 | 960 minute 5 year Summer I+0% | 960 | 61 | 32.630 | 30.409 | -0.086 |
| 1.007 | S107 | 960 minute 5 year Summer I+0% | 960 | 61 | 32.500 | 30.409 | -1.127 |
| 12.000 | S1200 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.635 | 31.852 | -0.148 |
| 13.000 | S1300 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.635 | 31.869 | -0.131 |
| 13.001 | S1301 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.635 | 31.778 | -0.132 |
| 12.001 | S1201 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.635 | 31.435 | -0.200 |
| 12.002 | S1202 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.680 | 31.071 | -0.189 |
| 12.003 | S1203 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.660 | 30.977 | -0.193 |
| 12.004 | S1204 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.660 | 30.839 | -0.196 |
| 14.000 | S1400 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.650 | 31.643 | -0.132 |
| 14.001 | S1401 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.680 | 31.294 | -0.201 |
| 15.000 | S1500 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.680 | 31.663 | -0.137 |
| 15.001 | S1501 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.600 | 31.618 | -0.137 |
| 14.002 | S1402 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.600 | 31.038 | -0.202 |
| 12.005 | 1205 | 960 minute 5 year Summer I+0% | 960 | 98 | 32.600 | 30.519 | -0.186 |
| 1.008 | S108 | 960 minute 5 year Summer I+0% | 960 | 61 | 32.550 | 30.409 | 0.054 |
| 16.000 | S1600 | 960 minute 5 year Summer I+0% | 960 | 96 | 32.545 | 31.439 | -0.211 |
| 16.001 | S1601 | 960 minute 5 year Summer I+0% | 960 | 98 | 32.545 | 30.473 | -0.212 |
| 1.009 | S109 | 960 minute 5 year Summer I+0% | 960 | 61 | 32.500 | 30.410 | 0.380 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 2.017 | 0.3 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.819 | 113.141 | 0.1 | 4.4 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.210 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.757 | 0.1 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.03 | | 0.006 | 20.928 | 0.6 | 1.4 | OK |
| 9.002 | S902 | 0.000 | 0.02 | | 0.015 | 27.786 | 1.3 | 1.9 | OK |
| 11.000 | S1100 | 0.000 | 0.02 | | 0.002 | 6.051 | 0.5 | 0.4 | OK |
| 9.003 | S903 | 0.000 | 0.03 | | 0.318 | 35.854 | 0.6 | 2.4 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 48.176 | 154.702 | 0.0 | 4.0 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.613 | 0.2 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.04 | | 0.002 | 9.279 | 0.5 | 0.6 | OK |
| 13.001 | S1301 | 0.000 | 0.04 | | 0.008 | 14.523 | 0.8 | 1.0 | OK |
| 12.001 | S1201 | 0.000 | 0.03 | | 0.006 | 28.239 | 0.8 | 1.9 | OK |
| 12.002 | S1202 | 0.000 | 0.06 | | 0.020 | 38.728 | 0.6 | 2.6 | OK |
| 12.003 | S1203 | 0.000 | 0.05 | | 0.026 | 38.728 | 0.7 | 2.6 | OK |
| 12.004 | S1204 | 0.000 | 0.04 | | 0.015 | 46.797 | 1.1 | 3.2 | OK |
| 14.000 | S1400 | 0.000 | 0.03 | | 0.002 | 9.682 | 0.5 | 0.7 | OK |

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## Summary Wizard of 960 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.02 | | 0.006 | 17.347 | 0.6 | 1.2 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.001 | 3.631 | 0.4 | 0.2 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.003 | 9.682 | 1.1 | 0.7 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.017 | 32.274 | 1.3 | 2.2 | OK |
| 12.005 | 1205 | 0.000 | 0.07 | | 0.059 | 87.946 | 1.3 | 6.0 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 53.041 | 245.875 | 0.2 | 5.7 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.003 | 13.716 | 0.9 | 0.9 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.005 | 15.330 | 1.0 | 1.0 | OK |
| 1.009 | S109 | 0.000 | 0.34 | | 2.807 | 261.202 | 1.0 | 5.7 | SURCHARGED |

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## Summary Wizard of 1440 minute 5 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.680 | 31.781 | -0.139 |
| 1.001 | S101 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.680 | 31.708 | -0.142 |
| 2.000 | S200 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.600 | 31.488 | -0.142 |
| 1.002 | S102 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.630 | 31.237 | -0.208 |
| 3.000 | S300 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.550 | 31.853 | -0.147 |
| 1.003 | S103 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.600 | 31.068 | -0.207 |
| 4.000 | S400 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.550 | 31.704 | -0.146 |
| 4.001 | S401 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.550 | 30.615 | -0.135 |
| 1.004 | S104 | 1440 minute 5 year Summer I+0% | 1440 | 73 | 32.600 | 30.358 | -0.172 |
| 1.005 | S105 | 1440 minute 5 year Summer I+0% | 1440 | 67 | 32.600 | 30.358 | -0.152 |
| 5.000 | S500 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.550 | 31.856 | -0.144 |
| 5.001 | S501 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.665 | 31.147 | -0.143 |
| 6.000 | S600 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.665 | 31.851 | -0.149 |
| 6.001 | S601 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.665 | 31.141 | -0.149 |
| 5.002 | S502 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.665 | 30.847 | -0.203 |
| 5.003 | S503 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.680 | 30.647 | -0.208 |
| 7.000 | S700 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.680 | 31.897 | -0.133 |
| 7.001 | S701 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.635 | 31.816 | -0.129 |
| 5.004 | S504 | 1440 minute 5 year Summer I+0% | 1440 | 70 | 32.635 | 30.358 | -0.187 |

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## Summary Wizard of 1440 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.02 | | 0.001 | 5.846 | 0.5 | 0.3 | OK |
| 1.001 | S101 | 0.000 | 0.01 | | 0.002 | 8.994 | 0.9 | 0.4 | OK |
| 2.000 | S200 | 0.000 | 0.01 | | 0.001 | 5.846 | 0.6 | 0.3 | OK |
| 1.002 | S102 | 0.000 | 0.02 | | 0.004 | 17.988 | 0.6 | 0.8 | OK |
| 3.000 | S300 | 0.000 | 0.00 | | 0.000 | 3.597 | 0.4 | 0.2 | OK |
| 1.003 | S103 | 0.000 | 0.02 | | 0.011 | 32.828 | 1.1 | 1.5 | OK |
| 4.000 | S400 | 0.000 | 0.01 | | 0.000 | 6.745 | 0.7 | 0.3 | OK |
| 4.001 | S401 | 0.000 | 0.02 | | 0.002 | 9.443 | 0.6 | 0.4 | OK |
| 1.004 | S104 | 0.000 | 0.05 | | 0.045 | 46.768 | 0.4 | 2.1 | OK |
| 1.005 | S105 | 0.000 | 0.02 | | 0.609 | 49.016 | 0.3 | 2.2 | OK |
| 5.000 | S500 | 0.000 | 0.01 | | 0.000 | 6.296 | 0.6 | 0.3 | OK |
| 5.001 | S501 | 0.000 | 0.01 | | 0.000 | 6.296 | 0.6 | 0.3 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 0.807 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.000 | 0.787 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.000 | 0.02 | | 0.005 | 23.722 | 0.7 | 1.1 | OK |
| 5.003 | S503 | 0.000 | 0.02 | | 0.010 | 26.870 | 1.0 | 1.2 | OK |
| 7.000 | S700 | 0.000 | 0.03 | | 0.002 | 11.692 | 0.5 | 0.5 | OK |
| 7.001 | S701 | 0.000 | 0.05 | | 0.009 | 17.538 | 0.5 | 0.8 | OK |
| 5.004 | S504 | 0.000 | 0.03 | | 0.194 | 44.408 | 0.4 | 2.0 | OK |

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## Summary Wizard of 1440 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.525 | 31.202 | -0.148 |
| 1.006 | S106 | 1440 minute 5 year Summer I+0% | 1440 | 67 | 32.500 | 30.358 | -1.288 |
| 9.000 | S900 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.665 | 31.018 | -0.202 |
| 9.002 | S902 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.640 | 30.775 | -0.210 |
| 11.000 | S1100 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.680 | 31.563 | -0.137 |
| 9.003 | S903 | 1440 minute 5 year Summer I+0% | 1440 | 67 | 32.630 | 30.358 | -0.137 |
| 1.007 | S107 | 1440 minute 5 year Summer I+0% | 1440 | 67 | 32.500 | 30.358 | -1.178 |
| 12.000 | S1200 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.635 | 31.852 | -0.148 |
| 13.000 | S1300 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.635 | 31.866 | -0.134 |
| 13.001 | S1301 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.635 | 31.776 | -0.134 |
| 12.001 | S1201 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.635 | 31.433 | -0.202 |
| 12.002 | S1202 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.680 | 31.066 | -0.194 |
| 12.003 | S1203 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.660 | 30.973 | -0.197 |
| 12.004 | S1204 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.660 | 30.835 | -0.200 |
| 14.000 | S1400 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.650 | 31.641 | -0.134 |
| 14.001 | S1401 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.680 | 31.289 | -0.206 |
| 15.000 | S1500 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.680 | 31.660 | -0.140 |
| 15.001 | S1501 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.600 | 31.615 | -0.140 |
| 14.002 | S1402 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.600 | 31.032 | -0.208 |
| 12.005 | 1205 | 1440 minute 5 year Summer I+0% | 1440 | 106 | 32.600 | 30.513 | -0.192 |
| 1.008 | S108 | 1440 minute 5 year Summer I+0% | 1440 | 67 | 32.550 | 30.358 | 0.003 |
| 16.000 | S1600 | 1440 minute 5 year Summer I+0% | 1440 | 105 | 32.545 | 31.435 | -0.215 |
| 16.001 | S1601 | 1440 minute 5 year Summer I+0% | 1440 | 106 | 32.545 | 30.470 | -0.215 |
| 1.009 | S109 | 1440 minute 5 year Summer I+0% | 1440 | 67 | 32.500 | 30.357 | 0.327 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 2.248 | 0.2 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.631 | 126.399 | 0.1 | 3.6 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.307 | 0.1 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.800 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.02 | | 0.005 | 23.243 | 0.6 | 1.1 | OK |
| 9.002 | S902 | 0.000 | 0.01 | | 0.010 | 30.888 | 1.3 | 1.4 | OK |
| 11.000 | S1100 | 0.000 | 0.02 | | 0.001 | 6.746 | 0.5 | 0.3 | OK |
| 9.003 | S903 | 0.000 | 0.02 | | 0.236 | 39.882 | 0.6 | 1.8 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 42.263 | 172.292 | 0.0 | 3.6 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.798 | 0.2 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.03 | | 0.002 | 10.343 | 0.5 | 0.5 | OK |
| 13.001 | S1301 | 0.000 | 0.03 | | 0.006 | 16.189 | 0.8 | 0.7 | OK |
| 12.001 | S1201 | 0.000 | 0.02 | | 0.005 | 31.479 | 0.8 | 1.4 | OK |
| 12.002 | S1202 | 0.000 | 0.05 | | 0.017 | 43.171 | 0.6 | 2.0 | OK |
| 12.003 | S1203 | 0.000 | 0.04 | | 0.022 | 43.171 | 0.7 | 2.0 | OK |
| 12.004 | S1204 | 0.000 | 0.03 | | 0.013 | 52.165 | 1.0 | 2.4 | OK |
| 14.000 | S1400 | 0.000 | 0.03 | | 0.002 | 10.793 | 0.5 | 0.5 | OK |

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## Summary Wizard of 1440 minute 5 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.02 | | 0.004 | 19.337 | 0.6 | 0.9 | OK |
| 15.000 | S1500 | 0.000 | 0.01 | | 0.001 | 4.047 | 0.4 | 0.2 | OK |
| 15.001 | S1501 | 0.000 | 0.01 | | 0.002 | 10.793 | 1.0 | 0.5 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.012 | 35.976 | 1.3 | 1.6 | OK |
| 12.005 | 1205 | 0.000 | 0.05 | | 0.048 | 98.034 | 1.2 | 4.4 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 47.476 | 273.923 | 0.2 | 5.3 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.002 | 15.290 | 0.7 | 0.7 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.003 | 17.089 | 0.8 | 0.8 | OK |
| 1.009 | S109 | 0.000 | 0.32 | | 2.581 | 291.009 | 1.0 | 5.4 | SURCHARGED |

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## Summary Wizard of 15 minute 30 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 15 minute 30 year Summer I+0% | 15 | 18 | 32.680 | 31.826 | -0.094 | 0.000 |
| 1.001 | S101 | 15 minute 30 year Summer I+0% | 15 | 18 | 32.680 | 31.748 | -0.102 | 0.000 |
| 2.000 | S200 | 15 minute 30 year Summer I+0% | 15 | 20 | 32.600 | 31.527 | -0.103 | 0.000 |
| 1.002 | S102 | 15 minute 30 year Summer I+0% | 15 | 24 | 32.630 | 31.306 | -0.139 | 0.000 |
| 3.000 | S300 | 15 minute 30 year Summer I+0% | 15 | 17 | 32.550 | 31.877 | -0.123 | 0.000 |
| 1.003 | S103 | 15 minute 30 year Summer I+0% | 15 | 25 | 32.600 | 31.140 | -0.135 | 0.000 |
| 4.000 | S400 | 15 minute 30 year Summer I+0% | 15 | 18 | 32.550 | 31.733 | -0.117 | 0.000 |
| 4.001 | S401 | 15 minute 30 year Summer I+0% | 15 | 40 | 32.550 | 30.665 | -0.085 | 0.000 |
| 1.004 | S104 | 15 minute 30 year Summer I+0% | 15 | 57 | 32.600 | 30.450 | -0.080 | 0.000 |
| 1.005 | S105 | 15 minute 30 year Summer I+0% | 15 | 65 | 32.600 | 30.389 | -0.121 | 0.000 |
| 5.000 | S500 | 15 minute 30 year Summer I+0% | 15 | 16 | 32.550 | 31.890 | -0.110 | 0.000 |
| 5.001 | S501 | 15 minute 30 year Summer I+0% | 15 | 25 | 32.665 | 31.182 | -0.108 | 0.000 |
| 6.000 | S600 | 15 minute 30 year Summer I+0% | 15 | 17 | 32.665 | 31.864 | -0.136 | 0.000 |
| 6.001 | S601 | 15 minute 30 year Summer I+0% | 15 | 25 | 32.665 | 31.156 | -0.134 | 0.000 |
| 5.002 | S502 | 15 minute 30 year Summer I+0% | 15 | 25 | 32.665 | 30.926 | -0.124 | 0.000 |
| 5.003 | S503 | 15 minute 30 year Summer I+0% | 15 | 38 | 32.680 | 30.716 | -0.139 | 0.000 |
| 7.000 | S700 | 15 minute 30 year Summer I+0% | 15 | 15 | 32.680 | 31.962 | -0.068 | 0.000 |
| 7.001 | S701 | 15 minute 30 year Summer I+0% | 15 | 16 | 32.635 | 31.905 | -0.040 | 0.000 |
| 5.004 | S504 | 15 minute 30 year Summer I+0% | 15 | 60 | 32.635 | 30.422 | -0.123 | 0.000 |

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## Summary Wizard of 15 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.29 | | 0.008 | 2.134 | 0.8 | 4.9 | OK |
| 1.001 | S101 | 0.22 | | 0.022 | 3.282 | 1.6 | 7.8 | OK |
| 2.000 | S200 | 0.22 | | 0.007 | 2.134 | 1.0 | 4.9 | OK |
| 1.002 | S102 | 0.31 | | 0.024 | 6.564 | 1.1 | 15.6 | OK |
| 3.000 | S300 | 0.07 | | 0.003 | 1.313 | 1.4 | 3.0 | OK |
| 1.003 | S103 | 0.33 | | 0.070 | 11.979 | 2.0 | 29.0 | OK |
| 4.000 | S400 | 0.11 | | 0.005 | 2.462 | 1.9 | 5.6 | OK |
| 4.001 | S401 | 0.39 | | 0.013 | 3.447 | 1.1 | 8.1 | OK |
| 1.004 | S104 | 0.88 | | 0.127 | 17.032 | 0.7 | 41.1 | OK |
| 1.005 | S105 | 0.38 | | 0.696 | 17.298 | 0.7 | 42.9 | OK |
| 5.000 | S500 | 0.16 | | 0.006 | 2.298 | 1.4 | 5.3 | OK |
| 5.001 | S501 | 0.17 | | 0.011 | 2.298 | 1.3 | 5.2 | OK |
| 6.000 | S600 | 0.02 | | 0.002 | 0.328 | 1.0 | 0.8 | OK |
| 6.001 | S601 | 0.02 | | 0.003 | 0.328 | 0.8 | 0.7 | OK |
| 5.002 | S502 | 0.42 | | 0.028 | 8.697 | 1.2 | 21.5 | OK |
| 5.003 | S503 | 0.31 | | 0.067 | 9.845 | 1.8 | 24.4 | OK |
| 7.000 | S700 | 0.58 | | 0.012 | 4.267 | 1.0 | 9.8 | OK |
| 7.001 | S701 | 0.88 | | 0.060 | 6.400 | 1.1 | 15.1 | OK |
| 5.004 | S504 | 0.64 | | 0.318 | 16.092 | 0.9 | 39.4 | OK |

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## Summary Wizard of 15 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 15 minute 30 year Summer I+0% | 15 | 25 | 32.525 | 31.221 | -0.129 |
| 1.006 | S106 | 15 minute 30 year Summer I+0% | 15 | 65 | 32.500 | 30.389 | -1.257 |
| 9.000 | S900 | 15 minute 30 year Summer I+0% | 15 | 17 | 32.665 | 31.867 | -0.133 |
| 10.000 | S901 | 15 minute 30 year Summer I+0% | 15 | 18 | 32.665 | 31.864 | -0.136 |
| 9.001 | S901 | 15 minute 30 year Summer I+0% | 15 | 25 | 32.665 | 31.101 | -0.119 |
| 9.002 | S902 | 15 minute 30 year Summer I+0% | 15 | 25 | 32.640 | 30.843 | -0.142 |
| 11.000 | S1100 | 15 minute 30 year Summer I+0% | 15 | 19 | 32.680 | 31.611 | -0.089 |
| 9.003 | S903 | 15 minute 30 year Summer I+0% | 15 | 65 | 32.630 | 30.389 | -0.106 |
| 1.007 | S107 | 15 minute 30 year Summer I+0% | 15 | 65 | 32.500 | 30.389 | -1.147 |
| 12.000 | S1200 | 15 minute 30 year Summer I+0% | 15 | 18 | 32.635 | 31.871 | -0.129 |
| 13.000 | S1300 | 15 minute 30 year Summer I+0% | 15 | 16 | 32.635 | 31.926 | -0.074 |
| 13.001 | S1301 | 15 minute 30 year Summer I+0% | 15 | 18 | 32.635 | 31.836 | -0.074 |
| 12.001 | S1201 | 15 minute 30 year Summer I+0% | 15 | 21 | 32.635 | 31.513 | -0.122 |
| 12.002 | S1202 | 15 minute 30 year Summer I+0% | 15 | 25 | 32.680 | 31.206 | -0.054 |
| 12.003 | S1203 | 15 minute 30 year Summer I+0% | 15 | 25 | 32.660 | 31.092 | -0.078 |
| 12.004 | S1204 | 15 minute 30 year Summer I+0% | 15 | 25 | 32.660 | 30.935 | -0.100 |
| 14.000 | S1400 | 15 minute 30 year Summer I+0% | 15 | 18 | 32.650 | 31.698 | -0.077 |
| 14.001 | S1401 | 15 minute 30 year Summer I+0% | 15 | 24 | 32.680 | 31.363 | -0.132 |
| 15.000 | S1500 | 15 minute 30 year Summer I+0% | 15 | 18 | 32.680 | 31.701 | -0.099 |
| 15.001 | S1501 | 15 minute 30 year Summer I+0% | 15 | 18 | 32.600 | 31.657 | -0.098 |
| 14.002 | S1402 | 15 minute 30 year Summer I+0% | 15 | 25 | 32.600 | 31.101 | -0.139 |
| 12.005 | 1205 | 15 minute 30 year Summer I+0% | 15 | 37 | 32.600 | 30.735 | 0.030 |
| 1.008 | S108 | 15 minute 30 year Summer I+0% | 15 | 65 | 32.550 | 30.389 | 0.034 |
| 16.000 | S1600 | 15 minute 30 year Summer I+0% | 15 | 22 | 32.545 | 31.489 | -0.161 |
| 16.001 | S1601 | 15 minute 30 year Summer I+0% | 15 | 45 | 32.545 | 30.523 | -0.162 |
| 1.009 | S109 | 15 minute 30 year Summer I+0% | 15 | 64 | 32.500 | 30.390 | 0.360 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.05 | | 0.018 | 0.820 | 1.3 | 1.9 | OK |
| 1.006 | S106 | 0.000 | 0.02 | | 0.748 | 26.470 | 0.3 | 55.1 | OK |
| 9.000 | S900 | 0.000 | 0.03 | | 0.002 | 0.492 | 1.0 | 1.1 | OK |
| 10.000 | S901 | 0.000 | 0.02 | | 0.001 | 0.328 | 1.1 | 0.8 | OK |
| 9.001 | S901 | 0.000 | 0.45 | | 0.030 | 8.532 | 1.2 | 21.6 | OK |
| 9.002 | S902 | 0.000 | 0.29 | | 0.077 | 11.321 | 2.2 | 28.7 | OK |
| 11.000 | S1100 | 0.000 | 0.34 | | 0.009 | 2.462 | 0.8 | 5.6 | OK |
| 9.003 | S903 | 0.000 | 0.44 | | 0.285 | 14.401 | 1.1 | 36.4 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 45.929 | 21.550 | 0.2 | 29.5 | OK |
| 12.000 | S1200 | 0.000 | 0.05 | | 0.003 | 0.657 | 1.0 | 1.5 | OK |
| 13.000 | S1300 | 0.000 | 0.51 | | 0.011 | 3.775 | 1.0 | 8.6 | OK |
| 13.001 | S1301 | 0.000 | 0.50 | | 0.040 | 5.908 | 1.6 | 14.0 | OK |
| 12.001 | S1201 | 0.000 | 0.43 | | 0.029 | 11.486 | 1.6 | 28.1 | OK |
| 12.002 | S1202 | 0.000 | 0.92 | | 0.173 | 15.752 | 1.2 | 39.0 | OK |
| 12.003 | S1203 | 0.000 | 0.75 | | 0.177 | 15.752 | 1.4 | 38.8 | OK |
| 12.004 | S1204 | 0.000 | 0.59 | | 0.091 | 19.033 | 2.1 | 46.9 | OK |
| 14.000 | S1400 | 0.000 | 0.47 | | 0.011 | 3.938 | 1.1 | 8.9 | OK |

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## Summary Wizard of 15 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.35 | | 0.026 | 7.056 | 1.1 | 16.7 | OK |
| 15.000 | S1500 | 0.000 | 0.25 | | 0.007 | 1.477 | 0.6 | 3.4 | OK |
| 15.001 | S1501 | 0.000 | 0.27 | | 0.020 | 3.938 | 1.8 | 9.7 | OK |
| 14.002 | S1402 | 0.000 | 0.31 | | 0.080 | 13.127 | 2.3 | 31.7 | OK |
| 12.005 | 1205 | 0.000 | 1.04 | | 0.573 | 35.770 | 2.4 | 86.3 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.06 | | 50.924 | 13.501 | 0.1 | 5.7 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.18 | | 0.017 | 5.578 | 1.4 | 12.6 | OK |
| 16.001 | S1601 | 0.000 | 0.17 | | 0.036 | 6.236 | 1.6 | 14.1 | OK |
| 1.009 | S109 | 0.000 | 0.33 | | 2.741 | 17.238 | 1.0 | 5.6 | SURCHARGED |

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## Summary Wizard of 30 minute 30 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 30 minute 30 year Summer I+0% | 30 | 21 | 32.680 | 31.823 | -0.097 | 0.000 |
| 1.001 | S101 | 30 minute 30 year Summer I+0% | 30 | 21 | 32.680 | 31.745 | -0.105 | 0.000 |
| 2.000 | S200 | 30 minute 30 year Summer I+0% | 30 | 23 | 32.600 | 31.525 | -0.105 | 0.000 |
| 1.002 | S102 | 30 minute 30 year Summer I+0% | 30 | 27 | 32.630 | 31.301 | -0.144 | 0.000 |
| 3.000 | S300 | 30 minute 30 year Summer I+0% | 30 | 20 | 32.550 | 31.875 | -0.125 | 0.000 |
| 1.003 | S103 | 30 minute 30 year Summer I+0% | 30 | 27 | 32.600 | 31.134 | -0.141 | 0.000 |
| 4.000 | S400 | 30 minute 30 year Summer I+0% | 30 | 21 | 32.550 | 31.732 | -0.118 | 0.000 |
| 4.001 | S401 | 30 minute 30 year Summer I+0% | 30 | 42 | 32.550 | 30.661 | -0.089 | 0.000 |
| 1.004 | S104 | 30 minute 30 year Summer I+0% | 30 | 46 | 32.600 | 30.516 | -0.014 | 0.000 |
| 1.005 | S105 | 30 minute 30 year Summer I+0% | 30 | 46 | 32.600 | 30.516 | 0.006 | 0.000 |
| 5.000 | S500 | 30 minute 30 year Summer I+0% | 30 | 19 | 32.550 | 31.888 | -0.112 | 0.000 |
| 5.001 | S501 | 30 minute 30 year Summer I+0% | 30 | 27 | 32.665 | 31.179 | -0.111 | 0.000 |
| 6.000 | S600 | 30 minute 30 year Summer I+0% | 30 | 21 | 32.665 | 31.863 | -0.137 | 0.000 |
| 6.001 | S601 | 30 minute 30 year Summer I+0% | 30 | 27 | 32.665 | 31.155 | -0.135 | 0.000 |
| 5.002 | S502 | 30 minute 30 year Summer I+0% | 30 | 27 | 32.665 | 30.920 | -0.130 | 0.000 |
| 5.003 | S503 | 30 minute 30 year Summer I+0% | 30 | 41 | 32.680 | 30.711 | -0.144 | 0.000 |
| 7.000 | S700 | 30 minute 30 year Summer I+0% | 30 | 18 | 32.680 | 31.957 | -0.073 | 0.000 |
| 7.001 | S701 | 30 minute 30 year Summer I+0% | 30 | 19 | 32.635 | 31.897 | -0.048 | 0.000 |
| 5.004 | S504 | 30 minute 30 year Summer I+0% | 30 | 46 | 32.635 | 30.516 | -0.029 | 0.000 |

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## Summary Wizard of 30 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.27 | | 0.008 | 2.828 | 0.8 | 4.5 | OK |
| 1.001 | S101 | 0.20 | | 0.021 | 4.351 | 1.6 | 7.0 | OK |
| 2.000 | S200 | 0.20 | | 0.006 | 2.828 | 1.0 | 4.5 | OK |
| 1.002 | S102 | 0.28 | | 0.022 | 8.702 | 1.1 | 13.9 | OK |
| 3.000 | S300 | 0.07 | | 0.003 | 1.741 | 1.4 | 2.8 | OK |
| 1.003 | S103 | 0.29 | | 0.066 | 15.882 | 1.9 | 25.6 | OK |
| 4.000 | S400 | 0.10 | | 0.004 | 3.264 | 1.9 | 5.2 | OK |
| 4.001 | S401 | 0.35 | | 0.012 | 4.569 | 1.1 | 7.3 | OK |
| 1.004 | S104 | 0.78 | | 0.256 | 22.439 | 0.7 | 36.7 | OK |
| 1.005 | S105 | 0.33 | | 1.030 | 22.580 | 0.6 | 37.3 | SURCHARGED |
| 5.000 | S500 | 0.15 | | 0.005 | 3.046 | 1.4 | 4.8 | OK |
| 5.001 | S501 | 0.16 | | 0.010 | 3.046 | 1.3 | 4.8 | OK |
| 6.000 | S600 | 0.02 | | 0.001 | 0.435 | 1.0 | 0.7 | OK |
| 6.001 | S601 | 0.02 | | 0.003 | 0.435 | 0.8 | 0.7 | OK |
| 5.002 | S502 | 0.37 | | 0.026 | 11.530 | 1.2 | 18.9 | OK |
| 5.003 | S503 | 0.27 | | 0.063 | 13.053 | 1.7 | 21.3 | OK |
| 7.000 | S700 | 0.53 | | 0.012 | 5.657 | 1.0 | 9.0 | OK |
| 7.001 | S701 | 0.79 | | 0.054 | 8.485 | 1.1 | 13.6 | OK |
| 5.004 | S504 | 0.57 | | 0.527 | 21.099 | 0.9 | 35.1 | OK |

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## Summary Wizard of 30 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 30 minute 30 year Summer I+0% | 30 | 27 | 32.525 | 31.220 | -0.130 |
| 1.006 | S106 | 30 minute 30 year Summer I+0% | 30 | 46 | 32.500 | 30.516 | -1.130 |
| 9.000 | S900 | 30 minute 30 year Summer I+0% | 30 | 20 | 32.665 | 31.867 | -0.133 |
| 10.000 | S901 | 30 minute 30 year Summer I+0% | 30 | 21 | 32.665 | 31.862 | -0.138 |
| 9.001 | S901 | 30 minute 30 year Summer I+0% | 30 | 27 | 32.665 | 31.094 | -0.126 |
| 9.002 | S902 | 30 minute 30 year Summer I+0% | 30 | 27 | 32.640 | 30.837 | -0.148 |
| 11.000 | S1100 | 30 minute 30 year Summer I+0% | 30 | 22 | 32.680 | 31.607 | -0.093 |
| 9.003 | S903 | 30 minute 30 year Summer I+0% | 30 | 46 | 32.630 | 30.516 | 0.021 |
| 1.007 | S107 | 30 minute 30 year Summer I+0% | 30 | 46 | 32.500 | 30.516 | -1.020 |
| 12.000 | S1200 | 30 minute 30 year Summer I+0% | 30 | 21 | 32.635 | 31.870 | -0.130 |
| 13.000 | S1300 | 30 minute 30 year Summer I+0% | 30 | 19 | 32.635 | 31.922 | -0.078 |
| 13.001 | S1301 | 30 minute 30 year Summer I+0% | 30 | 21 | 32.635 | 31.831 | -0.079 |
| 12.001 | S1201 | 30 minute 30 year Summer I+0% | 30 | 24 | 32.635 | 31.507 | -0.128 |
| 12.002 | S1202 | 30 minute 30 year Summer I+0% | 30 | 27 | 32.680 | 31.192 | -0.068 |
| 12.003 | S1203 | 30 minute 30 year Summer I+0% | 30 | 27 | 32.660 | 31.081 | -0.089 |
| 12.004 | S1204 | 30 minute 30 year Summer I+0% | 30 | 27 | 32.660 | 30.926 | -0.109 |
| 14.000 | S1400 | 30 minute 30 year Summer I+0% | 30 | 21 | 32.650 | 31.694 | -0.081 |
| 14.001 | S1401 | 30 minute 30 year Summer I+0% | 30 | 27 | 32.680 | 31.357 | -0.138 |
| 15.000 | S1500 | 30 minute 30 year Summer I+0% | 30 | 21 | 32.680 | 31.699 | -0.101 |
| 15.001 | S1501 | 30 minute 30 year Summer I+0% | 30 | 20 | 32.600 | 31.654 | -0.101 |
| 14.002 | S1402 | 30 minute 30 year Summer I+0% | 30 | 27 | 32.600 | 31.096 | -0.144 |
| 12.005 | 1205 | 30 minute 30 year Summer I+0% | 30 | 43 | 32.600 | 30.652 | -0.053 |
| 1.008 | S108 | 30 minute 30 year Summer I+0% | 30 | 46 | 32.550 | 30.516 | 0.161 |
| 16.000 | S1600 | 30 minute 30 year Summer I+0% | 30 | 25 | 32.545 | 31.486 | -0.164 |
| 16.001 | S1601 | 30 minute 30 year Summer I+0% | 30 | 47 | 32.545 | 30.519 | -0.166 |
| 1.009 | S109 | 30 minute 30 year Summer I+0% | 30 | 46 | 32.500 | 30.514 | 0.484 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.04 | | 0.017 | 1.088 | 1.2 | 1.7 | OK |
| 1.006 | S106 | 0.000 | 0.02 | | 1.123 | 32.006 | 0.2 | 41.4 | OK |
| 9.000 | S900 | 0.000 | 0.03 | | 0.002 | 0.653 | 1.0 | 1.0 | OK |
| 10.000 | S901 | 0.000 | 0.02 | | 0.001 | 0.435 | 1.1 | 0.7 | OK |
| 9.001 | S901 | 0.000 | 0.40 | | 0.027 | 11.312 | 1.1 | 18.8 | OK |
| 9.002 | S902 | 0.000 | 0.25 | | 0.071 | 15.011 | 2.1 | 24.9 | OK |
| 11.000 | S1100 | 0.000 | 0.31 | | 0.008 | 3.264 | 0.8 | 5.2 | OK |
| 9.003 | S903 | 0.000 | 0.38 | | 0.518 | 18.913 | 1.1 | 31.9 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 60.664 | 24.040 | 0.1 | 21.7 | OK |
| 12.000 | S1200 | 0.000 | 0.04 | | 0.002 | 0.870 | 1.0 | 1.4 | OK |
| 13.000 | S1300 | 0.000 | 0.47 | | 0.011 | 5.004 | 0.9 | 7.9 | OK |
| 13.001 | S1301 | 0.000 | 0.45 | | 0.038 | 7.832 | 1.5 | 12.5 | OK |
| 12.001 | S1201 | 0.000 | 0.38 | | 0.027 | 15.228 | 1.6 | 24.7 | OK |
| 12.002 | S1202 | 0.000 | 0.81 | | 0.150 | 20.884 | 1.2 | 34.1 | OK |
| 12.003 | S1203 | 0.000 | 0.66 | | 0.155 | 20.885 | 1.4 | 34.4 | OK |
| 12.004 | S1204 | 0.000 | 0.52 | | 0.078 | 25.235 | 2.0 | 41.6 | OK |
| 14.000 | S1400 | 0.000 | 0.44 | | 0.010 | 5.221 | 1.0 | 8.3 | OK |

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## Summary Wizard of 30 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.31 | | 0.024 | 9.354 | 1.1 | 15.0 | OK |
| 15.000 | S1500 | 0.000 | 0.23 | | 0.007 | 1.958 | 0.6 | 3.1 | OK |
| 15.001 | S1501 | 0.000 | 0.23 | | 0.019 | 5.221 | 1.7 | 8.5 | OK |
| 14.002 | S1402 | 0.000 | 0.27 | | 0.075 | 17.404 | 2.2 | 28.2 | OK |
| 12.005 | 1205 | 0.000 | 0.93 | | 0.340 | 47.425 | 2.4 | 77.8 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 64.872 | 12.445 | 0.1 | 6.1 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.16 | | 0.016 | 7.396 | 1.4 | 11.7 | OK |
| 16.001 | S1601 | 0.000 | 0.16 | | 0.034 | 8.258 | 1.6 | 13.1 | OK |
| 1.009 | S109 | 0.000 | 0.37 | | 3.134 | 17.630 | 1.0 | 6.2 | SURCHARGED |

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## Summary Wizard of 60 minute 30 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 60 minute 30 year Summer I+0% | 60 | 24 | 32.680 | 31.816 | -0.104 | 0.000 |
| 1.001 | S101 | 60 minute 30 year Summer I+0% | 60 | 24 | 32.680 | 31.738 | -0.112 | 0.000 |
| 2.000 | S200 | 60 minute 30 year Summer I+0% | 60 | 26 | 32.600 | 31.519 | -0.111 | 0.000 |
| 1.002 | S102 | 60 minute 30 year Summer I+0% | 60 | 29 | 32.630 | 31.289 | -0.156 | 0.000 |
| 3.000 | S300 | 60 minute 30 year Summer I+0% | 60 | 23 | 32.550 | 31.872 | -0.128 | 0.000 |
| 1.003 | S103 | 60 minute 30 year Summer I+0% | 60 | 29 | 32.600 | 31.122 | -0.153 | 0.000 |
| 4.000 | S400 | 60 minute 30 year Summer I+0% | 60 | 24 | 32.550 | 31.728 | -0.122 | 0.000 |
| 4.001 | S401 | 60 minute 30 year Summer I+0% | 60 | 45 | 32.550 | 30.652 | -0.098 | 0.000 |
| 1.004 | S104 | 60 minute 30 year Summer I+0% | 60 | 42 | 32.600 | 30.638 | 0.108 | 0.000 |
| 1.005 | S105 | 60 minute 30 year Summer I+0% | 60 | 42 | 32.600 | 30.638 | 0.128 | 0.000 |
| 5.000 | S500 | 60 minute 30 year Summer I+0% | 60 | 22 | 32.550 | 31.883 | -0.117 | 0.000 |
| 5.001 | S501 | 60 minute 30 year Summer I+0% | 60 | 29 | 32.665 | 31.174 | -0.116 | 0.000 |
| 6.000 | S600 | 60 minute 30 year Summer I+0% | 60 | 24 | 32.665 | 31.860 | -0.140 | 0.000 |
| 6.001 | S601 | 60 minute 30 year Summer I+0% | 60 | 29 | 32.665 | 31.152 | -0.138 | 0.000 |
| 5.002 | S502 | 60 minute 30 year Summer I+0% | 60 | 29 | 32.665 | 30.905 | -0.145 | 0.000 |
| 5.003 | S503 | 60 minute 30 year Summer I+0% | 60 | 43 | 32.680 | 30.699 | -0.156 | 0.000 |
| 7.000 | S700 | 60 minute 30 year Summer I+0% | 60 | 22 | 32.680 | 31.946 | -0.084 | 0.000 |
| 7.001 | S701 | 60 minute 30 year Summer I+0% | 60 | 22 | 32.635 | 31.879 | -0.066 | 0.000 |
| 5.004 | S504 | 60 minute 30 year Summer I+0% | 60 | 42 | 32.635 | 30.638 | 0.093 | 0.000 |

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## Summary Wizard of 60 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.20 | | 0.006 | 3.595 | 0.7 | 3.4 | OK |
| 1.001 | S101 | 0.15 | | 0.018 | 5.531 | 1.5 | 5.2 | OK |
| 2.000 | S200 | 0.15 | | 0.005 | 3.595 | 0.9 | 3.4 | OK |
| 1.002 | S102 | 0.21 | | 0.019 | 11.062 | 1.0 | 10.5 | OK |
| 3.000 | S300 | 0.05 | | 0.003 | 2.213 | 1.3 | 2.1 | OK |
| 1.003 | S103 | 0.22 | | 0.055 | 20.188 | 1.8 | 19.2 | OK |
| 4.000 | S400 | 0.08 | | 0.004 | 4.148 | 1.8 | 3.9 | OK |
| 4.001 | S401 | 0.26 | | 0.010 | 5.808 | 1.0 | 5.5 | OK |
| 1.004 | S104 | 0.58 | | 0.543 | 28.431 | 0.7 | 27.4 | SURCHARGED |
| 1.005 | S105 | 0.24 | | 1.273 | 28.705 | 0.5 | 27.1 | SURCHARGED |
| 5.000 | S500 | 0.11 | | 0.005 | 3.872 | 1.2 | 3.7 | OK |
| 5.001 | S501 | 0.12 | | 0.009 | 3.872 | 1.2 | 3.7 | OK |
| 6.000 | S600 | 0.01 | | 0.001 | 0.553 | 1.1 | 0.5 | OK |
| 6.001 | S601 | 0.02 | | 0.002 | 0.553 | 0.8 | 0.5 | OK |
| 5.002 | S502 | 0.27 | | 0.021 | 14.657 | 1.1 | 14.1 | OK |
| 5.003 | S503 | 0.20 | | 0.053 | 16.593 | 1.6 | 15.9 | OK |
| 7.000 | S700 | 0.40 | | 0.010 | 7.190 | 0.9 | 6.8 | OK |
| 7.001 | S701 | 0.60 | | 0.044 | 10.785 | 1.0 | 10.2 | OK |
| 5.004 | S504 | 0.43 | | 0.818 | 26.778 | 0.8 | 26.2 | SURCHARGED |

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## Summary Wizard of 60 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 60 minute 30 year Summer I+0% | 60 | 29 | 32.525 | 31.218 | -0.132 |
| 1.006 | S106 | 60 minute 30 year Summer I+0% | 60 | 42 | 32.500 | 30.638 | -1.008 |
| 9.000 | S900 | 60 minute 30 year Summer I+0% | 60 | 24 | 32.665 | 31.865 | -0.135 |
| 10.000 | S901 | 60 minute 30 year Summer I+0% | 60 | 24 | 32.665 | 31.859 | -0.141 |
| 9.001 | S901 | 60 minute 30 year Summer I+0% | 60 | 29 | 32.665 | 31.078 | -0.142 |
| 9.002 | S902 | 60 minute 30 year Summer I+0% | 60 | 29 | 32.640 | 30.826 | -0.159 |
| 11.000 | S1100 | 60 minute 30 year Summer I+0% | 60 | 25 | 32.680 | 31.599 | -0.101 |
| 9.003 | S903 | 60 minute 30 year Summer I+0% | 60 | 42 | 32.630 | 30.638 | 0.143 |
| 1.007 | S107 | 60 minute 30 year Summer I+0% | 60 | 42 | 32.500 | 30.638 | -0.898 |
| 12.000 | S1200 | 60 minute 30 year Summer I+0% | 60 | 24 | 32.635 | 31.868 | -0.132 |
| 13.000 | S1300 | 60 minute 30 year Summer I+0% | 60 | 22 | 32.635 | 31.911 | -0.089 |
| 13.001 | S1301 | 60 minute 30 year Summer I+0% | 60 | 24 | 32.635 | 31.820 | -0.090 |
| 12.001 | S1201 | 60 minute 30 year Summer I+0% | 60 | 27 | 32.635 | 31.492 | -0.143 |
| 12.002 | S1202 | 60 minute 30 year Summer I+0% | 60 | 29 | 32.680 | 31.162 | -0.098 |
| 12.003 | S1203 | 60 minute 30 year Summer I+0% | 60 | 29 | 32.660 | 31.057 | -0.113 |
| 12.004 | S1204 | 60 minute 30 year Summer I+0% | 60 | 29 | 32.660 | 30.907 | -0.128 |
| 14.000 | S1400 | 60 minute 30 year Summer I+0% | 60 | 24 | 32.650 | 31.684 | -0.091 |
| 14.001 | S1401 | 60 minute 30 year Summer I+0% | 60 | 29 | 32.680 | 31.344 | -0.151 |
| 15.000 | S1500 | 60 minute 30 year Summer I+0% | 60 | 24 | 32.680 | 31.692 | -0.108 |
| 15.001 | S1501 | 60 minute 30 year Summer I+0% | 60 | 25 | 32.600 | 31.647 | -0.108 |
| 14.002 | S1402 | 60 minute 30 year Summer I+0% | 60 | 29 | 32.600 | 31.084 | -0.156 |
| 12.005 | 1205 | 60 minute 30 year Summer I+0% | 60 | 45 | 32.600 | 30.640 | -0.065 |
| 1.008 | S108 | 60 minute 30 year Summer I+0% | 60 | 42 | 32.550 | 30.638 | 0.283 |
| 16.000 | S1600 | 60 minute 30 year Summer I+0% | 60 | 27 | 32.545 | 31.477 | -0.173 |
| 16.001 | S1601 | 60 minute 30 year Summer I+0% | 60 | 42 | 32.545 | 30.636 | -0.049 |
| 1.009 | S109 | 60 minute 30 year Summer I+0% | 60 | 42 | 32.500 | 30.636 | 0.606 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.03 | | 0.014 | 1.383 | 1.1 | 1.3 | OK |
| 1.006 | S106 | 0.000 | 0.01 | | 1.232 | 43.929 | 0.2 | 29.9 | OK |
| 9.000 | S900 | 0.000 | 0.02 | | 0.002 | 0.830 | 1.0 | 0.8 | OK |
| 10.000 | S901 | 0.000 | 0.01 | | 0.001 | 0.553 | 1.1 | 0.5 | OK |
| 9.001 | S901 | 0.000 | 0.29 | | 0.023 | 14.380 | 1.1 | 13.9 | OK |
| 9.002 | S902 | 0.000 | 0.19 | | 0.060 | 19.081 | 1.9 | 18.4 | OK |
| 11.000 | S1100 | 0.000 | 0.24 | | 0.007 | 4.148 | 0.8 | 3.9 | OK |
| 9.003 | S903 | 0.000 | 0.28 | | 0.753 | 24.030 | 1.0 | 23.4 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 74.718 | 37.851 | 0.1 | 15.0 | OK |
| 12.000 | S1200 | 0.000 | 0.03 | | 0.002 | 1.106 | 0.9 | 1.0 | OK |
| 13.000 | S1300 | 0.000 | 0.35 | | 0.009 | 6.361 | 0.9 | 6.0 | OK |
| 13.001 | S1301 | 0.000 | 0.34 | | 0.032 | 9.956 | 1.4 | 9.4 | OK |
| 12.001 | S1201 | 0.000 | 0.28 | | 0.022 | 19.358 | 1.4 | 18.5 | OK |
| 12.002 | S1202 | 0.000 | 0.60 | | 0.101 | 26.548 | 1.1 | 25.4 | OK |
| 12.003 | S1203 | 0.000 | 0.49 | | 0.108 | 26.548 | 1.3 | 25.5 | OK |
| 12.004 | S1204 | 0.000 | 0.39 | | 0.057 | 32.079 | 1.9 | 30.9 | OK |
| 14.000 | S1400 | 0.000 | 0.33 | | 0.009 | 6.637 | 1.0 | 6.3 | OK |

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## Summary Wizard of 60 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.24 | | 0.021 | 11.891 | 1.0 | 11.3 | OK |
| 15.000 | S1500 | 0.000 | 0.18 | | 0.006 | 2.489 | 0.6 | 2.3 | OK |
| 15.001 | S1501 | 0.000 | 0.17 | | 0.016 | 6.637 | 1.6 | 6.4 | OK |
| 14.002 | S1402 | 0.000 | 0.20 | | 0.063 | 22.124 | 2.0 | 21.1 | OK |
| 12.005 | 1205 | 0.000 | 0.69 | | 0.310 | 60.175 | 2.3 | 57.8 | OK |
| 1.008 | S108 | 0.000 | 0.07 | | 78.203 | 31.859 | 0.1 | 6.6 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.12 | | 0.013 | 9.402 | 1.3 | 8.9 | OK |
| 16.001 | S1601 | 0.000 | 0.12 | | 0.178 | 10.457 | 1.5 | 9.9 | OK |
| 1.009 | S109 | 0.000 | 0.40 | | 3.478 | 39.033 | 1.0 | 6.7 | SURCHARGED |

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## Summary Wizard of 120 minute 30 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 120 minute 30 year Summer I+0% | 120 | 34 | 32.680 | 31.807 | -0.113 |
| 1.001 | S101 | 120 minute 30 year Summer I+0% | 120 | 33 | 32.680 | 31.732 | -0.118 |
| 2.000 | S200 | 120 minute 30 year Summer I+0% | 120 | 36 | 32.600 | 31.512 | -0.118 |
| 1.002 | S102 | 120 minute 30 year Summer I+0% | 120 | 37 | 32.630 | 31.276 | -0.169 |
| 3.000 | S300 | 120 minute 30 year Summer I+0% | 120 | 33 | 32.550 | 31.868 | -0.132 |
| 1.003 | S103 | 120 minute 30 year Summer I+0% | 120 | 36 | 32.600 | 31.108 | -0.167 |
| 4.000 | S400 | 120 minute 30 year Summer I+0% | 120 | 34 | 32.550 | 31.722 | -0.128 |
| 4.001 | S401 | 120 minute 30 year Summer I+0% | 120 | 36 | 32.550 | 30.737 | -0.013 |
| 1.004 | S104 | 120 minute 30 year Summer I+0% | 120 | 36 | 32.600 | 30.736 | 0.206 |
| 1.005 | S105 | 120 minute 30 year Summer I+0% | 120 | 36 | 32.600 | 30.736 | 0.226 |
| 5.000 | S500 | 120 minute 30 year Summer I+0% | 120 | 33 | 32.550 | 31.877 | -0.123 |
| 5.001 | S501 | 120 minute 30 year Summer I+0% | 120 | 38 | 32.665 | 31.168 | -0.122 |
| 6.000 | S600 | 120 minute 30 year Summer I+0% | 120 | 34 | 32.665 | 31.857 | -0.143 |
| 6.001 | S601 | 120 minute 30 year Summer I+0% | 120 | 38 | 32.665 | 31.148 | -0.142 |
| 5.002 | S502 | 120 minute 30 year Summer I+0% | 120 | 35 | 32.665 | 30.890 | -0.160 |
| 5.003 | S503 | 120 minute 30 year Summer I+0% | 120 | 36 | 32.680 | 30.737 | -0.118 |
| 7.000 | S700 | 120 minute 30 year Summer I+0% | 120 | 33 | 32.680 | 31.933 | -0.097 |
| 7.001 | S701 | 120 minute 30 year Summer I+0% | 120 | 33 | 32.635 | 31.861 | -0.084 |
| 5.004 | S504 | 120 minute 30 year Summer I+0% | 120 | 36 | 32.635 | 30.736 | 0.191 |

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## Summary Wizard of 120 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.14 | | 0.005 | 4.443 | 0.7 | 2.3 | OK |
| 1.001 | S101 | 0.000 | 0.10 | | 0.014 | 6.836 | 1.3 | 3.5 | OK |
| 2.000 | S200 | 0.000 | 0.10 | | 0.004 | 4.443 | 0.8 | 2.3 | OK |
| 1.002 | S102 | 0.000 | 0.14 | | 0.015 | 13.671 | 0.9 | 7.1 | OK |
| 3.000 | S300 | 0.000 | 0.03 | | 0.002 | 2.734 | 1.2 | 1.4 | OK |
| 1.003 | S103 | 0.000 | 0.15 | | 0.044 | 24.950 | 1.6 | 12.9 | OK |
| 4.000 | S400 | 0.000 | 0.05 | | 0.003 | 5.127 | 1.6 | 2.6 | OK |
| 4.001 | S401 | 0.000 | 0.18 | | 0.032 | 7.177 | 0.9 | 3.7 | OK |
| 1.004 | S104 | 0.000 | 0.39 | | 0.731 | 35.228 | 0.6 | 18.1 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.16 | | 1.446 | 35.840 | 0.4 | 17.8 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.08 | | 0.004 | 4.785 | 1.1 | 2.5 | OK |
| 5.001 | S501 | 0.000 | 0.08 | | 0.007 | 4.785 | 1.1 | 2.5 | OK |
| 6.000 | S600 | 0.000 | 0.01 | | 0.000 | 0.684 | 0.8 | 0.4 | OK |
| 6.001 | S601 | 0.000 | 0.01 | | 0.001 | 0.684 | 0.8 | 0.4 | OK |
| 5.002 | S502 | 0.000 | 0.18 | | 0.017 | 18.114 | 1.0 | 9.4 | OK |
| 5.003 | S503 | 0.000 | 0.14 | | 0.087 | 20.506 | 1.4 | 10.6 | OK |
| 7.000 | S700 | 0.000 | 0.27 | | 0.008 | 8.886 | 0.8 | 4.6 | OK |
| 7.001 | S701 | 0.000 | 0.40 | | 0.034 | 13.329 | 0.9 | 6.9 | OK |
| 5.004 | S504 | 0.000 | 0.27 | | 1.042 | 33.248 | 0.7 | 16.8 | SURCHARGED |

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## Summary Wizard of 120 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 120 minute 30 year Summer I+0% | 120 | 38 | 32.525 | 31.215 | -0.135 |
| 1.006 | S106 | 120 minute 30 year Summer I+0% | 120 | 36 | 32.500 | 30.736 | -0.910 |
| 9.000 | S900 | 120 minute 30 year Summer I+0% | 120 | 34 | 32.665 | 31.860 | -0.140 |
| 10.000 | S901 | 120 minute 30 year Summer I+0% | 120 | 34 | 32.665 | 31.856 | -0.144 |
| 9.001 | S901 | 120 minute 30 year Summer I+0% | 120 | 34 | 32.665 | 31.062 | -0.158 |
| 9.002 | S902 | 120 minute 30 year Summer I+0% | 120 | 34 | 32.640 | 30.813 | -0.172 |
| 11.000 | S1100 | 120 minute 30 year Summer I+0% | 120 | 35 | 32.680 | 31.590 | -0.110 |
| 9.003 | S903 | 120 minute 30 year Summer I+0% | 120 | 36 | 32.630 | 30.736 | 0.241 |
| 1.007 | S107 | 120 minute 30 year Summer I+0% | 120 | 36 | 32.500 | 30.736 | -0.800 |
| 12.000 | S1200 | 120 minute 30 year Summer I+0% | 120 | 34 | 32.635 | 31.865 | -0.135 |
| 13.000 | S1300 | 120 minute 30 year Summer I+0% | 120 | 33 | 32.635 | 31.899 | -0.101 |
| 13.001 | S1301 | 120 minute 30 year Summer I+0% | 120 | 33 | 32.635 | 31.808 | -0.102 |
| 12.001 | S1201 | 120 minute 30 year Summer I+0% | 120 | 34 | 32.635 | 31.476 | -0.159 |
| 12.002 | S1202 | 120 minute 30 year Summer I+0% | 120 | 34 | 32.680 | 31.134 | -0.126 |
| 12.003 | S1203 | 120 minute 30 year Summer I+0% | 120 | 34 | 32.660 | 31.034 | -0.136 |
| 12.004 | S1204 | 120 minute 30 year Summer I+0% | 120 | 34 | 32.660 | 30.887 | -0.148 |
| 14.000 | S1400 | 120 minute 30 year Summer I+0% | 120 | 34 | 32.650 | 31.673 | -0.102 |
| 14.001 | S1401 | 120 minute 30 year Summer I+0% | 120 | 36 | 32.680 | 31.330 | -0.165 |
| 15.000 | S1500 | 120 minute 30 year Summer I+0% | 120 | 34 | 32.680 | 31.684 | -0.116 |
| 15.001 | S1501 | 120 minute 30 year Summer I+0% | 120 | 33 | 32.600 | 31.639 | -0.116 |
| 14.002 | S1402 | 120 minute 30 year Summer I+0% | 120 | 36 | 32.600 | 31.070 | -0.170 |
| 12.005 | 1205 | 120 minute 30 year Summer I+0% | 120 | 36 | 32.600 | 30.738 | 0.033 |
| 1.008 | S108 | 120 minute 30 year Summer I+0% | 120 | 36 | 32.550 | 30.736 | 0.381 |
| 16.000 | S1600 | 120 minute 30 year Summer I+0% | 120 | 36 | 32.545 | 31.468 | -0.182 |
| 16.001 | S1601 | 120 minute 30 year Summer I+0% | 120 | 36 | 32.545 | 30.734 | 0.049 |
| 1.009 | S109 | 120 minute 30 year Summer I+0% | 120 | 36 | 32.500 | 30.734 | 0.704 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.02 | | 0.012 | 1.709 | 1.1 | 0.9 | OK |
| 1.006 | S106 | 0.000 | 0.01 | | 1.262 | 62.614 | 0.1 | 19.5 | OK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.001 | 1.025 | 1.1 | 0.5 | OK |
| 10.000 | S901 | 0.000 | 0.01 | | 0.000 | 0.684 | 0.8 | 0.4 | OK |
| 9.001 | S901 | 0.000 | 0.19 | | 0.018 | 17.772 | 0.9 | 9.3 | OK |
| 9.002 | S902 | 0.000 | 0.12 | | 0.047 | 23.582 | 1.7 | 12.3 | OK |
| 11.000 | S1100 | 0.000 | 0.16 | | 0.006 | 5.127 | 0.7 | 2.6 | OK |
| 9.003 | S903 | 0.000 | 0.18 | | 0.942 | 29.846 | 0.9 | 15.1 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 86.034 | 63.600 | 0.1 | 10.5 | OK |
| 12.000 | S1200 | 0.000 | 0.02 | | 0.002 | 1.367 | 0.9 | 0.7 | OK |
| 13.000 | S1300 | 0.000 | 0.24 | | 0.007 | 7.861 | 0.8 | 4.0 | OK |
| 13.001 | S1301 | 0.000 | 0.23 | | 0.025 | 12.304 | 1.3 | 6.4 | OK |
| 12.001 | S1201 | 0.000 | 0.19 | | 0.018 | 23.924 | 1.3 | 12.4 | OK |
| 12.002 | S1202 | 0.000 | 0.40 | | 0.060 | 32.810 | 1.0 | 17.0 | OK |
| 12.003 | S1203 | 0.000 | 0.33 | | 0.078 | 32.810 | 1.2 | 17.1 | OK |
| 12.004 | S1204 | 0.000 | 0.26 | | 0.045 | 39.646 | 1.7 | 20.6 | OK |
| 14.000 | S1400 | 0.000 | 0.22 | | 0.007 | 8.203 | 0.9 | 4.2 | OK |

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## Summary Wizard of 120 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.16 | | 0.016 | 14.696 | 0.9 | 7.6 | OK |
| 15.000 | S1500 | 0.000 | 0.12 | | 0.005 | 3.076 | 0.5 | 1.6 | OK |
| 15.001 | S1501 | 0.000 | 0.12 | | 0.012 | 8.203 | 1.4 | 4.3 | OK |
| 14.002 | S1402 | 0.000 | 0.14 | | 0.050 | 27.342 | 1.9 | 14.2 | OK |
| 12.005 | 1205 | 0.000 | 0.46 | | 0.581 | 74.405 | 2.1 | 38.7 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.07 | | 88.920 | 72.945 | 0.2 | 6.9 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.08 | | 0.011 | 11.620 | 1.1 | 6.0 | OK |
| 16.001 | S1601 | 0.000 | 0.08 | | 0.375 | 12.939 | 1.3 | 6.7 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.43 | | 3.732 | 82.617 | 1.0 | 7.1 | SURCHARGED |

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## Summary Wizard of 180 minute 30 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 180 minute 30 year Summer I+0% | 180 | 41 | 32.680 | 31.802 | -0.118 |
| 1.001 | S101 | 180 minute 30 year Summer I+0% | 180 | 39 | 32.680 | 31.727 | -0.123 |
| 2.000 | S200 | 180 minute 30 year Summer I+0% | 180 | 43 | 32.600 | 31.508 | -0.122 |
| 1.002 | S102 | 180 minute 30 year Summer I+0% | 180 | 43 | 32.630 | 31.269 | -0.176 |
| 3.000 | S300 | 180 minute 30 year Summer I+0% | 180 | 40 | 32.550 | 31.866 | -0.134 |
| 1.003 | S103 | 180 minute 30 year Summer I+0% | 180 | 42 | 32.600 | 31.100 | -0.175 |
| 4.000 | S400 | 180 minute 30 year Summer I+0% | 180 | 41 | 32.550 | 31.719 | -0.131 |
| 4.001 | S401 | 180 minute 30 year Summer I+0% | 180 | 28 | 32.550 | 30.770 | 0.020 |
| 1.004 | S104 | 180 minute 30 year Summer I+0% | 180 | 28 | 32.600 | 30.769 | 0.239 |
| 1.005 | S105 | 180 minute 30 year Summer I+0% | 180 | 28 | 32.600 | 30.768 | 0.258 |
| 5.000 | S500 | 180 minute 30 year Summer I+0% | 180 | 40 | 32.550 | 31.873 | -0.127 |
| 5.001 | S501 | 180 minute 30 year Summer I+0% | 180 | 45 | 32.665 | 31.164 | -0.126 |
| 6.000 | S600 | 180 minute 30 year Summer I+0% | 180 | 41 | 32.665 | 31.855 | -0.145 |
| 6.001 | S601 | 180 minute 30 year Summer I+0% | 180 | 45 | 32.665 | 31.146 | -0.144 |
| 5.002 | S502 | 180 minute 30 year Summer I+0% | 180 | 42 | 32.665 | 30.881 | -0.169 |
| 5.003 | S503 | 180 minute 30 year Summer I+0% | 180 | 28 | 32.680 | 30.769 | -0.086 |
| 7.000 | S700 | 180 minute 30 year Summer I+0% | 180 | 40 | 32.680 | 31.926 | -0.104 |
| 7.001 | S701 | 180 minute 30 year Summer I+0% | 180 | 39 | 32.635 | 31.852 | -0.093 |
| 5.004 | S504 | 180 minute 30 year Summer I+0% | 180 | 28 | 32.635 | 30.769 | 0.224 |

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## Summary Wizard of 180 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.11 | | 0.004 | 4.978 | 0.6 | 1.8 | OK |
| 1.001 | S101 | 0.000 | 0.08 | | 0.012 | 7.658 | 1.2 | 2.7 | OK |
| 2.000 | S200 | 0.000 | 0.08 | | 0.004 | 4.978 | 0.8 | 1.8 | OK |
| 1.002 | S102 | 0.000 | 0.11 | | 0.013 | 15.316 | 0.9 | 5.4 | OK |
| 3.000 | S300 | 0.000 | 0.03 | | 0.002 | 3.063 | 1.2 | 1.1 | OK |
| 1.003 | S103 | 0.000 | 0.11 | | 0.038 | 27.952 | 1.5 | 9.9 | OK |
| 4.000 | S400 | 0.000 | 0.04 | | 0.002 | 5.744 | 1.5 | 2.0 | OK |
| 4.001 | S401 | 0.000 | 0.14 | | 0.042 | 8.041 | 0.9 | 2.8 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.29 | | 0.777 | 39.636 | 0.6 | 13.8 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.12 | | 1.503 | 40.604 | 0.4 | 13.5 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.06 | | 0.003 | 5.361 | 1.1 | 1.9 | OK |
| 5.001 | S501 | 0.000 | 0.06 | | 0.006 | 5.361 | 1.0 | 1.9 | OK |
| 6.000 | S600 | 0.000 | 0.01 | | 0.000 | 0.766 | 0.6 | 0.3 | OK |
| 6.001 | S601 | 0.000 | 0.01 | | 0.000 | 0.766 | 0.6 | 0.3 | OK |
| 5.002 | S502 | 0.000 | 0.14 | | 0.015 | 20.294 | 0.9 | 7.2 | OK |
| 5.003 | S503 | 0.000 | 0.10 | | 0.165 | 22.974 | 1.3 | 8.2 | OK |
| 7.000 | S700 | 0.000 | 0.21 | | 0.007 | 9.956 | 0.8 | 3.5 | OK |
| 7.001 | S701 | 0.000 | 0.31 | | 0.029 | 14.933 | 0.9 | 5.3 | OK |
| 5.004 | S504 | 0.000 | 0.21 | | 1.108 | 37.469 | 0.7 | 12.8 | SURCHARGED |

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## Summary Wizard of 180 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 180 minute 30 year Summer I+0% | 180 | 45 | 32.525 | 31.212 | -0.138 |
| 1.006 | S106 | 180 minute 30 year Summer I+0% | 180 | 28 | 32.500 | 30.768 | -0.878 |
| 9.000 | S900 | 180 minute 30 year Summer I+0% | 180 | 41 | 32.665 | 31.858 | -0.142 |
| 10.000 | S901 | 180 minute 30 year Summer I+0% | 180 | 41 | 32.665 | 31.855 | -0.145 |
| 9.001 | S901 | 180 minute 30 year Summer I+0% | 180 | 40 | 32.665 | 31.053 | -0.167 |
| 9.002 | S902 | 180 minute 30 year Summer I+0% | 180 | 40 | 32.640 | 30.807 | -0.178 |
| 11.000 | S1100 | 180 minute 30 year Summer I+0% | 180 | 42 | 32.680 | 31.585 | -0.115 |
| 9.003 | S903 | 180 minute 30 year Summer I+0% | 180 | 28 | 32.630 | 30.768 | 0.273 |
| 1.007 | S107 | 180 minute 30 year Summer I+0% | 180 | 28 | 32.500 | 30.768 | -0.768 |
| 12.000 | S1200 | 180 minute 30 year Summer I+0% | 180 | 41 | 32.635 | 31.862 | -0.138 |
| 13.000 | S1300 | 180 minute 30 year Summer I+0% | 180 | 40 | 32.635 | 31.893 | -0.107 |
| 13.001 | S1301 | 180 minute 30 year Summer I+0% | 180 | 39 | 32.635 | 31.802 | -0.108 |
| 12.001 | S1201 | 180 minute 30 year Summer I+0% | 180 | 40 | 32.635 | 31.467 | -0.168 |
| 12.002 | S1202 | 180 minute 30 year Summer I+0% | 180 | 42 | 32.680 | 31.121 | -0.139 |
| 12.003 | S1203 | 180 minute 30 year Summer I+0% | 180 | 42 | 32.660 | 31.022 | -0.148 |
| 12.004 | S1204 | 180 minute 30 year Summer I+0% | 180 | 41 | 32.660 | 30.878 | -0.157 |
| 14.000 | S1400 | 180 minute 30 year Summer I+0% | 180 | 41 | 32.650 | 31.667 | -0.108 |
| 14.001 | S1401 | 180 minute 30 year Summer I+0% | 180 | 42 | 32.680 | 31.322 | -0.173 |
| 15.000 | S1500 | 180 minute 30 year Summer I+0% | 180 | 41 | 32.680 | 31.680 | -0.120 |
| 15.001 | S1501 | 180 minute 30 year Summer I+0% | 180 | 39 | 32.600 | 31.635 | -0.120 |
| 14.002 | S1402 | 180 minute 30 year Summer I+0% | 180 | 42 | 32.600 | 31.064 | -0.176 |
| 12.005 | 1205 | 180 minute 30 year Summer I+0% | 180 | 30 | 32.600 | 30.770 | 0.065 |
| 1.008 | S108 | 180 minute 30 year Summer I+0% | 180 | 28 | 32.550 | 30.768 | 0.413 |
| 16.000 | S1600 | 180 minute 30 year Summer I+0% | 180 | 43 | 32.545 | 31.462 | -0.188 |
| 16.001 | S1601 | 180 minute 30 year Summer I+0% | 180 | 28 | 32.545 | 30.766 | 0.081 |
| 1.009 | S109 | 180 minute 30 year Summer I+0% | 180 | 28 | 32.500 | 30.766 | 0.736 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.02 | | 0.008 | 1.915 | 1.1 | 0.7 | OK |
| 1.006 | S106 | 0.000 | 0.01 | | 1.272 | 78.490 | 0.1 | 15.1 | OK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.000 | 1.149 | 0.9 | 0.4 | OK |
| 10.000 | S901 | 0.000 | 0.01 | | 0.000 | 0.766 | 0.6 | 0.3 | OK |
| 9.001 | S901 | 0.000 | 0.15 | | 0.015 | 19.911 | 0.9 | 7.1 | OK |
| 9.002 | S902 | 0.000 | 0.10 | | 0.041 | 26.420 | 1.6 | 9.4 | OK |
| 11.000 | S1100 | 0.000 | 0.12 | | 0.005 | 5.744 | 0.7 | 2.0 | OK |
| 9.003 | S903 | 0.000 | 0.14 | | 1.004 | 33.629 | 0.7 | 11.5 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 89.758 | 87.615 | 0.1 | 8.4 | OK |
| 12.000 | S1200 | 0.000 | 0.02 | | 0.001 | 1.532 | 0.9 | 0.5 | OK |
| 13.000 | S1300 | 0.000 | 0.18 | | 0.006 | 8.807 | 0.7 | 3.1 | OK |
| 13.001 | S1301 | 0.000 | 0.18 | | 0.021 | 13.785 | 1.2 | 4.9 | OK |
| 12.001 | S1201 | 0.000 | 0.14 | | 0.015 | 26.803 | 1.2 | 9.5 | OK |
| 12.002 | S1202 | 0.000 | 0.31 | | 0.052 | 36.759 | 0.9 | 13.1 | OK |
| 12.003 | S1203 | 0.000 | 0.25 | | 0.067 | 36.759 | 1.1 | 13.1 | OK |
| 12.004 | S1204 | 0.000 | 0.20 | | 0.039 | 44.417 | 1.6 | 15.8 | OK |
| 14.000 | S1400 | 0.000 | 0.17 | | 0.006 | 9.190 | 0.8 | 3.3 | OK |

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## Summary Wizard of 180 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.12 | | 0.014 | 16.465 | 0.8 | 5.8 | OK |
| 15.000 | S1500 | 0.000 | 0.09 | | 0.004 | 3.446 | 0.5 | 1.2 | OK |
| 15.001 | S1501 | 0.000 | 0.09 | | 0.011 | 9.190 | 1.3 | 3.3 | OK |
| 14.002 | S1402 | 0.000 | 0.11 | | 0.043 | 30.632 | 1.7 | 10.9 | OK |
| 12.005 | 1205 | 0.000 | 0.36 | | 0.677 | 83.473 | 1.9 | 29.7 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.07 | | 92.442 | 113.436 | 0.2 | 7.1 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.06 | | 0.009 | 13.019 | 1.1 | 4.6 | OK |
| 16.001 | S1601 | 0.000 | 0.06 | | 0.445 | 14.542 | 1.3 | 5.1 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.43 | | 3.814 | 124.907 | 1.0 | 7.2 | SURCHARGED |

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## Summary Wizard of 240 minute 30 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 240 minute 30 year Summer I+0% | 240 | 46 | 32.680 | 31.800 | -0.120 |
| 1.001 | S101 | 240 minute 30 year Summer I+0% | 240 | 45 | 32.680 | 31.724 | -0.126 |
| 2.000 | S200 | 240 minute 30 year Summer I+0% | 240 | 48 | 32.600 | 31.505 | -0.125 |
| 1.002 | S102 | 240 minute 30 year Summer I+0% | 240 | 49 | 32.630 | 31.265 | -0.180 |
| 3.000 | S300 | 240 minute 30 year Summer I+0% | 240 | 46 | 32.550 | 31.865 | -0.135 |
| 1.003 | S103 | 240 minute 30 year Summer I+0% | 240 | 49 | 32.600 | 31.096 | -0.179 |
| 4.000 | S400 | 240 minute 30 year Summer I+0% | 240 | 46 | 32.550 | 31.718 | -0.132 |
| 4.001 | S401 | 240 minute 30 year Summer I+0% | 240 | 24 | 32.550 | 30.778 | 0.028 |
| 1.004 | S104 | 240 minute 30 year Summer I+0% | 240 | 24 | 32.600 | 30.777 | 0.247 |
| 1.005 | S105 | 240 minute 30 year Summer I+0% | 240 | 24 | 32.600 | 30.777 | 0.267 |
| 5.000 | S500 | 240 minute 30 year Summer I+0% | 240 | 45 | 32.550 | 31.871 | -0.129 |
| 5.001 | S501 | 240 minute 30 year Summer I+0% | 240 | 50 | 32.665 | 31.162 | -0.128 |
| 6.000 | S600 | 240 minute 30 year Summer I+0% | 240 | 46 | 32.665 | 31.854 | -0.146 |
| 6.001 | S601 | 240 minute 30 year Summer I+0% | 240 | 50 | 32.665 | 31.145 | -0.145 |
| 5.002 | S502 | 240 minute 30 year Summer I+0% | 240 | 49 | 32.665 | 30.876 | -0.174 |
| 5.003 | S503 | 240 minute 30 year Summer I+0% | 240 | 24 | 32.680 | 30.777 | -0.078 |
| 7.000 | S700 | 240 minute 30 year Summer I+0% | 240 | 45 | 32.680 | 31.921 | -0.109 |
| 7.001 | S701 | 240 minute 30 year Summer I+0% | 240 | 45 | 32.635 | 31.846 | -0.099 |
| 5.004 | S504 | 240 minute 30 year Summer I+0% | 240 | 24 | 32.635 | 30.777 | 0.232 |

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## Summary Wizard of 240 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.09 | | 0.004 | 5.372 | 0.6 | 1.4 | OK |
| 1.001 | S101 | 0.000 | 0.06 | | 0.010 | 8.265 | 1.2 | 2.2 | OK |
| 2.000 | S200 | 0.000 | 0.06 | | 0.003 | 5.372 | 0.8 | 1.4 | OK |
| 1.002 | S102 | 0.000 | 0.09 | | 0.012 | 16.530 | 0.8 | 4.5 | OK |
| 3.000 | S300 | 0.000 | 0.02 | | 0.002 | 3.306 | 1.2 | 0.9 | OK |
| 1.003 | S103 | 0.000 | 0.09 | | 0.034 | 30.167 | 1.4 | 8.1 | OK |
| 4.000 | S400 | 0.000 | 0.03 | | 0.002 | 6.199 | 1.4 | 1.7 | OK |
| 4.001 | S401 | 0.000 | 0.11 | | 0.045 | 8.678 | 0.8 | 2.3 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.24 | | 0.789 | 42.905 | 0.5 | 11.3 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.10 | | 1.518 | 44.258 | 0.4 | 11.1 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.05 | | 0.003 | 5.786 | 1.0 | 1.6 | OK |
| 5.001 | S501 | 0.000 | 0.05 | | 0.005 | 5.786 | 1.0 | 1.6 | OK |
| 6.000 | S600 | 0.000 | 0.01 | | 0.000 | 0.826 | 0.5 | 0.2 | OK |
| 6.001 | S601 | 0.000 | 0.01 | | 0.000 | 0.826 | 0.5 | 0.2 | OK |
| 5.002 | S502 | 0.000 | 0.11 | | 0.013 | 21.902 | 0.9 | 5.9 | OK |
| 5.003 | S503 | 0.000 | 0.09 | | 0.184 | 24.795 | 1.2 | 6.7 | OK |
| 7.000 | S700 | 0.000 | 0.17 | | 0.006 | 10.745 | 0.7 | 2.9 | OK |
| 7.001 | S701 | 0.000 | 0.25 | | 0.026 | 16.117 | 0.8 | 4.3 | OK |
| 5.004 | S504 | 0.000 | 0.17 | | 1.124 | 40.648 | 0.6 | 10.5 | SURCHARGED |

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## Summary Wizard of 240 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 240 minute 30 year Summer I+0% | 240 | 50 | 32.525 | 31.210 | -0.140 |
| 1.006 | S106 | 240 minute 30 year Summer I+0% | 240 | 24 | 32.500 | 30.776 | -0.870 |
| 9.000 | S900 | 240 minute 30 year Summer I+0% | 240 | 46 | 32.665 | 31.856 | -0.144 |
| 10.000 | S901 | 240 minute 30 year Summer I+0% | 240 | 46 | 32.665 | 31.854 | -0.146 |
| 9.001 | S901 | 240 minute 30 year Summer I+0% | 240 | 49 | 32.665 | 31.047 | -0.173 |
| 9.002 | S902 | 240 minute 30 year Summer I+0% | 240 | 49 | 32.640 | 30.802 | -0.183 |
| 11.000 | S1100 | 240 minute 30 year Summer I+0% | 240 | 47 | 32.680 | 31.582 | -0.118 |
| 9.003 | S903 | 240 minute 30 year Summer I+0% | 240 | 24 | 32.630 | 30.777 | 0.282 |
| 1.007 | S107 | 240 minute 30 year Summer I+0% | 240 | 24 | 32.500 | 30.776 | -0.760 |
| 12.000 | S1200 | 240 minute 30 year Summer I+0% | 240 | 46 | 32.635 | 31.860 | -0.140 |
| 13.000 | S1300 | 240 minute 30 year Summer I+0% | 240 | 45 | 32.635 | 31.889 | -0.111 |
| 13.001 | S1301 | 240 minute 30 year Summer I+0% | 240 | 45 | 32.635 | 31.798 | -0.112 |
| 12.001 | S1201 | 240 minute 30 year Summer I+0% | 240 | 47 | 32.635 | 31.461 | -0.174 |
| 12.002 | S1202 | 240 minute 30 year Summer I+0% | 240 | 49 | 32.680 | 31.112 | -0.148 |
| 12.003 | S1203 | 240 minute 30 year Summer I+0% | 240 | 49 | 32.660 | 31.014 | -0.156 |
| 12.004 | S1204 | 240 minute 30 year Summer I+0% | 240 | 49 | 32.660 | 30.870 | -0.165 |
| 14.000 | S1400 | 240 minute 30 year Summer I+0% | 240 | 46 | 32.650 | 31.662 | -0.113 |
| 14.001 | S1401 | 240 minute 30 year Summer I+0% | 240 | 49 | 32.680 | 31.317 | -0.178 |
| 15.000 | S1500 | 240 minute 30 year Summer I+0% | 240 | 46 | 32.680 | 31.677 | -0.123 |
| 15.001 | S1501 | 240 minute 30 year Summer I+0% | 240 | 46 | 32.600 | 31.632 | -0.123 |
| 14.002 | S1402 | 240 minute 30 year Summer I+0% | 240 | 49 | 32.600 | 31.059 | -0.181 |
| 12.005 | 1205 | 240 minute 30 year Summer I+0% | 240 | 26 | 32.600 | 30.778 | 0.073 |
| 1.008 | S108 | 240 minute 30 year Summer I+0% | 240 | 24 | 32.550 | 30.776 | 0.421 |
| 16.000 | S1600 | 240 minute 30 year Summer I+0% | 240 | 48 | 32.545 | 31.458 | -0.192 |
| 16.001 | S1601 | 240 minute 30 year Summer I+0% | 240 | 24 | 32.545 | 30.775 | 0.090 |
| 1.009 | S109 | 240 minute 30 year Summer I+0% | 240 | 24 | 32.500 | 30.775 | 0.745 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.006 | 2.066 | 1.1 | 0.6 | OK |
| 1.006 | S106 | 0.000 | 0.01 | | 1.275 | 92.685 | 0.1 | 12.6 | OK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.000 | 1.240 | 0.7 | 0.3 | OK |
| 10.000 | S901 | 0.000 | 0.01 | | 0.000 | 0.826 | 0.5 | 0.2 | OK |
| 9.001 | S901 | 0.000 | 0.12 | | 0.014 | 21.489 | 0.8 | 5.8 | OK |
| 9.002 | S902 | 0.000 | 0.08 | | 0.036 | 28.514 | 1.5 | 7.7 | OK |
| 11.000 | S1100 | 0.000 | 0.10 | | 0.004 | 6.199 | 0.6 | 1.7 | OK |
| 9.003 | S903 | 0.000 | 0.11 | | 1.020 | 36.484 | 0.7 | 9.4 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 90.718 | 110.017 | 0.1 | 7.6 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.001 | 1.653 | 0.9 | 0.4 | OK |
| 13.000 | S1300 | 0.000 | 0.15 | | 0.005 | 9.505 | 0.7 | 2.6 | OK |
| 13.001 | S1301 | 0.000 | 0.14 | | 0.019 | 14.877 | 1.2 | 4.0 | OK |
| 12.001 | S1201 | 0.000 | 0.12 | | 0.014 | 28.928 | 1.1 | 7.8 | OK |
| 12.002 | S1202 | 0.000 | 0.25 | | 0.046 | 39.672 | 0.9 | 10.7 | OK |
| 12.003 | S1203 | 0.000 | 0.21 | | 0.060 | 39.672 | 1.0 | 10.7 | OK |
| 12.004 | S1204 | 0.000 | 0.16 | | 0.034 | 47.937 | 1.5 | 13.0 | OK |
| 14.000 | S1400 | 0.000 | 0.14 | | 0.005 | 9.918 | 0.8 | 2.7 | OK |

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## Summary Wizard of 240 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.10 | | 0.013 | 17.770 | 0.8 | 4.8 | OK |
| 15.000 | S1500 | 0.000 | 0.08 | | 0.004 | 3.719 | 0.5 | 1.0 | OK |
| 15.001 | S1501 | 0.000 | 0.07 | | 0.009 | 9.918 | 1.3 | 2.7 | OK |
| 14.002 | S1402 | 0.000 | 0.09 | | 0.039 | 33.060 | 1.6 | 8.9 | OK |
| 12.005 | 1205 | 0.000 | 0.29 | | 0.702 | 90.088 | 1.8 | 24.3 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.07 | | 93.350 | 151.932 | 0.2 | 7.1 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.05 | | 0.008 | 14.050 | 1.0 | 3.8 | OK |
| 16.001 | S1601 | 0.000 | 0.05 | | 0.463 | 15.703 | 1.2 | 4.2 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.44 | | 3.835 | 164.837 | 1.0 | 7.2 | SURCHARGED |

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## Summary Wizard of 360 minute 30 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 360 minute 30 year Summer I+0% | 360 | 52 | 32.680 | 31.795 | -0.125 |
| 1.001 | S101 | 360 minute 30 year Summer I+0% | 360 | 52 | 32.680 | 31.721 | -0.129 |
| 2.000 | S200 | 360 minute 30 year Summer I+0% | 360 | 54 | 32.600 | 31.501 | -0.129 |
| 1.002 | S102 | 360 minute 30 year Summer I+0% | 360 | 56 | 32.630 | 31.257 | -0.188 |
| 3.000 | S300 | 360 minute 30 year Summer I+0% | 360 | 52 | 32.550 | 31.861 | -0.139 |
| 1.003 | S103 | 360 minute 30 year Summer I+0% | 360 | 56 | 32.600 | 31.089 | -0.186 |
| 4.000 | S400 | 360 minute 30 year Summer I+0% | 360 | 52 | 32.550 | 31.716 | -0.134 |
| 4.001 | S401 | 360 minute 30 year Summer I+0% | 360 | 26 | 32.550 | 30.776 | 0.026 |
| 1.004 | S104 | 360 minute 30 year Summer I+0% | 360 | 26 | 32.600 | 30.775 | 0.245 |
| 1.005 | S105 | 360 minute 30 year Summer I+0% | 360 | 26 | 32.600 | 30.775 | 0.265 |
| 5.000 | S500 | 360 minute 30 year Summer I+0% | 360 | 51 | 32.550 | 31.868 | -0.132 |
| 5.001 | S501 | 360 minute 30 year Summer I+0% | 360 | 56 | 32.665 | 31.159 | -0.131 |
| 6.000 | S600 | 360 minute 30 year Summer I+0% | 360 | 52 | 32.665 | 31.853 | -0.147 |
| 6.001 | S601 | 360 minute 30 year Summer I+0% | 360 | 56 | 32.665 | 31.144 | -0.146 |
| 5.002 | S502 | 360 minute 30 year Summer I+0% | 360 | 56 | 32.665 | 30.869 | -0.181 |
| 5.003 | S503 | 360 minute 30 year Summer I+0% | 360 | 26 | 32.680 | 30.776 | -0.079 |
| 7.000 | S700 | 360 minute 30 year Summer I+0% | 360 | 51 | 32.680 | 31.915 | -0.115 |
| 7.001 | S701 | 360 minute 30 year Summer I+0% | 360 | 52 | 32.635 | 31.839 | -0.106 |
| 5.004 | S504 | 360 minute 30 year Summer I+0% | 360 | 26 | 32.635 | 30.775 | 0.230 |

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## Summary Wizard of 360 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.07 | | 0.003 | 5.947 | 0.6 | 1.1 | OK |
| 1.001 | S101 | 0.000 | 0.05 | | 0.008 | 9.149 | 1.1 | 1.7 | OK |
| 2.000 | S200 | 0.000 | 0.05 | | 0.003 | 5.947 | 0.7 | 1.1 | OK |
| 1.002 | S102 | 0.000 | 0.07 | | 0.010 | 18.297 | 0.8 | 3.3 | OK |
| 3.000 | S300 | 0.000 | 0.02 | | 0.001 | 3.660 | 1.2 | 0.7 | OK |
| 1.003 | S103 | 0.000 | 0.07 | | 0.028 | 33.393 | 1.3 | 6.1 | OK |
| 4.000 | S400 | 0.000 | 0.02 | | 0.002 | 6.862 | 1.4 | 1.2 | OK |
| 4.001 | S401 | 0.000 | 0.08 | | 0.044 | 9.606 | 0.7 | 1.7 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.18 | | 0.787 | 47.573 | 0.5 | 8.4 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.07 | | 1.515 | 49.583 | 0.4 | 8.2 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.04 | | 0.002 | 6.404 | 0.9 | 1.2 | OK |
| 5.001 | S501 | 0.000 | 0.04 | | 0.004 | 6.404 | 0.9 | 1.2 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 0.915 | 0.4 | 0.2 | OK |
| 6.001 | S601 | 0.000 | 0.01 | | 0.000 | 0.915 | 0.4 | 0.2 | OK |
| 5.002 | S502 | 0.000 | 0.09 | | 0.011 | 24.244 | 0.8 | 4.4 | OK |
| 5.003 | S503 | 0.000 | 0.06 | | 0.180 | 27.446 | 1.2 | 5.0 | OK |
| 7.000 | S700 | 0.000 | 0.13 | | 0.005 | 11.893 | 0.7 | 2.2 | OK |
| 7.001 | S701 | 0.000 | 0.19 | | 0.022 | 17.840 | 0.8 | 3.2 | OK |
| 5.004 | S504 | 0.000 | 0.13 | | 1.121 | 45.286 | 0.6 | 7.8 | SURCHARGED |

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## Summary Wizard of 360 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 360 minute 30 year Summer I+0% | 360 | 56 | 32.525 | 31.208 | -0.142 |
| 1.006 | S106 | 360 minute 30 year Summer I+0% | 360 | 26 | 32.500 | 30.775 | -0.871 |
| 9.000 | S900 | 360 minute 30 year Summer I+0% | 360 | 52 | 32.665 | 31.855 | -0.145 |
| 10.000 | S901 | 360 minute 30 year Summer I+0% | 360 | 52 | 32.665 | 31.853 | -0.147 |
| 9.001 | S901 | 360 minute 30 year Summer I+0% | 360 | 56 | 32.665 | 31.040 | -0.180 |
| 9.002 | S902 | 360 minute 30 year Summer I+0% | 360 | 56 | 32.640 | 30.795 | -0.190 |
| 11.000 | S1100 | 360 minute 30 year Summer I+0% | 360 | 53 | 32.680 | 31.577 | -0.123 |
| 9.003 | S903 | 360 minute 30 year Summer I+0% | 360 | 26 | 32.630 | 30.775 | 0.280 |
| 1.007 | S107 | 360 minute 30 year Summer I+0% | 360 | 26 | 32.500 | 30.775 | -0.761 |
| 12.000 | S1200 | 360 minute 30 year Summer I+0% | 360 | 52 | 32.635 | 31.857 | -0.143 |
| 13.000 | S1300 | 360 minute 30 year Summer I+0% | 360 | 51 | 32.635 | 31.883 | -0.117 |
| 13.001 | S1301 | 360 minute 30 year Summer I+0% | 360 | 52 | 32.635 | 31.793 | -0.117 |
| 12.001 | S1201 | 360 minute 30 year Summer I+0% | 360 | 55 | 32.635 | 31.455 | -0.180 |
| 12.002 | S1202 | 360 minute 30 year Summer I+0% | 360 | 56 | 32.680 | 31.101 | -0.159 |
| 12.003 | S1203 | 360 minute 30 year Summer I+0% | 360 | 56 | 32.660 | 31.004 | -0.166 |
| 12.004 | S1204 | 360 minute 30 year Summer I+0% | 360 | 56 | 32.660 | 30.862 | -0.173 |
| 14.000 | S1400 | 360 minute 30 year Summer I+0% | 360 | 52 | 32.650 | 31.657 | -0.118 |
| 14.001 | S1401 | 360 minute 30 year Summer I+0% | 360 | 56 | 32.680 | 31.310 | -0.185 |
| 15.000 | S1500 | 360 minute 30 year Summer I+0% | 360 | 52 | 32.680 | 31.673 | -0.127 |
| 15.001 | S1501 | 360 minute 30 year Summer I+0% | 360 | 53 | 32.600 | 31.627 | -0.128 |
| 14.002 | S1402 | 360 minute 30 year Summer I+0% | 360 | 56 | 32.600 | 31.052 | -0.188 |
| 12.005 | 1205 | 360 minute 30 year Summer I+0% | 360 | 28 | 32.600 | 30.777 | 0.072 |
| 1.008 | S108 | 360 minute 30 year Summer I+0% | 360 | 26 | 32.550 | 30.775 | 0.420 |
| 16.000 | S1600 | 360 minute 30 year Summer I+0% | 360 | 54 | 32.545 | 31.454 | -0.196 |
| 16.001 | S1601 | 360 minute 30 year Summer I+0% | 360 | 26 | 32.545 | 30.773 | 0.088 |
| 1.009 | S109 | 360 minute 30 year Summer I+0% | 360 | 26 | 32.500 | 30.773 | 0.743 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.003 | 2.287 | 0.9 | 0.4 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.274 | 116.618 | 0.1 | 9.8 | OK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.000 | 1.372 | 0.6 | 0.2 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.915 | 0.4 | 0.2 | OK |
| 9.001 | S901 | 0.000 | 0.09 | | 0.012 | 23.786 | 0.8 | 4.3 | OK |
| 9.002 | S902 | 0.000 | 0.06 | | 0.029 | 31.562 | 1.5 | 5.7 | OK |
| 11.000 | S1100 | 0.000 | 0.08 | | 0.004 | 6.862 | 0.6 | 1.2 | OK |
| 9.003 | S903 | 0.000 | 0.08 | | 1.017 | 40.684 | 0.7 | 7.0 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 90.527 | 149.124 | 0.1 | 6.6 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 1.830 | 0.7 | 0.3 | OK |
| 13.000 | S1300 | 0.000 | 0.11 | | 0.005 | 10.521 | 0.7 | 1.9 | OK |
| 13.001 | S1301 | 0.000 | 0.11 | | 0.016 | 16.468 | 1.1 | 3.0 | OK |
| 12.001 | S1201 | 0.000 | 0.09 | | 0.012 | 32.020 | 1.0 | 5.8 | OK |
| 12.002 | S1202 | 0.000 | 0.19 | | 0.039 | 43.914 | 0.8 | 8.0 | OK |
| 12.003 | S1203 | 0.000 | 0.15 | | 0.050 | 43.914 | 1.0 | 8.0 | OK |
| 12.004 | S1204 | 0.000 | 0.12 | | 0.029 | 53.062 | 1.4 | 9.6 | OK |
| 14.000 | S1400 | 0.000 | 0.11 | | 0.004 | 10.978 | 0.7 | 2.0 | OK |

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## Summary Wizard of 360 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.07 | | 0.011 | 19.670 | 0.7 | 3.6 | OK |
| 15.000 | S1500 | 0.000 | 0.06 | | 0.003 | 4.117 | 0.4 | 0.7 | OK |
| 15.001 | S1501 | 0.000 | 0.05 | | 0.007 | 10.978 | 1.2 | 2.0 | OK |
| 14.002 | S1402 | 0.000 | 0.06 | | 0.032 | 36.595 | 1.6 | 6.6 | OK |
| 12.005 | 1205 | 0.000 | 0.22 | | 0.697 | 99.721 | 1.7 | 18.1 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.07 | | 93.171 | 220.335 | 0.2 | 6.9 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.04 | | 0.007 | 15.553 | 1.0 | 2.8 | OK |
| 16.001 | S1601 | 0.000 | 0.04 | | 0.460 | 17.382 | 1.1 | 3.2 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.43 | | 3.831 | 235.900 | 1.0 | 7.2 | SURCHARGED |

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## Summary Wizard of 480 minute 30 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 480 minute 30 year Summer I+0% | 480 | 60 | 32.680 | 31.792 | -0.128 |
| 1.001 | S101 | 480 minute 30 year Summer I+0% | 480 | 60 | 32.680 | 31.719 | -0.131 |
| 2.000 | S200 | 480 minute 30 year Summer I+0% | 480 | 61 | 32.600 | 31.499 | -0.131 |
| 1.002 | S102 | 480 minute 30 year Summer I+0% | 480 | 63 | 32.630 | 31.253 | -0.192 |
| 3.000 | S300 | 480 minute 30 year Summer I+0% | 480 | 60 | 32.550 | 31.859 | -0.141 |
| 1.003 | S103 | 480 minute 30 year Summer I+0% | 480 | 63 | 32.600 | 31.084 | -0.191 |
| 4.000 | S400 | 480 minute 30 year Summer I+0% | 480 | 60 | 32.550 | 31.714 | -0.136 |
| 4.001 | S401 | 480 minute 30 year Summer I+0% | 480 | 31 | 32.550 | 30.767 | 0.017 |
| 1.004 | S104 | 480 minute 30 year Summer I+0% | 480 | 31 | 32.600 | 30.766 | 0.236 |
| 1.005 | S105 | 480 minute 30 year Summer I+0% | 480 | 31 | 32.600 | 30.766 | 0.256 |
| 5.000 | S500 | 480 minute 30 year Summer I+0% | 480 | 59 | 32.550 | 31.867 | -0.133 |
| 5.001 | S501 | 480 minute 30 year Summer I+0% | 480 | 63 | 32.665 | 31.157 | -0.133 |
| 6.000 | S600 | 480 minute 30 year Summer I+0% | 480 | 60 | 32.665 | 31.853 | -0.147 |
| 6.001 | S601 | 480 minute 30 year Summer I+0% | 480 | 63 | 32.665 | 31.143 | -0.147 |
| 5.002 | S502 | 480 minute 30 year Summer I+0% | 480 | 63 | 32.665 | 30.863 | -0.187 |
| 5.003 | S503 | 480 minute 30 year Summer I+0% | 480 | 31 | 32.680 | 30.767 | -0.088 |
| 7.000 | S700 | 480 minute 30 year Summer I+0% | 480 | 59 | 32.680 | 31.912 | -0.118 |
| 7.001 | S701 | 480 minute 30 year Summer I+0% | 480 | 60 | 32.635 | 31.834 | -0.111 |
| 5.004 | S504 | 480 minute 30 year Summer I+0% | 480 | 31 | 32.635 | 30.766 | 0.221 |

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## Summary Wizard of 480 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.05 | | 0.003 | 6.391 | 0.5 | 0.9 | OK |
| 1.001 | S101 | 0.000 | 0.04 | | 0.007 | 9.833 | 1.1 | 1.3 | OK |
| 2.000 | S200 | 0.000 | 0.04 | | 0.002 | 6.391 | 0.7 | 0.9 | OK |
| 1.002 | S102 | 0.000 | 0.05 | | 0.008 | 19.666 | 0.7 | 2.7 | OK |
| 3.000 | S300 | 0.000 | 0.01 | | 0.001 | 3.933 | 1.2 | 0.5 | OK |
| 1.003 | S103 | 0.000 | 0.06 | | 0.024 | 35.890 | 1.3 | 4.9 | OK |
| 4.000 | S400 | 0.000 | 0.02 | | 0.001 | 7.375 | 1.5 | 1.0 | OK |
| 4.001 | S401 | 0.000 | 0.07 | | 0.041 | 10.325 | 0.7 | 1.4 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.14 | | 0.774 | 51.131 | 0.4 | 6.8 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.06 | | 1.499 | 53.588 | 0.4 | 6.7 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.03 | | 0.002 | 6.883 | 0.9 | 0.9 | OK |
| 5.001 | S501 | 0.000 | 0.03 | | 0.004 | 6.883 | 0.9 | 0.9 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 0.983 | 0.3 | 0.1 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.000 | 0.983 | 0.3 | 0.1 | OK |
| 5.002 | S502 | 0.000 | 0.07 | | 0.010 | 26.057 | 0.8 | 3.5 | OK |
| 5.003 | S503 | 0.000 | 0.05 | | 0.158 | 29.498 | 1.1 | 4.0 | OK |
| 7.000 | S700 | 0.000 | 0.10 | | 0.004 | 12.783 | 0.6 | 1.7 | OK |
| 7.001 | S701 | 0.000 | 0.15 | | 0.019 | 19.174 | 0.7 | 2.6 | OK |
| 5.004 | S504 | 0.000 | 0.10 | | 1.104 | 48.673 | 0.5 | 6.3 | SURCHARGED |

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## Summary Wizard of 480 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 480 minute 30 year Summer I+0% | 480 | 63 | 32.525 | 31.206 | -0.144 |
| 1.006 | S106 | 480 minute 30 year Summer I+0% | 480 | 31 | 32.500 | 30.766 | -0.880 |
| 9.000 | S900 | 480 minute 30 year Summer I+0% | 480 | 60 | 32.665 | 31.854 | -0.146 |
| 10.000 | S901 | 480 minute 30 year Summer I+0% | 480 | 60 | 32.665 | 31.852 | -0.148 |
| 9.001 | S901 | 480 minute 30 year Summer I+0% | 480 | 63 | 32.665 | 31.035 | -0.185 |
| 9.002 | S902 | 480 minute 30 year Summer I+0% | 480 | 63 | 32.640 | 30.791 | -0.194 |
| 11.000 | S1100 | 480 minute 30 year Summer I+0% | 480 | 60 | 32.680 | 31.574 | -0.126 |
| 9.003 | S903 | 480 minute 30 year Summer I+0% | 480 | 31 | 32.630 | 30.766 | 0.271 |
| 1.007 | S107 | 480 minute 30 year Summer I+0% | 480 | 31 | 32.500 | 30.765 | -0.771 |
| 12.000 | S1200 | 480 minute 30 year Summer I+0% | 480 | 60 | 32.635 | 31.856 | -0.144 |
| 13.000 | S1300 | 480 minute 30 year Summer I+0% | 480 | 59 | 32.635 | 31.880 | -0.120 |
| 13.001 | S1301 | 480 minute 30 year Summer I+0% | 480 | 60 | 32.635 | 31.790 | -0.120 |
| 12.001 | S1201 | 480 minute 30 year Summer I+0% | 480 | 62 | 32.635 | 31.449 | -0.186 |
| 12.002 | S1202 | 480 minute 30 year Summer I+0% | 480 | 63 | 32.680 | 31.093 | -0.167 |
| 12.003 | S1203 | 480 minute 30 year Summer I+0% | 480 | 63 | 32.660 | 30.997 | -0.173 |
| 12.004 | S1204 | 480 minute 30 year Summer I+0% | 480 | 63 | 32.660 | 30.857 | -0.178 |
| 14.000 | S1400 | 480 minute 30 year Summer I+0% | 480 | 60 | 32.650 | 31.654 | -0.121 |
| 14.001 | S1401 | 480 minute 30 year Summer I+0% | 480 | 63 | 32.680 | 31.305 | -0.190 |
| 15.000 | S1500 | 480 minute 30 year Summer I+0% | 480 | 60 | 32.680 | 31.670 | -0.130 |
| 15.001 | S1501 | 480 minute 30 year Summer I+0% | 480 | 60 | 32.600 | 31.625 | -0.130 |
| 14.002 | S1402 | 480 minute 30 year Summer I+0% | 480 | 63 | 32.600 | 31.048 | -0.192 |
| 12.005 | 1205 | 480 minute 30 year Summer I+0% | 480 | 31 | 32.600 | 30.767 | 0.062 |
| 1.008 | S108 | 480 minute 30 year Summer I+0% | 480 | 31 | 32.550 | 30.765 | 0.410 |
| 16.000 | S1600 | 480 minute 30 year Summer I+0% | 480 | 61 | 32.545 | 31.451 | -0.199 |
| 16.001 | S1601 | 480 minute 30 year Summer I+0% | 480 | 31 | 32.545 | 30.764 | 0.079 |
| 1.009 | S109 | 480 minute 30 year Summer I+0% | 480 | 31 | 32.500 | 30.764 | 0.734 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.001 | 2.458 | 0.7 | 0.3 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.271 | 135.237 | 0.1 | 8.3 | OK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.000 | 1.475 | 0.4 | 0.2 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.983 | 0.3 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.07 | | 0.010 | 25.565 | 0.7 | 3.5 | OK |
| 9.002 | S902 | 0.000 | 0.05 | | 0.026 | 33.923 | 1.4 | 4.6 | OK |
| 11.000 | S1100 | 0.000 | 0.06 | | 0.003 | 7.375 | 0.6 | 1.0 | OK |
| 9.003 | S903 | 0.000 | 0.07 | | 0.999 | 43.756 | 0.6 | 5.7 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 89.467 | 180.548 | 0.0 | 5.9 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 1.967 | 0.6 | 0.3 | OK |
| 13.000 | S1300 | 0.000 | 0.09 | | 0.004 | 11.308 | 0.6 | 1.5 | OK |
| 13.001 | S1301 | 0.000 | 0.09 | | 0.014 | 17.699 | 1.0 | 2.4 | OK |
| 12.001 | S1201 | 0.000 | 0.07 | | 0.010 | 34.415 | 1.0 | 4.7 | OK |
| 12.002 | S1202 | 0.000 | 0.15 | | 0.034 | 47.198 | 0.8 | 6.4 | OK |
| 12.003 | S1203 | 0.000 | 0.12 | | 0.044 | 47.198 | 0.9 | 6.4 | OK |
| 12.004 | S1204 | 0.000 | 0.10 | | 0.026 | 57.031 | 1.3 | 7.8 | OK |
| 14.000 | S1400 | 0.000 | 0.08 | | 0.004 | 11.799 | 0.7 | 1.6 | OK |

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## Summary Wizard of 480 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.06 | | 0.009 | 21.141 | 0.7 | 2.9 | OK |
| 15.000 | S1500 | 0.000 | 0.05 | | 0.002 | 4.425 | 0.4 | 0.6 | OK |
| 15.001 | S1501 | 0.000 | 0.04 | | 0.006 | 11.800 | 1.1 | 1.6 | OK |
| 14.002 | S1402 | 0.000 | 0.05 | | 0.028 | 39.332 | 1.5 | 5.4 | OK |
| 12.005 | 1205 | 0.000 | 0.17 | | 0.669 | 107.179 | 1.6 | 14.6 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.07 | | 92.165 | 276.832 | 0.2 | 6.8 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.03 | | 0.006 | 16.716 | 0.9 | 2.3 | OK |
| 16.001 | S1601 | 0.000 | 0.03 | | 0.439 | 18.682 | 1.1 | 2.5 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.43 | | 3.808 | 294.701 | 1.0 | 7.2 | SURCHARGED |

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## Summary Wizard of 600 minute 30 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 600 minute 30 year Summer I+0% | 600 | 65 | 32.680 | 31.790 | -0.130 |
| 1.001 | S101 | 600 minute 30 year Summer I+0% | 600 | 65 | 32.680 | 31.717 | -0.133 |
| 2.000 | S200 | 600 minute 30 year Summer I+0% | 600 | 66 | 32.600 | 31.498 | -0.132 |
| 1.002 | S102 | 600 minute 30 year Summer I+0% | 600 | 68 | 32.630 | 31.250 | -0.195 |
| 3.000 | S300 | 600 minute 30 year Summer I+0% | 600 | 65 | 32.550 | 31.858 | -0.142 |
| 1.003 | S103 | 600 minute 30 year Summer I+0% | 600 | 68 | 32.600 | 31.081 | -0.194 |
| 4.000 | S400 | 600 minute 30 year Summer I+0% | 600 | 65 | 32.550 | 31.712 | -0.138 |
| 4.001 | S401 | 600 minute 30 year Summer I+0% | 600 | 33 | 32.550 | 30.752 | 0.002 |
| 1.004 | S104 | 600 minute 30 year Summer I+0% | 600 | 33 | 32.600 | 30.751 | 0.221 |
| 1.005 | S105 | 600 minute 30 year Summer I+0% | 600 | 33 | 32.600 | 30.751 | 0.241 |
| 5.000 | S500 | 600 minute 30 year Summer I+0% | 600 | 65 | 32.550 | 31.866 | -0.134 |
| 5.001 | S501 | 600 minute 30 year Summer I+0% | 600 | 68 | 32.665 | 31.156 | -0.134 |
| 6.000 | S600 | 600 minute 30 year Summer I+0% | 600 | 65 | 32.665 | 31.852 | -0.148 |
| 6.001 | S601 | 600 minute 30 year Summer I+0% | 600 | 68 | 32.665 | 31.143 | -0.147 |
| 5.002 | S502 | 600 minute 30 year Summer I+0% | 600 | 68 | 32.665 | 30.860 | -0.190 |
| 5.003 | S503 | 600 minute 30 year Summer I+0% | 600 | 33 | 32.680 | 30.752 | -0.103 |
| 7.000 | S700 | 600 minute 30 year Summer I+0% | 600 | 65 | 32.680 | 31.910 | -0.120 |
| 7.001 | S701 | 600 minute 30 year Summer I+0% | 600 | 65 | 32.635 | 31.831 | -0.114 |
| 5.004 | S504 | 600 minute 30 year Summer I+0% | 600 | 33 | 32.635 | 30.751 | 0.206 |

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## Summary Wizard of 600 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.04 | | 0.002 | 6.755 | 0.5 | 0.7 | OK |
| 1.001 | S101 | 0.000 | 0.03 | | 0.007 | 10.392 | 1.0 | 1.1 | OK |
| 2.000 | S200 | 0.000 | 0.03 | | 0.002 | 6.755 | 0.6 | 0.7 | OK |
| 1.002 | S102 | 0.000 | 0.04 | | 0.008 | 20.784 | 0.7 | 2.3 | OK |
| 3.000 | S300 | 0.000 | 0.01 | | 0.000 | 4.157 | 1.0 | 0.5 | OK |
| 1.003 | S103 | 0.000 | 0.05 | | 0.022 | 37.931 | 1.2 | 4.1 | OK |
| 4.000 | S400 | 0.000 | 0.02 | | 0.001 | 7.794 | 1.5 | 0.8 | OK |
| 4.001 | S401 | 0.000 | 0.06 | | 0.036 | 10.912 | 0.7 | 1.2 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.12 | | 0.752 | 54.039 | 0.4 | 5.8 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.05 | | 1.472 | 56.637 | 0.4 | 5.7 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.02 | | 0.002 | 7.274 | 0.9 | 0.8 | OK |
| 5.001 | S501 | 0.000 | 0.03 | | 0.003 | 7.274 | 0.9 | 0.8 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 1.039 | 0.3 | 0.1 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.000 | 1.039 | 0.3 | 0.1 | OK |
| 5.002 | S502 | 0.000 | 0.06 | | 0.009 | 27.539 | 0.8 | 3.0 | OK |
| 5.003 | S503 | 0.000 | 0.04 | | 0.122 | 31.176 | 1.1 | 3.4 | OK |
| 7.000 | S700 | 0.000 | 0.09 | | 0.004 | 13.510 | 0.6 | 1.5 | OK |
| 7.001 | S701 | 0.000 | 0.13 | | 0.017 | 20.265 | 0.7 | 2.2 | OK |
| 5.004 | S504 | 0.000 | 0.09 | | 1.075 | 51.440 | 0.5 | 5.3 | SURCHARGED |

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## Summary Wizard of 600 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 600 minute 30 year Summer I+0% | 600 | 68 | 32.525 | 31.205 | -0.145 |
| 1.006 | S106 | 600 minute 30 year Summer I+0% | 600 | 33 | 32.500 | 30.751 | -0.895 |
| 9.000 | S900 | 600 minute 30 year Summer I+0% | 600 | 65 | 32.665 | 31.853 | -0.147 |
| 10.000 | S901 | 600 minute 30 year Summer I+0% | 600 | 65 | 32.665 | 31.852 | -0.148 |
| 9.001 | S901 | 600 minute 30 year Summer I+0% | 600 | 68 | 32.665 | 31.031 | -0.189 |
| 9.002 | S902 | 600 minute 30 year Summer I+0% | 600 | 68 | 32.640 | 30.789 | -0.196 |
| 11.000 | S1100 | 600 minute 30 year Summer I+0% | 600 | 65 | 32.680 | 31.572 | -0.128 |
| 9.003 | S903 | 600 minute 30 year Summer I+0% | 600 | 33 | 32.630 | 30.751 | 0.256 |
| 1.007 | S107 | 600 minute 30 year Summer I+0% | 600 | 33 | 32.500 | 30.750 | -0.786 |
| 12.000 | S1200 | 600 minute 30 year Summer I+0% | 600 | 65 | 32.635 | 31.855 | -0.145 |
| 13.000 | S1300 | 600 minute 30 year Summer I+0% | 600 | 65 | 32.635 | 31.877 | -0.123 |
| 13.001 | S1301 | 600 minute 30 year Summer I+0% | 600 | 65 | 32.635 | 31.787 | -0.123 |
| 12.001 | S1201 | 600 minute 30 year Summer I+0% | 600 | 67 | 32.635 | 31.446 | -0.189 |
| 12.002 | S1202 | 600 minute 30 year Summer I+0% | 600 | 68 | 32.680 | 31.088 | -0.172 |
| 12.003 | S1203 | 600 minute 30 year Summer I+0% | 600 | 68 | 32.660 | 30.993 | -0.177 |
| 12.004 | S1204 | 600 minute 30 year Summer I+0% | 600 | 68 | 32.660 | 30.853 | -0.182 |
| 14.000 | S1400 | 600 minute 30 year Summer I+0% | 600 | 65 | 32.650 | 31.651 | -0.124 |
| 14.001 | S1401 | 600 minute 30 year Summer I+0% | 600 | 68 | 32.680 | 31.302 | -0.193 |
| 15.000 | S1500 | 600 minute 30 year Summer I+0% | 600 | 65 | 32.680 | 31.669 | -0.131 |
| 15.001 | S1501 | 600 minute 30 year Summer I+0% | 600 | 65 | 32.600 | 31.624 | -0.131 |
| 14.002 | S1402 | 600 minute 30 year Summer I+0% | 600 | 68 | 32.600 | 31.045 | -0.195 |
| 12.005 | 1205 | 600 minute 30 year Summer I+0% | 600 | 33 | 32.600 | 30.752 | 0.047 |
| 1.008 | S108 | 600 minute 30 year Summer I+0% | 600 | 33 | 32.550 | 30.750 | 0.395 |
| 16.000 | S1600 | 600 minute 30 year Summer I+0% | 600 | 67 | 32.545 | 31.449 | -0.201 |
| 16.001 | S1601 | 600 minute 30 year Summer I+0% | 600 | 33 | 32.545 | 30.749 | 0.064 |
| 1.009 | S109 | 600 minute 30 year Summer I+0% | 600 | 33 | 32.500 | 30.749 | 0.719 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.000 | 2.598 | 0.6 | 0.3 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.267 | 145.999 | 0.1 | 7.3 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.559 | 0.4 | 0.2 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 1.039 | 0.3 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.06 | | 0.009 | 27.019 | 0.7 | 2.9 | OK |
| 9.002 | S902 | 0.000 | 0.04 | | 0.023 | 35.852 | 1.3 | 3.9 | OK |
| 11.000 | S1100 | 0.000 | 0.05 | | 0.003 | 7.794 | 0.5 | 0.8 | OK |
| 9.003 | S903 | 0.000 | 0.06 | | 0.971 | 46.244 | 0.6 | 4.8 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 87.730 | 199.610 | 0.0 | 5.5 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 2.078 | 0.5 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.08 | | 0.004 | 11.951 | 0.6 | 1.3 | OK |
| 13.001 | S1301 | 0.000 | 0.07 | | 0.012 | 18.706 | 1.0 | 2.0 | OK |
| 12.001 | S1201 | 0.000 | 0.06 | | 0.009 | 36.372 | 1.0 | 4.0 | OK |
| 12.002 | S1202 | 0.000 | 0.13 | | 0.031 | 49.882 | 0.8 | 5.4 | OK |
| 12.003 | S1203 | 0.000 | 0.10 | | 0.041 | 49.882 | 0.9 | 5.4 | OK |
| 12.004 | S1204 | 0.000 | 0.08 | | 0.023 | 60.274 | 1.2 | 6.6 | OK |
| 14.000 | S1400 | 0.000 | 0.07 | | 0.003 | 12.470 | 0.7 | 1.4 | OK |

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## Summary Wizard of 600 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.05 | | 0.008 | 22.343 | 0.7 | 2.4 | OK |
| 15.000 | S1500 | 0.000 | 0.04 | | 0.002 | 4.676 | 0.4 | 0.5 | OK |
| 15.001 | S1501 | 0.000 | 0.04 | | 0.006 | 12.470 | 1.1 | 1.4 | OK |
| 14.002 | S1402 | 0.000 | 0.04 | | 0.025 | 41.568 | 1.4 | 4.5 | OK |
| 12.005 | 1205 | 0.000 | 0.15 | | 0.624 | 113.273 | 1.5 | 12.3 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.07 | | 90.522 | 315.317 | 0.2 | 6.8 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.03 | | 0.006 | 17.666 | 0.9 | 1.9 | OK |
| 16.001 | S1601 | 0.000 | 0.03 | | 0.407 | 19.745 | 1.1 | 2.1 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.43 | | 3.770 | 334.948 | 1.0 | 7.1 | SURCHARGED |

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## Summary Wizard of 720 minute 30 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 720 minute 30 year Summer I+0% | 720 | 70 | 32.680 | 31.789 | -0.131 |
| 1.001 | S101 | 720 minute 30 year Summer I+0% | 720 | 70 | 32.680 | 31.717 | -0.133 |
| 2.000 | S200 | 720 minute 30 year Summer I+0% | 720 | 71 | 32.600 | 31.497 | -0.133 |
| 1.002 | S102 | 720 minute 30 year Summer I+0% | 720 | 72 | 32.630 | 31.248 | -0.197 |
| 3.000 | S300 | 720 minute 30 year Summer I+0% | 720 | 70 | 32.550 | 31.857 | -0.143 |
| 1.003 | S103 | 720 minute 30 year Summer I+0% | 720 | 72 | 32.600 | 31.079 | -0.196 |
| 4.000 | S400 | 720 minute 30 year Summer I+0% | 720 | 70 | 32.550 | 31.710 | -0.140 |
| 4.001 | S401 | 720 minute 30 year Summer I+0% | 720 | 37 | 32.550 | 30.734 | -0.016 |
| 1.004 | S104 | 720 minute 30 year Summer I+0% | 720 | 37 | 32.600 | 30.733 | 0.203 |
| 1.005 | S105 | 720 minute 30 year Summer I+0% | 720 | 37 | 32.600 | 30.733 | 0.223 |
| 5.000 | S500 | 720 minute 30 year Summer I+0% | 720 | 70 | 32.550 | 31.865 | -0.135 |
| 5.001 | S501 | 720 minute 30 year Summer I+0% | 720 | 72 | 32.665 | 31.155 | -0.135 |
| 6.000 | S600 | 720 minute 30 year Summer I+0% | 720 | 70 | 32.665 | 31.852 | -0.148 |
| 6.001 | S601 | 720 minute 30 year Summer I+0% | 720 | 72 | 32.665 | 31.142 | -0.148 |
| 5.002 | S502 | 720 minute 30 year Summer I+0% | 720 | 72 | 32.665 | 30.857 | -0.193 |
| 5.003 | S503 | 720 minute 30 year Summer I+0% | 720 | 37 | 32.680 | 30.734 | -0.121 |
| 7.000 | S700 | 720 minute 30 year Summer I+0% | 720 | 70 | 32.680 | 31.907 | -0.123 |
| 7.001 | S701 | 720 minute 30 year Summer I+0% | 720 | 70 | 32.635 | 31.828 | -0.117 |
| 5.004 | S504 | 720 minute 30 year Summer I+0% | 720 | 37 | 32.635 | 30.733 | 0.188 |

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## Summary Wizard of 720 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.04 | | 0.002 | 7.064 | 0.5 | 0.6 | OK |
| 1.001 | S101 | 0.000 | 0.03 | | 0.006 | 10.868 | 1.0 | 1.0 | OK |
| 2.000 | S200 | 0.000 | 0.03 | | 0.002 | 7.064 | 0.6 | 0.6 | OK |
| 1.002 | S102 | 0.000 | 0.04 | | 0.007 | 21.737 | 0.7 | 2.0 | OK |
| 3.000 | S300 | 0.000 | 0.01 | | 0.000 | 4.347 | 0.9 | 0.4 | OK |
| 1.003 | S103 | 0.000 | 0.04 | | 0.020 | 39.669 | 1.2 | 3.6 | OK |
| 4.000 | S400 | 0.000 | 0.01 | | 0.001 | 8.151 | 1.5 | 0.7 | OK |
| 4.001 | S401 | 0.000 | 0.05 | | 0.031 | 11.412 | 0.7 | 1.0 | OK |
| 1.004 | S104 | 0.000 | 0.11 | | 0.726 | 56.515 | 0.4 | 5.1 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.04 | | 1.441 | 59.232 | 0.4 | 5.0 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.02 | | 0.002 | 7.608 | 0.9 | 0.7 | OK |
| 5.001 | S501 | 0.000 | 0.02 | | 0.003 | 7.608 | 0.9 | 0.7 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 1.086 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.000 | 1.086 | 0.2 | 0.1 | OK |
| 5.002 | S502 | 0.000 | 0.05 | | 0.008 | 28.801 | 0.7 | 2.6 | OK |
| 5.003 | S503 | 0.000 | 0.04 | | 0.082 | 32.604 | 1.0 | 3.0 | OK |
| 7.000 | S700 | 0.000 | 0.08 | | 0.004 | 14.129 | 0.6 | 1.3 | OK |
| 7.001 | S701 | 0.000 | 0.11 | | 0.016 | 21.193 | 0.7 | 1.9 | OK |
| 5.004 | S504 | 0.000 | 0.08 | | 1.035 | 53.798 | 0.5 | 4.7 | SURCHARGED |

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## Summary Wizard of 720 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 720 minute 30 year Summer I+0% | 720 | 72 | 32.525 | 31.204 | -0.146 |
| 1.006 | S106 | 720 minute 30 year Summer I+0% | 720 | 37 | 32.500 | 30.733 | -0.913 |
| 9.000 | S900 | 720 minute 30 year Summer I+0% | 720 | 70 | 32.665 | 31.853 | -0.147 |
| 10.000 | S901 | 720 minute 30 year Summer I+0% | 720 | 70 | 32.665 | 31.852 | -0.148 |
| 9.001 | S901 | 720 minute 30 year Summer I+0% | 720 | 72 | 32.665 | 31.028 | -0.192 |
| 9.002 | S902 | 720 minute 30 year Summer I+0% | 720 | 72 | 32.640 | 30.787 | -0.198 |
| 11.000 | S1100 | 720 minute 30 year Summer I+0% | 720 | 70 | 32.680 | 31.570 | -0.130 |
| 9.003 | S903 | 720 minute 30 year Summer I+0% | 720 | 37 | 32.630 | 30.733 | 0.238 |
| 1.007 | S107 | 720 minute 30 year Summer I+0% | 720 | 37 | 32.500 | 30.733 | -0.803 |
| 12.000 | S1200 | 720 minute 30 year Summer I+0% | 720 | 70 | 32.635 | 31.854 | -0.146 |
| 13.000 | S1300 | 720 minute 30 year Summer I+0% | 720 | 70 | 32.635 | 31.875 | -0.125 |
| 13.001 | S1301 | 720 minute 30 year Summer I+0% | 720 | 70 | 32.635 | 31.784 | -0.126 |
| 12.001 | S1201 | 720 minute 30 year Summer I+0% | 720 | 71 | 32.635 | 31.443 | -0.192 |
| 12.002 | S1202 | 720 minute 30 year Summer I+0% | 720 | 72 | 32.680 | 31.085 | -0.175 |
| 12.003 | S1203 | 720 minute 30 year Summer I+0% | 720 | 72 | 32.660 | 30.991 | -0.179 |
| 12.004 | S1204 | 720 minute 30 year Summer I+0% | 720 | 72 | 32.660 | 30.849 | -0.186 |
| 14.000 | S1400 | 720 minute 30 year Summer I+0% | 720 | 70 | 32.650 | 31.649 | -0.126 |
| 14.001 | S1401 | 720 minute 30 year Summer I+0% | 720 | 72 | 32.680 | 31.300 | -0.195 |
| 15.000 | S1500 | 720 minute 30 year Summer I+0% | 720 | 70 | 32.680 | 31.668 | -0.132 |
| 15.001 | S1501 | 720 minute 30 year Summer I+0% | 720 | 70 | 32.600 | 31.623 | -0.132 |
| 14.002 | S1402 | 720 minute 30 year Summer I+0% | 720 | 72 | 32.600 | 31.043 | -0.197 |
| 12.005 | 1205 | 720 minute 30 year Summer I+0% | 720 | 38 | 32.600 | 30.735 | 0.030 |
| 1.008 | S108 | 720 minute 30 year Summer I+0% | 720 | 37 | 32.550 | 30.733 | 0.378 |
| 16.000 | S1600 | 720 minute 30 year Summer I+0% | 720 | 71 | 32.545 | 31.448 | -0.202 |
| 16.001 | S1601 | 720 minute 30 year Summer I+0% | 720 | 37 | 32.545 | 30.731 | 0.046 |
| 1.009 | S109 | 720 minute 30 year Summer I+0% | 720 | 37 | 32.500 | 30.731 | 0.701 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.000 | 2.717 | 0.5 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.261 | 152.493 | 0.1 | 6.5 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.630 | 0.3 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 1.086 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.05 | | 0.008 | 28.257 | 0.7 | 2.6 | OK |
| 9.002 | S902 | 0.000 | 0.03 | | 0.022 | 37.495 | 1.3 | 3.4 | OK |
| 11.000 | S1100 | 0.000 | 0.04 | | 0.002 | 8.151 | 0.5 | 0.7 | OK |
| 9.003 | S903 | 0.000 | 0.05 | | 0.936 | 48.363 | 0.6 | 4.2 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 85.671 | 208.343 | 0.0 | 5.2 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 2.173 | 0.4 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.07 | | 0.003 | 12.499 | 0.6 | 1.1 | OK |
| 13.001 | S1301 | 0.000 | 0.06 | | 0.011 | 19.563 | 0.9 | 1.8 | OK |
| 12.001 | S1201 | 0.000 | 0.05 | | 0.008 | 38.039 | 1.0 | 3.5 | OK |
| 12.002 | S1202 | 0.000 | 0.11 | | 0.029 | 52.168 | 0.7 | 4.7 | OK |
| 12.003 | S1203 | 0.000 | 0.09 | | 0.038 | 52.168 | 0.8 | 4.7 | OK |
| 12.004 | S1204 | 0.000 | 0.07 | | 0.021 | 63.036 | 1.2 | 5.7 | OK |
| 14.000 | S1400 | 0.000 | 0.06 | | 0.003 | 13.042 | 0.6 | 1.2 | OK |

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## Summary Wizard of 720 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.04 | | 0.008 | 23.367 | 0.7 | 2.1 | OK |
| 15.000 | S1500 | 0.000 | 0.03 | | 0.002 | 4.891 | 0.4 | 0.4 | OK |
| 15.001 | S1501 | 0.000 | 0.03 | | 0.005 | 13.042 | 1.1 | 1.2 | OK |
| 14.002 | S1402 | 0.000 | 0.04 | | 0.023 | 43.473 | 1.4 | 3.9 | OK |
| 12.005 | 1205 | 0.000 | 0.13 | | 0.571 | 118.465 | 1.5 | 10.7 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.07 | | 88.572 | 331.116 | 0.2 | 6.7 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.005 | 18.476 | 0.9 | 1.7 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 0.368 | 20.650 | 1.1 | 1.9 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.43 | | 3.724 | 351.749 | 1.0 | 7.1 | SURCHARGED |

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## Summary Wizard of 960 minute 30 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.680 | 31.787 | -0.133 |
| 1.001 | S101 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.680 | 31.715 | -0.135 |
| 2.000 | S200 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.600 | 31.495 | -0.135 |
| 1.002 | S102 | 960 minute 30 year Summer I+0% | 960 | 79 | 32.630 | 31.246 | -0.199 |
| 3.000 | S300 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.550 | 31.855 | -0.145 |
| 1.003 | S103 | 960 minute 30 year Summer I+0% | 960 | 79 | 32.600 | 31.077 | -0.198 |
| 4.000 | S400 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.550 | 31.708 | -0.142 |
| 4.001 | S401 | 960 minute 30 year Summer I+0% | 960 | 39 | 32.550 | 30.695 | -0.055 |
| 1.004 | S104 | 960 minute 30 year Summer I+0% | 960 | 39 | 32.600 | 30.694 | 0.164 |
| 1.005 | S105 | 960 minute 30 year Summer I+0% | 960 | 39 | 32.600 | 30.694 | 0.184 |
| 5.000 | S500 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.550 | 31.862 | -0.138 |
| 5.001 | S501 | 960 minute 30 year Summer I+0% | 960 | 79 | 32.665 | 31.153 | -0.137 |
| 6.000 | S600 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.665 | 31.852 | -0.148 |
| 6.001 | S601 | 960 minute 30 year Summer I+0% | 960 | 79 | 32.665 | 31.142 | -0.148 |
| 5.002 | S502 | 960 minute 30 year Summer I+0% | 960 | 79 | 32.665 | 30.854 | -0.196 |
| 5.003 | S503 | 960 minute 30 year Summer I+0% | 960 | 44 | 32.680 | 30.695 | -0.160 |
| 7.000 | S700 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.680 | 31.904 | -0.126 |
| 7.001 | S701 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.635 | 31.825 | -0.120 |
| 5.004 | S504 | 960 minute 30 year Summer I+0% | 960 | 39 | 32.635 | 30.694 | 0.149 |

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## Summary Wizard of 960 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.03 | | 0.002 | 7.577 | 0.5 | 0.5 | OK |
| 1.001 | S101 | 0.000 | 0.02 | | 0.005 | 11.657 | 1.0 | 0.8 | OK |
| 2.000 | S200 | 0.000 | 0.02 | | 0.002 | 7.577 | 0.6 | 0.5 | OK |
| 1.002 | S102 | 0.000 | 0.03 | | 0.006 | 23.314 | 0.6 | 1.6 | OK |
| 3.000 | S300 | 0.000 | 0.01 | | 0.000 | 4.663 | 0.7 | 0.3 | OK |
| 1.003 | S103 | 0.000 | 0.03 | | 0.018 | 42.548 | 1.1 | 2.9 | OK |
| 4.000 | S400 | 0.000 | 0.01 | | 0.001 | 8.743 | 1.3 | 0.6 | OK |
| 4.001 | S401 | 0.000 | 0.04 | | 0.019 | 12.240 | 0.6 | 0.8 | OK |
| 1.004 | S104 | 0.000 | 0.09 | | 0.651 | 60.617 | 0.4 | 4.1 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.04 | | 1.372 | 63.531 | 0.4 | 4.0 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.02 | | 0.001 | 8.160 | 0.9 | 0.6 | OK |
| 5.001 | S501 | 0.000 | 0.02 | | 0.002 | 8.160 | 0.9 | 0.6 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 1.165 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.000 | 1.163 | 0.2 | 0.1 | OK |
| 5.002 | S502 | 0.000 | 0.04 | | 0.007 | 30.889 | 0.7 | 2.1 | OK |
| 5.003 | S503 | 0.000 | 0.03 | | 0.049 | 34.969 | 1.0 | 2.4 | OK |
| 7.000 | S700 | 0.000 | 0.06 | | 0.003 | 15.154 | 0.6 | 1.0 | OK |
| 7.001 | S701 | 0.000 | 0.09 | | 0.014 | 22.731 | 0.6 | 1.5 | OK |
| 5.004 | S504 | 0.000 | 0.06 | | 0.947 | 57.700 | 0.5 | 3.8 | SURCHARGED |

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## Summary Wizard of 960 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 960 minute 30 year Summer I+0% | 960 | 79 | 32.525 | 31.204 | -0.146 |
| 1.006 | S106 | 960 minute 30 year Summer I+0% | 960 | 39 | 32.500 | 30.694 | -0.952 |
| 9.000 | S900 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 960 minute 30 year Summer I+0% | 960 | 79 | 32.665 | 31.025 | -0.195 |
| 9.002 | S902 | 960 minute 30 year Summer I+0% | 960 | 79 | 32.640 | 30.785 | -0.200 |
| 11.000 | S1100 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.680 | 31.568 | -0.132 |
| 9.003 | S903 | 960 minute 30 year Summer I+0% | 960 | 39 | 32.630 | 30.694 | 0.199 |
| 1.007 | S107 | 960 minute 30 year Summer I+0% | 960 | 39 | 32.500 | 30.694 | -0.842 |
| 12.000 | S1200 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.635 | 31.854 | -0.146 |
| 13.000 | S1300 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.635 | 31.872 | -0.128 |
| 13.001 | S1301 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.635 | 31.782 | -0.128 |
| 12.001 | S1201 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.635 | 31.440 | -0.195 |
| 12.002 | S1202 | 960 minute 30 year Summer I+0% | 960 | 79 | 32.680 | 31.080 | -0.180 |
| 12.003 | S1203 | 960 minute 30 year Summer I+0% | 960 | 79 | 32.660 | 30.985 | -0.185 |
| 12.004 | S1204 | 960 minute 30 year Summer I+0% | 960 | 79 | 32.660 | 30.845 | -0.190 |
| 14.000 | S1400 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.650 | 31.647 | -0.128 |
| 14.001 | S1401 | 960 minute 30 year Summer I+0% | 960 | 79 | 32.680 | 31.297 | -0.198 |
| 15.000 | S1500 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.680 | 31.666 | -0.134 |
| 15.001 | S1501 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.600 | 31.621 | -0.134 |
| 14.002 | S1402 | 960 minute 30 year Summer I+0% | 960 | 79 | 32.600 | 31.041 | -0.199 |
| 12.005 | 1205 | 960 minute 30 year Summer I+0% | 960 | 40 | 32.600 | 30.696 | -0.009 |
| 1.008 | S108 | 960 minute 30 year Summer I+0% | 960 | 39 | 32.550 | 30.694 | 0.339 |
| 16.000 | S1600 | 960 minute 30 year Summer I+0% | 960 | 78 | 32.545 | 31.445 | -0.205 |
| 16.001 | S1601 | 960 minute 30 year Summer I+0% | 960 | 39 | 32.545 | 30.692 | 0.007 |
| 1.009 | S109 | 960 minute 30 year Summer I+0% | 960 | 39 | 32.500 | 30.692 | 0.662 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.000 | 2.914 | 0.4 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.250 | 163.816 | 0.1 | 5.6 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.748 | 0.3 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 1.165 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.04 | | 0.007 | 30.308 | 0.7 | 2.1 | OK |
| 9.002 | S902 | 0.000 | 0.03 | | 0.019 | 40.216 | 1.3 | 2.7 | OK |
| 11.000 | S1100 | 0.000 | 0.04 | | 0.002 | 8.743 | 0.5 | 0.6 | OK |
| 9.003 | S903 | 0.000 | 0.04 | | 0.861 | 51.873 | 0.6 | 3.4 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 81.158 | 223.874 | 0.0 | 4.8 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 2.331 | 0.4 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.05 | | 0.003 | 13.406 | 0.6 | 0.9 | OK |
| 13.001 | S1301 | 0.000 | 0.05 | | 0.010 | 20.983 | 0.9 | 1.4 | OK |
| 12.001 | S1201 | 0.000 | 0.04 | | 0.007 | 40.800 | 0.9 | 2.8 | OK |
| 12.002 | S1202 | 0.000 | 0.09 | | 0.026 | 55.954 | 0.7 | 3.8 | OK |
| 12.003 | S1203 | 0.000 | 0.07 | | 0.033 | 55.954 | 0.8 | 3.8 | OK |
| 12.004 | S1204 | 0.000 | 0.06 | | 0.018 | 67.611 | 1.2 | 4.6 | OK |
| 14.000 | S1400 | 0.000 | 0.05 | | 0.003 | 13.989 | 0.6 | 1.0 | OK |

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## Summary Wizard of 960 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.04 | | 0.007 | 25.063 | 0.6 | 1.7 | OK |
| 15.000 | S1500 | 0.000 | 0.03 | | 0.002 | 5.246 | 0.4 | 0.4 | OK |
| 15.001 | S1501 | 0.000 | 0.03 | | 0.005 | 13.989 | 1.0 | 1.0 | OK |
| 14.002 | S1402 | 0.000 | 0.03 | | 0.021 | 46.629 | 1.3 | 3.2 | OK |
| 12.005 | 1205 | 0.000 | 0.10 | | 0.455 | 127.063 | 1.4 | 8.6 | OK |
| 1.008 | S108 | 0.000 | 0.07 | | 84.304 | 355.600 | 0.2 | 6.6 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.004 | 19.817 | 0.9 | 1.3 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 0.283 | 22.149 | 1.1 | 1.5 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.42 | | 3.625 | 377.746 | 1.0 | 6.9 | SURCHARGED |

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## Summary Wizard of 1440 minute 30 year Summer I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | FSR | Ratio R | 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.680 | 31.785 | -0.135 |
| 1.001 | S101 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.680 | 31.712 | -0.138 |
| 2.000 | S200 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.600 | 31.492 | -0.138 |
| 1.002 | S102 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.630 | 31.243 | -0.202 |
| 3.000 | S300 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.550 | 31.854 | -0.146 |
| 1.003 | S103 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.600 | 31.074 | -0.201 |
| 4.000 | S400 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.550 | 31.706 | -0.144 |
| 4.001 | S401 | 1440 minute 30 year Summer I+0% | 1440 | 77 | 32.550 | 30.622 | -0.128 |
| 1.004 | S104 | 1440 minute 30 year Summer I+0% | 1440 | 43 | 32.600 | 30.621 | 0.091 |
| 1.005 | S105 | 1440 minute 30 year Summer I+0% | 1440 | 43 | 32.600 | 30.621 | 0.111 |
| 5.000 | S500 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.550 | 31.859 | -0.141 |
| 5.001 | S501 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.665 | 31.149 | -0.141 |
| 6.000 | S600 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.665 | 31.851 | -0.149 |
| 6.001 | S601 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.665 | 31.141 | -0.149 |
| 5.002 | S502 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.665 | 30.850 | -0.200 |
| 5.003 | S503 | 1440 minute 30 year Summer I+0% | 1440 | 95 | 32.680 | 30.653 | -0.202 |
| 7.000 | S700 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.680 | 31.900 | -0.130 |
| 7.001 | S701 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.635 | 31.820 | -0.125 |
| 5.004 | S504 | 1440 minute 30 year Summer I+0% | 1440 | 43 | 32.635 | 30.621 | 0.076 |

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## Summary Wizard of 1440 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.02 | | 0.002 | 8.353 | 0.5 | 0.4 | OK |
| 1.001 | S101 | 0.000 | 0.02 | | 0.004 | 12.851 | 1.0 | 0.6 | OK |
| 2.000 | S200 | 0.000 | 0.02 | | 0.001 | 8.353 | 0.6 | 0.4 | OK |
| 1.002 | S102 | 0.000 | 0.02 | | 0.005 | 25.702 | 0.6 | 1.2 | OK |
| 3.000 | S300 | 0.000 | 0.01 | | 0.000 | 5.140 | 0.5 | 0.2 | OK |
| 1.003 | S103 | 0.000 | 0.02 | | 0.015 | 46.907 | 1.1 | 2.1 | OK |
| 4.000 | S400 | 0.000 | 0.01 | | 0.000 | 9.638 | 1.0 | 0.4 | OK |
| 4.001 | S401 | 0.000 | 0.03 | | 0.004 | 13.494 | 0.6 | 0.6 | OK |
| 1.004 | S104 | 0.000 | 0.06 | | 0.503 | 66.826 | 0.4 | 3.0 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.03 | | 1.242 | 70.039 | 0.3 | 3.0 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.01 | | 0.001 | 8.996 | 0.9 | 0.4 | OK |
| 5.001 | S501 | 0.000 | 0.01 | | 0.001 | 8.996 | 0.9 | 0.4 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 1.233 | 0.1 | 0.1 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.000 | 1.195 | 0.1 | 0.1 | OK |
| 5.002 | S502 | 0.000 | 0.03 | | 0.006 | 33.965 | 0.7 | 1.5 | OK |
| 5.003 | S503 | 0.000 | 0.02 | | 0.015 | 38.463 | 1.0 | 1.7 | OK |
| 7.000 | S700 | 0.000 | 0.04 | | 0.002 | 16.707 | 0.5 | 0.8 | OK |
| 7.001 | S701 | 0.000 | 0.07 | | 0.011 | 25.060 | 0.6 | 1.1 | OK |
| 5.004 | S504 | 0.000 | 0.05 | | 0.776 | 63.523 | 0.5 | 2.8 | SURCHARGED |

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## Summary Wizard of 1440 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.525 | 31.203 | -0.147 |
| 1.006 | S106 | 1440 minute 30 year Summer I+0% | 1440 | 43 | 32.500 | 30.620 | -1.026 |
| 9.000 | S900 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.665 | 31.021 | -0.199 |
| 9.002 | S902 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.640 | 30.782 | -0.203 |
| 11.000 | S1100 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.680 | 31.566 | -0.134 |
| 9.003 | S903 | 1440 minute 30 year Summer I+0% | 1440 | 43 | 32.630 | 30.621 | 0.126 |
| 1.007 | S107 | 1440 minute 30 year Summer I+0% | 1440 | 43 | 32.500 | 30.620 | -0.916 |
| 12.000 | S1200 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.635 | 31.853 | -0.147 |
| 13.000 | S1300 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.635 | 31.869 | -0.131 |
| 13.001 | S1301 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.635 | 31.779 | -0.131 |
| 12.001 | S1201 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.635 | 31.436 | -0.199 |
| 12.002 | S1202 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.680 | 31.073 | -0.187 |
| 12.003 | S1203 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.660 | 30.978 | -0.192 |
| 12.004 | S1204 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.660 | 30.840 | -0.195 |
| 14.000 | S1400 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.650 | 31.644 | -0.131 |
| 14.001 | S1401 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.680 | 31.294 | -0.201 |
| 15.000 | S1500 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.680 | 31.664 | -0.136 |
| 15.001 | S1501 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.600 | 31.619 | -0.136 |
| 14.002 | S1402 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.600 | 31.038 | -0.202 |
| 12.005 | 1205 | 1440 minute 30 year Summer I+0% | 1440 | 47 | 32.600 | 30.622 | -0.083 |
| 1.008 | S108 | 1440 minute 30 year Summer I+0% | 1440 | 43 | 32.550 | 30.620 | 0.265 |
| 16.000 | S1600 | 1440 minute 30 year Summer I+0% | 1440 | 94 | 32.545 | 31.440 | -0.210 |
| 16.001 | S1601 | 1440 minute 30 year Summer I+0% | 1440 | 43 | 32.545 | 30.619 | -0.066 |
| 1.009 | S109 | 1440 minute 30 year Summer I+0% | 1440 | 43 | 32.500 | 30.619 | 0.589 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 3.212 | 0.3 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.226 | 180.414 | 0.1 | 4.5 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.927 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 1.221 | 0.1 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.03 | | 0.006 | 33.348 | 0.6 | 1.5 | OK |
| 9.002 | S902 | 0.000 | 0.02 | | 0.016 | 44.272 | 1.3 | 2.0 | OK |
| 11.000 | S1100 | 0.000 | 0.03 | | 0.002 | 9.638 | 0.5 | 0.4 | OK |
| 9.003 | S903 | 0.000 | 0.03 | | 0.720 | 57.123 | 0.6 | 2.5 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 72.698 | 246.512 | 0.0 | 4.3 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 2.570 | 0.3 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.04 | | 0.002 | 14.779 | 0.5 | 0.7 | OK |
| 13.001 | S1301 | 0.000 | 0.04 | | 0.008 | 23.132 | 0.8 | 1.0 | OK |
| 12.001 | S1201 | 0.000 | 0.03 | | 0.006 | 44.979 | 0.8 | 2.0 | OK |
| 12.002 | S1202 | 0.000 | 0.07 | | 0.021 | 61.685 | 0.6 | 2.8 | OK |
| 12.003 | S1203 | 0.000 | 0.05 | | 0.027 | 61.685 | 0.8 | 2.8 | OK |
| 12.004 | S1204 | 0.000 | 0.04 | | 0.015 | 74.536 | 1.1 | 3.4 | OK |
| 14.000 | S1400 | 0.000 | 0.04 | | 0.002 | 15.421 | 0.6 | 0.7 | OK |

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## Summary Wizard of 1440 minute 30 year Summer I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.03 | | 0.006 | 27.630 | 0.6 | 1.3 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.001 | 5.783 | 0.4 | 0.3 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.004 | 15.421 | 1.1 | 0.7 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.018 | 51.405 | 1.3 | 2.3 | OK |
| 12.005 | 1205 | 0.000 | 0.08 | | 0.265 | 140.077 | 1.3 | 6.4 | OK |
| 1.008 | S108 | 0.000 | 0.07 | | 76.291 | 391.729 | 0.2 | 6.3 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.003 | 21.847 | 0.9 | 1.0 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.150 | 24.417 | 1.1 | 1.1 | OK |
| 1.009 | S109 | 0.000 | 0.40 | | 3.432 | 416.144 | 1.0 | 6.6 | SURCHARGED |

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## Summary Wizard of 15 minute 100 year Summer I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 15 minute 100 year Summer I+45% | 15 | 13 | 32.680 | 31.850 | -0.070 |
| 1.001 | S101 | 15 minute 100 year Summer I+45% | 15 | 13 | 32.680 | 31.767 | -0.083 |
| 2.000 | S200 | 15 minute 100 year Summer I+45% | 15 | 14 | 32.600 | 31.547 | -0.083 |
| 1.002 | S102 | 15 minute 100 year Summer I+45% | 15 | 19 | 32.630 | 31.343 | -0.102 |
| 3.000 | S300 | 15 minute 100 year Summer I+45% | 15 | 11 | 32.550 | 31.887 | -0.113 |
| 1.003 | S103 | 15 minute 100 year Summer I+45% | 15 | 21 | 32.600 | 31.180 | -0.095 |
| 4.000 | S400 | 15 minute 100 year Summer I+45% | 15 | 13 | 32.550 | 31.746 | -0.104 |
| 4.001 | S401 | 15 minute 100 year Summer I+45% | 15 | 30 | 32.550 | 30.769 | 0.019 |
| 1.004 | S104 | 15 minute 100 year Summer I+45% | 15 | 30 | 32.600 | 30.767 | 0.237 |
| 1.005 | S105 | 15 minute 100 year Summer I+45% | 15 | 30 | 32.600 | 30.767 | 0.257 |
| 5.000 | S500 | 15 minute 100 year Summer I+45% | 15 | 11 | 32.550 | 31.907 | -0.093 |
| 5.001 | S501 | 15 minute 100 year Summer I+45% | 15 | 21 | 32.665 | 31.198 | -0.092 |
| 6.000 | S600 | 15 minute 100 year Summer I+45% | 15 | 12 | 32.665 | 31.869 | -0.131 |
| 6.001 | S601 | 15 minute 100 year Summer I+45% | 15 | 21 | 32.665 | 31.161 | -0.129 |
| 5.002 | S502 | 15 minute 100 year Summer I+45% | 15 | 23 | 32.665 | 30.976 | -0.074 |
| 5.003 | S503 | 15 minute 100 year Summer I+45% | 15 | 30 | 32.680 | 30.767 | -0.088 |
| 7.000 | S700 | 15 minute 100 year Summer I+45% | 15 | 6 | 32.680 | 32.191 | 0.161 |
| 7.001 | S701 | 15 minute 100 year Summer I+45% | 15 | 9 | 32.635 | 32.091 | 0.146 |
| 5.004 | S504 | 15 minute 100 year Summer I+45% | 15 | 30 | 32.635 | 30.767 | 0.222 |

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## Summary Wizard of 15 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.55 | | 0.012 | 3.994 | 1.0 | 9.1 | OK |
| 1.001 | S101 | 0.000 | 0.41 | | 0.033 | 6.144 | 1.9 | 14.6 | OK |
| 2.000 | S200 | 0.000 | 0.41 | | 0.010 | 3.994 | 1.2 | 9.1 | OK |
| 1.002 | S102 | 0.000 | 0.57 | | 0.045 | 12.288 | 1.3 | 29.1 | OK |
| 3.000 | S300 | 0.000 | 0.14 | | 0.005 | 2.458 | 1.7 | 5.6 | OK |
| 1.003 | S103 | 0.000 | 0.62 | | 0.145 | 22.425 | 2.3 | 54.2 | OK |
| 4.000 | S400 | 0.000 | 0.21 | | 0.007 | 4.609 | 2.3 | 10.6 | OK |
| 4.001 | S401 | 0.000 | 0.72 | | 0.042 | 6.430 | 1.3 | 15.2 | SURCHARGED |
| 1.004 | S104 | 0.000 | 1.64 | | 0.776 | 31.257 | 1.1 | 77.0 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.70 | | 1.501 | 31.406 | 0.8 | 78.8 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.31 | | 0.008 | 4.302 | 1.6 | 9.9 | OK |
| 5.001 | S501 | 0.000 | 0.32 | | 0.016 | 4.302 | 1.6 | 9.8 | OK |
| 6.000 | S600 | 0.000 | 0.04 | | 0.002 | 0.615 | 1.1 | 1.4 | OK |
| 6.001 | S601 | 0.000 | 0.05 | | 0.004 | 0.615 | 1.0 | 1.4 | OK |
| 5.002 | S502 | 0.000 | 0.78 | | 0.048 | 16.280 | 1.4 | 40.2 | OK |
| 5.003 | S503 | 0.000 | 0.58 | | 0.160 | 18.376 | 2.0 | 45.7 | OK |
| 7.000 | S700 | 0.000 | 1.07 | | 0.049 | 7.988 | 1.0 | 18.2 | SURCHARGED |
| 7.001 | S701 | 0.000 | 1.65 | | 0.157 | 11.981 | 1.6 | 28.3 | SURCHARGED |
| 5.004 | S504 | 0.000 | 1.21 | | 1.106 | 29.400 | 1.1 | 74.0 | SURCHARGED |

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## Summary Wizard of 15 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 15 minute 100 year Summer I+45% | 15 | 21 | 32.525 | 31.230 | -0.120 |
| 1.006 | S106 | 15 minute 100 year Summer I+45% | 15 | 30 | 32.500 | 30.767 | -0.879 |
| 9.000 | S900 | 15 minute 100 year Summer I+45% | 15 | 12 | 32.665 | 31.873 | -0.127 |
| 10.000 | S901 | 15 minute 100 year Summer I+45% | 15 | 12 | 32.665 | 31.868 | -0.132 |
| 9.001 | S901 | 15 minute 100 year Summer I+45% | 15 | 21 | 32.665 | 31.155 | -0.065 |
| 9.002 | S902 | 15 minute 100 year Summer I+45% | 15 | 23 | 32.640 | 30.879 | -0.106 |
| 11.000 | S1100 | 15 minute 100 year Summer I+45% | 15 | 14 | 32.680 | 31.638 | -0.062 |
| 9.003 | S903 | 15 minute 100 year Summer I+45% | 15 | 30 | 32.630 | 30.767 | 0.272 |
| 1.007 | S107 | 15 minute 100 year Summer I+45% | 15 | 30 | 32.500 | 30.767 | -0.769 |
| 12.000 | S1200 | 15 minute 100 year Summer I+45% | 15 | 3 | 32.635 | 32.303 | 0.303 |
| 13.000 | S1300 | 15 minute 100 year Summer I+45% | 15 | 1 | 32.635 | 32.571 | 0.571 |
| 13.001 | S1301 | 15 minute 100 year Summer I+45% | 15 | 1 | 32.635 | 32.502 | 0.592 |
| 12.001 | S1201 | 15 minute 100 year Summer I+45% | 15 | 3 | 32.635 | 32.296 | 0.661 |
| 12.002 | S1202 | 15 minute 100 year Summer I+45% | 15 | 9 | 32.680 | 32.100 | 0.840 |
| 12.003 | S1203 | 15 minute 100 year Summer I+45% | 15 | 11 | 32.660 | 31.903 | 0.733 |
| 12.004 | S1204 | 15 minute 100 year Summer I+45% | 15 | 13 | 32.660 | 31.706 | 0.671 |
| 14.000 | S1400 | 15 minute 100 year Summer I+45% | 15 | 13 | 32.650 | 31.831 | 0.056 |
| 14.001 | S1401 | 15 minute 100 year Summer I+45% | 15 | 14 | 32.680 | 31.633 | 0.138 |
| 15.000 | S1500 | 15 minute 100 year Summer I+45% | 15 | 13 | 32.680 | 31.723 | -0.077 |
| 15.001 | S1501 | 15 minute 100 year Summer I+45% | 15 | 13 | 32.600 | 31.680 | -0.075 |
| 14.002 | S1402 | 15 minute 100 year Summer I+45% | 15 | 14 | 32.600 | 31.551 | 0.311 |
| 12.005 | 1205 | 15 minute 100 year Summer I+45% | 15 | 18 | 32.600 | 31.416 | 0.711 |
| 1.008 | S108 | 15 minute 100 year Summer I+45% | 15 | 30 | 32.550 | 30.767 | 0.412 |
| 16.000 | S1600 | 15 minute 100 year Summer I+45% | 15 | 15 | 32.545 | 31.515 | -0.135 |
| 16.001 | S1601 | 15 minute 100 year Summer I+45% | 15 | 30 | 32.545 | 30.765 | 0.080 |
| 1.009 | S109 | 15 minute 100 year Summer I+45% | 15 | 29 | 32.500 | 30.765 | 0.735 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.09 | | 0.029 | 1.536 | 1.4 | 3.5 | OK |
| 1.006 | S106 | 0.000 | 0.04 | | 1.272 | 42.690 | 0.3 | 90.5 | OK |
| 9.000 | S900 | 0.000 | 0.06 | | 0.003 | 0.922 | 1.2 | 2.1 | OK |
| 10.000 | S901 | 0.000 | 0.04 | | 0.002 | 0.615 | 1.2 | 1.4 | OK |
| 9.001 | S901 | 0.000 | 0.85 | | 0.062 | 15.971 | 1.3 | 40.5 | OK |
| 9.002 | S902 | 0.000 | 0.55 | | 0.140 | 21.192 | 2.5 | 53.8 | OK |
| 11.000 | S1100 | 0.000 | 0.64 | | 0.013 | 4.608 | 1.0 | 10.6 | OK |
| 9.003 | S903 | 0.000 | 0.82 | | 1.002 | 26.461 | 1.3 | 68.1 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.01 | | 89.680 | 30.788 | 0.2 | 52.7 | OK |
| 12.000 | S1200 | 0.000 | 0.11 | | 0.071 | 1.229 | 1.1 | 3.5 | SURCHARGED |
| 13.000 | S1300 | 0.000 | 0.91 | | 0.114 | 7.066 | 1.1 | 15.6 | FLOOD RISK |
| 13.001 | S1301 | 0.000 | 0.86 | | 0.237 | 11.059 | 1.7 | 24.1 | FLOOD RISK |
| 12.001 | S1201 | 0.000 | 0.71 | | 0.538 | 21.502 | 1.7 | 46.5 | SURCHARGED |
| 12.002 | S1202 | 0.000 | 1.51 | | 1.038 | 29.488 | 1.6 | 63.8 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 1.23 | | 0.594 | 29.488 | 1.6 | 63.8 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.96 | | 0.503 | 35.630 | 2.0 | 76.7 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.88 | | 0.032 | 7.370 | 1.2 | 16.7 | SURCHARGED |

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## Summary Wizard of 15 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.61 | | 0.382 | 13.200 | 1.3 | 29.2 | SURCHARGED |
| 15.000 | S1500 | 0.000 | 0.48 | | 0.011 | 2.765 | 0.7 | 6.3 | OK |
| 15.001 | S1501 | 0.000 | 0.50 | | 0.030 | 7.372 | 2.1 | 18.1 | OK |
| 14.002 | S1402 | 0.000 | 0.49 | | 1.265 | 24.566 | 2.5 | 50.7 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 1.68 | | 1.952 | 66.478 | 3.5 | 139.8 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.07 | | 92.366 | 14.809 | 0.0 | 7.1 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.33 | | 0.024 | 10.443 | 1.6 | 23.6 | OK |
| 16.001 | S1601 | 0.000 | 0.32 | | 0.442 | 11.376 | 1.9 | 26.5 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.43 | | 3.812 | 22.487 | 1.0 | 7.2 | SURCHARGED |

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## Summary Wizard of 30 minute 100 year Summer I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 30 minute 100 year Summer I+45% | 30 | 15 | 32.680 | 31.846 | -0.074 |
| 1.001 | S101 | 30 minute 100 year Summer I+45% | 30 | 15 | 32.680 | 31.764 | -0.086 |
| 2.000 | S200 | 30 minute 100 year Summer I+45% | 30 | 17 | 32.600 | 31.544 | -0.086 |
| 1.002 | S102 | 30 minute 100 year Summer I+45% | 30 | 21 | 32.630 | 31.336 | -0.109 |
| 3.000 | S300 | 30 minute 100 year Summer I+45% | 30 | 13 | 32.550 | 31.885 | -0.115 |
| 1.003 | S103 | 30 minute 100 year Summer I+45% | 30 | 23 | 32.600 | 31.172 | -0.103 |
| 4.000 | S400 | 30 minute 100 year Summer I+45% | 30 | 15 | 32.550 | 31.744 | -0.106 |
| 4.001 | S401 | 30 minute 100 year Summer I+45% | 30 | 22 | 32.550 | 31.022 | 0.272 |
| 1.004 | S104 | 30 minute 100 year Summer I+45% | 30 | 22 | 32.600 | 31.020 | 0.490 |
| 1.005 | S105 | 30 minute 100 year Summer I+45% | 30 | 22 | 32.600 | 31.020 | 0.510 |
| 5.000 | S500 | 30 minute 100 year Summer I+45% | 30 | 13 | 32.550 | 31.904 | -0.096 |
| 5.001 | S501 | 30 minute 100 year Summer I+45% | 30 | 23 | 32.665 | 31.196 | -0.094 |
| 6.000 | S600 | 30 minute 100 year Summer I+45% | 30 | 14 | 32.665 | 31.868 | -0.132 |
| 6.001 | S601 | 30 minute 100 year Summer I+45% | 30 | 23 | 32.665 | 31.160 | -0.130 |
| 5.002 | S502 | 30 minute 100 year Summer I+45% | 30 | 22 | 32.665 | 31.023 | -0.027 |
| 5.003 | S503 | 30 minute 100 year Summer I+45% | 30 | 22 | 32.680 | 31.021 | 0.166 |
| 7.000 | S700 | 30 minute 100 year Summer I+45% | 30 | 9 | 32.680 | 32.136 | 0.106 |
| 7.001 | S701 | 30 minute 100 year Summer I+45% | 30 | 11 | 32.635 | 32.051 | 0.106 |
| 5.004 | S504 | 30 minute 100 year Summer I+45% | 30 | 22 | 32.635 | 31.020 | 0.475 |

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## Summary Wizard of 30 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.51 | | 0.011 | 5.347 | 0.9 | 8.5 | OK |
| 1.001 | S101 | 0.000 | 0.37 | | 0.031 | 8.226 | 1.9 | 13.2 | OK |
| 2.000 | S200 | 0.000 | 0.38 | | 0.009 | 5.347 | 1.2 | 8.5 | OK |
| 1.002 | S102 | 0.000 | 0.52 | | 0.039 | 16.452 | 1.3 | 26.4 | OK |
| 3.000 | S300 | 0.000 | 0.13 | | 0.005 | 3.291 | 1.6 | 5.2 | OK |
| 1.003 | S103 | 0.000 | 0.56 | | 0.125 | 30.024 | 2.3 | 48.5 | OK |
| 4.000 | S400 | 0.000 | 0.19 | | 0.006 | 6.170 | 2.2 | 9.8 | OK |
| 4.001 | S401 | 0.000 | 0.66 | | 0.125 | 8.523 | 1.3 | 13.8 | SURCHARGED |
| 1.004 | S104 | 0.000 | 1.46 | | 1.142 | 41.574 | 1.0 | 68.3 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.61 | | 1.947 | 41.758 | 0.6 | 68.6 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.28 | | 0.008 | 5.759 | 1.6 | 9.1 | OK |
| 5.001 | S501 | 0.000 | 0.30 | | 0.015 | 5.759 | 1.5 | 9.1 | OK |
| 6.000 | S600 | 0.000 | 0.04 | | 0.002 | 0.823 | 1.1 | 1.3 | OK |
| 6.001 | S601 | 0.000 | 0.04 | | 0.004 | 0.823 | 0.9 | 1.3 | OK |
| 5.002 | S502 | 0.000 | 0.69 | | 0.068 | 21.737 | 1.4 | 35.7 | OK |
| 5.003 | S503 | 0.000 | 0.51 | | 0.684 | 23.981 | 2.0 | 40.3 | SURCHARGED |
| 7.000 | S700 | 0.000 | 1.00 | | 0.040 | 10.694 | 1.0 | 17.0 | SURCHARGED |
| 7.001 | S701 | 0.000 | 1.50 | | 0.149 | 16.041 | 1.5 | 25.8 | SURCHARGED |
| 5.004 | S504 | 0.000 | 1.07 | | 1.565 | 38.542 | 1.0 | 65.4 | SURCHARGED |

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## Summary Wizard of 30 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 30 minute 100 year Summer I+45% | 30 | 23 | 32.525 | 31.229 | -0.121 |
| 1.006 | S106 | 30 minute 100 year Summer I+45% | 30 | 22 | 32.500 | 31.020 | -0.626 |
| 9.000 | S900 | 30 minute 100 year Summer I+45% | 30 | 14 | 32.665 | 31.872 | -0.128 |
| 10.000 | S901 | 30 minute 100 year Summer I+45% | 30 | 14 | 32.665 | 31.868 | -0.132 |
| 9.001 | S901 | 30 minute 100 year Summer I+45% | 30 | 23 | 32.665 | 31.143 | -0.077 |
| 9.002 | S902 | 30 minute 100 year Summer I+45% | 30 | 22 | 32.640 | 31.020 | 0.035 |
| 11.000 | S1100 | 30 minute 100 year Summer I+45% | 30 | 16 | 32.680 | 31.633 | -0.067 |
| 9.003 | S903 | 30 minute 100 year Summer I+45% | 30 | 22 | 32.630 | 31.020 | 0.525 |
| 1.007 | S107 | 30 minute 100 year Summer I+45% | 30 | 22 | 32.500 | 31.020 | -0.516 |
| 12.000 | S1200 | 30 minute 100 year Summer I+45% | 30 | 10 | 32.635 | 32.094 | 0.094 |
| 13.000 | S1300 | 30 minute 100 year Summer I+45% | 30 | 3 | 32.635 | 32.321 | 0.321 |
| 13.001 | S1301 | 30 minute 100 year Summer I+45% | 30 | 5 | 32.635 | 32.259 | 0.349 |
| 12.001 | S1201 | 30 minute 100 year Summer I+45% | 30 | 10 | 32.635 | 32.087 | 0.452 |
| 12.002 | S1202 | 30 minute 100 year Summer I+45% | 30 | 12 | 32.680 | 31.927 | 0.667 |
| 12.003 | S1203 | 30 minute 100 year Summer I+45% | 30 | 14 | 32.660 | 31.750 | 0.580 |
| 12.004 | S1204 | 30 minute 100 year Summer I+45% | 30 | 15 | 32.660 | 31.580 | 0.545 |
| 14.000 | S1400 | 30 minute 100 year Summer I+45% | 30 | 15 | 32.650 | 31.729 | -0.046 |
| 14.001 | S1401 | 30 minute 100 year Summer I+45% | 30 | 16 | 32.680 | 31.532 | 0.037 |
| 15.000 | S1500 | 30 minute 100 year Summer I+45% | 30 | 15 | 32.680 | 31.720 | -0.080 |
| 15.001 | S1501 | 30 minute 100 year Summer I+45% | 30 | 15 | 32.600 | 31.675 | -0.080 |
| 14.002 | S1402 | 30 minute 100 year Summer I+45% | 30 | 18 | 32.600 | 31.467 | 0.227 |
| 12.005 | 1205 | 30 minute 100 year Summer I+45% | 30 | 20 | 32.600 | 31.362 | 0.657 |
| 1.008 | S108 | 30 minute 100 year Summer I+45% | 30 | 22 | 32.550 | 31.019 | 0.664 |
| 16.000 | S1600 | 30 minute 100 year Summer I+45% | 30 | 17 | 32.545 | 31.510 | -0.140 |
| 16.001 | S1601 | 30 minute 100 year Summer I+45% | 30 | 22 | 32.545 | 31.018 | 0.333 |
| 1.009 | S109 | 30 minute 100 year Summer I+45% | 30 | 22 | 32.500 | 31.018 | 0.988 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.08 | | 0.027 | 2.056 | 1.4 | 3.3 | OK |
| 1.006 | S106 | 0.000 | 0.03 | | 1.348 | 53.868 | 0.2 | 76.2 | OK |
| 9.000 | S900 | 0.000 | 0.05 | | 0.003 | 1.234 | 1.2 | 2.0 | OK |
| 10.000 | S901 | 0.000 | 0.03 | | 0.002 | 0.823 | 1.1 | 1.3 | OK |
| 9.001 | S901 | 0.000 | 0.75 | | 0.055 | 21.385 | 1.3 | 35.6 | OK |
| 9.002 | S902 | 0.000 | 0.48 | | 0.611 | 27.943 | 2.5 | 47.0 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.59 | | 0.012 | 6.170 | 1.0 | 9.8 | OK |
| 9.003 | S903 | 0.000 | 0.68 | | 1.419 | 34.812 | 1.2 | 56.4 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 118.864 | 36.008 | 0.2 | 41.8 | OK |
| 12.000 | S1200 | 0.000 | 0.08 | | 0.038 | 1.645 | 1.1 | 2.6 | SURCHARGED |
| 13.000 | S1300 | 0.000 | 0.84 | | 0.074 | 9.460 | 1.1 | 14.2 | SURCHARGED |
| 13.001 | S1301 | 0.000 | 0.78 | | 0.198 | 14.807 | 1.7 | 21.8 | SURCHARGED |
| 12.001 | S1201 | 0.000 | 0.64 | | 0.479 | 28.789 | 1.7 | 41.8 | SURCHARGED |
| 12.002 | S1202 | 0.000 | 1.37 | | 0.989 | 39.482 | 1.5 | 57.8 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 1.10 | | 0.551 | 39.462 | 1.4 | 57.0 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.86 | | 0.468 | 47.533 | 2.1 | 68.9 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.83 | | 0.016 | 9.870 | 1.2 | 15.6 | OK |

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## Summary Wizard of 30 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.57 | | 0.220 | 17.681 | 1.3 | 27.5 | SURCHARGED |
| 15.000 | S1500 | 0.000 | 0.44 | | 0.010 | 3.702 | 0.7 | 5.9 | OK |
| 15.001 | S1501 | 0.000 | 0.44 | | 0.028 | 9.871 | 2.0 | 16.1 | OK |
| 14.002 | S1402 | 0.000 | 0.44 | | 1.193 | 32.898 | 2.5 | 45.1 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 1.49 | | 1.876 | 88.232 | 3.1 | 124.4 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.08 | | 119.966 | 12.770 | 0.1 | 8.0 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.31 | | 0.023 | 13.983 | 1.6 | 22.1 | OK |
| 16.001 | S1601 | 0.000 | 0.29 | | 0.994 | 14.736 | 1.8 | 24.7 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.49 | | 4.454 | 23.106 | 1.1 | 8.1 | SURCHARGED |

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## Summary Wizard of 60 minute 100 year Summer I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 60 minute 100 year Summer I+45% | 60 | 17 | 32.680 | 31.835 | -0.085 |
| 1.001 | S101 | 60 minute 100 year Summer I+45% | 60 | 17 | 32.680 | 31.754 | -0.096 |
| 2.000 | S200 | 60 minute 100 year Summer I+45% | 60 | 19 | 32.600 | 31.535 | -0.095 |
| 1.002 | S102 | 60 minute 100 year Summer I+45% | 60 | 23 | 32.630 | 31.318 | -0.127 |
| 3.000 | S300 | 60 minute 100 year Summer I+45% | 60 | 15 | 32.550 | 31.881 | -0.119 |
| 1.003 | S103 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.600 | 31.275 | 0.000 |
| 4.000 | S400 | 60 minute 100 year Summer I+45% | 60 | 17 | 32.550 | 31.738 | -0.112 |
| 4.001 | S401 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.550 | 31.274 | 0.524 |
| 1.004 | S104 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.600 | 31.272 | 0.742 |
| 1.005 | S105 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.600 | 31.272 | 0.762 |
| 5.000 | S500 | 60 minute 100 year Summer I+45% | 60 | 15 | 32.550 | 31.897 | -0.103 |
| 5.001 | S501 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.665 | 31.275 | -0.015 |
| 6.000 | S600 | 60 minute 100 year Summer I+45% | 60 | 16 | 32.665 | 31.866 | -0.134 |
| 6.001 | S601 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.665 | 31.275 | -0.015 |
| 5.002 | S502 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.665 | 31.275 | 0.225 |
| 5.003 | S503 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.680 | 31.273 | 0.418 |
| 7.000 | S700 | 60 minute 100 year Summer I+45% | 60 | 13 | 32.680 | 32.014 | -0.016 |
| 7.001 | S701 | 60 minute 100 year Summer I+45% | 60 | 14 | 32.635 | 31.965 | 0.020 |
| 5.004 | S504 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.635 | 31.272 | 0.727 |

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## Summary Wizard of 60 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.39 | | 0.010 | 6.842 | 0.9 | 6.5 | OK |
| 1.001 | S101 | 0.000 | 0.28 | | 0.026 | 10.526 | 1.7 | 10.0 | OK |
| 2.000 | S200 | 0.000 | 0.29 | | 0.008 | 6.842 | 1.1 | 6.5 | OK |
| 1.002 | S102 | 0.000 | 0.39 | | 0.028 | 21.052 | 1.2 | 20.0 | OK |
| 3.000 | S300 | 0.000 | 0.10 | | 0.004 | 4.211 | 1.5 | 4.0 | OK |
| 1.003 | S103 | 0.000 | 0.42 | | 0.384 | 38.323 | 2.1 | 36.6 | SURCHARGED |
| 4.000 | S400 | 0.000 | 0.15 | | 0.005 | 7.895 | 2.1 | 7.4 | OK |
| 4.001 | S401 | 0.000 | 0.49 | | 0.209 | 10.874 | 1.2 | 10.3 | SURCHARGED |
| 1.004 | S104 | 0.000 | 1.06 | | 1.379 | 53.131 | 0.7 | 49.5 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.44 | | 2.393 | 53.564 | 0.4 | 49.9 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.22 | | 0.007 | 7.368 | 1.5 | 7.0 | OK |
| 5.001 | S501 | 0.000 | 0.23 | | 0.048 | 7.365 | 1.4 | 7.0 | OK |
| 6.000 | S600 | 0.000 | 0.03 | | 0.002 | 1.053 | 1.0 | 1.0 | OK |
| 6.001 | S601 | 0.000 | 0.03 | | 0.040 | 1.050 | 0.9 | 1.0 | OK |
| 5.002 | S502 | 0.000 | 0.52 | | 0.192 | 27.714 | 1.3 | 26.8 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.38 | | 0.768 | 30.653 | 1.9 | 30.2 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.76 | | 0.021 | 13.684 | 1.0 | 12.9 | OK |
| 7.001 | S701 | 0.000 | 1.14 | | 0.110 | 20.526 | 1.1 | 19.5 | SURCHARGED |
| 5.004 | S504 | 0.000 | 0.76 | | 2.010 | 49.374 | 0.9 | 46.6 | SURCHARGED |

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## Summary Wizard of 60 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.525 | 31.272 | -0.078 |
| 1.006 | S106 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.500 | 31.271 | -0.375 |
| 9.000 | S900 | 60 minute 100 year Summer I+45% | 60 | 16 | 32.665 | 31.869 | -0.131 |
| 10.000 | S901 | 60 minute 100 year Summer I+45% | 60 | 16 | 32.665 | 31.866 | -0.134 |
| 9.001 | S901 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.665 | 31.274 | 0.054 |
| 9.002 | S902 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.640 | 31.272 | 0.287 |
| 11.000 | S1100 | 60 minute 100 year Summer I+45% | 60 | 18 | 32.680 | 31.621 | -0.079 |
| 9.003 | S903 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.630 | 31.271 | 0.776 |
| 1.007 | S107 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.500 | 31.271 | -0.265 |
| 12.000 | S1200 | 60 minute 100 year Summer I+45% | 60 | 16 | 32.635 | 31.874 | -0.126 |
| 13.000 | S1300 | 60 minute 100 year Summer I+45% | 60 | 15 | 32.635 | 31.940 | -0.060 |
| 13.001 | S1301 | 60 minute 100 year Summer I+45% | 60 | 17 | 32.635 | 31.848 | -0.062 |
| 12.001 | S1201 | 60 minute 100 year Summer I+45% | 60 | 16 | 32.635 | 31.679 | 0.044 |
| 12.002 | S1202 | 60 minute 100 year Summer I+45% | 60 | 17 | 32.680 | 31.596 | 0.336 |
| 12.003 | S1203 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.660 | 31.497 | 0.327 |
| 12.004 | S1204 | 60 minute 100 year Summer I+45% | 60 | 21 | 32.660 | 31.375 | 0.340 |
| 14.000 | S1400 | 60 minute 100 year Summer I+45% | 60 | 17 | 32.650 | 31.711 | -0.064 |
| 14.001 | S1401 | 60 minute 100 year Summer I+45% | 60 | 22 | 32.680 | 31.376 | -0.119 |
| 15.000 | S1500 | 60 minute 100 year Summer I+45% | 60 | 17 | 32.680 | 31.710 | -0.090 |
| 15.001 | S1501 | 60 minute 100 year Summer I+45% | 60 | 17 | 32.600 | 31.665 | -0.090 |
| 14.002 | S1402 | 60 minute 100 year Summer I+45% | 60 | 23 | 32.600 | 31.275 | 0.035 |
| 12.005 | 1205 | 60 minute 100 year Summer I+45% | 60 | 22 | 32.600 | 31.273 | 0.568 |
| 1.008 | S108 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.550 | 31.271 | 0.916 |
| 16.000 | S1600 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.545 | 31.499 | -0.151 |
| 16.001 | S1601 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.545 | 31.269 | 0.584 |
| 1.009 | S109 | 60 minute 100 year Summer I+45% | 60 | 20 | 32.500 | 31.268 | 1.238 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.06 | | 0.075 | 2.631 | 1.3 | 2.5 | OK |
| 1.006 | S106 | 0.000 | 0.02 | | 1.418 | 74.140 | 0.2 | 56.6 | OK |
| 9.000 | S900 | 0.000 | 0.04 | | 0.002 | 1.579 | 1.1 | 1.5 | OK |
| 10.000 | S901 | 0.000 | 0.02 | | 0.002 | 1.053 | 1.1 | 1.0 | OK |
| 9.001 | S901 | 0.000 | 0.56 | | 0.157 | 27.280 | 1.2 | 26.5 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.36 | | 1.056 | 35.225 | 2.3 | 35.0 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.45 | | 0.010 | 7.895 | 0.9 | 7.4 | OK |
| 9.003 | S903 | 0.000 | 0.51 | | 1.779 | 44.127 | 1.0 | 42.7 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 147.919 | 56.583 | 0.2 | 31.4 | OK |
| 12.000 | S1200 | 0.000 | 0.06 | | 0.003 | 2.105 | 1.1 | 2.0 | OK |
| 13.000 | S1300 | 0.000 | 0.67 | | 0.014 | 12.105 | 1.0 | 11.4 | OK |
| 13.001 | S1301 | 0.000 | 0.64 | | 0.047 | 18.947 | 1.7 | 18.0 | OK |
| 12.001 | S1201 | 0.000 | 0.53 | | 0.180 | 36.840 | 1.7 | 34.8 | SURCHARGED |
| 12.002 | S1202 | 0.000 | 1.04 | | 0.880 | 50.424 | 1.2 | 44.2 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.85 | | 0.480 | 50.124 | 1.4 | 44.2 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.66 | | 0.410 | 60.288 | 2.1 | 53.2 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.63 | | 0.013 | 12.630 | 1.1 | 11.9 | OK |

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## Summary Wizard of 60 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.45 | | 0.031 | 22.629 | 1.2 | 21.5 | OK |
| 15.000 | S1500 | 0.000 | 0.34 | | 0.009 | 4.737 | 0.7 | 4.5 | OK |
| 15.001 | S1501 | 0.000 | 0.33 | | 0.023 | 12.631 | 1.9 | 12.1 | OK |
| 14.002 | S1402 | 0.000 | 0.38 | | 0.656 | 41.884 | 2.4 | 39.2 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 1.17 | | 1.747 | 112.142 | 2.5 | 97.3 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.09 | | 147.443 | 38.019 | 0.1 | 8.7 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.24 | | 0.019 | 17.893 | 1.5 | 16.9 | OK |
| 16.001 | S1601 | 0.000 | 0.20 | | 1.542 | 18.699 | 1.7 | 17.2 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.54 | | 5.092 | 51.845 | 1.1 | 8.9 | SURCHARGED |

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## Summary Wizard of 120 minute 100 year Summer I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 120 minute 100 year Summer I+45% | 120 | 22 | 32.680 | 31.822 | -0.098 |
| 1.001 | S101 | 120 minute 100 year Summer I+45% | 120 | 22 | 32.680 | 31.744 | -0.106 |
| 2.000 | S200 | 120 minute 100 year Summer I+45% | 120 | 24 | 32.600 | 31.525 | -0.105 |
| 1.002 | S102 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.630 | 31.507 | 0.062 |
| 3.000 | S300 | 120 minute 100 year Summer I+45% | 120 | 21 | 32.550 | 31.875 | -0.125 |
| 1.003 | S103 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.600 | 31.505 | 0.230 |
| 4.000 | S400 | 120 minute 100 year Summer I+45% | 120 | 22 | 32.550 | 31.732 | -0.118 |
| 4.001 | S401 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.550 | 31.503 | 0.753 |
| 1.004 | S104 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.600 | 31.501 | 0.971 |
| 1.005 | S105 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.600 | 31.500 | 0.990 |
| 5.000 | S500 | 120 minute 100 year Summer I+45% | 120 | 20 | 32.550 | 31.888 | -0.112 |
| 5.001 | S501 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.665 | 31.505 | 0.215 |
| 6.000 | S600 | 120 minute 100 year Summer I+45% | 120 | 22 | 32.665 | 31.863 | -0.137 |
| 6.001 | S601 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.665 | 31.504 | 0.214 |
| 5.002 | S502 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.665 | 31.504 | 0.454 |
| 5.003 | S503 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.680 | 31.502 | 0.647 |
| 7.000 | S700 | 120 minute 100 year Summer I+45% | 120 | 19 | 32.680 | 31.956 | -0.074 |
| 7.001 | S701 | 120 minute 100 year Summer I+45% | 120 | 20 | 32.635 | 31.894 | -0.051 |
| 5.004 | S504 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.635 | 31.501 | 0.956 |

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## Summary Wizard of 120 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.26 | | 0.007 | 8.474 | 0.8 | 4.4 | OK |
| 1.001 | S101 | 0.000 | 0.19 | | 0.021 | 13.037 | 1.6 | 6.7 | OK |
| 2.000 | S200 | 0.000 | 0.19 | | 0.006 | 8.474 | 1.0 | 4.4 | OK |
| 1.002 | S102 | 0.000 | 0.27 | | 0.226 | 26.069 | 1.1 | 13.5 | SURCHARGED |
| 3.000 | S300 | 0.000 | 0.07 | | 0.003 | 5.215 | 1.4 | 2.7 | OK |
| 1.003 | S103 | 0.000 | 0.28 | | 0.717 | 47.265 | 1.9 | 24.6 | SURCHARGED |
| 4.000 | S400 | 0.000 | 0.10 | | 0.004 | 9.778 | 1.9 | 5.0 | OK |
| 4.001 | S401 | 0.000 | 0.32 | | 0.285 | 13.481 | 1.0 | 6.8 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.71 | | 1.447 | 65.875 | 0.6 | 33.6 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.30 | | 2.797 | 66.782 | 0.4 | 33.8 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.15 | | 0.005 | 9.126 | 1.3 | 4.7 | OK |
| 5.001 | S501 | 0.000 | 0.15 | | 0.189 | 9.097 | 1.3 | 4.7 | SURCHARGED |
| 6.000 | S600 | 0.000 | 0.02 | | 0.001 | 1.304 | 1.1 | 0.7 | OK |
| 6.001 | S601 | 0.000 | 0.02 | | 0.152 | 1.278 | 0.9 | 0.7 | SURCHARGED |
| 5.002 | S502 | 0.000 | 0.35 | | 0.259 | 34.269 | 1.2 | 17.9 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.23 | | 0.833 | 38.062 | 1.6 | 18.3 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.51 | | 0.011 | 16.948 | 1.0 | 8.7 | OK |
| 7.001 | S701 | 0.000 | 0.76 | | 0.052 | 25.423 | 1.1 | 13.1 | OK |
| 5.004 | S504 | 0.000 | 0.48 | | 2.415 | 61.528 | 0.7 | 29.7 | SURCHARGED |

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## Summary Wizard of 120 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.525 | 31.500 | 0.150 |
| 1.006 | S106 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.500 | 31.500 | -0.146 |
| 9.000 | S900 | 120 minute 100 year Summer I+45% | 120 | 21 | 32.665 | 31.866 | -0.134 |
| 10.000 | S901 | 120 minute 100 year Summer I+45% | 120 | 22 | 32.665 | 31.862 | -0.138 |
| 9.001 | S901 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.665 | 31.502 | 0.282 |
| 9.002 | S902 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.640 | 31.500 | 0.515 |
| 11.000 | S1100 | 120 minute 100 year Summer I+45% | 120 | 23 | 32.680 | 31.607 | -0.093 |
| 9.003 | S903 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.630 | 31.499 | 1.004 |
| 1.007 | S107 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.500 | 31.499 | -0.037 |
| 12.000 | S1200 | 120 minute 100 year Summer I+45% | 120 | 22 | 32.635 | 31.870 | -0.130 |
| 13.000 | S1300 | 120 minute 100 year Summer I+45% | 120 | 20 | 32.635 | 31.921 | -0.079 |
| 13.001 | S1301 | 120 minute 100 year Summer I+45% | 120 | 22 | 32.635 | 31.829 | -0.081 |
| 12.001 | S1201 | 120 minute 100 year Summer I+45% | 120 | 22 | 32.635 | 31.512 | -0.123 |
| 12.002 | S1202 | 120 minute 100 year Summer I+45% | 120 | 21 | 32.680 | 31.507 | 0.247 |
| 12.003 | S1203 | 120 minute 100 year Summer I+45% | 120 | 19 | 32.660 | 31.504 | 0.334 |
| 12.004 | S1204 | 120 minute 100 year Summer I+45% | 120 | 19 | 32.660 | 31.502 | 0.467 |
| 14.000 | S1400 | 120 minute 100 year Summer I+45% | 120 | 22 | 32.650 | 31.693 | -0.082 |
| 14.001 | S1401 | 120 minute 100 year Summer I+45% | 120 | 18 | 32.680 | 31.502 | 0.007 |
| 15.000 | S1500 | 120 minute 100 year Summer I+45% | 120 | 22 | 32.680 | 31.698 | -0.102 |
| 15.001 | S1501 | 120 minute 100 year Summer I+45% | 120 | 23 | 32.600 | 31.653 | -0.102 |
| 14.002 | S1402 | 120 minute 100 year Summer I+45% | 120 | 17 | 32.600 | 31.500 | 0.260 |
| 12.005 | 1205 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.600 | 31.498 | 0.793 |
| 1.008 | S108 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.550 | 31.496 | 1.141 |
| 16.000 | S1600 | 120 minute 100 year Summer I+45% | 120 | 21 | 32.545 | 31.496 | -0.154 |
| 16.001 | S1601 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.545 | 31.494 | 0.809 |
| 1.009 | S109 | 120 minute 100 year Summer I+45% | 120 | 16 | 32.500 | 31.493 | 1.463 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.04 | | 0.334 | 3.217 | 1.2 | 1.7 | SURCHARGED |
| 1.006 | S106 | 0.000 | 0.02 | | 1.427 | 103.607 | 0.2 | 38.2 | OK |
| 9.000 | S900 | 0.000 | 0.03 | | 0.002 | 1.956 | 1.0 | 1.0 | OK |
| 10.000 | S901 | 0.000 | 0.02 | | 0.001 | 1.304 | 1.1 | 0.7 | OK |
| 9.001 | S901 | 0.000 | 0.37 | | 0.366 | 33.733 | 1.1 | 17.7 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.23 | | 1.121 | 43.750 | 2.0 | 23.1 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.31 | | 0.008 | 9.778 | 0.8 | 5.0 | OK |
| 9.003 | S903 | 0.000 | 0.34 | | 2.131 | 55.039 | 0.8 | 28.3 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 174.240 | 93.769 | 0.1 | 20.6 | OK |
| 12.000 | S1200 | 0.000 | 0.04 | | 0.002 | 2.607 | 1.0 | 1.3 | OK |
| 13.000 | S1300 | 0.000 | 0.45 | | 0.010 | 14.993 | 0.9 | 7.7 | OK |
| 13.001 | S1301 | 0.000 | 0.43 | | 0.037 | 23.467 | 1.5 | 12.1 | OK |
| 12.001 | S1201 | 0.000 | 0.36 | | 0.028 | 45.630 | 1.5 | 23.6 | OK |
| 12.002 | S1202 | 0.000 | 0.77 | | 0.790 | 62.326 | 1.2 | 32.4 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.60 | | 0.482 | 61.927 | 1.4 | 31.1 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.45 | | 0.445 | 74.568 | 1.9 | 36.4 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.43 | | 0.010 | 15.644 | 1.0 | 8.1 | OK |

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## Summary Wizard of 120 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.30 | | 0.171 | 28.030 | 1.1 | 14.5 | SURCHARGED |
| 15.000 | S1500 | 0.000 | 0.23 | | 0.007 | 5.867 | 0.6 | 3.0 | OK |
| 15.001 | S1501 | 0.000 | 0.22 | | 0.018 | 15.644 | 1.7 | 8.1 | OK |
| 14.002 | S1402 | 0.000 | 0.26 | | 1.227 | 51.627 | 2.2 | 27.0 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 0.82 | | 2.070 | 138.792 | 2.2 | 68.6 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.10 | | 172.028 | 93.462 | 0.1 | 9.4 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.16 | | 0.019 | 22.163 | 1.4 | 11.4 | OK |
| 16.001 | S1601 | 0.000 | 0.13 | | 1.997 | 23.285 | 1.4 | 10.9 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.57 | | 5.664 | 111.652 | 1.1 | 9.6 | SURCHARGED |

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## Summary Wizard of 180 minute 100 year Summer I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.680 | 31.880 | -0.040 |
| 1.001 | S101 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.680 | 31.879 | 0.029 |
| 2.000 | S200 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.600 | 31.879 | 0.249 |
| 1.002 | S102 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.630 | 31.878 | 0.433 |
| 3.000 | S300 | 180 minute 100 year Summer I+45% | 180 | 16 | 32.550 | 31.878 | -0.122 |
| 1.003 | S103 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.600 | 31.877 | 0.602 |
| 4.000 | S400 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.550 | 31.877 | 0.027 |
| 4.001 | S401 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.550 | 31.876 | 1.126 |
| 1.004 | S104 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.600 | 31.874 | 1.344 |
| 1.005 | S105 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.600 | 31.874 | 1.364 |
| 5.000 | S500 | 180 minute 100 year Summer I+45% | 180 | 24 | 32.550 | 31.883 | -0.117 |
| 5.001 | S501 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.665 | 31.877 | 0.587 |
| 6.000 | S600 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.665 | 31.877 | -0.123 |
| 6.001 | S601 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.665 | 31.877 | 0.587 |
| 5.002 | S502 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.665 | 31.877 | 0.827 |
| 5.003 | S503 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.680 | 31.875 | 1.020 |
| 7.000 | S700 | 180 minute 100 year Summer I+45% | 180 | 24 | 32.680 | 31.945 | -0.085 |
| 7.001 | S701 | 180 minute 100 year Summer I+45% | 180 | 23 | 32.635 | 31.878 | -0.067 |
| 5.004 | S504 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.635 | 31.874 | 1.329 |

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## Summary Wizard of 180 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.20 | | 0.017 | 9.479 | 0.7 | 3.4 | OK |
| 1.001 | S101 | 0.000 | 0.15 | | 0.101 | 14.582 | 1.5 | 5.2 | SURCHARGED |
| 2.000 | S200 | 0.000 | 0.15 | | 0.063 | 9.478 | 0.9 | 3.4 | SURCHARGED |
| 1.002 | S102 | 0.000 | 0.20 | | 0.462 | 29.165 | 1.0 | 10.3 | SURCHARGED |
| 3.000 | S300 | 0.000 | 0.05 | | 0.004 | 5.833 | 1.3 | 2.1 | OK |
| 1.003 | S103 | 0.000 | 0.22 | | 0.917 | 53.022 | 1.8 | 18.9 | SURCHARGED |
| 4.000 | S400 | 0.000 | 0.08 | | 0.027 | 10.937 | 1.8 | 3.9 | SURCHARGED |
| 4.001 | S401 | 0.000 | 0.25 | | 0.391 | 15.118 | 0.9 | 5.2 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.55 | | 1.552 | 74.070 | 0.5 | 25.7 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.23 | | 3.456 | 75.439 | 0.3 | 25.9 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.11 | | 0.004 | 10.208 | 1.2 | 3.6 | OK |
| 5.001 | S501 | 0.000 | 0.12 | | 0.418 | 10.192 | 1.2 | 3.6 | SURCHARGED |
| 6.000 | S600 | 0.000 | 0.01 | | 0.003 | 1.458 | 1.1 | 0.5 | OK |
| 6.001 | S601 | 0.000 | 0.02 | | 0.333 | 1.444 | 0.9 | 0.5 | SURCHARGED |
| 5.002 | S502 | 0.000 | 0.27 | | 0.364 | 38.413 | 1.1 | 13.7 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.18 | | 0.938 | 42.760 | 1.5 | 13.7 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.40 | | 0.010 | 18.957 | 0.9 | 6.7 | OK |
| 7.001 | S701 | 0.000 | 0.59 | | 0.044 | 28.436 | 1.0 | 10.1 | OK |
| 5.004 | S504 | 0.000 | 0.37 | | 3.141 | 69.315 | 0.6 | 22.4 | SURCHARGED |

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## Summary Wizard of 180 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.525 | 31.874 | 0.524 |
| 1.006 | S106 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.500 | 31.873 | 0.227 |
| 9.000 | S900 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.665 | 31.877 | -0.123 |
| 10.000 | S901 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.665 | 31.877 | -0.123 |
| 9.001 | S901 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.665 | 31.877 | 0.657 |
| 9.002 | S902 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.640 | 31.875 | 0.890 |
| 11.000 | S1100 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.680 | 31.875 | 0.175 |
| 9.003 | S903 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.630 | 31.874 | 1.379 |
| 1.007 | S107 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.500 | 31.873 | 0.337 |
| 12.000 | S1200 | 180 minute 100 year Summer I+45% | 180 | 14 | 32.635 | 31.885 | -0.115 |
| 13.000 | S1300 | 180 minute 100 year Summer I+45% | 180 | 24 | 32.635 | 31.911 | -0.089 |
| 13.001 | S1301 | 180 minute 100 year Summer I+45% | 180 | 14 | 32.635 | 31.887 | -0.023 |
| 12.001 | S1201 | 180 minute 100 year Summer I+45% | 180 | 14 | 32.635 | 31.885 | 0.250 |
| 12.002 | S1202 | 180 minute 100 year Summer I+45% | 180 | 13 | 32.680 | 31.882 | 0.622 |
| 12.003 | S1203 | 180 minute 100 year Summer I+45% | 180 | 12 | 32.660 | 31.880 | 0.710 |
| 12.004 | S1204 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.660 | 31.879 | 0.844 |
| 14.000 | S1400 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.650 | 31.882 | 0.107 |
| 14.001 | S1401 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.680 | 31.880 | 0.385 |
| 15.000 | S1500 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.680 | 31.880 | 0.080 |
| 15.001 | S1501 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.600 | 31.879 | 0.124 |
| 14.002 | S1402 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.600 | 31.878 | 0.638 |
| 12.005 | 1205 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.600 | 31.877 | 1.172 |
| 1.008 | S108 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.550 | 31.873 | 1.518 |
| 16.000 | S1600 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.545 | 31.873 | 0.223 |
| 16.001 | S1601 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.545 | 31.871 | 1.186 |
| 1.009 | S109 | 180 minute 100 year Summer I+45% | 180 | 11 | 32.500 | 31.871 | 1.841 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.03 | | 0.757 | 3.645 | 1.1 | 1.3 | SURCHARGED |
| 1.006 | S106 | 0.000 | 0.01 | | 1.427 | 128.232 | 0.1 | 29.2 | SURCHARGED |
| 9.000 | S900 | 0.000 | 0.02 | | 0.004 | 2.187 | 1.0 | 0.8 | OK |
| 10.000 | S901 | 0.000 | 0.01 | | 0.004 | 1.458 | 1.1 | 0.5 | OK |
| 9.001 | S901 | 0.000 | 0.28 | | 0.709 | 37.795 | 1.0 | 13.5 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.18 | | 1.227 | 49.148 | 1.9 | 17.5 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.24 | | 0.051 | 10.937 | 0.8 | 3.9 | SURCHARGED |
| 9.003 | S903 | 0.000 | 0.26 | | 2.734 | 62.044 | 0.7 | 21.6 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 185.483 | 128.942 | 0.1 | 16.1 | SURCHARGED |
| 12.000 | S1200 | 0.000 | 0.03 | | 0.005 | 2.917 | 0.9 | 1.0 | OK |
| 13.000 | S1300 | 0.000 | 0.35 | | 0.009 | 16.770 | 0.9 | 5.9 | OK |
| 13.001 | S1301 | 0.000 | 0.33 | | 0.076 | 26.249 | 1.4 | 9.3 | OK |
| 12.001 | S1201 | 0.000 | 0.28 | | 0.396 | 51.038 | 1.4 | 18.1 | SURCHARGED |
| 12.002 | S1202 | 0.000 | 0.59 | | 0.976 | 69.822 | 1.1 | 24.9 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.46 | | 0.588 | 69.471 | 1.3 | 24.1 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.35 | | 0.552 | 83.674 | 1.8 | 28.0 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.33 | | 0.040 | 17.499 | 1.0 | 6.2 | SURCHARGED |

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## Summary Wizard of 180 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.23 | | 0.554 | 31.352 | 1.0 | 11.1 | SURCHARGED |
| 15.000 | S1500 | 0.000 | 0.17 | | 0.036 | 6.562 | 0.6 | 2.3 | SURCHARGED |
| 15.001 | S1501 | 0.000 | 0.17 | | 0.094 | 17.499 | 1.6 | 6.2 | SURCHARGED |
| 14.002 | S1402 | 0.000 | 0.20 | | 1.400 | 57.973 | 2.0 | 20.7 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 0.64 | | 2.612 | 156.009 | 2.0 | 53.1 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.11 | | 175.958 | 151.164 | 0.1 | 10.2 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.12 | | 0.125 | 24.791 | 1.3 | 8.8 | SURCHARGED |
| 16.001 | S1601 | 0.000 | 0.10 | | 2.233 | 26.314 | 1.3 | 8.4 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.64 | | 6.625 | 172.494 | 1.1 | 10.6 | SURCHARGED |

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## Summary Wizard of 240 minute 100 year Summer I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.680 | 32.190 | 0.270 |
| 1.001 | S101 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.680 | 32.189 | 0.339 |
| 2.000 | S200 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.600 | 32.189 | 0.559 |
| 1.002 | S102 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.630 | 32.188 | 0.743 |
| 3.000 | S300 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.550 | 32.188 | 0.188 |
| 1.003 | S103 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.600 | 32.187 | 0.912 |
| 4.000 | S400 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.550 | 32.187 | 0.337 |
| 4.001 | S401 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.550 | 32.186 | 1.436 |
| 1.004 | S104 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.600 | 32.184 | 1.654 |
| 1.005 | S105 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.600 | 32.184 | 1.674 |
| 5.000 | S500 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.550 | 32.188 | 0.188 |
| 5.001 | S501 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.665 | 32.187 | 0.897 |
| 6.000 | S600 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.665 | 32.187 | 0.187 |
| 6.001 | S601 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.665 | 32.187 | 0.897 |
| 5.002 | S502 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.665 | 32.187 | 1.137 |
| 5.003 | S503 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.680 | 32.185 | 1.330 |
| 7.000 | S700 | 240 minute 100 year Summer I+45% | 240 | 7 | 32.680 | 32.187 | 0.157 |
| 7.001 | S701 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.635 | 32.186 | 0.241 |
| 5.004 | S504 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.635 | 32.184 | 1.639 |

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## Summary Wizard of 240 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.17 | | 0.066 | 10.200 | 0.7 | 2.7 | SURCHARGED |
| 1.001 | S101 | 0.000 | 0.12 | | 0.164 | 15.693 | 1.4 | 4.2 | SURCHARGED |
| 2.000 | S200 | 0.000 | 0.12 | | 0.112 | 10.200 | 0.9 | 2.7 | SURCHARGED |
| 1.002 | S102 | 0.000 | 0.17 | | 0.550 | 31.386 | 1.0 | 8.5 | SURCHARGED |
| 3.000 | S300 | 0.000 | 0.04 | | 0.053 | 6.277 | 1.3 | 1.7 | SURCHARGED |
| 1.003 | S103 | 0.000 | 0.18 | | 1.020 | 57.240 | 1.7 | 15.4 | SURCHARGED |
| 4.000 | S400 | 0.000 | 0.06 | | 0.077 | 11.770 | 1.7 | 3.2 | SURCHARGED |
| 4.001 | S401 | 0.000 | 0.20 | | 0.441 | 16.319 | 0.9 | 4.3 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.45 | | 1.640 | 80.144 | 0.5 | 21.1 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.19 | | 4.004 | 81.972 | 0.3 | 21.2 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.09 | | 0.053 | 10.985 | 1.2 | 3.0 | SURCHARGED |
| 5.001 | S501 | 0.000 | 0.10 | | 0.495 | 10.985 | 1.1 | 3.0 | SURCHARGED |
| 6.000 | S600 | 0.000 | 0.01 | | 0.053 | 1.569 | 0.9 | 0.4 | SURCHARGED |
| 6.001 | S601 | 0.000 | 0.01 | | 0.403 | 1.569 | 0.9 | 0.4 | SURCHARGED |
| 5.002 | S502 | 0.000 | 0.22 | | 0.452 | 41.450 | 1.0 | 11.1 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.14 | | 1.026 | 46.216 | 1.4 | 11.4 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.32 | | 0.048 | 20.401 | 0.9 | 5.5 | SURCHARGED |
| 7.001 | S701 | 0.000 | 0.48 | | 0.172 | 30.601 | 1.0 | 8.2 | SURCHARGED |
| 5.004 | S504 | 0.000 | 0.30 | | 3.720 | 75.116 | 0.6 | 18.5 | SURCHARGED |

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## Summary Wizard of 240 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.525 | 32.184 | 0.834 |
| 1.006 | S106 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.500 | 32.183 | 0.537 |
| 9.000 | S900 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.665 | 32.187 | 0.187 |
| 10.000 | S901 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.665 | 32.187 | 0.187 |
| 9.001 | S901 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.665 | 32.187 | 0.967 |
| 9.002 | S902 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.640 | 32.185 | 1.200 |
| 11.000 | S1100 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.680 | 32.185 | 0.485 |
| 9.003 | S903 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.630 | 32.184 | 1.689 |
| 1.007 | S107 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.500 | 32.183 | 0.647 |
| 12.000 | S1200 | 240 minute 100 year Summer I+45% | 240 | 7 | 32.635 | 32.196 | 0.196 |
| 13.000 | S1300 | 240 minute 100 year Summer I+45% | 240 | 9 | 32.635 | 32.199 | 0.199 |
| 13.001 | S1301 | 240 minute 100 year Summer I+45% | 240 | 8 | 32.635 | 32.198 | 0.288 |
| 12.001 | S1201 | 240 minute 100 year Summer I+45% | 240 | 7 | 32.635 | 32.196 | 0.561 |
| 12.002 | S1202 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.680 | 32.193 | 0.933 |
| 12.003 | S1203 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.660 | 32.191 | 1.021 |
| 12.004 | S1204 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.660 | 32.189 | 1.154 |
| 14.000 | S1400 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.650 | 32.192 | 0.417 |
| 14.001 | S1401 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.680 | 32.190 | 0.695 |
| 15.000 | S1500 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.680 | 32.190 | 0.390 |
| 15.001 | S1501 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.600 | 32.190 | 0.435 |
| 14.002 | S1402 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.600 | 32.188 | 0.948 |
| 12.005 | 1205 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.600 | 32.187 | 1.482 |
| 1.008 | S108 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.550 | 32.183 | 1.828 |
| 16.000 | S1600 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.545 | 32.183 | 0.533 |
| 16.001 | S1601 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.545 | 32.181 | 1.496 |
| 1.009 | S109 | 240 minute 100 year Summer I+45% | 240 | 6 | 32.500 | 32.181 | 2.151 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.03 | | 1.107 | 3.923 | 1.1 | 1.1 | SURCHARGED |
| 1.006 | S106 | 0.000 | 0.01 | | 1.427 | 150.547 | 0.1 | 24.6 | SURCHARGED |
| 9.000 | S900 | 0.000 | 0.02 | | 0.053 | 2.354 | 1.1 | 0.6 | SURCHARGED |
| 10.000 | S901 | 0.000 | 0.01 | | 0.053 | 1.569 | 0.9 | 0.4 | SURCHARGED |
| 9.001 | S901 | 0.000 | 0.23 | | 0.832 | 40.759 | 1.0 | 11.0 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.14 | | 1.315 | 53.224 | 1.8 | 13.8 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.19 | | 0.100 | 11.770 | 0.7 | 3.2 | SURCHARGED |
| 9.003 | S903 | 0.000 | 0.21 | | 3.178 | 67.377 | 0.7 | 17.1 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 185.535 | 163.216 | 0.1 | 13.9 | SURCHARGED |
| 12.000 | S1200 | 0.000 | 0.03 | | 0.054 | 3.139 | 0.9 | 0.8 | SURCHARGED |
| 13.000 | S1300 | 0.000 | 0.29 | | 0.055 | 18.047 | 0.8 | 4.9 | SURCHARGED |
| 13.001 | S1301 | 0.000 | 0.27 | | 0.189 | 28.247 | 1.4 | 7.6 | SURCHARGED |
| 12.001 | S1201 | 0.000 | 0.23 | | 0.509 | 54.925 | 1.4 | 14.8 | SURCHARGED |
| 12.002 | S1202 | 0.000 | 0.48 | | 1.064 | 75.285 | 1.1 | 20.3 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.39 | | 0.676 | 75.097 | 1.2 | 20.1 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.29 | | 0.640 | 90.468 | 1.7 | 23.5 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.27 | | 0.089 | 18.831 | 0.9 | 5.1 | SURCHARGED |

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## Summary Wizard of 240 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.19 | | 0.641 | 33.740 | 0.9 | 9.1 | SURCHARGED |
| 15.000 | S1500 | 0.000 | 0.14 | | 0.085 | 7.062 | 0.5 | 1.9 | SURCHARGED |
| 15.001 | S1501 | 0.000 | 0.14 | | 0.144 | 18.831 | 1.5 | 5.1 | SURCHARGED |
| 14.002 | S1402 | 0.000 | 0.16 | | 1.488 | 62.692 | 2.0 | 16.9 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 0.53 | | 3.056 | 168.916 | 1.9 | 44.0 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.11 | | 176.506 | 209.888 | 0.2 | 10.7 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.10 | | 0.213 | 26.677 | 1.2 | 7.2 | SURCHARGED |
| 16.001 | S1601 | 0.000 | 0.08 | | 2.320 | 28.647 | 1.2 | 6.9 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.68 | | 7.414 | 233.812 | 1.2 | 11.3 | SURCHARGED |

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## Summary Wizard of 360 minute 100 year Summer I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.680 | 32.246 | 0.326 |
| 1.001 | S101 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.680 | 32.246 | 0.396 |
| 2.000 | S200 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.600 | 32.246 | 0.616 |
| 1.002 | S102 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.630 | 32.245 | 0.800 |
| 3.000 | S300 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.550 | 32.244 | 0.244 |
| 1.003 | S103 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.600 | 32.244 | 0.969 |
| 4.000 | S400 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.550 | 32.243 | 0.393 |
| 4.001 | S401 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.550 | 32.242 | 1.492 |
| 1.004 | S104 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.600 | 32.241 | 1.711 |
| 1.005 | S105 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.600 | 32.240 | 1.730 |
| 5.000 | S500 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.550 | 32.245 | 0.245 |
| 5.001 | S501 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.665 | 32.244 | 0.954 |
| 6.000 | S600 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.665 | 32.243 | 0.243 |
| 6.001 | S601 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.665 | 32.243 | 0.953 |
| 5.002 | S502 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.665 | 32.243 | 1.193 |
| 5.003 | S503 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.680 | 32.242 | 1.387 |
| 7.000 | S700 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.680 | 32.244 | 0.214 |
| 7.001 | S701 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.635 | 32.242 | 0.297 |
| 5.004 | S504 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.635 | 32.241 | 1.696 |

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## Summary Wizard of 360 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.12 | | 0.075 | 11.215 | 0.7 | 2.0 | SURCHARGED |
| 1.001 | S101 | 0.000 | 0.09 | | 0.173 | 17.254 | 1.2 | 3.1 | SURCHARGED |
| 2.000 | S200 | 0.000 | 0.09 | | 0.121 | 11.215 | 0.8 | 2.0 | SURCHARGED |
| 1.002 | S102 | 0.000 | 0.12 | | 0.566 | 34.507 | 0.9 | 6.3 | SURCHARGED |
| 3.000 | S300 | 0.000 | 0.03 | | 0.062 | 6.902 | 1.2 | 1.3 | SURCHARGED |
| 1.003 | S103 | 0.000 | 0.13 | | 1.036 | 62.975 | 1.6 | 11.4 | SURCHARGED |
| 4.000 | S400 | 0.000 | 0.05 | | 0.086 | 12.940 | 1.6 | 2.3 | SURCHARGED |
| 4.001 | S401 | 0.000 | 0.15 | | 0.450 | 18.044 | 0.8 | 3.2 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.33 | | 1.656 | 88.737 | 0.4 | 15.6 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.14 | | 4.104 | 91.393 | 0.4 | 15.7 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.07 | | 0.062 | 12.078 | 1.1 | 2.2 | SURCHARGED |
| 5.001 | S501 | 0.000 | 0.07 | | 0.504 | 12.078 | 1.1 | 2.2 | SURCHARGED |
| 6.000 | S600 | 0.000 | 0.01 | | 0.062 | 1.725 | 0.7 | 0.3 | SURCHARGED |
| 6.001 | S601 | 0.000 | 0.01 | | 0.412 | 1.725 | 0.7 | 0.3 | SURCHARGED |
| 5.002 | S502 | 0.000 | 0.16 | | 0.468 | 45.714 | 1.0 | 8.1 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.11 | | 1.042 | 51.384 | 1.2 | 8.7 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.24 | | 0.057 | 22.430 | 0.8 | 4.1 | SURCHARGED |
| 7.001 | S701 | 0.000 | 0.36 | | 0.181 | 33.644 | 0.9 | 6.1 | SURCHARGED |
| 5.004 | S504 | 0.000 | 0.23 | | 3.820 | 83.762 | 0.5 | 14.1 | SURCHARGED |

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## Summary Wizard of 360 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.525 | 32.240 | 0.890 |
| 1.006 | S106 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.500 | 32.240 | 0.594 |
| 9.000 | S900 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.665 | 32.244 | 0.244 |
| 10.000 | S901 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.665 | 32.244 | 0.244 |
| 9.001 | S901 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.665 | 32.244 | 1.024 |
| 9.002 | S902 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.640 | 32.242 | 1.257 |
| 11.000 | S1100 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.680 | 32.241 | 0.541 |
| 9.003 | S903 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.630 | 32.241 | 1.746 |
| 1.007 | S107 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.500 | 32.240 | 0.704 |
| 12.000 | S1200 | 360 minute 100 year Summer I+45% | 360 | 5 | 32.635 | 32.252 | 0.252 |
| 13.000 | S1300 | 360 minute 100 year Summer I+45% | 360 | 6 | 32.635 | 32.255 | 0.255 |
| 13.001 | S1301 | 360 minute 100 year Summer I+45% | 360 | 6 | 32.635 | 32.254 | 0.344 |
| 12.001 | S1201 | 360 minute 100 year Summer I+45% | 360 | 5 | 32.635 | 32.252 | 0.617 |
| 12.002 | S1202 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.680 | 32.250 | 0.990 |
| 12.003 | S1203 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.660 | 32.248 | 1.078 |
| 12.004 | S1204 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.660 | 32.246 | 1.211 |
| 14.000 | S1400 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.650 | 32.249 | 0.474 |
| 14.001 | S1401 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.680 | 32.247 | 0.752 |
| 15.000 | S1500 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.680 | 32.247 | 0.447 |
| 15.001 | S1501 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.600 | 32.246 | 0.491 |
| 14.002 | S1402 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.600 | 32.245 | 1.005 |
| 12.005 | 1205 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.600 | 32.243 | 1.538 |
| 1.008 | S108 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.550 | 32.240 | 1.885 |
| 16.000 | S1600 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.545 | 32.240 | 0.590 |
| 16.001 | S1601 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.545 | 32.238 | 1.553 |
| 1.009 | S109 | 360 minute 100 year Summer I+45% | 360 | 4 | 32.500 | 32.237 | 2.207 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.02 | | 1.171 | 4.313 | 1.1 | 0.8 | FLOOD RISK |
| 1.006 | S106 | 0.000 | 0.01 | | 1.427 | 188.667 | 0.1 | 19.1 | FLOOD RISK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.062 | 2.588 | 1.0 | 0.5 | SURCHARGED |
| 10.000 | S901 | 0.000 | 0.01 | | 0.062 | 1.725 | 0.7 | 0.3 | SURCHARGED |
| 9.001 | S901 | 0.000 | 0.17 | | 0.848 | 44.857 | 0.9 | 8.1 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.10 | | 1.331 | 59.434 | 1.6 | 9.8 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.14 | | 0.109 | 12.940 | 0.7 | 2.3 | SURCHARGED |
| 9.003 | S903 | 0.000 | 0.15 | | 3.259 | 75.526 | 0.6 | 12.2 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 185.544 | 224.751 | 0.1 | 11.7 | FLOOD RISK |
| 12.000 | S1200 | 0.000 | 0.02 | | 0.063 | 3.451 | 0.9 | 0.6 | SURCHARGED |
| 13.000 | S1300 | 0.000 | 0.21 | | 0.064 | 19.842 | 0.8 | 3.6 | SURCHARGED |
| 13.001 | S1301 | 0.000 | 0.20 | | 0.198 | 31.056 | 1.2 | 5.6 | SURCHARGED |
| 12.001 | S1201 | 0.000 | 0.17 | | 0.525 | 60.387 | 1.3 | 11.0 | SURCHARGED |
| 12.002 | S1202 | 0.000 | 0.36 | | 1.080 | 82.817 | 1.0 | 15.0 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.29 | | 0.692 | 82.817 | 1.1 | 15.0 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.22 | | 0.656 | 100.046 | 1.6 | 17.5 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.20 | | 0.098 | 20.704 | 0.8 | 3.8 | SURCHARGED |

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## Summary Wizard of 360 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.14 | | 0.657 | 37.094 | 0.9 | 6.7 | SURCHARGED |
| 15.000 | S1500 | 0.000 | 0.11 | | 0.094 | 7.764 | 0.5 | 1.4 | SURCHARGED |
| 15.001 | S1501 | 0.000 | 0.10 | | 0.153 | 20.704 | 1.4 | 3.8 | SURCHARGED |
| 14.002 | S1402 | 0.000 | 0.12 | | 1.504 | 69.013 | 1.8 | 12.5 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 0.39 | | 3.137 | 187.105 | 1.8 | 32.6 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.11 | | 176.606 | 317.177 | 0.2 | 10.9 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.07 | | 0.229 | 29.331 | 1.1 | 5.3 | SURCHARGED |
| 16.001 | S1601 | 0.000 | 0.06 | | 2.336 | 32.152 | 1.1 | 5.2 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.69 | | 7.557 | 345.239 | 1.2 | 11.5 | FLOOD RISK |

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## Summary Wizard of 480 minute 100 year Summer I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.680 | 32.233 | 0.313 |
| 1.001 | S101 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.680 | 32.232 | 0.382 |
| 2.000 | S200 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.600 | 32.232 | 0.602 |
| 1.002 | S102 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.630 | 32.231 | 0.786 |
| 3.000 | S300 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.550 | 32.230 | 0.230 |
| 1.003 | S103 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.600 | 32.230 | 0.955 |
| 4.000 | S400 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.550 | 32.229 | 0.379 |
| 4.001 | S401 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.550 | 32.228 | 1.478 |
| 1.004 | S104 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.600 | 32.227 | 1.697 |
| 1.005 | S105 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.600 | 32.226 | 1.716 |
| 5.000 | S500 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.550 | 32.231 | 0.231 |
| 5.001 | S501 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.665 | 32.230 | 0.940 |
| 6.000 | S600 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.665 | 32.229 | 0.229 |
| 6.001 | S601 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.665 | 32.229 | 0.939 |
| 5.002 | S502 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.665 | 32.229 | 1.179 |
| 5.003 | S503 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.680 | 32.228 | 1.373 |
| 7.000 | S700 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.680 | 32.230 | 0.200 |
| 7.001 | S701 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.635 | 32.228 | 0.283 |
| 5.004 | S504 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.635 | 32.227 | 1.682 |

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## Summary Wizard of 480 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.10 | | 0.073 | 12.003 | 0.6 | 1.6 | SURCHARGED |
| 1.001 | S101 | 0.000 | 0.07 | | 0.171 | 18.465 | 1.2 | 2.5 | SURCHARGED |
| 2.000 | S200 | 0.000 | 0.07 | | 0.119 | 12.002 | 0.8 | 1.6 | SURCHARGED |
| 1.002 | S102 | 0.000 | 0.10 | | 0.562 | 36.931 | 0.8 | 5.0 | SURCHARGED |
| 3.000 | S300 | 0.000 | 0.02 | | 0.060 | 7.386 | 1.2 | 1.0 | SURCHARGED |
| 1.003 | S103 | 0.000 | 0.11 | | 1.032 | 67.399 | 1.5 | 9.2 | SURCHARGED |
| 4.000 | S400 | 0.000 | 0.04 | | 0.083 | 13.849 | 1.5 | 1.9 | SURCHARGED |
| 4.001 | S401 | 0.000 | 0.12 | | 0.448 | 19.387 | 0.7 | 2.5 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.27 | | 1.652 | 95.534 | 0.4 | 12.5 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.11 | | 4.080 | 98.920 | 0.4 | 12.6 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.05 | | 0.060 | 12.926 | 1.1 | 1.8 | SURCHARGED |
| 5.001 | S501 | 0.000 | 0.06 | | 0.502 | 12.926 | 1.0 | 1.8 | SURCHARGED |
| 6.000 | S600 | 0.000 | 0.01 | | 0.060 | 1.846 | 0.6 | 0.3 | SURCHARGED |
| 6.001 | S601 | 0.000 | 0.01 | | 0.410 | 1.846 | 0.6 | 0.3 | SURCHARGED |
| 5.002 | S502 | 0.000 | 0.13 | | 0.464 | 48.933 | 0.9 | 6.5 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.09 | | 1.038 | 55.396 | 1.2 | 7.0 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.19 | | 0.055 | 24.005 | 0.7 | 3.3 | SURCHARGED |
| 7.001 | S701 | 0.000 | 0.29 | | 0.179 | 36.008 | 0.8 | 4.9 | SURCHARGED |
| 5.004 | S504 | 0.000 | 0.19 | | 3.795 | 90.653 | 0.5 | 11.4 | SURCHARGED |

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## Summary Wizard of 480 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.525 | 32.226 | 0.876 |
| 1.006 | S106 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.500 | 32.226 | 0.580 |
| 9.000 | S900 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.665 | 32.230 | 0.230 |
| 10.000 | S901 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.665 | 32.230 | 0.230 |
| 9.001 | S901 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.665 | 32.230 | 1.010 |
| 9.002 | S902 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.640 | 32.228 | 1.243 |
| 11.000 | S1100 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.680 | 32.227 | 0.527 |
| 9.003 | S903 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.630 | 32.227 | 1.732 |
| 1.007 | S107 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.500 | 32.226 | 0.690 |
| 12.000 | S1200 | 480 minute 100 year Summer I+45% | 480 | 6 | 32.635 | 32.238 | 0.238 |
| 13.000 | S1300 | 480 minute 100 year Summer I+45% | 480 | 8 | 32.635 | 32.241 | 0.241 |
| 13.001 | S1301 | 480 minute 100 year Summer I+45% | 480 | 7 | 32.635 | 32.240 | 0.330 |
| 12.001 | S1201 | 480 minute 100 year Summer I+45% | 480 | 6 | 32.635 | 32.238 | 0.603 |
| 12.002 | S1202 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.680 | 32.236 | 0.976 |
| 12.003 | S1203 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.660 | 32.234 | 1.064 |
| 12.004 | S1204 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.660 | 32.232 | 1.197 |
| 14.000 | S1400 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.650 | 32.235 | 0.460 |
| 14.001 | S1401 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.680 | 32.233 | 0.738 |
| 15.000 | S1500 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.680 | 32.233 | 0.433 |
| 15.001 | S1501 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.600 | 32.232 | 0.477 |
| 14.002 | S1402 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.600 | 32.231 | 0.991 |
| 12.005 | 1205 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.600 | 32.229 | 1.524 |
| 1.008 | S108 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.550 | 32.226 | 1.871 |
| 16.000 | S1600 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.545 | 32.226 | 0.576 |
| 16.001 | S1601 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.545 | 32.224 | 1.539 |
| 1.009 | S109 | 480 minute 100 year Summer I+45% | 480 | 5 | 32.500 | 32.223 | 2.193 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.02 | | 1.155 | 4.616 | 1.1 | 0.6 | FLOOD RISK |
| 1.006 | S106 | 0.000 | 0.01 | | 1.427 | 221.607 | 0.1 | 15.8 | FLOOD RISK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.060 | 2.770 | 0.8 | 0.4 | SURCHARGED |
| 10.000 | S901 | 0.000 | 0.01 | | 0.060 | 1.846 | 0.6 | 0.3 | SURCHARGED |
| 9.001 | S901 | 0.000 | 0.14 | | 0.844 | 48.009 | 0.9 | 6.5 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.08 | | 1.327 | 63.704 | 1.5 | 7.8 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.11 | | 0.107 | 13.849 | 0.6 | 1.9 | SURCHARGED |
| 9.003 | S903 | 0.000 | 0.12 | | 3.239 | 81.466 | 0.6 | 9.8 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 185.542 | 278.461 | 0.1 | 10.3 | FLOOD RISK |
| 12.000 | S1200 | 0.000 | 0.02 | | 0.061 | 3.693 | 0.9 | 0.5 | SURCHARGED |
| 13.000 | S1300 | 0.000 | 0.17 | | 0.061 | 21.235 | 0.7 | 2.9 | SURCHARGED |
| 13.001 | S1301 | 0.000 | 0.16 | | 0.195 | 33.238 | 1.2 | 4.5 | SURCHARGED |
| 12.001 | S1201 | 0.000 | 0.13 | | 0.521 | 64.629 | 1.2 | 8.8 | SURCHARGED |
| 12.002 | S1202 | 0.000 | 0.29 | | 1.076 | 88.634 | 0.9 | 12.1 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.23 | | 0.688 | 88.634 | 1.1 | 12.1 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.18 | | 0.652 | 107.099 | 1.5 | 14.1 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.16 | | 0.096 | 22.158 | 0.8 | 3.0 | SURCHARGED |

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## Summary Wizard of 480 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.11 | | 0.654 | 39.699 | 0.8 | 5.4 | SURCHARGED |
| 15.000 | S1500 | 0.000 | 0.09 | | 0.092 | 8.309 | 0.5 | 1.1 | SURCHARGED |
| 15.001 | S1501 | 0.000 | 0.08 | | 0.151 | 22.159 | 1.3 | 3.0 | SURCHARGED |
| 14.002 | S1402 | 0.000 | 0.10 | | 1.500 | 73.860 | 1.7 | 10.1 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 0.31 | | 3.117 | 201.030 | 1.6 | 26.1 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.11 | | 176.581 | 411.643 | 0.2 | 10.8 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.06 | | 0.225 | 31.391 | 1.1 | 4.3 | SURCHARGED |
| 16.001 | S1601 | 0.000 | 0.05 | | 2.333 | 34.950 | 1.1 | 4.2 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.69 | | 7.522 | 443.131 | 1.2 | 11.4 | FLOOD RISK |

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## Summary Wizard of 600 minute 100 year Summer I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.680 | 32.131 | 0.211 |
| 1.001 | S101 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.680 | 32.130 | 0.280 |
| 2.000 | S200 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.600 | 32.130 | 0.500 |
| 1.002 | S102 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.630 | 32.129 | 0.684 |
| 3.000 | S300 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.550 | 32.129 | 0.129 |
| 1.003 | S103 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.600 | 32.128 | 0.853 |
| 4.000 | S400 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.550 | 32.128 | 0.278 |
| 4.001 | S401 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.550 | 32.127 | 1.377 |
| 1.004 | S104 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.600 | 32.125 | 1.595 |
| 1.005 | S105 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.600 | 32.125 | 1.615 |
| 5.000 | S500 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.550 | 32.129 | 0.129 |
| 5.001 | S501 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.665 | 32.128 | 0.838 |
| 6.000 | S600 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.665 | 32.128 | 0.128 |
| 6.001 | S601 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.665 | 32.128 | 0.838 |
| 5.002 | S502 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.665 | 32.128 | 1.078 |
| 5.003 | S503 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.680 | 32.126 | 1.271 |
| 7.000 | S700 | 600 minute 100 year Summer I+45% | 600 | 10 | 32.680 | 32.128 | 0.098 |
| 7.001 | S701 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.635 | 32.127 | 0.182 |
| 5.004 | S504 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.635 | 32.125 | 1.580 |

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## Summary Wizard of 600 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.08 | | 0.057 | 12.641 | 0.6 | 1.4 | SURCHARGED |
| 1.001 | S101 | 0.000 | 0.06 | | 0.155 | 19.448 | 1.2 | 2.1 | SURCHARGED |
| 2.000 | S200 | 0.000 | 0.06 | | 0.103 | 12.641 | 0.8 | 1.4 | SURCHARGED |
| 1.002 | S102 | 0.000 | 0.08 | | 0.533 | 38.895 | 0.8 | 4.2 | SURCHARGED |
| 3.000 | S300 | 0.000 | 0.02 | | 0.044 | 7.779 | 1.2 | 0.8 | SURCHARGED |
| 1.003 | S103 | 0.000 | 0.09 | | 1.003 | 70.984 | 1.4 | 7.7 | SURCHARGED |
| 4.000 | S400 | 0.000 | 0.03 | | 0.067 | 14.586 | 1.5 | 1.6 | SURCHARGED |
| 4.001 | S401 | 0.000 | 0.10 | | 0.432 | 20.420 | 0.7 | 2.1 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.22 | | 1.623 | 101.057 | 0.4 | 10.6 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.09 | | 3.900 | 105.213 | 0.3 | 10.6 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.05 | | 0.044 | 13.614 | 1.0 | 1.5 | SURCHARGED |
| 5.001 | S501 | 0.000 | 0.05 | | 0.486 | 13.613 | 1.0 | 1.5 | SURCHARGED |
| 6.000 | S600 | 0.000 | 0.01 | | 0.043 | 1.945 | 0.5 | 0.2 | SURCHARGED |
| 6.001 | S601 | 0.000 | 0.01 | | 0.394 | 1.945 | 0.5 | 0.2 | SURCHARGED |
| 5.002 | S502 | 0.000 | 0.11 | | 0.435 | 51.536 | 0.8 | 5.5 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.08 | | 1.009 | 58.343 | 1.2 | 6.0 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.16 | | 0.039 | 25.282 | 0.7 | 2.8 | SURCHARGED |
| 7.001 | S701 | 0.000 | 0.24 | | 0.163 | 37.923 | 0.8 | 4.1 | SURCHARGED |
| 5.004 | S504 | 0.000 | 0.16 | | 3.615 | 96.008 | 0.5 | 9.6 | SURCHARGED |

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## Summary Wizard of 600 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.525 | 32.125 | 0.775 |
| 1.006 | S106 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.500 | 32.124 | 0.478 |
| 9.000 | S900 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.665 | 32.128 | 0.128 |
| 10.000 | S901 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.665 | 32.128 | 0.128 |
| 9.001 | S901 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.665 | 32.128 | 0.908 |
| 9.002 | S902 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.640 | 32.126 | 1.141 |
| 11.000 | S1100 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.680 | 32.126 | 0.426 |
| 9.003 | S903 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.630 | 32.125 | 1.630 |
| 1.007 | S107 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.500 | 32.124 | 0.588 |
| 12.000 | S1200 | 600 minute 100 year Summer I+45% | 600 | 8 | 32.635 | 32.137 | 0.137 |
| 13.000 | S1300 | 600 minute 100 year Summer I+45% | 600 | 10 | 32.635 | 32.139 | 0.139 |
| 13.001 | S1301 | 600 minute 100 year Summer I+45% | 600 | 10 | 32.635 | 32.138 | 0.228 |
| 12.001 | S1201 | 600 minute 100 year Summer I+45% | 600 | 8 | 32.635 | 32.136 | 0.501 |
| 12.002 | S1202 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.680 | 32.134 | 0.874 |
| 12.003 | S1203 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.660 | 32.132 | 0.962 |
| 12.004 | S1204 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.660 | 32.130 | 1.095 |
| 14.000 | S1400 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.650 | 32.133 | 0.358 |
| 14.001 | S1401 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.680 | 32.131 | 0.636 |
| 15.000 | S1500 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.680 | 32.131 | 0.331 |
| 15.001 | S1501 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.600 | 32.131 | 0.376 |
| 14.002 | S1402 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.600 | 32.129 | 0.889 |
| 12.005 | 1205 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.600 | 32.128 | 1.423 |
| 1.008 | S108 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.550 | 32.124 | 1.769 |
| 16.000 | S1600 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.545 | 32.124 | 0.474 |
| 16.001 | S1601 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.545 | 32.122 | 1.437 |
| 1.009 | S109 | 600 minute 100 year Summer I+45% | 600 | 7 | 32.500 | 32.122 | 2.092 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 1.040 | 4.862 | 1.1 | 0.5 | SURCHARGED |
| 1.006 | S106 | 0.000 | 0.01 | | 1.427 | 249.988 | 0.1 | 13.7 | SURCHARGED |
| 9.000 | S900 | 0.000 | 0.01 | | 0.043 | 2.917 | 0.7 | 0.3 | SURCHARGED |
| 10.000 | S901 | 0.000 | 0.01 | | 0.043 | 1.945 | 0.5 | 0.2 | SURCHARGED |
| 9.001 | S901 | 0.000 | 0.12 | | 0.815 | 50.564 | 0.8 | 5.5 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.07 | | 1.298 | 67.095 | 1.5 | 6.6 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.10 | | 0.091 | 14.586 | 0.6 | 1.6 | SURCHARGED |
| 9.003 | S903 | 0.000 | 0.10 | | 3.093 | 86.252 | 0.6 | 8.3 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 185.525 | 324.956 | 0.1 | 9.4 | SURCHARGED |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.045 | 3.890 | 0.9 | 0.4 | SURCHARGED |
| 13.000 | S1300 | 0.000 | 0.14 | | 0.045 | 22.365 | 0.7 | 2.4 | SURCHARGED |
| 13.001 | S1301 | 0.000 | 0.14 | | 0.179 | 35.006 | 1.1 | 3.8 | SURCHARGED |
| 12.001 | S1201 | 0.000 | 0.11 | | 0.493 | 68.067 | 1.1 | 7.4 | SURCHARGED |
| 12.002 | S1202 | 0.000 | 0.24 | | 1.047 | 93.349 | 0.9 | 10.2 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.20 | | 0.659 | 93.349 | 1.0 | 10.2 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.15 | | 0.623 | 112.797 | 1.5 | 11.9 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.13 | | 0.080 | 23.337 | 0.8 | 2.5 | SURCHARGED |

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Summary Wizard of 600 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.09 | | 0.625 | 41.813 | 0.8 | 4.6 | SURCHARGED |
| 15.000 | S1500 | 0.000 | 0.07 | | 0.076 | 8.752 | 0.5 | 1.0 | SURCHARGED |
| 15.001 | S1501 | 0.000 | 0.07 | | 0.134 | 23.337 | 1.3 | 2.5 | SURCHARGED |
| 14.002 | S1402 | 0.000 | 0.08 | | 1.471 | 77.791 | 1.6 | 8.5 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 0.27 | | 2.971 | 211.980 | 1.6 | 22.1 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.11 | | 176.402 | 493.526 | 0.2 | 10.6 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.05 | | 0.196 | 33.061 | 1.0 | 3.6 | SURCHARGED |
| 16.001 | S1601 | 0.000 | 0.04 | | 2.304 | 36.951 | 1.1 | 3.5 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.67 | | 7.263 | 527.710 | 1.2 | 11.2 | SURCHARGED |

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## Summary Wizard of 720 minute 100 year Summer I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.680 | 31.972 | 0.052 |
| 1.001 | S101 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.680 | 31.971 | 0.121 |
| 2.000 | S200 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.600 | 31.971 | 0.341 |
| 1.002 | S102 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.630 | 31.970 | 0.525 |
| 3.000 | S300 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.550 | 31.970 | -0.030 |
| 1.003 | S103 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.600 | 31.969 | 0.694 |
| 4.000 | S400 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.550 | 31.969 | 0.119 |
| 4.001 | S401 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.550 | 31.968 | 1.218 |
| 1.004 | S104 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.600 | 31.966 | 1.436 |
| 1.005 | S105 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.600 | 31.966 | 1.456 |
| 5.000 | S500 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.550 | 31.970 | -0.030 |
| 5.001 | S501 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.665 | 31.969 | 0.679 |
| 6.000 | S600 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.665 | 31.969 | -0.031 |
| 6.001 | S601 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.665 | 31.969 | 0.679 |
| 5.002 | S502 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.665 | 31.969 | 0.919 |
| 5.003 | S503 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.680 | 31.967 | 1.112 |
| 7.000 | S700 | 720 minute 100 year Summer I+45% | 720 | 14 | 32.680 | 31.969 | -0.061 |
| 7.001 | S701 | 720 minute 100 year Summer I+45% | 720 | 13 | 32.635 | 31.968 | 0.023 |
| 5.004 | S504 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.635 | 31.966 | 1.421 |

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## Summary Wizard of 720 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.07 | | 0.031 | 13.181 | 0.6 | 1.2 | SURCHARGED |
| 1.001 | S101 | 0.000 | 0.05 | | 0.129 | 20.279 | 1.2 | 1.8 | SURCHARGED |
| 2.000 | S200 | 0.000 | 0.05 | | 0.077 | 13.181 | 0.7 | 1.2 | SURCHARGED |
| 1.002 | S102 | 0.000 | 0.07 | | 0.488 | 40.558 | 0.8 | 3.7 | SURCHARGED |
| 3.000 | S300 | 0.000 | 0.02 | | 0.018 | 8.112 | 1.2 | 0.7 | OK |
| 1.003 | S103 | 0.000 | 0.08 | | 0.957 | 74.018 | 1.3 | 6.7 | SURCHARGED |
| 4.000 | S400 | 0.000 | 0.03 | | 0.042 | 15.209 | 1.5 | 1.4 | SURCHARGED |
| 4.001 | S401 | 0.000 | 0.09 | | 0.406 | 21.293 | 0.7 | 1.9 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.20 | | 1.578 | 105.450 | 0.4 | 9.2 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.08 | | 3.619 | 110.270 | 0.3 | 9.3 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.04 | | 0.018 | 14.195 | 1.0 | 1.3 | OK |
| 5.001 | S501 | 0.000 | 0.04 | | 0.457 | 14.195 | 0.9 | 1.3 | SURCHARGED |
| 6.000 | S600 | 0.000 | 0.00 | | 0.018 | 2.028 | 0.4 | 0.2 | OK |
| 6.001 | S601 | 0.000 | 0.01 | | 0.366 | 2.028 | 0.4 | 0.2 | SURCHARGED |
| 5.002 | S502 | 0.000 | 0.09 | | 0.390 | 53.739 | 0.8 | 4.8 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.07 | | 0.964 | 60.836 | 1.1 | 5.2 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.14 | | 0.013 | 26.363 | 0.7 | 2.4 | OK |
| 7.001 | S701 | 0.000 | 0.21 | | 0.112 | 39.544 | 0.8 | 3.6 | SURCHARGED |
| 5.004 | S504 | 0.000 | 0.14 | | 3.320 | 100.380 | 0.5 | 8.4 | SURCHARGED |

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## Summary Wizard of 720 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.525 | 31.966 | 0.616 |
| 1.006 | S106 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.500 | 31.966 | 0.320 |
| 9.000 | S900 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.665 | 31.969 | -0.031 |
| 10.000 | S901 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.665 | 31.969 | -0.031 |
| 9.001 | S901 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.665 | 31.969 | 0.749 |
| 9.002 | S902 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.640 | 31.967 | 0.982 |
| 11.000 | S1100 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.680 | 31.967 | 0.267 |
| 9.003 | S903 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.630 | 31.966 | 1.471 |
| 1.007 | S107 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.500 | 31.966 | 0.430 |
| 12.000 | S1200 | 720 minute 100 year Summer I+45% | 720 | 12 | 32.635 | 31.977 | -0.023 |
| 13.000 | S1300 | 720 minute 100 year Summer I+45% | 720 | 12 | 32.635 | 31.980 | -0.020 |
| 13.001 | S1301 | 720 minute 100 year Summer I+45% | 720 | 12 | 32.635 | 31.979 | 0.069 |
| 12.001 | S1201 | 720 minute 100 year Summer I+45% | 720 | 12 | 32.635 | 31.977 | 0.342 |
| 12.002 | S1202 | 720 minute 100 year Summer I+45% | 720 | 10 | 32.680 | 31.975 | 0.715 |
| 12.003 | S1203 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.660 | 31.973 | 0.803 |
| 12.004 | S1204 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.660 | 31.971 | 0.936 |
| 14.000 | S1400 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.650 | 31.974 | 0.199 |
| 14.001 | S1401 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.680 | 31.972 | 0.477 |
| 15.000 | S1500 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.680 | 31.972 | 0.172 |
| 15.001 | S1501 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.600 | 31.972 | 0.217 |
| 14.002 | S1402 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.600 | 31.970 | 0.730 |
| 12.005 | 1205 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.600 | 31.969 | 1.264 |
| 1.008 | S108 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.550 | 31.966 | 1.611 |
| 16.000 | S1600 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.545 | 31.965 | 0.315 |
| 16.001 | S1601 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.545 | 31.964 | 1.279 |
| 1.009 | S109 | 720 minute 100 year Summer I+45% | 720 | 9 | 32.500 | 31.963 | 1.933 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.861 | 5.070 | 1.0 | 0.5 | SURCHARGED |
| 1.006 | S106 | 0.000 | 0.01 | | 1.427 | 274.033 | 0.1 | 12.2 | SURCHARGED |
| 9.000 | S900 | 0.000 | 0.01 | | 0.018 | 3.042 | 0.6 | 0.3 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.018 | 2.028 | 0.4 | 0.2 | OK |
| 9.001 | S901 | 0.000 | 0.10 | | 0.764 | 52.723 | 0.8 | 4.8 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.06 | | 1.253 | 69.960 | 1.4 | 5.7 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.08 | | 0.066 | 15.209 | 0.6 | 1.4 | SURCHARGED |
| 9.003 | S903 | 0.000 | 0.09 | | 2.866 | 90.229 | 0.6 | 7.2 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 185.498 | 364.676 | 0.1 | 8.7 | SURCHARGED |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.019 | 4.056 | 0.8 | 0.4 | OK |
| 13.000 | S1300 | 0.000 | 0.12 | | 0.020 | 23.321 | 0.7 | 2.1 | OK |
| 13.001 | S1301 | 0.000 | 0.12 | | 0.150 | 36.502 | 1.1 | 3.3 | SURCHARGED |
| 12.001 | S1201 | 0.000 | 0.10 | | 0.444 | 70.976 | 1.1 | 6.4 | SURCHARGED |
| 12.002 | S1202 | 0.000 | 0.21 | | 1.002 | 97.338 | 0.8 | 8.8 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.17 | | 0.614 | 97.338 | 1.0 | 8.8 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.13 | | 0.578 | 117.617 | 1.4 | 10.4 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.12 | | 0.055 | 24.335 | 0.7 | 2.2 | SURCHARGED |

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## Summary Wizard of 720 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.08 | | 0.580 | 43.601 | 0.7 | 4.0 | SURCHARGED |
| 15.000 | S1500 | 0.000 | 0.06 | | 0.050 | 9.126 | 0.4 | 0.8 | SURCHARGED |
| 15.001 | S1501 | 0.000 | 0.06 | | 0.109 | 24.335 | 1.2 | 2.2 | SURCHARGED |
| 14.002 | S1402 | 0.000 | 0.07 | | 1.426 | 81.117 | 1.6 | 7.4 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 0.23 | | 2.744 | 221.041 | 1.5 | 19.2 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.11 | | 176.121 | 563.270 | 0.2 | 10.2 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.04 | | 0.151 | 34.474 | 1.0 | 3.1 | SURCHARGED |
| 16.001 | S1601 | 0.000 | 0.04 | | 2.259 | 38.530 | 1.1 | 3.0 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.65 | | 6.860 | 600.078 | 1.2 | 10.8 | SURCHARGED |

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## Summary Wizard of 960 minute 100 year Summer I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 960 minute 100 year Summer I+45% | 960 | 57 | 32.680 | 31.793 | -0.127 |
| 1.001 | S101 | 960 minute 100 year Summer I+45% | 960 | 56 | 32.680 | 31.720 | -0.130 |
| 2.000 | S200 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.600 | 31.653 | 0.023 |
| 1.002 | S102 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.630 | 31.652 | 0.207 |
| 3.000 | S300 | 960 minute 100 year Summer I+45% | 960 | 57 | 32.550 | 31.860 | -0.140 |
| 1.003 | S103 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.600 | 31.651 | 0.376 |
| 4.000 | S400 | 960 minute 100 year Summer I+45% | 960 | 57 | 32.550 | 31.715 | -0.135 |
| 4.001 | S401 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.550 | 31.650 | 0.900 |
| 1.004 | S104 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.600 | 31.649 | 1.119 |
| 1.005 | S105 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.600 | 31.648 | 1.138 |
| 5.000 | S500 | 960 minute 100 year Summer I+45% | 960 | 56 | 32.550 | 31.867 | -0.133 |
| 5.001 | S501 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.665 | 31.651 | 0.361 |
| 6.000 | S600 | 960 minute 100 year Summer I+45% | 960 | 57 | 32.665 | 31.853 | -0.147 |
| 6.001 | S601 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.665 | 31.651 | 0.361 |
| 5.002 | S502 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.665 | 31.651 | 0.601 |
| 5.003 | S503 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.680 | 31.649 | 0.794 |
| 7.000 | S700 | 960 minute 100 year Summer I+45% | 960 | 56 | 32.680 | 31.913 | -0.117 |
| 7.001 | S701 | 960 minute 100 year Summer I+45% | 960 | 56 | 32.635 | 31.836 | -0.109 |
| 5.004 | S504 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.635 | 31.648 | 1.103 |

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## Summary Wizard of 960 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.06 | | 0.003 | 14.069 | 0.6 | 1.0 | OK |
| 1.001 | S101 | 0.000 | 0.04 | | 0.008 | 21.644 | 1.1 | 1.5 | OK |
| 2.000 | S200 | 0.000 | 0.04 | | 0.027 | 14.069 | 0.7 | 1.0 | SURCHARGED |
| 1.002 | S102 | 0.000 | 0.06 | | 0.358 | 43.288 | 0.8 | 2.9 | SURCHARGED |
| 3.000 | S300 | 0.000 | 0.01 | | 0.001 | 8.658 | 1.2 | 0.6 | OK |
| 1.003 | S103 | 0.000 | 0.06 | | 0.796 | 79.001 | 1.3 | 5.4 | SURCHARGED |
| 4.000 | S400 | 0.000 | 0.02 | | 0.002 | 16.233 | 1.5 | 1.1 | OK |
| 4.001 | S401 | 0.000 | 0.07 | | 0.332 | 22.726 | 0.7 | 1.5 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.16 | | 1.489 | 112.549 | 0.4 | 7.4 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.07 | | 3.058 | 117.960 | 0.3 | 7.4 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.03 | | 0.002 | 15.151 | 0.9 | 1.0 | OK |
| 5.001 | S501 | 0.000 | 0.03 | | 0.281 | 15.151 | 0.9 | 1.0 | SURCHARGED |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 2.164 | 0.3 | 0.1 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.225 | 2.164 | 0.3 | 0.1 | SURCHARGED |
| 5.002 | S502 | 0.000 | 0.07 | | 0.300 | 57.356 | 0.8 | 3.8 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.05 | | 0.875 | 64.932 | 1.1 | 4.2 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.11 | | 0.005 | 28.137 | 0.7 | 1.9 | OK |
| 7.001 | S701 | 0.000 | 0.17 | | 0.020 | 42.206 | 0.7 | 2.9 | OK |
| 5.004 | S504 | 0.000 | 0.11 | | 2.675 | 107.138 | 0.5 | 6.7 | SURCHARGED |

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## Summary Wizard of 960 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.525 | 31.648 | 0.298 |
| 1.006 | S106 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.500 | 31.648 | 0.002 |
| 9.000 | S900 | 960 minute 100 year Summer I+45% | 960 | 57 | 32.665 | 31.854 | -0.146 |
| 10.000 | S901 | 960 minute 100 year Summer I+45% | 960 | 57 | 32.665 | 31.853 | -0.147 |
| 9.001 | S901 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.665 | 31.651 | 0.431 |
| 9.002 | S902 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.640 | 31.649 | 0.664 |
| 11.000 | S1100 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.680 | 31.649 | -0.051 |
| 9.003 | S903 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.630 | 31.648 | 1.153 |
| 1.007 | S107 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.500 | 31.648 | 0.112 |
| 12.000 | S1200 | 960 minute 100 year Summer I+45% | 960 | 57 | 32.635 | 31.857 | -0.143 |
| 13.000 | S1300 | 960 minute 100 year Summer I+45% | 960 | 56 | 32.635 | 31.882 | -0.118 |
| 13.001 | S1301 | 960 minute 100 year Summer I+45% | 960 | 56 | 32.635 | 31.791 | -0.119 |
| 12.001 | S1201 | 960 minute 100 year Summer I+45% | 960 | 17 | 32.635 | 31.658 | 0.023 |
| 12.002 | S1202 | 960 minute 100 year Summer I+45% | 960 | 16 | 32.680 | 31.656 | 0.396 |
| 12.003 | S1203 | 960 minute 100 year Summer I+45% | 960 | 16 | 32.660 | 31.654 | 0.484 |
| 12.004 | S1204 | 960 minute 100 year Summer I+45% | 960 | 14 | 32.660 | 31.653 | 0.618 |
| 14.000 | S1400 | 960 minute 100 year Summer I+45% | 960 | 57 | 32.650 | 31.656 | -0.119 |
| 14.001 | S1401 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.680 | 31.654 | 0.159 |
| 15.000 | S1500 | 960 minute 100 year Summer I+45% | 960 | 57 | 32.680 | 31.671 | -0.129 |
| 15.001 | S1501 | 960 minute 100 year Summer I+45% | 960 | 22 | 32.600 | 31.653 | -0.102 |
| 14.002 | S1402 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.600 | 31.652 | 0.412 |
| 12.005 | 1205 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.600 | 31.651 | 0.946 |
| 1.008 | S108 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.550 | 31.648 | 1.293 |
| 16.000 | S1600 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.545 | 31.647 | -0.003 |
| 16.001 | S1601 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.545 | 31.646 | 0.961 |
| 1.009 | S109 | 960 minute 100 year Summer I+45% | 960 | 13 | 32.500 | 31.645 | 1.615 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.501 | 5.411 | 0.8 | 0.4 | SURCHARGED |
| 1.006 | S106 | 0.000 | 0.00 | | 1.427 | 304.085 | 0.0 | 10.2 | SURCHARGED |
| 9.000 | S900 | 0.000 | 0.01 | | 0.000 | 3.246 | 0.5 | 0.2 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 2.164 | 0.3 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.08 | | 0.503 | 56.274 | 0.7 | 3.8 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.05 | | 1.163 | 74.671 | 1.4 | 4.7 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.07 | | 0.015 | 16.233 | 0.6 | 1.1 | OK |
| 9.003 | S903 | 0.000 | 0.07 | | 2.380 | 96.315 | 0.6 | 5.9 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 183.481 | 415.676 | 0.0 | 7.8 | SURCHARGED |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 4.329 | 0.7 | 0.3 | OK |
| 13.000 | S1300 | 0.000 | 0.10 | | 0.004 | 24.891 | 0.6 | 1.7 | OK |
| 13.001 | S1301 | 0.000 | 0.10 | | 0.015 | 38.959 | 1.0 | 2.7 | OK |
| 12.001 | S1201 | 0.000 | 0.08 | | 0.155 | 75.754 | 1.0 | 5.2 | SURCHARGED |
| 12.002 | S1202 | 0.000 | 0.17 | | 0.912 | 103.891 | 0.8 | 7.1 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.14 | | 0.524 | 103.891 | 0.9 | 7.1 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.11 | | 0.488 | 125.535 | 1.3 | 8.4 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.09 | | 0.004 | 25.973 | 0.7 | 1.8 | OK |

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## Summary Wizard of 960 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.07 | | 0.414 | 46.535 | 0.7 | 3.2 | SURCHARGED |
| 15.000 | S1500 | 0.000 | 0.05 | | 0.003 | 9.740 | 0.4 | 0.7 | OK |
| 15.001 | S1501 | 0.000 | 0.05 | | 0.019 | 25.973 | 1.2 | 1.8 | OK |
| 14.002 | S1402 | 0.000 | 0.06 | | 1.322 | 86.576 | 1.5 | 5.9 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 0.19 | | 2.288 | 235.920 | 1.5 | 15.5 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.10 | | 175.026 | 659.065 | 0.2 | 9.4 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.03 | | 0.062 | 36.795 | 0.9 | 2.5 | OK |
| 16.001 | S1601 | 0.000 | 0.03 | | 2.155 | 41.124 | 1.1 | 2.4 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.60 | | 6.051 | 700.100 | 1.1 | 10.0 | SURCHARGED |

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## Summary Wizard of 1440 minute 100 year Summer I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 1440 minute 100 year Summer I+45% | 1440 | 67 | 32.680 | 31.790 | -0.130 |
| 1.001 | S101 | 1440 minute 100 year Summer I+45% | 1440 | 67 | 32.680 | 31.717 | -0.133 |
| 2.000 | S200 | 1440 minute 100 year Summer I+45% | 1440 | 68 | 32.600 | 31.497 | -0.133 |
| 1.002 | S102 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.630 | 31.454 | 0.009 |
| 3.000 | S300 | 1440 minute 100 year Summer I+45% | 1440 | 67 | 32.550 | 31.857 | -0.143 |
| 1.003 | S103 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.600 | 31.453 | 0.178 |
| 4.000 | S400 | 1440 minute 100 year Summer I+45% | 1440 | 67 | 32.550 | 31.711 | -0.139 |
| 4.001 | S401 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.550 | 31.452 | 0.702 |
| 1.004 | S104 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.600 | 31.451 | 0.921 |
| 1.005 | S105 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.600 | 31.450 | 0.940 |
| 5.000 | S500 | 1440 minute 100 year Summer I+45% | 1440 | 67 | 32.550 | 31.865 | -0.135 |
| 5.001 | S501 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.665 | 31.453 | 0.163 |
| 6.000 | S600 | 1440 minute 100 year Summer I+45% | 1440 | 67 | 32.665 | 31.852 | -0.148 |
| 6.001 | S601 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.665 | 31.453 | 0.163 |
| 5.002 | S502 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.665 | 31.453 | 0.403 |
| 5.003 | S503 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.680 | 31.452 | 0.597 |
| 7.000 | S700 | 1440 minute 100 year Summer I+45% | 1440 | 67 | 32.680 | 31.909 | -0.121 |
| 7.001 | S701 | 1440 minute 100 year Summer I+45% | 1440 | 67 | 32.635 | 31.830 | -0.115 |
| 5.004 | S504 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.635 | 31.451 | 0.906 |

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## Summary Wizard of 1440 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.04 | | 0.002 | 15.395 | 0.5 | 0.7 | OK |
| 1.001 | S101 | 0.000 | 0.03 | | 0.006 | 23.684 | 1.0 | 1.1 | OK |
| 2.000 | S200 | 0.000 | 0.03 | | 0.002 | 15.395 | 0.6 | 0.7 | OK |
| 1.002 | S102 | 0.000 | 0.04 | | 0.154 | 47.368 | 0.7 | 2.1 | SURCHARGED |
| 3.000 | S300 | 0.000 | 0.01 | | 0.000 | 9.474 | 1.0 | 0.4 | OK |
| 1.003 | S103 | 0.000 | 0.05 | | 0.689 | 86.446 | 1.2 | 3.9 | SURCHARGED |
| 4.000 | S400 | 0.000 | 0.02 | | 0.001 | 17.763 | 1.5 | 0.8 | OK |
| 4.001 | S401 | 0.000 | 0.05 | | 0.268 | 24.868 | 0.6 | 1.1 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.11 | | 1.433 | 123.157 | 0.4 | 5.4 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.05 | | 2.708 | 129.078 | 0.2 | 5.5 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.02 | | 0.002 | 16.579 | 0.9 | 0.8 | OK |
| 5.001 | S501 | 0.000 | 0.02 | | 0.157 | 16.579 | 0.9 | 0.8 | SURCHARGED |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 2.368 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.127 | 2.368 | 0.2 | 0.1 | SURCHARGED |
| 5.002 | S502 | 0.000 | 0.05 | | 0.244 | 62.762 | 0.8 | 2.8 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.04 | | 0.819 | 71.051 | 1.0 | 3.0 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.08 | | 0.004 | 30.789 | 0.6 | 1.4 | OK |
| 7.001 | S701 | 0.000 | 0.12 | | 0.017 | 46.184 | 0.7 | 2.1 | OK |
| 5.004 | S504 | 0.000 | 0.08 | | 2.326 | 117.235 | 0.5 | 4.9 | SURCHARGED |

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## Summary Wizard of 1440 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.525 | 31.450 | 0.100 |
| 1.006 | S106 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.500 | 31.450 | -0.196 |
| 9.000 | S900 | 1440 minute 100 year Summer I+45% | 1440 | 67 | 32.665 | 31.853 | -0.147 |
| 10.000 | S901 | 1440 minute 100 year Summer I+45% | 1440 | 67 | 32.665 | 31.852 | -0.148 |
| 9.001 | S901 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.665 | 31.452 | 0.232 |
| 9.002 | S902 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.640 | 31.451 | 0.466 |
| 11.000 | S1100 | 1440 minute 100 year Summer I+45% | 1440 | 67 | 32.680 | 31.571 | -0.129 |
| 9.003 | S903 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.630 | 31.450 | 0.955 |
| 1.007 | S107 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.500 | 31.449 | -0.087 |
| 12.000 | S1200 | 1440 minute 100 year Summer I+45% | 1440 | 67 | 32.635 | 31.855 | -0.145 |
| 13.000 | S1300 | 1440 minute 100 year Summer I+45% | 1440 | 67 | 32.635 | 31.876 | -0.124 |
| 13.001 | S1301 | 1440 minute 100 year Summer I+45% | 1440 | 67 | 32.635 | 31.786 | -0.124 |
| 12.001 | S1201 | 1440 minute 100 year Summer I+45% | 1440 | 50 | 32.635 | 31.458 | -0.177 |
| 12.002 | S1202 | 1440 minute 100 year Summer I+45% | 1440 | 22 | 32.680 | 31.456 | 0.196 |
| 12.003 | S1203 | 1440 minute 100 year Summer I+45% | 1440 | 21 | 32.660 | 31.454 | 0.284 |
| 12.004 | S1204 | 1440 minute 100 year Summer I+45% | 1440 | 20 | 32.660 | 31.453 | 0.418 |
| 14.000 | S1400 | 1440 minute 100 year Summer I+45% | 1440 | 67 | 32.650 | 31.650 | -0.125 |
| 14.001 | S1401 | 1440 minute 100 year Summer I+45% | 1440 | 19 | 32.680 | 31.453 | -0.042 |
| 15.000 | S1500 | 1440 minute 100 year Summer I+45% | 1440 | 67 | 32.680 | 31.668 | -0.132 |
| 15.001 | S1501 | 1440 minute 100 year Summer I+45% | 1440 | 67 | 32.600 | 31.623 | -0.132 |
| 14.002 | S1402 | 1440 minute 100 year Summer I+45% | 1440 | 19 | 32.600 | 31.452 | 0.212 |
| 12.005 | 1205 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.600 | 31.451 | 0.746 |
| 1.008 | S108 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.550 | 31.448 | 1.093 |
| 16.000 | S1600 | 1440 minute 100 year Summer I+45% | 1440 | 65 | 32.545 | 31.450 | -0.200 |
| 16.001 | S1601 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.545 | 31.446 | 0.761 |
| 1.009 | S109 | 1440 minute 100 year Summer I+45% | 1440 | 17 | 32.500 | 31.446 | 1.416 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.278 | 5.921 | 0.6 | 0.3 | SURCHARGED |
| 1.006 | S106 | 0.000 | 0.00 | | 1.427 | 332.829 | 0.0 | 8.0 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 3.552 | 0.4 | 0.2 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 2.368 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.06 | | 0.320 | 61.578 | 0.7 | 2.8 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.04 | | 1.107 | 81.709 | 1.3 | 3.6 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.05 | | 0.003 | 17.763 | 0.5 | 0.8 | OK |
| 9.003 | S903 | 0.000 | 0.05 | | 2.047 | 105.393 | 0.6 | 4.5 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 168.515 | 454.765 | 0.0 | 6.8 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 4.737 | 0.5 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.07 | | 0.003 | 27.237 | 0.6 | 1.2 | OK |
| 13.001 | S1301 | 0.000 | 0.07 | | 0.012 | 42.631 | 1.0 | 1.9 | OK |
| 12.001 | S1201 | 0.000 | 0.06 | | 0.013 | 82.894 | 1.0 | 3.8 | OK |
| 12.002 | S1202 | 0.000 | 0.12 | | 0.705 | 113.683 | 0.7 | 5.2 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.10 | | 0.468 | 113.683 | 0.8 | 5.2 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.08 | | 0.432 | 137.367 | 1.2 | 6.2 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.07 | | 0.003 | 28.421 | 0.6 | 1.3 | OK |

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## Summary Wizard of 1440 minute 100 year Summer I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.05 | | 0.106 | 50.920 | 0.7 | 2.3 | OK |
| 15.000 | S1500 | 0.000 | 0.04 | | 0.002 | 10.658 | 0.4 | 0.5 | OK |
| 15.001 | S1501 | 0.000 | 0.04 | | 0.006 | 28.421 | 1.1 | 1.3 | OK |
| 14.002 | S1402 | 0.000 | 0.04 | | 1.178 | 94.736 | 1.4 | 4.3 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 0.14 | | 2.002 | 258.155 | 1.4 | 11.4 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.09 | | 166.820 | 722.394 | 0.2 | 8.9 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.03 | | 0.006 | 40.263 | 0.9 | 1.8 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 1.926 | 44.999 | 1.1 | 1.8 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.57 | | 5.544 | 767.390 | 1.1 | 9.4 | SURCHARGED |

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## Summary Wizard of 15 minute 1 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 15 minute 1 year Winter I+0% | 15 | 38 | 32.680 | 31.804 | -0.116 | 0.000 |
| 1.001 | S101 | 15 minute 1 year Winter I+0% | 15 | 38 | 32.680 | 31.728 | -0.122 | 0.000 |
| 2.000 | S200 | 15 minute 1 year Winter I+0% | 15 | 40 | 32.600 | 31.509 | -0.121 | 0.000 |
| 1.002 | S102 | 15 minute 1 year Winter I+0% | 15 | 42 | 32.630 | 31.269 | -0.176 | 0.000 |
| 3.000 | S300 | 15 minute 1 year Winter I+0% | 15 | 37 | 32.550 | 31.867 | -0.133 | 0.000 |
| 1.003 | S103 | 15 minute 1 year Winter I+0% | 15 | 43 | 32.600 | 31.100 | -0.175 | 0.000 |
| 4.000 | S400 | 15 minute 1 year Winter I+0% | 15 | 38 | 32.550 | 31.720 | -0.130 | 0.000 |
| 4.001 | S401 | 15 minute 1 year Winter I+0% | 15 | 57 | 32.550 | 30.637 | -0.113 | 0.000 |
| 1.004 | S104 | 15 minute 1 year Winter I+0% | 15 | 85 | 32.600 | 30.341 | -0.189 | 0.000 |
| 1.005 | S105 | 15 minute 1 year Winter I+0% | 15 | 119 | 32.600 | 30.167 | -0.343 | 0.000 |
| 5.000 | S500 | 15 minute 1 year Winter I+0% | 15 | 37 | 32.550 | 31.874 | -0.126 | 0.000 |
| 5.001 | S501 | 15 minute 1 year Winter I+0% | 15 | 42 | 32.665 | 31.165 | -0.125 | 0.000 |
| 6.000 | S600 | 15 minute 1 year Winter I+0% | 15 | 38 | 32.665 | 31.856 | -0.144 | 0.000 |
| 6.001 | S601 | 15 minute 1 year Winter I+0% | 15 | 42 | 32.665 | 31.147 | -0.143 | 0.000 |
| 5.002 | S502 | 15 minute 1 year Winter I+0% | 15 | 44 | 32.665 | 30.879 | -0.171 | 0.000 |
| 5.003 | S503 | 15 minute 1 year Winter I+0% | 15 | 57 | 32.680 | 30.677 | -0.178 | 0.000 |
| 7.000 | S700 | 15 minute 1 year Winter I+0% | 15 | 37 | 32.680 | 31.928 | -0.102 | 0.000 |
| 7.001 | S701 | 15 minute 1 year Winter I+0% | 15 | 38 | 32.635 | 31.852 | -0.093 | 0.000 |
| 5.004 | S504 | 15 minute 1 year Winter I+0% | 15 | 86 | 32.635 | 30.339 | -0.206 | 0.000 |

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## Summary Wizard of 15 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.11 | | 0.005 | 0.872 | 0.6 | 1.9 | OK |
| 1.001 | S101 | 0.08 | | 0.012 | 1.342 | 1.2 | 2.7 | OK |
| 2.000 | S200 | 0.08 | | 0.004 | 0.872 | 0.8 | 1.9 | OK |
| 1.002 | S102 | 0.11 | | 0.013 | 2.683 | 0.9 | 5.4 | OK |
| 3.000 | S300 | 0.03 | | 0.002 | 0.537 | 1.1 | 1.2 | OK |
| 1.003 | S103 | 0.11 | | 0.037 | 4.897 | 1.5 | 9.5 | OK |
| 4.000 | S400 | 0.04 | | 0.002 | 1.006 | 1.6 | 2.2 | OK |
| 4.001 | S401 | 0.14 | | 0.007 | 1.409 | 0.9 | 2.9 | OK |
| 1.004 | S104 | 0.29 | | 0.033 | 6.976 | 0.6 | 13.6 | OK |
| 1.005 | S105 | 0.13 | | 0.180 | 7.259 | 0.5 | 14.3 | OK |
| 5.000 | S500 | 0.06 | | 0.003 | 0.939 | 1.1 | 2.0 | OK |
| 5.001 | S501 | 0.06 | | 0.006 | 0.939 | 1.0 | 2.0 | OK |
| 6.000 | S600 | 0.01 | | 0.000 | 0.134 | 0.6 | 0.3 | OK |
| 6.001 | S601 | 0.01 | | 0.000 | 0.134 | 0.6 | 0.3 | OK |
| 5.002 | S502 | 0.13 | | 0.014 | 3.555 | 0.9 | 6.8 | OK |
| 5.003 | S503 | 0.10 | | 0.035 | 4.025 | 1.3 | 7.6 | OK |
| 7.000 | S700 | 0.22 | | 0.007 | 1.744 | 0.8 | 3.7 | OK |
| 7.001 | S701 | 0.31 | | 0.029 | 2.616 | 0.9 | 5.3 | OK |
| 5.004 | S504 | 0.21 | | 0.157 | 6.641 | 0.7 | 12.9 | OK |

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## Summary Wizard of 15 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 15 minute 1 year Winter I+0% | 15 | 42 | 32.525 | 31.213 | -0.137 | 0.000 |
| 1.006 | S106 | 15 minute 1 year Winter I+0% | 15 | 120 | 32.500 | 30.132 | -1.514 | 0.000 |
| 9.000 | S900 | 15 minute 1 year Winter I+0% | 15 | 38 | 32.665 | 31.858 | -0.142 | 0.000 |
| 10.000 | S901 | 15 minute 1 year Winter I+0% | 15 | 38 | 32.665 | 31.855 | -0.145 | 0.000 |
| 9.001 | S901 | 15 minute 1 year Winter I+0% | 15 | 44 | 32.665 | 31.050 | -0.170 | 0.000 |
| 9.002 | S902 | 15 minute 1 year Winter I+0% | 15 | 44 | 32.640 | 30.805 | -0.180 | 0.000 |
| 11.000 | S1100 | 15 minute 1 year Winter I+0% | 15 | 39 | 32.680 | 31.586 | -0.114 | 0.000 |
| 9.003 | S903 | 15 minute 1 year Winter I+0% | 15 | 97 | 32.630 | 30.269 | -0.226 | 0.000 |
| 1.007 | S107 | 15 minute 1 year Winter I+0% | 15 | 120 | 32.500 | 30.132 | -1.404 | 0.000 |
| 12.000 | S1200 | 15 minute 1 year Winter I+0% | 15 | 38 | 32.635 | 31.863 | -0.137 | 0.000 |
| 13.000 | S1300 | 15 minute 1 year Winter I+0% | 15 | 37 | 32.635 | 31.895 | -0.105 | 0.000 |
| 13.001 | S1301 | 15 minute 1 year Winter I+0% | 15 | 38 | 32.635 | 31.802 | -0.108 | 0.000 |
| 12.001 | S1201 | 15 minute 1 year Winter I+0% | 15 | 41 | 32.635 | 31.466 | -0.169 | 0.000 |
| 12.002 | S1202 | 15 minute 1 year Winter I+0% | 15 | 44 | 32.680 | 31.118 | -0.142 | 0.000 |
| 12.003 | S1203 | 15 minute 1 year Winter I+0% | 15 | 44 | 32.660 | 31.019 | -0.151 | 0.000 |
| 12.004 | S1204 | 15 minute 1 year Winter I+0% | 15 | 44 | 32.660 | 30.875 | -0.160 | 0.000 |
| 14.000 | S1400 | 15 minute 1 year Winter I+0% | 15 | 38 | 32.650 | 31.668 | -0.107 | 0.000 |
| 14.001 | S1401 | 15 minute 1 year Winter I+0% | 15 | 43 | 32.680 | 31.322 | -0.173 | 0.000 |
| 15.000 | S1500 | 15 minute 1 year Winter I+0% | 15 | 38 | 32.680 | 31.681 | -0.119 | 0.000 |
| 15.001 | S1501 | 15 minute 1 year Winter I+0% | 15 | 40 | 32.600 | 31.635 | -0.120 | 0.000 |
| 14.002 | S1402 | 15 minute 1 year Winter I+0% | 15 | 43 | 32.600 | 31.063 | -0.177 | 0.000 |
| 12.005 | 1205 | 15 minute 1 year Winter I+0% | 15 | 59 | 32.600 | 30.570 | -0.135 | 0.000 |
| 1.008 | S108 | 15 minute 1 year Winter I+0% | 15 | 119 | 32.550 | 30.132 | -0.223 | 0.000 |
| 16.000 | S1600 | 15 minute 1 year Winter I+0% | 15 | 40 | 32.545 | 31.463 | -0.187 | 0.000 |
| 16.001 | S1601 | 15 minute 1 year Winter I+0% | 15 | 59 | 32.545 | 30.497 | -0.188 | 0.000 |
| 1.009 | S109 | 15 minute 1 year Winter I+0% | 15 | 120 | 32.500 | 30.131 | 0.101 | 0.000 |

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.02 | | 0.009 | 0.335 | 1.1 | 0.7 | OK |
| 1.006 | S106 | 0.01 | | 0.048 | 14.554 | 0.2 | 25.8 | OK |
| 9.000 | S900 | 0.01 | | 0.001 | 0.201 | 1.0 | 0.4 | OK |
| 10.000 | S901 | 0.01 | | 0.000 | 0.134 | 0.6 | 0.3 | OK |
| 9.001 | S901 | 0.13 | | 0.015 | 3.488 | 0.9 | 6.4 | OK |
| 9.002 | S902 | 0.09 | | 0.039 | 4.628 | 1.5 | 8.4 | OK |
| 11.000 | S1100 | 0.13 | | 0.005 | 1.006 | 0.7 | 2.2 | OK |
| 9.003 | S903 | 0.13 | | 0.098 | 5.970 | 0.8 | 11.2 | OK |
| 1.007 | S107 | 0.00 | | 15.859 | 14.100 | 0.1 | 18.0 | OK |
| 12.000 | S1200 | 0.02 | | 0.001 | 0.268 | 0.9 | 0.6 | OK |
| 13.000 | S1300 | 0.19 | | 0.006 | 1.543 | 0.8 | 3.3 | OK |
| 13.001 | S1301 | 0.17 | | 0.021 | 2.415 | 1.2 | 4.9 | OK |
| 12.001 | S1201 | 0.14 | | 0.015 | 4.695 | 1.2 | 9.0 | OK |
| 12.002 | S1202 | 0.29 | | 0.050 | 6.439 | 0.9 | 12.2 | OK |
| 12.003 | S1203 | 0.24 | | 0.065 | 6.439 | 1.1 | 12.3 | OK |
| 12.004 | S1204 | 0.18 | | 0.037 | 7.780 | 1.6 | 14.7 | OK |
| 14.000 | S1400 | 0.18 | | 0.006 | 1.610 | 0.8 | 3.4 | OK |

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## Summary Wizard of 15 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.12 | | 0.014 | 2.884 | 0.8 | 5.7 | OK |
| 15.000 | S1500 | 0.10 | | 0.004 | 0.604 | 0.5 | 1.3 | OK |
| 15.001 | S1501 | 0.09 | | 0.011 | 1.610 | 1.3 | 3.1 | OK |
| 14.002 | S1402 | 0.10 | | 0.043 | 5.366 | 1.7 | 10.4 | OK |
| 12.005 | 1205 | 0.33 | | 0.145 | 14.622 | 1.9 | 27.8 | OK |
| 1.008 | S108 | 0.04 | | 22.697 | 10.660 | 0.1 | 4.0 | OK |
| 16.000 | S1600 | 0.07 | | 0.009 | 2.280 | 1.1 | 4.8 | OK |
| 16.001 | S1601 | 0.06 | | 0.020 | 2.549 | 1.3 | 5.3 | OK |
| 1.009 | S109 | 0.24 | | 1.225 | 12.191 | 0.9 | 4.0 | SURCHARGED |

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## Summary Wizard of 30 minute 1 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 30 minute 1 year Winter I+0% | 30 | 45 | 32.680 | 31.800 | -0.120 | 0.000 |
| 1.001 | S101 | 30 minute 1 year Winter I+0% | 30 | 46 | 32.680 | 31.724 | -0.126 | 0.000 |
| 2.000 | S200 | 30 minute 1 year Winter I+0% | 30 | 47 | 32.600 | 31.505 | -0.125 | 0.000 |
| 1.002 | S102 | 30 minute 1 year Winter I+0% | 30 | 50 | 32.630 | 31.265 | -0.180 | 0.000 |
| 3.000 | S300 | 30 minute 1 year Winter I+0% | 30 | 45 | 32.550 | 31.865 | -0.135 | 0.000 |
| 1.003 | S103 | 30 minute 1 year Winter I+0% | 30 | 50 | 32.600 | 31.096 | -0.179 | 0.000 |
| 4.000 | S400 | 30 minute 1 year Winter I+0% | 30 | 45 | 32.550 | 31.718 | -0.132 | 0.000 |
| 4.001 | S401 | 30 minute 1 year Winter I+0% | 30 | 62 | 32.550 | 30.633 | -0.117 | 0.000 |
| 1.004 | S104 | 30 minute 1 year Winter I+0% | 30 | 91 | 32.600 | 30.329 | -0.201 | 0.000 |
| 1.005 | S105 | 30 minute 1 year Winter I+0% | 30 | 116 | 32.600 | 30.180 | -0.330 | 0.000 |
| 5.000 | S500 | 30 minute 1 year Winter I+0% | 30 | 44 | 32.550 | 31.871 | -0.129 | 0.000 |
| 5.001 | S501 | 30 minute 1 year Winter I+0% | 30 | 49 | 32.665 | 31.162 | -0.128 | 0.000 |
| 6.000 | S600 | 30 minute 1 year Winter I+0% | 30 | 45 | 32.665 | 31.854 | -0.146 | 0.000 |
| 6.001 | S601 | 30 minute 1 year Winter I+0% | 30 | 49 | 32.665 | 31.145 | -0.145 | 0.000 |
| 5.002 | S502 | 30 minute 1 year Winter I+0% | 30 | 50 | 32.665 | 30.875 | -0.175 | 0.000 |
| 5.003 | S503 | 30 minute 1 year Winter I+0% | 30 | 61 | 32.680 | 30.673 | -0.182 | 0.000 |
| 7.000 | S700 | 30 minute 1 year Winter I+0% | 30 | 44 | 32.680 | 31.922 | -0.108 | 0.000 |
| 7.001 | S701 | 30 minute 1 year Winter I+0% | 30 | 46 | 32.635 | 31.846 | -0.099 | 0.000 |
| 5.004 | S504 | 30 minute 1 year Winter I+0% | 30 | 91 | 32.635 | 30.329 | -0.216 | 0.000 |

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## Summary Wizard of 30 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.09 | | 0.004 | 1.151 | 0.6 | 1.5 | OK |
| 1.001 | S101 | 0.06 | | 0.010 | 1.770 | 1.2 | 2.2 | OK |
| 2.000 | S200 | 0.07 | | 0.003 | 1.151 | 0.8 | 1.5 | OK |
| 1.002 | S102 | 0.09 | | 0.012 | 3.541 | 0.8 | 4.4 | OK |
| 3.000 | S300 | 0.02 | | 0.002 | 0.708 | 1.2 | 0.9 | OK |
| 1.003 | S103 | 0.09 | | 0.034 | 6.462 | 1.4 | 7.9 | OK |
| 4.000 | S400 | 0.03 | | 0.002 | 1.328 | 1.4 | 1.7 | OK |
| 4.001 | S401 | 0.11 | | 0.006 | 1.859 | 0.8 | 2.3 | OK |
| 1.004 | S104 | 0.24 | | 0.027 | 9.206 | 0.6 | 11.3 | OK |
| 1.005 | S105 | 0.10 | | 0.205 | 9.490 | 0.5 | 11.8 | OK |
| 5.000 | S500 | 0.05 | | 0.003 | 1.239 | 1.0 | 1.6 | OK |
| 5.001 | S501 | 0.05 | | 0.005 | 1.239 | 1.0 | 1.6 | OK |
| 6.000 | S600 | 0.01 | | 0.000 | 0.177 | 0.5 | 0.2 | OK |
| 6.001 | S601 | 0.01 | | 0.000 | 0.177 | 0.5 | 0.2 | OK |
| 5.002 | S502 | 0.11 | | 0.013 | 4.691 | 0.9 | 5.7 | OK |
| 5.003 | S503 | 0.08 | | 0.031 | 5.311 | 1.2 | 6.4 | OK |
| 7.000 | S700 | 0.17 | | 0.006 | 2.302 | 0.7 | 2.9 | OK |
| 7.001 | S701 | 0.25 | | 0.026 | 3.452 | 0.8 | 4.3 | OK |
| 5.004 | S504 | 0.17 | | 0.140 | 8.763 | 0.7 | 10.7 | OK |

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## Summary Wizard of 30 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 30 minute 1 year Winter I+0% | 30 | 49 | 32.525 | 31.210 | -0.140 | 0.000 |
| 1.006 | S106 | 30 minute 1 year Winter I+0% | 30 | 116 | 32.500 | 30.180 | -1.466 | 0.000 |
| 9.000 | S900 | 30 minute 1 year Winter I+0% | 30 | 45 | 32.665 | 31.857 | -0.143 | 0.000 |
| 10.000 | S901 | 30 minute 1 year Winter I+0% | 30 | 45 | 32.665 | 31.854 | -0.146 | 0.000 |
| 9.001 | S901 | 30 minute 1 year Winter I+0% | 30 | 50 | 32.665 | 31.046 | -0.174 | 0.000 |
| 9.002 | S902 | 30 minute 1 year Winter I+0% | 30 | 50 | 32.640 | 30.800 | -0.185 | 0.000 |
| 11.000 | S1100 | 30 minute 1 year Winter I+0% | 30 | 46 | 32.680 | 31.582 | -0.118 | 0.000 |
| 9.003 | S903 | 30 minute 1 year Winter I+0% | 30 | 103 | 32.630 | 30.262 | -0.233 | 0.000 |
| 1.007 | S107 | 30 minute 1 year Winter I+0% | 30 | 116 | 32.500 | 30.180 | -1.356 | 0.000 |
| 12.000 | S1200 | 30 minute 1 year Winter I+0% | 30 | 45 | 32.635 | 31.860 | -0.140 | 0.000 |
| 13.000 | S1300 | 30 minute 1 year Winter I+0% | 30 | 44 | 32.635 | 31.889 | -0.111 | 0.000 |
| 13.001 | S1301 | 30 minute 1 year Winter I+0% | 30 | 46 | 32.635 | 31.797 | -0.113 | 0.000 |
| 12.001 | S1201 | 30 minute 1 year Winter I+0% | 30 | 48 | 32.635 | 31.461 | -0.174 | 0.000 |
| 12.002 | S1202 | 30 minute 1 year Winter I+0% | 30 | 50 | 32.680 | 31.110 | -0.150 | 0.000 |
| 12.003 | S1203 | 30 minute 1 year Winter I+0% | 30 | 50 | 32.660 | 31.013 | -0.157 | 0.000 |
| 12.004 | S1204 | 30 minute 1 year Winter I+0% | 30 | 50 | 32.660 | 30.869 | -0.166 | 0.000 |
| 14.000 | S1400 | 30 minute 1 year Winter I+0% | 30 | 45 | 32.650 | 31.663 | -0.112 | 0.000 |
| 14.001 | S1401 | 30 minute 1 year Winter I+0% | 30 | 50 | 32.680 | 31.317 | -0.178 | 0.000 |
| 15.000 | S1500 | 30 minute 1 year Winter I+0% | 30 | 45 | 32.680 | 31.677 | -0.123 | 0.000 |
| 15.001 | S1501 | 30 minute 1 year Winter I+0% | 30 | 47 | 32.600 | 31.631 | -0.124 | 0.000 |
| 14.002 | S1402 | 30 minute 1 year Winter I+0% | 30 | 50 | 32.600 | 31.059 | -0.181 | 0.000 |
| 12.005 | 1205 | 30 minute 1 year Winter I+0% | 30 | 63 | 32.600 | 30.561 | -0.144 | 0.000 |
| 1.008 | S108 | 30 minute 1 year Winter I+0% | 30 | 116 | 32.550 | 30.180 | -0.175 | 0.000 |
| 16.000 | S1600 | 30 minute 1 year Winter I+0% | 30 | 47 | 32.545 | 31.458 | -0.192 | 0.000 |
| 16.001 | S1601 | 30 minute 1 year Winter I+0% | 30 | 64 | 32.545 | 30.492 | -0.193 | 0.000 |
| 1.009 | S109 | 30 minute 1 year Winter I+0% | 30 | 116 | 32.500 | 30.179 | 0.149 | 0.000 |

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.01 | | 0.006 | 0.443 | 1.1 | 0.6 | OK |
| 1.006 | S106 | 0.01 | | 0.118 | 16.994 | 0.2 | 19.0 | OK |
| 9.000 | S900 | 0.01 | | 0.000 | 0.265 | 0.8 | 0.3 | OK |
| 10.000 | S901 | 0.01 | | 0.000 | 0.177 | 0.5 | 0.2 | OK |
| 9.001 | S901 | 0.11 | | 0.013 | 4.602 | 0.8 | 5.5 | OK |
| 9.002 | S902 | 0.07 | | 0.035 | 6.107 | 1.5 | 7.2 | OK |
| 11.000 | S1100 | 0.10 | | 0.004 | 1.328 | 0.6 | 1.7 | OK |
| 9.003 | S903 | 0.11 | | 0.089 | 7.877 | 0.8 | 9.4 | OK |
| 1.007 | S107 | 0.00 | | 21.457 | 15.311 | 0.1 | 13.2 | OK |
| 12.000 | S1200 | 0.01 | | 0.001 | 0.354 | 0.9 | 0.5 | OK |
| 13.000 | S1300 | 0.15 | | 0.005 | 2.036 | 0.7 | 2.6 | OK |
| 13.001 | S1301 | 0.14 | | 0.019 | 3.187 | 1.2 | 4.0 | OK |
| 12.001 | S1201 | 0.11 | | 0.013 | 6.196 | 1.1 | 7.6 | OK |
| 12.002 | S1202 | 0.24 | | 0.045 | 8.498 | 0.9 | 10.3 | OK |
| 12.003 | S1203 | 0.20 | | 0.059 | 8.498 | 1.0 | 10.2 | OK |
| 12.004 | S1204 | 0.15 | | 0.033 | 10.268 | 1.5 | 12.3 | OK |
| 14.000 | S1400 | 0.14 | | 0.005 | 2.124 | 0.8 | 2.7 | OK |

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Summary Wizard of 30 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.10 | | 0.013 | 3.806 | 0.8 | 4.7 | OK |
| 15.000 | S1500 | 0.08 | | 0.004 | 0.797 | 0.5 | 1.0 | OK |
| 15.001 | S1501 | 0.07 | | 0.009 | 2.124 | 1.3 | 2.6 | OK |
| 14.002 | S1402 | 0.08 | | 0.038 | 7.081 | 1.6 | 8.6 | OK |
| 12.005 | 1205 | 0.28 | | 0.130 | 19.297 | 1.8 | 23.3 | OK |
| 1.008 | S108 | 0.05 | | 27.955 | 10.189 | 0.1 | 4.3 | OK |
| 16.000 | S1600 | 0.05 | | 0.008 | 3.010 | 1.0 | 3.8 | OK |
| 16.001 | S1601 | 0.05 | | 0.017 | 3.364 | 1.2 | 4.3 | OK |
| 1.009 | S109 | 0.26 | | 1.532 | 12.151 | 0.9 | 4.3 | SURCHARGED |

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## Summary Wizard of 60 minute 1 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 60 minute 1 year Winter I+0% | 60 | 54 | 32.680 | 31.794 | -0.126 | 0.000 |
| 1.001 | S101 | 60 minute 1 year Winter I+0% | 60 | 54 | 32.680 | 31.720 | -0.130 | 0.000 |
| 2.000 | S200 | 60 minute 1 year Winter I+0% | 60 | 56 | 32.600 | 31.500 | -0.130 | 0.000 |
| 1.002 | S102 | 60 minute 1 year Winter I+0% | 60 | 58 | 32.630 | 31.256 | -0.189 | 0.000 |
| 3.000 | S300 | 60 minute 1 year Winter I+0% | 60 | 54 | 32.550 | 31.861 | -0.139 | 0.000 |
| 1.003 | S103 | 60 minute 1 year Winter I+0% | 60 | 58 | 32.600 | 31.087 | -0.188 | 0.000 |
| 4.000 | S400 | 60 minute 1 year Winter I+0% | 60 | 54 | 32.550 | 31.715 | -0.135 | 0.000 |
| 4.001 | S401 | 60 minute 1 year Winter I+0% | 60 | 68 | 32.550 | 30.627 | -0.123 | 0.000 |
| 1.004 | S104 | 60 minute 1 year Winter I+0% | 60 | 96 | 32.600 | 30.312 | -0.218 | 0.000 |
| 1.005 | S105 | 60 minute 1 year Winter I+0% | 60 | 107 | 32.600 | 30.224 | -0.286 | 0.000 |
| 5.000 | S500 | 60 minute 1 year Winter I+0% | 60 | 53 | 32.550 | 31.868 | -0.132 | 0.000 |
| 5.001 | S501 | 60 minute 1 year Winter I+0% | 60 | 58 | 32.665 | 31.158 | -0.132 | 0.000 |
| 6.000 | S600 | 60 minute 1 year Winter I+0% | 60 | 54 | 32.665 | 31.853 | -0.147 | 0.000 |
| 6.001 | S601 | 60 minute 1 year Winter I+0% | 60 | 58 | 32.665 | 31.144 | -0.146 | 0.000 |
| 5.002 | S502 | 60 minute 1 year Winter I+0% | 60 | 58 | 32.665 | 30.867 | -0.183 | 0.000 |
| 5.003 | S503 | 60 minute 1 year Winter I+0% | 60 | 67 | 32.680 | 30.665 | -0.190 | 0.000 |
| 7.000 | S700 | 60 minute 1 year Winter I+0% | 60 | 53 | 32.680 | 31.914 | -0.116 | 0.000 |
| 7.001 | S701 | 60 minute 1 year Winter I+0% | 60 | 54 | 32.635 | 31.837 | -0.108 | 0.000 |
| 5.004 | S504 | 60 minute 1 year Winter I+0% | 60 | 96 | 32.635 | 30.315 | -0.230 | 0.000 |

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## Summary Wizard of 60 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.06 | | 0.003 | 1.479 | 0.6 | 1.0 | OK |
| 1.001 | S101 | 0.04 | | 0.008 | 2.275 | 1.1 | 1.5 | OK |
| 2.000 | S200 | 0.04 | | 0.002 | 1.479 | 0.7 | 1.0 | OK |
| 1.002 | S102 | 0.06 | | 0.009 | 4.550 | 0.8 | 3.1 | OK |
| 3.000 | S300 | 0.02 | | 0.001 | 0.910 | 1.2 | 0.6 | OK |
| 1.003 | S103 | 0.06 | | 0.026 | 8.304 | 1.3 | 5.6 | OK |
| 4.000 | S400 | 0.02 | | 0.002 | 1.706 | 1.4 | 1.2 | OK |
| 4.001 | S401 | 0.08 | | 0.005 | 2.389 | 0.7 | 1.6 | OK |
| 1.004 | S104 | 0.17 | | 0.022 | 11.830 | 0.5 | 7.9 | OK |
| 1.005 | S105 | 0.07 | | 0.288 | 12.227 | 0.4 | 8.3 | OK |
| 5.000 | S500 | 0.03 | | 0.002 | 1.593 | 0.9 | 1.1 | OK |
| 5.001 | S501 | 0.04 | | 0.004 | 1.593 | 0.9 | 1.1 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.227 | 0.3 | 0.2 | OK |
| 6.001 | S601 | 0.01 | | 0.000 | 0.227 | 0.3 | 0.2 | OK |
| 5.002 | S502 | 0.08 | | 0.010 | 6.029 | 0.8 | 4.0 | OK |
| 5.003 | S503 | 0.06 | | 0.025 | 6.825 | 1.2 | 4.6 | OK |
| 7.000 | S700 | 0.12 | | 0.005 | 2.958 | 0.7 | 2.0 | OK |
| 7.001 | S701 | 0.17 | | 0.021 | 4.437 | 0.7 | 3.0 | OK |
| 5.004 | S504 | 0.12 | | 0.115 | 11.262 | 0.6 | 7.5 | OK |

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## Summary Wizard of 60 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 60 minute 1 year Winter I+0% | 60 | 58 | 32.525 | 31.207 | -0.143 | 0.000 |
| 1.006 | S106 | 60 minute 1 year Winter I+0% | 60 | 107 | 32.500 | 30.225 | -1.421 | 0.000 |
| 9.000 | S900 | 60 minute 1 year Winter I+0% | 60 | 54 | 32.665 | 31.854 | -0.146 | 0.000 |
| 10.000 | S901 | 60 minute 1 year Winter I+0% | 60 | 54 | 32.665 | 31.853 | -0.147 | 0.000 |
| 9.001 | S901 | 60 minute 1 year Winter I+0% | 60 | 58 | 32.665 | 31.038 | -0.182 | 0.000 |
| 9.002 | S902 | 60 minute 1 year Winter I+0% | 60 | 58 | 32.640 | 30.793 | -0.192 | 0.000 |
| 11.000 | S1100 | 60 minute 1 year Winter I+0% | 60 | 55 | 32.680 | 31.576 | -0.124 | 0.000 |
| 9.003 | S903 | 60 minute 1 year Winter I+0% | 60 | 111 | 32.630 | 30.252 | -0.243 | 0.000 |
| 1.007 | S107 | 60 minute 1 year Winter I+0% | 60 | 107 | 32.500 | 30.225 | -1.311 | 0.000 |
| 12.000 | S1200 | 60 minute 1 year Winter I+0% | 60 | 54 | 32.635 | 31.857 | -0.143 | 0.000 |
| 13.000 | S1300 | 60 minute 1 year Winter I+0% | 60 | 53 | 32.635 | 31.882 | -0.118 | 0.000 |
| 13.001 | S1301 | 60 minute 1 year Winter I+0% | 60 | 54 | 32.635 | 31.791 | -0.119 | 0.000 |
| 12.001 | S1201 | 60 minute 1 year Winter I+0% | 60 | 57 | 32.635 | 31.453 | -0.182 | 0.000 |
| 12.002 | S1202 | 60 minute 1 year Winter I+0% | 60 | 58 | 32.680 | 31.097 | -0.163 | 0.000 |
| 12.003 | S1203 | 60 minute 1 year Winter I+0% | 60 | 58 | 32.660 | 31.001 | -0.169 | 0.000 |
| 12.004 | S1204 | 60 minute 1 year Winter I+0% | 60 | 58 | 32.660 | 30.859 | -0.176 | 0.000 |
| 14.000 | S1400 | 60 minute 1 year Winter I+0% | 60 | 54 | 32.650 | 31.656 | -0.119 | 0.000 |
| 14.001 | S1401 | 60 minute 1 year Winter I+0% | 60 | 58 | 32.680 | 31.308 | -0.187 | 0.000 |
| 15.000 | S1500 | 60 minute 1 year Winter I+0% | 60 | 54 | 32.680 | 31.672 | -0.128 | 0.000 |
| 15.001 | S1501 | 60 minute 1 year Winter I+0% | 60 | 55 | 32.600 | 31.626 | -0.129 | 0.000 |
| 14.002 | S1402 | 60 minute 1 year Winter I+0% | 60 | 58 | 32.600 | 31.050 | -0.190 | 0.000 |
| 12.005 | 1205 | 60 minute 1 year Winter I+0% | 60 | 70 | 32.600 | 30.548 | -0.157 | 0.000 |
| 1.008 | S108 | 60 minute 1 year Winter I+0% | 60 | 107 | 32.550 | 30.225 | -0.130 | 0.000 |
| 16.000 | S1600 | 60 minute 1 year Winter I+0% | 60 | 56 | 32.545 | 31.453 | -0.197 | 0.000 |
| 16.001 | S1601 | 60 minute 1 year Winter I+0% | 60 | 70 | 32.545 | 30.487 | -0.198 | 0.000 |
| 1.009 | S109 | 60 minute 1 year Winter I+0% | 60 | 107 | 32.500 | 30.223 | 0.193 | 0.000 |

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.01 | | 0.002 | 0.569 | 0.9 | 0.4 | OK |
| 1.006 | S106 | 0.01 | | 0.205 | 23.587 | 0.2 | 12.4 | OK |
| 9.000 | S900 | 0.01 | | 0.000 | 0.341 | 0.5 | 0.2 | OK |
| 10.000 | S901 | 0.00 | | 0.000 | 0.227 | 0.3 | 0.2 | OK |
| 9.001 | S901 | 0.08 | | 0.011 | 5.915 | 0.7 | 3.9 | OK |
| 9.002 | S902 | 0.05 | | 0.028 | 7.849 | 1.4 | 5.2 | OK |
| 11.000 | S1100 | 0.07 | | 0.003 | 1.706 | 0.6 | 1.2 | OK |
| 9.003 | S903 | 0.08 | | 0.074 | 10.124 | 0.7 | 6.7 | OK |
| 1.007 | S107 | 0.00 | | 26.634 | 24.025 | 0.1 | 8.0 | OK |
| 12.000 | S1200 | 0.01 | | 0.000 | 0.455 | 0.7 | 0.3 | OK |
| 13.000 | S1300 | 0.10 | | 0.004 | 2.617 | 0.6 | 1.8 | OK |
| 13.001 | S1301 | 0.10 | | 0.015 | 4.095 | 1.0 | 2.8 | OK |
| 12.001 | S1201 | 0.08 | | 0.011 | 7.963 | 1.0 | 5.3 | OK |
| 12.002 | S1202 | 0.17 | | 0.037 | 10.921 | 0.8 | 7.3 | OK |
| 12.003 | S1203 | 0.14 | | 0.048 | 10.921 | 0.9 | 7.3 | OK |
| 12.004 | S1204 | 0.11 | | 0.028 | 13.196 | 1.4 | 8.8 | OK |
| 14.000 | S1400 | 0.10 | | 0.004 | 2.730 | 0.7 | 1.9 | OK |

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## Summary Wizard of 60 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.07 | | 0.010 | 4.892 | 0.7 | 3.3 | OK |
| 15.000 | S1500 | 0.05 | | 0.003 | 1.024 | 0.4 | 0.7 | OK |
| 15.001 | S1501 | 0.05 | | 0.007 | 2.730 | 1.2 | 1.8 | OK |
| 14.002 | S1402 | 0.06 | | 0.030 | 9.101 | 1.5 | 6.1 | OK |
| 12.005 | 1205 | 0.20 | | 0.108 | 24.799 | 1.6 | 16.6 | OK |
| 1.008 | S108 | 0.05 | | 32.832 | 23.717 | 0.2 | 4.5 | OK |
| 16.000 | S1600 | 0.04 | | 0.006 | 3.868 | 0.9 | 2.6 | OK |
| 16.001 | S1601 | 0.03 | | 0.014 | 4.323 | 1.1 | 2.9 | OK |
| 1.009 | S109 | 0.28 | | 1.818 | 26.586 | 0.9 | 4.6 | SURCHARGED |

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## Summary Wizard of 120 minute 1 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 120 minute 1 year Winter I+0% | 120 | 69 | 32.680 | 31.789 | -0.131 | 0.000 |
| 1.001 | S101 | 120 minute 1 year Winter I+0% | 120 | 69 | 32.680 | 31.717 | -0.133 | 0.000 |
| 2.000 | S200 | 120 minute 1 year Winter I+0% | 120 | 70 | 32.600 | 31.497 | -0.133 | 0.000 |
| 1.002 | S102 | 120 minute 1 year Winter I+0% | 120 | 71 | 32.630 | 31.249 | -0.196 | 0.000 |
| 3.000 | S300 | 120 minute 1 year Winter I+0% | 120 | 69 | 32.550 | 31.857 | -0.143 | 0.000 |
| 1.003 | S103 | 120 minute 1 year Winter I+0% | 120 | 71 | 32.600 | 31.079 | -0.196 | 0.000 |
| 4.000 | S400 | 120 minute 1 year Winter I+0% | 120 | 69 | 32.550 | 31.711 | -0.139 | 0.000 |
| 4.001 | S401 | 120 minute 1 year Winter I+0% | 120 | 78 | 32.550 | 30.621 | -0.129 | 0.000 |
| 1.004 | S104 | 120 minute 1 year Winter I+0% | 120 | 102 | 32.600 | 30.296 | -0.234 | 0.000 |
| 1.005 | S105 | 120 minute 1 year Winter I+0% | 120 | 97 | 32.600 | 30.255 | -0.255 | 0.000 |
| 5.000 | S500 | 120 minute 1 year Winter I+0% | 120 | 69 | 32.550 | 31.865 | -0.135 | 0.000 |
| 5.001 | S501 | 120 minute 1 year Winter I+0% | 120 | 71 | 32.665 | 31.155 | -0.135 | 0.000 |
| 6.000 | S600 | 120 minute 1 year Winter I+0% | 120 | 69 | 32.665 | 31.852 | -0.148 | 0.000 |
| 6.001 | S601 | 120 minute 1 year Winter I+0% | 120 | 71 | 32.665 | 31.142 | -0.148 | 0.000 |
| 5.002 | S502 | 120 minute 1 year Winter I+0% | 120 | 71 | 32.665 | 30.857 | -0.193 | 0.000 |
| 5.003 | S503 | 120 minute 1 year Winter I+0% | 120 | 76 | 32.680 | 30.658 | -0.197 | 0.000 |
| 7.000 | S700 | 120 minute 1 year Winter I+0% | 120 | 69 | 32.680 | 31.907 | -0.123 | 0.000 |
| 7.001 | S701 | 120 minute 1 year Winter I+0% | 120 | 69 | 32.635 | 31.828 | -0.117 | 0.000 |
| 5.004 | S504 | 120 minute 1 year Winter I+0% | 120 | 100 | 32.635 | 30.301 | -0.244 | 0.000 |

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## Summary Wizard of 120 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.04 | | 0.002 | 1.869 | 0.5 | 0.7 | OK |
| 1.001 | S101 | 0.03 | | 0.006 | 2.876 | 1.0 | 1.0 | OK |
| 2.000 | S200 | 0.03 | | 0.002 | 1.869 | 0.6 | 0.7 | OK |
| 1.002 | S102 | 0.04 | | 0.007 | 5.752 | 0.7 | 2.0 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 1.150 | 0.9 | 0.4 | OK |
| 1.003 | S103 | 0.04 | | 0.020 | 10.497 | 1.2 | 3.6 | OK |
| 4.000 | S400 | 0.01 | | 0.001 | 2.157 | 1.5 | 0.8 | OK |
| 4.001 | S401 | 0.05 | | 0.004 | 3.020 | 0.7 | 1.0 | OK |
| 1.004 | S104 | 0.11 | | 0.018 | 14.955 | 0.4 | 5.2 | OK |
| 1.005 | S105 | 0.05 | | 0.345 | 15.571 | 0.4 | 5.3 | OK |
| 5.000 | S500 | 0.02 | | 0.002 | 2.013 | 0.9 | 0.7 | OK |
| 5.001 | S501 | 0.02 | | 0.003 | 2.013 | 0.9 | 0.7 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.287 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.287 | 0.2 | 0.1 | OK |
| 5.002 | S502 | 0.05 | | 0.008 | 7.621 | 0.7 | 2.6 | OK |
| 5.003 | S503 | 0.04 | | 0.019 | 8.627 | 1.0 | 3.0 | OK |
| 7.000 | S700 | 0.08 | | 0.004 | 3.739 | 0.6 | 1.3 | OK |
| 7.001 | S701 | 0.11 | | 0.016 | 5.609 | 0.7 | 1.9 | OK |
| 5.004 | S504 | 0.08 | | 0.091 | 14.236 | 0.5 | 4.9 | OK |

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## Summary Wizard of 120 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 120 minute 1 year Winter I+0% | 120 | 71 | 32.525 | 31.205 | -0.145 |
| 1.006 | S106 | 120 minute 1 year Winter I+0% | 120 | 97 | 32.500 | 30.255 | -1.391 |
| 9.000 | S900 | 120 minute 1 year Winter I+0% | 120 | 69 | 32.665 | 31.853 | -0.147 |
| 10.000 | S901 | 120 minute 1 year Winter I+0% | 120 | 69 | 32.665 | 31.852 | -0.148 |
| 9.001 | S901 | 120 minute 1 year Winter I+0% | 120 | 71 | 32.665 | 31.029 | -0.191 |
| 9.002 | S902 | 120 minute 1 year Winter I+0% | 120 | 71 | 32.640 | 30.787 | -0.198 |
| 11.000 | S1100 | 120 minute 1 year Winter I+0% | 120 | 69 | 32.680 | 31.570 | -0.130 |
| 9.003 | S903 | 120 minute 1 year Winter I+0% | 120 | 108 | 32.630 | 30.256 | -0.239 |
| 1.007 | S107 | 120 minute 1 year Winter I+0% | 120 | 97 | 32.500 | 30.255 | -1.281 |
| 12.000 | S1200 | 120 minute 1 year Winter I+0% | 120 | 69 | 32.635 | 31.854 | -0.146 |
| 13.000 | S1300 | 120 minute 1 year Winter I+0% | 120 | 69 | 32.635 | 31.875 | -0.125 |
| 13.001 | S1301 | 120 minute 1 year Winter I+0% | 120 | 69 | 32.635 | 31.785 | -0.125 |
| 12.001 | S1201 | 120 minute 1 year Winter I+0% | 120 | 70 | 32.635 | 31.443 | -0.192 |
| 12.002 | S1202 | 120 minute 1 year Winter I+0% | 120 | 71 | 32.680 | 31.085 | -0.175 |
| 12.003 | S1203 | 120 minute 1 year Winter I+0% | 120 | 71 | 32.660 | 30.991 | -0.179 |
| 12.004 | S1204 | 120 minute 1 year Winter I+0% | 120 | 71 | 32.660 | 30.849 | -0.186 |
| 14.000 | S1400 | 120 minute 1 year Winter I+0% | 120 | 69 | 32.650 | 31.649 | -0.126 |
| 14.001 | S1401 | 120 minute 1 year Winter I+0% | 120 | 71 | 32.680 | 31.300 | -0.195 |
| 15.000 | S1500 | 120 minute 1 year Winter I+0% | 120 | 69 | 32.680 | 31.668 | -0.132 |
| 15.001 | S1501 | 120 minute 1 year Winter I+0% | 120 | 69 | 32.600 | 31.623 | -0.132 |
| 14.002 | S1402 | 120 minute 1 year Winter I+0% | 120 | 71 | 32.600 | 31.043 | -0.197 |
| 12.005 | 1205 | 120 minute 1 year Winter I+0% | 120 | 79 | 32.600 | 30.534 | -0.171 |
| 1.008 | S108 | 120 minute 1 year Winter I+0% | 120 | 97 | 32.550 | 30.255 | -0.100 |
| 16.000 | S1600 | 120 minute 1 year Winter I+0% | 120 | 70 | 32.545 | 31.448 | -0.202 |
| 16.001 | S1601 | 120 minute 1 year Winter I+0% | 120 | 79 | 32.545 | 30.483 | -0.202 |
| 1.009 | S109 | 120 minute 1 year Winter I+0% | 120 | 97 | 32.500 | 30.254 | 0.224 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.000 | 0.719 | 0.6 | 0.3 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.273 | 34.302 | 0.2 | 7.7 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.431 | 0.3 | 0.2 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.287 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.05 | | 0.008 | 7.477 | 0.7 | 2.6 | OK |
| 9.002 | S902 | 0.000 | 0.03 | | 0.022 | 9.922 | 1.3 | 3.4 | OK |
| 11.000 | S1100 | 0.000 | 0.05 | | 0.002 | 2.157 | 0.5 | 0.8 | OK |
| 9.003 | S903 | 0.000 | 0.05 | | 0.080 | 12.798 | 0.7 | 4.4 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 30.233 | 40.098 | 0.1 | 5.6 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 0.575 | 0.4 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.07 | | 0.003 | 3.308 | 0.6 | 1.2 | OK |
| 13.001 | S1301 | 0.000 | 0.06 | | 0.011 | 5.177 | 0.9 | 1.8 | OK |
| 12.001 | S1201 | 0.000 | 0.05 | | 0.008 | 10.066 | 1.0 | 3.5 | OK |
| 12.002 | S1202 | 0.000 | 0.11 | | 0.029 | 13.805 | 0.7 | 4.8 | OK |
| 12.003 | S1203 | 0.000 | 0.09 | | 0.038 | 13.805 | 0.8 | 4.8 | OK |
| 12.004 | S1204 | 0.000 | 0.07 | | 0.021 | 16.681 | 1.2 | 5.8 | OK |
| 14.000 | S1400 | 0.000 | 0.06 | | 0.003 | 3.451 | 0.6 | 1.2 | OK |

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## Summary Wizard of 120 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.04 | | 0.008 | 6.184 | 0.7 | 2.1 | OK |
| 15.000 | S1500 | 0.000 | 0.03 | | 0.002 | 1.294 | 0.4 | 0.5 | OK |
| 15.001 | S1501 | 0.000 | 0.03 | | 0.005 | 3.451 | 1.0 | 1.2 | OK |
| 14.002 | S1402 | 0.000 | 0.04 | | 0.023 | 11.504 | 1.4 | 4.0 | OK |
| 12.005 | 1205 | 0.000 | 0.13 | | 0.083 | 31.349 | 1.5 | 10.8 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 36.200 | 50.843 | 0.2 | 4.7 | OK |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.005 | 4.889 | 0.9 | 1.7 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 0.011 | 5.464 | 1.1 | 1.9 | OK |
| 1.009 | S109 | 0.000 | 0.29 | | 2.015 | 55.105 | 0.9 | 4.8 | SURCHARGED |

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## Summary Wizard of 180 minute 1 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.680 | 31.787 | -0.133 | 0.000 |
| 1.001 | S101 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.680 | 31.715 | -0.135 | 0.000 |
| 2.000 | S200 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.600 | 31.495 | -0.135 | 0.000 |
| 1.002 | S102 | 180 minute 1 year Winter I+0% | 180 | 82 | 32.630 | 31.246 | -0.199 | 0.000 |
| 3.000 | S300 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.550 | 31.855 | -0.145 | 0.000 |
| 1.003 | S103 | 180 minute 1 year Winter I+0% | 180 | 82 | 32.600 | 31.076 | -0.199 | 0.000 |
| 4.000 | S400 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.550 | 31.708 | -0.142 | 0.000 |
| 4.001 | S401 | 180 minute 1 year Winter I+0% | 180 | 86 | 32.550 | 30.619 | -0.131 | 0.000 |
| 1.004 | S104 | 180 minute 1 year Winter I+0% | 180 | 104 | 32.600 | 30.288 | -0.242 | 0.000 |
| 1.005 | S105 | 180 minute 1 year Winter I+0% | 180 | 92 | 32.600 | 30.264 | -0.246 | 0.000 |
| 5.000 | S500 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.550 | 31.862 | -0.138 | 0.000 |
| 5.001 | S501 | 180 minute 1 year Winter I+0% | 180 | 82 | 32.665 | 31.152 | -0.138 | 0.000 |
| 6.000 | S600 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 180 minute 1 year Winter I+0% | 180 | 82 | 32.665 | 31.142 | -0.148 | 0.000 |
| 5.002 | S502 | 180 minute 1 year Winter I+0% | 180 | 82 | 32.665 | 30.854 | -0.196 | 0.000 |
| 5.003 | S503 | 180 minute 1 year Winter I+0% | 180 | 85 | 32.680 | 30.655 | -0.200 | 0.000 |
| 7.000 | S700 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.680 | 31.903 | -0.127 | 0.000 |
| 7.001 | S701 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.635 | 31.825 | -0.120 | 0.000 |
| 5.004 | S504 | 180 minute 1 year Winter I+0% | 180 | 104 | 32.635 | 30.293 | -0.252 | 0.000 |

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## Summary Wizard of 180 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.03 | | 0.002 | 2.135 | 0.5 | 0.5 | OK |
| 1.001 | S101 | 0.02 | | 0.005 | 3.285 | 1.0 | 0.8 | OK |
| 2.000 | S200 | 0.02 | | 0.002 | 2.135 | 0.6 | 0.5 | OK |
| 1.002 | S102 | 0.03 | | 0.006 | 6.569 | 0.6 | 1.5 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 1.314 | 0.7 | 0.3 | OK |
| 1.003 | S103 | 0.03 | | 0.018 | 11.989 | 1.1 | 2.8 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 2.463 | 1.3 | 0.6 | OK |
| 4.001 | S401 | 0.04 | | 0.003 | 3.449 | 0.6 | 0.8 | OK |
| 1.004 | S104 | 0.08 | | 0.015 | 17.080 | 0.4 | 4.0 | OK |
| 1.005 | S105 | 0.04 | | 0.361 | 17.894 | 0.4 | 4.0 | OK |
| 5.000 | S500 | 0.02 | | 0.001 | 2.299 | 0.9 | 0.5 | OK |
| 5.001 | S501 | 0.02 | | 0.002 | 2.299 | 0.9 | 0.5 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.328 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.328 | 0.2 | 0.1 | OK |
| 5.002 | S502 | 0.04 | | 0.007 | 8.704 | 0.7 | 2.0 | OK |
| 5.003 | S503 | 0.03 | | 0.017 | 9.853 | 1.0 | 2.3 | OK |
| 7.000 | S700 | 0.06 | | 0.003 | 4.270 | 0.6 | 1.0 | OK |
| 7.001 | S701 | 0.09 | | 0.014 | 6.406 | 0.6 | 1.5 | OK |
| 5.004 | S504 | 0.06 | | 0.076 | 16.259 | 0.5 | 3.8 | OK |

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## Summary Wizard of 180 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 180 minute 1 year Winter I+0% | 180 | 82 | 32.525 | 31.203 | -0.147 |
| 1.006 | S106 | 180 minute 1 year Winter I+0% | 180 | 92 | 32.500 | 30.264 | -1.382 |
| 9.000 | S900 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 180 minute 1 year Winter I+0% | 180 | 82 | 32.665 | 31.024 | -0.196 |
| 9.002 | S902 | 180 minute 1 year Winter I+0% | 180 | 82 | 32.640 | 30.784 | -0.201 |
| 11.000 | S1100 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.680 | 31.568 | -0.132 |
| 9.003 | S903 | 180 minute 1 year Winter I+0% | 180 | 101 | 32.630 | 30.264 | -0.231 |
| 1.007 | S107 | 180 minute 1 year Winter I+0% | 180 | 92 | 32.500 | 30.264 | -1.272 |
| 12.000 | S1200 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.635 | 31.853 | -0.147 |
| 13.000 | S1300 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.635 | 31.872 | -0.128 |
| 13.001 | S1301 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.635 | 31.781 | -0.129 |
| 12.001 | S1201 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.635 | 31.439 | -0.196 |
| 12.002 | S1202 | 180 minute 1 year Winter I+0% | 180 | 82 | 32.680 | 31.079 | -0.181 |
| 12.003 | S1203 | 180 minute 1 year Winter I+0% | 180 | 82 | 32.660 | 30.984 | -0.186 |
| 12.004 | S1204 | 180 minute 1 year Winter I+0% | 180 | 82 | 32.660 | 30.844 | -0.191 |
| 14.000 | S1400 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.650 | 31.646 | -0.129 |
| 14.001 | S1401 | 180 minute 1 year Winter I+0% | 180 | 82 | 32.680 | 31.297 | -0.198 |
| 15.000 | S1500 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.680 | 31.666 | -0.134 |
| 15.001 | S1501 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.600 | 31.621 | -0.134 |
| 14.002 | S1402 | 180 minute 1 year Winter I+0% | 180 | 82 | 32.600 | 31.040 | -0.200 |
| 12.005 | 1205 | 180 minute 1 year Winter I+0% | 180 | 87 | 32.600 | 30.527 | -0.178 |
| 1.008 | S108 | 180 minute 1 year Winter I+0% | 180 | 92 | 32.550 | 30.264 | -0.091 |
| 16.000 | S1600 | 180 minute 1 year Winter I+0% | 180 | 81 | 32.545 | 31.444 | -0.206 |
| 16.001 | S1601 | 180 minute 1 year Winter I+0% | 180 | 87 | 32.545 | 30.478 | -0.207 |
| 1.009 | S109 | 180 minute 1 year Winter I+0% | 180 | 92 | 32.500 | 30.263 | 0.233 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 0.821 | 0.4 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.303 | 43.184 | 0.1 | 6.0 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.492 | 0.3 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.328 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.04 | | 0.007 | 8.539 | 0.7 | 2.0 | OK |
| 9.002 | S902 | 0.000 | 0.03 | | 0.019 | 11.331 | 1.3 | 2.6 | OK |
| 11.000 | S1100 | 0.000 | 0.03 | | 0.002 | 2.464 | 0.5 | 0.6 | OK |
| 9.003 | S903 | 0.000 | 0.04 | | 0.092 | 14.616 | 0.6 | 3.4 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 31.244 | 54.398 | 0.0 | 4.6 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 0.657 | 0.3 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.05 | | 0.003 | 3.778 | 0.6 | 0.9 | OK |
| 13.001 | S1301 | 0.000 | 0.05 | | 0.009 | 5.913 | 0.9 | 1.4 | OK |
| 12.001 | S1201 | 0.000 | 0.04 | | 0.007 | 11.497 | 0.9 | 2.7 | OK |
| 12.002 | S1202 | 0.000 | 0.09 | | 0.025 | 15.767 | 0.7 | 3.7 | OK |
| 12.003 | S1203 | 0.000 | 0.07 | | 0.032 | 15.767 | 0.8 | 3.7 | OK |
| 12.004 | S1204 | 0.000 | 0.06 | | 0.018 | 19.052 | 1.2 | 4.4 | OK |
| 14.000 | S1400 | 0.000 | 0.05 | | 0.003 | 3.942 | 0.6 | 0.9 | OK |

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## Summary Wizard of 180 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.03 | | 0.007 | 7.062 | 0.6 | 1.6 | OK |
| 15.000 | S1500 | 0.000 | 0.03 | | 0.002 | 1.478 | 0.4 | 0.3 | OK |
| 15.001 | S1501 | 0.000 | 0.03 | | 0.005 | 3.942 | 1.0 | 0.9 | OK |
| 14.002 | S1402 | 0.000 | 0.03 | | 0.020 | 13.139 | 1.3 | 3.1 | OK |
| 12.005 | 1205 | 0.000 | 0.10 | | 0.073 | 35.804 | 1.4 | 8.3 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 37.143 | 76.149 | 0.2 | 4.7 | OK |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.004 | 5.584 | 0.9 | 1.3 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 0.008 | 6.241 | 1.1 | 1.5 | OK |
| 1.009 | S109 | 0.000 | 0.29 | | 2.070 | 81.550 | 0.9 | 4.9 | SURCHARGED |

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## Summary Wizard of 240 minute 1 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.680 | 31.786 | -0.134 | 0.000 |
| 1.001 | S101 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.680 | 31.713 | -0.137 | 0.000 |
| 2.000 | S200 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.600 | 31.493 | -0.137 | 0.000 |
| 1.002 | S102 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.630 | 31.244 | -0.201 | 0.000 |
| 3.000 | S300 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.550 | 31.854 | -0.146 | 0.000 |
| 1.003 | S103 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.600 | 31.074 | -0.201 | 0.000 |
| 4.000 | S400 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.550 | 31.707 | -0.143 | 0.000 |
| 4.001 | S401 | 240 minute 1 year Winter I+0% | 240 | 91 | 32.550 | 30.617 | -0.133 | 0.000 |
| 1.004 | S104 | 240 minute 1 year Winter I+0% | 240 | 106 | 32.600 | 30.282 | -0.248 | 0.000 |
| 1.005 | S105 | 240 minute 1 year Winter I+0% | 240 | 90 | 32.600 | 30.267 | -0.243 | 0.000 |
| 5.000 | S500 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.550 | 31.860 | -0.140 | 0.000 |
| 5.001 | S501 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.665 | 31.150 | -0.140 | 0.000 |
| 6.000 | S600 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 240 minute 1 year Winter I+0% | 240 | 90 | 32.665 | 30.851 | -0.199 | 0.000 |
| 5.003 | S503 | 240 minute 1 year Winter I+0% | 240 | 91 | 32.680 | 30.653 | -0.202 | 0.000 |
| 7.000 | S700 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.680 | 31.901 | -0.129 | 0.000 |
| 7.001 | S701 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.635 | 31.821 | -0.124 | 0.000 |
| 5.004 | S504 | 240 minute 1 year Winter I+0% | 240 | 106 | 32.635 | 30.288 | -0.257 | 0.000 |

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## Summary Wizard of 240 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.02 | | 0.002 | 2.344 | 0.5 | 0.4 | OK |
| 1.001 | S101 | 0.02 | | 0.004 | 3.606 | 1.0 | 0.6 | OK |
| 2.000 | S200 | 0.02 | | 0.001 | 2.344 | 0.6 | 0.4 | OK |
| 1.002 | S102 | 0.02 | | 0.006 | 7.213 | 0.6 | 1.3 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 1.442 | 0.6 | 0.3 | OK |
| 1.003 | S103 | 0.03 | | 0.016 | 13.163 | 1.1 | 2.3 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 2.704 | 1.1 | 0.5 | OK |
| 4.001 | S401 | 0.03 | | 0.003 | 3.786 | 0.6 | 0.7 | OK |
| 1.004 | S104 | 0.07 | | 0.014 | 18.752 | 0.4 | 3.3 | OK |
| 1.005 | S105 | 0.03 | | 0.367 | 19.654 | 0.4 | 3.3 | OK |
| 5.000 | S500 | 0.01 | | 0.001 | 2.524 | 0.9 | 0.4 | OK |
| 5.001 | S501 | 0.01 | | 0.002 | 2.524 | 0.9 | 0.4 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.360 | 0.1 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.359 | 0.1 | 0.1 | OK |
| 5.002 | S502 | 0.03 | | 0.006 | 9.556 | 0.7 | 1.7 | OK |
| 5.003 | S503 | 0.02 | | 0.015 | 10.818 | 1.0 | 1.9 | OK |
| 7.000 | S700 | 0.05 | | 0.003 | 4.689 | 0.5 | 0.8 | OK |
| 7.001 | S701 | 0.07 | | 0.012 | 7.033 | 0.6 | 1.2 | OK |
| 5.004 | S504 | 0.05 | | 0.068 | 17.850 | 0.5 | 3.1 | OK |

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## Summary Wizard of 240 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.525 | 31.203 | -0.147 |
| 1.006 | S106 | 240 minute 1 year Winter I+0% | 240 | 90 | 32.500 | 30.267 | -1.379 |
| 9.000 | S900 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 240 minute 1 year Winter I+0% | 240 | 90 | 32.665 | 31.022 | -0.198 |
| 9.002 | S902 | 240 minute 1 year Winter I+0% | 240 | 90 | 32.640 | 30.783 | -0.202 |
| 11.000 | S1100 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.680 | 31.567 | -0.133 |
| 9.003 | S903 | 240 minute 1 year Winter I+0% | 240 | 99 | 32.630 | 30.267 | -0.228 |
| 1.007 | S107 | 240 minute 1 year Winter I+0% | 240 | 90 | 32.500 | 30.267 | -1.269 |
| 12.000 | S1200 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.635 | 31.853 | -0.147 |
| 13.000 | S1300 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.635 | 31.870 | -0.130 |
| 13.001 | S1301 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.635 | 31.779 | -0.131 |
| 12.001 | S1201 | 240 minute 1 year Winter I+0% | 240 | 90 | 32.635 | 31.437 | -0.198 |
| 12.002 | S1202 | 240 minute 1 year Winter I+0% | 240 | 90 | 32.680 | 31.074 | -0.186 |
| 12.003 | S1203 | 240 minute 1 year Winter I+0% | 240 | 90 | 32.660 | 30.980 | -0.190 |
| 12.004 | S1204 | 240 minute 1 year Winter I+0% | 240 | 90 | 32.660 | 30.841 | -0.194 |
| 14.000 | S1400 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.650 | 31.644 | -0.131 |
| 14.001 | S1401 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.680 | 31.295 | -0.200 |
| 15.000 | S1500 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.680 | 31.665 | -0.135 |
| 15.001 | S1501 | 240 minute 1 year Winter I+0% | 240 | 90 | 32.600 | 31.620 | -0.135 |
| 14.002 | S1402 | 240 minute 1 year Winter I+0% | 240 | 90 | 32.600 | 31.039 | -0.201 |
| 12.005 | 1205 | 240 minute 1 year Winter I+0% | 240 | 93 | 32.600 | 30.523 | -0.182 |
| 1.008 | S108 | 240 minute 1 year Winter I+0% | 240 | 90 | 32.550 | 30.267 | -0.088 |
| 16.000 | S1600 | 240 minute 1 year Winter I+0% | 240 | 89 | 32.545 | 31.441 | -0.209 |
| 16.001 | S1601 | 240 minute 1 year Winter I+0% | 240 | 92 | 32.545 | 30.475 | -0.210 |
| 1.009 | S109 | 240 minute 1 year Winter I+0% | 240 | 90 | 32.500 | 30.265 | 0.235 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 0.901 | 0.4 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.312 | 50.417 | 0.1 | 5.0 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.540 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.359 | 0.1 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.03 | | 0.006 | 9.375 | 0.6 | 1.6 | OK |
| 9.002 | S902 | 0.000 | 0.02 | | 0.018 | 12.440 | 1.3 | 2.2 | OK |
| 11.000 | S1100 | 0.000 | 0.03 | | 0.002 | 2.705 | 0.5 | 0.5 | OK |
| 9.003 | S903 | 0.000 | 0.03 | | 0.096 | 16.047 | 0.6 | 2.8 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 31.545 | 66.613 | 0.0 | 4.1 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 0.721 | 0.3 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.04 | | 0.002 | 4.148 | 0.5 | 0.7 | OK |
| 13.001 | S1301 | 0.000 | 0.04 | | 0.008 | 6.492 | 0.9 | 1.1 | OK |
| 12.001 | S1201 | 0.000 | 0.03 | | 0.006 | 12.623 | 0.8 | 2.2 | OK |
| 12.002 | S1202 | 0.000 | 0.07 | | 0.022 | 17.311 | 0.6 | 3.0 | OK |
| 12.003 | S1203 | 0.000 | 0.06 | | 0.028 | 17.311 | 0.8 | 3.0 | OK |
| 12.004 | S1204 | 0.000 | 0.05 | | 0.016 | 20.917 | 1.1 | 3.7 | OK |
| 14.000 | S1400 | 0.000 | 0.04 | | 0.002 | 4.328 | 0.6 | 0.8 | OK |

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## Summary Wizard of 240 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.03 | | 0.006 | 7.754 | 0.6 | 1.4 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.002 | 1.623 | 0.4 | 0.3 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.004 | 4.328 | 1.1 | 0.8 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.018 | 14.426 | 1.3 | 2.5 | OK |
| 12.005 | 1205 | 0.000 | 0.08 | | 0.065 | 39.310 | 1.3 | 6.9 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 37.424 | 98.729 | 0.2 | 4.6 | OK |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.003 | 6.131 | 0.9 | 1.1 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.006 | 6.852 | 1.1 | 1.2 | OK |
| 1.009 | S109 | 0.000 | 0.29 | | 2.086 | 105.115 | 0.9 | 4.9 | SURCHARGED |

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## Summary Wizard of 360 minute 1 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.680 | 31.783 | -0.137 | 0.000 |
| 1.001 | S101 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.680 | 31.710 | -0.140 | 0.000 |
| 2.000 | S200 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.600 | 31.490 | -0.140 | 0.000 |
| 1.002 | S102 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.630 | 31.240 | -0.205 | 0.000 |
| 3.000 | S300 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.550 | 31.853 | -0.147 | 0.000 |
| 1.003 | S103 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.600 | 31.071 | -0.204 | 0.000 |
| 4.000 | S400 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.550 | 31.705 | -0.145 | 0.000 |
| 4.001 | S401 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.550 | 30.616 | -0.134 | 0.000 |
| 1.004 | S104 | 360 minute 1 year Winter I+0% | 360 | 109 | 32.600 | 30.274 | -0.256 | 0.000 |
| 1.005 | S105 | 360 minute 1 year Winter I+0% | 360 | 95 | 32.600 | 30.262 | -0.248 | 0.000 |
| 5.000 | S500 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.550 | 31.857 | -0.143 | 0.000 |
| 5.001 | S501 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.665 | 31.148 | -0.142 | 0.000 |
| 6.000 | S600 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.665 | 30.849 | -0.201 | 0.000 |
| 5.003 | S503 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.680 | 30.650 | -0.205 | 0.000 |
| 7.000 | S700 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.680 | 31.898 | -0.132 | 0.000 |
| 7.001 | S701 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.635 | 31.817 | -0.128 | 0.000 |
| 5.004 | S504 | 360 minute 1 year Winter I+0% | 360 | 109 | 32.635 | 30.283 | -0.262 | 0.000 |

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## Summary Wizard of 360 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.02 | | 0.001 | 2.671 | 0.5 | 0.3 | OK |
| 1.001 | S101 | 0.01 | | 0.002 | 4.110 | 1.0 | 0.5 | OK |
| 2.000 | S200 | 0.01 | | 0.001 | 2.671 | 0.7 | 0.3 | OK |
| 1.002 | S102 | 0.02 | | 0.005 | 8.219 | 0.7 | 1.0 | OK |
| 3.000 | S300 | 0.00 | | 0.000 | 1.643 | 0.4 | 0.2 | OK |
| 1.003 | S103 | 0.02 | | 0.014 | 15.000 | 1.1 | 1.8 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 3.082 | 0.8 | 0.4 | OK |
| 4.001 | S401 | 0.02 | | 0.002 | 4.315 | 0.6 | 0.5 | OK |
| 1.004 | S104 | 0.05 | | 0.011 | 21.370 | 0.4 | 2.5 | OK |
| 1.005 | S105 | 0.02 | | 0.357 | 22.397 | 0.4 | 2.5 | OK |
| 5.000 | S500 | 0.01 | | 0.000 | 2.877 | 0.7 | 0.3 | OK |
| 5.001 | S501 | 0.01 | | 0.001 | 2.877 | 0.7 | 0.3 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.408 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.407 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.02 | | 0.005 | 10.887 | 0.7 | 1.3 | OK |
| 5.003 | S503 | 0.02 | | 0.012 | 12.326 | 1.0 | 1.4 | OK |
| 7.000 | S700 | 0.04 | | 0.002 | 5.343 | 0.5 | 0.6 | OK |
| 7.001 | S701 | 0.05 | | 0.010 | 8.015 | 0.6 | 0.9 | OK |
| 5.004 | S504 | 0.04 | | 0.058 | 20.340 | 0.5 | 2.4 | OK |

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## Summary Wizard of 360 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.525 | 31.202 | -0.148 |
| 1.006 | S106 | 360 minute 1 year Winter I+0% | 360 | 95 | 32.500 | 30.261 | -1.385 |
| 9.000 | S900 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.665 | 31.019 | -0.201 |
| 9.002 | S902 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.640 | 30.778 | -0.207 |
| 11.000 | S1100 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.680 | 31.565 | -0.135 |
| 9.003 | S903 | 360 minute 1 year Winter I+0% | 360 | 105 | 32.630 | 30.262 | -0.233 |
| 1.007 | S107 | 360 minute 1 year Winter I+0% | 360 | 95 | 32.500 | 30.262 | -1.274 |
| 12.000 | S1200 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.635 | 31.852 | -0.148 |
| 13.000 | S1300 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.635 | 31.868 | -0.132 |
| 13.001 | S1301 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.635 | 31.777 | -0.133 |
| 12.001 | S1201 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.635 | 31.434 | -0.201 |
| 12.002 | S1202 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.680 | 31.069 | -0.191 |
| 12.003 | S1203 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.660 | 30.975 | -0.195 |
| 12.004 | S1204 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.660 | 30.837 | -0.198 |
| 14.000 | S1400 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.650 | 31.642 | -0.133 |
| 14.001 | S1401 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.680 | 31.293 | -0.202 |
| 15.000 | S1500 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.680 | 31.662 | -0.138 |
| 15.001 | S1501 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.600 | 31.616 | -0.139 |
| 14.002 | S1402 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.600 | 31.035 | -0.205 |
| 12.005 | 1205 | 360 minute 1 year Winter I+0% | 360 | 101 | 32.600 | 30.516 | -0.189 |
| 1.008 | S108 | 360 minute 1 year Winter I+0% | 360 | 95 | 32.550 | 30.262 | -0.093 |
| 16.000 | S1600 | 360 minute 1 year Winter I+0% | 360 | 100 | 32.545 | 31.437 | -0.213 |
| 16.001 | S1601 | 360 minute 1 year Winter I+0% | 360 | 101 | 32.545 | 30.472 | -0.213 |
| 1.009 | S109 | 360 minute 1 year Winter I+0% | 360 | 95 | 32.500 | 30.260 | 0.230 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.026 | 0.3 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.295 | 57.845 | 0.1 | 4.1 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.615 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.408 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.03 | | 0.006 | 10.682 | 0.6 | 1.2 | OK |
| 9.002 | S902 | 0.000 | 0.02 | | 0.013 | 14.175 | 1.3 | 1.7 | OK |
| 11.000 | S1100 | 0.000 | 0.02 | | 0.002 | 3.083 | 0.5 | 0.4 | OK |
| 9.003 | S903 | 0.000 | 0.03 | | 0.089 | 18.285 | 0.6 | 2.1 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 30.963 | 78.940 | 0.0 | 3.5 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 0.821 | 0.2 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.03 | | 0.002 | 4.727 | 0.5 | 0.6 | OK |
| 13.001 | S1301 | 0.000 | 0.03 | | 0.007 | 7.398 | 0.8 | 0.9 | OK |
| 12.001 | S1201 | 0.000 | 0.03 | | 0.006 | 14.385 | 0.8 | 1.7 | OK |
| 12.002 | S1202 | 0.000 | 0.05 | | 0.018 | 19.728 | 0.6 | 2.3 | OK |
| 12.003 | S1203 | 0.000 | 0.04 | | 0.024 | 19.728 | 0.7 | 2.3 | OK |
| 12.004 | S1204 | 0.000 | 0.03 | | 0.014 | 23.838 | 1.0 | 2.8 | OK |
| 14.000 | S1400 | 0.000 | 0.03 | | 0.002 | 4.932 | 0.5 | 0.6 | OK |

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## Summary Wizard of 360 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.02 | | 0.005 | 8.837 | 0.6 | 1.0 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.001 | 1.849 | 0.4 | 0.2 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.003 | 4.932 | 1.0 | 0.6 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.015 | 16.440 | 1.3 | 1.9 | OK |
| 12.005 | 1205 | 0.000 | 0.06 | | 0.054 | 44.798 | 1.3 | 5.2 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 36.880 | 124.832 | 0.2 | 4.6 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.002 | 6.987 | 0.8 | 0.8 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.004 | 7.809 | 0.9 | 0.9 | OK |
| 1.009 | S109 | 0.000 | 0.29 | | 2.054 | 132.583 | 0.9 | 4.9 | SURCHARGED |

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## Summary Wizard of 480 minute 1 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.680 | 31.781 | -0.139 | 0.000 |
| 1.001 | S101 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.680 | 31.708 | -0.142 | 0.000 |
| 2.000 | S200 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.600 | 31.488 | -0.142 | 0.000 |
| 1.002 | S102 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.630 | 31.237 | -0.208 | 0.000 |
| 3.000 | S300 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.550 | 31.853 | -0.147 | 0.000 |
| 1.003 | S103 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.600 | 31.068 | -0.207 | 0.000 |
| 4.000 | S400 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.550 | 31.704 | -0.146 | 0.000 |
| 4.001 | S401 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.550 | 30.614 | -0.136 | 0.000 |
| 1.004 | S104 | 480 minute 1 year Winter I+0% | 480 | 111 | 32.600 | 30.270 | -0.260 | 0.000 |
| 1.005 | S105 | 480 minute 1 year Winter I+0% | 480 | 102 | 32.600 | 30.248 | -0.262 | 0.000 |
| 5.000 | S500 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.550 | 31.856 | -0.144 | 0.000 |
| 5.001 | S501 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.665 | 31.146 | -0.144 | 0.000 |
| 6.000 | S600 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.665 | 30.846 | -0.204 | 0.000 |
| 5.003 | S503 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.680 | 30.646 | -0.209 | 0.000 |
| 7.000 | S700 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.680 | 31.897 | -0.133 | 0.000 |
| 7.001 | S701 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.635 | 31.815 | -0.130 | 0.000 |
| 5.004 | S504 | 480 minute 1 year Winter I+0% | 480 | 111 | 32.635 | 30.280 | -0.265 | 0.000 |

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## Summary Wizard of 480 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.02 | | 0.001 | 2.912 | 0.5 | 0.3 | OK |
| 1.001 | S101 | 0.01 | | 0.002 | 4.479 | 0.9 | 0.4 | OK |
| 2.000 | S200 | 0.01 | | 0.000 | 2.911 | 0.6 | 0.3 | OK |
| 1.002 | S102 | 0.02 | | 0.003 | 8.958 | 0.7 | 0.8 | OK |
| 3.000 | S300 | 0.00 | | 0.000 | 1.791 | 0.3 | 0.2 | OK |
| 1.003 | S103 | 0.02 | | 0.010 | 16.348 | 1.1 | 1.4 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 3.359 | 0.7 | 0.3 | OK |
| 4.001 | S401 | 0.02 | | 0.002 | 4.702 | 0.6 | 0.4 | OK |
| 1.004 | S104 | 0.04 | | 0.010 | 23.290 | 0.4 | 2.0 | OK |
| 1.005 | S105 | 0.02 | | 0.331 | 24.410 | 0.4 | 2.1 | OK |
| 5.000 | S500 | 0.01 | | 0.000 | 3.135 | 0.6 | 0.3 | OK |
| 5.001 | S501 | 0.01 | | 0.000 | 3.135 | 0.6 | 0.3 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.441 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.436 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.02 | | 0.005 | 11.859 | 0.7 | 1.0 | OK |
| 5.003 | S503 | 0.02 | | 0.009 | 13.426 | 1.0 | 1.2 | OK |
| 7.000 | S700 | 0.03 | | 0.002 | 5.824 | 0.5 | 0.5 | OK |
| 7.001 | S701 | 0.04 | | 0.009 | 8.735 | 0.5 | 0.8 | OK |
| 5.004 | S504 | 0.03 | | 0.053 | 22.161 | 0.4 | 1.9 | OK |

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## Summary Wizard of 480 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.525 | 31.202 | -0.148 |
| 1.006 | S106 | 480 minute 1 year Winter I+0% | 480 | 102 | 32.500 | 30.248 | -1.398 |
| 9.000 | S900 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.665 | 31.018 | -0.202 |
| 9.002 | S902 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.640 | 30.775 | -0.210 |
| 11.000 | S1100 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.680 | 31.563 | -0.137 |
| 9.003 | S903 | 480 minute 1 year Winter I+0% | 480 | 112 | 32.630 | 30.248 | -0.247 |
| 1.007 | S107 | 480 minute 1 year Winter I+0% | 480 | 102 | 32.500 | 30.248 | -1.288 |
| 12.000 | S1200 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.635 | 31.852 | -0.148 |
| 13.000 | S1300 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.635 | 31.866 | -0.134 |
| 13.001 | S1301 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.635 | 31.776 | -0.134 |
| 12.001 | S1201 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.635 | 31.432 | -0.203 |
| 12.002 | S1202 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.680 | 31.065 | -0.195 |
| 12.003 | S1203 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.660 | 30.973 | -0.197 |
| 12.004 | S1204 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.660 | 30.835 | -0.200 |
| 14.000 | S1400 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.650 | 31.641 | -0.134 |
| 14.001 | S1401 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.680 | 31.289 | -0.206 |
| 15.000 | S1500 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.680 | 31.659 | -0.141 |
| 15.001 | S1501 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.600 | 31.614 | -0.141 |
| 14.002 | S1402 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.600 | 31.031 | -0.209 |
| 12.005 | 1205 | 480 minute 1 year Winter I+0% | 480 | 108 | 32.600 | 30.513 | -0.192 |
| 1.008 | S108 | 480 minute 1 year Winter I+0% | 480 | 102 | 32.550 | 30.248 | -0.107 |
| 16.000 | S1600 | 480 minute 1 year Winter I+0% | 480 | 107 | 32.545 | 31.435 | -0.215 |
| 16.001 | S1601 | 480 minute 1 year Winter I+0% | 480 | 108 | 32.545 | 30.469 | -0.216 |
| 1.009 | S109 | 480 minute 1 year Winter I+0% | 480 | 102 | 32.500 | 30.247 | 0.217 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.118 | 0.2 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.250 | 62.924 | 0.1 | 3.5 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.669 | 0.1 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.439 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.02 | | 0.005 | 11.635 | 0.6 | 1.0 | OK |
| 9.002 | S902 | 0.000 | 0.01 | | 0.010 | 15.442 | 1.3 | 1.4 | OK |
| 11.000 | S1100 | 0.000 | 0.02 | | 0.001 | 3.360 | 0.5 | 0.3 | OK |
| 9.003 | S903 | 0.000 | 0.02 | | 0.069 | 19.921 | 0.6 | 1.8 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 29.327 | 85.766 | 0.0 | 3.3 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 0.895 | 0.2 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.03 | | 0.002 | 5.152 | 0.5 | 0.5 | OK |
| 13.001 | S1301 | 0.000 | 0.03 | | 0.006 | 8.063 | 0.8 | 0.7 | OK |
| 12.001 | S1201 | 0.000 | 0.02 | | 0.005 | 15.677 | 0.8 | 1.4 | OK |
| 12.002 | S1202 | 0.000 | 0.04 | | 0.016 | 21.500 | 0.6 | 1.9 | OK |
| 12.003 | S1203 | 0.000 | 0.04 | | 0.021 | 21.500 | 0.7 | 1.9 | OK |
| 12.004 | S1204 | 0.000 | 0.03 | | 0.012 | 25.980 | 1.0 | 2.3 | OK |
| 14.000 | S1400 | 0.000 | 0.02 | | 0.002 | 5.376 | 0.5 | 0.5 | OK |

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## Summary Wizard of 480 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.02 | | 0.004 | 9.631 | 0.6 | 0.8 | OK |
| 15.000 | S1500 | 0.000 | 0.01 | | 0.001 | 2.016 | 0.4 | 0.2 | OK |
| 15.001 | S1501 | 0.000 | 0.01 | | 0.002 | 5.375 | 1.0 | 0.5 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.011 | 17.917 | 1.3 | 1.6 | OK |
| 12.005 | 1205 | 0.000 | 0.05 | | 0.047 | 48.824 | 1.2 | 4.3 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 35.347 | 136.372 | 0.2 | 4.5 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.001 | 7.615 | 0.7 | 0.7 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.003 | 8.510 | 0.7 | 0.7 | OK |
| 1.009 | S109 | 0.000 | 0.29 | | 1.965 | 144.873 | 0.9 | 4.8 | SURCHARGED |

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## Summary Wizard of 600 minute 1 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.680 | 31.779 | -0.141 | 0.000 |
| 1.001 | S101 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.680 | 31.707 | -0.143 | 0.000 |
| 2.000 | S200 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.600 | 31.487 | -0.143 | 0.000 |
| 1.002 | S102 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.630 | 31.234 | -0.211 | 0.000 |
| 3.000 | S300 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.550 | 31.852 | -0.148 | 0.000 |
| 1.003 | S103 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.600 | 31.065 | -0.210 | 0.000 |
| 4.000 | S400 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.550 | 31.704 | -0.146 | 0.000 |
| 4.001 | S401 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.550 | 30.612 | -0.138 | 0.000 |
| 1.004 | S104 | 600 minute 1 year Winter I+0% | 600 | 115 | 32.600 | 30.267 | -0.263 | 0.000 |
| 1.005 | S105 | 600 minute 1 year Winter I+0% | 600 | 106 | 32.600 | 30.233 | -0.277 | 0.000 |
| 5.000 | S500 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.550 | 31.855 | -0.145 | 0.000 |
| 5.001 | S501 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.665 | 31.145 | -0.145 | 0.000 |
| 6.000 | S600 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.665 | 30.843 | -0.207 | 0.000 |
| 5.003 | S503 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.680 | 30.644 | -0.211 | 0.000 |
| 7.000 | S700 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.680 | 31.896 | -0.134 | 0.000 |
| 7.001 | S701 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.635 | 31.814 | -0.131 | 0.000 |
| 5.004 | S504 | 600 minute 1 year Winter I+0% | 600 | 114 | 32.635 | 30.278 | -0.267 | 0.000 |

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## Summary Wizard of 600 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.01 | | 0.001 | 3.113 | 0.5 | 0.2 | OK |
| 1.001 | S101 | 0.01 | | 0.001 | 4.788 | 0.7 | 0.3 | OK |
| 2.000 | S200 | 0.01 | | 0.000 | 3.112 | 0.5 | 0.2 | OK |
| 1.002 | S102 | 0.01 | | 0.003 | 9.576 | 0.7 | 0.7 | OK |
| 3.000 | S300 | 0.00 | | 0.000 | 1.914 | 0.3 | 0.1 | OK |
| 1.003 | S103 | 0.01 | | 0.008 | 17.475 | 1.1 | 1.2 | OK |
| 4.000 | S400 | 0.00 | | 0.000 | 3.590 | 0.6 | 0.3 | OK |
| 4.001 | S401 | 0.02 | | 0.001 | 5.027 | 0.6 | 0.4 | OK |
| 1.004 | S104 | 0.04 | | 0.009 | 24.896 | 0.3 | 1.7 | OK |
| 1.005 | S105 | 0.02 | | 0.303 | 26.093 | 0.4 | 1.8 | OK |
| 5.000 | S500 | 0.01 | | 0.000 | 3.351 | 0.5 | 0.2 | OK |
| 5.001 | S501 | 0.01 | | 0.000 | 3.351 | 0.5 | 0.2 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.457 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.441 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.02 | | 0.004 | 12.651 | 0.7 | 0.9 | OK |
| 5.003 | S503 | 0.01 | | 0.007 | 14.326 | 1.0 | 1.0 | OK |
| 7.000 | S700 | 0.03 | | 0.002 | 6.226 | 0.5 | 0.4 | OK |
| 7.001 | S701 | 0.04 | | 0.008 | 9.338 | 0.5 | 0.7 | OK |
| 5.004 | S504 | 0.03 | | 0.049 | 23.664 | 0.4 | 1.7 | OK |

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## Summary Wizard of 600 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.525 | 31.202 | -0.148 |
| 1.006 | S106 | 600 minute 1 year Winter I+0% | 600 | 106 | 32.500 | 30.233 | -1.413 |
| 9.000 | S900 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.665 | 31.015 | -0.205 |
| 9.002 | S902 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.640 | 30.773 | -0.212 |
| 11.000 | S1100 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.680 | 31.561 | -0.139 |
| 9.003 | S903 | 600 minute 1 year Winter I+0% | 600 | 114 | 32.630 | 30.233 | -0.262 |
| 1.007 | S107 | 600 minute 1 year Winter I+0% | 600 | 106 | 32.500 | 30.233 | -1.303 |
| 12.000 | S1200 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.635 | 31.851 | -0.149 |
| 13.000 | S1300 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.635 | 31.865 | -0.135 |
| 13.001 | S1301 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.635 | 31.775 | -0.135 |
| 12.001 | S1201 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.635 | 31.429 | -0.206 |
| 12.002 | S1202 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.680 | 31.063 | -0.197 |
| 12.003 | S1203 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.660 | 30.971 | -0.199 |
| 12.004 | S1204 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.660 | 30.834 | -0.201 |
| 14.000 | S1400 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.650 | 31.640 | -0.135 |
| 14.001 | S1401 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.680 | 31.286 | -0.209 |
| 15.000 | S1500 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.680 | 31.658 | -0.142 |
| 15.001 | S1501 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.600 | 31.613 | -0.142 |
| 14.002 | S1402 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.600 | 31.029 | -0.211 |
| 12.005 | 1205 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.600 | 30.510 | -0.195 |
| 1.008 | S108 | 600 minute 1 year Winter I+0% | 600 | 106 | 32.550 | 30.233 | -0.122 |
| 16.000 | S1600 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.545 | 31.434 | -0.216 |
| 16.001 | S1601 | 600 minute 1 year Winter I+0% | 600 | 113 | 32.545 | 30.468 | -0.217 |
| 1.009 | S109 | 600 minute 1 year Winter I+0% | 600 | 106 | 32.500 | 30.232 | 0.202 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.194 | 0.2 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.221 | 67.253 | 0.1 | 3.1 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.714 | 0.1 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.454 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.02 | | 0.004 | 12.422 | 0.6 | 0.9 | OK |
| 9.002 | S902 | 0.000 | 0.01 | | 0.007 | 16.491 | 1.1 | 1.2 | OK |
| 11.000 | S1100 | 0.000 | 0.02 | | 0.001 | 3.592 | 0.5 | 0.3 | OK |
| 9.003 | S903 | 0.000 | 0.02 | | 0.048 | 21.280 | 0.6 | 1.5 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 27.578 | 91.847 | 0.0 | 3.1 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 0.956 | 0.1 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.02 | | 0.002 | 5.507 | 0.5 | 0.4 | OK |
| 13.001 | S1301 | 0.000 | 0.02 | | 0.006 | 8.620 | 0.8 | 0.6 | OK |
| 12.001 | S1201 | 0.000 | 0.02 | | 0.004 | 16.759 | 0.8 | 1.2 | OK |
| 12.002 | S1202 | 0.000 | 0.04 | | 0.015 | 22.984 | 0.6 | 1.6 | OK |
| 12.003 | S1203 | 0.000 | 0.03 | | 0.019 | 22.984 | 0.7 | 1.6 | OK |
| 12.004 | S1204 | 0.000 | 0.02 | | 0.012 | 27.773 | 1.0 | 2.0 | OK |
| 14.000 | S1400 | 0.000 | 0.02 | | 0.002 | 5.747 | 0.5 | 0.4 | OK |

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## Summary Wizard of 600 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.02 | | 0.003 | 10.296 | 0.6 | 0.7 | OK |
| 15.000 | S1500 | 0.000 | 0.01 | | 0.000 | 2.155 | 0.3 | 0.2 | OK |
| 15.001 | S1501 | 0.000 | 0.01 | | 0.001 | 5.746 | 0.9 | 0.4 | OK |
| 14.002 | S1402 | 0.000 | 0.01 | | 0.009 | 19.153 | 1.3 | 1.3 | OK |
| 12.005 | 1205 | 0.000 | 0.04 | | 0.043 | 52.193 | 1.2 | 3.7 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 33.721 | 145.956 | 0.2 | 4.4 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.001 | 8.140 | 0.6 | 0.6 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.002 | 9.097 | 0.6 | 0.6 | OK |
| 1.009 | S109 | 0.000 | 0.28 | | 1.870 | 155.050 | 0.9 | 4.7 | SURCHARGED |

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## Summary Wizard of 720 minute 1 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | FSR | Ratio R | 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.680 | 31.778 | -0.142 | 0.000 |
| 1.001 | S101 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.680 | 31.706 | -0.144 | 0.000 |
| 2.000 | S200 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.600 | 31.486 | -0.144 | 0.000 |
| 1.002 | S102 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.630 | 31.232 | -0.213 | 0.000 |
| 3.000 | S300 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.550 | 31.852 | -0.148 | 0.000 |
| 1.003 | S103 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.600 | 31.063 | -0.212 | 0.000 |
| 4.000 | S400 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.550 | 31.703 | -0.147 | 0.000 |
| 4.001 | S401 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.550 | 30.611 | -0.139 | 0.000 |
| 1.004 | S104 | 720 minute 1 year Winter I+0% | 720 | 116 | 32.600 | 30.265 | -0.265 | 0.000 |
| 1.005 | S105 | 720 minute 1 year Winter I+0% | 720 | 110 | 32.600 | 30.217 | -0.293 | 0.000 |
| 5.000 | S500 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.550 | 31.855 | -0.145 | 0.000 |
| 5.001 | S501 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.665 | 31.145 | -0.145 | 0.000 |
| 6.000 | S600 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.665 | 30.841 | -0.209 | 0.000 |
| 5.003 | S503 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.680 | 30.642 | -0.213 | 0.000 |
| 7.000 | S700 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.680 | 31.895 | -0.135 | 0.000 |
| 7.001 | S701 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.635 | 31.813 | -0.132 | 0.000 |
| 5.004 | S504 | 720 minute 1 year Winter I+0% | 720 | 115 | 32.635 | 30.276 | -0.269 | 0.000 |

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## Summary Wizard of 720 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.01 | | 0.001 | 3.287 | 0.4 | 0.2 | OK |
| 1.001 | S101 | 0.01 | | 0.001 | 5.056 | 0.7 | 0.3 | OK |
| 2.000 | S200 | 0.01 | | 0.000 | 3.287 | 0.4 | 0.2 | OK |
| 1.002 | S102 | 0.01 | | 0.002 | 10.113 | 0.6 | 0.6 | OK |
| 3.000 | S300 | 0.00 | | 0.000 | 2.021 | 0.3 | 0.1 | OK |
| 1.003 | S103 | 0.01 | | 0.007 | 18.454 | 1.1 | 1.1 | OK |
| 4.000 | S400 | 0.00 | | 0.000 | 3.792 | 0.5 | 0.2 | OK |
| 4.001 | S401 | 0.01 | | 0.001 | 5.309 | 0.6 | 0.3 | OK |
| 1.004 | S104 | 0.03 | | 0.009 | 26.291 | 0.3 | 1.5 | OK |
| 1.005 | S105 | 0.01 | | 0.274 | 27.555 | 0.3 | 1.6 | OK |
| 5.000 | S500 | 0.01 | | 0.000 | 3.539 | 0.5 | 0.2 | OK |
| 5.001 | S501 | 0.01 | | 0.000 | 3.539 | 0.5 | 0.2 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.474 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.459 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.02 | | 0.003 | 13.354 | 0.7 | 0.8 | OK |
| 5.003 | S503 | 0.01 | | 0.006 | 15.123 | 0.9 | 0.9 | OK |
| 7.000 | S700 | 0.02 | | 0.002 | 6.575 | 0.5 | 0.4 | OK |
| 7.001 | S701 | 0.03 | | 0.007 | 9.862 | 0.5 | 0.6 | OK |
| 5.004 | S504 | 0.02 | | 0.047 | 24.985 | 0.4 | 1.5 | OK |

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## Summary Wizard of 720 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.525 | 31.201 | -0.149 |
| 1.006 | S106 | 720 minute 1 year Winter I+0% | 720 | 110 | 32.500 | 30.217 | -1.429 |
| 9.000 | S900 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.665 | 31.012 | -0.208 |
| 9.002 | S902 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.640 | 30.771 | -0.214 |
| 11.000 | S1100 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.680 | 31.560 | -0.140 |
| 9.003 | S903 | 720 minute 1 year Winter I+0% | 720 | 116 | 32.630 | 30.221 | -0.274 |
| 1.007 | S107 | 720 minute 1 year Winter I+0% | 720 | 110 | 32.500 | 30.217 | -1.319 |
| 12.000 | S1200 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.635 | 31.851 | -0.149 |
| 13.000 | S1300 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.635 | 31.864 | -0.136 |
| 13.001 | S1301 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.635 | 31.774 | -0.136 |
| 12.001 | S1201 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.635 | 31.427 | -0.208 |
| 12.002 | S1202 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.680 | 31.062 | -0.198 |
| 12.003 | S1203 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.660 | 30.970 | -0.200 |
| 12.004 | S1204 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.660 | 30.833 | -0.202 |
| 14.000 | S1400 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.650 | 31.638 | -0.137 |
| 14.001 | S1401 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.680 | 31.284 | -0.211 |
| 15.000 | S1500 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.680 | 31.657 | -0.143 |
| 15.001 | S1501 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.600 | 31.612 | -0.143 |
| 14.002 | S1402 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.600 | 31.027 | -0.213 |
| 12.005 | 1205 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.600 | 30.508 | -0.197 |
| 1.008 | S108 | 720 minute 1 year Winter I+0% | 720 | 110 | 32.550 | 30.217 | -0.138 |
| 16.000 | S1600 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.545 | 31.432 | -0.218 |
| 16.001 | S1601 | 720 minute 1 year Winter I+0% | 720 | 114 | 32.545 | 30.467 | -0.218 |
| 1.009 | S109 | 720 minute 1 year Winter I+0% | 720 | 110 | 32.500 | 30.216 | 0.186 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.260 | 0.2 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.190 | 71.036 | 0.1 | 2.9 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.752 | 0.1 | 0.0 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.470 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.02 | | 0.004 | 13.107 | 0.6 | 0.8 | OK |
| 9.002 | S902 | 0.000 | 0.01 | | 0.006 | 17.404 | 1.0 | 1.0 | OK |
| 11.000 | S1100 | 0.000 | 0.01 | | 0.001 | 3.793 | 0.5 | 0.2 | OK |
| 9.003 | S903 | 0.000 | 0.02 | | 0.030 | 22.461 | 0.6 | 1.3 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 25.734 | 97.012 | 0.0 | 3.0 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.009 | 0.1 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.02 | | 0.001 | 5.816 | 0.5 | 0.3 | OK |
| 13.001 | S1301 | 0.000 | 0.02 | | 0.005 | 9.103 | 0.8 | 0.5 | OK |
| 12.001 | S1201 | 0.000 | 0.02 | | 0.003 | 17.698 | 0.8 | 1.0 | OK |
| 12.002 | S1202 | 0.000 | 0.03 | | 0.014 | 24.273 | 0.5 | 1.4 | OK |
| 12.003 | S1203 | 0.000 | 0.03 | | 0.018 | 24.272 | 0.7 | 1.4 | OK |
| 12.004 | S1204 | 0.000 | 0.02 | | 0.011 | 29.330 | 1.0 | 1.7 | OK |
| 14.000 | S1400 | 0.000 | 0.02 | | 0.001 | 6.069 | 0.5 | 0.4 | OK |

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## Summary Wizard of 720 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.01 | | 0.003 | 10.873 | 0.6 | 0.6 | OK |
| 15.000 | S1500 | 0.000 | 0.01 | | 0.000 | 2.276 | 0.3 | 0.1 | OK |
| 15.001 | S1501 | 0.000 | 0.01 | | 0.001 | 6.068 | 0.8 | 0.4 | OK |
| 14.002 | S1402 | 0.000 | 0.01 | | 0.007 | 20.227 | 1.2 | 1.2 | OK |
| 12.005 | 1205 | 0.000 | 0.04 | | 0.040 | 55.120 | 1.1 | 3.2 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 31.982 | 154.154 | 0.2 | 4.3 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.001 | 8.597 | 0.5 | 0.5 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.001 | 9.607 | 0.6 | 0.6 | OK |
| 1.009 | S109 | 0.000 | 0.28 | | 1.769 | 163.759 | 0.9 | 4.6 | SURCHARGED |

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## Summary Wizard of 960 minute 1 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.680 | 31.777 | -0.143 | 0.000 |
| 1.001 | S101 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.680 | 31.705 | -0.145 | 0.000 |
| 2.000 | S200 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.600 | 31.485 | -0.145 | 0.000 |
| 1.002 | S102 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.630 | 31.230 | -0.215 | 0.000 |
| 3.000 | S300 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.550 | 31.852 | -0.148 | 0.000 |
| 1.003 | S103 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.600 | 31.061 | -0.214 | 0.000 |
| 4.000 | S400 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.550 | 31.703 | -0.147 | 0.000 |
| 4.001 | S401 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.550 | 30.609 | -0.141 | 0.000 |
| 1.004 | S104 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.600 | 30.263 | -0.267 | 0.000 |
| 1.005 | S105 | 960 minute 1 year Winter I+0% | 960 | 114 | 32.600 | 30.186 | -0.324 | 0.000 |
| 5.000 | S500 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.550 | 31.854 | -0.146 | 0.000 |
| 5.001 | S501 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.665 | 31.144 | -0.146 | 0.000 |
| 6.000 | S600 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.665 | 31.850 | -0.150 | 0.000 |
| 6.001 | S601 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.665 | 30.838 | -0.212 | 0.000 |
| 5.003 | S503 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.680 | 30.640 | -0.215 | 0.000 |
| 7.000 | S700 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.680 | 31.893 | -0.137 | 0.000 |
| 7.001 | S701 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.635 | 31.811 | -0.134 | 0.000 |
| 5.004 | S504 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.635 | 30.273 | -0.272 | 0.000 |

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## Summary Wizard of 960 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.01 | | 0.000 | 3.583 | 0.3 | 0.2 | OK |
| 1.001 | S101 | 0.01 | | 0.000 | 5.512 | 0.5 | 0.2 | OK |
| 2.000 | S200 | 0.01 | | 0.000 | 3.583 | 0.3 | 0.2 | OK |
| 1.002 | S102 | 0.01 | | 0.002 | 11.024 | 0.5 | 0.5 | OK |
| 3.000 | S300 | 0.00 | | 0.000 | 2.202 | 0.2 | 0.1 | OK |
| 1.003 | S103 | 0.01 | | 0.005 | 20.116 | 0.9 | 0.9 | OK |
| 4.000 | S400 | 0.00 | | 0.000 | 4.133 | 0.4 | 0.2 | OK |
| 4.001 | S401 | 0.01 | | 0.001 | 5.786 | 0.6 | 0.3 | OK |
| 1.004 | S104 | 0.03 | | 0.008 | 28.658 | 0.3 | 1.3 | OK |
| 1.005 | S105 | 0.01 | | 0.216 | 30.036 | 0.3 | 1.3 | OK |
| 5.000 | S500 | 0.01 | | 0.000 | 3.858 | 0.4 | 0.2 | OK |
| 5.001 | S501 | 0.01 | | 0.000 | 3.858 | 0.4 | 0.2 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.499 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.492 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.01 | | 0.002 | 14.549 | 0.6 | 0.6 | OK |
| 5.003 | S503 | 0.01 | | 0.004 | 16.477 | 0.7 | 0.7 | OK |
| 7.000 | S700 | 0.02 | | 0.001 | 7.168 | 0.5 | 0.3 | OK |
| 7.001 | S701 | 0.03 | | 0.006 | 10.751 | 0.5 | 0.5 | OK |
| 5.004 | S504 | 0.02 | | 0.040 | 27.228 | 0.4 | 1.2 | OK |

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## Summary Wizard of 960 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.525 | 31.201 | -0.149 |
| 1.006 | S106 | 960 minute 1 year Winter I+0% | 960 | 113 | 32.500 | 30.186 | -1.460 |
| 9.000 | S900 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.665 | 31.850 | -0.150 |
| 9.001 | S901 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.665 | 31.009 | -0.211 |
| 9.002 | S902 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.640 | 30.769 | -0.216 |
| 11.000 | S1100 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.680 | 31.558 | -0.142 |
| 9.003 | S903 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.630 | 30.213 | -0.282 |
| 1.007 | S107 | 960 minute 1 year Winter I+0% | 960 | 113 | 32.500 | 30.186 | -1.350 |
| 12.000 | S1200 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.635 | 31.851 | -0.149 |
| 13.000 | S1300 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.635 | 31.862 | -0.138 |
| 13.001 | S1301 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.635 | 31.771 | -0.139 |
| 12.001 | S1201 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.635 | 31.424 | -0.211 |
| 12.002 | S1202 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.680 | 31.060 | -0.200 |
| 12.003 | S1203 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.660 | 30.968 | -0.202 |
| 12.004 | S1204 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.660 | 30.829 | -0.206 |
| 14.000 | S1400 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.650 | 31.636 | -0.139 |
| 14.001 | S1401 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.680 | 31.282 | -0.213 |
| 15.000 | S1500 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.680 | 31.656 | -0.144 |
| 15.001 | S1501 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.600 | 31.611 | -0.144 |
| 14.002 | S1402 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.600 | 31.025 | -0.215 |
| 12.005 | 1205 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.600 | 30.506 | -0.199 |
| 1.008 | S108 | 960 minute 1 year Winter I+0% | 960 | 113 | 32.550 | 30.186 | -0.169 |
| 16.000 | S1600 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.545 | 31.431 | -0.219 |
| 16.001 | S1601 | 960 minute 1 year Winter I+0% | 960 | 118 | 32.545 | 30.466 | -0.219 |
| 1.009 | S109 | 960 minute 1 year Winter I+0% | 960 | 113 | 32.500 | 30.185 | 0.155 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.371 | 0.1 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.129 | 77.344 | 0.1 | 2.6 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.800 | 0.1 | 0.0 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.495 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.01 | | 0.003 | 14.251 | 0.6 | 0.6 | OK |
| 9.002 | S902 | 0.000 | 0.01 | | 0.004 | 18.935 | 0.8 | 0.8 | OK |
| 11.000 | S1100 | 0.000 | 0.01 | | 0.000 | 4.134 | 0.4 | 0.2 | OK |
| 9.003 | S903 | 0.000 | 0.01 | | 0.019 | 24.447 | 0.6 | 1.1 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 22.120 | 105.437 | 0.0 | 2.8 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.097 | 0.1 | 0.0 | OK |
| 13.000 | S1300 | 0.000 | 0.02 | | 0.001 | 6.340 | 0.5 | 0.3 | OK |
| 13.001 | S1301 | 0.000 | 0.02 | | 0.003 | 9.924 | 0.8 | 0.4 | OK |
| 12.001 | S1201 | 0.000 | 0.01 | | 0.003 | 19.290 | 0.8 | 0.8 | OK |
| 12.002 | S1202 | 0.000 | 0.03 | | 0.013 | 26.457 | 0.5 | 1.2 | OK |
| 12.003 | S1203 | 0.000 | 0.02 | | 0.017 | 26.457 | 0.7 | 1.2 | OK |
| 12.004 | S1204 | 0.000 | 0.02 | | 0.008 | 31.970 | 1.0 | 1.4 | OK |
| 14.000 | S1400 | 0.000 | 0.02 | | 0.001 | 6.616 | 0.5 | 0.3 | OK |

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## Summary Wizard of 960 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.01 | | 0.002 | 11.853 | 0.5 | 0.5 | OK |
| 15.000 | S1500 | 0.000 | 0.01 | | 0.000 | 2.480 | 0.2 | 0.1 | OK |
| 15.001 | S1501 | 0.000 | 0.01 | | 0.000 | 6.615 | 0.6 | 0.3 | OK |
| 14.002 | S1402 | 0.000 | 0.01 | | 0.005 | 22.049 | 1.0 | 1.0 | OK |
| 12.005 | 1205 | 0.000 | 0.03 | | 0.036 | 60.084 | 1.1 | 2.6 | OK |
| 1.008 | S108 | 0.000 | 0.04 | | 28.579 | 167.725 | 0.2 | 4.1 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.000 | 9.371 | 0.4 | 0.4 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.001 | 10.473 | 0.5 | 0.5 | OK |
| 1.009 | S109 | 0.000 | 0.26 | | 1.569 | 178.195 | 0.9 | 4.4 | SURCHARGED |

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## Summary Wizard of 1440 minute 1 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.680 | 31.775 | -0.145 |
| 1.001 | S101 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.680 | 31.704 | -0.146 |
| 2.000 | S200 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.600 | 31.484 | -0.146 |
| 1.002 | S102 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.630 | 31.228 | -0.217 |
| 3.000 | S300 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.550 | 31.851 | -0.149 |
| 1.003 | S103 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.600 | 31.058 | -0.217 |
| 4.000 | S400 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.550 | 31.702 | -0.148 |
| 4.001 | S401 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.550 | 30.606 | -0.144 |
| 1.004 | S104 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.600 | 30.259 | -0.271 |
| 1.005 | S105 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.600 | 30.135 | -0.375 |
| 5.000 | S500 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.550 | 31.853 | -0.147 |
| 5.001 | S501 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.665 | 31.143 | -0.147 |
| 6.000 | S600 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.665 | 31.850 | -0.150 |
| 6.001 | S601 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.665 | 31.140 | -0.150 |
| 5.002 | S502 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.665 | 30.835 | -0.215 |
| 5.003 | S503 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.680 | 30.637 | -0.218 |
| 7.000 | S700 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.680 | 31.890 | -0.140 |
| 7.001 | S701 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.635 | 31.810 | -0.135 |
| 5.004 | S504 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.635 | 30.266 | -0.279 |

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## Summary Wizard of 1440 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.01 | | 0.000 | 4.049 | 0.3 | 0.1 | OK |
| 1.001 | S101 | 0.000 | 0.01 | | 0.000 | 6.228 | 0.4 | 0.2 | OK |
| 2.000 | S200 | 0.000 | 0.01 | | 0.000 | 4.048 | 0.3 | 0.1 | OK |
| 1.002 | S102 | 0.000 | 0.01 | | 0.001 | 12.456 | 0.4 | 0.4 | OK |
| 3.000 | S300 | 0.000 | 0.00 | | 0.000 | 2.485 | 0.2 | 0.1 | OK |
| 1.003 | S103 | 0.000 | 0.01 | | 0.003 | 22.727 | 0.7 | 0.7 | OK |
| 4.000 | S400 | 0.000 | 0.00 | | 0.000 | 4.668 | 0.3 | 0.1 | OK |
| 4.001 | S401 | 0.000 | 0.01 | | 0.000 | 6.536 | 0.4 | 0.2 | OK |
| 1.004 | S104 | 0.000 | 0.02 | | 0.007 | 32.377 | 0.3 | 0.9 | OK |
| 1.005 | S105 | 0.000 | 0.01 | | 0.124 | 33.934 | 0.2 | 1.0 | OK |
| 5.000 | S500 | 0.000 | 0.00 | | 0.000 | 4.360 | 0.3 | 0.1 | OK |
| 5.001 | S501 | 0.000 | 0.00 | | 0.000 | 4.359 | 0.3 | 0.1 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 0.545 | 0.0 | 0.0 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.000 | 0.536 | 0.0 | 0.0 | OK |
| 5.002 | S502 | 0.000 | 0.01 | | 0.001 | 16.419 | 0.5 | 0.5 | OK |
| 5.003 | S503 | 0.000 | 0.01 | | 0.002 | 18.598 | 0.5 | 0.5 | OK |
| 7.000 | S700 | 0.000 | 0.01 | | 0.001 | 8.099 | 0.5 | 0.2 | OK |
| 7.001 | S701 | 0.000 | 0.02 | | 0.005 | 12.148 | 0.5 | 0.4 | OK |
| 5.004 | S504 | 0.000 | 0.01 | | 0.028 | 30.745 | 0.4 | 0.9 | OK |

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## Summary Wizard of 1440 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.525 | 31.201 | -0.149 |
| 1.006 | S106 | 1440 minute 1 year Winter I+0% | 1440 | 118 | 32.500 | 30.135 | -1.511 |
| 9.000 | S900 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.665 | 31.850 | -0.150 |
| 9.001 | S901 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.665 | 31.006 | -0.214 |
| 9.002 | S902 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.640 | 30.767 | -0.218 |
| 11.000 | S1100 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.680 | 31.556 | -0.144 |
| 9.003 | S903 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.630 | 30.209 | -0.286 |
| 1.007 | S107 | 1440 minute 1 year Winter I+0% | 1440 | 118 | 32.500 | 30.135 | -1.401 |
| 12.000 | S1200 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.635 | 31.851 | -0.149 |
| 13.000 | S1300 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.635 | 31.859 | -0.141 |
| 13.001 | S1301 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.635 | 31.768 | -0.142 |
| 12.001 | S1201 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.635 | 31.420 | -0.215 |
| 12.002 | S1202 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.680 | 31.057 | -0.203 |
| 12.003 | S1203 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.660 | 30.963 | -0.207 |
| 12.004 | S1204 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.660 | 30.824 | -0.211 |
| 14.000 | S1400 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.650 | 31.633 | -0.142 |
| 14.001 | S1401 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.680 | 31.279 | -0.216 |
| 15.000 | S1500 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.680 | 31.654 | -0.146 |
| 15.001 | S1501 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.600 | 31.609 | -0.146 |
| 14.002 | S1402 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.600 | 31.023 | -0.217 |
| 12.005 | 1205 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.600 | 30.503 | -0.202 |
| 1.008 | S108 | 1440 minute 1 year Winter I+0% | 1440 | 118 | 32.550 | 30.135 | -0.220 |
| 16.000 | S1600 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.545 | 31.430 | -0.220 |
| 16.001 | S1601 | 1440 minute 1 year Winter I+0% | 1440 | 120 | 32.545 | 30.464 | -0.221 |
| 1.009 | S109 | 1440 minute 1 year Winter I+0% | 1440 | 118 | 32.500 | 30.134 | 0.104 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.525 | 0.1 | 0.0 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.050 | 87.384 | 0.0 | 2.2 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.867 | 0.1 | 0.0 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.541 | 0.0 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.01 | | 0.002 | 16.048 | 0.5 | 0.5 | OK |
| 9.002 | S902 | 0.000 | 0.01 | | 0.002 | 21.340 | 0.6 | 0.6 | OK |
| 11.000 | S1100 | 0.000 | 0.01 | | 0.000 | 4.672 | 0.3 | 0.1 | OK |
| 9.003 | S903 | 0.000 | 0.01 | | 0.013 | 27.568 | 0.5 | 0.8 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 16.166 | 119.478 | 0.0 | 2.6 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.221 | 0.1 | 0.0 | OK |
| 13.000 | S1300 | 0.000 | 0.01 | | 0.001 | 7.164 | 0.5 | 0.2 | OK |
| 13.001 | S1301 | 0.000 | 0.01 | | 0.002 | 11.212 | 0.7 | 0.3 | OK |
| 12.001 | S1201 | 0.000 | 0.01 | | 0.002 | 21.776 | 0.6 | 0.6 | OK |
| 12.002 | S1202 | 0.000 | 0.02 | | 0.011 | 29.873 | 0.5 | 0.9 | OK |
| 12.003 | S1203 | 0.000 | 0.02 | | 0.012 | 29.873 | 0.7 | 0.9 | OK |
| 12.004 | S1204 | 0.000 | 0.01 | | 0.006 | 36.102 | 1.0 | 1.1 | OK |
| 14.000 | S1400 | 0.000 | 0.01 | | 0.001 | 7.475 | 0.5 | 0.2 | OK |

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## Summary Wizard of 1440 minute 1 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.01 | | 0.001 | 13.393 | 0.4 | 0.4 | OK |
| 15.000 | S1500 | 0.000 | 0.01 | | 0.000 | 2.803 | 0.2 | 0.1 | OK |
| 15.001 | S1501 | 0.000 | 0.01 | | 0.000 | 7.474 | 0.5 | 0.2 | OK |
| 14.002 | S1402 | 0.000 | 0.01 | | 0.003 | 24.914 | 0.7 | 0.7 | OK |
| 12.005 | 1205 | 0.000 | 0.02 | | 0.032 | 67.868 | 1.1 | 2.0 | OK |
| 1.008 | S108 | 0.000 | 0.04 | | 22.982 | 189.837 | 0.2 | 3.8 | OK |
| 16.000 | S1600 | 0.000 | 0.00 | | 0.000 | 10.588 | 0.3 | 0.3 | OK |
| 16.001 | S1601 | 0.000 | 0.00 | | 0.000 | 11.834 | 0.3 | 0.3 | OK |
| 1.009 | S109 | 0.000 | 0.24 | | 1.243 | 201.668 | 0.9 | 4.0 | SURCHARGED |

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## Summary Wizard of 15 minute 2 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 15 minute 2 year Winter I+0% | 15 | 31 | 32.680 | 31.808 | -0.112 | 0.000 |
| 1.001 | S101 | 15 minute 2 year Winter I+0% | 15 | 32 | 32.680 | 31.732 | -0.118 | 0.000 |
| 2.000 | S200 | 15 minute 2 year Winter I+0% | 15 | 33 | 32.600 | 31.513 | -0.117 | 0.000 |
| 1.002 | S102 | 15 minute 2 year Winter I+0% | 15 | 36 | 32.630 | 31.276 | -0.169 | 0.000 |
| 3.000 | S300 | 15 minute 2 year Winter I+0% | 15 | 30 | 32.550 | 31.868 | -0.132 | 0.000 |
| 1.003 | S103 | 15 minute 2 year Winter I+0% | 15 | 37 | 32.600 | 31.107 | -0.168 | 0.000 |
| 4.000 | S400 | 15 minute 2 year Winter I+0% | 15 | 31 | 32.550 | 31.723 | -0.127 | 0.000 |
| 4.001 | S401 | 15 minute 2 year Winter I+0% | 15 | 52 | 32.550 | 30.643 | -0.107 | 0.000 |
| 1.004 | S104 | 15 minute 2 year Winter I+0% | 15 | 72 | 32.600 | 30.359 | -0.171 | 0.000 |
| 1.005 | S105 | 15 minute 2 year Winter I+0% | 15 | 115 | 32.600 | 30.185 | -0.325 | 0.000 |
| 5.000 | S500 | 15 minute 2 year Winter I+0% | 15 | 30 | 32.550 | 31.878 | -0.122 | 0.000 |
| 5.001 | S501 | 15 minute 2 year Winter I+0% | 15 | 35 | 32.665 | 31.169 | -0.121 | 0.000 |
| 6.000 | S600 | 15 minute 2 year Winter I+0% | 15 | 31 | 32.665 | 31.857 | -0.143 | 0.000 |
| 6.001 | S601 | 15 minute 2 year Winter I+0% | 15 | 35 | 32.665 | 31.149 | -0.141 | 0.000 |
| 5.002 | S502 | 15 minute 2 year Winter I+0% | 15 | 37 | 32.665 | 30.887 | -0.163 | 0.000 |
| 5.003 | S503 | 15 minute 2 year Winter I+0% | 15 | 51 | 32.680 | 30.683 | -0.172 | 0.000 |
| 7.000 | S700 | 15 minute 2 year Winter I+0% | 15 | 30 | 32.680 | 31.935 | -0.095 | 0.000 |
| 7.001 | S701 | 15 minute 2 year Winter I+0% | 15 | 32 | 32.635 | 31.861 | -0.084 | 0.000 |
| 5.004 | S504 | 15 minute 2 year Winter I+0% | 15 | 77 | 32.635 | 30.352 | -0.193 | 0.000 |

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## Summary Wizard of 15 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.15 | | 0.005 | 1.129 | 0.7 | 2.4 | OK |
| 1.001 | S101 | 0.10 | | 0.014 | 1.736 | 1.3 | 3.5 | OK |
| 2.000 | S200 | 0.11 | | 0.004 | 1.129 | 0.9 | 2.4 | OK |
| 1.002 | S102 | 0.14 | | 0.015 | 3.472 | 0.9 | 7.0 | OK |
| 3.000 | S300 | 0.04 | | 0.002 | 0.695 | 1.2 | 1.5 | OK |
| 1.003 | S103 | 0.14 | | 0.043 | 6.337 | 1.6 | 12.3 | OK |
| 4.000 | S400 | 0.06 | | 0.003 | 1.302 | 1.7 | 2.8 | OK |
| 4.001 | S401 | 0.18 | | 0.008 | 1.823 | 0.9 | 3.7 | OK |
| 1.004 | S104 | 0.38 | | 0.045 | 9.028 | 0.6 | 17.6 | OK |
| 1.005 | S105 | 0.16 | | 0.213 | 9.322 | 0.5 | 18.6 | OK |
| 5.000 | S500 | 0.08 | | 0.004 | 1.215 | 1.1 | 2.6 | OK |
| 5.001 | S501 | 0.08 | | 0.007 | 1.216 | 1.1 | 2.6 | OK |
| 6.000 | S600 | 0.01 | | 0.000 | 0.174 | 0.8 | 0.4 | OK |
| 6.001 | S601 | 0.01 | | 0.001 | 0.174 | 0.8 | 0.4 | OK |
| 5.002 | S502 | 0.17 | | 0.016 | 4.601 | 1.0 | 8.8 | OK |
| 5.003 | S503 | 0.13 | | 0.040 | 5.209 | 1.4 | 9.8 | OK |
| 7.000 | S700 | 0.28 | | 0.008 | 2.257 | 0.8 | 4.8 | OK |
| 7.001 | S701 | 0.40 | | 0.034 | 3.386 | 0.9 | 6.8 | OK |
| 5.004 | S504 | 0.27 | | 0.182 | 8.594 | 0.7 | 16.7 | OK |

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## Summary Wizard of 15 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 15 minute 2 year Winter I+0% | 15 | 35 | 32.525 | 31.216 | -0.134 | 0.000 |
| 1.006 | S106 | 15 minute 2 year Winter I+0% | 15 | 114 | 32.500 | 30.185 | -1.461 | 0.000 |
| 9.000 | S900 | 15 minute 2 year Winter I+0% | 15 | 31 | 32.665 | 31.861 | -0.139 | 0.000 |
| 10.000 | S901 | 15 minute 2 year Winter I+0% | 15 | 31 | 32.665 | 31.857 | -0.143 | 0.000 |
| 9.001 | S901 | 15 minute 2 year Winter I+0% | 15 | 38 | 32.665 | 31.058 | -0.162 | 0.000 |
| 9.002 | S902 | 15 minute 2 year Winter I+0% | 15 | 38 | 32.640 | 30.810 | -0.175 | 0.000 |
| 11.000 | S1100 | 15 minute 2 year Winter I+0% | 15 | 32 | 32.680 | 31.591 | -0.109 | 0.000 |
| 9.003 | S903 | 15 minute 2 year Winter I+0% | 15 | 91 | 32.630 | 30.280 | -0.215 | 0.000 |
| 1.007 | S107 | 15 minute 2 year Winter I+0% | 15 | 114 | 32.500 | 30.185 | -1.351 | 0.000 |
| 12.000 | S1200 | 15 minute 2 year Winter I+0% | 15 | 31 | 32.635 | 31.866 | -0.134 | 0.000 |
| 13.000 | S1300 | 15 minute 2 year Winter I+0% | 15 | 30 | 32.635 | 31.901 | -0.099 | 0.000 |
| 13.001 | S1301 | 15 minute 2 year Winter I+0% | 15 | 32 | 32.635 | 31.808 | -0.102 | 0.000 |
| 12.001 | S1201 | 15 minute 2 year Winter I+0% | 15 | 35 | 32.635 | 31.474 | -0.161 | 0.000 |
| 12.002 | S1202 | 15 minute 2 year Winter I+0% | 15 | 37 | 32.680 | 31.131 | -0.129 | 0.000 |
| 12.003 | S1203 | 15 minute 2 year Winter I+0% | 15 | 37 | 32.660 | 31.031 | -0.139 | 0.000 |
| 12.004 | S1204 | 15 minute 2 year Winter I+0% | 15 | 37 | 32.660 | 30.884 | -0.151 | 0.000 |
| 14.000 | S1400 | 15 minute 2 year Winter I+0% | 15 | 31 | 32.650 | 31.674 | -0.101 | 0.000 |
| 14.001 | S1401 | 15 minute 2 year Winter I+0% | 15 | 37 | 32.680 | 31.329 | -0.166 | 0.000 |
| 15.000 | S1500 | 15 minute 2 year Winter I+0% | 15 | 31 | 32.680 | 31.685 | -0.115 | 0.000 |
| 15.001 | S1501 | 15 minute 2 year Winter I+0% | 15 | 34 | 32.600 | 31.638 | -0.117 | 0.000 |
| 14.002 | S1402 | 15 minute 2 year Winter I+0% | 15 | 37 | 32.600 | 31.069 | -0.171 | 0.000 |
| 12.005 | 1205 | 15 minute 2 year Winter I+0% | 15 | 53 | 32.600 | 30.583 | -0.122 | 0.000 |
| 1.008 | S108 | 15 minute 2 year Winter I+0% | 15 | 114 | 32.550 | 30.185 | -0.170 | 0.000 |
| 16.000 | S1600 | 15 minute 2 year Winter I+0% | 15 | 33 | 32.545 | 31.470 | -0.180 | 0.000 |
| 16.001 | S1601 | 15 minute 2 year Winter I+0% | 15 | 54 | 32.545 | 30.503 | -0.182 | 0.000 |
| 1.009 | S109 | 15 minute 2 year Winter I+0% | 15 | 114 | 32.500 | 30.184 | 0.154 | 0.000 |

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.02 | | 0.012 | 0.434 | 1.1 | 0.9 | OK |
| 1.006 | S106 | 0.01 | | 0.127 | 17.136 | 0.3 | 32.0 | OK |
| 9.000 | S900 | 0.02 | | 0.001 | 0.260 | 1.0 | 0.6 | OK |
| 10.000 | S901 | 0.01 | | 0.000 | 0.174 | 0.8 | 0.4 | OK |
| 9.001 | S901 | 0.17 | | 0.017 | 4.514 | 0.9 | 8.3 | OK |
| 9.002 | S902 | 0.11 | | 0.044 | 5.989 | 1.7 | 10.9 | OK |
| 11.000 | S1100 | 0.17 | | 0.006 | 1.302 | 0.7 | 2.8 | OK |
| 9.003 | S903 | 0.17 | | 0.114 | 7.726 | 0.9 | 14.5 | OK |
| 1.007 | S107 | 0.00 | | 21.982 | 15.816 | 0.1 | 19.0 | OK |
| 12.000 | S1200 | 0.02 | | 0.002 | 0.347 | 0.9 | 0.7 | OK |
| 13.000 | S1300 | 0.25 | | 0.007 | 1.997 | 0.8 | 4.3 | OK |
| 13.001 | S1301 | 0.23 | | 0.025 | 3.125 | 1.3 | 6.3 | OK |
| 12.001 | S1201 | 0.18 | | 0.017 | 6.076 | 1.3 | 11.7 | OK |
| 12.002 | S1202 | 0.37 | | 0.058 | 8.333 | 1.0 | 15.7 | OK |
| 12.003 | S1203 | 0.31 | | 0.075 | 8.333 | 1.2 | 15.9 | OK |
| 12.004 | S1204 | 0.24 | | 0.043 | 10.069 | 1.7 | 19.0 | OK |
| 14.000 | S1400 | 0.23 | | 0.007 | 2.083 | 0.9 | 4.4 | OK |

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## Summary Wizard of 15 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.15 | | 0.016 | 3.732 | 0.9 | 7.4 | OK |
| 15.000 | S1500 | 0.13 | | 0.005 | 0.781 | 0.5 | 1.7 | OK |
| 15.001 | S1501 | 0.11 | | 0.012 | 2.083 | 1.4 | 4.0 | OK |
| 14.002 | S1402 | 0.13 | | 0.049 | 6.944 | 1.8 | 13.4 | OK |
| 12.005 | 1205 | 0.43 | | 0.169 | 18.923 | 2.0 | 36.0 | OK |
| 1.008 | S108 | 0.05 | | 28.450 | 11.415 | 0.0 | 4.4 | OK |
| 16.000 | S1600 | 0.09 | | 0.011 | 2.951 | 1.1 | 6.2 | OK |
| 16.001 | S1601 | 0.08 | | 0.024 | 3.298 | 1.3 | 6.8 | OK |
| 1.009 | S109 | 0.26 | | 1.561 | 13.377 | 0.9 | 4.4 | SURCHARGED |

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## Summary Wizard of 30 minute 2 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 30 minute 2 year Winter I+0% | 30 | 37 | 32.680 | 31.804 | -0.116 | 0.000 |
| 1.001 | S101 | 30 minute 2 year Winter I+0% | 30 | 37 | 32.680 | 31.728 | -0.122 | 0.000 |
| 2.000 | S200 | 30 minute 2 year Winter I+0% | 30 | 39 | 32.600 | 31.509 | -0.121 | 0.000 |
| 1.002 | S102 | 30 minute 2 year Winter I+0% | 30 | 41 | 32.630 | 31.270 | -0.175 | 0.000 |
| 3.000 | S300 | 30 minute 2 year Winter I+0% | 30 | 36 | 32.550 | 31.867 | -0.133 | 0.000 |
| 1.003 | S103 | 30 minute 2 year Winter I+0% | 30 | 41 | 32.600 | 31.101 | -0.174 | 0.000 |
| 4.000 | S400 | 30 minute 2 year Winter I+0% | 30 | 37 | 32.550 | 31.720 | -0.130 | 0.000 |
| 4.001 | S401 | 30 minute 2 year Winter I+0% | 30 | 56 | 32.550 | 30.638 | -0.112 | 0.000 |
| 1.004 | S104 | 30 minute 2 year Winter I+0% | 30 | 83 | 32.600 | 30.344 | -0.186 | 0.000 |
| 1.005 | S105 | 30 minute 2 year Winter I+0% | 30 | 103 | 32.600 | 30.247 | -0.263 | 0.000 |
| 5.000 | S500 | 30 minute 2 year Winter I+0% | 30 | 36 | 32.550 | 31.874 | -0.126 | 0.000 |
| 5.001 | S501 | 30 minute 2 year Winter I+0% | 30 | 41 | 32.665 | 31.165 | -0.125 | 0.000 |
| 6.000 | S600 | 30 minute 2 year Winter I+0% | 30 | 37 | 32.665 | 31.856 | -0.144 | 0.000 |
| 6.001 | S601 | 30 minute 2 year Winter I+0% | 30 | 41 | 32.665 | 31.147 | -0.143 | 0.000 |
| 5.002 | S502 | 30 minute 2 year Winter I+0% | 30 | 40 | 32.665 | 30.881 | -0.169 | 0.000 |
| 5.003 | S503 | 30 minute 2 year Winter I+0% | 30 | 54 | 32.680 | 30.679 | -0.176 | 0.000 |
| 7.000 | S700 | 30 minute 2 year Winter I+0% | 30 | 36 | 32.680 | 31.928 | -0.102 | 0.000 |
| 7.001 | S701 | 30 minute 2 year Winter I+0% | 30 | 37 | 32.635 | 31.854 | -0.091 | 0.000 |
| 5.004 | S504 | 30 minute 2 year Winter I+0% | 30 | 84 | 32.635 | 30.341 | -0.204 | 0.000 |

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## Summary Wizard of 30 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.11 | | 0.005 | 1.486 | 0.6 | 1.9 | OK |
| 1.001 | S101 | 0.08 | | 0.012 | 2.286 | 1.2 | 2.8 | OK |
| 2.000 | S200 | 0.08 | | 0.004 | 1.486 | 0.8 | 1.9 | OK |
| 1.002 | S102 | 0.11 | | 0.013 | 4.571 | 0.9 | 5.7 | OK |
| 3.000 | S300 | 0.03 | | 0.002 | 0.914 | 1.2 | 1.2 | OK |
| 1.003 | S103 | 0.12 | | 0.038 | 8.342 | 1.5 | 10.2 | OK |
| 4.000 | S400 | 0.04 | | 0.002 | 1.714 | 1.6 | 2.2 | OK |
| 4.001 | S401 | 0.14 | | 0.007 | 2.400 | 0.9 | 3.0 | OK |
| 1.004 | S104 | 0.31 | | 0.036 | 11.885 | 0.6 | 14.6 | OK |
| 1.005 | S105 | 0.14 | | 0.329 | 12.178 | 0.5 | 15.2 | OK |
| 5.000 | S500 | 0.06 | | 0.003 | 1.600 | 1.1 | 2.0 | OK |
| 5.001 | S501 | 0.07 | | 0.006 | 1.600 | 1.0 | 2.0 | OK |
| 6.000 | S600 | 0.01 | | 0.000 | 0.228 | 0.7 | 0.3 | OK |
| 6.001 | S601 | 0.01 | | 0.000 | 0.228 | 0.6 | 0.3 | OK |
| 5.002 | S502 | 0.14 | | 0.015 | 6.056 | 0.9 | 7.3 | OK |
| 5.003 | S503 | 0.11 | | 0.036 | 6.856 | 1.3 | 8.3 | OK |
| 7.000 | S700 | 0.22 | | 0.007 | 2.971 | 0.8 | 3.8 | OK |
| 7.001 | S701 | 0.32 | | 0.030 | 4.457 | 0.9 | 5.6 | OK |
| 5.004 | S504 | 0.22 | | 0.162 | 11.313 | 0.7 | 13.8 | OK |

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## Summary Wizard of 30 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 30 minute 2 year Winter I+0% | 30 | 41 | 32.525 | 31.213 | -0.137 | 0.000 |
| 1.006 | S106 | 30 minute 2 year Winter I+0% | 30 | 103 | 32.500 | 30.247 | -1.399 | 0.000 |
| 9.000 | S900 | 30 minute 2 year Winter I+0% | 30 | 37 | 32.665 | 31.858 | -0.142 | 0.000 |
| 10.000 | S901 | 30 minute 2 year Winter I+0% | 30 | 37 | 32.665 | 31.855 | -0.145 | 0.000 |
| 9.001 | S901 | 30 minute 2 year Winter I+0% | 30 | 41 | 32.665 | 31.053 | -0.167 | 0.000 |
| 9.002 | S902 | 30 minute 2 year Winter I+0% | 30 | 41 | 32.640 | 30.806 | -0.179 | 0.000 |
| 11.000 | S1100 | 30 minute 2 year Winter I+0% | 30 | 38 | 32.680 | 31.586 | -0.114 | 0.000 |
| 9.003 | S903 | 30 minute 2 year Winter I+0% | 30 | 93 | 32.630 | 30.271 | -0.224 | 0.000 |
| 1.007 | S107 | 30 minute 2 year Winter I+0% | 30 | 103 | 32.500 | 30.247 | -1.289 | 0.000 |
| 12.000 | S1200 | 30 minute 2 year Winter I+0% | 30 | 37 | 32.635 | 31.863 | -0.137 | 0.000 |
| 13.000 | S1300 | 30 minute 2 year Winter I+0% | 30 | 36 | 32.635 | 31.895 | -0.105 | 0.000 |
| 13.001 | S1301 | 30 minute 2 year Winter I+0% | 30 | 37 | 32.635 | 31.803 | -0.107 | 0.000 |
| 12.001 | S1201 | 30 minute 2 year Winter I+0% | 30 | 39 | 32.635 | 31.468 | -0.167 | 0.000 |
| 12.002 | S1202 | 30 minute 2 year Winter I+0% | 30 | 40 | 32.680 | 31.121 | -0.139 | 0.000 |
| 12.003 | S1203 | 30 minute 2 year Winter I+0% | 30 | 40 | 32.660 | 31.022 | -0.148 | 0.000 |
| 12.004 | S1204 | 30 minute 2 year Winter I+0% | 30 | 40 | 32.660 | 30.878 | -0.157 | 0.000 |
| 14.000 | S1400 | 30 minute 2 year Winter I+0% | 30 | 37 | 32.650 | 31.668 | -0.107 | 0.000 |
| 14.001 | S1401 | 30 minute 2 year Winter I+0% | 30 | 41 | 32.680 | 31.323 | -0.172 | 0.000 |
| 15.000 | S1500 | 30 minute 2 year Winter I+0% | 30 | 37 | 32.680 | 31.681 | -0.119 | 0.000 |
| 15.001 | S1501 | 30 minute 2 year Winter I+0% | 30 | 38 | 32.600 | 31.635 | -0.120 | 0.000 |
| 14.002 | S1402 | 30 minute 2 year Winter I+0% | 30 | 41 | 32.600 | 31.064 | -0.176 | 0.000 |
| 12.005 | 1205 | 30 minute 2 year Winter I+0% | 30 | 56 | 32.600 | 30.573 | -0.132 | 0.000 |
| 1.008 | S108 | 30 minute 2 year Winter I+0% | 30 | 103 | 32.550 | 30.247 | -0.108 | 0.000 |
| 16.000 | S1600 | 30 minute 2 year Winter I+0% | 30 | 39 | 32.545 | 31.464 | -0.186 | 0.000 |
| 16.001 | S1601 | 30 minute 2 year Winter I+0% | 30 | 58 | 32.545 | 30.497 | -0.188 | 0.000 |
| 1.009 | S109 | 30 minute 2 year Winter I+0% | 30 | 103 | 32.500 | 30.246 | 0.216 | 0.000 |

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.02 | | 0.009 | 0.571 | 1.1 | 0.7 | OK |
| 1.006 | S106 | 0.01 | | 0.249 | 20.169 | 0.2 | 22.5 | OK |
| 9.000 | S900 | 0.01 | | 0.001 | 0.343 | 1.0 | 0.4 | OK |
| 10.000 | S901 | 0.01 | | 0.000 | 0.228 | 0.7 | 0.3 | OK |
| 9.001 | S901 | 0.15 | | 0.015 | 5.942 | 0.9 | 7.1 | OK |
| 9.002 | S902 | 0.09 | | 0.041 | 7.884 | 1.6 | 9.3 | OK |
| 11.000 | S1100 | 0.13 | | 0.005 | 1.714 | 0.7 | 2.2 | OK |
| 9.003 | S903 | 0.15 | | 0.103 | 10.143 | 0.9 | 12.2 | OK |
| 1.007 | S107 | 0.00 | | 29.260 | 17.252 | 0.1 | 13.6 | OK |
| 12.000 | S1200 | 0.02 | | 0.001 | 0.457 | 0.9 | 0.6 | OK |
| 13.000 | S1300 | 0.20 | | 0.006 | 2.628 | 0.8 | 3.4 | OK |
| 13.001 | S1301 | 0.18 | | 0.022 | 4.114 | 1.2 | 5.1 | OK |
| 12.001 | S1201 | 0.15 | | 0.015 | 7.999 | 1.2 | 9.8 | OK |
| 12.002 | S1202 | 0.31 | | 0.052 | 10.970 | 0.9 | 13.2 | OK |
| 12.003 | S1203 | 0.26 | | 0.067 | 10.970 | 1.1 | 13.2 | OK |
| 12.004 | S1204 | 0.20 | | 0.039 | 13.256 | 1.6 | 15.9 | OK |
| 14.000 | S1400 | 0.19 | | 0.006 | 2.743 | 0.8 | 3.5 | OK |

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## Summary Wizard of 30 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.13 | | 0.014 | 4.914 | 0.9 | 6.1 | OK |
| 15.000 | S1500 | 0.10 | | 0.004 | 1.029 | 0.5 | 1.3 | OK |
| 15.001 | S1501 | 0.09 | | 0.011 | 2.743 | 1.3 | 3.3 | OK |
| 14.002 | S1402 | 0.11 | | 0.044 | 9.142 | 1.7 | 11.1 | OK |
| 12.005 | 1205 | 0.36 | | 0.152 | 24.912 | 1.9 | 30.0 | OK |
| 1.008 | S108 | 0.05 | | 35.291 | 10.871 | 0.1 | 4.7 | OK |
| 16.000 | S1600 | 0.07 | | 0.010 | 3.885 | 1.1 | 5.0 | OK |
| 16.001 | S1601 | 0.07 | | 0.020 | 4.342 | 1.3 | 5.5 | OK |
| 1.009 | S109 | 0.29 | | 1.961 | 13.394 | 0.9 | 4.8 | SURCHARGED |

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## Summary Wizard of 60 minute 2 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 60 minute 2 year Winter I+0% | 60 | 48 | 32.680 | 31.798 | -0.122 | 0.000 |
| 1.001 | S101 | 60 minute 2 year Winter I+0% | 60 | 48 | 32.680 | 31.723 | -0.127 | 0.000 |
| 2.000 | S200 | 60 minute 2 year Winter I+0% | 60 | 50 | 32.600 | 31.503 | -0.127 | 0.000 |
| 1.002 | S102 | 60 minute 2 year Winter I+0% | 60 | 52 | 32.630 | 31.261 | -0.184 | 0.000 |
| 3.000 | S300 | 60 minute 2 year Winter I+0% | 60 | 48 | 32.550 | 31.864 | -0.136 | 0.000 |
| 1.003 | S103 | 60 minute 2 year Winter I+0% | 60 | 52 | 32.600 | 31.093 | -0.182 | 0.000 |
| 4.000 | S400 | 60 minute 2 year Winter I+0% | 60 | 48 | 32.550 | 31.717 | -0.133 | 0.000 |
| 4.001 | S401 | 60 minute 2 year Winter I+0% | 60 | 64 | 32.550 | 30.631 | -0.119 | 0.000 |
| 1.004 | S104 | 60 minute 2 year Winter I+0% | 60 | 94 | 32.600 | 30.324 | -0.206 | 0.000 |
| 1.005 | S105 | 60 minute 2 year Winter I+0% | 60 | 83 | 32.600 | 30.303 | -0.207 | 0.000 |
| 5.000 | S500 | 60 minute 2 year Winter I+0% | 60 | 47 | 32.550 | 31.870 | -0.130 | 0.000 |
| 5.001 | S501 | 60 minute 2 year Winter I+0% | 60 | 52 | 32.665 | 31.160 | -0.130 | 0.000 |
| 6.000 | S600 | 60 minute 2 year Winter I+0% | 60 | 48 | 32.665 | 31.854 | -0.146 | 0.000 |
| 6.001 | S601 | 60 minute 2 year Winter I+0% | 60 | 52 | 32.665 | 31.145 | -0.145 | 0.000 |
| 5.002 | S502 | 60 minute 2 year Winter I+0% | 60 | 52 | 32.665 | 30.872 | -0.178 | 0.000 |
| 5.003 | S503 | 60 minute 2 year Winter I+0% | 60 | 63 | 32.680 | 30.670 | -0.185 | 0.000 |
| 7.000 | S700 | 60 minute 2 year Winter I+0% | 60 | 47 | 32.680 | 31.919 | -0.111 | 0.000 |
| 7.001 | S701 | 60 minute 2 year Winter I+0% | 60 | 48 | 32.635 | 31.843 | -0.102 | 0.000 |
| 5.004 | S504 | 60 minute 2 year Winter I+0% | 60 | 94 | 32.635 | 30.324 | -0.221 | 0.000 |

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## Summary Wizard of 60 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.08 | | 0.004 | 1.886 | 0.6 | 1.3 | OK |
| 1.001 | S101 | 0.06 | | 0.009 | 2.902 | 1.2 | 2.0 | OK |
| 2.000 | S200 | 0.06 | | 0.003 | 1.886 | 0.7 | 1.3 | OK |
| 1.002 | S102 | 0.08 | | 0.011 | 5.803 | 0.8 | 3.9 | OK |
| 3.000 | S300 | 0.02 | | 0.001 | 1.160 | 1.2 | 0.8 | OK |
| 1.003 | S103 | 0.08 | | 0.031 | 10.590 | 1.4 | 7.1 | OK |
| 4.000 | S400 | 0.03 | | 0.002 | 2.176 | 1.4 | 1.5 | OK |
| 4.001 | S401 | 0.10 | | 0.006 | 3.047 | 0.8 | 2.1 | OK |
| 1.004 | S104 | 0.22 | | 0.026 | 15.086 | 0.5 | 10.1 | OK |
| 1.005 | S105 | 0.09 | | 0.465 | 15.502 | 0.4 | 10.4 | OK |
| 5.000 | S500 | 0.04 | | 0.002 | 2.031 | 1.0 | 1.4 | OK |
| 5.001 | S501 | 0.05 | | 0.005 | 2.031 | 1.0 | 1.4 | OK |
| 6.000 | S600 | 0.01 | | 0.000 | 0.290 | 0.4 | 0.2 | OK |
| 6.001 | S601 | 0.01 | | 0.000 | 0.290 | 0.4 | 0.2 | OK |
| 5.002 | S502 | 0.10 | | 0.012 | 7.689 | 0.8 | 5.1 | OK |
| 5.003 | S503 | 0.07 | | 0.029 | 8.704 | 1.2 | 5.8 | OK |
| 7.000 | S700 | 0.15 | | 0.005 | 3.772 | 0.7 | 2.6 | OK |
| 7.001 | S701 | 0.22 | | 0.024 | 5.658 | 0.8 | 3.8 | OK |
| 5.004 | S504 | 0.16 | | 0.131 | 14.363 | 0.6 | 9.6 | OK |

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## Summary Wizard of 60 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 60 minute 2 year Winter I+0% | 60 | 52 | 32.525 | 31.209 | -0.141 | 0.000 |
| 1.006 | S106 | 60 minute 2 year Winter I+0% | 60 | 83 | 32.500 | 30.303 | -1.343 | 0.000 |
| 9.000 | S900 | 60 minute 2 year Winter I+0% | 60 | 48 | 32.665 | 31.856 | -0.144 | 0.000 |
| 10.000 | S901 | 60 minute 2 year Winter I+0% | 60 | 48 | 32.665 | 31.854 | -0.146 | 0.000 |
| 9.001 | S901 | 60 minute 2 year Winter I+0% | 60 | 52 | 32.665 | 31.044 | -0.176 | 0.000 |
| 9.002 | S902 | 60 minute 2 year Winter I+0% | 60 | 52 | 32.640 | 30.798 | -0.187 | 0.000 |
| 11.000 | S1100 | 60 minute 2 year Winter I+0% | 60 | 49 | 32.680 | 31.580 | -0.120 | 0.000 |
| 9.003 | S903 | 60 minute 2 year Winter I+0% | 60 | 83 | 32.630 | 30.304 | -0.191 | 0.000 |
| 1.007 | S107 | 60 minute 2 year Winter I+0% | 60 | 83 | 32.500 | 30.303 | -1.233 | 0.000 |
| 12.000 | S1200 | 60 minute 2 year Winter I+0% | 60 | 48 | 32.635 | 31.859 | -0.141 | 0.000 |
| 13.000 | S1300 | 60 minute 2 year Winter I+0% | 60 | 47 | 32.635 | 31.886 | -0.114 | 0.000 |
| 13.001 | S1301 | 60 minute 2 year Winter I+0% | 60 | 48 | 32.635 | 31.795 | -0.115 | 0.000 |
| 12.001 | S1201 | 60 minute 2 year Winter I+0% | 60 | 51 | 32.635 | 31.458 | -0.177 | 0.000 |
| 12.002 | S1202 | 60 minute 2 year Winter I+0% | 60 | 52 | 32.680 | 31.106 | -0.154 | 0.000 |
| 12.003 | S1203 | 60 minute 2 year Winter I+0% | 60 | 52 | 32.660 | 31.009 | -0.161 | 0.000 |
| 12.004 | S1204 | 60 minute 2 year Winter I+0% | 60 | 52 | 32.660 | 30.866 | -0.169 | 0.000 |
| 14.000 | S1400 | 60 minute 2 year Winter I+0% | 60 | 48 | 32.650 | 31.660 | -0.115 | 0.000 |
| 14.001 | S1401 | 60 minute 2 year Winter I+0% | 60 | 52 | 32.680 | 31.315 | -0.180 | 0.000 |
| 15.000 | S1500 | 60 minute 2 year Winter I+0% | 60 | 48 | 32.680 | 31.675 | -0.125 | 0.000 |
| 15.001 | S1501 | 60 minute 2 year Winter I+0% | 60 | 49 | 32.600 | 31.630 | -0.125 | 0.000 |
| 14.002 | S1402 | 60 minute 2 year Winter I+0% | 60 | 52 | 32.600 | 31.056 | -0.184 | 0.000 |
| 12.005 | 1205 | 60 minute 2 year Winter I+0% | 60 | 65 | 32.600 | 30.557 | -0.148 | 0.000 |
| 1.008 | S108 | 60 minute 2 year Winter I+0% | 60 | 83 | 32.550 | 30.303 | -0.052 | 0.000 |
| 16.000 | S1600 | 60 minute 2 year Winter I+0% | 60 | 50 | 32.545 | 31.456 | -0.194 | 0.000 |
| 16.001 | S1601 | 60 minute 2 year Winter I+0% | 60 | 66 | 32.545 | 30.490 | -0.195 | 0.000 |
| 1.009 | S109 | 60 minute 2 year Winter I+0% | 60 | 83 | 32.500 | 30.302 | 0.272 | 0.000 |

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.01 | | 0.005 | 0.725 | 1.1 | 0.5 | OK |
| 1.006 | S106 | 0.01 | | 0.440 | 27.833 | 0.2 | 13.6 | OK |
| 9.000 | S900 | 0.01 | | 0.000 | 0.435 | 0.7 | 0.3 | OK |
| 10.000 | S901 | 0.00 | | 0.000 | 0.290 | 0.4 | 0.2 | OK |
| 9.001 | S901 | 0.11 | | 0.013 | 7.544 | 0.8 | 5.0 | OK |
| 9.002 | S902 | 0.07 | | 0.033 | 10.010 | 1.5 | 6.6 | OK |
| 11.000 | S1100 | 0.09 | | 0.004 | 2.176 | 0.6 | 1.5 | OK |
| 9.003 | S903 | 0.10 | | 0.149 | 12.860 | 0.8 | 8.6 | OK |
| 1.007 | S107 | 0.00 | | 35.865 | 27.087 | 0.1 | 8.6 | OK |
| 12.000 | S1200 | 0.01 | | 0.001 | 0.580 | 0.9 | 0.4 | OK |
| 13.000 | S1300 | 0.13 | | 0.005 | 3.337 | 0.7 | 2.3 | OK |
| 13.001 | S1301 | 0.13 | | 0.017 | 5.223 | 1.1 | 3.5 | OK |
| 12.001 | S1201 | 0.10 | | 0.013 | 10.155 | 1.1 | 6.8 | OK |
| 12.002 | S1202 | 0.22 | | 0.042 | 13.928 | 0.9 | 9.3 | OK |
| 12.003 | S1203 | 0.18 | | 0.055 | 13.928 | 1.0 | 9.3 | OK |
| 12.004 | S1204 | 0.14 | | 0.031 | 16.829 | 1.5 | 11.2 | OK |
| 14.000 | S1400 | 0.13 | | 0.005 | 3.482 | 0.8 | 2.4 | OK |

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## Summary Wizard of 60 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.09 | | 0.012 | 6.238 | 0.7 | 4.2 | OK |
| 15.000 | S1500 | 0.07 | | 0.003 | 1.306 | 0.5 | 0.9 | OK |
| 15.001 | S1501 | 0.06 | | 0.008 | 3.482 | 1.2 | 2.3 | OK |
| 14.002 | S1402 | 0.08 | | 0.035 | 11.606 | 1.6 | 7.8 | OK |
| 12.005 | 1205 | 0.25 | | 0.123 | 31.627 | 1.8 | 21.1 | OK |
| 1.008 | S108 | 0.05 | | 41.475 | 25.797 | 0.1 | 5.0 | OK |
| 16.000 | S1600 | 0.05 | | 0.007 | 4.933 | 1.0 | 3.4 | OK |
| 16.001 | S1601 | 0.04 | | 0.016 | 5.513 | 1.2 | 3.7 | OK |
| 1.009 | S109 | 0.31 | | 2.298 | 29.381 | 0.9 | 5.1 | SURCHARGED |

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## Summary Wizard of 120 minute 2 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 120 minute 2 year Winter I+0% | 120 | 61 | 32.680 | 31.791 | -0.129 | 0.000 |
| 1.001 | S101 | 120 minute 2 year Winter I+0% | 120 | 61 | 32.680 | 31.718 | -0.132 | 0.000 |
| 2.000 | S200 | 120 minute 2 year Winter I+0% | 120 | 62 | 32.600 | 31.498 | -0.132 | 0.000 |
| 1.002 | S102 | 120 minute 2 year Winter I+0% | 120 | 64 | 32.630 | 31.252 | -0.193 | 0.000 |
| 3.000 | S300 | 120 minute 2 year Winter I+0% | 120 | 61 | 32.550 | 31.859 | -0.141 | 0.000 |
| 1.003 | S103 | 120 minute 2 year Winter I+0% | 120 | 64 | 32.600 | 31.083 | -0.192 | 0.000 |
| 4.000 | S400 | 120 minute 2 year Winter I+0% | 120 | 61 | 32.550 | 31.713 | -0.137 | 0.000 |
| 4.001 | S401 | 120 minute 2 year Winter I+0% | 120 | 72 | 32.550 | 30.624 | -0.126 | 0.000 |
| 1.004 | S104 | 120 minute 2 year Winter I+0% | 120 | 84 | 32.600 | 30.344 | -0.186 | 0.000 |
| 1.005 | S105 | 120 minute 2 year Winter I+0% | 120 | 75 | 32.600 | 30.343 | -0.167 | 0.000 |
| 5.000 | S500 | 120 minute 2 year Winter I+0% | 120 | 61 | 32.550 | 31.866 | -0.134 | 0.000 |
| 5.001 | S501 | 120 minute 2 year Winter I+0% | 120 | 64 | 32.665 | 31.157 | -0.133 | 0.000 |
| 6.000 | S600 | 120 minute 2 year Winter I+0% | 120 | 61 | 32.665 | 31.852 | -0.148 | 0.000 |
| 6.001 | S601 | 120 minute 2 year Winter I+0% | 120 | 64 | 32.665 | 31.143 | -0.147 | 0.000 |
| 5.002 | S502 | 120 minute 2 year Winter I+0% | 120 | 64 | 32.665 | 30.862 | -0.188 | 0.000 |
| 5.003 | S503 | 120 minute 2 year Winter I+0% | 120 | 71 | 32.680 | 30.661 | -0.194 | 0.000 |
| 7.000 | S700 | 120 minute 2 year Winter I+0% | 120 | 60 | 32.680 | 31.911 | -0.119 | 0.000 |
| 7.001 | S701 | 120 minute 2 year Winter I+0% | 120 | 61 | 32.635 | 31.832 | -0.113 | 0.000 |
| 5.004 | S504 | 120 minute 2 year Winter I+0% | 120 | 82 | 32.635 | 30.344 | -0.201 | 0.000 |

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## Summary Wizard of 120 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.05 | | 0.003 | 2.347 | 0.5 | 0.8 | OK |
| 1.001 | S101 | 0.04 | | 0.007 | 3.611 | 1.0 | 1.3 | OK |
| 2.000 | S200 | 0.04 | | 0.002 | 2.347 | 0.7 | 0.8 | OK |
| 1.002 | S102 | 0.05 | | 0.008 | 7.221 | 0.7 | 2.5 | OK |
| 3.000 | S300 | 0.01 | | 0.001 | 1.444 | 1.1 | 0.5 | OK |
| 1.003 | S103 | 0.05 | | 0.023 | 13.178 | 1.3 | 4.6 | OK |
| 4.000 | S400 | 0.02 | | 0.001 | 2.708 | 1.5 | 0.9 | OK |
| 4.001 | S401 | 0.06 | | 0.004 | 3.791 | 0.7 | 1.3 | OK |
| 1.004 | S104 | 0.14 | | 0.035 | 18.774 | 0.5 | 6.5 | OK |
| 1.005 | S105 | 0.06 | | 0.570 | 19.436 | 0.4 | 6.6 | OK |
| 5.000 | S500 | 0.03 | | 0.002 | 2.527 | 0.9 | 0.9 | OK |
| 5.001 | S501 | 0.03 | | 0.004 | 2.527 | 0.9 | 0.9 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.361 | 0.3 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.361 | 0.3 | 0.1 | OK |
| 5.002 | S502 | 0.06 | | 0.009 | 9.568 | 0.8 | 3.3 | OK |
| 5.003 | S503 | 0.05 | | 0.022 | 10.831 | 1.1 | 3.7 | OK |
| 7.000 | S700 | 0.10 | | 0.004 | 4.694 | 0.6 | 1.6 | OK |
| 7.001 | S701 | 0.14 | | 0.018 | 7.041 | 0.7 | 2.4 | OK |
| 5.004 | S504 | 0.10 | | 0.166 | 17.872 | 0.6 | 6.2 | OK |

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## Summary Wizard of 120 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 120 minute 2 year Winter I+0% | 120 | 64 | 32.525 | 31.206 | -0.144 |
| 1.006 | S106 | 120 minute 2 year Winter I+0% | 120 | 75 | 32.500 | 30.343 | -1.303 |
| 9.000 | S900 | 120 minute 2 year Winter I+0% | 120 | 61 | 32.665 | 31.854 | -0.146 |
| 10.000 | S901 | 120 minute 2 year Winter I+0% | 120 | 61 | 32.665 | 31.852 | -0.148 |
| 9.001 | S901 | 120 minute 2 year Winter I+0% | 120 | 64 | 32.665 | 31.033 | -0.187 |
| 9.002 | S902 | 120 minute 2 year Winter I+0% | 120 | 64 | 32.640 | 30.790 | -0.195 |
| 11.000 | S1100 | 120 minute 2 year Winter I+0% | 120 | 61 | 32.680 | 31.573 | -0.127 |
| 9.003 | S903 | 120 minute 2 year Winter I+0% | 120 | 75 | 32.630 | 30.344 | -0.151 |
| 1.007 | S107 | 120 minute 2 year Winter I+0% | 120 | 75 | 32.500 | 30.343 | -1.193 |
| 12.000 | S1200 | 120 minute 2 year Winter I+0% | 120 | 61 | 32.635 | 31.856 | -0.144 |
| 13.000 | S1300 | 120 minute 2 year Winter I+0% | 120 | 60 | 32.635 | 31.879 | -0.121 |
| 13.001 | S1301 | 120 minute 2 year Winter I+0% | 120 | 61 | 32.635 | 31.788 | -0.122 |
| 12.001 | S1201 | 120 minute 2 year Winter I+0% | 120 | 63 | 32.635 | 31.448 | -0.187 |
| 12.002 | S1202 | 120 minute 2 year Winter I+0% | 120 | 64 | 32.680 | 31.091 | -0.169 |
| 12.003 | S1203 | 120 minute 2 year Winter I+0% | 120 | 64 | 32.660 | 30.996 | -0.174 |
| 12.004 | S1204 | 120 minute 2 year Winter I+0% | 120 | 64 | 32.660 | 30.855 | -0.180 |
| 14.000 | S1400 | 120 minute 2 year Winter I+0% | 120 | 61 | 32.650 | 31.653 | -0.122 |
| 14.001 | S1401 | 120 minute 2 year Winter I+0% | 120 | 64 | 32.680 | 31.304 | -0.191 |
| 15.000 | S1500 | 120 minute 2 year Winter I+0% | 120 | 61 | 32.680 | 31.670 | -0.130 |
| 15.001 | S1501 | 120 minute 2 year Winter I+0% | 120 | 61 | 32.600 | 31.624 | -0.131 |
| 14.002 | S1402 | 120 minute 2 year Winter I+0% | 120 | 64 | 32.600 | 31.047 | -0.193 |
| 12.005 | 1205 | 120 minute 2 year Winter I+0% | 120 | 74 | 32.600 | 30.541 | -0.164 |
| 1.008 | S108 | 120 minute 2 year Winter I+0% | 120 | 75 | 32.550 | 30.343 | -0.012 |
| 16.000 | S1600 | 120 minute 2 year Winter I+0% | 120 | 62 | 32.545 | 31.450 | -0.200 |
| 16.001 | S1601 | 120 minute 2 year Winter I+0% | 120 | 74 | 32.545 | 30.485 | -0.200 |
| 1.009 | S109 | 120 minute 2 year Winter I+0% | 120 | 75 | 32.500 | 30.338 | 0.308 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.001 | 0.902 | 0.7 | 0.3 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.579 | 40.073 | 0.2 | 8.4 | OK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.000 | 0.541 | 0.4 | 0.2 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.361 | 0.3 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.07 | | 0.010 | 9.387 | 0.7 | 3.2 | OK |
| 9.002 | S902 | 0.000 | 0.04 | | 0.025 | 12.456 | 1.4 | 4.3 | OK |
| 11.000 | S1100 | 0.000 | 0.06 | | 0.003 | 2.708 | 0.5 | 0.9 | OK |
| 9.003 | S903 | 0.000 | 0.07 | | 0.213 | 16.062 | 0.7 | 5.5 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 40.548 | 45.174 | 0.1 | 5.7 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 0.722 | 0.6 | 0.3 | OK |
| 13.000 | S1300 | 0.000 | 0.08 | | 0.004 | 4.152 | 0.6 | 1.4 | OK |
| 13.001 | S1301 | 0.000 | 0.08 | | 0.013 | 6.499 | 1.0 | 2.3 | OK |
| 12.001 | S1201 | 0.000 | 0.07 | | 0.010 | 12.637 | 1.0 | 4.4 | OK |
| 12.002 | S1202 | 0.000 | 0.14 | | 0.033 | 17.331 | 0.8 | 6.0 | OK |
| 12.003 | S1203 | 0.000 | 0.12 | | 0.043 | 17.331 | 0.9 | 6.0 | OK |
| 12.004 | S1204 | 0.000 | 0.09 | | 0.025 | 20.941 | 1.3 | 7.2 | OK |
| 14.000 | S1400 | 0.000 | 0.08 | | 0.004 | 4.333 | 0.7 | 1.5 | OK |

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## Summary Wizard of 120 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.06 | | 0.009 | 7.763 | 0.7 | 2.7 | OK |
| 15.000 | S1500 | 0.000 | 0.04 | | 0.002 | 1.625 | 0.4 | 0.6 | OK |
| 15.001 | S1501 | 0.000 | 0.04 | | 0.006 | 4.333 | 1.1 | 1.5 | OK |
| 14.002 | S1402 | 0.000 | 0.05 | | 0.026 | 14.442 | 1.5 | 5.0 | OK |
| 12.005 | 1205 | 0.000 | 0.16 | | 0.095 | 39.355 | 1.6 | 13.6 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 45.860 | 55.952 | 0.2 | 5.2 | OK |
| 16.000 | S1600 | 0.000 | 0.03 | | 0.006 | 6.138 | 0.9 | 2.1 | OK |
| 16.001 | S1601 | 0.000 | 0.03 | | 0.012 | 6.860 | 1.1 | 2.4 | OK |
| 1.009 | S109 | 0.000 | 0.32 | | 2.484 | 61.122 | 1.0 | 5.3 | SURCHARGED |

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## Summary Wizard of 180 minute 2 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 180 minute 2 year Winter I+0% | 180 | 73 | 32.680 | 31.789 | -0.131 | 0.000 |
| 1.001 | S101 | 180 minute 2 year Winter I+0% | 180 | 73 | 32.680 | 31.716 | -0.134 | 0.000 |
| 2.000 | S200 | 180 minute 2 year Winter I+0% | 180 | 74 | 32.600 | 31.496 | -0.134 | 0.000 |
| 1.002 | S102 | 180 minute 2 year Winter I+0% | 180 | 75 | 32.630 | 31.248 | -0.197 | 0.000 |
| 3.000 | S300 | 180 minute 2 year Winter I+0% | 180 | 73 | 32.550 | 31.857 | -0.143 | 0.000 |
| 1.003 | S103 | 180 minute 2 year Winter I+0% | 180 | 75 | 32.600 | 31.079 | -0.196 | 0.000 |
| 4.000 | S400 | 180 minute 2 year Winter I+0% | 180 | 73 | 32.550 | 31.710 | -0.140 | 0.000 |
| 4.001 | S401 | 180 minute 2 year Winter I+0% | 180 | 81 | 32.550 | 30.621 | -0.129 | 0.000 |
| 1.004 | S104 | 180 minute 2 year Winter I+0% | 180 | 78 | 32.600 | 30.353 | -0.177 | 0.000 |
| 1.005 | S105 | 180 minute 2 year Winter I+0% | 180 | 71 | 32.600 | 30.353 | -0.157 | 0.000 |
| 5.000 | S500 | 180 minute 2 year Winter I+0% | 180 | 73 | 32.550 | 31.865 | -0.135 | 0.000 |
| 5.001 | S501 | 180 minute 2 year Winter I+0% | 180 | 75 | 32.665 | 31.155 | -0.135 | 0.000 |
| 6.000 | S600 | 180 minute 2 year Winter I+0% | 180 | 73 | 32.665 | 31.852 | -0.148 | 0.000 |
| 6.001 | S601 | 180 minute 2 year Winter I+0% | 180 | 75 | 32.665 | 31.142 | -0.148 | 0.000 |
| 5.002 | S502 | 180 minute 2 year Winter I+0% | 180 | 75 | 32.665 | 30.857 | -0.193 | 0.000 |
| 5.003 | S503 | 180 minute 2 year Winter I+0% | 180 | 79 | 32.680 | 30.658 | -0.197 | 0.000 |
| 7.000 | S700 | 180 minute 2 year Winter I+0% | 180 | 73 | 32.680 | 31.907 | -0.123 | 0.000 |
| 7.001 | S701 | 180 minute 2 year Winter I+0% | 180 | 73 | 32.635 | 31.828 | -0.117 | 0.000 |
| 5.004 | S504 | 180 minute 2 year Winter I+0% | 180 | 76 | 32.635 | 30.353 | -0.192 | 0.000 |

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## Summary Wizard of 180 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.04 | | 0.002 | 2.654 | 0.5 | 0.6 | OK |
| 1.001 | S101 | 0.03 | | 0.006 | 4.082 | 1.0 | 1.0 | OK |
| 2.000 | S200 | 0.03 | | 0.002 | 2.654 | 0.6 | 0.6 | OK |
| 1.002 | S102 | 0.04 | | 0.007 | 8.165 | 0.7 | 1.9 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 1.633 | 0.8 | 0.4 | OK |
| 1.003 | S103 | 0.04 | | 0.020 | 14.901 | 1.2 | 3.5 | OK |
| 4.000 | S400 | 0.01 | | 0.001 | 3.062 | 1.5 | 0.7 | OK |
| 4.001 | S401 | 0.05 | | 0.003 | 4.286 | 0.7 | 1.0 | OK |
| 1.004 | S104 | 0.11 | | 0.041 | 21.229 | 0.4 | 4.9 | OK |
| 1.005 | S105 | 0.04 | | 0.595 | 22.119 | 0.4 | 5.0 | OK |
| 5.000 | S500 | 0.02 | | 0.002 | 2.858 | 0.9 | 0.7 | OK |
| 5.001 | S501 | 0.02 | | 0.003 | 2.858 | 0.9 | 0.7 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.408 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.408 | 0.2 | 0.1 | OK |
| 5.002 | S502 | 0.05 | | 0.008 | 10.818 | 0.7 | 2.5 | OK |
| 5.003 | S503 | 0.04 | | 0.019 | 12.247 | 1.0 | 2.8 | OK |
| 7.000 | S700 | 0.07 | | 0.003 | 5.308 | 0.6 | 1.2 | OK |
| 7.001 | S701 | 0.11 | | 0.015 | 7.961 | 0.7 | 1.9 | OK |
| 5.004 | S504 | 0.08 | | 0.183 | 20.208 | 0.5 | 4.7 | OK |

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## Summary Wizard of 180 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 180 minute 2 year Winter I+0% | 180 | 75 | 32.525 | 31.204 | -0.146 |
| 1.006 | S106 | 180 minute 2 year Winter I+0% | 180 | 71 | 32.500 | 30.352 | -1.294 |
| 9.000 | S900 | 180 minute 2 year Winter I+0% | 180 | 73 | 32.665 | 31.853 | -0.147 |
| 10.000 | S901 | 180 minute 2 year Winter I+0% | 180 | 73 | 32.665 | 31.852 | -0.148 |
| 9.001 | S901 | 180 minute 2 year Winter I+0% | 180 | 75 | 32.665 | 31.028 | -0.192 |
| 9.002 | S902 | 180 minute 2 year Winter I+0% | 180 | 75 | 32.640 | 30.787 | -0.198 |
| 11.000 | S1100 | 180 minute 2 year Winter I+0% | 180 | 73 | 32.680 | 31.570 | -0.130 |
| 9.003 | S903 | 180 minute 2 year Winter I+0% | 180 | 71 | 32.630 | 30.353 | -0.142 |
| 1.007 | S107 | 180 minute 2 year Winter I+0% | 180 | 71 | 32.500 | 30.353 | -1.183 |
| 12.000 | S1200 | 180 minute 2 year Winter I+0% | 180 | 73 | 32.635 | 31.854 | -0.146 |
| 13.000 | S1300 | 180 minute 2 year Winter I+0% | 180 | 73 | 32.635 | 31.875 | -0.125 |
| 13.001 | S1301 | 180 minute 2 year Winter I+0% | 180 | 73 | 32.635 | 31.784 | -0.126 |
| 12.001 | S1201 | 180 minute 2 year Winter I+0% | 180 | 74 | 32.635 | 31.442 | -0.193 |
| 12.002 | S1202 | 180 minute 2 year Winter I+0% | 180 | 75 | 32.680 | 31.084 | -0.176 |
| 12.003 | S1203 | 180 minute 2 year Winter I+0% | 180 | 75 | 32.660 | 30.990 | -0.180 |
| 12.004 | S1204 | 180 minute 2 year Winter I+0% | 180 | 75 | 32.660 | 30.848 | -0.187 |
| 14.000 | S1400 | 180 minute 2 year Winter I+0% | 180 | 73 | 32.650 | 31.649 | -0.126 |
| 14.001 | S1401 | 180 minute 2 year Winter I+0% | 180 | 75 | 32.680 | 31.300 | -0.195 |
| 15.000 | S1500 | 180 minute 2 year Winter I+0% | 180 | 73 | 32.680 | 31.667 | -0.133 |
| 15.001 | S1501 | 180 minute 2 year Winter I+0% | 180 | 74 | 32.600 | 31.622 | -0.133 |
| 14.002 | S1402 | 180 minute 2 year Winter I+0% | 180 | 75 | 32.600 | 31.043 | -0.197 |
| 12.005 | 1205 | 180 minute 2 year Winter I+0% | 180 | 82 | 32.600 | 30.532 | -0.173 |
| 1.008 | S108 | 180 minute 2 year Winter I+0% | 180 | 71 | 32.550 | 30.353 | -0.002 |
| 16.000 | S1600 | 180 minute 2 year Winter I+0% | 180 | 74 | 32.545 | 31.448 | -0.202 |
| 16.001 | S1601 | 180 minute 2 year Winter I+0% | 180 | 82 | 32.545 | 30.483 | -0.202 |
| 1.009 | S109 | 180 minute 2 year Winter I+0% | 180 | 71 | 32.500 | 30.344 | 0.314 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.000 | 1.020 | 0.5 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.611 | 50.591 | 0.1 | 6.5 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.612 | 0.3 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.408 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.05 | | 0.008 | 10.614 | 0.7 | 2.5 | OK |
| 9.002 | S902 | 0.000 | 0.03 | | 0.021 | 14.084 | 1.3 | 3.3 | OK |
| 11.000 | S1100 | 0.000 | 0.04 | | 0.002 | 3.062 | 0.5 | 0.7 | OK |
| 9.003 | S903 | 0.000 | 0.05 | | 0.227 | 18.166 | 0.7 | 4.2 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 41.617 | 61.751 | 0.1 | 4.9 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 0.816 | 0.4 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.06 | | 0.003 | 4.695 | 0.6 | 1.1 | OK |
| 13.001 | S1301 | 0.000 | 0.06 | | 0.011 | 7.349 | 0.9 | 1.7 | OK |
| 12.001 | S1201 | 0.000 | 0.05 | | 0.008 | 14.289 | 0.9 | 3.3 | OK |
| 12.002 | S1202 | 0.000 | 0.11 | | 0.028 | 19.596 | 0.7 | 4.6 | OK |
| 12.003 | S1203 | 0.000 | 0.09 | | 0.037 | 19.596 | 0.8 | 4.6 | OK |
| 12.004 | S1204 | 0.000 | 0.07 | | 0.021 | 23.679 | 1.2 | 5.5 | OK |
| 14.000 | S1400 | 0.000 | 0.06 | | 0.003 | 4.899 | 0.6 | 1.1 | OK |

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## Summary Wizard of 180 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.04 | | 0.007 | 8.778 | 0.7 | 2.0 | OK |
| 15.000 | S1500 | 0.000 | 0.03 | | 0.002 | 1.837 | 0.4 | 0.4 | OK |
| 15.001 | S1501 | 0.000 | 0.03 | | 0.005 | 4.899 | 1.0 | 1.1 | OK |
| 14.002 | S1402 | 0.000 | 0.04 | | 0.023 | 16.330 | 1.4 | 3.8 | OK |
| 12.005 | 1205 | 0.000 | 0.12 | | 0.081 | 44.500 | 1.5 | 10.3 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 46.868 | 84.477 | 0.2 | 5.2 | OK |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.005 | 6.940 | 0.9 | 1.6 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 0.011 | 7.757 | 1.1 | 1.8 | OK |
| 1.009 | S109 | 0.000 | 0.32 | | 2.515 | 90.933 | 1.0 | 5.3 | SURCHARGED |

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## Summary Wizard of 240 minute 2 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.680 | 31.787 | -0.133 | 0.000 |
| 1.001 | S101 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.680 | 31.715 | -0.135 | 0.000 |
| 2.000 | S200 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.600 | 31.495 | -0.135 | 0.000 |
| 1.002 | S102 | 240 minute 2 year Winter I+0% | 240 | 80 | 32.630 | 31.246 | -0.199 | 0.000 |
| 3.000 | S300 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.550 | 31.855 | -0.145 | 0.000 |
| 1.003 | S103 | 240 minute 2 year Winter I+0% | 240 | 80 | 32.600 | 31.076 | -0.199 | 0.000 |
| 4.000 | S400 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.550 | 31.708 | -0.142 | 0.000 |
| 4.001 | S401 | 240 minute 2 year Winter I+0% | 240 | 84 | 32.550 | 30.619 | -0.131 | 0.000 |
| 1.004 | S104 | 240 minute 2 year Winter I+0% | 240 | 77 | 32.600 | 30.355 | -0.175 | 0.000 |
| 1.005 | S105 | 240 minute 2 year Winter I+0% | 240 | 70 | 32.600 | 30.355 | -0.155 | 0.000 |
| 5.000 | S500 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.550 | 31.862 | -0.138 | 0.000 |
| 5.001 | S501 | 240 minute 2 year Winter I+0% | 240 | 80 | 32.665 | 31.153 | -0.137 | 0.000 |
| 6.000 | S600 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 240 minute 2 year Winter I+0% | 240 | 80 | 32.665 | 31.142 | -0.148 | 0.000 |
| 5.002 | S502 | 240 minute 2 year Winter I+0% | 240 | 80 | 32.665 | 30.854 | -0.196 | 0.000 |
| 5.003 | S503 | 240 minute 2 year Winter I+0% | 240 | 83 | 32.680 | 30.655 | -0.200 | 0.000 |
| 7.000 | S700 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.680 | 31.904 | -0.126 | 0.000 |
| 7.001 | S701 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.635 | 31.825 | -0.120 | 0.000 |
| 5.004 | S504 | 240 minute 2 year Winter I+0% | 240 | 74 | 32.635 | 30.355 | -0.190 | 0.000 |

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## Summary Wizard of 240 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.03 | | 0.002 | 2.892 | 0.5 | 0.5 | OK |
| 1.001 | S101 | 0.02 | | 0.005 | 4.449 | 1.0 | 0.8 | OK |
| 2.000 | S200 | 0.02 | | 0.002 | 2.892 | 0.6 | 0.5 | OK |
| 1.002 | S102 | 0.03 | | 0.006 | 8.897 | 0.6 | 1.6 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 1.779 | 0.7 | 0.3 | OK |
| 1.003 | S103 | 0.03 | | 0.018 | 16.237 | 1.1 | 2.8 | OK |
| 4.000 | S400 | 0.01 | | 0.001 | 3.336 | 1.3 | 0.6 | OK |
| 4.001 | S401 | 0.04 | | 0.003 | 4.671 | 0.6 | 0.8 | OK |
| 1.004 | S104 | 0.09 | | 0.043 | 23.133 | 0.4 | 4.0 | OK |
| 1.005 | S105 | 0.04 | | 0.601 | 24.229 | 0.4 | 4.1 | OK |
| 5.000 | S500 | 0.02 | | 0.001 | 3.114 | 0.9 | 0.5 | OK |
| 5.001 | S501 | 0.02 | | 0.002 | 3.114 | 0.9 | 0.5 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.444 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.444 | 0.2 | 0.1 | OK |
| 5.002 | S502 | 0.04 | | 0.007 | 11.788 | 0.7 | 2.1 | OK |
| 5.003 | S503 | 0.03 | | 0.017 | 13.345 | 1.0 | 2.3 | OK |
| 7.000 | S700 | 0.06 | | 0.003 | 5.784 | 0.6 | 1.0 | OK |
| 7.001 | S701 | 0.09 | | 0.014 | 8.676 | 0.6 | 1.5 | OK |
| 5.004 | S504 | 0.06 | | 0.187 | 22.021 | 0.5 | 3.9 | OK |

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## Summary Wizard of 240 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 240 minute 2 year Winter I+0% | 240 | 80 | 32.525 | 31.204 | -0.146 |
| 1.006 | S106 | 240 minute 2 year Winter I+0% | 240 | 70 | 32.500 | 30.355 | -1.291 |
| 9.000 | S900 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 240 minute 2 year Winter I+0% | 240 | 80 | 32.665 | 31.025 | -0.195 |
| 9.002 | S902 | 240 minute 2 year Winter I+0% | 240 | 80 | 32.640 | 30.785 | -0.200 |
| 11.000 | S1100 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.680 | 31.568 | -0.132 |
| 9.003 | S903 | 240 minute 2 year Winter I+0% | 240 | 69 | 32.630 | 30.355 | -0.140 |
| 1.007 | S107 | 240 minute 2 year Winter I+0% | 240 | 70 | 32.500 | 30.355 | -1.181 |
| 12.000 | S1200 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.635 | 31.853 | -0.147 |
| 13.000 | S1300 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.635 | 31.872 | -0.128 |
| 13.001 | S1301 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.635 | 31.781 | -0.129 |
| 12.001 | S1201 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.635 | 31.439 | -0.196 |
| 12.002 | S1202 | 240 minute 2 year Winter I+0% | 240 | 80 | 32.680 | 31.080 | -0.180 |
| 12.003 | S1203 | 240 minute 2 year Winter I+0% | 240 | 80 | 32.660 | 30.985 | -0.185 |
| 12.004 | S1204 | 240 minute 2 year Winter I+0% | 240 | 80 | 32.660 | 30.844 | -0.191 |
| 14.000 | S1400 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.650 | 31.646 | -0.129 |
| 14.001 | S1401 | 240 minute 2 year Winter I+0% | 240 | 80 | 32.680 | 31.297 | -0.198 |
| 15.000 | S1500 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.680 | 31.666 | -0.134 |
| 15.001 | S1501 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.600 | 31.621 | -0.134 |
| 14.002 | S1402 | 240 minute 2 year Winter I+0% | 240 | 80 | 32.600 | 31.041 | -0.199 |
| 12.005 | 1205 | 240 minute 2 year Winter I+0% | 240 | 85 | 32.600 | 30.528 | -0.177 |
| 1.008 | S108 | 240 minute 2 year Winter I+0% | 240 | 70 | 32.550 | 30.355 | 0.000 |
| 16.000 | S1600 | 240 minute 2 year Winter I+0% | 240 | 79 | 32.545 | 31.445 | -0.205 |
| 16.001 | S1601 | 240 minute 2 year Winter I+0% | 240 | 85 | 32.545 | 30.479 | -0.206 |
| 1.009 | S109 | 240 minute 2 year Winter I+0% | 240 | 70 | 32.500 | 30.345 | 0.315 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.112 | 0.4 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.620 | 59.237 | 0.1 | 5.5 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.667 | 0.3 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.444 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.04 | | 0.007 | 11.566 | 0.7 | 2.0 | OK |
| 9.002 | S902 | 0.000 | 0.03 | | 0.019 | 15.347 | 1.3 | 2.7 | OK |
| 11.000 | S1100 | 0.000 | 0.04 | | 0.002 | 3.337 | 0.5 | 0.6 | OK |
| 9.003 | S903 | 0.000 | 0.04 | | 0.231 | 19.796 | 0.6 | 3.5 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 41.897 | 76.153 | 0.0 | 4.5 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 0.889 | 0.3 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.05 | | 0.003 | 5.116 | 0.6 | 0.9 | OK |
| 13.001 | S1301 | 0.000 | 0.05 | | 0.009 | 8.008 | 0.9 | 1.4 | OK |
| 12.001 | S1201 | 0.000 | 0.04 | | 0.007 | 15.571 | 0.9 | 2.7 | OK |
| 12.002 | S1202 | 0.000 | 0.09 | | 0.026 | 21.354 | 0.7 | 3.7 | OK |
| 12.003 | S1203 | 0.000 | 0.07 | | 0.032 | 21.354 | 0.8 | 3.7 | OK |
| 12.004 | S1204 | 0.000 | 0.06 | | 0.018 | 25.803 | 1.2 | 4.5 | OK |
| 14.000 | S1400 | 0.000 | 0.05 | | 0.003 | 5.339 | 0.6 | 0.9 | OK |

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## Summary Wizard of 240 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.03 | | 0.007 | 9.565 | 0.6 | 1.7 | OK |
| 15.000 | S1500 | 0.000 | 0.03 | | 0.002 | 2.002 | 0.4 | 0.4 | OK |
| 15.001 | S1501 | 0.000 | 0.03 | | 0.005 | 5.338 | 1.0 | 0.9 | OK |
| 14.002 | S1402 | 0.000 | 0.03 | | 0.020 | 17.795 | 1.3 | 3.1 | OK |
| 12.005 | 1205 | 0.000 | 0.10 | | 0.073 | 48.491 | 1.4 | 8.5 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 47.132 | 110.377 | 0.2 | 5.2 | OK |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.004 | 7.563 | 0.9 | 1.3 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 0.009 | 8.453 | 1.1 | 1.5 | OK |
| 1.009 | S109 | 0.000 | 0.32 | | 2.522 | 117.952 | 1.0 | 5.3 | SURCHARGED |

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## Summary Wizard of 360 minute 2 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.680 | 31.785 | -0.135 | 0.000 |
| 1.001 | S101 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.680 | 31.712 | -0.138 | 0.000 |
| 2.000 | S200 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.600 | 31.492 | -0.138 | 0.000 |
| 1.002 | S102 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.630 | 31.243 | -0.202 | 0.000 |
| 3.000 | S300 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.550 | 31.854 | -0.146 | 0.000 |
| 1.003 | S103 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.600 | 31.074 | -0.201 | 0.000 |
| 4.000 | S400 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.550 | 31.706 | -0.144 | 0.000 |
| 4.001 | S401 | 360 minute 2 year Winter I+0% | 360 | 95 | 32.550 | 30.617 | -0.133 | 0.000 |
| 1.004 | S104 | 360 minute 2 year Winter I+0% | 360 | 80 | 32.600 | 30.350 | -0.180 | 0.000 |
| 1.005 | S105 | 360 minute 2 year Winter I+0% | 360 | 73 | 32.600 | 30.349 | -0.161 | 0.000 |
| 5.000 | S500 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.550 | 31.859 | -0.141 | 0.000 |
| 5.001 | S501 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.665 | 31.150 | -0.140 | 0.000 |
| 6.000 | S600 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.665 | 30.850 | -0.200 | 0.000 |
| 5.003 | S503 | 360 minute 2 year Winter I+0% | 360 | 94 | 32.680 | 30.653 | -0.202 | 0.000 |
| 7.000 | S700 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.680 | 31.900 | -0.130 | 0.000 |
| 7.001 | S701 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.635 | 31.820 | -0.125 | 0.000 |
| 5.004 | S504 | 360 minute 2 year Winter I+0% | 360 | 80 | 32.635 | 30.350 | -0.195 | 0.000 |

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## Summary Wizard of 360 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.02 | | 0.002 | 3.260 | 0.5 | 0.4 | OK |
| 1.001 | S101 | 0.02 | | 0.004 | 5.015 | 1.0 | 0.6 | OK |
| 2.000 | S200 | 0.02 | | 0.001 | 3.260 | 0.6 | 0.4 | OK |
| 1.002 | S102 | 0.02 | | 0.005 | 10.029 | 0.7 | 1.2 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 2.006 | 0.5 | 0.2 | OK |
| 1.003 | S103 | 0.02 | | 0.016 | 18.303 | 1.1 | 2.1 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 3.761 | 1.0 | 0.4 | OK |
| 4.001 | S401 | 0.03 | | 0.003 | 5.265 | 0.6 | 0.6 | OK |
| 1.004 | S104 | 0.06 | | 0.039 | 26.075 | 0.4 | 3.1 | OK |
| 1.005 | S105 | 0.03 | | 0.586 | 27.329 | 0.4 | 3.1 | OK |
| 5.000 | S500 | 0.01 | | 0.001 | 3.510 | 0.9 | 0.4 | OK |
| 5.001 | S501 | 0.01 | | 0.001 | 3.510 | 0.9 | 0.4 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.499 | 0.1 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.499 | 0.1 | 0.1 | OK |
| 5.002 | S502 | 0.03 | | 0.006 | 13.287 | 0.7 | 1.6 | OK |
| 5.003 | S503 | 0.02 | | 0.015 | 15.042 | 1.0 | 1.8 | OK |
| 7.000 | S700 | 0.04 | | 0.002 | 6.520 | 0.5 | 0.8 | OK |
| 7.001 | S701 | 0.07 | | 0.011 | 9.779 | 0.6 | 1.1 | OK |
| 5.004 | S504 | 0.05 | | 0.176 | 24.821 | 0.5 | 2.9 | OK |

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## Summary Wizard of 360 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.525 | 31.203 | -0.147 |
| 1.006 | S106 | 360 minute 2 year Winter I+0% | 360 | 73 | 32.500 | 30.349 | -1.297 |
| 9.000 | S900 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.665 | 31.021 | -0.199 |
| 9.002 | S902 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.640 | 30.782 | -0.203 |
| 11.000 | S1100 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.680 | 31.566 | -0.134 |
| 9.003 | S903 | 360 minute 2 year Winter I+0% | 360 | 73 | 32.630 | 30.350 | -0.145 |
| 1.007 | S107 | 360 minute 2 year Winter I+0% | 360 | 73 | 32.500 | 30.349 | -1.187 |
| 12.000 | S1200 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.635 | 31.853 | -0.147 |
| 13.000 | S1300 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.635 | 31.869 | -0.131 |
| 13.001 | S1301 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.635 | 31.779 | -0.131 |
| 12.001 | S1201 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.635 | 31.436 | -0.199 |
| 12.002 | S1202 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.680 | 31.073 | -0.187 |
| 12.003 | S1203 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.660 | 30.979 | -0.191 |
| 12.004 | S1204 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.660 | 30.840 | -0.195 |
| 14.000 | S1400 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.650 | 31.644 | -0.131 |
| 14.001 | S1401 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.680 | 31.294 | -0.201 |
| 15.000 | S1500 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.680 | 31.664 | -0.136 |
| 15.001 | S1501 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.600 | 31.619 | -0.136 |
| 14.002 | S1402 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.600 | 31.038 | -0.202 |
| 12.005 | 1205 | 360 minute 2 year Winter I+0% | 360 | 96 | 32.600 | 30.521 | -0.184 |
| 1.008 | S108 | 360 minute 2 year Winter I+0% | 360 | 73 | 32.550 | 30.349 | -0.006 |
| 16.000 | S1600 | 360 minute 2 year Winter I+0% | 360 | 93 | 32.545 | 31.440 | -0.210 |
| 16.001 | S1601 | 360 minute 2 year Winter I+0% | 360 | 96 | 32.545 | 30.474 | -0.211 |
| 1.009 | S109 | 360 minute 2 year Winter I+0% | 360 | 73 | 32.500 | 30.342 | 0.312 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.253 | 0.3 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.599 | 70.494 | 0.1 | 4.5 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.751 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.499 | 0.1 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.03 | | 0.006 | 13.036 | 0.6 | 1.5 | OK |
| 9.002 | S902 | 0.000 | 0.02 | | 0.017 | 17.298 | 1.3 | 2.0 | OK |
| 11.000 | S1100 | 0.000 | 0.03 | | 0.002 | 3.761 | 0.5 | 0.4 | OK |
| 9.003 | S903 | 0.000 | 0.03 | | 0.222 | 22.313 | 0.6 | 2.6 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 41.234 | 96.409 | 0.0 | 3.9 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.002 | 0.3 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.04 | | 0.002 | 5.767 | 0.5 | 0.7 | OK |
| 13.001 | S1301 | 0.000 | 0.04 | | 0.008 | 9.027 | 0.8 | 1.1 | OK |
| 12.001 | S1201 | 0.000 | 0.03 | | 0.006 | 17.552 | 0.8 | 2.1 | OK |
| 12.002 | S1202 | 0.000 | 0.07 | | 0.021 | 24.071 | 0.6 | 2.8 | OK |
| 12.003 | S1203 | 0.000 | 0.05 | | 0.027 | 24.071 | 0.8 | 2.8 | OK |
| 12.004 | S1204 | 0.000 | 0.04 | | 0.015 | 29.086 | 1.1 | 3.4 | OK |
| 14.000 | S1400 | 0.000 | 0.04 | | 0.002 | 6.018 | 0.6 | 0.7 | OK |

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## Summary Wizard of 360 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.03 | | 0.006 | 10.782 | 0.6 | 1.3 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.001 | 2.257 | 0.4 | 0.3 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.004 | 6.018 | 1.0 | 0.7 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.018 | 20.059 | 1.3 | 2.3 | OK |
| 12.005 | 1205 | 0.000 | 0.08 | | 0.062 | 54.662 | 1.3 | 6.4 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 46.507 | 150.356 | 0.2 | 5.1 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.003 | 8.525 | 0.9 | 1.0 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.006 | 9.528 | 1.1 | 1.1 | OK |
| 1.009 | S109 | 0.000 | 0.32 | | 2.505 | 159.731 | 1.0 | 5.3 | SURCHARGED |

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## Summary Wizard of 480 minute 2 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.680 | 31.783 | -0.137 | 0.000 |
| 1.001 | S101 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.680 | 31.710 | -0.140 | 0.000 |
| 2.000 | S200 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.600 | 31.490 | -0.140 | 0.000 |
| 1.002 | S102 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.630 | 31.240 | -0.205 | 0.000 |
| 3.000 | S300 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.550 | 31.853 | -0.147 | 0.000 |
| 1.003 | S103 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.600 | 31.071 | -0.204 | 0.000 |
| 4.000 | S400 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.550 | 31.705 | -0.145 | 0.000 |
| 4.001 | S401 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.550 | 30.616 | -0.134 | 0.000 |
| 1.004 | S104 | 480 minute 2 year Winter I+0% | 480 | 90 | 32.600 | 30.335 | -0.195 | 0.000 |
| 1.005 | S105 | 480 minute 2 year Winter I+0% | 480 | 78 | 32.600 | 30.334 | -0.176 | 0.000 |
| 5.000 | S500 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.550 | 31.857 | -0.143 | 0.000 |
| 5.001 | S501 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.665 | 31.148 | -0.142 | 0.000 |
| 6.000 | S600 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.665 | 30.849 | -0.201 | 0.000 |
| 5.003 | S503 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.680 | 30.649 | -0.206 | 0.000 |
| 7.000 | S700 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.680 | 31.898 | -0.132 | 0.000 |
| 7.001 | S701 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.635 | 31.817 | -0.128 | 0.000 |
| 5.004 | S504 | 480 minute 2 year Winter I+0% | 480 | 90 | 32.635 | 30.335 | -0.210 | 0.000 |

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## Summary Wizard of 480 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.02 | | 0.001 | 3.538 | 0.5 | 0.3 | OK |
| 1.001 | S101 | 0.01 | | 0.002 | 5.442 | 1.0 | 0.5 | OK |
| 2.000 | S200 | 0.01 | | 0.001 | 3.537 | 0.6 | 0.3 | OK |
| 1.002 | S102 | 0.02 | | 0.004 | 10.884 | 0.7 | 1.0 | OK |
| 3.000 | S300 | 0.00 | | 0.000 | 2.176 | 0.4 | 0.2 | OK |
| 1.003 | S103 | 0.02 | | 0.014 | 19.863 | 1.1 | 1.7 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 4.081 | 0.8 | 0.4 | OK |
| 4.001 | S401 | 0.02 | | 0.002 | 5.714 | 0.6 | 0.5 | OK |
| 1.004 | S104 | 0.05 | | 0.029 | 28.297 | 0.4 | 2.5 | OK |
| 1.005 | S105 | 0.02 | | 0.547 | 29.658 | 0.4 | 2.5 | OK |
| 5.000 | S500 | 0.01 | | 0.000 | 3.809 | 0.7 | 0.3 | OK |
| 5.001 | S501 | 0.01 | | 0.001 | 3.809 | 0.7 | 0.3 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.540 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.539 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.02 | | 0.005 | 14.417 | 0.7 | 1.3 | OK |
| 5.003 | S503 | 0.02 | | 0.012 | 16.321 | 1.0 | 1.4 | OK |
| 7.000 | S700 | 0.04 | | 0.002 | 7.075 | 0.5 | 0.6 | OK |
| 7.001 | S701 | 0.05 | | 0.010 | 10.613 | 0.6 | 0.9 | OK |
| 5.004 | S504 | 0.04 | | 0.150 | 26.934 | 0.5 | 2.4 | OK |

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## Summary Wizard of 480 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.525 | 31.202 | -0.148 |
| 1.006 | S106 | 480 minute 2 year Winter I+0% | 480 | 78 | 32.500 | 30.334 | -1.312 |
| 9.000 | S900 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.665 | 31.019 | -0.201 |
| 9.002 | S902 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.640 | 30.778 | -0.207 |
| 11.000 | S1100 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.680 | 31.565 | -0.135 |
| 9.003 | S903 | 480 minute 2 year Winter I+0% | 480 | 78 | 32.630 | 30.335 | -0.160 |
| 1.007 | S107 | 480 minute 2 year Winter I+0% | 480 | 78 | 32.500 | 30.334 | -1.202 |
| 12.000 | S1200 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.635 | 31.852 | -0.148 |
| 13.000 | S1300 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.635 | 31.867 | -0.133 |
| 13.001 | S1301 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.635 | 31.777 | -0.133 |
| 12.001 | S1201 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.635 | 31.434 | -0.201 |
| 12.002 | S1202 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.680 | 31.069 | -0.191 |
| 12.003 | S1203 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.660 | 30.975 | -0.195 |
| 12.004 | S1204 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.660 | 30.837 | -0.198 |
| 14.000 | S1400 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.650 | 31.642 | -0.133 |
| 14.001 | S1401 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.680 | 31.293 | -0.202 |
| 15.000 | S1500 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.680 | 31.661 | -0.139 |
| 15.001 | S1501 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.600 | 31.616 | -0.139 |
| 14.002 | S1402 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.600 | 31.035 | -0.205 |
| 12.005 | 1205 | 480 minute 2 year Winter I+0% | 480 | 102 | 32.600 | 30.516 | -0.189 |
| 1.008 | S108 | 480 minute 2 year Winter I+0% | 480 | 78 | 32.550 | 30.334 | -0.021 |
| 16.000 | S1600 | 480 minute 2 year Winter I+0% | 480 | 101 | 32.545 | 31.437 | -0.213 |
| 16.001 | S1601 | 480 minute 2 year Winter I+0% | 480 | 102 | 32.545 | 30.472 | -0.213 |
| 1.009 | S109 | 480 minute 2 year Winter I+0% | 480 | 78 | 32.500 | 30.331 | 0.301 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.359 | 0.3 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.547 | 76.575 | 0.1 | 3.9 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.814 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.540 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.03 | | 0.006 | 14.144 | 0.6 | 1.2 | OK |
| 9.002 | S902 | 0.000 | 0.02 | | 0.013 | 18.769 | 1.3 | 1.6 | OK |
| 11.000 | S1100 | 0.000 | 0.02 | | 0.002 | 4.082 | 0.5 | 0.4 | OK |
| 9.003 | S903 | 0.000 | 0.03 | | 0.198 | 24.212 | 0.6 | 2.1 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 39.495 | 104.831 | 0.0 | 3.8 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.088 | 0.2 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.03 | | 0.002 | 6.259 | 0.5 | 0.5 | OK |
| 13.001 | S1301 | 0.000 | 0.03 | | 0.007 | 9.797 | 0.8 | 0.9 | OK |
| 12.001 | S1201 | 0.000 | 0.03 | | 0.006 | 19.048 | 0.8 | 1.7 | OK |
| 12.002 | S1202 | 0.000 | 0.05 | | 0.018 | 26.123 | 0.6 | 2.3 | OK |
| 12.003 | S1203 | 0.000 | 0.04 | | 0.024 | 26.123 | 0.7 | 2.3 | OK |
| 12.004 | S1204 | 0.000 | 0.03 | | 0.014 | 31.565 | 1.0 | 2.8 | OK |
| 14.000 | S1400 | 0.000 | 0.03 | | 0.002 | 6.531 | 0.5 | 0.6 | OK |

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## Summary Wizard of 480 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.02 | | 0.005 | 11.701 | 0.6 | 1.0 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.001 | 2.449 | 0.4 | 0.2 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.003 | 6.530 | 1.1 | 0.6 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.015 | 21.769 | 1.3 | 1.9 | OK |
| 12.005 | 1205 | 0.000 | 0.06 | | 0.054 | 59.321 | 1.3 | 5.2 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 44.871 | 166.249 | 0.2 | 5.0 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.002 | 9.252 | 0.8 | 0.8 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.004 | 10.340 | 0.9 | 0.9 | OK |
| 1.009 | S109 | 0.000 | 0.32 | | 2.447 | 176.566 | 1.0 | 5.3 | SURCHARGED |

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## Summary Wizard of 600 minute 2 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.680 | 31.781 | -0.139 | 0.000 |
| 1.001 | S101 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.680 | 31.708 | -0.142 | 0.000 |
| 2.000 | S200 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.600 | 31.488 | -0.142 | 0.000 |
| 1.002 | S102 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.630 | 31.237 | -0.208 | 0.000 |
| 3.000 | S300 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.550 | 31.853 | -0.147 | 0.000 |
| 1.003 | S103 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.600 | 31.068 | -0.207 | 0.000 |
| 4.000 | S400 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.550 | 31.704 | -0.146 | 0.000 |
| 4.001 | S401 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.550 | 30.614 | -0.136 | 0.000 |
| 1.004 | S104 | 600 minute 2 year Winter I+0% | 600 | 95 | 32.600 | 30.317 | -0.213 | 0.000 |
| 1.005 | S105 | 600 minute 2 year Winter I+0% | 600 | 82 | 32.600 | 30.317 | -0.193 | 0.000 |
| 5.000 | S500 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.550 | 31.856 | -0.144 | 0.000 |
| 5.001 | S501 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.665 | 31.147 | -0.143 | 0.000 |
| 6.000 | S600 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.665 | 30.847 | -0.203 | 0.000 |
| 5.003 | S503 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.680 | 30.647 | -0.208 | 0.000 |
| 7.000 | S700 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.680 | 31.897 | -0.133 | 0.000 |
| 7.001 | S701 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.635 | 31.816 | -0.129 | 0.000 |
| 5.004 | S504 | 600 minute 2 year Winter I+0% | 600 | 95 | 32.635 | 30.317 | -0.228 | 0.000 |

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## Summary Wizard of 600 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.02 | | 0.001 | 3.769 | 0.5 | 0.3 | OK |
| 1.001 | S101 | 0.01 | | 0.002 | 5.797 | 0.9 | 0.4 | OK |
| 2.000 | S200 | 0.01 | | 0.001 | 3.768 | 0.6 | 0.3 | OK |
| 1.002 | S102 | 0.02 | | 0.004 | 11.594 | 0.7 | 0.8 | OK |
| 3.000 | S300 | 0.00 | | 0.000 | 2.318 | 0.4 | 0.2 | OK |
| 1.003 | S103 | 0.02 | | 0.011 | 21.158 | 1.1 | 1.5 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 4.347 | 0.7 | 0.3 | OK |
| 4.001 | S401 | 0.02 | | 0.002 | 6.086 | 0.6 | 0.4 | OK |
| 1.004 | S104 | 0.05 | | 0.024 | 30.143 | 0.4 | 2.1 | OK |
| 1.005 | S105 | 0.02 | | 0.501 | 31.593 | 0.4 | 2.2 | OK |
| 5.000 | S500 | 0.01 | | 0.000 | 4.058 | 0.6 | 0.3 | OK |
| 5.001 | S501 | 0.01 | | 0.000 | 4.058 | 0.6 | 0.3 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.572 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.569 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.02 | | 0.005 | 15.353 | 0.7 | 1.1 | OK |
| 5.003 | S503 | 0.02 | | 0.010 | 17.381 | 1.0 | 1.2 | OK |
| 7.000 | S700 | 0.03 | | 0.002 | 7.537 | 0.5 | 0.5 | OK |
| 7.001 | S701 | 0.05 | | 0.009 | 11.306 | 0.5 | 0.8 | OK |
| 5.004 | S504 | 0.03 | | 0.119 | 28.687 | 0.4 | 2.0 | OK |

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## Summary Wizard of 600 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.525 | 31.202 | -0.148 |
| 1.006 | S106 | 600 minute 2 year Winter I+0% | 600 | 82 | 32.500 | 30.317 | -1.329 |
| 9.000 | S900 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.665 | 31.018 | -0.202 |
| 9.002 | S902 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.640 | 30.775 | -0.210 |
| 11.000 | S1100 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.680 | 31.563 | -0.137 |
| 9.003 | S903 | 600 minute 2 year Winter I+0% | 600 | 82 | 32.630 | 30.317 | -0.178 |
| 1.007 | S107 | 600 minute 2 year Winter I+0% | 600 | 82 | 32.500 | 30.317 | -1.219 |
| 12.000 | S1200 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.635 | 31.852 | -0.148 |
| 13.000 | S1300 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.635 | 31.866 | -0.134 |
| 13.001 | S1301 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.635 | 31.776 | -0.134 |
| 12.001 | S1201 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.635 | 31.433 | -0.202 |
| 12.002 | S1202 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.680 | 31.066 | -0.194 |
| 12.003 | S1203 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.660 | 30.973 | -0.197 |
| 12.004 | S1204 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.660 | 30.835 | -0.200 |
| 14.000 | S1400 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.650 | 31.641 | -0.134 |
| 14.001 | S1401 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.680 | 31.289 | -0.206 |
| 15.000 | S1500 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.680 | 31.660 | -0.140 |
| 15.001 | S1501 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.600 | 31.615 | -0.140 |
| 14.002 | S1402 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.600 | 31.032 | -0.208 |
| 12.005 | 1205 | 600 minute 2 year Winter I+0% | 600 | 107 | 32.600 | 30.513 | -0.192 |
| 1.008 | S108 | 600 minute 2 year Winter I+0% | 600 | 82 | 32.550 | 30.317 | -0.038 |
| 16.000 | S1600 | 600 minute 2 year Winter I+0% | 600 | 106 | 32.545 | 31.435 | -0.215 |
| 16.001 | S1601 | 600 minute 2 year Winter I+0% | 600 | 107 | 32.545 | 30.470 | -0.215 |
| 1.009 | S109 | 600 minute 2 year Winter I+0% | 600 | 82 | 32.500 | 30.315 | 0.285 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.447 | 0.2 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.487 | 81.426 | 0.1 | 3.5 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.867 | 0.1 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.570 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.02 | | 0.005 | 15.062 | 0.6 | 1.1 | OK |
| 9.002 | S902 | 0.000 | 0.01 | | 0.010 | 19.990 | 1.3 | 1.4 | OK |
| 11.000 | S1100 | 0.000 | 0.02 | | 0.001 | 4.348 | 0.5 | 0.3 | OK |
| 9.003 | S903 | 0.000 | 0.02 | | 0.171 | 25.787 | 0.6 | 1.8 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 37.453 | 111.389 | 0.0 | 3.5 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.158 | 0.2 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.03 | | 0.002 | 6.668 | 0.5 | 0.5 | OK |
| 13.001 | S1301 | 0.000 | 0.03 | | 0.006 | 10.436 | 0.8 | 0.7 | OK |
| 12.001 | S1201 | 0.000 | 0.02 | | 0.005 | 20.291 | 0.8 | 1.4 | OK |
| 12.002 | S1202 | 0.000 | 0.05 | | 0.017 | 27.828 | 0.6 | 2.0 | OK |
| 12.003 | S1203 | 0.000 | 0.04 | | 0.022 | 27.828 | 0.7 | 2.0 | OK |
| 12.004 | S1204 | 0.000 | 0.03 | | 0.013 | 33.626 | 1.0 | 2.4 | OK |
| 14.000 | S1400 | 0.000 | 0.03 | | 0.002 | 6.958 | 0.5 | 0.5 | OK |

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## Summary Wizard of 600 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.02 | | 0.004 | 12.465 | 0.6 | 0.9 | OK |
| 15.000 | S1500 | 0.000 | 0.01 | | 0.001 | 2.609 | 0.4 | 0.2 | OK |
| 15.001 | S1501 | 0.000 | 0.01 | | 0.002 | 6.956 | 1.1 | 0.5 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.012 | 23.190 | 1.3 | 1.6 | OK |
| 12.005 | 1205 | 0.000 | 0.05 | | 0.048 | 63.193 | 1.2 | 4.4 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 42.957 | 176.900 | 0.2 | 4.9 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.002 | 9.856 | 0.7 | 0.7 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.003 | 11.015 | 0.8 | 0.8 | OK |
| 1.009 | S109 | 0.000 | 0.31 | | 2.365 | 187.912 | 1.0 | 5.2 | SURCHARGED |

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## Summary Wizard of 720 minute 2 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.680 | 31.780 | -0.140 | 0.000 |
| 1.001 | S101 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.680 | 31.707 | -0.143 | 0.000 |
| 2.000 | S200 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.600 | 31.487 | -0.143 | 0.000 |
| 1.002 | S102 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.630 | 31.235 | -0.210 | 0.000 |
| 3.000 | S300 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.550 | 31.852 | -0.148 | 0.000 |
| 1.003 | S103 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.600 | 31.066 | -0.209 | 0.000 |
| 4.000 | S400 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.550 | 31.704 | -0.146 | 0.000 |
| 4.001 | S401 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.550 | 30.613 | -0.137 | 0.000 |
| 1.004 | S104 | 720 minute 2 year Winter I+0% | 720 | 100 | 32.600 | 30.299 | -0.231 | 0.000 |
| 1.005 | S105 | 720 minute 2 year Winter I+0% | 720 | 86 | 32.600 | 30.299 | -0.211 | 0.000 |
| 5.000 | S500 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.550 | 31.855 | -0.145 | 0.000 |
| 5.001 | S501 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.665 | 31.146 | -0.144 | 0.000 |
| 6.000 | S600 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.665 | 30.845 | -0.205 | 0.000 |
| 5.003 | S503 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.680 | 30.645 | -0.210 | 0.000 |
| 7.000 | S700 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.680 | 31.896 | -0.134 | 0.000 |
| 7.001 | S701 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.635 | 31.814 | -0.131 | 0.000 |
| 5.004 | S504 | 720 minute 2 year Winter I+0% | 720 | 102 | 32.635 | 30.299 | -0.246 | 0.000 |

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## Summary Wizard of 720 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.01 | | 0.001 | 3.968 | 0.5 | 0.2 | OK |
| 1.001 | S101 | 0.01 | | 0.001 | 6.104 | 0.8 | 0.4 | OK |
| 2.000 | S200 | 0.01 | | 0.000 | 3.968 | 0.5 | 0.2 | OK |
| 1.002 | S102 | 0.01 | | 0.003 | 12.208 | 0.7 | 0.7 | OK |
| 3.000 | S300 | 0.00 | | 0.000 | 2.441 | 0.3 | 0.1 | OK |
| 1.003 | S103 | 0.01 | | 0.009 | 22.278 | 1.1 | 1.3 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 4.577 | 0.6 | 0.3 | OK |
| 4.001 | S401 | 0.02 | | 0.002 | 6.408 | 0.6 | 0.4 | OK |
| 1.004 | S104 | 0.04 | | 0.019 | 31.739 | 0.4 | 1.9 | OK |
| 1.005 | S105 | 0.02 | | 0.453 | 33.265 | 0.4 | 1.9 | OK |
| 5.000 | S500 | 0.01 | | 0.000 | 4.272 | 0.6 | 0.3 | OK |
| 5.001 | S501 | 0.01 | | 0.000 | 4.272 | 0.6 | 0.3 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.589 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.574 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.02 | | 0.004 | 16.140 | 0.7 | 0.9 | OK |
| 5.003 | S503 | 0.01 | | 0.008 | 18.276 | 1.0 | 1.1 | OK |
| 7.000 | S700 | 0.03 | | 0.002 | 7.936 | 0.5 | 0.5 | OK |
| 7.001 | S701 | 0.04 | | 0.008 | 11.905 | 0.5 | 0.7 | OK |
| 5.004 | S504 | 0.03 | | 0.088 | 30.180 | 0.4 | 1.8 | OK |

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## Summary Wizard of 720 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.525 | 31.202 | -0.148 |
| 1.006 | S106 | 720 minute 2 year Winter I+0% | 720 | 86 | 32.500 | 30.299 | -1.347 |
| 9.000 | S900 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.665 | 31.016 | -0.204 |
| 9.002 | S902 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.640 | 30.773 | -0.212 |
| 11.000 | S1100 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.680 | 31.562 | -0.138 |
| 9.003 | S903 | 720 minute 2 year Winter I+0% | 720 | 86 | 32.630 | 30.299 | -0.196 |
| 1.007 | S107 | 720 minute 2 year Winter I+0% | 720 | 86 | 32.500 | 30.299 | -1.237 |
| 12.000 | S1200 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.635 | 31.852 | -0.148 |
| 13.000 | S1300 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.635 | 31.866 | -0.134 |
| 13.001 | S1301 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.635 | 31.775 | -0.135 |
| 12.001 | S1201 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.635 | 31.430 | -0.205 |
| 12.002 | S1202 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.680 | 31.064 | -0.196 |
| 12.003 | S1203 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.660 | 30.972 | -0.198 |
| 12.004 | S1204 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.660 | 30.834 | -0.201 |
| 14.000 | S1400 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.650 | 31.640 | -0.135 |
| 14.001 | S1401 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.680 | 31.287 | -0.208 |
| 15.000 | S1500 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.680 | 31.659 | -0.141 |
| 15.001 | S1501 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.600 | 31.613 | -0.142 |
| 14.002 | S1402 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.600 | 31.030 | -0.210 |
| 12.005 | 1205 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.600 | 30.511 | -0.194 |
| 1.008 | S108 | 720 minute 2 year Winter I+0% | 720 | 86 | 32.550 | 30.299 | -0.056 |
| 16.000 | S1600 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.545 | 31.434 | -0.216 |
| 16.001 | S1601 | 720 minute 2 year Winter I+0% | 720 | 110 | 32.545 | 30.469 | -0.216 |
| 1.009 | S109 | 720 minute 2 year Winter I+0% | 720 | 86 | 32.500 | 30.298 | 0.268 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.523 | 0.2 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.424 | 85.787 | 0.1 | 3.2 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.911 | 0.1 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.583 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.02 | | 0.005 | 15.841 | 0.6 | 0.9 | OK |
| 9.002 | S902 | 0.000 | 0.01 | | 0.008 | 21.029 | 1.2 | 1.2 | OK |
| 11.000 | S1100 | 0.000 | 0.02 | | 0.001 | 4.579 | 0.5 | 0.3 | OK |
| 9.003 | S903 | 0.000 | 0.02 | | 0.142 | 27.133 | 0.6 | 1.6 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 35.344 | 117.446 | 0.0 | 3.4 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.218 | 0.2 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.02 | | 0.002 | 7.021 | 0.5 | 0.4 | OK |
| 13.001 | S1301 | 0.000 | 0.02 | | 0.006 | 10.989 | 0.8 | 0.6 | OK |
| 12.001 | S1201 | 0.000 | 0.02 | | 0.004 | 21.364 | 0.8 | 1.3 | OK |
| 12.002 | S1202 | 0.000 | 0.04 | | 0.015 | 29.301 | 0.6 | 1.7 | OK |
| 12.003 | S1203 | 0.000 | 0.03 | | 0.020 | 29.301 | 0.7 | 1.7 | OK |
| 12.004 | S1204 | 0.000 | 0.03 | | 0.012 | 35.405 | 1.0 | 2.1 | OK |
| 14.000 | S1400 | 0.000 | 0.02 | | 0.002 | 7.326 | 0.5 | 0.4 | OK |

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## Summary Wizard of 720 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.02 | | 0.004 | 13.125 | 0.6 | 0.8 | OK |
| 15.000 | S1500 | 0.000 | 0.01 | | 0.001 | 2.747 | 0.4 | 0.2 | OK |
| 15.001 | S1501 | 0.000 | 0.01 | | 0.001 | 7.325 | 1.0 | 0.4 | OK |
| 14.002 | S1402 | 0.000 | 0.01 | | 0.010 | 24.417 | 1.3 | 1.4 | OK |
| 12.005 | 1205 | 0.000 | 0.05 | | 0.045 | 66.537 | 1.2 | 3.9 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 40.983 | 186.425 | 0.2 | 4.8 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.001 | 10.378 | 0.6 | 0.6 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.002 | 11.598 | 0.7 | 0.7 | OK |
| 1.009 | S109 | 0.000 | 0.31 | | 2.277 | 198.020 | 0.9 | 5.1 | SURCHARGED |

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## Summary Wizard of 960 minute 2 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.680 | 31.778 | -0.142 | 0.000 |
| 1.001 | S101 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.680 | 31.706 | -0.144 | 0.000 |
| 2.000 | S200 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.600 | 31.486 | -0.144 | 0.000 |
| 1.002 | S102 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.630 | 31.232 | -0.213 | 0.000 |
| 3.000 | S300 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.550 | 31.852 | -0.148 | 0.000 |
| 1.003 | S103 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.600 | 31.063 | -0.212 | 0.000 |
| 4.000 | S400 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.550 | 31.703 | -0.147 | 0.000 |
| 4.001 | S401 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.550 | 30.610 | -0.140 | 0.000 |
| 1.004 | S104 | 960 minute 2 year Winter I+0% | 960 | 113 | 32.600 | 30.267 | -0.263 | 0.000 |
| 1.005 | S105 | 960 minute 2 year Winter I+0% | 960 | 91 | 32.600 | 30.264 | -0.246 | 0.000 |
| 5.000 | S500 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.550 | 31.854 | -0.146 | 0.000 |
| 5.001 | S501 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.665 | 31.145 | -0.145 | 0.000 |
| 6.000 | S600 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.665 | 30.841 | -0.209 | 0.000 |
| 5.003 | S503 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.680 | 30.642 | -0.213 | 0.000 |
| 7.000 | S700 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.680 | 31.895 | -0.135 | 0.000 |
| 7.001 | S701 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.635 | 31.813 | -0.132 | 0.000 |
| 5.004 | S504 | 960 minute 2 year Winter I+0% | 960 | 116 | 32.635 | 30.276 | -0.269 | 0.000 |

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## Summary Wizard of 960 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.01 | | 0.000 | 4.304 | 0.4 | 0.2 | OK |
| 1.001 | S101 | 0.01 | | 0.000 | 6.621 | 0.6 | 0.3 | OK |
| 2.000 | S200 | 0.01 | | 0.000 | 4.303 | 0.4 | 0.2 | OK |
| 1.002 | S102 | 0.01 | | 0.002 | 13.241 | 0.6 | 0.6 | OK |
| 3.000 | S300 | 0.00 | | 0.000 | 2.646 | 0.3 | 0.1 | OK |
| 1.003 | S103 | 0.01 | | 0.007 | 24.164 | 1.0 | 1.1 | OK |
| 4.000 | S400 | 0.00 | | 0.000 | 4.965 | 0.5 | 0.2 | OK |
| 4.001 | S401 | 0.01 | | 0.001 | 6.951 | 0.6 | 0.3 | OK |
| 1.004 | S104 | 0.03 | | 0.009 | 34.425 | 0.3 | 1.5 | OK |
| 1.005 | S105 | 0.01 | | 0.362 | 36.080 | 0.3 | 1.5 | OK |
| 5.000 | S500 | 0.01 | | 0.000 | 4.634 | 0.5 | 0.2 | OK |
| 5.001 | S501 | 0.01 | | 0.000 | 4.634 | 0.5 | 0.2 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.619 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.600 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.01 | | 0.003 | 17.485 | 0.7 | 0.8 | OK |
| 5.003 | S503 | 0.01 | | 0.006 | 19.801 | 0.9 | 0.9 | OK |
| 7.000 | S700 | 0.02 | | 0.002 | 8.609 | 0.5 | 0.4 | OK |
| 7.001 | S701 | 0.03 | | 0.007 | 12.914 | 0.5 | 0.6 | OK |
| 5.004 | S504 | 0.02 | | 0.046 | 32.714 | 0.4 | 1.4 | OK |

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## Summary Wizard of 960 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.525 | 31.201 | -0.149 |
| 1.006 | S106 | 960 minute 2 year Winter I+0% | 960 | 91 | 32.500 | 30.264 | -1.382 |
| 9.000 | S900 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.665 | 31.012 | -0.208 |
| 9.002 | S902 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.640 | 30.771 | -0.214 |
| 11.000 | S1100 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.680 | 31.559 | -0.141 |
| 9.003 | S903 | 960 minute 2 year Winter I+0% | 960 | 100 | 32.630 | 30.264 | -0.231 |
| 1.007 | S107 | 960 minute 2 year Winter I+0% | 960 | 91 | 32.500 | 30.264 | -1.272 |
| 12.000 | S1200 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.635 | 31.851 | -0.149 |
| 13.000 | S1300 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.635 | 31.864 | -0.136 |
| 13.001 | S1301 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.635 | 31.773 | -0.137 |
| 12.001 | S1201 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.635 | 31.426 | -0.209 |
| 12.002 | S1202 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.680 | 31.061 | -0.199 |
| 12.003 | S1203 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.660 | 30.969 | -0.201 |
| 12.004 | S1204 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.660 | 30.832 | -0.203 |
| 14.000 | S1400 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.650 | 31.638 | -0.137 |
| 14.001 | S1401 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.680 | 31.284 | -0.211 |
| 15.000 | S1500 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.680 | 31.657 | -0.143 |
| 15.001 | S1501 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.600 | 31.612 | -0.143 |
| 14.002 | S1402 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.600 | 31.027 | -0.213 |
| 12.005 | 1205 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.600 | 30.508 | -0.197 |
| 1.008 | S108 | 960 minute 2 year Winter I+0% | 960 | 91 | 32.550 | 30.264 | -0.091 |
| 16.000 | S1600 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.545 | 31.432 | -0.218 |
| 16.001 | S1601 | 960 minute 2 year Winter I+0% | 960 | 115 | 32.545 | 30.467 | -0.218 |
| 1.009 | S109 | 960 minute 2 year Winter I+0% | 960 | 91 | 32.500 | 30.263 | 0.233 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.650 | 0.2 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.303 | 93.113 | 0.1 | 2.8 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.984 | 0.1 | 0.0 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.614 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.02 | | 0.003 | 17.160 | 0.6 | 0.8 | OK |
| 9.002 | S902 | 0.000 | 0.01 | | 0.006 | 22.787 | 1.0 | 1.0 | OK |
| 11.000 | S1100 | 0.000 | 0.01 | | 0.001 | 4.967 | 0.5 | 0.2 | OK |
| 9.003 | S903 | 0.000 | 0.02 | | 0.092 | 29.409 | 0.6 | 1.3 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 31.255 | 127.286 | 0.0 | 3.2 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.320 | 0.1 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.02 | | 0.001 | 7.616 | 0.5 | 0.3 | OK |
| 13.001 | S1301 | 0.000 | 0.02 | | 0.005 | 11.920 | 0.8 | 0.5 | OK |
| 12.001 | S1201 | 0.000 | 0.02 | | 0.003 | 23.173 | 0.8 | 1.0 | OK |
| 12.002 | S1202 | 0.000 | 0.03 | | 0.014 | 31.782 | 0.5 | 1.4 | OK |
| 12.003 | S1203 | 0.000 | 0.03 | | 0.018 | 31.782 | 0.7 | 1.4 | OK |
| 12.004 | S1204 | 0.000 | 0.02 | | 0.011 | 38.404 | 1.0 | 1.7 | OK |
| 14.000 | S1400 | 0.000 | 0.02 | | 0.001 | 7.947 | 0.5 | 0.3 | OK |

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## Summary Wizard of 960 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.01 | | 0.003 | 14.238 | 0.6 | 0.6 | OK |
| 15.000 | S1500 | 0.000 | 0.01 | | 0.000 | 2.979 | 0.3 | 0.1 | OK |
| 15.001 | S1501 | 0.000 | 0.01 | | 0.001 | 7.945 | 0.8 | 0.3 | OK |
| 14.002 | S1402 | 0.000 | 0.01 | | 0.007 | 26.485 | 1.1 | 1.2 | OK |
| 12.005 | 1205 | 0.000 | 0.04 | | 0.040 | 72.173 | 1.1 | 3.2 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 37.157 | 202.107 | 0.2 | 4.6 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.001 | 11.256 | 0.5 | 0.5 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.001 | 12.579 | 0.5 | 0.6 | OK |
| 1.009 | S109 | 0.000 | 0.29 | | 2.071 | 214.684 | 0.9 | 4.9 | SURCHARGED |

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## Summary Wizard of 1440 minute 2 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.680 | 31.776 | -0.144 |
| 1.001 | S101 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.680 | 31.704 | -0.146 |
| 2.000 | S200 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.600 | 31.484 | -0.146 |
| 1.002 | S102 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.630 | 31.229 | -0.216 |
| 3.000 | S300 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.550 | 31.851 | -0.149 |
| 1.003 | S103 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.600 | 31.060 | -0.215 |
| 4.000 | S400 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.550 | 31.702 | -0.148 |
| 4.001 | S401 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.550 | 30.608 | -0.142 |
| 1.004 | S104 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.600 | 30.261 | -0.269 |
| 1.005 | S105 | 1440 minute 2 year Winter I+0% | 1440 | 111 | 32.600 | 30.202 | -0.308 |
| 5.000 | S500 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.550 | 31.853 | -0.147 |
| 5.001 | S501 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.665 | 31.144 | -0.146 |
| 6.000 | S600 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.665 | 31.850 | -0.150 |
| 6.001 | S601 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.665 | 31.141 | -0.149 |
| 5.002 | S502 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.665 | 30.837 | -0.213 |
| 5.003 | S503 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.680 | 30.639 | -0.216 |
| 7.000 | S700 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.680 | 31.892 | -0.138 |
| 7.001 | S701 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.635 | 31.811 | -0.134 |
| 5.004 | S504 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.635 | 30.270 | -0.275 |

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## Summary Wizard of 1440 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.01 | | 0.000 | 4.826 | 0.3 | 0.1 | OK |
| 1.001 | S101 | 0.000 | 0.01 | | 0.000 | 7.425 | 0.5 | 0.2 | OK |
| 2.000 | S200 | 0.000 | 0.01 | | 0.000 | 4.826 | 0.3 | 0.1 | OK |
| 1.002 | S102 | 0.000 | 0.01 | | 0.001 | 14.850 | 0.4 | 0.4 | OK |
| 3.000 | S300 | 0.000 | 0.00 | | 0.000 | 2.966 | 0.2 | 0.1 | OK |
| 1.003 | S103 | 0.000 | 0.01 | | 0.004 | 27.097 | 0.8 | 0.8 | OK |
| 4.000 | S400 | 0.000 | 0.00 | | 0.000 | 5.568 | 0.4 | 0.2 | OK |
| 4.001 | S401 | 0.000 | 0.01 | | 0.001 | 7.795 | 0.5 | 0.2 | OK |
| 1.004 | S104 | 0.000 | 0.02 | | 0.008 | 38.604 | 0.3 | 1.1 | OK |
| 1.005 | S105 | 0.000 | 0.01 | | 0.246 | 40.461 | 0.3 | 1.2 | OK |
| 5.000 | S500 | 0.000 | 0.00 | | 0.000 | 5.197 | 0.3 | 0.2 | OK |
| 5.001 | S501 | 0.000 | 0.00 | | 0.000 | 5.197 | 0.3 | 0.2 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 0.663 | 0.0 | 0.0 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.000 | 0.653 | 0.0 | 0.0 | OK |
| 5.002 | S502 | 0.000 | 0.01 | | 0.002 | 19.588 | 0.6 | 0.6 | OK |
| 5.003 | S503 | 0.000 | 0.01 | | 0.003 | 22.185 | 0.6 | 0.7 | OK |
| 7.000 | S700 | 0.000 | 0.02 | | 0.001 | 9.655 | 0.5 | 0.3 | OK |
| 7.001 | S701 | 0.000 | 0.02 | | 0.006 | 14.483 | 0.5 | 0.4 | OK |
| 5.004 | S504 | 0.000 | 0.02 | | 0.035 | 36.667 | 0.4 | 1.1 | OK |

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## Summary Wizard of 1440 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.525 | 31.201 | -0.149 |
| 1.006 | S106 | 1440 minute 2 year Winter I+0% | 1440 | 111 | 32.500 | 30.202 | -1.444 |
| 9.000 | S900 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.665 | 31.850 | -0.150 |
| 9.001 | S901 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.665 | 31.008 | -0.212 |
| 9.002 | S902 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.640 | 30.768 | -0.217 |
| 11.000 | S1100 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.680 | 31.557 | -0.143 |
| 9.003 | S903 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.630 | 30.212 | -0.283 |
| 1.007 | S107 | 1440 minute 2 year Winter I+0% | 1440 | 111 | 32.500 | 30.202 | -1.334 |
| 12.000 | S1200 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.635 | 31.851 | -0.149 |
| 13.000 | S1300 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.635 | 31.860 | -0.140 |
| 13.001 | S1301 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.635 | 31.770 | -0.140 |
| 12.001 | S1201 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.635 | 31.422 | -0.213 |
| 12.002 | S1202 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.680 | 31.059 | -0.201 |
| 12.003 | S1203 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.660 | 30.966 | -0.204 |
| 12.004 | S1204 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.660 | 30.827 | -0.208 |
| 14.000 | S1400 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.650 | 31.635 | -0.140 |
| 14.001 | S1401 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.680 | 31.280 | -0.215 |
| 15.000 | S1500 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.680 | 31.655 | -0.145 |
| 15.001 | S1501 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.600 | 31.610 | -0.145 |
| 14.002 | S1402 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.600 | 31.024 | -0.216 |
| 12.005 | 1205 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.600 | 30.505 | -0.200 |
| 1.008 | S108 | 1440 minute 2 year Winter I+0% | 1440 | 111 | 32.550 | 30.202 | -0.153 |
| 16.000 | S1600 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.545 | 31.430 | -0.220 |
| 16.001 | S1601 | 1440 minute 2 year Winter I+0% | 1440 | 119 | 32.545 | 30.465 | -0.220 |
| 1.009 | S109 | 1440 minute 2 year Winter I+0% | 1440 | 111 | 32.500 | 30.201 | 0.171 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.842 | 0.1 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.161 | 104.151 | 0.1 | 2.4 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.061 | 0.1 | 0.0 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.660 | 0.0 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.01 | | 0.002 | 19.174 | 0.6 | 0.6 | OK |
| 9.002 | S902 | 0.000 | 0.01 | | 0.003 | 25.483 | 0.7 | 0.8 | OK |
| 11.000 | S1100 | 0.000 | 0.01 | | 0.000 | 5.569 | 0.4 | 0.2 | OK |
| 9.003 | S903 | 0.000 | 0.01 | | 0.017 | 32.908 | 0.5 | 1.0 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 23.999 | 142.194 | 0.0 | 2.8 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.475 | 0.1 | 0.0 | OK |
| 13.000 | S1300 | 0.000 | 0.01 | | 0.001 | 8.541 | 0.5 | 0.3 | OK |
| 13.001 | S1301 | 0.000 | 0.01 | | 0.003 | 13.367 | 0.8 | 0.4 | OK |
| 12.001 | S1201 | 0.000 | 0.01 | | 0.002 | 25.981 | 0.8 | 0.8 | OK |
| 12.002 | S1202 | 0.000 | 0.02 | | 0.012 | 35.636 | 0.5 | 1.0 | OK |
| 12.003 | S1203 | 0.000 | 0.02 | | 0.015 | 35.636 | 0.7 | 1.0 | OK |
| 12.004 | S1204 | 0.000 | 0.02 | | 0.007 | 43.062 | 1.0 | 1.3 | OK |
| 14.000 | S1400 | 0.000 | 0.01 | | 0.001 | 8.912 | 0.5 | 0.3 | OK |

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## Summary Wizard of 1440 minute 2 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.01 | | 0.002 | 15.967 | 0.5 | 0.5 | OK |
| 15.000 | S1500 | 0.000 | 0.01 | | 0.000 | 3.341 | 0.2 | 0.1 | OK |
| 15.001 | S1501 | 0.000 | 0.01 | | 0.000 | 8.910 | 0.6 | 0.3 | OK |
| 14.002 | S1402 | 0.000 | 0.01 | | 0.004 | 29.701 | 0.9 | 0.9 | OK |
| 12.005 | 1205 | 0.000 | 0.03 | | 0.034 | 80.932 | 1.1 | 2.4 | OK |
| 1.008 | S108 | 0.000 | 0.04 | | 30.338 | 226.096 | 0.2 | 4.2 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.000 | 12.623 | 0.4 | 0.4 | OK |
| 16.001 | S1601 | 0.000 | 0.00 | | 0.000 | 14.107 | 0.4 | 0.4 | OK |
| 1.009 | S109 | 0.000 | 0.27 | | 1.672 | 240.201 | 0.9 | 4.5 | SURCHARGED |

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## Summary Wizard of 15 minute 5 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 15 minute 5 year Winter I+0% | 15 | 26 | 32.680 | 31.814 | -0.106 | 0.000 |
| 1.001 | S101 | 15 minute 5 year Winter I+0% | 15 | 26 | 32.680 | 31.736 | -0.114 | 0.000 |
| 2.000 | S200 | 15 minute 5 year Winter I+0% | 15 | 28 | 32.600 | 31.517 | -0.113 | 0.000 |
| 1.002 | S102 | 15 minute 5 year Winter I+0% | 15 | 31 | 32.630 | 31.284 | -0.161 | 0.000 |
| 3.000 | S300 | 15 minute 5 year Winter I+0% | 15 | 25 | 32.550 | 31.871 | -0.129 | 0.000 |
| 1.003 | S103 | 15 minute 5 year Winter I+0% | 15 | 31 | 32.600 | 31.116 | -0.159 | 0.000 |
| 4.000 | S400 | 15 minute 5 year Winter I+0% | 15 | 26 | 32.550 | 31.726 | -0.124 | 0.000 |
| 4.001 | S401 | 15 minute 5 year Winter I+0% | 15 | 47 | 32.550 | 30.649 | -0.101 | 0.000 |
| 1.004 | S104 | 15 minute 5 year Winter I+0% | 15 | 67 | 32.600 | 30.379 | -0.151 | 0.000 |
| 1.005 | S105 | 15 minute 5 year Winter I+0% | 15 | 101 | 32.600 | 30.251 | -0.259 | 0.000 |
| 5.000 | S500 | 15 minute 5 year Winter I+0% | 15 | 25 | 32.550 | 31.882 | -0.118 | 0.000 |
| 5.001 | S501 | 15 minute 5 year Winter I+0% | 15 | 31 | 32.665 | 31.173 | -0.117 | 0.000 |
| 6.000 | S600 | 15 minute 5 year Winter I+0% | 15 | 26 | 32.665 | 31.859 | -0.141 | 0.000 |
| 6.001 | S601 | 15 minute 5 year Winter I+0% | 15 | 31 | 32.665 | 31.151 | -0.139 | 0.000 |
| 5.002 | S502 | 15 minute 5 year Winter I+0% | 15 | 31 | 32.665 | 30.897 | -0.153 | 0.000 |
| 5.003 | S503 | 15 minute 5 year Winter I+0% | 15 | 46 | 32.680 | 30.691 | -0.164 | 0.000 |
| 7.000 | S700 | 15 minute 5 year Winter I+0% | 15 | 25 | 32.680 | 31.943 | -0.087 | 0.000 |
| 7.001 | S701 | 15 minute 5 year Winter I+0% | 15 | 25 | 32.635 | 31.872 | -0.073 | 0.000 |
| 5.004 | S504 | 15 minute 5 year Winter I+0% | 15 | 68 | 32.635 | 30.369 | -0.176 | 0.000 |

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## Summary Wizard of 15 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.19 | | 0.006 | 1.459 | 0.7 | 3.1 | OK |
| 1.001 | S101 | 0.13 | | 0.016 | 2.244 | 1.4 | 4.5 | OK |
| 2.000 | S200 | 0.14 | | 0.005 | 1.459 | 0.9 | 3.1 | OK |
| 1.002 | S102 | 0.18 | | 0.018 | 4.488 | 1.0 | 9.0 | OK |
| 3.000 | S300 | 0.05 | | 0.003 | 0.898 | 1.3 | 1.9 | OK |
| 1.003 | S103 | 0.18 | | 0.050 | 8.190 | 1.7 | 15.9 | OK |
| 4.000 | S400 | 0.07 | | 0.003 | 1.683 | 1.7 | 3.6 | OK |
| 4.001 | S401 | 0.23 | | 0.009 | 2.356 | 1.0 | 4.8 | OK |
| 1.004 | S104 | 0.49 | | 0.060 | 11.668 | 0.7 | 22.8 | OK |
| 1.005 | S105 | 0.21 | | 0.338 | 11.971 | 0.6 | 24.0 | OK |
| 5.000 | S500 | 0.10 | | 0.004 | 1.571 | 1.2 | 3.4 | OK |
| 5.001 | S501 | 0.11 | | 0.009 | 1.571 | 1.2 | 3.3 | OK |
| 6.000 | S600 | 0.01 | | 0.001 | 0.224 | 1.1 | 0.5 | OK |
| 6.001 | S601 | 0.02 | | 0.002 | 0.224 | 0.8 | 0.5 | OK |
| 5.002 | S502 | 0.22 | | 0.019 | 5.946 | 1.1 | 11.3 | OK |
| 5.003 | S503 | 0.16 | | 0.046 | 6.732 | 1.5 | 12.7 | OK |
| 7.000 | S700 | 0.37 | | 0.009 | 2.917 | 0.9 | 6.3 | OK |
| 7.001 | S701 | 0.51 | | 0.040 | 4.376 | 1.0 | 8.8 | OK |
| 5.004 | S504 | 0.35 | | 0.214 | 11.107 | 0.8 | 21.6 | OK |

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## Summary Wizard of 15 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 15 minute 5 year Winter I+0% | 15 | 31 | 32.525 | 31.217 | -0.133 | 0.000 |
| 1.006 | S106 | 15 minute 5 year Winter I+0% | 15 | 100 | 32.500 | 30.252 | -1.394 | 0.000 |
| 9.000 | S900 | 15 minute 5 year Winter I+0% | 15 | 26 | 32.665 | 31.864 | -0.136 | 0.000 |
| 10.000 | S901 | 15 minute 5 year Winter I+0% | 15 | 26 | 32.665 | 31.859 | -0.141 | 0.000 |
| 9.001 | S901 | 15 minute 5 year Winter I+0% | 15 | 31 | 32.665 | 31.068 | -0.152 | 0.000 |
| 9.002 | S902 | 15 minute 5 year Winter I+0% | 15 | 31 | 32.640 | 30.817 | -0.168 | 0.000 |
| 11.000 | S1100 | 15 minute 5 year Winter I+0% | 15 | 27 | 32.680 | 31.598 | -0.102 | 0.000 |
| 9.003 | S903 | 15 minute 5 year Winter I+0% | 15 | 89 | 32.630 | 30.292 | -0.203 | 0.000 |
| 1.007 | S107 | 15 minute 5 year Winter I+0% | 15 | 100 | 32.500 | 30.252 | -1.284 | 0.000 |
| 12.000 | S1200 | 15 minute 5 year Winter I+0% | 15 | 26 | 32.635 | 31.867 | -0.133 | 0.000 |
| 13.000 | S1300 | 15 minute 5 year Winter I+0% | 15 | 25 | 32.635 | 31.909 | -0.091 | 0.000 |
| 13.001 | S1301 | 15 minute 5 year Winter I+0% | 15 | 26 | 32.635 | 31.816 | -0.094 | 0.000 |
| 12.001 | S1201 | 15 minute 5 year Winter I+0% | 15 | 29 | 32.635 | 31.484 | -0.151 | 0.000 |
| 12.002 | S1202 | 15 minute 5 year Winter I+0% | 15 | 31 | 32.680 | 31.147 | -0.113 | 0.000 |
| 12.003 | S1203 | 15 minute 5 year Winter I+0% | 15 | 31 | 32.660 | 31.044 | -0.126 | 0.000 |
| 12.004 | S1204 | 15 minute 5 year Winter I+0% | 15 | 31 | 32.660 | 30.896 | -0.139 | 0.000 |
| 14.000 | S1400 | 15 minute 5 year Winter I+0% | 15 | 26 | 32.650 | 31.682 | -0.093 | 0.000 |
| 14.001 | S1401 | 15 minute 5 year Winter I+0% | 15 | 31 | 32.680 | 31.339 | -0.156 | 0.000 |
| 15.000 | S1500 | 15 minute 5 year Winter I+0% | 15 | 26 | 32.680 | 31.691 | -0.109 | 0.000 |
| 15.001 | S1501 | 15 minute 5 year Winter I+0% | 15 | 28 | 32.600 | 31.643 | -0.112 | 0.000 |
| 14.002 | S1402 | 15 minute 5 year Winter I+0% | 15 | 31 | 32.600 | 31.077 | -0.163 | 0.000 |
| 12.005 | 1205 | 15 minute 5 year Winter I+0% | 15 | 49 | 32.600 | 30.601 | -0.104 | 0.000 |
| 1.008 | S108 | 15 minute 5 year Winter I+0% | 15 | 100 | 32.550 | 30.252 | -0.103 | 0.000 |
| 16.000 | S1600 | 15 minute 5 year Winter I+0% | 15 | 29 | 32.545 | 31.476 | -0.174 | 0.000 |
| 16.001 | S1601 | 15 minute 5 year Winter I+0% | 15 | 50 | 32.545 | 30.509 | -0.176 | 0.000 |
| 1.009 | S109 | 15 minute 5 year Winter I+0% | 15 | 100 | 32.500 | 30.251 | 0.221 | 0.000 |

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.03 | | 0.014 | 0.561 | 1.1 | 1.2 | OK |
| 1.006 | S106 | 0.02 | | 0.261 | 20.331 | 0.3 | 37.2 | OK |
| 9.000 | S900 | 0.02 | | 0.001 | 0.337 | 1.0 | 0.7 | OK |
| 10.000 | S901 | 0.01 | | 0.001 | 0.224 | 1.1 | 0.5 | OK |
| 9.001 | S901 | 0.22 | | 0.020 | 5.833 | 1.0 | 10.7 | OK |
| 9.002 | S902 | 0.14 | | 0.051 | 7.741 | 1.8 | 14.1 | OK |
| 11.000 | S1100 | 0.22 | | 0.007 | 1.683 | 0.8 | 3.6 | OK |
| 9.003 | S903 | 0.23 | | 0.132 | 9.970 | 1.0 | 18.7 | OK |
| 1.007 | S107 | 0.00 | | 29.816 | 17.890 | 0.2 | 21.1 | OK |
| 12.000 | S1200 | 0.03 | | 0.002 | 0.449 | 0.9 | 1.0 | OK |
| 13.000 | S1300 | 0.33 | | 0.009 | 2.581 | 0.9 | 5.5 | OK |
| 13.001 | S1301 | 0.29 | | 0.029 | 4.039 | 1.4 | 8.1 | OK |
| 12.001 | S1201 | 0.23 | | 0.020 | 7.853 | 1.4 | 15.1 | OK |
| 12.002 | S1202 | 0.48 | | 0.075 | 10.770 | 1.1 | 20.4 | OK |
| 12.003 | S1203 | 0.40 | | 0.088 | 10.770 | 1.2 | 20.5 | OK |
| 12.004 | S1204 | 0.31 | | 0.050 | 13.014 | 1.8 | 24.6 | OK |
| 14.000 | S1400 | 0.30 | | 0.008 | 2.692 | 0.9 | 5.7 | OK |

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## Summary Wizard of 15 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.20 | | 0.019 | 4.824 | 0.9 | 9.5 | OK |
| 15.000 | S1500 | 0.16 | | 0.006 | 1.010 | 0.6 | 2.2 | OK |
| 15.001 | S1501 | 0.14 | | 0.014 | 2.693 | 1.5 | 5.2 | OK |
| 14.002 | S1402 | 0.17 | | 0.057 | 8.975 | 2.0 | 17.4 | OK |
| 12.005 | 1205 | 0.56 | | 0.211 | 24.456 | 2.2 | 46.5 | OK |
| 1.008 | S108 | 0.05 | | 35.813 | 12.224 | 0.0 | 4.8 | OK |
| 16.000 | S1600 | 0.11 | | 0.013 | 3.814 | 1.2 | 8.0 | OK |
| 16.001 | S1601 | 0.11 | | 0.028 | 4.263 | 1.4 | 8.8 | OK |
| 1.009 | S109 | 0.29 | | 1.992 | 14.739 | 0.9 | 4.8 | SURCHARGED |

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## Summary Wizard of 30 minute 5 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 30 minute 5 year Winter I+0% | 30 | 32 | 32.680 | 31.808 | -0.112 | 0.000 |
| 1.001 | S101 | 30 minute 5 year Winter I+0% | 30 | 31 | 32.680 | 31.732 | -0.118 | 0.000 |
| 2.000 | S200 | 30 minute 5 year Winter I+0% | 30 | 34 | 32.600 | 31.513 | -0.117 | 0.000 |
| 1.002 | S102 | 30 minute 5 year Winter I+0% | 30 | 35 | 32.630 | 31.277 | -0.168 | 0.000 |
| 3.000 | S300 | 30 minute 5 year Winter I+0% | 30 | 31 | 32.550 | 31.868 | -0.132 | 0.000 |
| 1.003 | S103 | 30 minute 5 year Winter I+0% | 30 | 35 | 32.600 | 31.108 | -0.167 | 0.000 |
| 4.000 | S400 | 30 minute 5 year Winter I+0% | 30 | 32 | 32.550 | 31.723 | -0.127 | 0.000 |
| 4.001 | S401 | 30 minute 5 year Winter I+0% | 30 | 51 | 32.550 | 30.643 | -0.107 | 0.000 |
| 1.004 | S104 | 30 minute 5 year Winter I+0% | 30 | 71 | 32.600 | 30.361 | -0.169 | 0.000 |
| 1.005 | S105 | 30 minute 5 year Winter I+0% | 30 | 79 | 32.600 | 30.330 | -0.180 | 0.000 |
| 5.000 | S500 | 30 minute 5 year Winter I+0% | 30 | 31 | 32.550 | 31.878 | -0.122 | 0.000 |
| 5.001 | S501 | 30 minute 5 year Winter I+0% | 30 | 36 | 32.665 | 31.169 | -0.121 | 0.000 |
| 6.000 | S600 | 30 minute 5 year Winter I+0% | 30 | 32 | 32.665 | 31.857 | -0.143 | 0.000 |
| 6.001 | S601 | 30 minute 5 year Winter I+0% | 30 | 36 | 32.665 | 31.149 | -0.141 | 0.000 |
| 5.002 | S502 | 30 minute 5 year Winter I+0% | 30 | 36 | 32.665 | 30.890 | -0.160 | 0.000 |
| 5.003 | S503 | 30 minute 5 year Winter I+0% | 30 | 50 | 32.680 | 30.685 | -0.170 | 0.000 |
| 7.000 | S700 | 30 minute 5 year Winter I+0% | 30 | 31 | 32.680 | 31.935 | -0.095 | 0.000 |
| 7.001 | S701 | 30 minute 5 year Winter I+0% | 30 | 31 | 32.635 | 31.862 | -0.083 | 0.000 |
| 5.004 | S504 | 30 minute 5 year Winter I+0% | 30 | 75 | 32.635 | 30.355 | -0.190 | 0.000 |

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## Summary Wizard of 30 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.15 | | 0.005 | 1.906 | 0.7 | 2.4 | OK |
| 1.001 | S101 | 0.10 | | 0.014 | 2.932 | 1.3 | 3.7 | OK |
| 2.000 | S200 | 0.11 | | 0.004 | 1.906 | 0.9 | 2.4 | OK |
| 1.002 | S102 | 0.14 | | 0.015 | 5.863 | 0.9 | 7.3 | OK |
| 3.000 | S300 | 0.04 | | 0.002 | 1.173 | 1.2 | 1.5 | OK |
| 1.003 | S103 | 0.15 | | 0.044 | 10.701 | 1.6 | 13.1 | OK |
| 4.000 | S400 | 0.06 | | 0.003 | 2.199 | 1.7 | 2.8 | OK |
| 4.001 | S401 | 0.18 | | 0.008 | 3.078 | 0.9 | 3.9 | OK |
| 1.004 | S104 | 0.40 | | 0.047 | 15.225 | 0.6 | 18.7 | OK |
| 1.005 | S105 | 0.17 | | 0.536 | 15.499 | 0.5 | 19.4 | OK |
| 5.000 | S500 | 0.08 | | 0.004 | 2.052 | 1.1 | 2.6 | OK |
| 5.001 | S501 | 0.09 | | 0.007 | 2.052 | 1.1 | 2.6 | OK |
| 6.000 | S600 | 0.01 | | 0.000 | 0.293 | 0.8 | 0.4 | OK |
| 6.001 | S601 | 0.01 | | 0.001 | 0.293 | 0.8 | 0.4 | OK |
| 5.002 | S502 | 0.18 | | 0.017 | 7.769 | 1.0 | 9.4 | OK |
| 5.003 | S503 | 0.14 | | 0.041 | 8.795 | 1.4 | 10.6 | OK |
| 7.000 | S700 | 0.29 | | 0.008 | 3.811 | 0.8 | 4.9 | OK |
| 7.001 | S701 | 0.42 | | 0.035 | 5.717 | 0.9 | 7.1 | OK |
| 5.004 | S504 | 0.29 | | 0.187 | 14.423 | 0.8 | 17.7 | OK |

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## Summary Wizard of 30 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 30 minute 5 year Winter I+0% | 30 | 36 | 32.525 | 31.216 | -0.134 | 0.000 |
| 1.006 | S106 | 30 minute 5 year Winter I+0% | 30 | 79 | 32.500 | 30.330 | -1.316 | 0.000 |
| 9.000 | S900 | 30 minute 5 year Winter I+0% | 30 | 32 | 32.665 | 31.861 | -0.139 | 0.000 |
| 10.000 | S901 | 30 minute 5 year Winter I+0% | 30 | 32 | 32.665 | 31.857 | -0.143 | 0.000 |
| 9.001 | S901 | 30 minute 5 year Winter I+0% | 30 | 35 | 32.665 | 31.061 | -0.159 | 0.000 |
| 9.002 | S902 | 30 minute 5 year Winter I+0% | 30 | 35 | 32.640 | 30.812 | -0.173 | 0.000 |
| 11.000 | S1100 | 30 minute 5 year Winter I+0% | 30 | 33 | 32.680 | 31.591 | -0.109 | 0.000 |
| 9.003 | S903 | 30 minute 5 year Winter I+0% | 30 | 79 | 32.630 | 30.331 | -0.164 | 0.000 |
| 1.007 | S107 | 30 minute 5 year Winter I+0% | 30 | 79 | 32.500 | 30.331 | -1.205 | 0.000 |
| 12.000 | S1200 | 30 minute 5 year Winter I+0% | 30 | 32 | 32.635 | 31.866 | -0.134 | 0.000 |
| 13.000 | S1300 | 30 minute 5 year Winter I+0% | 30 | 31 | 32.635 | 31.901 | -0.099 | 0.000 |
| 13.001 | S1301 | 30 minute 5 year Winter I+0% | 30 | 31 | 32.635 | 31.809 | -0.101 | 0.000 |
| 12.001 | S1201 | 30 minute 5 year Winter I+0% | 30 | 33 | 32.635 | 31.476 | -0.159 | 0.000 |
| 12.002 | S1202 | 30 minute 5 year Winter I+0% | 30 | 36 | 32.680 | 31.134 | -0.126 | 0.000 |
| 12.003 | S1203 | 30 minute 5 year Winter I+0% | 30 | 36 | 32.660 | 31.034 | -0.136 | 0.000 |
| 12.004 | S1204 | 30 minute 5 year Winter I+0% | 30 | 35 | 32.660 | 30.887 | -0.148 | 0.000 |
| 14.000 | S1400 | 30 minute 5 year Winter I+0% | 30 | 32 | 32.650 | 31.674 | -0.101 | 0.000 |
| 14.001 | S1401 | 30 minute 5 year Winter I+0% | 30 | 35 | 32.680 | 31.330 | -0.165 | 0.000 |
| 15.000 | S1500 | 30 minute 5 year Winter I+0% | 30 | 32 | 32.680 | 31.685 | -0.115 | 0.000 |
| 15.001 | S1501 | 30 minute 5 year Winter I+0% | 30 | 32 | 32.600 | 31.639 | -0.116 | 0.000 |
| 14.002 | S1402 | 30 minute 5 year Winter I+0% | 30 | 35 | 32.600 | 31.071 | -0.169 | 0.000 |
| 12.005 | 1205 | 30 minute 5 year Winter I+0% | 30 | 51 | 32.600 | 30.588 | -0.117 | 0.000 |
| 1.008 | S108 | 30 minute 5 year Winter I+0% | 30 | 79 | 32.550 | 30.331 | -0.024 | 0.000 |
| 16.000 | S1600 | 30 minute 5 year Winter I+0% | 30 | 34 | 32.545 | 31.470 | -0.180 | 0.000 |
| 16.001 | S1601 | 30 minute 5 year Winter I+0% | 30 | 53 | 32.545 | 30.504 | -0.181 | 0.000 |
| 1.009 | S109 | 30 minute 5 year Winter I+0% | 30 | 79 | 32.500 | 30.327 | 0.297 | 0.000 |

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.02 | | 0.012 | 0.733 | 1.1 | 0.9 | OK |
| 1.006 | S106 | 0.01 | | 0.534 | 24.069 | 0.2 | 24.6 | OK |
| 9.000 | S900 | 0.02 | | 0.001 | 0.440 | 1.0 | 0.6 | OK |
| 10.000 | S901 | 0.01 | | 0.000 | 0.293 | 0.8 | 0.4 | OK |
| 9.001 | S901 | 0.19 | | 0.018 | 7.622 | 0.9 | 9.1 | OK |
| 9.002 | S902 | 0.12 | | 0.046 | 10.114 | 1.7 | 12.0 | OK |
| 11.000 | S1100 | 0.17 | | 0.006 | 2.199 | 0.7 | 2.8 | OK |
| 9.003 | S903 | 0.19 | | 0.192 | 12.900 | 0.9 | 15.6 | OK |
| 1.007 | S107 | 0.00 | | 39.041 | 19.551 | 0.1 | 14.2 | OK |
| 12.000 | S1200 | 0.02 | | 0.002 | 0.586 | 0.9 | 0.7 | OK |
| 13.000 | S1300 | 0.25 | | 0.007 | 3.372 | 0.8 | 4.3 | OK |
| 13.001 | S1301 | 0.24 | | 0.025 | 5.277 | 1.3 | 6.6 | OK |
| 12.001 | S1201 | 0.19 | | 0.018 | 10.261 | 1.3 | 12.5 | OK |
| 12.002 | S1202 | 0.40 | | 0.060 | 14.072 | 1.0 | 17.0 | OK |
| 12.003 | S1203 | 0.33 | | 0.078 | 14.072 | 1.2 | 17.0 | OK |
| 12.004 | S1204 | 0.26 | | 0.045 | 17.003 | 1.7 | 20.4 | OK |
| 14.000 | S1400 | 0.24 | | 0.007 | 3.518 | 0.9 | 4.5 | OK |

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## Summary Wizard of 30 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.16 | | 0.017 | 6.303 | 0.9 | 7.8 | OK |
| 15.000 | S1500 | 0.13 | | 0.005 | 1.319 | 0.5 | 1.7 | OK |
| 15.001 | S1501 | 0.12 | | 0.012 | 3.518 | 1.4 | 4.3 | OK |
| 14.002 | S1402 | 0.14 | | 0.050 | 11.726 | 1.9 | 14.3 | OK |
| 12.005 | 1205 | 0.46 | | 0.178 | 31.955 | 2.1 | 38.6 | OK |
| 1.008 | S108 | 0.05 | | 44.450 | 11.518 | 0.1 | 5.2 | OK |
| 16.000 | S1600 | 0.09 | | 0.011 | 4.984 | 1.1 | 6.4 | OK |
| 16.001 | S1601 | 0.08 | | 0.024 | 5.570 | 1.3 | 7.0 | OK |
| 1.009 | S109 | 0.31 | | 2.427 | 14.762 | 1.0 | 5.2 | SURCHARGED |

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## Summary Wizard of 60 minute 5 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 60 minute 5 year Winter I+0% | 60 | 42 | 32.680 | 31.801 | -0.119 | 0.000 |
| 1.001 | S101 | 60 minute 5 year Winter I+0% | 60 | 42 | 32.680 | 31.726 | -0.124 | 0.000 |
| 2.000 | S200 | 60 minute 5 year Winter I+0% | 60 | 44 | 32.600 | 31.506 | -0.124 | 0.000 |
| 1.002 | S102 | 60 minute 5 year Winter I+0% | 60 | 46 | 32.630 | 31.267 | -0.178 | 0.000 |
| 3.000 | S300 | 60 minute 5 year Winter I+0% | 60 | 41 | 32.550 | 31.866 | -0.134 | 0.000 |
| 1.003 | S103 | 60 minute 5 year Winter I+0% | 60 | 46 | 32.600 | 31.098 | -0.177 | 0.000 |
| 4.000 | S400 | 60 minute 5 year Winter I+0% | 60 | 42 | 32.550 | 31.719 | -0.131 | 0.000 |
| 4.001 | S401 | 60 minute 5 year Winter I+0% | 60 | 60 | 32.550 | 30.635 | -0.115 | 0.000 |
| 1.004 | S104 | 60 minute 5 year Winter I+0% | 60 | 64 | 32.600 | 30.403 | -0.127 | 0.000 |
| 1.005 | S105 | 60 minute 5 year Winter I+0% | 60 | 62 | 32.600 | 30.403 | -0.107 | 0.000 |
| 5.000 | S500 | 60 minute 5 year Winter I+0% | 60 | 41 | 32.550 | 31.872 | -0.128 | 0.000 |
| 5.001 | S501 | 60 minute 5 year Winter I+0% | 60 | 46 | 32.665 | 31.163 | -0.127 | 0.000 |
| 6.000 | S600 | 60 minute 5 year Winter I+0% | 60 | 42 | 32.665 | 31.855 | -0.145 | 0.000 |
| 6.001 | S601 | 60 minute 5 year Winter I+0% | 60 | 46 | 32.665 | 31.146 | -0.144 | 0.000 |
| 5.002 | S502 | 60 minute 5 year Winter I+0% | 60 | 46 | 32.665 | 30.878 | -0.172 | 0.000 |
| 5.003 | S503 | 60 minute 5 year Winter I+0% | 60 | 59 | 32.680 | 30.676 | -0.179 | 0.000 |
| 7.000 | S700 | 60 minute 5 year Winter I+0% | 60 | 41 | 32.680 | 31.924 | -0.106 | 0.000 |
| 7.001 | S701 | 60 minute 5 year Winter I+0% | 60 | 42 | 32.635 | 31.849 | -0.096 | 0.000 |
| 5.004 | S504 | 60 minute 5 year Winter I+0% | 60 | 64 | 32.635 | 30.403 | -0.142 | 0.000 |

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## Summary Wizard of 60 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.10 | | 0.004 | 2.399 | 0.6 | 1.6 | OK |
| 1.001 | S101 | 0.07 | | 0.011 | 3.690 | 1.2 | 2.5 | OK |
| 2.000 | S200 | 0.07 | | 0.003 | 2.399 | 0.8 | 1.6 | OK |
| 1.002 | S102 | 0.10 | | 0.012 | 7.380 | 0.8 | 5.0 | OK |
| 3.000 | S300 | 0.02 | | 0.002 | 1.476 | 1.2 | 1.0 | OK |
| 1.003 | S103 | 0.10 | | 0.036 | 13.469 | 1.5 | 9.0 | OK |
| 4.000 | S400 | 0.04 | | 0.002 | 2.768 | 1.5 | 1.9 | OK |
| 4.001 | S401 | 0.13 | | 0.006 | 3.875 | 0.8 | 2.6 | OK |
| 1.004 | S104 | 0.27 | | 0.076 | 19.158 | 0.6 | 12.9 | OK |
| 1.005 | S105 | 0.12 | | 0.735 | 19.547 | 0.5 | 13.0 | OK |
| 5.000 | S500 | 0.05 | | 0.003 | 2.583 | 1.1 | 1.8 | OK |
| 5.001 | S501 | 0.06 | | 0.005 | 2.583 | 1.0 | 1.8 | OK |
| 6.000 | S600 | 0.01 | | 0.000 | 0.369 | 0.6 | 0.3 | OK |
| 6.001 | S601 | 0.01 | | 0.000 | 0.369 | 0.6 | 0.3 | OK |
| 5.002 | S502 | 0.13 | | 0.014 | 9.779 | 0.9 | 6.5 | OK |
| 5.003 | S503 | 0.09 | | 0.034 | 11.070 | 1.3 | 7.4 | OK |
| 7.000 | S700 | 0.19 | | 0.006 | 4.797 | 0.7 | 3.3 | OK |
| 7.001 | S701 | 0.28 | | 0.027 | 7.196 | 0.8 | 4.9 | OK |
| 5.004 | S504 | 0.20 | | 0.282 | 18.127 | 0.7 | 12.2 | OK |

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## Summary Wizard of 60 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 60 minute 5 year Winter I+0% | 60 | 46 | 32.525 | 31.211 | -0.139 | 0.000 |
| 1.006 | S106 | 60 minute 5 year Winter I+0% | 60 | 62 | 32.500 | 30.403 | -1.243 | 0.000 |
| 9.000 | S900 | 60 minute 5 year Winter I+0% | 60 | 42 | 32.665 | 31.857 | -0.143 | 0.000 |
| 10.000 | S901 | 60 minute 5 year Winter I+0% | 60 | 42 | 32.665 | 31.854 | -0.146 | 0.000 |
| 9.001 | S901 | 60 minute 5 year Winter I+0% | 60 | 46 | 32.665 | 31.049 | -0.171 | 0.000 |
| 9.002 | S902 | 60 minute 5 year Winter I+0% | 60 | 46 | 32.640 | 30.804 | -0.181 | 0.000 |
| 11.000 | S1100 | 60 minute 5 year Winter I+0% | 60 | 43 | 32.680 | 31.584 | -0.116 | 0.000 |
| 9.003 | S903 | 60 minute 5 year Winter I+0% | 60 | 62 | 32.630 | 30.403 | -0.092 | 0.000 |
| 1.007 | S107 | 60 minute 5 year Winter I+0% | 60 | 62 | 32.500 | 30.403 | -1.133 | 0.000 |
| 12.000 | S1200 | 60 minute 5 year Winter I+0% | 60 | 42 | 32.635 | 31.861 | -0.139 | 0.000 |
| 13.000 | S1300 | 60 minute 5 year Winter I+0% | 60 | 41 | 32.635 | 31.891 | -0.109 | 0.000 |
| 13.001 | S1301 | 60 minute 5 year Winter I+0% | 60 | 42 | 32.635 | 31.800 | -0.110 | 0.000 |
| 12.001 | S1201 | 60 minute 5 year Winter I+0% | 60 | 44 | 32.635 | 31.464 | -0.171 | 0.000 |
| 12.002 | S1202 | 60 minute 5 year Winter I+0% | 60 | 46 | 32.680 | 31.116 | -0.144 | 0.000 |
| 12.003 | S1203 | 60 minute 5 year Winter I+0% | 60 | 46 | 32.660 | 31.018 | -0.152 | 0.000 |
| 12.004 | S1204 | 60 minute 5 year Winter I+0% | 60 | 46 | 32.660 | 30.874 | -0.161 | 0.000 |
| 14.000 | S1400 | 60 minute 5 year Winter I+0% | 60 | 42 | 32.650 | 31.665 | -0.110 | 0.000 |
| 14.001 | S1401 | 60 minute 5 year Winter I+0% | 60 | 46 | 32.680 | 31.320 | -0.175 | 0.000 |
| 15.000 | S1500 | 60 minute 5 year Winter I+0% | 60 | 42 | 32.680 | 31.679 | -0.121 | 0.000 |
| 15.001 | S1501 | 60 minute 5 year Winter I+0% | 60 | 43 | 32.600 | 31.633 | -0.122 | 0.000 |
| 14.002 | S1402 | 60 minute 5 year Winter I+0% | 60 | 46 | 32.600 | 31.062 | -0.178 | 0.000 |
| 12.005 | 1205 | 60 minute 5 year Winter I+0% | 60 | 61 | 32.600 | 30.568 | -0.137 | 0.000 |
| 1.008 | S108 | 60 minute 5 year Winter I+0% | 60 | 62 | 32.550 | 30.403 | 0.048 | 0.000 |
| 16.000 | S1600 | 60 minute 5 year Winter I+0% | 60 | 44 | 32.545 | 31.460 | -0.190 | 0.000 |
| 16.001 | S1601 | 60 minute 5 year Winter I+0% | 60 | 62 | 32.545 | 30.494 | -0.191 | 0.000 |
| 1.009 | S109 | 60 minute 5 year Winter I+0% | 60 | 62 | 32.500 | 30.403 | 0.373 | 0.000 |

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.02 | | 0.007 | 0.922 | 1.1 | 0.6 | OK |
| 1.006 | S106 | 0.01 | | 0.798 | 32.819 | 0.2 | 15.2 | OK |
| 9.000 | S900 | 0.01 | | 0.000 | 0.553 | 0.8 | 0.4 | OK |
| 10.000 | S901 | 0.01 | | 0.000 | 0.369 | 0.6 | 0.3 | OK |
| 9.001 | S901 | 0.13 | | 0.014 | 9.594 | 0.9 | 6.4 | OK |
| 9.002 | S902 | 0.09 | | 0.039 | 12.731 | 1.5 | 8.4 | OK |
| 11.000 | S1100 | 0.11 | | 0.005 | 2.768 | 0.6 | 1.9 | OK |
| 9.003 | S903 | 0.13 | | 0.308 | 16.230 | 0.8 | 10.9 | OK |
| 1.007 | S107 | 0.00 | | 47.503 | 30.493 | 0.1 | 9.1 | OK |
| 12.000 | S1200 | 0.02 | | 0.001 | 0.738 | 0.9 | 0.5 | OK |
| 13.000 | S1300 | 0.17 | | 0.006 | 4.244 | 0.7 | 2.9 | OK |
| 13.001 | S1301 | 0.16 | | 0.020 | 6.642 | 1.2 | 4.5 | OK |
| 12.001 | S1201 | 0.13 | | 0.014 | 12.915 | 1.2 | 8.7 | OK |
| 12.002 | S1202 | 0.28 | | 0.048 | 17.712 | 0.9 | 11.8 | OK |
| 12.003 | S1203 | 0.23 | | 0.063 | 17.712 | 1.1 | 11.8 | OK |
| 12.004 | S1204 | 0.18 | | 0.036 | 21.402 | 1.5 | 14.3 | OK |
| 14.000 | S1400 | 0.16 | | 0.006 | 4.428 | 0.8 | 3.0 | OK |

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## Summary Wizard of 60 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.11 | | 0.013 | 7.934 | 0.8 | 5.3 | OK |
| 15.000 | S1500 | 0.09 | | 0.004 | 1.661 | 0.5 | 1.1 | OK |
| 15.001 | S1501 | 0.08 | | 0.010 | 4.428 | 1.3 | 3.0 | OK |
| 14.002 | S1402 | 0.10 | | 0.041 | 14.760 | 1.7 | 9.9 | OK |
| 12.005 | 1205 | 0.32 | | 0.141 | 40.222 | 1.9 | 26.9 | OK |
| 1.008 | S108 | 0.06 | | 52.415 | 27.907 | 0.1 | 5.8 | SURCHARGED |
| 16.000 | S1600 | 0.06 | | 0.009 | 6.273 | 1.1 | 4.3 | OK |
| 16.001 | S1601 | 0.06 | | 0.018 | 7.011 | 1.2 | 4.8 | OK |
| 1.009 | S109 | 0.34 | | 2.783 | 32.453 | 1.0 | 5.6 | SURCHARGED |

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## Summary Wizard of 120 minute 5 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 120 minute 5 year Winter I+0% | 120 | 53 | 32.680 | 31.794 | -0.126 | 0.000 |
| 1.001 | S101 | 120 minute 5 year Winter I+0% | 120 | 53 | 32.680 | 31.720 | -0.130 | 0.000 |
| 2.000 | S200 | 120 minute 5 year Winter I+0% | 120 | 55 | 32.600 | 31.500 | -0.130 | 0.000 |
| 1.002 | S102 | 120 minute 5 year Winter I+0% | 120 | 57 | 32.630 | 31.256 | -0.189 | 0.000 |
| 3.000 | S300 | 120 minute 5 year Winter I+0% | 120 | 53 | 32.550 | 31.861 | -0.139 | 0.000 |
| 1.003 | S103 | 120 minute 5 year Winter I+0% | 120 | 57 | 32.600 | 31.087 | -0.188 | 0.000 |
| 4.000 | S400 | 120 minute 5 year Winter I+0% | 120 | 53 | 32.550 | 31.716 | -0.134 | 0.000 |
| 4.001 | S401 | 120 minute 5 year Winter I+0% | 120 | 67 | 32.550 | 30.628 | -0.122 | 0.000 |
| 1.004 | S104 | 120 minute 5 year Winter I+0% | 120 | 54 | 32.600 | 30.457 | -0.073 | 0.000 |
| 1.005 | S105 | 120 minute 5 year Winter I+0% | 120 | 54 | 32.600 | 30.456 | -0.054 | 0.000 |
| 5.000 | S500 | 120 minute 5 year Winter I+0% | 120 | 52 | 32.550 | 31.868 | -0.132 | 0.000 |
| 5.001 | S501 | 120 minute 5 year Winter I+0% | 120 | 57 | 32.665 | 31.158 | -0.132 | 0.000 |
| 6.000 | S600 | 120 minute 5 year Winter I+0% | 120 | 53 | 32.665 | 31.853 | -0.147 | 0.000 |
| 6.001 | S601 | 120 minute 5 year Winter I+0% | 120 | 57 | 32.665 | 31.144 | -0.146 | 0.000 |
| 5.002 | S502 | 120 minute 5 year Winter I+0% | 120 | 57 | 32.665 | 30.867 | -0.183 | 0.000 |
| 5.003 | S503 | 120 minute 5 year Winter I+0% | 120 | 66 | 32.680 | 30.666 | -0.189 | 0.000 |
| 7.000 | S700 | 120 minute 5 year Winter I+0% | 120 | 52 | 32.680 | 31.915 | -0.115 | 0.000 |
| 7.001 | S701 | 120 minute 5 year Winter I+0% | 120 | 53 | 32.635 | 31.838 | -0.107 | 0.000 |
| 5.004 | S504 | 120 minute 5 year Winter I+0% | 120 | 54 | 32.635 | 30.457 | -0.088 | 0.000 |

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## Summary Wizard of 120 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.06 | | 0.003 | 2.955 | 0.6 | 1.0 | OK |
| 1.001 | S101 | 0.04 | | 0.008 | 4.546 | 1.1 | 1.6 | OK |
| 2.000 | S200 | 0.05 | | 0.002 | 2.955 | 0.7 | 1.0 | OK |
| 1.002 | S102 | 0.06 | | 0.009 | 9.091 | 0.8 | 3.2 | OK |
| 3.000 | S300 | 0.02 | | 0.001 | 1.818 | 1.2 | 0.6 | OK |
| 1.003 | S103 | 0.07 | | 0.027 | 16.591 | 1.3 | 5.7 | OK |
| 4.000 | S400 | 0.02 | | 0.002 | 3.409 | 1.5 | 1.2 | OK |
| 4.001 | S401 | 0.08 | | 0.005 | 4.773 | 0.7 | 1.7 | OK |
| 1.004 | S104 | 0.17 | | 0.140 | 23.618 | 0.5 | 8.2 | OK |
| 1.005 | S105 | 0.07 | | 0.886 | 24.307 | 0.4 | 8.2 | OK |
| 5.000 | S500 | 0.03 | | 0.002 | 3.182 | 0.9 | 1.1 | OK |
| 5.001 | S501 | 0.04 | | 0.004 | 3.182 | 0.9 | 1.1 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.454 | 0.4 | 0.2 | OK |
| 6.001 | S601 | 0.01 | | 0.000 | 0.454 | 0.4 | 0.2 | OK |
| 5.002 | S502 | 0.08 | | 0.011 | 12.046 | 0.8 | 4.2 | OK |
| 5.003 | S503 | 0.06 | | 0.025 | 13.636 | 1.2 | 4.7 | OK |
| 7.000 | S700 | 0.12 | | 0.005 | 5.910 | 0.7 | 2.1 | OK |
| 7.001 | S701 | 0.18 | | 0.021 | 8.864 | 0.7 | 3.1 | OK |
| 5.004 | S504 | 0.13 | | 0.389 | 22.419 | 0.6 | 7.8 | OK |

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## Summary Wizard of 120 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 120 minute 5 year Winter I+0% | 120 | 57 | 32.525 | 31.207 | -0.143 |
| 1.006 | S106 | 120 minute 5 year Winter I+0% | 120 | 54 | 32.500 | 30.456 | -1.190 |
| 9.000 | S900 | 120 minute 5 year Winter I+0% | 120 | 53 | 32.665 | 31.855 | -0.145 |
| 10.000 | S901 | 120 minute 5 year Winter I+0% | 120 | 53 | 32.665 | 31.853 | -0.147 |
| 9.001 | S901 | 120 minute 5 year Winter I+0% | 120 | 57 | 32.665 | 31.039 | -0.181 |
| 9.002 | S902 | 120 minute 5 year Winter I+0% | 120 | 57 | 32.640 | 30.794 | -0.191 |
| 11.000 | S1100 | 120 minute 5 year Winter I+0% | 120 | 54 | 32.680 | 31.576 | -0.124 |
| 9.003 | S903 | 120 minute 5 year Winter I+0% | 120 | 54 | 32.630 | 30.457 | -0.038 |
| 1.007 | S107 | 120 minute 5 year Winter I+0% | 120 | 54 | 32.500 | 30.456 | -1.080 |
| 12.000 | S1200 | 120 minute 5 year Winter I+0% | 120 | 53 | 32.635 | 31.857 | -0.143 |
| 13.000 | S1300 | 120 minute 5 year Winter I+0% | 120 | 52 | 32.635 | 31.883 | -0.117 |
| 13.001 | S1301 | 120 minute 5 year Winter I+0% | 120 | 53 | 32.635 | 31.792 | -0.118 |
| 12.001 | S1201 | 120 minute 5 year Winter I+0% | 120 | 56 | 32.635 | 31.453 | -0.182 |
| 12.002 | S1202 | 120 minute 5 year Winter I+0% | 120 | 57 | 32.680 | 31.099 | -0.161 |
| 12.003 | S1203 | 120 minute 5 year Winter I+0% | 120 | 57 | 32.660 | 31.002 | -0.168 |
| 12.004 | S1204 | 120 minute 5 year Winter I+0% | 120 | 57 | 32.660 | 30.860 | -0.175 |
| 14.000 | S1400 | 120 minute 5 year Winter I+0% | 120 | 53 | 32.650 | 31.657 | -0.118 |
| 14.001 | S1401 | 120 minute 5 year Winter I+0% | 120 | 57 | 32.680 | 31.309 | -0.186 |
| 15.000 | S1500 | 120 minute 5 year Winter I+0% | 120 | 53 | 32.680 | 31.672 | -0.128 |
| 15.001 | S1501 | 120 minute 5 year Winter I+0% | 120 | 54 | 32.600 | 31.627 | -0.128 |
| 14.002 | S1402 | 120 minute 5 year Winter I+0% | 120 | 57 | 32.600 | 31.051 | -0.189 |
| 12.005 | 1205 | 120 minute 5 year Winter I+0% | 120 | 69 | 32.600 | 30.549 | -0.156 |
| 1.008 | S108 | 120 minute 5 year Winter I+0% | 120 | 54 | 32.550 | 30.456 | 0.101 |
| 16.000 | S1600 | 120 minute 5 year Winter I+0% | 120 | 55 | 32.545 | 31.453 | -0.197 |
| 16.001 | S1601 | 120 minute 5 year Winter I+0% | 120 | 69 | 32.545 | 30.487 | -0.198 |
| 1.009 | S109 | 120 minute 5 year Winter I+0% | 120 | 54 | 32.500 | 30.458 | 0.428 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.003 | 1.136 | 0.9 | 0.4 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.986 | 46.918 | 0.2 | 10.1 | OK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.000 | 0.682 | 0.5 | 0.2 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.454 | 0.4 | 0.2 | OK |
| 9.001 | S901 | 0.000 | 0.09 | | 0.011 | 11.818 | 0.7 | 4.1 | OK |
| 9.002 | S902 | 0.000 | 0.05 | | 0.028 | 15.682 | 1.4 | 5.4 | OK |
| 11.000 | S1100 | 0.000 | 0.07 | | 0.003 | 3.409 | 0.6 | 1.2 | OK |
| 9.003 | S903 | 0.000 | 0.08 | | 0.406 | 20.089 | 0.7 | 7.0 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 53.717 | 50.898 | 0.1 | 6.7 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 0.909 | 0.7 | 0.3 | OK |
| 13.000 | S1300 | 0.000 | 0.11 | | 0.004 | 5.228 | 0.6 | 1.8 | OK |
| 13.001 | S1301 | 0.000 | 0.10 | | 0.015 | 8.182 | 1.0 | 2.8 | OK |
| 12.001 | S1201 | 0.000 | 0.08 | | 0.011 | 15.910 | 1.0 | 5.5 | OK |
| 12.002 | S1202 | 0.000 | 0.18 | | 0.037 | 21.819 | 0.8 | 7.5 | OK |
| 12.003 | S1203 | 0.000 | 0.15 | | 0.048 | 21.819 | 1.0 | 7.5 | OK |
| 12.004 | S1204 | 0.000 | 0.11 | | 0.028 | 26.365 | 1.4 | 9.1 | OK |
| 14.000 | S1400 | 0.000 | 0.10 | | 0.004 | 5.455 | 0.7 | 1.9 | OK |

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## Summary Wizard of 120 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.07 | | 0.010 | 9.773 | 0.7 | 3.4 | OK |
| 15.000 | S1500 | 0.000 | 0.05 | | 0.003 | 2.046 | 0.4 | 0.7 | OK |
| 15.001 | S1501 | 0.000 | 0.05 | | 0.007 | 5.455 | 1.2 | 1.9 | OK |
| 14.002 | S1402 | 0.000 | 0.06 | | 0.031 | 18.182 | 1.5 | 6.3 | OK |
| 12.005 | 1205 | 0.000 | 0.21 | | 0.109 | 49.547 | 1.7 | 17.1 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 58.280 | 61.578 | 0.2 | 6.0 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.04 | | 0.007 | 7.728 | 0.9 | 2.7 | OK |
| 16.001 | S1601 | 0.000 | 0.04 | | 0.014 | 8.637 | 1.1 | 3.0 | OK |
| 1.009 | S109 | 0.000 | 0.35 | | 2.960 | 67.914 | 1.0 | 5.9 | SURCHARGED |

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## Summary Wizard of 180 minute 5 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 180 minute 5 year Winter I+0% | 180 | 63 | 32.680 | 31.791 | -0.129 | 0.000 |
| 1.001 | S101 | 180 minute 5 year Winter I+0% | 180 | 63 | 32.680 | 31.718 | -0.132 | 0.000 |
| 2.000 | S200 | 180 minute 5 year Winter I+0% | 180 | 64 | 32.600 | 31.498 | -0.132 | 0.000 |
| 1.002 | S102 | 180 minute 5 year Winter I+0% | 180 | 66 | 32.630 | 31.251 | -0.194 | 0.000 |
| 3.000 | S300 | 180 minute 5 year Winter I+0% | 180 | 63 | 32.550 | 31.858 | -0.142 | 0.000 |
| 1.003 | S103 | 180 minute 5 year Winter I+0% | 180 | 65 | 32.600 | 31.082 | -0.193 | 0.000 |
| 4.000 | S400 | 180 minute 5 year Winter I+0% | 180 | 63 | 32.550 | 31.713 | -0.137 | 0.000 |
| 4.001 | S401 | 180 minute 5 year Winter I+0% | 180 | 74 | 32.550 | 30.624 | -0.126 | 0.000 |
| 1.004 | S104 | 180 minute 5 year Winter I+0% | 180 | 49 | 32.600 | 30.471 | -0.059 | 0.000 |
| 1.005 | S105 | 180 minute 5 year Winter I+0% | 180 | 49 | 32.600 | 30.471 | -0.039 | 0.000 |
| 5.000 | S500 | 180 minute 5 year Winter I+0% | 180 | 63 | 32.550 | 31.866 | -0.134 | 0.000 |
| 5.001 | S501 | 180 minute 5 year Winter I+0% | 180 | 66 | 32.665 | 31.156 | -0.134 | 0.000 |
| 6.000 | S600 | 180 minute 5 year Winter I+0% | 180 | 63 | 32.665 | 31.852 | -0.148 | 0.000 |
| 6.001 | S601 | 180 minute 5 year Winter I+0% | 180 | 66 | 32.665 | 31.143 | -0.147 | 0.000 |
| 5.002 | S502 | 180 minute 5 year Winter I+0% | 180 | 65 | 32.665 | 30.861 | -0.189 | 0.000 |
| 5.003 | S503 | 180 minute 5 year Winter I+0% | 180 | 72 | 32.680 | 30.661 | -0.194 | 0.000 |
| 7.000 | S700 | 180 minute 5 year Winter I+0% | 180 | 62 | 32.680 | 31.910 | -0.120 | 0.000 |
| 7.001 | S701 | 180 minute 5 year Winter I+0% | 180 | 63 | 32.635 | 31.831 | -0.114 | 0.000 |
| 5.004 | S504 | 180 minute 5 year Winter I+0% | 180 | 49 | 32.635 | 30.471 | -0.074 | 0.000 |

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## Summary Wizard of 180 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.05 | | 0.003 | 3.318 | 0.5 | 0.8 | OK |
| 1.001 | S101 | 0.03 | | 0.007 | 5.105 | 1.0 | 1.2 | OK |
| 2.000 | S200 | 0.03 | | 0.002 | 3.318 | 0.6 | 0.8 | OK |
| 1.002 | S102 | 0.05 | | 0.008 | 10.210 | 0.7 | 2.4 | OK |
| 3.000 | S300 | 0.01 | | 0.001 | 2.042 | 1.1 | 0.5 | OK |
| 1.003 | S103 | 0.05 | | 0.022 | 18.633 | 1.2 | 4.3 | OK |
| 4.000 | S400 | 0.02 | | 0.001 | 3.828 | 1.5 | 0.9 | OK |
| 4.001 | S401 | 0.06 | | 0.004 | 5.360 | 0.7 | 1.2 | OK |
| 1.004 | S104 | 0.13 | | 0.168 | 26.544 | 0.5 | 6.2 | OK |
| 1.005 | S105 | 0.06 | | 0.924 | 27.518 | 0.4 | 6.2 | OK |
| 5.000 | S500 | 0.03 | | 0.002 | 3.573 | 0.9 | 0.8 | OK |
| 5.001 | S501 | 0.03 | | 0.003 | 3.573 | 0.9 | 0.8 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.510 | 0.3 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.510 | 0.3 | 0.1 | OK |
| 5.002 | S502 | 0.06 | | 0.009 | 13.527 | 0.8 | 3.1 | OK |
| 5.003 | S503 | 0.05 | | 0.021 | 15.314 | 1.1 | 3.6 | OK |
| 7.000 | S700 | 0.09 | | 0.004 | 6.637 | 0.6 | 1.5 | OK |
| 7.001 | S701 | 0.13 | | 0.018 | 9.955 | 0.7 | 2.3 | OK |
| 5.004 | S504 | 0.10 | | 0.422 | 25.269 | 0.6 | 5.9 | OK |

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## Summary Wizard of 180 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 180 minute 5 year Winter I+0% | 180 | 66 | 32.525 | 31.205 | -0.145 |
| 1.006 | S106 | 180 minute 5 year Winter I+0% | 180 | 49 | 32.500 | 30.470 | -1.176 |
| 9.000 | S900 | 180 minute 5 year Winter I+0% | 180 | 63 | 32.665 | 31.853 | -0.147 |
| 10.000 | S901 | 180 minute 5 year Winter I+0% | 180 | 63 | 32.665 | 31.852 | -0.148 |
| 9.001 | S901 | 180 minute 5 year Winter I+0% | 180 | 65 | 32.665 | 31.032 | -0.188 |
| 9.002 | S902 | 180 minute 5 year Winter I+0% | 180 | 65 | 32.640 | 30.789 | -0.196 |
| 11.000 | S1100 | 180 minute 5 year Winter I+0% | 180 | 63 | 32.680 | 31.572 | -0.128 |
| 9.003 | S903 | 180 minute 5 year Winter I+0% | 180 | 49 | 32.630 | 30.471 | -0.024 |
| 1.007 | S107 | 180 minute 5 year Winter I+0% | 180 | 49 | 32.500 | 30.470 | -1.066 |
| 12.000 | S1200 | 180 minute 5 year Winter I+0% | 180 | 63 | 32.635 | 31.855 | -0.145 |
| 13.000 | S1300 | 180 minute 5 year Winter I+0% | 180 | 62 | 32.635 | 31.878 | -0.122 |
| 13.001 | S1301 | 180 minute 5 year Winter I+0% | 180 | 63 | 32.635 | 31.787 | -0.123 |
| 12.001 | S1201 | 180 minute 5 year Winter I+0% | 180 | 64 | 32.635 | 31.447 | -0.188 |
| 12.002 | S1202 | 180 minute 5 year Winter I+0% | 180 | 65 | 32.680 | 31.090 | -0.170 |
| 12.003 | S1203 | 180 minute 5 year Winter I+0% | 180 | 65 | 32.660 | 30.994 | -0.176 |
| 12.004 | S1204 | 180 minute 5 year Winter I+0% | 180 | 65 | 32.660 | 30.854 | -0.181 |
| 14.000 | S1400 | 180 minute 5 year Winter I+0% | 180 | 63 | 32.650 | 31.652 | -0.123 |
| 14.001 | S1401 | 180 minute 5 year Winter I+0% | 180 | 66 | 32.680 | 31.303 | -0.192 |
| 15.000 | S1500 | 180 minute 5 year Winter I+0% | 180 | 63 | 32.680 | 31.669 | -0.131 |
| 15.001 | S1501 | 180 minute 5 year Winter I+0% | 180 | 62 | 32.600 | 31.624 | -0.131 |
| 14.002 | S1402 | 180 minute 5 year Winter I+0% | 180 | 65 | 32.600 | 31.046 | -0.194 |
| 12.005 | 1205 | 180 minute 5 year Winter I+0% | 180 | 75 | 32.600 | 30.539 | -0.166 |
| 1.008 | S108 | 180 minute 5 year Winter I+0% | 180 | 49 | 32.550 | 30.470 | 0.115 |
| 16.000 | S1600 | 180 minute 5 year Winter I+0% | 180 | 64 | 32.545 | 31.450 | -0.200 |
| 16.001 | S1601 | 180 minute 5 year Winter I+0% | 180 | 76 | 32.545 | 30.484 | -0.201 |
| 1.009 | S109 | 180 minute 5 year Winter I+0% | 180 | 49 | 32.500 | 30.472 | 0.442 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.001 | 1.276 | 0.7 | 0.3 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.018 | 58.936 | 0.1 | 7.9 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.765 | 0.4 | 0.2 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.510 | 0.3 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.06 | | 0.009 | 13.272 | 0.7 | 3.1 | OK |
| 9.002 | S902 | 0.000 | 0.04 | | 0.024 | 17.611 | 1.3 | 4.1 | OK |
| 11.000 | S1100 | 0.000 | 0.05 | | 0.003 | 3.829 | 0.5 | 0.9 | OK |
| 9.003 | S903 | 0.000 | 0.06 | | 0.432 | 22.671 | 0.7 | 5.2 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 55.351 | 69.792 | 0.1 | 5.6 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 1.021 | 0.5 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.08 | | 0.004 | 5.871 | 0.6 | 1.4 | OK |
| 13.001 | S1301 | 0.000 | 0.08 | | 0.013 | 9.189 | 1.0 | 2.1 | OK |
| 12.001 | S1201 | 0.000 | 0.06 | | 0.009 | 17.867 | 1.0 | 4.2 | OK |
| 12.002 | S1202 | 0.000 | 0.13 | | 0.032 | 24.504 | 0.8 | 5.7 | OK |
| 12.003 | S1203 | 0.000 | 0.11 | | 0.042 | 24.504 | 0.9 | 5.7 | OK |
| 12.004 | S1204 | 0.000 | 0.09 | | 0.024 | 29.609 | 1.2 | 6.9 | OK |
| 14.000 | S1400 | 0.000 | 0.08 | | 0.004 | 6.126 | 0.7 | 1.4 | OK |

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## Summary Wizard of 180 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.05 | | 0.008 | 10.976 | 0.7 | 2.6 | OK |
| 15.000 | S1500 | 0.000 | 0.04 | | 0.002 | 2.297 | 0.4 | 0.5 | OK |
| 15.001 | S1501 | 0.000 | 0.04 | | 0.006 | 6.126 | 1.1 | 1.4 | OK |
| 14.002 | S1402 | 0.000 | 0.05 | | 0.026 | 20.420 | 1.4 | 4.7 | OK |
| 12.005 | 1205 | 0.000 | 0.16 | | 0.092 | 55.644 | 1.6 | 12.9 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 59.822 | 93.855 | 0.2 | 6.0 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.03 | | 0.006 | 8.678 | 0.9 | 2.0 | OK |
| 16.001 | S1601 | 0.000 | 0.03 | | 0.012 | 9.699 | 1.1 | 2.3 | OK |
| 1.009 | S109 | 0.000 | 0.36 | | 3.005 | 101.652 | 1.0 | 6.0 | SURCHARGED |

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## Summary Wizard of 240 minute 5 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | FSR | Ratio R | 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 240 minute 5 year Winter I+0% | 240 | 72 | 32.680 | 31.789 | -0.131 | 0.000 |
| 1.001 | S101 | 240 minute 5 year Winter I+0% | 240 | 71 | 32.680 | 31.716 | -0.134 | 0.000 |
| 2.000 | S200 | 240 minute 5 year Winter I+0% | 240 | 73 | 32.600 | 31.497 | -0.133 | 0.000 |
| 1.002 | S102 | 240 minute 5 year Winter I+0% | 240 | 73 | 32.630 | 31.248 | -0.197 | 0.000 |
| 3.000 | S300 | 240 minute 5 year Winter I+0% | 240 | 72 | 32.550 | 31.857 | -0.143 | 0.000 |
| 1.003 | S103 | 240 minute 5 year Winter I+0% | 240 | 73 | 32.600 | 31.079 | -0.196 | 0.000 |
| 4.000 | S400 | 240 minute 5 year Winter I+0% | 240 | 72 | 32.550 | 31.710 | -0.140 | 0.000 |
| 4.001 | S401 | 240 minute 5 year Winter I+0% | 240 | 79 | 32.550 | 30.621 | -0.129 | 0.000 |
| 1.004 | S104 | 240 minute 5 year Winter I+0% | 240 | 47 | 32.600 | 30.472 | -0.058 | 0.000 |
| 1.005 | S105 | 240 minute 5 year Winter I+0% | 240 | 47 | 32.600 | 30.472 | -0.038 | 0.000 |
| 5.000 | S500 | 240 minute 5 year Winter I+0% | 240 | 72 | 32.550 | 31.865 | -0.135 | 0.000 |
| 5.001 | S501 | 240 minute 5 year Winter I+0% | 240 | 74 | 32.665 | 31.155 | -0.135 | 0.000 |
| 6.000 | S600 | 240 minute 5 year Winter I+0% | 240 | 72 | 32.665 | 31.852 | -0.148 | 0.000 |
| 6.001 | S601 | 240 minute 5 year Winter I+0% | 240 | 74 | 32.665 | 31.142 | -0.148 | 0.000 |
| 5.002 | S502 | 240 minute 5 year Winter I+0% | 240 | 73 | 32.665 | 30.857 | -0.193 | 0.000 |
| 5.003 | S503 | 240 minute 5 year Winter I+0% | 240 | 77 | 32.680 | 30.658 | -0.197 | 0.000 |
| 7.000 | S700 | 240 minute 5 year Winter I+0% | 240 | 72 | 32.680 | 31.907 | -0.123 | 0.000 |
| 7.001 | S701 | 240 minute 5 year Winter I+0% | 240 | 71 | 32.635 | 31.828 | -0.117 | 0.000 |
| 5.004 | S504 | 240 minute 5 year Winter I+0% | 240 | 47 | 32.635 | 30.472 | -0.073 | 0.000 |

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## Summary Wizard of 240 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.04 | | 0.002 | 3.597 | 0.5 | 0.6 | OK |
| 1.001 | S101 | 0.03 | | 0.006 | 5.533 | 1.0 | 1.0 | OK |
| 2.000 | S200 | 0.03 | | 0.002 | 3.597 | 0.6 | 0.6 | OK |
| 1.002 | S102 | 0.04 | | 0.007 | 11.066 | 0.7 | 1.9 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 2.213 | 0.9 | 0.4 | OK |
| 1.003 | S103 | 0.04 | | 0.020 | 20.195 | 1.2 | 3.5 | OK |
| 4.000 | S400 | 0.01 | | 0.001 | 4.150 | 1.5 | 0.7 | OK |
| 4.001 | S401 | 0.05 | | 0.003 | 5.809 | 0.7 | 1.0 | OK |
| 1.004 | S104 | 0.11 | | 0.171 | 28.771 | 0.4 | 5.0 | OK |
| 1.005 | S105 | 0.05 | | 0.927 | 29.987 | 0.4 | 5.1 | OK |
| 5.000 | S500 | 0.02 | | 0.002 | 3.873 | 0.9 | 0.7 | OK |
| 5.001 | S501 | 0.02 | | 0.003 | 3.873 | 0.9 | 0.7 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.553 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.553 | 0.2 | 0.1 | OK |
| 5.002 | S502 | 0.05 | | 0.008 | 14.662 | 0.7 | 2.6 | OK |
| 5.003 | S503 | 0.04 | | 0.019 | 16.598 | 1.0 | 2.9 | OK |
| 7.000 | S700 | 0.07 | | 0.003 | 7.193 | 0.6 | 1.3 | OK |
| 7.001 | S701 | 0.11 | | 0.016 | 10.790 | 0.7 | 1.9 | OK |
| 5.004 | S504 | 0.08 | | 0.425 | 27.388 | 0.5 | 4.8 | OK |

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## Summary Wizard of 240 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 240 minute 5 year Winter I+0% | 240 | 74 | 32.525 | 31.204 | -0.146 |
| 1.006 | S106 | 240 minute 5 year Winter I+0% | 240 | 47 | 32.500 | 30.472 | -1.174 |
| 9.000 | S900 | 240 minute 5 year Winter I+0% | 240 | 72 | 32.665 | 31.853 | -0.147 |
| 10.000 | S901 | 240 minute 5 year Winter I+0% | 240 | 72 | 32.665 | 31.852 | -0.148 |
| 9.001 | S901 | 240 minute 5 year Winter I+0% | 240 | 73 | 32.665 | 31.028 | -0.192 |
| 9.002 | S902 | 240 minute 5 year Winter I+0% | 240 | 73 | 32.640 | 30.787 | -0.198 |
| 11.000 | S1100 | 240 minute 5 year Winter I+0% | 240 | 72 | 32.680 | 31.570 | -0.130 |
| 9.003 | S903 | 240 minute 5 year Winter I+0% | 240 | 47 | 32.630 | 30.472 | -0.023 |
| 1.007 | S107 | 240 minute 5 year Winter I+0% | 240 | 47 | 32.500 | 30.472 | -1.064 |
| 12.000 | S1200 | 240 minute 5 year Winter I+0% | 240 | 72 | 32.635 | 31.854 | -0.146 |
| 13.000 | S1300 | 240 minute 5 year Winter I+0% | 240 | 72 | 32.635 | 31.875 | -0.125 |
| 13.001 | S1301 | 240 minute 5 year Winter I+0% | 240 | 71 | 32.635 | 31.784 | -0.126 |
| 12.001 | S1201 | 240 minute 5 year Winter I+0% | 240 | 72 | 32.635 | 31.443 | -0.192 |
| 12.002 | S1202 | 240 minute 5 year Winter I+0% | 240 | 73 | 32.680 | 31.084 | -0.176 |
| 12.003 | S1203 | 240 minute 5 year Winter I+0% | 240 | 73 | 32.660 | 30.990 | -0.180 |
| 12.004 | S1204 | 240 minute 5 year Winter I+0% | 240 | 73 | 32.660 | 30.849 | -0.186 |
| 14.000 | S1400 | 240 minute 5 year Winter I+0% | 240 | 72 | 32.650 | 31.649 | -0.126 |
| 14.001 | S1401 | 240 minute 5 year Winter I+0% | 240 | 73 | 32.680 | 31.300 | -0.195 |
| 15.000 | S1500 | 240 minute 5 year Winter I+0% | 240 | 72 | 32.680 | 31.668 | -0.132 |
| 15.001 | S1501 | 240 minute 5 year Winter I+0% | 240 | 71 | 32.600 | 31.622 | -0.133 |
| 14.002 | S1402 | 240 minute 5 year Winter I+0% | 240 | 73 | 32.600 | 31.043 | -0.197 |
| 12.005 | 1205 | 240 minute 5 year Winter I+0% | 240 | 80 | 32.600 | 30.533 | -0.172 |
| 1.008 | S108 | 240 minute 5 year Winter I+0% | 240 | 47 | 32.550 | 30.472 | 0.117 |
| 16.000 | S1600 | 240 minute 5 year Winter I+0% | 240 | 73 | 32.545 | 31.448 | -0.202 |
| 16.001 | S1601 | 240 minute 5 year Winter I+0% | 240 | 80 | 32.545 | 30.483 | -0.202 |
| 1.009 | S109 | 240 minute 5 year Winter I+0% | 240 | 47 | 32.500 | 30.474 | 0.444 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.000 | 1.383 | 0.5 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.022 | 69.547 | 0.1 | 6.7 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.830 | 0.3 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.553 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.05 | | 0.008 | 14.385 | 0.7 | 2.5 | OK |
| 9.002 | S902 | 0.000 | 0.03 | | 0.021 | 19.088 | 1.3 | 3.3 | OK |
| 11.000 | S1100 | 0.000 | 0.04 | | 0.002 | 4.150 | 0.5 | 0.7 | OK |
| 9.003 | S903 | 0.000 | 0.05 | | 0.435 | 24.621 | 0.7 | 4.2 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 55.522 | 86.885 | 0.1 | 5.0 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 1.106 | 0.4 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.07 | | 0.003 | 6.363 | 0.6 | 1.1 | OK |
| 13.001 | S1301 | 0.000 | 0.06 | | 0.011 | 9.960 | 0.9 | 1.7 | OK |
| 12.001 | S1201 | 0.000 | 0.05 | | 0.008 | 19.366 | 1.0 | 3.4 | OK |
| 12.002 | S1202 | 0.000 | 0.11 | | 0.028 | 26.559 | 0.7 | 4.6 | OK |
| 12.003 | S1203 | 0.000 | 0.09 | | 0.038 | 26.559 | 0.8 | 4.6 | OK |
| 12.004 | S1204 | 0.000 | 0.07 | | 0.021 | 32.092 | 1.2 | 5.6 | OK |
| 14.000 | S1400 | 0.000 | 0.06 | | 0.003 | 6.640 | 0.6 | 1.2 | OK |

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## Summary Wizard of 240 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.04 | | 0.007 | 11.896 | 0.7 | 2.1 | OK |
| 15.000 | S1500 | 0.000 | 0.03 | | 0.002 | 2.490 | 0.4 | 0.4 | OK |
| 15.001 | S1501 | 0.000 | 0.03 | | 0.005 | 6.640 | 1.0 | 1.2 | OK |
| 14.002 | S1402 | 0.000 | 0.04 | | 0.023 | 22.132 | 1.4 | 3.9 | OK |
| 12.005 | 1205 | 0.000 | 0.13 | | 0.082 | 60.310 | 1.5 | 10.5 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 59.984 | 123.748 | 0.2 | 6.0 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.005 | 9.406 | 0.9 | 1.6 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 0.011 | 10.513 | 1.1 | 1.8 | OK |
| 1.009 | S109 | 0.000 | 0.36 | | 3.010 | 132.827 | 1.0 | 6.0 | SURCHARGED |

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## Summary Wizard of 360 minute 5 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.680 | 31.787 | -0.133 | 0.000 |
| 1.001 | S101 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.680 | 31.715 | -0.135 | 0.000 |
| 2.000 | S200 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.600 | 31.495 | -0.135 | 0.000 |
| 1.002 | S102 | 360 minute 5 year Winter I+0% | 360 | 86 | 32.630 | 31.245 | -0.200 | 0.000 |
| 3.000 | S300 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.550 | 31.855 | -0.145 | 0.000 |
| 1.003 | S103 | 360 minute 5 year Winter I+0% | 360 | 86 | 32.600 | 31.076 | -0.199 | 0.000 |
| 4.000 | S400 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.550 | 31.708 | -0.142 | 0.000 |
| 4.001 | S401 | 360 minute 5 year Winter I+0% | 360 | 89 | 32.550 | 30.618 | -0.132 | 0.000 |
| 1.004 | S104 | 360 minute 5 year Winter I+0% | 360 | 52 | 32.600 | 30.467 | -0.063 | 0.000 |
| 1.005 | S105 | 360 minute 5 year Winter I+0% | 360 | 52 | 32.600 | 30.466 | -0.044 | 0.000 |
| 5.000 | S500 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.550 | 31.861 | -0.139 | 0.000 |
| 5.001 | S501 | 360 minute 5 year Winter I+0% | 360 | 86 | 32.665 | 31.152 | -0.138 | 0.000 |
| 6.000 | S600 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 360 minute 5 year Winter I+0% | 360 | 86 | 32.665 | 31.142 | -0.148 | 0.000 |
| 5.002 | S502 | 360 minute 5 year Winter I+0% | 360 | 86 | 32.665 | 30.853 | -0.197 | 0.000 |
| 5.003 | S503 | 360 minute 5 year Winter I+0% | 360 | 88 | 32.680 | 30.655 | -0.200 | 0.000 |
| 7.000 | S700 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.680 | 31.903 | -0.127 | 0.000 |
| 7.001 | S701 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.635 | 31.824 | -0.121 | 0.000 |
| 5.004 | S504 | 360 minute 5 year Winter I+0% | 360 | 52 | 32.635 | 30.466 | -0.079 | 0.000 |

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## Summary Wizard of 360 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.03 | | 0.002 | 4.021 | 0.5 | 0.5 | OK |
| 1.001 | S101 | 0.02 | | 0.005 | 6.186 | 1.0 | 0.7 | OK |
| 2.000 | S200 | 0.02 | | 0.002 | 4.021 | 0.6 | 0.5 | OK |
| 1.002 | S102 | 0.03 | | 0.006 | 12.373 | 0.6 | 1.4 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 2.474 | 0.6 | 0.3 | OK |
| 1.003 | S103 | 0.03 | | 0.017 | 22.581 | 1.1 | 2.6 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 4.640 | 1.2 | 0.5 | OK |
| 4.001 | S401 | 0.04 | | 0.003 | 6.496 | 0.6 | 0.8 | OK |
| 1.004 | S104 | 0.08 | | 0.159 | 32.169 | 0.4 | 3.8 | OK |
| 1.005 | S105 | 0.03 | | 0.914 | 33.716 | 0.4 | 3.8 | OK |
| 5.000 | S500 | 0.02 | | 0.001 | 4.330 | 0.9 | 0.5 | OK |
| 5.001 | S501 | 0.02 | | 0.002 | 4.330 | 0.9 | 0.5 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.617 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.617 | 0.2 | 0.1 | OK |
| 5.002 | S502 | 0.04 | | 0.007 | 16.393 | 0.7 | 1.9 | OK |
| 5.003 | S503 | 0.03 | | 0.016 | 18.558 | 1.0 | 2.2 | OK |
| 7.000 | S700 | 0.06 | | 0.003 | 8.043 | 0.6 | 0.9 | OK |
| 7.001 | S701 | 0.08 | | 0.013 | 12.064 | 0.6 | 1.4 | OK |
| 5.004 | S504 | 0.06 | | 0.412 | 30.622 | 0.5 | 3.6 | OK |

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## Summary Wizard of 360 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 360 minute 5 year Winter I+0% | 360 | 86 | 32.525 | 31.203 | -0.147 |
| 1.006 | S106 | 360 minute 5 year Winter I+0% | 360 | 52 | 32.500 | 30.466 | -1.180 |
| 9.000 | S900 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 360 minute 5 year Winter I+0% | 360 | 86 | 32.665 | 31.024 | -0.196 |
| 9.002 | S902 | 360 minute 5 year Winter I+0% | 360 | 86 | 32.640 | 30.784 | -0.201 |
| 11.000 | S1100 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.680 | 31.568 | -0.132 |
| 9.003 | S903 | 360 minute 5 year Winter I+0% | 360 | 52 | 32.630 | 30.467 | -0.028 |
| 1.007 | S107 | 360 minute 5 year Winter I+0% | 360 | 52 | 32.500 | 30.466 | -1.070 |
| 12.000 | S1200 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.635 | 31.853 | -0.147 |
| 13.000 | S1300 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.635 | 31.871 | -0.129 |
| 13.001 | S1301 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.635 | 31.781 | -0.129 |
| 12.001 | S1201 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.635 | 31.438 | -0.197 |
| 12.002 | S1202 | 360 minute 5 year Winter I+0% | 360 | 86 | 32.680 | 31.078 | -0.182 |
| 12.003 | S1203 | 360 minute 5 year Winter I+0% | 360 | 86 | 32.660 | 30.983 | -0.187 |
| 12.004 | S1204 | 360 minute 5 year Winter I+0% | 360 | 86 | 32.660 | 30.843 | -0.192 |
| 14.000 | S1400 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.650 | 31.646 | -0.129 |
| 14.001 | S1401 | 360 minute 5 year Winter I+0% | 360 | 86 | 32.680 | 31.296 | -0.199 |
| 15.000 | S1500 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.680 | 31.666 | -0.134 |
| 15.001 | S1501 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.600 | 31.621 | -0.134 |
| 14.002 | S1402 | 360 minute 5 year Winter I+0% | 360 | 86 | 32.600 | 31.040 | -0.200 |
| 12.005 | 1205 | 360 minute 5 year Winter I+0% | 360 | 90 | 32.600 | 30.526 | -0.179 |
| 1.008 | S108 | 360 minute 5 year Winter I+0% | 360 | 52 | 32.550 | 30.466 | 0.111 |
| 16.000 | S1600 | 360 minute 5 year Winter I+0% | 360 | 85 | 32.545 | 31.443 | -0.207 |
| 16.001 | S1601 | 360 minute 5 year Winter I+0% | 360 | 90 | 32.545 | 30.477 | -0.208 |
| 1.009 | S109 | 360 minute 5 year Winter I+0% | 360 | 52 | 32.500 | 30.468 | 0.438 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.546 | 0.4 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.009 | 85.971 | 0.1 | 5.3 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 0.927 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.617 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.04 | | 0.007 | 16.083 | 0.6 | 1.9 | OK |
| 9.002 | S902 | 0.000 | 0.03 | | 0.019 | 21.342 | 1.3 | 2.5 | OK |
| 11.000 | S1100 | 0.000 | 0.03 | | 0.002 | 4.640 | 0.5 | 0.5 | OK |
| 9.003 | S903 | 0.000 | 0.04 | | 0.424 | 27.529 | 0.6 | 3.1 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 54.854 | 114.730 | 0.0 | 4.4 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.237 | 0.3 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.05 | | 0.003 | 7.115 | 0.5 | 0.8 | OK |
| 13.001 | S1301 | 0.000 | 0.05 | | 0.009 | 11.136 | 0.9 | 1.3 | OK |
| 12.001 | S1201 | 0.000 | 0.04 | | 0.007 | 21.653 | 0.9 | 2.5 | OK |
| 12.002 | S1202 | 0.000 | 0.08 | | 0.024 | 29.696 | 0.7 | 3.5 | OK |
| 12.003 | S1203 | 0.000 | 0.07 | | 0.031 | 29.696 | 0.8 | 3.5 | OK |
| 12.004 | S1204 | 0.000 | 0.05 | | 0.017 | 35.883 | 1.2 | 4.2 | OK |
| 14.000 | S1400 | 0.000 | 0.05 | | 0.002 | 7.424 | 0.6 | 0.9 | OK |

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## Summary Wizard of 360 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.03 | | 0.006 | 13.302 | 0.6 | 1.6 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.002 | 2.784 | 0.4 | 0.3 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.005 | 7.424 | 1.0 | 0.9 | OK |
| 14.002 | S1402 | 0.000 | 0.03 | | 0.020 | 24.747 | 1.3 | 2.9 | OK |
| 12.005 | 1205 | 0.000 | 0.09 | | 0.071 | 67.435 | 1.3 | 7.9 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 59.357 | 174.646 | 0.2 | 5.9 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.004 | 10.517 | 0.9 | 1.2 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 0.008 | 11.754 | 1.1 | 1.4 | OK |
| 1.009 | S109 | 0.000 | 0.36 | | 2.991 | 185.850 | 1.0 | 5.9 | SURCHARGED |

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## Summary Wizard of 480 minute 5 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.680 | 31.785 | -0.135 | 0.000 |
| 1.001 | S101 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.680 | 31.712 | -0.138 | 0.000 |
| 2.000 | S200 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.600 | 31.492 | -0.138 | 0.000 |
| 1.002 | S102 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.630 | 31.243 | -0.202 | 0.000 |
| 3.000 | S300 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.550 | 31.854 | -0.146 | 0.000 |
| 1.003 | S103 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.600 | 31.074 | -0.201 | 0.000 |
| 4.000 | S400 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.550 | 31.706 | -0.144 | 0.000 |
| 4.001 | S401 | 480 minute 5 year Winter I+0% | 480 | 94 | 32.550 | 30.617 | -0.133 | 0.000 |
| 1.004 | S104 | 480 minute 5 year Winter I+0% | 480 | 56 | 32.600 | 30.451 | -0.079 | 0.000 |
| 1.005 | S105 | 480 minute 5 year Winter I+0% | 480 | 56 | 32.600 | 30.450 | -0.060 | 0.000 |
| 5.000 | S500 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.550 | 31.859 | -0.141 | 0.000 |
| 5.001 | S501 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.665 | 31.150 | -0.140 | 0.000 |
| 6.000 | S600 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.665 | 30.851 | -0.199 | 0.000 |
| 5.003 | S503 | 480 minute 5 year Winter I+0% | 480 | 93 | 32.680 | 30.653 | -0.202 | 0.000 |
| 7.000 | S700 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.680 | 31.900 | -0.130 | 0.000 |
| 7.001 | S701 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.635 | 31.820 | -0.125 | 0.000 |
| 5.004 | S504 | 480 minute 5 year Winter I+0% | 480 | 56 | 32.635 | 30.451 | -0.094 | 0.000 |

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## Summary Wizard of 480 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.02 | | 0.002 | 4.350 | 0.5 | 0.4 | OK |
| 1.001 | S101 | 0.02 | | 0.004 | 6.691 | 1.0 | 0.6 | OK |
| 2.000 | S200 | 0.02 | | 0.001 | 4.349 | 0.7 | 0.4 | OK |
| 1.002 | S102 | 0.02 | | 0.005 | 13.382 | 0.6 | 1.2 | OK |
| 3.000 | S300 | 0.01 | | 0.000 | 2.676 | 0.5 | 0.2 | OK |
| 1.003 | S103 | 0.02 | | 0.016 | 24.422 | 1.1 | 2.1 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 5.018 | 1.0 | 0.4 | OK |
| 4.001 | S401 | 0.03 | | 0.003 | 7.025 | 0.6 | 0.6 | OK |
| 1.004 | S104 | 0.07 | | 0.129 | 34.793 | 0.4 | 3.1 | OK |
| 1.005 | S105 | 0.03 | | 0.870 | 36.466 | 0.4 | 3.1 | OK |
| 5.000 | S500 | 0.01 | | 0.001 | 4.684 | 0.9 | 0.4 | OK |
| 5.001 | S501 | 0.01 | | 0.001 | 4.684 | 0.9 | 0.4 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.666 | 0.1 | 0.1 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.665 | 0.1 | 0.1 | OK |
| 5.002 | S502 | 0.03 | | 0.006 | 17.728 | 0.7 | 1.6 | OK |
| 5.003 | S503 | 0.02 | | 0.015 | 20.070 | 1.0 | 1.8 | OK |
| 7.000 | S700 | 0.05 | | 0.002 | 8.699 | 0.5 | 0.8 | OK |
| 7.001 | S701 | 0.07 | | 0.011 | 13.049 | 0.6 | 1.1 | OK |
| 5.004 | S504 | 0.05 | | 0.375 | 33.119 | 0.5 | 2.9 | OK |

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## Summary Wizard of 480 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.525 | 31.203 | -0.147 |
| 1.006 | S106 | 480 minute 5 year Winter I+0% | 480 | 56 | 32.500 | 30.450 | -1.196 |
| 9.000 | S900 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.665 | 31.021 | -0.199 |
| 9.002 | S902 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.640 | 30.782 | -0.203 |
| 11.000 | S1100 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.680 | 31.566 | -0.134 |
| 9.003 | S903 | 480 minute 5 year Winter I+0% | 480 | 56 | 32.630 | 30.451 | -0.044 |
| 1.007 | S107 | 480 minute 5 year Winter I+0% | 480 | 56 | 32.500 | 30.450 | -1.086 |
| 12.000 | S1200 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.635 | 31.853 | -0.147 |
| 13.000 | S1300 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.635 | 31.869 | -0.131 |
| 13.001 | S1301 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.635 | 31.779 | -0.131 |
| 12.001 | S1201 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.635 | 31.436 | -0.199 |
| 12.002 | S1202 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.680 | 31.073 | -0.187 |
| 12.003 | S1203 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.660 | 30.979 | -0.191 |
| 12.004 | S1204 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.660 | 30.840 | -0.195 |
| 14.000 | S1400 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.650 | 31.644 | -0.131 |
| 14.001 | S1401 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.680 | 31.294 | -0.201 |
| 15.000 | S1500 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.680 | 31.664 | -0.136 |
| 15.001 | S1501 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.600 | 31.619 | -0.136 |
| 14.002 | S1402 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.600 | 31.038 | -0.202 |
| 12.005 | 1205 | 480 minute 5 year Winter I+0% | 480 | 95 | 32.600 | 30.521 | -0.184 |
| 1.008 | S108 | 480 minute 5 year Winter I+0% | 480 | 56 | 32.550 | 30.450 | 0.095 |
| 16.000 | S1600 | 480 minute 5 year Winter I+0% | 480 | 92 | 32.545 | 31.440 | -0.210 |
| 16.001 | S1601 | 480 minute 5 year Winter I+0% | 480 | 95 | 32.545 | 30.474 | -0.211 |
| 1.009 | S109 | 480 minute 5 year Winter I+0% | 480 | 56 | 32.500 | 30.453 | 0.423 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.672 | 0.3 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.972 | 93.924 | 0.1 | 4.6 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.002 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.666 | 0.1 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.03 | | 0.006 | 17.394 | 0.6 | 1.5 | OK |
| 9.002 | S902 | 0.000 | 0.02 | | 0.017 | 23.081 | 1.3 | 2.0 | OK |
| 11.000 | S1100 | 0.000 | 0.03 | | 0.002 | 5.019 | 0.5 | 0.4 | OK |
| 9.003 | S903 | 0.000 | 0.03 | | 0.395 | 29.773 | 0.6 | 2.5 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 53.015 | 128.360 | 0.0 | 4.2 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.338 | 0.3 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.04 | | 0.002 | 7.695 | 0.5 | 0.7 | OK |
| 13.001 | S1301 | 0.000 | 0.04 | | 0.008 | 12.045 | 0.8 | 1.1 | OK |
| 12.001 | S1201 | 0.000 | 0.03 | | 0.006 | 23.420 | 0.8 | 2.1 | OK |
| 12.002 | S1202 | 0.000 | 0.07 | | 0.021 | 32.119 | 0.6 | 2.8 | OK |
| 12.003 | S1203 | 0.000 | 0.05 | | 0.027 | 32.119 | 0.8 | 2.8 | OK |
| 12.004 | S1204 | 0.000 | 0.04 | | 0.015 | 38.811 | 1.1 | 3.4 | OK |
| 14.000 | S1400 | 0.000 | 0.04 | | 0.002 | 8.030 | 0.6 | 0.7 | OK |

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## Summary Wizard of 480 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.03 | | 0.006 | 14.387 | 0.6 | 1.3 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.001 | 3.011 | 0.4 | 0.3 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.004 | 8.030 | 1.1 | 0.7 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.018 | 26.766 | 1.3 | 2.4 | OK |
| 12.005 | 1205 | 0.000 | 0.08 | | 0.062 | 72.937 | 1.3 | 6.4 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 57.614 | 203.320 | 0.2 | 5.9 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.003 | 11.375 | 0.9 | 1.0 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.006 | 12.713 | 1.1 | 1.1 | OK |
| 1.009 | S109 | 0.000 | 0.35 | | 2.943 | 215.971 | 1.0 | 5.9 | SURCHARGED |

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## Summary Wizard of 600 minute 5 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.680 | 31.784 | -0.136 | 0.000 |
| 1.001 | S101 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.680 | 31.710 | -0.140 | 0.000 |
| 2.000 | S200 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.600 | 31.490 | -0.140 | 0.000 |
| 1.002 | S102 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.630 | 31.241 | -0.204 | 0.000 |
| 3.000 | S300 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.550 | 31.853 | -0.147 | 0.000 |
| 1.003 | S103 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.600 | 31.072 | -0.203 | 0.000 |
| 4.000 | S400 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.550 | 31.705 | -0.145 | 0.000 |
| 4.001 | S401 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.550 | 30.616 | -0.134 | 0.000 |
| 1.004 | S104 | 600 minute 5 year Winter I+0% | 600 | 61 | 32.600 | 30.431 | -0.099 | 0.000 |
| 1.005 | S105 | 600 minute 5 year Winter I+0% | 600 | 59 | 32.600 | 30.431 | -0.079 | 0.000 |
| 5.000 | S500 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.550 | 31.858 | -0.142 | 0.000 |
| 5.001 | S501 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.665 | 31.148 | -0.142 | 0.000 |
| 6.000 | S600 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.665 | 30.849 | -0.201 | 0.000 |
| 5.003 | S503 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.680 | 30.650 | -0.205 | 0.000 |
| 7.000 | S700 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.680 | 31.899 | -0.131 | 0.000 |
| 7.001 | S701 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.635 | 31.818 | -0.127 | 0.000 |
| 5.004 | S504 | 600 minute 5 year Winter I+0% | 600 | 59 | 32.635 | 30.431 | -0.114 | 0.000 |

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## Summary Wizard of 600 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.02 | | 0.001 | 4.621 | 0.5 | 0.3 | OK |
| 1.001 | S101 | 0.01 | | 0.003 | 7.108 | 1.0 | 0.5 | OK |
| 2.000 | S200 | 0.01 | | 0.001 | 4.620 | 0.6 | 0.3 | OK |
| 1.002 | S102 | 0.02 | | 0.005 | 14.216 | 0.7 | 1.0 | OK |
| 3.000 | S300 | 0.00 | | 0.000 | 2.843 | 0.4 | 0.2 | OK |
| 1.003 | S103 | 0.02 | | 0.014 | 25.944 | 1.1 | 1.8 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 5.331 | 0.8 | 0.4 | OK |
| 4.001 | S401 | 0.03 | | 0.002 | 7.463 | 0.6 | 0.5 | OK |
| 1.004 | S104 | 0.06 | | 0.096 | 36.961 | 0.4 | 2.6 | OK |
| 1.005 | S105 | 0.02 | | 0.815 | 38.739 | 0.4 | 2.6 | OK |
| 5.000 | S500 | 0.01 | | 0.000 | 4.975 | 0.8 | 0.3 | OK |
| 5.001 | S501 | 0.01 | | 0.001 | 4.975 | 0.8 | 0.3 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.706 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.704 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.03 | | 0.005 | 18.831 | 0.7 | 1.3 | OK |
| 5.003 | S503 | 0.02 | | 0.013 | 21.318 | 1.0 | 1.5 | OK |
| 7.000 | S700 | 0.04 | | 0.002 | 9.242 | 0.5 | 0.6 | OK |
| 7.001 | S701 | 0.06 | | 0.010 | 13.862 | 0.6 | 1.0 | OK |
| 5.004 | S504 | 0.04 | | 0.337 | 35.181 | 0.5 | 2.5 | OK |

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## Summary Wizard of 600 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.525 | 31.202 | -0.148 |
| 1.006 | S106 | 600 minute 5 year Winter I+0% | 600 | 59 | 32.500 | 30.431 | -1.215 |
| 9.000 | S900 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.665 | 31.020 | -0.200 |
| 9.002 | S902 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.640 | 30.779 | -0.206 |
| 11.000 | S1100 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.680 | 31.565 | -0.135 |
| 9.003 | S903 | 600 minute 5 year Winter I+0% | 600 | 59 | 32.630 | 30.431 | -0.064 |
| 1.007 | S107 | 600 minute 5 year Winter I+0% | 600 | 59 | 32.500 | 30.431 | -1.105 |
| 12.000 | S1200 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.635 | 31.852 | -0.148 |
| 13.000 | S1300 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.635 | 31.868 | -0.132 |
| 13.001 | S1301 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.635 | 31.777 | -0.133 |
| 12.001 | S1201 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.635 | 31.434 | -0.201 |
| 12.002 | S1202 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.680 | 31.069 | -0.191 |
| 12.003 | S1203 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.660 | 30.976 | -0.194 |
| 12.004 | S1204 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.660 | 30.838 | -0.197 |
| 14.000 | S1400 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.650 | 31.642 | -0.133 |
| 14.001 | S1401 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.680 | 31.293 | -0.202 |
| 15.000 | S1500 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.680 | 31.662 | -0.138 |
| 15.001 | S1501 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.600 | 31.617 | -0.138 |
| 14.002 | S1402 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.600 | 31.036 | -0.204 |
| 12.005 | 1205 | 600 minute 5 year Winter I+0% | 600 | 100 | 32.600 | 30.517 | -0.188 |
| 1.008 | S108 | 600 minute 5 year Winter I+0% | 600 | 59 | 32.550 | 30.431 | 0.076 |
| 16.000 | S1600 | 600 minute 5 year Winter I+0% | 600 | 99 | 32.545 | 31.438 | -0.212 |
| 16.001 | S1601 | 600 minute 5 year Winter I+0% | 600 | 100 | 32.545 | 30.472 | -0.213 |
| 1.009 | S109 | 600 minute 5 year Winter I+0% | 600 | 59 | 32.500 | 30.434 | 0.404 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.775 | 0.3 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.901 | 99.996 | 0.1 | 4.1 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.064 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.706 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.03 | | 0.006 | 18.475 | 0.6 | 1.3 | OK |
| 9.002 | S902 | 0.000 | 0.02 | | 0.013 | 24.518 | 1.3 | 1.7 | OK |
| 11.000 | S1100 | 0.000 | 0.02 | | 0.002 | 5.332 | 0.5 | 0.4 | OK |
| 9.003 | S903 | 0.000 | 0.03 | | 0.360 | 31.626 | 0.6 | 2.2 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 50.786 | 136.698 | 0.0 | 3.9 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.421 | 0.2 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.03 | | 0.002 | 8.175 | 0.5 | 0.6 | OK |
| 13.001 | S1301 | 0.000 | 0.03 | | 0.007 | 12.796 | 0.8 | 0.9 | OK |
| 12.001 | S1201 | 0.000 | 0.03 | | 0.006 | 24.880 | 0.8 | 1.7 | OK |
| 12.002 | S1202 | 0.000 | 0.06 | | 0.019 | 34.121 | 0.6 | 2.4 | OK |
| 12.003 | S1203 | 0.000 | 0.05 | | 0.024 | 34.121 | 0.7 | 2.4 | OK |
| 12.004 | S1204 | 0.000 | 0.04 | | 0.014 | 41.230 | 1.0 | 2.9 | OK |
| 14.000 | S1400 | 0.000 | 0.03 | | 0.002 | 8.531 | 0.5 | 0.6 | OK |

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## Summary Wizard of 600 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.02 | | 0.005 | 15.284 | 0.6 | 1.1 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.001 | 3.199 | 0.4 | 0.2 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.003 | 8.530 | 1.1 | 0.6 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.015 | 28.434 | 1.3 | 2.0 | OK |
| 12.005 | 1205 | 0.000 | 0.07 | | 0.055 | 77.484 | 1.3 | 5.4 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 55.498 | 217.012 | 0.2 | 5.8 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.002 | 12.085 | 0.8 | 0.8 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.004 | 13.506 | 0.9 | 0.9 | OK |
| 1.009 | S109 | 0.000 | 0.35 | | 2.881 | 230.508 | 1.0 | 5.8 | SURCHARGED |

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## Summary Wizard of 720 minute 5 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.680 | 31.782 | -0.138 | 0.000 |
| 1.001 | S101 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.680 | 31.709 | -0.141 | 0.000 |
| 2.000 | S200 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.600 | 31.489 | -0.141 | 0.000 |
| 1.002 | S102 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.630 | 31.238 | -0.207 | 0.000 |
| 3.000 | S300 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.550 | 31.853 | -0.147 | 0.000 |
| 1.003 | S103 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.600 | 31.069 | -0.206 | 0.000 |
| 4.000 | S400 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.550 | 31.705 | -0.145 | 0.000 |
| 4.001 | S401 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.550 | 30.615 | -0.135 | 0.000 |
| 1.004 | S104 | 720 minute 5 year Winter I+0% | 720 | 62 | 32.600 | 30.410 | -0.120 | 0.000 |
| 1.005 | S105 | 720 minute 5 year Winter I+0% | 720 | 60 | 32.600 | 30.410 | -0.100 | 0.000 |
| 5.000 | S500 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.550 | 31.857 | -0.143 | 0.000 |
| 5.001 | S501 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.665 | 31.147 | -0.143 | 0.000 |
| 6.000 | S600 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.665 | 30.848 | -0.202 | 0.000 |
| 5.003 | S503 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.680 | 30.648 | -0.207 | 0.000 |
| 7.000 | S700 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.680 | 31.898 | -0.132 | 0.000 |
| 7.001 | S701 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.635 | 31.816 | -0.129 | 0.000 |
| 5.004 | S504 | 720 minute 5 year Winter I+0% | 720 | 62 | 32.635 | 30.410 | -0.135 | 0.000 |

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## Summary Wizard of 720 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.02 | | 0.001 | 4.854 | 0.5 | 0.3 | OK |
| 1.001 | S101 | 0.01 | | 0.002 | 7.467 | 1.0 | 0.4 | OK |
| 2.000 | S200 | 0.01 | | 0.001 | 4.854 | 0.6 | 0.3 | OK |
| 1.002 | S102 | 0.02 | | 0.004 | 14.934 | 0.7 | 0.9 | OK |
| 3.000 | S300 | 0.00 | | 0.000 | 2.986 | 0.4 | 0.2 | OK |
| 1.003 | S103 | 0.02 | | 0.012 | 27.253 | 1.1 | 1.6 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 5.599 | 0.7 | 0.3 | OK |
| 4.001 | S401 | 0.02 | | 0.002 | 7.839 | 0.6 | 0.5 | OK |
| 1.004 | S104 | 0.05 | | 0.081 | 38.826 | 0.4 | 2.3 | OK |
| 1.005 | S105 | 0.02 | | 0.755 | 40.692 | 0.4 | 2.3 | OK |
| 5.000 | S500 | 0.01 | | 0.000 | 5.226 | 0.7 | 0.3 | OK |
| 5.001 | S501 | 0.01 | | 0.001 | 5.226 | 0.7 | 0.3 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.739 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.736 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.02 | | 0.005 | 19.777 | 0.7 | 1.2 | OK |
| 5.003 | S503 | 0.02 | | 0.011 | 22.390 | 1.0 | 1.3 | OK |
| 7.000 | S700 | 0.03 | | 0.002 | 9.708 | 0.5 | 0.6 | OK |
| 7.001 | S701 | 0.05 | | 0.009 | 14.562 | 0.6 | 0.9 | OK |
| 5.004 | S504 | 0.04 | | 0.295 | 36.952 | 0.4 | 2.2 | OK |

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## Summary Wizard of 720 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.525 | 31.202 | -0.148 |
| 1.006 | S106 | 720 minute 5 year Winter I+0% | 720 | 60 | 32.500 | 30.410 | -1.236 |
| 9.000 | S900 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.665 | 31.018 | -0.202 |
| 9.002 | S902 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.640 | 30.776 | -0.209 |
| 11.000 | S1100 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.680 | 31.564 | -0.136 |
| 9.003 | S903 | 720 minute 5 year Winter I+0% | 720 | 60 | 32.630 | 30.410 | -0.085 |
| 1.007 | S107 | 720 minute 5 year Winter I+0% | 720 | 60 | 32.500 | 30.410 | -1.126 |
| 12.000 | S1200 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.635 | 31.852 | -0.148 |
| 13.000 | S1300 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.635 | 31.867 | -0.133 |
| 13.001 | S1301 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.635 | 31.777 | -0.133 |
| 12.001 | S1201 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.635 | 31.433 | -0.202 |
| 12.002 | S1202 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.680 | 31.067 | -0.193 |
| 12.003 | S1203 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.660 | 30.974 | -0.196 |
| 12.004 | S1204 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.660 | 30.836 | -0.199 |
| 14.000 | S1400 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.650 | 31.641 | -0.134 |
| 14.001 | S1401 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.680 | 31.291 | -0.204 |
| 15.000 | S1500 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.680 | 31.661 | -0.139 |
| 15.001 | S1501 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.600 | 31.615 | -0.140 |
| 14.002 | S1402 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.600 | 31.033 | -0.207 |
| 12.005 | 1205 | 720 minute 5 year Winter I+0% | 720 | 105 | 32.600 | 30.515 | -0.190 |
| 1.008 | S108 | 720 minute 5 year Winter I+0% | 720 | 60 | 32.550 | 30.410 | 0.055 |
| 16.000 | S1600 | 720 minute 5 year Winter I+0% | 720 | 104 | 32.545 | 31.436 | -0.214 |
| 16.001 | S1601 | 720 minute 5 year Winter I+0% | 720 | 105 | 32.545 | 30.471 | -0.214 |
| 1.009 | S109 | 720 minute 5 year Winter I+0% | 720 | 60 | 32.500 | 30.411 | 0.381 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 1.864 | 0.2 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.823 | 104.723 | 0.1 | 3.7 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.117 | 0.1 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.738 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.02 | | 0.005 | 19.403 | 0.6 | 1.1 | OK |
| 9.002 | S902 | 0.000 | 0.02 | | 0.011 | 25.750 | 1.3 | 1.5 | OK |
| 11.000 | S1100 | 0.000 | 0.02 | | 0.001 | 5.601 | 0.5 | 0.3 | OK |
| 9.003 | S903 | 0.000 | 0.02 | | 0.320 | 33.217 | 0.6 | 1.9 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 48.301 | 143.056 | 0.0 | 3.8 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.492 | 0.2 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.03 | | 0.002 | 8.588 | 0.5 | 0.5 | OK |
| 13.001 | S1301 | 0.000 | 0.03 | | 0.007 | 13.441 | 0.8 | 0.8 | OK |
| 12.001 | S1201 | 0.000 | 0.02 | | 0.005 | 26.134 | 0.8 | 1.5 | OK |
| 12.002 | S1202 | 0.000 | 0.05 | | 0.017 | 35.842 | 0.6 | 2.1 | OK |
| 12.003 | S1203 | 0.000 | 0.04 | | 0.022 | 35.842 | 0.7 | 2.1 | OK |
| 12.004 | S1204 | 0.000 | 0.03 | | 0.013 | 43.309 | 1.0 | 2.5 | OK |
| 14.000 | S1400 | 0.000 | 0.03 | | 0.002 | 8.961 | 0.5 | 0.5 | OK |

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## Summary Wizard of 720 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.02 | | 0.005 | 16.055 | 0.6 | 0.9 | OK |
| 15.000 | S1500 | 0.000 | 0.01 | | 0.001 | 3.360 | 0.4 | 0.2 | OK |
| 15.001 | S1501 | 0.000 | 0.01 | | 0.002 | 8.960 | 1.1 | 0.5 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.013 | 29.868 | 1.3 | 1.7 | OK |
| 12.005 | 1205 | 0.000 | 0.06 | | 0.051 | 81.392 | 1.2 | 4.8 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 53.161 | 227.434 | 0.2 | 5.7 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.002 | 12.694 | 0.7 | 0.7 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.003 | 14.187 | 0.8 | 0.8 | OK |
| 1.009 | S109 | 0.000 | 0.34 | | 2.809 | 241.619 | 1.0 | 5.7 | SURCHARGED |

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## Summary Wizard of 960 minute 5 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.680 | 31.780 | -0.140 | 0.000 |
| 1.001 | S101 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.680 | 31.707 | -0.143 | 0.000 |
| 2.000 | S200 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.600 | 31.487 | -0.143 | 0.000 |
| 1.002 | S102 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.630 | 31.235 | -0.210 | 0.000 |
| 3.000 | S300 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.550 | 31.852 | -0.148 | 0.000 |
| 1.003 | S103 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.600 | 31.066 | -0.209 | 0.000 |
| 4.000 | S400 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.550 | 31.704 | -0.146 | 0.000 |
| 4.001 | S401 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.550 | 30.613 | -0.137 | 0.000 |
| 1.004 | S104 | 960 minute 5 year Winter I+0% | 960 | 69 | 32.600 | 30.370 | -0.160 | 0.000 |
| 1.005 | S105 | 960 minute 5 year Winter I+0% | 960 | 66 | 32.600 | 30.369 | -0.141 | 0.000 |
| 5.000 | S500 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.550 | 31.855 | -0.145 | 0.000 |
| 5.001 | S501 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.665 | 31.146 | -0.144 | 0.000 |
| 6.000 | S600 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.665 | 31.851 | -0.149 | 0.000 |
| 6.001 | S601 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.665 | 31.141 | -0.149 | 0.000 |
| 5.002 | S502 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.665 | 30.844 | -0.206 | 0.000 |
| 5.003 | S503 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.680 | 30.644 | -0.211 | 0.000 |
| 7.000 | S700 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.680 | 31.896 | -0.134 | 0.000 |
| 7.001 | S701 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.635 | 31.814 | -0.131 | 0.000 |
| 5.004 | S504 | 960 minute 5 year Winter I+0% | 960 | 67 | 32.635 | 30.369 | -0.176 | 0.000 |

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## Summary Wizard of 960 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.01 | | 0.001 | 5.244 | 0.5 | 0.2 | OK |
| 1.001 | S101 | 0.01 | | 0.001 | 8.067 | 0.8 | 0.4 | OK |
| 2.000 | S200 | 0.01 | | 0.000 | 5.244 | 0.5 | 0.2 | OK |
| 1.002 | S102 | 0.01 | | 0.003 | 16.133 | 0.7 | 0.7 | OK |
| 3.000 | S300 | 0.00 | | 0.000 | 3.226 | 0.3 | 0.1 | OK |
| 1.003 | S103 | 0.01 | | 0.009 | 29.442 | 1.1 | 1.3 | OK |
| 4.000 | S400 | 0.01 | | 0.000 | 6.049 | 0.6 | 0.3 | OK |
| 4.001 | S401 | 0.02 | | 0.002 | 8.469 | 0.6 | 0.4 | OK |
| 1.004 | S104 | 0.04 | | 0.053 | 41.945 | 0.4 | 1.8 | OK |
| 1.005 | S105 | 0.02 | | 0.640 | 43.962 | 0.3 | 1.9 | OK |
| 5.000 | S500 | 0.01 | | 0.000 | 5.646 | 0.6 | 0.2 | OK |
| 5.001 | S501 | 0.01 | | 0.000 | 5.646 | 0.6 | 0.2 | OK |
| 6.000 | S600 | 0.00 | | 0.000 | 0.777 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.00 | | 0.000 | 0.756 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.02 | | 0.004 | 21.328 | 0.7 | 0.9 | OK |
| 5.003 | S503 | 0.01 | | 0.008 | 24.150 | 1.0 | 1.1 | OK |
| 7.000 | S700 | 0.03 | | 0.002 | 10.489 | 0.5 | 0.5 | OK |
| 7.001 | S701 | 0.04 | | 0.008 | 15.733 | 0.5 | 0.7 | OK |
| 5.004 | S504 | 0.03 | | 0.215 | 39.883 | 0.4 | 1.8 | OK |

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## Summary Wizard of 960 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.525 | 31.202 | -0.148 |
| 1.006 | S106 | 960 minute 5 year Winter I+0% | 960 | 66 | 32.500 | 30.369 | -1.277 |
| 9.000 | S900 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.665 | 31.016 | -0.204 |
| 9.002 | S902 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.640 | 30.773 | -0.212 |
| 11.000 | S1100 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.680 | 31.561 | -0.139 |
| 9.003 | S903 | 960 minute 5 year Winter I+0% | 960 | 66 | 32.630 | 30.369 | -0.126 |
| 1.007 | S107 | 960 minute 5 year Winter I+0% | 960 | 66 | 32.500 | 30.369 | -1.167 |
| 12.000 | S1200 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.635 | 31.852 | -0.148 |
| 13.000 | S1300 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.635 | 31.866 | -0.134 |
| 13.001 | S1301 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.635 | 31.775 | -0.135 |
| 12.001 | S1201 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.635 | 31.430 | -0.205 |
| 12.002 | S1202 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.680 | 31.064 | -0.196 |
| 12.003 | S1203 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.660 | 30.971 | -0.199 |
| 12.004 | S1204 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.660 | 30.834 | -0.201 |
| 14.000 | S1400 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.650 | 31.640 | -0.135 |
| 14.001 | S1401 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.680 | 31.287 | -0.208 |
| 15.000 | S1500 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.680 | 31.659 | -0.141 |
| 15.001 | S1501 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.600 | 31.613 | -0.142 |
| 14.002 | S1402 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.600 | 31.030 | -0.210 |
| 12.005 | 1205 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.600 | 30.511 | -0.194 |
| 1.008 | S108 | 960 minute 5 year Winter I+0% | 960 | 66 | 32.550 | 30.369 | 0.014 |
| 16.000 | S1600 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.545 | 31.434 | -0.216 |
| 16.001 | S1601 | 960 minute 5 year Winter I+0% | 960 | 111 | 32.545 | 30.469 | -0.216 |
| 1.009 | S109 | 960 minute 5 year Winter I+0% | 960 | 66 | 32.500 | 30.368 | 0.338 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 2.013 | 0.2 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.672 | 113.109 | 0.1 | 3.3 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.204 | 0.1 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.771 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.02 | | 0.005 | 20.935 | 0.6 | 0.9 | OK |
| 9.002 | S902 | 0.000 | 0.01 | | 0.008 | 27.792 | 1.2 | 1.2 | OK |
| 11.000 | S1100 | 0.000 | 0.02 | | 0.001 | 6.051 | 0.5 | 0.3 | OK |
| 9.003 | S903 | 0.000 | 0.02 | | 0.253 | 35.860 | 0.6 | 1.6 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 43.555 | 154.416 | 0.0 | 3.6 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.611 | 0.2 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.02 | | 0.002 | 9.279 | 0.5 | 0.4 | OK |
| 13.001 | S1301 | 0.000 | 0.02 | | 0.006 | 14.523 | 0.8 | 0.6 | OK |
| 12.001 | S1201 | 0.000 | 0.02 | | 0.004 | 28.236 | 0.8 | 1.2 | OK |
| 12.002 | S1202 | 0.000 | 0.04 | | 0.015 | 38.725 | 0.6 | 1.7 | OK |
| 12.003 | S1203 | 0.000 | 0.03 | | 0.020 | 38.725 | 0.7 | 1.7 | OK |
| 12.004 | S1204 | 0.000 | 0.03 | | 0.012 | 46.793 | 1.0 | 2.1 | OK |
| 14.000 | S1400 | 0.000 | 0.02 | | 0.002 | 9.682 | 0.5 | 0.4 | OK |

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## Summary Wizard of 960 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.02 | | 0.004 | 17.347 | 0.6 | 0.8 | OK |
| 15.000 | S1500 | 0.000 | 0.01 | | 0.001 | 3.630 | 0.4 | 0.2 | OK |
| 15.001 | S1501 | 0.000 | 0.01 | | 0.001 | 9.680 | 0.9 | 0.4 | OK |
| 14.002 | S1402 | 0.000 | 0.01 | | 0.010 | 32.269 | 1.3 | 1.4 | OK |
| 12.005 | 1205 | 0.000 | 0.05 | | 0.044 | 87.937 | 1.2 | 3.9 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 48.692 | 245.580 | 0.2 | 5.7 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.001 | 13.715 | 0.6 | 0.6 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.002 | 15.327 | 0.7 | 0.7 | OK |
| 1.009 | S109 | 0.000 | 0.33 | | 2.637 | 260.904 | 1.0 | 5.5 | SURCHARGED |

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## Summary Wizard of 1440 minute 5 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.680 | 31.777 | -0.143 |
| 1.001 | S101 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.680 | 31.705 | -0.145 |
| 2.000 | S200 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.600 | 31.485 | -0.145 |
| 1.002 | S102 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.630 | 31.231 | -0.214 |
| 3.000 | S300 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.550 | 31.852 | -0.148 |
| 1.003 | S103 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.600 | 31.062 | -0.213 |
| 4.000 | S400 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.550 | 31.703 | -0.147 |
| 4.001 | S401 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.550 | 30.609 | -0.141 |
| 1.004 | S104 | 1440 minute 5 year Winter I+0% | 1440 | 101 | 32.600 | 30.296 | -0.234 |
| 1.005 | S105 | 1440 minute 5 year Winter I+0% | 1440 | 87 | 32.600 | 30.296 | -0.214 |
| 5.000 | S500 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.550 | 31.854 | -0.146 |
| 5.001 | S501 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.665 | 31.144 | -0.146 |
| 6.000 | S600 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.665 | 31.851 | -0.149 |
| 6.001 | S601 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.665 | 31.141 | -0.149 |
| 5.002 | S502 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.665 | 30.839 | -0.211 |
| 5.003 | S503 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.680 | 30.641 | -0.214 |
| 7.000 | S700 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.680 | 31.894 | -0.136 |
| 7.001 | S701 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.635 | 31.812 | -0.133 |
| 5.004 | S504 | 1440 minute 5 year Winter I+0% | 1440 | 103 | 32.635 | 30.297 | -0.248 |

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## Summary Wizard of 1440 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.01 | | 0.000 | 5.845 | 0.4 | 0.2 | OK |
| 1.001 | S101 | 0.000 | 0.01 | | 0.000 | 8.991 | 0.6 | 0.3 | OK |
| 2.000 | S200 | 0.000 | 0.01 | | 0.000 | 5.844 | 0.4 | 0.2 | OK |
| 1.002 | S102 | 0.000 | 0.01 | | 0.002 | 17.983 | 0.5 | 0.5 | OK |
| 3.000 | S300 | 0.000 | 0.00 | | 0.000 | 3.593 | 0.2 | 0.1 | OK |
| 1.003 | S103 | 0.000 | 0.01 | | 0.006 | 32.815 | 0.9 | 1.0 | OK |
| 4.000 | S400 | 0.000 | 0.00 | | 0.000 | 6.743 | 0.4 | 0.2 | OK |
| 4.001 | S401 | 0.000 | 0.01 | | 0.001 | 9.440 | 0.6 | 0.3 | OK |
| 1.004 | S104 | 0.000 | 0.03 | | 0.018 | 46.751 | 0.3 | 1.4 | OK |
| 1.005 | S105 | 0.000 | 0.01 | | 0.445 | 48.998 | 0.3 | 1.4 | OK |
| 5.000 | S500 | 0.000 | 0.01 | | 0.000 | 6.294 | 0.4 | 0.2 | OK |
| 5.001 | S501 | 0.000 | 0.01 | | 0.000 | 6.294 | 0.4 | 0.2 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 0.826 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.000 | 0.808 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.000 | 0.01 | | 0.003 | 23.738 | 0.7 | 0.7 | OK |
| 5.003 | S503 | 0.000 | 0.01 | | 0.005 | 26.883 | 0.8 | 0.8 | OK |
| 7.000 | S700 | 0.000 | 0.02 | | 0.001 | 11.692 | 0.5 | 0.3 | OK |
| 7.001 | S701 | 0.000 | 0.03 | | 0.007 | 17.538 | 0.5 | 0.5 | OK |
| 5.004 | S504 | 0.000 | 0.02 | | 0.083 | 44.420 | 0.4 | 1.3 | OK |

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## Summary Wizard of 1440 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.525 | 31.201 | -0.149 |
| 1.006 | S106 | 1440 minute 5 year Winter I+0% | 1440 | 87 | 32.500 | 30.296 | -1.350 |
| 9.000 | S900 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.665 | 31.850 | -0.150 |
| 9.001 | S901 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.665 | 31.010 | -0.210 |
| 9.002 | S902 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.640 | 30.770 | -0.215 |
| 11.000 | S1100 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.680 | 31.559 | -0.141 |
| 9.003 | S903 | 1440 minute 5 year Winter I+0% | 1440 | 87 | 32.630 | 30.296 | -0.199 |
| 1.007 | S107 | 1440 minute 5 year Winter I+0% | 1440 | 87 | 32.500 | 30.296 | -1.240 |
| 12.000 | S1200 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.635 | 31.851 | -0.149 |
| 13.000 | S1300 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.635 | 31.863 | -0.137 |
| 13.001 | S1301 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.635 | 31.772 | -0.138 |
| 12.001 | S1201 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.635 | 31.425 | -0.210 |
| 12.002 | S1202 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.680 | 31.060 | -0.200 |
| 12.003 | S1203 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.660 | 30.969 | -0.201 |
| 12.004 | S1204 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.660 | 30.830 | -0.205 |
| 14.000 | S1400 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.650 | 31.637 | -0.138 |
| 14.001 | S1401 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.680 | 31.283 | -0.212 |
| 15.000 | S1500 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.680 | 31.656 | -0.144 |
| 15.001 | S1501 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.600 | 31.611 | -0.144 |
| 14.002 | S1402 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.600 | 31.026 | -0.214 |
| 12.005 | 1205 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.600 | 30.507 | -0.198 |
| 1.008 | S108 | 1440 minute 5 year Winter I+0% | 1440 | 87 | 32.550 | 30.296 | -0.059 |
| 16.000 | S1600 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.545 | 31.432 | -0.218 |
| 16.001 | S1601 | 1440 minute 5 year Winter I+0% | 1440 | 117 | 32.545 | 30.466 | -0.219 |
| 1.009 | S109 | 1440 minute 5 year Winter I+0% | 1440 | 87 | 32.500 | 30.295 | 0.265 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 2.239 | 0.1 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 0.414 | 126.181 | 0.1 | 2.7 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.329 | 0.1 | 0.0 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.817 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.01 | | 0.003 | 23.281 | 0.6 | 0.7 | OK |
| 9.002 | S902 | 0.000 | 0.01 | | 0.005 | 30.922 | 0.9 | 0.9 | OK |
| 11.000 | S1100 | 0.000 | 0.01 | | 0.001 | 6.745 | 0.4 | 0.2 | OK |
| 9.003 | S903 | 0.000 | 0.01 | | 0.138 | 39.914 | 0.6 | 1.2 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 34.995 | 172.628 | 0.0 | 3.2 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 1.792 | 0.1 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.02 | | 0.001 | 10.343 | 0.5 | 0.3 | OK |
| 13.001 | S1301 | 0.000 | 0.02 | | 0.004 | 16.188 | 0.8 | 0.5 | OK |
| 12.001 | S1201 | 0.000 | 0.01 | | 0.003 | 31.470 | 0.8 | 0.9 | OK |
| 12.002 | S1202 | 0.000 | 0.03 | | 0.013 | 43.162 | 0.5 | 1.3 | OK |
| 12.003 | S1203 | 0.000 | 0.02 | | 0.017 | 43.162 | 0.7 | 1.3 | OK |
| 12.004 | S1204 | 0.000 | 0.02 | | 0.009 | 52.155 | 1.0 | 1.5 | OK |
| 14.000 | S1400 | 0.000 | 0.02 | | 0.001 | 10.793 | 0.5 | 0.3 | OK |

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## Summary Wizard of 1440 minute 5 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.01 | | 0.002 | 19.336 | 0.6 | 0.6 | OK |
| 15.000 | S1500 | 0.000 | 0.01 | | 0.000 | 4.046 | 0.3 | 0.1 | OK |
| 15.001 | S1501 | 0.000 | 0.01 | | 0.001 | 10.790 | 0.7 | 0.3 | OK |
| 14.002 | S1402 | 0.000 | 0.01 | | 0.006 | 35.968 | 1.0 | 1.1 | OK |
| 12.005 | 1205 | 0.000 | 0.03 | | 0.038 | 98.016 | 1.1 | 2.9 | OK |
| 1.008 | S108 | 0.000 | 0.05 | | 40.656 | 274.241 | 0.2 | 4.8 | OK |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.000 | 15.287 | 0.4 | 0.4 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.001 | 17.084 | 0.5 | 0.5 | OK |
| 1.009 | S109 | 0.000 | 0.30 | | 2.262 | 291.321 | 0.9 | 5.1 | SURCHARGED |

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## Summary Wizard of 15 minute 30 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 15 minute 30 year Winter I+0% | 15 | 20 | 32.680 | 31.824 | -0.096 | 0.000 |
| 1.001 | S101 | 15 minute 30 year Winter I+0% | 15 | 19 | 32.680 | 31.746 | -0.104 | 0.000 |
| 2.000 | S200 | 15 minute 30 year Winter I+0% | 15 | 22 | 32.600 | 31.526 | -0.104 | 0.000 |
| 1.002 | S102 | 15 minute 30 year Winter I+0% | 15 | 25 | 32.630 | 31.302 | -0.143 | 0.000 |
| 3.000 | S300 | 15 minute 30 year Winter I+0% | 15 | 19 | 32.550 | 31.876 | -0.124 | 0.000 |
| 1.003 | S103 | 15 minute 30 year Winter I+0% | 15 | 26 | 32.600 | 31.135 | -0.140 | 0.000 |
| 4.000 | S400 | 15 minute 30 year Winter I+0% | 15 | 20 | 32.550 | 31.732 | -0.118 | 0.000 |
| 4.001 | S401 | 15 minute 30 year Winter I+0% | 15 | 41 | 32.550 | 30.662 | -0.088 | 0.000 |
| 1.004 | S104 | 15 minute 30 year Winter I+0% | 15 | 60 | 32.600 | 30.436 | -0.094 | 0.000 |
| 1.005 | S105 | 15 minute 30 year Winter I+0% | 15 | 64 | 32.600 | 30.390 | -0.120 | 0.000 |
| 5.000 | S500 | 15 minute 30 year Winter I+0% | 15 | 18 | 32.550 | 31.889 | -0.111 | 0.000 |
| 5.001 | S501 | 15 minute 30 year Winter I+0% | 15 | 26 | 32.665 | 31.180 | -0.110 | 0.000 |
| 6.000 | S600 | 15 minute 30 year Winter I+0% | 15 | 20 | 32.665 | 31.864 | -0.136 | 0.000 |
| 6.001 | S601 | 15 minute 30 year Winter I+0% | 15 | 26 | 32.665 | 31.155 | -0.135 | 0.000 |
| 5.002 | S502 | 15 minute 30 year Winter I+0% | 15 | 26 | 32.665 | 30.921 | -0.129 | 0.000 |
| 5.003 | S503 | 15 minute 30 year Winter I+0% | 15 | 39 | 32.680 | 30.711 | -0.144 | 0.000 |
| 7.000 | S700 | 15 minute 30 year Winter I+0% | 15 | 17 | 32.680 | 31.959 | -0.071 | 0.000 |
| 7.001 | S701 | 15 minute 30 year Winter I+0% | 15 | 17 | 32.635 | 31.899 | -0.046 | 0.000 |
| 5.004 | S504 | 15 minute 30 year Winter I+0% | 15 | 61 | 32.635 | 30.412 | -0.133 | 0.000 |

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## Summary Wizard of 15 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.28 | | 0.008 | 2.133 | 0.8 | 4.6 | OK |
| 1.001 | S101 | 0.20 | | 0.021 | 3.282 | 1.6 | 7.2 | OK |
| 2.000 | S200 | 0.20 | | 0.007 | 2.133 | 1.0 | 4.6 | OK |
| 1.002 | S102 | 0.28 | | 0.023 | 6.564 | 1.1 | 14.3 | OK |
| 3.000 | S300 | 0.07 | | 0.003 | 1.313 | 1.4 | 2.8 | OK |
| 1.003 | S103 | 0.30 | | 0.067 | 11.978 | 1.9 | 26.4 | OK |
| 4.000 | S400 | 0.10 | | 0.004 | 2.462 | 1.9 | 5.3 | OK |
| 4.001 | S401 | 0.36 | | 0.012 | 3.446 | 1.1 | 7.5 | OK |
| 1.004 | S104 | 0.80 | | 0.100 | 17.031 | 0.7 | 37.4 | OK |
| 1.005 | S105 | 0.35 | | 0.697 | 17.296 | 0.6 | 39.0 | OK |
| 5.000 | S500 | 0.15 | | 0.005 | 2.298 | 1.4 | 4.9 | OK |
| 5.001 | S501 | 0.16 | | 0.011 | 2.298 | 1.3 | 4.9 | OK |
| 6.000 | S600 | 0.02 | | 0.001 | 0.328 | 1.0 | 0.7 | OK |
| 6.001 | S601 | 0.02 | | 0.003 | 0.328 | 0.8 | 0.7 | OK |
| 5.002 | S502 | 0.38 | | 0.026 | 8.696 | 1.2 | 19.4 | OK |
| 5.003 | S503 | 0.28 | | 0.063 | 9.845 | 1.7 | 22.0 | OK |
| 7.000 | S700 | 0.54 | | 0.012 | 4.266 | 1.0 | 9.1 | OK |
| 7.001 | S701 | 0.81 | | 0.055 | 6.399 | 1.1 | 13.9 | OK |
| 5.004 | S504 | 0.58 | | 0.298 | 16.091 | 0.9 | 35.7 | OK |

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## Summary Wizard of 15 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 15 minute 30 year Winter I+0% | 15 | 26 | 32.525 | 31.220 | -0.130 |
| 1.006 | S106 | 15 minute 30 year Winter I+0% | 15 | 64 | 32.500 | 30.390 | -1.256 |
| 9.000 | S900 | 15 minute 30 year Winter I+0% | 15 | 19 | 32.665 | 31.867 | -0.133 |
| 10.000 | S901 | 15 minute 30 year Winter I+0% | 15 | 20 | 32.665 | 31.863 | -0.137 |
| 9.001 | S901 | 15 minute 30 year Winter I+0% | 15 | 26 | 32.665 | 31.095 | -0.125 |
| 9.002 | S902 | 15 minute 30 year Winter I+0% | 15 | 26 | 32.640 | 30.838 | -0.147 |
| 11.000 | S1100 | 15 minute 30 year Winter I+0% | 15 | 21 | 32.680 | 31.608 | -0.092 |
| 9.003 | S903 | 15 minute 30 year Winter I+0% | 15 | 64 | 32.630 | 30.390 | -0.105 |
| 1.007 | S107 | 15 minute 30 year Winter I+0% | 15 | 64 | 32.500 | 30.390 | -1.146 |
| 12.000 | S1200 | 15 minute 30 year Winter I+0% | 15 | 20 | 32.635 | 31.870 | -0.130 |
| 13.000 | S1300 | 15 minute 30 year Winter I+0% | 15 | 18 | 32.635 | 31.923 | -0.077 |
| 13.001 | S1301 | 15 minute 30 year Winter I+0% | 15 | 19 | 32.635 | 31.832 | -0.078 |
| 12.001 | S1201 | 15 minute 30 year Winter I+0% | 15 | 23 | 32.635 | 31.507 | -0.128 |
| 12.002 | S1202 | 15 minute 30 year Winter I+0% | 15 | 26 | 32.680 | 31.194 | -0.066 |
| 12.003 | S1203 | 15 minute 30 year Winter I+0% | 15 | 26 | 32.660 | 31.082 | -0.088 |
| 12.004 | S1204 | 15 minute 30 year Winter I+0% | 15 | 26 | 32.660 | 30.927 | -0.108 |
| 14.000 | S1400 | 15 minute 30 year Winter I+0% | 15 | 20 | 32.650 | 31.696 | -0.079 |
| 14.001 | S1401 | 15 minute 30 year Winter I+0% | 15 | 25 | 32.680 | 31.358 | -0.137 |
| 15.000 | S1500 | 15 minute 30 year Winter I+0% | 15 | 20 | 32.680 | 31.700 | -0.100 |
| 15.001 | S1501 | 15 minute 30 year Winter I+0% | 15 | 19 | 32.600 | 31.655 | -0.100 |
| 14.002 | S1402 | 15 minute 30 year Winter I+0% | 15 | 26 | 32.600 | 31.097 | -0.143 |
| 12.005 | 1205 | 15 minute 30 year Winter I+0% | 15 | 42 | 32.600 | 30.655 | -0.050 |
| 1.008 | S108 | 15 minute 30 year Winter I+0% | 15 | 64 | 32.550 | 30.390 | 0.035 |
| 16.000 | S1600 | 15 minute 30 year Winter I+0% | 15 | 24 | 32.545 | 31.487 | -0.163 |
| 16.001 | S1601 | 15 minute 30 year Winter I+0% | 15 | 46 | 32.545 | 30.520 | -0.165 |
| 1.009 | S109 | 15 minute 30 year Winter I+0% | 15 | 65 | 32.500 | 30.389 | 0.359 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.04 | | 0.017 | 0.820 | 1.2 | 1.8 | OK |
| 1.006 | S106 | 0.000 | 0.02 | | 0.749 | 26.516 | 0.3 | 48.5 | OK |
| 9.000 | S900 | 0.000 | 0.03 | | 0.002 | 0.492 | 1.0 | 1.1 | OK |
| 10.000 | S901 | 0.000 | 0.02 | | 0.001 | 0.328 | 1.1 | 0.7 | OK |
| 9.001 | S901 | 0.000 | 0.41 | | 0.027 | 8.532 | 1.1 | 19.4 | OK |
| 9.002 | S902 | 0.000 | 0.26 | | 0.072 | 11.321 | 2.1 | 25.7 | OK |
| 11.000 | S1100 | 0.000 | 0.32 | | 0.009 | 2.461 | 0.8 | 5.3 | OK |
| 9.003 | S903 | 0.000 | 0.39 | | 0.285 | 14.400 | 1.1 | 32.8 | OK |
| 1.007 | S107 | 0.000 | 0.00 | | 45.966 | 21.582 | 0.2 | 26.0 | OK |
| 12.000 | S1200 | 0.000 | 0.04 | | 0.002 | 0.656 | 1.0 | 1.4 | OK |
| 13.000 | S1300 | 0.000 | 0.48 | | 0.011 | 3.774 | 1.0 | 8.1 | OK |
| 13.001 | S1301 | 0.000 | 0.46 | | 0.038 | 5.907 | 1.6 | 12.9 | OK |
| 12.001 | S1201 | 0.000 | 0.39 | | 0.027 | 11.485 | 1.6 | 25.5 | OK |
| 12.002 | S1202 | 0.000 | 0.83 | | 0.153 | 15.751 | 1.2 | 35.2 | OK |
| 12.003 | S1203 | 0.000 | 0.68 | | 0.157 | 15.751 | 1.4 | 35.0 | OK |
| 12.004 | S1204 | 0.000 | 0.53 | | 0.079 | 19.032 | 2.0 | 42.2 | OK |
| 14.000 | S1400 | 0.000 | 0.44 | | 0.010 | 3.938 | 1.0 | 8.4 | OK |

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## Summary Wizard of 15 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.32 | | 0.025 | 7.055 | 1.1 | 15.3 | OK |
| 15.000 | S1500 | 0.000 | 0.24 | | 0.007 | 1.477 | 0.6 | 3.2 | OK |
| 15.001 | S1501 | 0.000 | 0.24 | | 0.019 | 3.938 | 1.7 | 8.8 | OK |
| 14.002 | S1402 | 0.000 | 0.28 | | 0.076 | 13.126 | 2.3 | 28.8 | OK |
| 12.005 | 1205 | 0.000 | 0.94 | | 0.348 | 35.768 | 2.4 | 78.4 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 50.959 | 13.511 | 0.0 | 5.6 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.16 | | 0.016 | 5.578 | 1.4 | 11.8 | OK |
| 16.001 | S1601 | 0.000 | 0.16 | | 0.035 | 6.236 | 1.6 | 13.1 | OK |
| 1.009 | S109 | 0.000 | 0.33 | | 2.739 | 17.247 | 1.0 | 5.6 | SURCHARGED |

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## Summary Wizard of 30 minute 30 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 30 minute 30 year Winter I+0% | 30 | 23 | 32.680 | 31.817 | -0.103 | 0.000 |
| 1.001 | S101 | 30 minute 30 year Winter I+0% | 30 | 23 | 32.680 | 31.740 | -0.110 | 0.000 |
| 2.000 | S200 | 30 minute 30 year Winter I+0% | 30 | 25 | 32.600 | 31.520 | -0.110 | 0.000 |
| 1.002 | S102 | 30 minute 30 year Winter I+0% | 30 | 28 | 32.630 | 31.292 | -0.153 | 0.000 |
| 3.000 | S300 | 30 minute 30 year Winter I+0% | 30 | 22 | 32.550 | 31.872 | -0.128 | 0.000 |
| 1.003 | S103 | 30 minute 30 year Winter I+0% | 30 | 28 | 32.600 | 31.124 | -0.151 | 0.000 |
| 4.000 | S400 | 30 minute 30 year Winter I+0% | 30 | 23 | 32.550 | 31.729 | -0.121 | 0.000 |
| 4.001 | S401 | 30 minute 30 year Winter I+0% | 30 | 44 | 32.550 | 30.654 | -0.096 | 0.000 |
| 1.004 | S104 | 30 minute 30 year Winter I+0% | 30 | 45 | 32.600 | 30.517 | -0.013 | 0.000 |
| 1.005 | S105 | 30 minute 30 year Winter I+0% | 30 | 45 | 32.600 | 30.517 | 0.007 | 0.000 |
| 5.000 | S500 | 30 minute 30 year Winter I+0% | 30 | 21 | 32.550 | 31.884 | -0.116 | 0.000 |
| 5.001 | S501 | 30 minute 30 year Winter I+0% | 30 | 28 | 32.665 | 31.175 | -0.115 | 0.000 |
| 6.000 | S600 | 30 minute 30 year Winter I+0% | 30 | 23 | 32.665 | 31.861 | -0.139 | 0.000 |
| 6.001 | S601 | 30 minute 30 year Winter I+0% | 30 | 28 | 32.665 | 31.153 | -0.137 | 0.000 |
| 5.002 | S502 | 30 minute 30 year Winter I+0% | 30 | 28 | 32.665 | 30.908 | -0.142 | 0.000 |
| 5.003 | S503 | 30 minute 30 year Winter I+0% | 30 | 42 | 32.680 | 30.701 | -0.154 | 0.000 |
| 7.000 | S700 | 30 minute 30 year Winter I+0% | 30 | 21 | 32.680 | 31.948 | -0.082 | 0.000 |
| 7.001 | S701 | 30 minute 30 year Winter I+0% | 30 | 21 | 32.635 | 31.882 | -0.063 | 0.000 |
| 5.004 | S504 | 30 minute 30 year Winter I+0% | 30 | 45 | 32.635 | 30.517 | -0.028 | 0.000 |

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## Summary Wizard of 30 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.22 | | 0.007 | 2.828 | 0.8 | 3.6 | OK |
| 1.001 | S101 | 0.16 | | 0.018 | 4.351 | 1.5 | 5.6 | OK |
| 2.000 | S200 | 0.16 | | 0.006 | 2.828 | 1.0 | 3.6 | OK |
| 1.002 | S102 | 0.22 | | 0.020 | 8.702 | 1.0 | 11.2 | OK |
| 3.000 | S300 | 0.05 | | 0.003 | 1.740 | 1.4 | 2.2 | OK |
| 1.003 | S103 | 0.23 | | 0.057 | 15.881 | 1.8 | 20.4 | OK |
| 4.000 | S400 | 0.08 | | 0.004 | 3.263 | 1.8 | 4.2 | OK |
| 4.001 | S401 | 0.28 | | 0.010 | 4.569 | 1.0 | 5.9 | OK |
| 1.004 | S104 | 0.62 | | 0.258 | 22.437 | 0.7 | 29.2 | OK |
| 1.005 | S105 | 0.26 | | 1.032 | 22.578 | 0.6 | 29.5 | SURCHARGED |
| 5.000 | S500 | 0.12 | | 0.005 | 3.046 | 1.3 | 3.9 | OK |
| 5.001 | S501 | 0.13 | | 0.009 | 3.046 | 1.2 | 3.9 | OK |
| 6.000 | S600 | 0.01 | | 0.001 | 0.435 | 1.0 | 0.6 | OK |
| 6.001 | S601 | 0.02 | | 0.002 | 0.435 | 0.9 | 0.6 | OK |
| 5.002 | S502 | 0.29 | | 0.022 | 11.529 | 1.1 | 14.9 | OK |
| 5.003 | S503 | 0.21 | | 0.055 | 13.052 | 1.6 | 16.8 | OK |
| 7.000 | S700 | 0.43 | | 0.010 | 5.656 | 0.9 | 7.2 | OK |
| 7.001 | S701 | 0.63 | | 0.046 | 8.484 | 1.0 | 10.9 | OK |
| 5.004 | S504 | 0.45 | | 0.529 | 21.097 | 0.8 | 27.8 | OK |

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## Summary Wizard of 30 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 30 minute 30 year Winter I+0% | 30 | 28 | 32.525 | 31.218 | -0.132 |
| 1.006 | S106 | 30 minute 30 year Winter I+0% | 30 | 45 | 32.500 | 30.517 | -1.129 |
| 9.000 | S900 | 30 minute 30 year Winter I+0% | 30 | 22 | 32.665 | 31.865 | -0.135 |
| 10.000 | S901 | 30 minute 30 year Winter I+0% | 30 | 23 | 32.665 | 31.860 | -0.140 |
| 9.001 | S901 | 30 minute 30 year Winter I+0% | 30 | 28 | 32.665 | 31.081 | -0.139 |
| 9.002 | S902 | 30 minute 30 year Winter I+0% | 30 | 28 | 32.640 | 30.828 | -0.157 |
| 11.000 | S1100 | 30 minute 30 year Winter I+0% | 30 | 24 | 32.680 | 31.601 | -0.099 |
| 9.003 | S903 | 30 minute 30 year Winter I+0% | 30 | 45 | 32.630 | 30.517 | 0.022 |
| 1.007 | S107 | 30 minute 30 year Winter I+0% | 30 | 45 | 32.500 | 30.517 | -1.019 |
| 12.000 | S1200 | 30 minute 30 year Winter I+0% | 30 | 23 | 32.635 | 31.868 | -0.132 |
| 13.000 | S1300 | 30 minute 30 year Winter I+0% | 30 | 21 | 32.635 | 31.914 | -0.086 |
| 13.001 | S1301 | 30 minute 30 year Winter I+0% | 30 | 23 | 32.635 | 31.822 | -0.088 |
| 12.001 | S1201 | 30 minute 30 year Winter I+0% | 30 | 26 | 32.635 | 31.494 | -0.141 |
| 12.002 | S1202 | 30 minute 30 year Winter I+0% | 30 | 28 | 32.680 | 31.167 | -0.093 |
| 12.003 | S1203 | 30 minute 30 year Winter I+0% | 30 | 28 | 32.660 | 31.061 | -0.109 |
| 12.004 | S1204 | 30 minute 30 year Winter I+0% | 30 | 28 | 32.660 | 30.910 | -0.125 |
| 14.000 | S1400 | 30 minute 30 year Winter I+0% | 30 | 23 | 32.650 | 31.686 | -0.089 |
| 14.001 | S1401 | 30 minute 30 year Winter I+0% | 30 | 28 | 32.680 | 31.346 | -0.149 |
| 15.000 | S1500 | 30 minute 30 year Winter I+0% | 30 | 23 | 32.680 | 31.694 | -0.106 |
| 15.001 | S1501 | 30 minute 30 year Winter I+0% | 30 | 24 | 32.600 | 31.649 | -0.106 |
| 14.002 | S1402 | 30 minute 30 year Winter I+0% | 30 | 28 | 32.600 | 31.086 | -0.154 |
| 12.005 | 1205 | 30 minute 30 year Winter I+0% | 30 | 46 | 32.600 | 30.625 | -0.080 |
| 1.008 | S108 | 30 minute 30 year Winter I+0% | 30 | 45 | 32.550 | 30.517 | 0.162 |
| 16.000 | S1600 | 30 minute 30 year Winter I+0% | 30 | 26 | 32.545 | 31.479 | -0.171 |
| 16.001 | S1601 | 30 minute 30 year Winter I+0% | 30 | 48 | 32.545 | 30.516 | -0.169 |
| 1.009 | S109 | 30 minute 30 year Winter I+0% | 30 | 45 | 32.500 | 30.515 | 0.485 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.04 | | 0.015 | 1.088 | 1.1 | 1.4 | OK |
| 1.006 | S106 | 0.000 | 0.01 | | 1.125 | 31.995 | 0.2 | 33.1 | OK |
| 9.000 | S900 | 0.000 | 0.02 | | 0.002 | 0.653 | 1.0 | 0.8 | OK |
| 10.000 | S901 | 0.000 | 0.01 | | 0.001 | 0.435 | 1.1 | 0.6 | OK |
| 9.001 | S901 | 0.000 | 0.31 | | 0.023 | 11.312 | 1.1 | 14.7 | OK |
| 9.002 | S902 | 0.000 | 0.20 | | 0.062 | 15.010 | 1.9 | 19.5 | OK |
| 11.000 | S1100 | 0.000 | 0.25 | | 0.007 | 3.263 | 0.8 | 4.2 | OK |
| 9.003 | S903 | 0.000 | 0.30 | | 0.519 | 18.912 | 1.0 | 25.1 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 60.743 | 24.018 | 0.2 | 17.7 | OK |
| 12.000 | S1200 | 0.000 | 0.03 | | 0.002 | 0.870 | 0.9 | 1.1 | OK |
| 13.000 | S1300 | 0.000 | 0.38 | | 0.009 | 5.004 | 0.9 | 6.4 | OK |
| 13.001 | S1301 | 0.000 | 0.36 | | 0.033 | 7.832 | 1.5 | 10.0 | OK |
| 12.001 | S1201 | 0.000 | 0.30 | | 0.023 | 15.228 | 1.5 | 19.6 | OK |
| 12.002 | S1202 | 0.000 | 0.64 | | 0.109 | 20.884 | 1.1 | 27.0 | OK |
| 12.003 | S1203 | 0.000 | 0.52 | | 0.116 | 20.884 | 1.3 | 27.1 | OK |
| 12.004 | S1204 | 0.000 | 0.41 | | 0.059 | 25.234 | 1.9 | 32.7 | OK |
| 14.000 | S1400 | 0.000 | 0.35 | | 0.009 | 5.221 | 1.0 | 6.7 | OK |

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## Summary Wizard of 30 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.25 | | 0.021 | 9.354 | 1.0 | 12.0 | OK |
| 15.000 | S1500 | 0.000 | 0.19 | | 0.006 | 1.958 | 0.6 | 2.5 | OK |
| 15.001 | S1501 | 0.000 | 0.19 | | 0.017 | 5.221 | 1.6 | 6.7 | OK |
| 14.002 | S1402 | 0.000 | 0.22 | | 0.066 | 17.403 | 2.1 | 22.4 | OK |
| 12.005 | 1205 | 0.000 | 0.74 | | 0.271 | 47.423 | 2.3 | 61.4 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 64.939 | 12.421 | 0.1 | 6.1 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.13 | | 0.014 | 7.396 | 1.3 | 9.4 | OK |
| 16.001 | S1601 | 0.000 | 0.13 | | 0.032 | 8.258 | 1.5 | 10.6 | OK |
| 1.009 | S109 | 0.000 | 0.37 | | 3.136 | 17.607 | 1.0 | 6.2 | SURCHARGED |

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## Summary Wizard of 60 minute 30 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) | Flooded Volume (m³) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 60 minute 30 year Winter I+0% | 60 | 30 | 32.680 | 31.808 | -0.112 | 0.000 |
| 1.001 | S101 | 60 minute 30 year Winter I+0% | 60 | 30 | 32.680 | 31.733 | -0.117 | 0.000 |
| 2.000 | S200 | 60 minute 30 year Winter I+0% | 60 | 32 | 32.600 | 31.513 | -0.117 | 0.000 |
| 1.002 | S102 | 60 minute 30 year Winter I+0% | 60 | 34 | 32.630 | 31.278 | -0.167 | 0.000 |
| 3.000 | S300 | 60 minute 30 year Winter I+0% | 60 | 29 | 32.550 | 31.868 | -0.132 | 0.000 |
| 1.003 | S103 | 60 minute 30 year Winter I+0% | 60 | 33 | 32.600 | 31.110 | -0.165 | 0.000 |
| 4.000 | S400 | 60 minute 30 year Winter I+0% | 60 | 30 | 32.550 | 31.723 | -0.127 | 0.000 |
| 4.001 | S401 | 60 minute 30 year Winter I+0% | 60 | 50 | 32.550 | 30.644 | -0.106 | 0.000 |
| 1.004 | S104 | 60 minute 30 year Winter I+0% | 60 | 41 | 32.600 | 30.640 | 0.110 | 0.000 |
| 1.005 | S105 | 60 minute 30 year Winter I+0% | 60 | 41 | 32.600 | 30.640 | 0.130 | 0.000 |
| 5.000 | S500 | 60 minute 30 year Winter I+0% | 60 | 29 | 32.550 | 31.878 | -0.122 | 0.000 |
| 5.001 | S501 | 60 minute 30 year Winter I+0% | 60 | 34 | 32.665 | 31.169 | -0.121 | 0.000 |
| 6.000 | S600 | 60 minute 30 year Winter I+0% | 60 | 30 | 32.665 | 31.857 | -0.143 | 0.000 |
| 6.001 | S601 | 60 minute 30 year Winter I+0% | 60 | 34 | 32.665 | 31.149 | -0.141 | 0.000 |
| 5.002 | S502 | 60 minute 30 year Winter I+0% | 60 | 33 | 32.665 | 30.892 | -0.158 | 0.000 |
| 5.003 | S503 | 60 minute 30 year Winter I+0% | 60 | 48 | 32.680 | 30.687 | -0.168 | 0.000 |
| 7.000 | S700 | 60 minute 30 year Winter I+0% | 60 | 29 | 32.680 | 31.935 | -0.095 | 0.000 |
| 7.001 | S701 | 60 minute 30 year Winter I+0% | 60 | 30 | 32.635 | 31.863 | -0.082 | 0.000 |
| 5.004 | S504 | 60 minute 30 year Winter I+0% | 60 | 41 | 32.635 | 30.640 | 0.095 | 0.000 |

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## Summary Wizard of 60 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.15 | | 0.005 | 3.595 | 0.7 | 2.4 | OK |
| 1.001 | S101 | 0.11 | | 0.014 | 5.531 | 1.3 | 3.8 | OK |
| 2.000 | S200 | 0.11 | | 0.004 | 3.595 | 0.9 | 2.4 | OK |
| 1.002 | S102 | 0.15 | | 0.016 | 11.062 | 0.9 | 7.5 | OK |
| 3.000 | S300 | 0.04 | | 0.002 | 2.212 | 1.2 | 1.5 | OK |
| 1.003 | S103 | 0.16 | | 0.045 | 20.187 | 1.6 | 13.8 | OK |
| 4.000 | S400 | 0.06 | | 0.003 | 4.148 | 1.7 | 2.8 | OK |
| 4.001 | S401 | 0.19 | | 0.008 | 5.807 | 0.9 | 4.0 | OK |
| 1.004 | S104 | 0.42 | | 0.547 | 28.429 | 0.6 | 19.6 | SURCHARGED |
| 1.005 | S105 | 0.17 | | 1.276 | 28.702 | 0.5 | 19.3 | SURCHARGED |
| 5.000 | S500 | 0.08 | | 0.004 | 3.872 | 1.1 | 2.6 | OK |
| 5.001 | S501 | 0.09 | | 0.007 | 3.872 | 1.1 | 2.6 | OK |
| 6.000 | S600 | 0.01 | | 0.000 | 0.553 | 0.8 | 0.4 | OK |
| 6.001 | S601 | 0.01 | | 0.001 | 0.553 | 0.8 | 0.4 | OK |
| 5.002 | S502 | 0.19 | | 0.018 | 14.656 | 1.0 | 10.0 | OK |
| 5.003 | S503 | 0.14 | | 0.043 | 16.592 | 1.4 | 11.3 | OK |
| 7.000 | S700 | 0.29 | | 0.008 | 7.190 | 0.8 | 4.9 | OK |
| 7.001 | S701 | 0.43 | | 0.035 | 10.785 | 0.9 | 7.4 | OK |
| 5.004 | S504 | 0.31 | | 0.823 | 26.776 | 0.8 | 18.7 | SURCHARGED |

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## Summary Wizard of 60 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 60 minute 30 year Winter I+0% | 60 | 34 | 32.525 | 31.216 | -0.134 |
| 1.006 | S106 | 60 minute 30 year Winter I+0% | 60 | 41 | 32.500 | 30.640 | -1.006 |
| 9.000 | S900 | 60 minute 30 year Winter I+0% | 60 | 30 | 32.665 | 31.861 | -0.139 |
| 10.000 | S901 | 60 minute 30 year Winter I+0% | 60 | 30 | 32.665 | 31.857 | -0.143 |
| 9.001 | S901 | 60 minute 30 year Winter I+0% | 60 | 33 | 32.665 | 31.064 | -0.156 |
| 9.002 | S902 | 60 minute 30 year Winter I+0% | 60 | 33 | 32.640 | 30.814 | -0.171 |
| 11.000 | S1100 | 60 minute 30 year Winter I+0% | 60 | 31 | 32.680 | 31.591 | -0.109 |
| 9.003 | S903 | 60 minute 30 year Winter I+0% | 60 | 41 | 32.630 | 30.640 | 0.145 |
| 1.007 | S107 | 60 minute 30 year Winter I+0% | 60 | 41 | 32.500 | 30.640 | -0.896 |
| 12.000 | S1200 | 60 minute 30 year Winter I+0% | 60 | 30 | 32.635 | 31.866 | -0.134 |
| 13.000 | S1300 | 60 minute 30 year Winter I+0% | 60 | 29 | 32.635 | 31.901 | -0.099 |
| 13.001 | S1301 | 60 minute 30 year Winter I+0% | 60 | 30 | 32.635 | 31.810 | -0.100 |
| 12.001 | S1201 | 60 minute 30 year Winter I+0% | 60 | 31 | 32.635 | 31.478 | -0.157 |
| 12.002 | S1202 | 60 minute 30 year Winter I+0% | 60 | 33 | 32.680 | 31.138 | -0.122 |
| 12.003 | S1203 | 60 minute 30 year Winter I+0% | 60 | 33 | 32.660 | 31.037 | -0.133 |
| 12.004 | S1204 | 60 minute 30 year Winter I+0% | 60 | 33 | 32.660 | 30.890 | -0.145 |
| 14.000 | S1400 | 60 minute 30 year Winter I+0% | 60 | 30 | 32.650 | 31.675 | -0.100 |
| 14.001 | S1401 | 60 minute 30 year Winter I+0% | 60 | 33 | 32.680 | 31.332 | -0.163 |
| 15.000 | S1500 | 60 minute 30 year Winter I+0% | 60 | 30 | 32.680 | 31.685 | -0.115 |
| 15.001 | S1501 | 60 minute 30 year Winter I+0% | 60 | 30 | 32.600 | 31.640 | -0.115 |
| 14.002 | S1402 | 60 minute 30 year Winter I+0% | 60 | 33 | 32.600 | 31.072 | -0.168 |
| 12.005 | 1205 | 60 minute 30 year Winter I+0% | 60 | 44 | 32.600 | 30.642 | -0.063 |
| 1.008 | S108 | 60 minute 30 year Winter I+0% | 60 | 41 | 32.550 | 30.640 | 0.285 |
| 16.000 | S1600 | 60 minute 30 year Winter I+0% | 60 | 32 | 32.545 | 31.470 | -0.180 |
| 16.001 | S1601 | 60 minute 30 year Winter I+0% | 60 | 41 | 32.545 | 30.639 | -0.046 |
| 1.009 | S109 | 60 minute 30 year Winter I+0% | 60 | 41 | 32.500 | 30.638 | 0.608 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.02 | | 0.012 | 1.382 | 1.1 | 0.9 | OK |
| 1.006 | S106 | 0.000 | 0.01 | | 1.233 | 43.894 | 0.2 | 21.7 | OK |
| 9.000 | S900 | 0.000 | 0.02 | | 0.001 | 0.829 | 1.1 | 0.6 | OK |
| 10.000 | S901 | 0.000 | 0.01 | | 0.000 | 0.553 | 0.8 | 0.4 | OK |
| 9.001 | S901 | 0.000 | 0.21 | | 0.019 | 14.379 | 1.0 | 9.9 | OK |
| 9.002 | S902 | 0.000 | 0.13 | | 0.049 | 19.081 | 1.8 | 13.1 | OK |
| 11.000 | S1100 | 0.000 | 0.17 | | 0.006 | 4.148 | 0.7 | 2.8 | OK |
| 9.003 | S903 | 0.000 | 0.20 | | 0.757 | 24.028 | 0.9 | 16.4 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 74.955 | 37.835 | 0.1 | 11.6 | OK |
| 12.000 | S1200 | 0.000 | 0.02 | | 0.002 | 1.106 | 0.9 | 0.8 | OK |
| 13.000 | S1300 | 0.000 | 0.25 | | 0.007 | 6.360 | 0.8 | 4.3 | OK |
| 13.001 | S1301 | 0.000 | 0.24 | | 0.026 | 9.955 | 1.3 | 6.8 | OK |
| 12.001 | S1201 | 0.000 | 0.20 | | 0.019 | 19.357 | 1.3 | 13.2 | OK |
| 12.002 | S1202 | 0.000 | 0.43 | | 0.063 | 26.547 | 1.0 | 18.2 | OK |
| 12.003 | S1203 | 0.000 | 0.35 | | 0.081 | 26.547 | 1.2 | 18.2 | OK |
| 12.004 | S1204 | 0.000 | 0.27 | | 0.046 | 32.078 | 1.7 | 22.0 | OK |
| 14.000 | S1400 | 0.000 | 0.24 | | 0.007 | 6.637 | 0.9 | 4.5 | OK |

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## Summary Wizard of 60 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.17 | | 0.017 | 11.891 | 0.9 | 8.1 | OK |
| 15.000 | S1500 | 0.000 | 0.13 | | 0.005 | 2.489 | 0.5 | 1.7 | OK |
| 15.001 | S1501 | 0.000 | 0.12 | | 0.013 | 6.637 | 1.4 | 4.5 | OK |
| 14.002 | S1402 | 0.000 | 0.15 | | 0.052 | 22.123 | 1.9 | 15.1 | OK |
| 12.005 | 1205 | 0.000 | 0.49 | | 0.315 | 60.173 | 2.1 | 41.2 | OK |
| 1.008 | S108 | 0.000 | 0.07 | | 78.427 | 31.805 | 0.1 | 6.6 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.09 | | 0.011 | 9.402 | 1.1 | 6.4 | OK |
| 16.001 | S1601 | 0.000 | 0.09 | | 0.181 | 10.456 | 1.3 | 7.2 | OK |
| 1.009 | S109 | 0.000 | 0.40 | | 3.483 | 38.978 | 1.0 | 6.7 | SURCHARGED |

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## Summary Wizard of 120 minute 30 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 120 minute 30 year Winter I+0% | 120 | 43 | 32.680 | 31.801 | -0.119 |
| 1.001 | S101 | 120 minute 30 year Winter I+0% | 120 | 43 | 32.680 | 31.725 | -0.125 |
| 2.000 | S200 | 120 minute 30 year Winter I+0% | 120 | 45 | 32.600 | 31.506 | -0.124 |
| 1.002 | S102 | 120 minute 30 year Winter I+0% | 120 | 47 | 32.630 | 31.266 | -0.179 |
| 3.000 | S300 | 120 minute 30 year Winter I+0% | 120 | 42 | 32.550 | 31.865 | -0.135 |
| 1.003 | S103 | 120 minute 30 year Winter I+0% | 120 | 47 | 32.600 | 31.097 | -0.178 |
| 4.000 | S400 | 120 minute 30 year Winter I+0% | 120 | 43 | 32.550 | 31.718 | -0.132 |
| 4.001 | S401 | 120 minute 30 year Winter I+0% | 120 | 34 | 32.550 | 30.742 | -0.008 |
| 1.004 | S104 | 120 minute 30 year Winter I+0% | 120 | 34 | 32.600 | 30.741 | 0.211 |
| 1.005 | S105 | 120 minute 30 year Winter I+0% | 120 | 34 | 32.600 | 30.740 | 0.230 |
| 5.000 | S500 | 120 minute 30 year Winter I+0% | 120 | 42 | 32.550 | 31.872 | -0.128 |
| 5.001 | S501 | 120 minute 30 year Winter I+0% | 120 | 47 | 32.665 | 31.162 | -0.128 |
| 6.000 | S600 | 120 minute 30 year Winter I+0% | 120 | 43 | 32.665 | 31.855 | -0.145 |
| 6.001 | S601 | 120 minute 30 year Winter I+0% | 120 | 47 | 32.665 | 31.146 | -0.144 |
| 5.002 | S502 | 120 minute 30 year Winter I+0% | 120 | 47 | 32.665 | 30.877 | -0.173 |
| 5.003 | S503 | 120 minute 30 year Winter I+0% | 120 | 34 | 32.680 | 30.741 | -0.114 |
| 7.000 | S700 | 120 minute 30 year Winter I+0% | 120 | 42 | 32.680 | 31.923 | -0.107 |
| 7.001 | S701 | 120 minute 30 year Winter I+0% | 120 | 43 | 32.635 | 31.848 | -0.097 |
| 5.004 | S504 | 120 minute 30 year Winter I+0% | 120 | 34 | 32.635 | 30.740 | 0.195 |

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## Summary Wizard of 120 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.09 | | 0.004 | 4.443 | 0.6 | 1.5 | OK |
| 1.001 | S101 | 0.000 | 0.07 | | 0.011 | 6.835 | 1.2 | 2.4 | OK |
| 2.000 | S200 | 0.000 | 0.07 | | 0.003 | 4.443 | 0.8 | 1.5 | OK |
| 1.002 | S102 | 0.000 | 0.09 | | 0.012 | 13.671 | 0.8 | 4.8 | OK |
| 3.000 | S300 | 0.000 | 0.02 | | 0.002 | 2.734 | 1.2 | 1.0 | OK |
| 1.003 | S103 | 0.000 | 0.10 | | 0.035 | 24.949 | 1.4 | 8.7 | OK |
| 4.000 | S400 | 0.000 | 0.04 | | 0.002 | 5.126 | 1.5 | 1.8 | OK |
| 4.001 | S401 | 0.000 | 0.12 | | 0.033 | 7.177 | 0.8 | 2.5 | OK |
| 1.004 | S104 | 0.000 | 0.26 | | 0.737 | 35.225 | 0.6 | 12.2 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.11 | | 1.453 | 35.836 | 0.4 | 11.9 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.05 | | 0.003 | 4.784 | 1.1 | 1.7 | OK |
| 5.001 | S501 | 0.000 | 0.05 | | 0.005 | 4.784 | 1.0 | 1.7 | OK |
| 6.000 | S600 | 0.000 | 0.01 | | 0.000 | 0.683 | 0.5 | 0.2 | OK |
| 6.001 | S601 | 0.000 | 0.01 | | 0.000 | 0.683 | 0.5 | 0.2 | OK |
| 5.002 | S502 | 0.000 | 0.12 | | 0.013 | 18.113 | 0.9 | 6.3 | OK |
| 5.003 | S503 | 0.000 | 0.09 | | 0.097 | 20.506 | 1.2 | 7.1 | OK |
| 7.000 | S700 | 0.000 | 0.18 | | 0.006 | 8.886 | 0.7 | 3.1 | OK |
| 7.001 | S701 | 0.000 | 0.27 | | 0.027 | 13.329 | 0.8 | 4.6 | OK |
| 5.004 | S504 | 0.000 | 0.18 | | 1.051 | 33.246 | 0.7 | 11.3 | SURCHARGED |

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## Summary Wizard of 120 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 120 minute 30 year Winter I+0% | 120 | 47 | 32.525 | 31.211 | -0.139 |
| 1.006 | S106 | 120 minute 30 year Winter I+0% | 120 | 34 | 32.500 | 30.740 | -0.906 |
| 9.000 | S900 | 120 minute 30 year Winter I+0% | 120 | 43 | 32.665 | 31.857 | -0.143 |
| 10.000 | S901 | 120 minute 30 year Winter I+0% | 120 | 43 | 32.665 | 31.854 | -0.146 |
| 9.001 | S901 | 120 minute 30 year Winter I+0% | 120 | 47 | 32.665 | 31.049 | -0.171 |
| 9.002 | S902 | 120 minute 30 year Winter I+0% | 120 | 47 | 32.640 | 30.803 | -0.182 |
| 11.000 | S1100 | 120 minute 30 year Winter I+0% | 120 | 44 | 32.680 | 31.583 | -0.117 |
| 9.003 | S903 | 120 minute 30 year Winter I+0% | 120 | 34 | 32.630 | 30.740 | 0.245 |
| 1.007 | S107 | 120 minute 30 year Winter I+0% | 120 | 34 | 32.500 | 30.740 | -0.796 |
| 12.000 | S1200 | 120 minute 30 year Winter I+0% | 120 | 43 | 32.635 | 31.861 | -0.139 |
| 13.000 | S1300 | 120 minute 30 year Winter I+0% | 120 | 42 | 32.635 | 31.890 | -0.110 |
| 13.001 | S1301 | 120 minute 30 year Winter I+0% | 120 | 43 | 32.635 | 31.799 | -0.111 |
| 12.001 | S1201 | 120 minute 30 year Winter I+0% | 120 | 45 | 32.635 | 31.463 | -0.172 |
| 12.002 | S1202 | 120 minute 30 year Winter I+0% | 120 | 47 | 32.680 | 31.114 | -0.146 |
| 12.003 | S1203 | 120 minute 30 year Winter I+0% | 120 | 47 | 32.660 | 31.016 | -0.154 |
| 12.004 | S1204 | 120 minute 30 year Winter I+0% | 120 | 47 | 32.660 | 30.872 | -0.163 |
| 14.000 | S1400 | 120 minute 30 year Winter I+0% | 120 | 43 | 32.650 | 31.664 | -0.111 |
| 14.001 | S1401 | 120 minute 30 year Winter I+0% | 120 | 47 | 32.680 | 31.319 | -0.176 |
| 15.000 | S1500 | 120 minute 30 year Winter I+0% | 120 | 43 | 32.680 | 31.678 | -0.122 |
| 15.001 | S1501 | 120 minute 30 year Winter I+0% | 120 | 44 | 32.600 | 31.633 | -0.122 |
| 14.002 | S1402 | 120 minute 30 year Winter I+0% | 120 | 47 | 32.600 | 31.061 | -0.179 |
| 12.005 | 1205 | 120 minute 30 year Winter I+0% | 120 | 34 | 32.600 | 30.742 | 0.037 |
| 1.008 | S108 | 120 minute 30 year Winter I+0% | 120 | 34 | 32.550 | 30.740 | 0.385 |
| 16.000 | S1600 | 120 minute 30 year Winter I+0% | 120 | 45 | 32.545 | 31.459 | -0.191 |
| 16.001 | S1601 | 120 minute 30 year Winter I+0% | 120 | 34 | 32.545 | 30.738 | 0.053 |
| 1.009 | S109 | 120 minute 30 year Winter I+0% | 120 | 34 | 32.500 | 30.738 | 0.708 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.02 | | 0.007 | 1.709 | 1.1 | 0.6 | OK |
| 1.006 | S106 | 0.000 | 0.01 | | 1.264 | 62.579 | 0.2 | 13.6 | OK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.000 | 1.025 | 0.8 | 0.4 | OK |
| 10.000 | S901 | 0.000 | 0.01 | | 0.000 | 0.683 | 0.5 | 0.2 | OK |
| 9.001 | S901 | 0.000 | 0.13 | | 0.014 | 17.771 | 0.9 | 6.2 | OK |
| 9.002 | S902 | 0.000 | 0.08 | | 0.038 | 23.581 | 1.5 | 8.2 | OK |
| 11.000 | S1100 | 0.000 | 0.11 | | 0.004 | 5.127 | 0.6 | 1.8 | OK |
| 9.003 | S903 | 0.000 | 0.12 | | 0.950 | 29.844 | 0.8 | 10.1 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 86.517 | 63.531 | 0.1 | 8.0 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.001 | 1.367 | 0.9 | 0.5 | OK |
| 13.000 | S1300 | 0.000 | 0.16 | | 0.006 | 7.861 | 0.7 | 2.7 | OK |
| 13.001 | S1301 | 0.000 | 0.15 | | 0.019 | 12.304 | 1.2 | 4.3 | OK |
| 12.001 | S1201 | 0.000 | 0.13 | | 0.014 | 23.924 | 1.2 | 8.3 | OK |
| 12.002 | S1202 | 0.000 | 0.27 | | 0.047 | 32.810 | 0.9 | 11.4 | OK |
| 12.003 | S1203 | 0.000 | 0.22 | | 0.062 | 32.810 | 1.1 | 11.4 | OK |
| 12.004 | S1204 | 0.000 | 0.17 | | 0.036 | 39.645 | 1.5 | 13.8 | OK |
| 14.000 | S1400 | 0.000 | 0.15 | | 0.005 | 8.202 | 0.8 | 2.9 | OK |

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## Summary Wizard of 120 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.11 | | 0.013 | 14.696 | 0.8 | 5.1 | OK |
| 15.000 | S1500 | 0.000 | 0.08 | | 0.004 | 3.076 | 0.5 | 1.1 | OK |
| 15.001 | S1501 | 0.000 | 0.08 | | 0.010 | 8.202 | 1.3 | 2.9 | OK |
| 14.002 | S1402 | 0.000 | 0.09 | | 0.040 | 27.341 | 1.6 | 9.5 | OK |
| 12.005 | 1205 | 0.000 | 0.31 | | 0.593 | 74.403 | 1.9 | 26.0 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.07 | | 89.375 | 72.828 | 0.1 | 6.9 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.06 | | 0.008 | 11.620 | 1.1 | 4.0 | OK |
| 16.001 | S1601 | 0.000 | 0.05 | | 0.384 | 12.939 | 1.2 | 4.5 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.43 | | 3.743 | 82.499 | 1.0 | 7.1 | SURCHARGED |

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## Summary Wizard of 180 minute 30 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 180 minute 30 year Winter I+0% | 180 | 51 | 32.680 | 31.796 | -0.124 |
| 1.001 | S101 | 180 minute 30 year Winter I+0% | 180 | 51 | 32.680 | 31.722 | -0.128 |
| 2.000 | S200 | 180 minute 30 year Winter I+0% | 180 | 53 | 32.600 | 31.502 | -0.128 |
| 1.002 | S102 | 180 minute 30 year Winter I+0% | 180 | 55 | 32.630 | 31.259 | -0.186 |
| 3.000 | S300 | 180 minute 30 year Winter I+0% | 180 | 51 | 32.550 | 31.862 | -0.138 |
| 1.003 | S103 | 180 minute 30 year Winter I+0% | 180 | 54 | 32.600 | 31.090 | -0.185 |
| 4.000 | S400 | 180 minute 30 year Winter I+0% | 180 | 51 | 32.550 | 31.716 | -0.134 |
| 4.001 | S401 | 180 minute 30 year Winter I+0% | 180 | 25 | 32.550 | 30.776 | 0.026 |
| 1.004 | S104 | 180 minute 30 year Winter I+0% | 180 | 25 | 32.600 | 30.776 | 0.246 |
| 1.005 | S105 | 180 minute 30 year Winter I+0% | 180 | 25 | 32.600 | 30.775 | 0.265 |
| 5.000 | S500 | 180 minute 30 year Winter I+0% | 180 | 50 | 32.550 | 31.869 | -0.131 |
| 5.001 | S501 | 180 minute 30 year Winter I+0% | 180 | 55 | 32.665 | 31.159 | -0.131 |
| 6.000 | S600 | 180 minute 30 year Winter I+0% | 180 | 51 | 32.665 | 31.853 | -0.147 |
| 6.001 | S601 | 180 minute 30 year Winter I+0% | 180 | 55 | 32.665 | 31.144 | -0.146 |
| 5.002 | S502 | 180 minute 30 year Winter I+0% | 180 | 54 | 32.665 | 30.871 | -0.179 |
| 5.003 | S503 | 180 minute 30 year Winter I+0% | 180 | 25 | 32.680 | 30.776 | -0.079 |
| 7.000 | S700 | 180 minute 30 year Winter I+0% | 180 | 50 | 32.680 | 31.917 | -0.113 |
| 7.001 | S701 | 180 minute 30 year Winter I+0% | 180 | 51 | 32.635 | 31.841 | -0.104 |
| 5.004 | S504 | 180 minute 30 year Winter I+0% | 180 | 25 | 32.635 | 30.775 | 0.230 |

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## Summary Wizard of 180 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.07 | | 0.003 | 4.978 | 0.6 | 1.2 | OK |
| 1.001 | S101 | 0.000 | 0.05 | | 0.009 | 7.658 | 1.1 | 1.8 | OK |
| 2.000 | S200 | 0.000 | 0.05 | | 0.003 | 4.978 | 0.7 | 1.2 | OK |
| 1.002 | S102 | 0.000 | 0.07 | | 0.010 | 15.316 | 0.8 | 3.6 | OK |
| 3.000 | S300 | 0.000 | 0.02 | | 0.001 | 3.063 | 1.2 | 0.7 | OK |
| 1.003 | S103 | 0.000 | 0.07 | | 0.029 | 27.951 | 1.3 | 6.5 | OK |
| 4.000 | S400 | 0.000 | 0.03 | | 0.002 | 5.743 | 1.4 | 1.3 | OK |
| 4.001 | S401 | 0.000 | 0.09 | | 0.044 | 8.041 | 0.7 | 1.9 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.19 | | 0.787 | 39.633 | 0.5 | 9.1 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.08 | | 1.515 | 40.600 | 0.4 | 8.9 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.04 | | 0.002 | 5.360 | 1.0 | 1.3 | OK |
| 5.001 | S501 | 0.000 | 0.04 | | 0.004 | 5.360 | 0.9 | 1.3 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 0.765 | 0.4 | 0.2 | OK |
| 6.001 | S601 | 0.000 | 0.01 | | 0.000 | 0.765 | 0.4 | 0.2 | OK |
| 5.002 | S502 | 0.000 | 0.09 | | 0.012 | 20.293 | 0.8 | 4.7 | OK |
| 5.003 | S503 | 0.000 | 0.07 | | 0.181 | 22.973 | 1.2 | 5.4 | OK |
| 7.000 | S700 | 0.000 | 0.14 | | 0.005 | 9.955 | 0.7 | 2.3 | OK |
| 7.001 | S701 | 0.000 | 0.20 | | 0.023 | 14.933 | 0.8 | 3.5 | OK |
| 5.004 | S504 | 0.000 | 0.14 | | 1.121 | 37.467 | 0.6 | 8.4 | SURCHARGED |

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## Summary Wizard of 180 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 180 minute 30 year Winter I+0% | 180 | 55 | 32.525 | 31.208 | -0.142 |
| 1.006 | S106 | 180 minute 30 year Winter I+0% | 180 | 25 | 32.500 | 30.775 | -0.871 |
| 9.000 | S900 | 180 minute 30 year Winter I+0% | 180 | 51 | 32.665 | 31.855 | -0.145 |
| 10.000 | S901 | 180 minute 30 year Winter I+0% | 180 | 51 | 32.665 | 31.853 | -0.147 |
| 9.001 | S901 | 180 minute 30 year Winter I+0% | 180 | 54 | 32.665 | 31.042 | -0.178 |
| 9.002 | S902 | 180 minute 30 year Winter I+0% | 180 | 54 | 32.640 | 30.796 | -0.189 |
| 11.000 | S1100 | 180 minute 30 year Winter I+0% | 180 | 52 | 32.680 | 31.578 | -0.122 |
| 9.003 | S903 | 180 minute 30 year Winter I+0% | 180 | 25 | 32.630 | 30.775 | 0.280 |
| 1.007 | S107 | 180 minute 30 year Winter I+0% | 180 | 25 | 32.500 | 30.775 | -0.761 |
| 12.000 | S1200 | 180 minute 30 year Winter I+0% | 180 | 51 | 32.635 | 31.858 | -0.142 |
| 13.000 | S1300 | 180 minute 30 year Winter I+0% | 180 | 50 | 32.635 | 31.884 | -0.116 |
| 13.001 | S1301 | 180 minute 30 year Winter I+0% | 180 | 51 | 32.635 | 31.794 | -0.116 |
| 12.001 | S1201 | 180 minute 30 year Winter I+0% | 180 | 53 | 32.635 | 31.456 | -0.179 |
| 12.002 | S1202 | 180 minute 30 year Winter I+0% | 180 | 54 | 32.680 | 31.103 | -0.157 |
| 12.003 | S1203 | 180 minute 30 year Winter I+0% | 180 | 54 | 32.660 | 31.006 | -0.164 |
| 12.004 | S1204 | 180 minute 30 year Winter I+0% | 180 | 54 | 32.660 | 30.864 | -0.171 |
| 14.000 | S1400 | 180 minute 30 year Winter I+0% | 180 | 51 | 32.650 | 31.658 | -0.117 |
| 14.001 | S1401 | 180 minute 30 year Winter I+0% | 180 | 54 | 32.680 | 31.312 | -0.183 |
| 15.000 | S1500 | 180 minute 30 year Winter I+0% | 180 | 51 | 32.680 | 31.674 | -0.126 |
| 15.001 | S1501 | 180 minute 30 year Winter I+0% | 180 | 51 | 32.600 | 31.628 | -0.127 |
| 14.002 | S1402 | 180 minute 30 year Winter I+0% | 180 | 54 | 32.600 | 31.054 | -0.186 |
| 12.005 | 1205 | 180 minute 30 year Winter I+0% | 180 | 27 | 32.600 | 30.777 | 0.072 |
| 1.008 | S108 | 180 minute 30 year Winter I+0% | 180 | 25 | 32.550 | 30.775 | 0.420 |
| 16.000 | S1600 | 180 minute 30 year Winter I+0% | 180 | 53 | 32.545 | 31.455 | -0.195 |
| 16.001 | S1601 | 180 minute 30 year Winter I+0% | 180 | 25 | 32.545 | 30.773 | 0.088 |
| 1.009 | S109 | 180 minute 30 year Winter I+0% | 180 | 25 | 32.500 | 30.773 | 0.743 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.004 | 1.914 | 1.0 | 0.4 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.274 | 78.456 | 0.1 | 10.5 | OK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.000 | 1.148 | 0.6 | 0.3 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.765 | 0.4 | 0.2 | OK |
| 9.001 | S901 | 0.000 | 0.10 | | 0.012 | 19.910 | 0.8 | 4.7 | OK |
| 9.002 | S902 | 0.000 | 0.06 | | 0.031 | 26.419 | 1.5 | 6.2 | OK |
| 11.000 | S1100 | 0.000 | 0.08 | | 0.004 | 5.744 | 0.6 | 1.3 | OK |
| 9.003 | S903 | 0.000 | 0.09 | | 1.017 | 33.628 | 0.7 | 7.6 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 90.547 | 87.511 | 0.1 | 6.9 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 1.531 | 0.8 | 0.4 | OK |
| 13.000 | S1300 | 0.000 | 0.12 | | 0.005 | 8.807 | 0.7 | 2.1 | OK |
| 13.001 | S1301 | 0.000 | 0.12 | | 0.016 | 13.784 | 1.1 | 3.2 | OK |
| 12.001 | S1201 | 0.000 | 0.10 | | 0.012 | 26.803 | 1.1 | 6.3 | OK |
| 12.002 | S1202 | 0.000 | 0.20 | | 0.041 | 36.758 | 0.8 | 8.6 | OK |
| 12.003 | S1203 | 0.000 | 0.17 | | 0.052 | 36.758 | 1.0 | 8.6 | OK |
| 12.004 | S1204 | 0.000 | 0.13 | | 0.030 | 44.416 | 1.4 | 10.4 | OK |
| 14.000 | S1400 | 0.000 | 0.11 | | 0.005 | 9.190 | 0.7 | 2.1 | OK |

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## Summary Wizard of 180 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.08 | | 0.011 | 16.465 | 0.7 | 3.8 | OK |
| 15.000 | S1500 | 0.000 | 0.06 | | 0.003 | 3.446 | 0.4 | 0.8 | OK |
| 15.001 | S1501 | 0.000 | 0.06 | | 0.008 | 9.189 | 1.2 | 2.1 | OK |
| 14.002 | S1402 | 0.000 | 0.07 | | 0.033 | 30.632 | 1.6 | 7.1 | OK |
| 12.005 | 1205 | 0.000 | 0.23 | | 0.697 | 83.471 | 1.7 | 19.5 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.07 | | 93.189 | 113.281 | 0.2 | 7.1 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.04 | | 0.007 | 13.019 | 1.0 | 3.0 | OK |
| 16.001 | S1601 | 0.000 | 0.04 | | 0.460 | 14.542 | 1.1 | 3.4 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.43 | | 3.831 | 124.749 | 1.0 | 7.2 | SURCHARGED |

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## Summary Wizard of 240 minute 30 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 240 minute 30 year Winter I+0% | 240 | 58 | 32.680 | 31.793 | -0.127 |
| 1.001 | S101 | 240 minute 30 year Winter I+0% | 240 | 58 | 32.680 | 31.719 | -0.131 |
| 2.000 | S200 | 240 minute 30 year Winter I+0% | 240 | 59 | 32.600 | 31.500 | -0.130 |
| 1.002 | S102 | 240 minute 30 year Winter I+0% | 240 | 61 | 32.630 | 31.255 | -0.190 |
| 3.000 | S300 | 240 minute 30 year Winter I+0% | 240 | 58 | 32.550 | 31.860 | -0.140 |
| 1.003 | S103 | 240 minute 30 year Winter I+0% | 240 | 61 | 32.600 | 31.086 | -0.189 |
| 4.000 | S400 | 240 minute 30 year Winter I+0% | 240 | 58 | 32.550 | 31.715 | -0.135 |
| 4.001 | S401 | 240 minute 30 year Winter I+0% | 240 | 23 | 32.550 | 30.785 | 0.035 |
| 1.004 | S104 | 240 minute 30 year Winter I+0% | 240 | 23 | 32.600 | 30.784 | 0.254 |
| 1.005 | S105 | 240 minute 30 year Winter I+0% | 240 | 23 | 32.600 | 30.783 | 0.273 |
| 5.000 | S500 | 240 minute 30 year Winter I+0% | 240 | 57 | 32.550 | 31.867 | -0.133 |
| 5.001 | S501 | 240 minute 30 year Winter I+0% | 240 | 61 | 32.665 | 31.158 | -0.132 |
| 6.000 | S600 | 240 minute 30 year Winter I+0% | 240 | 58 | 32.665 | 31.853 | -0.147 |
| 6.001 | S601 | 240 minute 30 year Winter I+0% | 240 | 61 | 32.665 | 31.143 | -0.147 |
| 5.002 | S502 | 240 minute 30 year Winter I+0% | 240 | 60 | 32.665 | 30.865 | -0.185 |
| 5.003 | S503 | 240 minute 30 year Winter I+0% | 240 | 23 | 32.680 | 30.784 | -0.071 |
| 7.000 | S700 | 240 minute 30 year Winter I+0% | 240 | 57 | 32.680 | 31.913 | -0.117 |
| 7.001 | S701 | 240 minute 30 year Winter I+0% | 240 | 58 | 32.635 | 31.836 | -0.109 |
| 5.004 | S504 | 240 minute 30 year Winter I+0% | 240 | 23 | 32.635 | 30.784 | 0.239 |

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## Summary Wizard of 240 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.06 | | 0.003 | 5.372 | 0.6 | 0.9 | OK |
| 1.001 | S101 | 0.000 | 0.04 | | 0.008 | 8.265 | 1.1 | 1.4 | OK |
| 2.000 | S200 | 0.000 | 0.04 | | 0.002 | 5.372 | 0.7 | 0.9 | OK |
| 1.002 | S102 | 0.000 | 0.06 | | 0.009 | 16.529 | 0.7 | 2.9 | OK |
| 3.000 | S300 | 0.000 | 0.01 | | 0.001 | 3.306 | 1.2 | 0.6 | OK |
| 1.003 | S103 | 0.000 | 0.06 | | 0.026 | 30.166 | 1.3 | 5.3 | OK |
| 4.000 | S400 | 0.000 | 0.02 | | 0.002 | 6.198 | 1.5 | 1.1 | OK |
| 4.001 | S401 | 0.000 | 0.07 | | 0.047 | 8.677 | 0.7 | 1.5 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.16 | | 0.799 | 42.902 | 0.5 | 7.4 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.06 | | 1.529 | 44.253 | 0.4 | 7.3 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.03 | | 0.002 | 5.785 | 0.9 | 1.0 | OK |
| 5.001 | S501 | 0.000 | 0.03 | | 0.004 | 5.785 | 0.9 | 1.0 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 0.826 | 0.3 | 0.1 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.000 | 0.826 | 0.3 | 0.1 | OK |
| 5.002 | S502 | 0.000 | 0.07 | | 0.010 | 21.901 | 0.8 | 3.8 | OK |
| 5.003 | S503 | 0.000 | 0.06 | | 0.200 | 24.794 | 1.2 | 4.3 | OK |
| 7.000 | S700 | 0.000 | 0.11 | | 0.004 | 10.744 | 0.7 | 1.9 | OK |
| 7.001 | S701 | 0.000 | 0.16 | | 0.020 | 16.117 | 0.7 | 2.8 | OK |
| 5.004 | S504 | 0.000 | 0.11 | | 1.137 | 40.646 | 0.6 | 6.8 | SURCHARGED |

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## Summary Wizard of 240 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 240 minute 30 year Winter I+0% | 240 | 61 | 32.525 | 31.207 | -0.143 |
| 1.006 | S106 | 240 minute 30 year Winter I+0% | 240 | 23 | 32.500 | 30.783 | -0.863 |
| 9.000 | S900 | 240 minute 30 year Winter I+0% | 240 | 58 | 32.665 | 31.854 | -0.146 |
| 10.000 | S901 | 240 minute 30 year Winter I+0% | 240 | 58 | 32.665 | 31.853 | -0.147 |
| 9.001 | S901 | 240 minute 30 year Winter I+0% | 240 | 60 | 32.665 | 31.037 | -0.183 |
| 9.002 | S902 | 240 minute 30 year Winter I+0% | 240 | 60 | 32.640 | 30.792 | -0.193 |
| 11.000 | S1100 | 240 minute 30 year Winter I+0% | 240 | 58 | 32.680 | 31.575 | -0.125 |
| 9.003 | S903 | 240 minute 30 year Winter I+0% | 240 | 23 | 32.630 | 30.783 | 0.288 |
| 1.007 | S107 | 240 minute 30 year Winter I+0% | 240 | 23 | 32.500 | 30.783 | -0.753 |
| 12.000 | S1200 | 240 minute 30 year Winter I+0% | 240 | 58 | 32.635 | 31.856 | -0.144 |
| 13.000 | S1300 | 240 minute 30 year Winter I+0% | 240 | 57 | 32.635 | 31.881 | -0.119 |
| 13.001 | S1301 | 240 minute 30 year Winter I+0% | 240 | 58 | 32.635 | 31.791 | -0.119 |
| 12.001 | S1201 | 240 minute 30 year Winter I+0% | 240 | 59 | 32.635 | 31.451 | -0.184 |
| 12.002 | S1202 | 240 minute 30 year Winter I+0% | 240 | 60 | 32.680 | 31.096 | -0.164 |
| 12.003 | S1203 | 240 minute 30 year Winter I+0% | 240 | 60 | 32.660 | 31.000 | -0.170 |
| 12.004 | S1204 | 240 minute 30 year Winter I+0% | 240 | 60 | 32.660 | 30.858 | -0.177 |
| 14.000 | S1400 | 240 minute 30 year Winter I+0% | 240 | 58 | 32.650 | 31.655 | -0.120 |
| 14.001 | S1401 | 240 minute 30 year Winter I+0% | 240 | 61 | 32.680 | 31.307 | -0.188 |
| 15.000 | S1500 | 240 minute 30 year Winter I+0% | 240 | 58 | 32.680 | 31.671 | -0.129 |
| 15.001 | S1501 | 240 minute 30 year Winter I+0% | 240 | 57 | 32.600 | 31.626 | -0.129 |
| 14.002 | S1402 | 240 minute 30 year Winter I+0% | 240 | 60 | 32.600 | 31.049 | -0.191 |
| 12.005 | 1205 | 240 minute 30 year Winter I+0% | 240 | 25 | 32.600 | 30.785 | 0.080 |
| 1.008 | S108 | 240 minute 30 year Winter I+0% | 240 | 23 | 32.550 | 30.783 | 0.428 |
| 16.000 | S1600 | 240 minute 30 year Winter I+0% | 240 | 59 | 32.545 | 31.452 | -0.198 |
| 16.001 | S1601 | 240 minute 30 year Winter I+0% | 240 | 23 | 32.545 | 30.781 | 0.096 |
| 1.009 | S109 | 240 minute 30 year Winter I+0% | 240 | 23 | 32.500 | 30.781 | 0.751 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.002 | 2.066 | 0.8 | 0.4 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.277 | 92.621 | 0.1 | 8.8 | OK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.000 | 1.239 | 0.5 | 0.2 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.826 | 0.3 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.08 | | 0.011 | 21.488 | 0.7 | 3.8 | OK |
| 9.002 | S902 | 0.000 | 0.05 | | 0.027 | 28.513 | 1.4 | 5.0 | OK |
| 11.000 | S1100 | 0.000 | 0.07 | | 0.003 | 6.199 | 0.6 | 1.1 | OK |
| 9.003 | S903 | 0.000 | 0.07 | | 1.033 | 36.482 | 0.7 | 6.1 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 91.488 | 109.870 | 0.1 | 6.4 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 1.653 | 0.6 | 0.3 | OK |
| 13.000 | S1300 | 0.000 | 0.10 | | 0.004 | 9.505 | 0.6 | 1.7 | OK |
| 13.001 | S1301 | 0.000 | 0.09 | | 0.015 | 14.877 | 1.0 | 2.6 | OK |
| 12.001 | S1201 | 0.000 | 0.08 | | 0.011 | 28.927 | 1.0 | 5.1 | OK |
| 12.002 | S1202 | 0.000 | 0.16 | | 0.036 | 39.671 | 0.8 | 7.0 | OK |
| 12.003 | S1203 | 0.000 | 0.13 | | 0.046 | 39.671 | 0.9 | 7.0 | OK |
| 12.004 | S1204 | 0.000 | 0.10 | | 0.027 | 47.936 | 1.3 | 8.4 | OK |
| 14.000 | S1400 | 0.000 | 0.09 | | 0.004 | 9.918 | 0.7 | 1.7 | OK |

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## Summary Wizard of 240 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.07 | | 0.010 | 17.770 | 0.7 | 3.1 | OK |
| 15.000 | S1500 | 0.000 | 0.05 | | 0.003 | 3.719 | 0.4 | 0.7 | OK |
| 15.001 | S1501 | 0.000 | 0.05 | | 0.007 | 9.918 | 1.2 | 1.7 | OK |
| 14.002 | S1402 | 0.000 | 0.06 | | 0.029 | 33.059 | 1.5 | 5.8 | OK |
| 12.005 | 1205 | 0.000 | 0.19 | | 0.721 | 90.086 | 1.6 | 15.8 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.08 | | 94.078 | 151.725 | 0.2 | 7.1 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.03 | | 0.006 | 14.050 | 0.9 | 2.5 | OK |
| 16.001 | S1601 | 0.000 | 0.03 | | 0.477 | 15.703 | 1.1 | 2.8 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.44 | | 3.852 | 164.634 | 1.0 | 7.3 | SURCHARGED |

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## Summary Wizard of 360 minute 30 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 360 minute 30 year Winter I+0% | 360 | 68 | 32.680 | 31.790 | -0.130 |
| 1.001 | S101 | 360 minute 30 year Winter I+0% | 360 | 68 | 32.680 | 31.717 | -0.133 |
| 2.000 | S200 | 360 minute 30 year Winter I+0% | 360 | 69 | 32.600 | 31.497 | -0.133 |
| 1.002 | S102 | 360 minute 30 year Winter I+0% | 360 | 70 | 32.630 | 31.250 | -0.195 |
| 3.000 | S300 | 360 minute 30 year Winter I+0% | 360 | 68 | 32.550 | 31.857 | -0.143 |
| 1.003 | S103 | 360 minute 30 year Winter I+0% | 360 | 70 | 32.600 | 31.080 | -0.195 |
| 4.000 | S400 | 360 minute 30 year Winter I+0% | 360 | 68 | 32.550 | 31.711 | -0.139 |
| 4.001 | S401 | 360 minute 30 year Winter I+0% | 360 | 27 | 32.550 | 30.776 | 0.026 |
| 1.004 | S104 | 360 minute 30 year Winter I+0% | 360 | 27 | 32.600 | 30.775 | 0.245 |
| 1.005 | S105 | 360 minute 30 year Winter I+0% | 360 | 27 | 32.600 | 30.775 | 0.265 |
| 5.000 | S500 | 360 minute 30 year Winter I+0% | 360 | 68 | 32.550 | 31.865 | -0.135 |
| 5.001 | S501 | 360 minute 30 year Winter I+0% | 360 | 70 | 32.665 | 31.156 | -0.134 |
| 6.000 | S600 | 360 minute 30 year Winter I+0% | 360 | 68 | 32.665 | 31.852 | -0.148 |
| 6.001 | S601 | 360 minute 30 year Winter I+0% | 360 | 70 | 32.665 | 31.142 | -0.148 |
| 5.002 | S502 | 360 minute 30 year Winter I+0% | 360 | 70 | 32.665 | 30.859 | -0.191 |
| 5.003 | S503 | 360 minute 30 year Winter I+0% | 360 | 27 | 32.680 | 30.776 | -0.079 |
| 7.000 | S700 | 360 minute 30 year Winter I+0% | 360 | 68 | 32.680 | 31.909 | -0.121 |
| 7.001 | S701 | 360 minute 30 year Winter I+0% | 360 | 68 | 32.635 | 31.830 | -0.115 |
| 5.004 | S504 | 360 minute 30 year Winter I+0% | 360 | 27 | 32.635 | 30.775 | 0.230 |

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## Summary Wizard of 360 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.04 | | 0.002 | 5.947 | 0.5 | 0.7 | OK |
| 1.001 | S101 | 0.000 | 0.03 | | 0.006 | 9.148 | 1.0 | 1.1 | OK |
| 2.000 | S200 | 0.000 | 0.03 | | 0.002 | 5.947 | 0.6 | 0.7 | OK |
| 1.002 | S102 | 0.000 | 0.04 | | 0.007 | 18.297 | 0.7 | 2.1 | OK |
| 3.000 | S300 | 0.000 | 0.01 | | 0.000 | 3.659 | 1.0 | 0.4 | OK |
| 1.003 | S103 | 0.000 | 0.04 | | 0.021 | 33.391 | 1.2 | 3.9 | OK |
| 4.000 | S400 | 0.000 | 0.02 | | 0.001 | 6.861 | 1.5 | 0.8 | OK |
| 4.001 | S401 | 0.000 | 0.05 | | 0.044 | 9.605 | 0.7 | 1.1 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.12 | | 0.787 | 47.571 | 0.4 | 5.5 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.05 | | 1.515 | 49.580 | 0.4 | 5.5 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.02 | | 0.002 | 6.404 | 0.9 | 0.7 | OK |
| 5.001 | S501 | 0.000 | 0.02 | | 0.003 | 6.404 | 0.9 | 0.7 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 0.914 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.000 | 0.914 | 0.2 | 0.1 | OK |
| 5.002 | S502 | 0.000 | 0.05 | | 0.008 | 24.243 | 0.8 | 2.8 | OK |
| 5.003 | S503 | 0.000 | 0.04 | | 0.180 | 27.444 | 1.1 | 3.2 | OK |
| 7.000 | S700 | 0.000 | 0.08 | | 0.004 | 11.893 | 0.6 | 1.4 | OK |
| 7.001 | S701 | 0.000 | 0.12 | | 0.017 | 17.840 | 0.7 | 2.1 | OK |
| 5.004 | S504 | 0.000 | 0.08 | | 1.121 | 45.284 | 0.5 | 5.1 | SURCHARGED |

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## Summary Wizard of 360 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 360 minute 30 year Winter I+0% | 360 | 70 | 32.525 | 31.205 | -0.145 |
| 1.006 | S106 | 360 minute 30 year Winter I+0% | 360 | 27 | 32.500 | 30.775 | -0.871 |
| 9.000 | S900 | 360 minute 30 year Winter I+0% | 360 | 68 | 32.665 | 31.853 | -0.147 |
| 10.000 | S901 | 360 minute 30 year Winter I+0% | 360 | 68 | 32.665 | 31.852 | -0.148 |
| 9.001 | S901 | 360 minute 30 year Winter I+0% | 360 | 70 | 32.665 | 31.030 | -0.190 |
| 9.002 | S902 | 360 minute 30 year Winter I+0% | 360 | 70 | 32.640 | 30.788 | -0.197 |
| 11.000 | S1100 | 360 minute 30 year Winter I+0% | 360 | 68 | 32.680 | 31.571 | -0.129 |
| 9.003 | S903 | 360 minute 30 year Winter I+0% | 360 | 27 | 32.630 | 30.775 | 0.280 |
| 1.007 | S107 | 360 minute 30 year Winter I+0% | 360 | 27 | 32.500 | 30.774 | -0.762 |
| 12.000 | S1200 | 360 minute 30 year Winter I+0% | 360 | 68 | 32.635 | 31.855 | -0.145 |
| 13.000 | S1300 | 360 minute 30 year Winter I+0% | 360 | 68 | 32.635 | 31.876 | -0.124 |
| 13.001 | S1301 | 360 minute 30 year Winter I+0% | 360 | 68 | 32.635 | 31.786 | -0.124 |
| 12.001 | S1201 | 360 minute 30 year Winter I+0% | 360 | 69 | 32.635 | 31.444 | -0.191 |
| 12.002 | S1202 | 360 minute 30 year Winter I+0% | 360 | 70 | 32.680 | 31.087 | -0.173 |
| 12.003 | S1203 | 360 minute 30 year Winter I+0% | 360 | 70 | 32.660 | 30.992 | -0.178 |
| 12.004 | S1204 | 360 minute 30 year Winter I+0% | 360 | 70 | 32.660 | 30.851 | -0.184 |
| 14.000 | S1400 | 360 minute 30 year Winter I+0% | 360 | 68 | 32.650 | 31.650 | -0.125 |
| 14.001 | S1401 | 360 minute 30 year Winter I+0% | 360 | 70 | 32.680 | 31.301 | -0.194 |
| 15.000 | S1500 | 360 minute 30 year Winter I+0% | 360 | 68 | 32.680 | 31.668 | -0.132 |
| 15.001 | S1501 | 360 minute 30 year Winter I+0% | 360 | 68 | 32.600 | 31.623 | -0.132 |
| 14.002 | S1402 | 360 minute 30 year Winter I+0% | 360 | 70 | 32.600 | 31.044 | -0.196 |
| 12.005 | 1205 | 360 minute 30 year Winter I+0% | 360 | 29 | 32.600 | 30.777 | 0.072 |
| 1.008 | S108 | 360 minute 30 year Winter I+0% | 360 | 27 | 32.550 | 30.774 | 0.419 |
| 16.000 | S1600 | 360 minute 30 year Winter I+0% | 360 | 69 | 32.545 | 31.449 | -0.201 |
| 16.001 | S1601 | 360 minute 30 year Winter I+0% | 360 | 27 | 32.545 | 30.773 | 0.088 |
| 1.009 | S109 | 360 minute 30 year Winter I+0% | 360 | 27 | 32.500 | 30.773 | 0.743 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.000 | 2.287 | 0.6 | 0.3 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.274 | 116.615 | 0.1 | 7.0 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.372 | 0.4 | 0.2 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.914 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.06 | | 0.009 | 23.785 | 0.7 | 2.8 | OK |
| 9.002 | S902 | 0.000 | 0.04 | | 0.023 | 31.561 | 1.3 | 3.7 | OK |
| 11.000 | S1100 | 0.000 | 0.05 | | 0.003 | 6.861 | 0.5 | 0.8 | OK |
| 9.003 | S903 | 0.000 | 0.05 | | 1.017 | 40.682 | 0.6 | 4.5 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 90.513 | 148.962 | 0.1 | 5.6 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 1.829 | 0.5 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.07 | | 0.003 | 10.521 | 0.6 | 1.2 | OK |
| 13.001 | S1301 | 0.000 | 0.07 | | 0.012 | 16.467 | 1.0 | 1.9 | OK |
| 12.001 | S1201 | 0.000 | 0.06 | | 0.009 | 32.020 | 1.0 | 3.7 | OK |
| 12.002 | S1202 | 0.000 | 0.12 | | 0.030 | 43.913 | 0.7 | 5.1 | OK |
| 12.003 | S1203 | 0.000 | 0.10 | | 0.039 | 43.913 | 0.8 | 5.1 | OK |
| 12.004 | S1204 | 0.000 | 0.08 | | 0.023 | 53.061 | 1.2 | 6.2 | OK |
| 14.000 | S1400 | 0.000 | 0.07 | | 0.003 | 10.978 | 0.6 | 1.3 | OK |

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## Summary Wizard of 360 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.05 | | 0.008 | 19.669 | 0.7 | 2.3 | OK |
| 15.000 | S1500 | 0.000 | 0.04 | | 0.002 | 4.117 | 0.4 | 0.5 | OK |
| 15.001 | S1501 | 0.000 | 0.04 | | 0.006 | 10.978 | 1.1 | 1.3 | OK |
| 14.002 | S1402 | 0.000 | 0.04 | | 0.024 | 36.594 | 1.4 | 4.3 | OK |
| 12.005 | 1205 | 0.000 | 0.14 | | 0.696 | 99.719 | 1.5 | 11.7 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.07 | | 93.155 | 220.131 | 0.2 | 7.0 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.03 | | 0.005 | 15.552 | 0.9 | 1.8 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 0.459 | 17.382 | 1.1 | 2.0 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.43 | | 3.831 | 235.694 | 1.0 | 7.2 | SURCHARGED |

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## Summary Wizard of 480 minute 30 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.680 | 31.788 | -0.132 |
| 1.001 | S101 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.680 | 31.716 | -0.134 |
| 2.000 | S200 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.600 | 31.496 | -0.134 |
| 1.002 | S102 | 480 minute 30 year Winter I+0% | 480 | 78 | 32.630 | 31.247 | -0.198 |
| 3.000 | S300 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.550 | 31.856 | -0.144 |
| 1.003 | S103 | 480 minute 30 year Winter I+0% | 480 | 78 | 32.600 | 31.078 | -0.197 |
| 4.000 | S400 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.550 | 31.709 | -0.141 |
| 4.001 | S401 | 480 minute 30 year Winter I+0% | 480 | 32 | 32.550 | 30.761 | 0.011 |
| 1.004 | S104 | 480 minute 30 year Winter I+0% | 480 | 32 | 32.600 | 30.760 | 0.230 |
| 1.005 | S105 | 480 minute 30 year Winter I+0% | 480 | 32 | 32.600 | 30.760 | 0.250 |
| 5.000 | S500 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.550 | 31.863 | -0.137 |
| 5.001 | S501 | 480 minute 30 year Winter I+0% | 480 | 78 | 32.665 | 31.154 | -0.136 |
| 6.000 | S600 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.665 | 31.852 | -0.148 |
| 6.001 | S601 | 480 minute 30 year Winter I+0% | 480 | 78 | 32.665 | 31.142 | -0.148 |
| 5.002 | S502 | 480 minute 30 year Winter I+0% | 480 | 78 | 32.665 | 30.855 | -0.195 |
| 5.003 | S503 | 480 minute 30 year Winter I+0% | 480 | 32 | 32.680 | 30.760 | -0.095 |
| 7.000 | S700 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.680 | 31.905 | -0.125 |
| 7.001 | S701 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.635 | 31.826 | -0.119 |
| 5.004 | S504 | 480 minute 30 year Winter I+0% | 480 | 32 | 32.635 | 30.760 | 0.215 |

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## Summary Wizard of 480 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.03 | | 0.002 | 6.391 | 0.5 | 0.6 | OK |
| 1.001 | S101 | 0.000 | 0.02 | | 0.006 | 9.833 | 1.0 | 0.9 | OK |
| 2.000 | S200 | 0.000 | 0.02 | | 0.002 | 6.391 | 0.6 | 0.6 | OK |
| 1.002 | S102 | 0.000 | 0.03 | | 0.006 | 19.665 | 0.7 | 1.7 | OK |
| 3.000 | S300 | 0.000 | 0.01 | | 0.000 | 3.932 | 0.8 | 0.3 | OK |
| 1.003 | S103 | 0.000 | 0.04 | | 0.019 | 35.888 | 1.1 | 3.2 | OK |
| 4.000 | S400 | 0.000 | 0.01 | | 0.001 | 7.374 | 1.4 | 0.6 | OK |
| 4.001 | S401 | 0.000 | 0.04 | | 0.039 | 10.324 | 0.7 | 0.9 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.09 | | 0.765 | 51.128 | 0.4 | 4.4 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.04 | | 1.488 | 53.583 | 0.4 | 4.4 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.02 | | 0.001 | 6.883 | 0.9 | 0.6 | OK |
| 5.001 | S501 | 0.000 | 0.02 | | 0.003 | 6.882 | 0.9 | 0.6 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 0.981 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.000 | 0.981 | 0.2 | 0.1 | OK |
| 5.002 | S502 | 0.000 | 0.04 | | 0.007 | 26.054 | 0.7 | 2.3 | OK |
| 5.003 | S503 | 0.000 | 0.03 | | 0.144 | 29.495 | 1.0 | 2.6 | OK |
| 7.000 | S700 | 0.000 | 0.07 | | 0.003 | 12.783 | 0.6 | 1.1 | OK |
| 7.001 | S701 | 0.000 | 0.10 | | 0.015 | 19.174 | 0.6 | 1.7 | OK |
| 5.004 | S504 | 0.000 | 0.07 | | 1.092 | 48.669 | 0.5 | 4.1 | SURCHARGED |

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## Summary Wizard of 480 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 480 minute 30 year Winter I+0% | 480 | 78 | 32.525 | 31.204 | -0.146 |
| 1.006 | S106 | 480 minute 30 year Winter I+0% | 480 | 32 | 32.500 | 30.759 | -0.887 |
| 9.000 | S900 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.665 | 31.853 | -0.147 |
| 10.000 | S901 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.665 | 31.852 | -0.148 |
| 9.001 | S901 | 480 minute 30 year Winter I+0% | 480 | 78 | 32.665 | 31.026 | -0.194 |
| 9.002 | S902 | 480 minute 30 year Winter I+0% | 480 | 78 | 32.640 | 30.786 | -0.199 |
| 11.000 | S1100 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.680 | 31.569 | -0.131 |
| 9.003 | S903 | 480 minute 30 year Winter I+0% | 480 | 32 | 32.630 | 30.760 | 0.265 |
| 1.007 | S107 | 480 minute 30 year Winter I+0% | 480 | 32 | 32.500 | 30.759 | -0.777 |
| 12.000 | S1200 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.635 | 31.854 | -0.146 |
| 13.000 | S1300 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.635 | 31.873 | -0.127 |
| 13.001 | S1301 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.635 | 31.783 | -0.127 |
| 12.001 | S1201 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.635 | 31.441 | -0.194 |
| 12.002 | S1202 | 480 minute 30 year Winter I+0% | 480 | 78 | 32.680 | 31.082 | -0.178 |
| 12.003 | S1203 | 480 minute 30 year Winter I+0% | 480 | 78 | 32.660 | 30.987 | -0.183 |
| 12.004 | S1204 | 480 minute 30 year Winter I+0% | 480 | 78 | 32.660 | 30.846 | -0.189 |
| 14.000 | S1400 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.650 | 31.648 | -0.127 |
| 14.001 | S1401 | 480 minute 30 year Winter I+0% | 480 | 78 | 32.680 | 31.298 | -0.197 |
| 15.000 | S1500 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.680 | 31.667 | -0.133 |
| 15.001 | S1501 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.600 | 31.622 | -0.133 |
| 14.002 | S1402 | 480 minute 30 year Winter I+0% | 480 | 78 | 32.600 | 31.042 | -0.198 |
| 12.005 | 1205 | 480 minute 30 year Winter I+0% | 480 | 32 | 32.600 | 30.761 | 0.056 |
| 1.008 | S108 | 480 minute 30 year Winter I+0% | 480 | 32 | 32.550 | 30.759 | 0.404 |
| 16.000 | S1600 | 480 minute 30 year Winter I+0% | 480 | 77 | 32.545 | 31.447 | -0.203 |
| 16.001 | S1601 | 480 minute 30 year Winter I+0% | 480 | 32 | 32.545 | 30.758 | 0.073 |
| 1.009 | S109 | 480 minute 30 year Winter I+0% | 480 | 32 | 32.500 | 30.758 | 0.728 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.000 | 2.457 | 0.5 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.269 | 135.342 | 0.1 | 6.0 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.474 | 0.3 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 0.981 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.05 | | 0.008 | 25.563 | 0.7 | 2.2 | OK |
| 9.002 | S902 | 0.000 | 0.03 | | 0.020 | 33.920 | 1.3 | 3.0 | OK |
| 11.000 | S1100 | 0.000 | 0.04 | | 0.002 | 7.375 | 0.5 | 0.6 | OK |
| 9.003 | S903 | 0.000 | 0.04 | | 0.988 | 43.753 | 0.6 | 3.7 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 88.756 | 180.699 | 0.0 | 5.2 | OK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 1.966 | 0.4 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.06 | | 0.003 | 11.308 | 0.6 | 1.0 | OK |
| 13.001 | S1301 | 0.000 | 0.06 | | 0.010 | 17.699 | 0.9 | 1.6 | OK |
| 12.001 | S1201 | 0.000 | 0.05 | | 0.008 | 34.414 | 0.9 | 3.0 | OK |
| 12.002 | S1202 | 0.000 | 0.10 | | 0.027 | 47.197 | 0.7 | 4.1 | OK |
| 12.003 | S1203 | 0.000 | 0.08 | | 0.035 | 47.197 | 0.8 | 4.1 | OK |
| 12.004 | S1204 | 0.000 | 0.06 | | 0.019 | 57.029 | 1.2 | 5.0 | OK |
| 14.000 | S1400 | 0.000 | 0.05 | | 0.003 | 11.799 | 0.6 | 1.0 | OK |

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## Summary Wizard of 480 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.04 | | 0.007 | 21.141 | 0.6 | 1.9 | OK |
| 15.000 | S1500 | 0.000 | 0.03 | | 0.002 | 4.425 | 0.4 | 0.4 | OK |
| 15.001 | S1501 | 0.000 | 0.03 | | 0.005 | 11.799 | 1.0 | 1.0 | OK |
| 14.002 | S1402 | 0.000 | 0.03 | | 0.021 | 39.331 | 1.3 | 3.5 | OK |
| 12.005 | 1205 | 0.000 | 0.11 | | 0.651 | 107.176 | 1.4 | 9.4 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.07 | | 91.492 | 276.868 | 0.2 | 6.8 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.005 | 16.716 | 0.9 | 1.5 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 0.426 | 18.682 | 1.1 | 1.6 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.43 | | 3.792 | 294.732 | 1.0 | 7.2 | SURCHARGED |

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## Summary Wizard of 600 minute 30 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.680 | 31.787 | -0.133 |
| 1.001 | S101 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.680 | 31.715 | -0.135 |
| 2.000 | S200 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.600 | 31.495 | -0.135 |
| 1.002 | S102 | 600 minute 30 year Winter I+0% | 600 | 85 | 32.630 | 31.245 | -0.200 |
| 3.000 | S300 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.550 | 31.855 | -0.145 |
| 1.003 | S103 | 600 minute 30 year Winter I+0% | 600 | 85 | 32.600 | 31.076 | -0.199 |
| 4.000 | S400 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.550 | 31.708 | -0.142 |
| 4.001 | S401 | 600 minute 30 year Winter I+0% | 600 | 35 | 32.550 | 30.738 | -0.012 |
| 1.004 | S104 | 600 minute 30 year Winter I+0% | 600 | 35 | 32.600 | 30.737 | 0.207 |
| 1.005 | S105 | 600 minute 30 year Winter I+0% | 600 | 35 | 32.600 | 30.737 | 0.227 |
| 5.000 | S500 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.550 | 31.861 | -0.139 |
| 5.001 | S501 | 600 minute 30 year Winter I+0% | 600 | 85 | 32.665 | 31.152 | -0.138 |
| 6.000 | S600 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.665 | 31.851 | -0.149 |
| 6.001 | S601 | 600 minute 30 year Winter I+0% | 600 | 85 | 32.665 | 31.142 | -0.148 |
| 5.002 | S502 | 600 minute 30 year Winter I+0% | 600 | 85 | 32.665 | 30.853 | -0.197 |
| 5.003 | S503 | 600 minute 30 year Winter I+0% | 600 | 35 | 32.680 | 30.738 | -0.117 |
| 7.000 | S700 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.680 | 31.903 | -0.127 |
| 7.001 | S701 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.635 | 31.824 | -0.121 |
| 5.004 | S504 | 600 minute 30 year Winter I+0% | 600 | 35 | 32.635 | 30.737 | 0.192 |

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## Summary Wizard of 600 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.03 | | 0.002 | 6.755 | 0.5 | 0.5 | OK |
| 1.001 | S101 | 0.000 | 0.02 | | 0.005 | 10.392 | 1.0 | 0.7 | OK |
| 2.000 | S200 | 0.000 | 0.02 | | 0.002 | 6.755 | 0.7 | 0.5 | OK |
| 1.002 | S102 | 0.000 | 0.03 | | 0.006 | 20.783 | 0.7 | 1.5 | OK |
| 3.000 | S300 | 0.000 | 0.01 | | 0.000 | 4.156 | 0.6 | 0.3 | OK |
| 1.003 | S103 | 0.000 | 0.03 | | 0.017 | 37.929 | 1.1 | 2.7 | OK |
| 4.000 | S400 | 0.000 | 0.01 | | 0.000 | 7.793 | 1.2 | 0.5 | OK |
| 4.001 | S401 | 0.000 | 0.04 | | 0.032 | 10.910 | 0.6 | 0.8 | OK |
| 1.004 | S104 | 0.000 | 0.08 | | 0.732 | 54.034 | 0.4 | 3.7 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.03 | | 1.447 | 56.632 | 0.4 | 3.7 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.02 | | 0.001 | 7.274 | 0.9 | 0.5 | OK |
| 5.001 | S501 | 0.000 | 0.02 | | 0.002 | 7.274 | 0.9 | 0.5 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 1.036 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.000 | 1.035 | 0.2 | 0.1 | OK |
| 5.002 | S502 | 0.000 | 0.04 | | 0.007 | 27.534 | 0.7 | 1.9 | OK |
| 5.003 | S503 | 0.000 | 0.03 | | 0.089 | 31.171 | 1.0 | 2.2 | OK |
| 7.000 | S700 | 0.000 | 0.06 | | 0.003 | 13.510 | 0.6 | 0.9 | OK |
| 7.001 | S701 | 0.000 | 0.08 | | 0.013 | 20.264 | 0.6 | 1.4 | OK |
| 5.004 | S504 | 0.000 | 0.06 | | 1.043 | 51.436 | 0.5 | 3.5 | SURCHARGED |

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## Summary Wizard of 600 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 600 minute 30 year Winter I+0% | 600 | 85 | 32.525 | 31.203 | -0.147 |
| 1.006 | S106 | 600 minute 30 year Winter I+0% | 600 | 35 | 32.500 | 30.736 | -0.910 |
| 9.000 | S900 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 600 minute 30 year Winter I+0% | 600 | 85 | 32.665 | 31.024 | -0.196 |
| 9.002 | S902 | 600 minute 30 year Winter I+0% | 600 | 85 | 32.640 | 30.784 | -0.201 |
| 11.000 | S1100 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.680 | 31.568 | -0.132 |
| 9.003 | S903 | 600 minute 30 year Winter I+0% | 600 | 35 | 32.630 | 30.737 | 0.242 |
| 1.007 | S107 | 600 minute 30 year Winter I+0% | 600 | 35 | 32.500 | 30.736 | -0.800 |
| 12.000 | S1200 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.635 | 31.853 | -0.147 |
| 13.000 | S1300 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.635 | 31.871 | -0.129 |
| 13.001 | S1301 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.635 | 31.781 | -0.129 |
| 12.001 | S1201 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.635 | 31.438 | -0.197 |
| 12.002 | S1202 | 600 minute 30 year Winter I+0% | 600 | 85 | 32.680 | 31.078 | -0.182 |
| 12.003 | S1203 | 600 minute 30 year Winter I+0% | 600 | 85 | 32.660 | 30.983 | -0.187 |
| 12.004 | S1204 | 600 minute 30 year Winter I+0% | 600 | 85 | 32.660 | 30.843 | -0.192 |
| 14.000 | S1400 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.650 | 31.646 | -0.129 |
| 14.001 | S1401 | 600 minute 30 year Winter I+0% | 600 | 85 | 32.680 | 31.296 | -0.199 |
| 15.000 | S1500 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.680 | 31.666 | -0.134 |
| 15.001 | S1501 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.600 | 31.621 | -0.134 |
| 14.002 | S1402 | 600 minute 30 year Winter I+0% | 600 | 85 | 32.600 | 31.040 | -0.200 |
| 12.005 | 1205 | 600 minute 30 year Winter I+0% | 600 | 35 | 32.600 | 30.738 | 0.033 |
| 1.008 | S108 | 600 minute 30 year Winter I+0% | 600 | 35 | 32.550 | 30.736 | 0.381 |
| 16.000 | S1600 | 600 minute 30 year Winter I+0% | 600 | 84 | 32.545 | 31.443 | -0.207 |
| 16.001 | S1601 | 600 minute 30 year Winter I+0% | 600 | 35 | 32.545 | 30.735 | 0.050 |
| 1.009 | S109 | 600 minute 30 year Winter I+0% | 600 | 35 | 32.500 | 30.735 | 0.705 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 2.597 | 0.4 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.263 | 146.134 | 0.1 | 5.3 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.558 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 1.036 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.04 | | 0.007 | 27.015 | 0.6 | 1.9 | OK |
| 9.002 | S902 | 0.000 | 0.03 | | 0.019 | 35.848 | 1.3 | 2.5 | OK |
| 11.000 | S1100 | 0.000 | 0.03 | | 0.002 | 7.794 | 0.5 | 0.5 | OK |
| 9.003 | S903 | 0.000 | 0.04 | | 0.943 | 46.240 | 0.6 | 3.1 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 86.104 | 199.803 | 0.0 | 4.9 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 2.078 | 0.3 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.05 | | 0.003 | 11.951 | 0.5 | 0.8 | OK |
| 13.001 | S1301 | 0.000 | 0.05 | | 0.009 | 18.705 | 0.9 | 1.3 | OK |
| 12.001 | S1201 | 0.000 | 0.04 | | 0.007 | 36.371 | 0.9 | 2.6 | OK |
| 12.002 | S1202 | 0.000 | 0.08 | | 0.024 | 49.880 | 0.7 | 3.5 | OK |
| 12.003 | S1203 | 0.000 | 0.07 | | 0.031 | 49.880 | 0.8 | 3.5 | OK |
| 12.004 | S1204 | 0.000 | 0.05 | | 0.017 | 60.272 | 1.2 | 4.2 | OK |
| 14.000 | S1400 | 0.000 | 0.05 | | 0.002 | 12.470 | 0.6 | 0.9 | OK |

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## Summary Wizard of 600 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.03 | | 0.006 | 22.343 | 0.6 | 1.6 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.002 | 4.676 | 0.4 | 0.3 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.005 | 12.470 | 1.0 | 0.9 | OK |
| 14.002 | S1402 | 0.000 | 0.03 | | 0.020 | 41.567 | 1.3 | 2.9 | OK |
| 12.005 | 1205 | 0.000 | 0.10 | | 0.583 | 113.270 | 1.3 | 8.0 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.07 | | 88.983 | 315.496 | 0.2 | 6.7 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.004 | 17.666 | 0.9 | 1.2 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 0.376 | 19.744 | 1.1 | 1.4 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.43 | | 3.734 | 335.126 | 1.0 | 7.1 | SURCHARGED |

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## Summary Wizard of 720 minute 30 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.680 | 31.786 | -0.134 |
| 1.001 | S101 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.680 | 31.713 | -0.137 |
| 2.000 | S200 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.600 | 31.493 | -0.137 |
| 1.002 | S102 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.630 | 31.244 | -0.201 |
| 3.000 | S300 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.550 | 31.854 | -0.146 |
| 1.003 | S103 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.600 | 31.074 | -0.201 |
| 4.000 | S400 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.550 | 31.707 | -0.143 |
| 4.001 | S401 | 720 minute 30 year Winter I+0% | 720 | 38 | 32.550 | 30.711 | -0.039 |
| 1.004 | S104 | 720 minute 30 year Winter I+0% | 720 | 38 | 32.600 | 30.710 | 0.180 |
| 1.005 | S105 | 720 minute 30 year Winter I+0% | 720 | 38 | 32.600 | 30.710 | 0.200 |
| 5.000 | S500 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.550 | 31.860 | -0.140 |
| 5.001 | S501 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.665 | 31.150 | -0.140 |
| 6.000 | S600 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.665 | 31.851 | -0.149 |
| 6.001 | S601 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.665 | 31.141 | -0.149 |
| 5.002 | S502 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.665 | 30.851 | -0.199 |
| 5.003 | S503 | 720 minute 30 year Winter I+0% | 720 | 40 | 32.680 | 30.711 | -0.144 |
| 7.000 | S700 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.680 | 31.901 | -0.129 |
| 7.001 | S701 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.635 | 31.821 | -0.124 |
| 5.004 | S504 | 720 minute 30 year Winter I+0% | 720 | 38 | 32.635 | 30.710 | 0.165 |

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## Summary Wizard of 720 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.02 | | 0.002 | 7.064 | 0.5 | 0.4 | OK |
| 1.001 | S101 | 0.000 | 0.02 | | 0.004 | 10.868 | 1.0 | 0.6 | OK |
| 2.000 | S200 | 0.000 | 0.02 | | 0.001 | 7.064 | 0.6 | 0.4 | OK |
| 1.002 | S102 | 0.000 | 0.03 | | 0.006 | 21.736 | 0.6 | 1.3 | OK |
| 3.000 | S300 | 0.000 | 0.01 | | 0.000 | 4.346 | 0.6 | 0.3 | OK |
| 1.003 | S103 | 0.000 | 0.03 | | 0.016 | 39.667 | 1.1 | 2.3 | OK |
| 4.000 | S400 | 0.000 | 0.01 | | 0.000 | 8.149 | 1.1 | 0.5 | OK |
| 4.001 | S401 | 0.000 | 0.03 | | 0.023 | 11.410 | 0.6 | 0.7 | OK |
| 1.004 | S104 | 0.000 | 0.07 | | 0.681 | 56.510 | 0.4 | 3.3 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.03 | | 1.400 | 59.227 | 0.4 | 3.2 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.01 | | 0.001 | 7.607 | 0.9 | 0.4 | OK |
| 5.001 | S501 | 0.000 | 0.01 | | 0.002 | 7.607 | 0.9 | 0.4 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 1.083 | 0.1 | 0.1 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.000 | 1.082 | 0.1 | 0.1 | OK |
| 5.002 | S502 | 0.000 | 0.03 | | 0.006 | 28.795 | 0.7 | 1.7 | OK |
| 5.003 | S503 | 0.000 | 0.02 | | 0.063 | 32.599 | 1.0 | 1.9 | OK |
| 7.000 | S700 | 0.000 | 0.05 | | 0.003 | 14.129 | 0.5 | 0.8 | OK |
| 7.001 | S701 | 0.000 | 0.07 | | 0.012 | 21.193 | 0.6 | 1.2 | OK |
| 5.004 | S504 | 0.000 | 0.05 | | 0.983 | 53.792 | 0.5 | 3.0 | SURCHARGED |

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## Summary Wizard of 720 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.525 | 31.203 | -0.147 |
| 1.006 | S106 | 720 minute 30 year Winter I+0% | 720 | 38 | 32.500 | 30.710 | -0.936 |
| 9.000 | S900 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.665 | 31.022 | -0.198 |
| 9.002 | S902 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.640 | 30.783 | -0.202 |
| 11.000 | S1100 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.680 | 31.567 | -0.133 |
| 9.003 | S903 | 720 minute 30 year Winter I+0% | 720 | 38 | 32.630 | 30.710 | 0.215 |
| 1.007 | S107 | 720 minute 30 year Winter I+0% | 720 | 38 | 32.500 | 30.710 | -0.826 |
| 12.000 | S1200 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.635 | 31.853 | -0.147 |
| 13.000 | S1300 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.635 | 31.870 | -0.130 |
| 13.001 | S1301 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.635 | 31.779 | -0.131 |
| 12.001 | S1201 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.635 | 31.437 | -0.198 |
| 12.002 | S1202 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.680 | 31.075 | -0.185 |
| 12.003 | S1203 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.660 | 30.980 | -0.190 |
| 12.004 | S1204 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.660 | 30.841 | -0.194 |
| 14.000 | S1400 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.650 | 31.644 | -0.131 |
| 14.001 | S1401 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.680 | 31.295 | -0.200 |
| 15.000 | S1500 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.680 | 31.665 | -0.135 |
| 15.001 | S1501 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.600 | 31.620 | -0.135 |
| 14.002 | S1402 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.600 | 31.039 | -0.201 |
| 12.005 | 1205 | 720 minute 30 year Winter I+0% | 720 | 39 | 32.600 | 30.712 | 0.007 |
| 1.008 | S108 | 720 minute 30 year Winter I+0% | 720 | 38 | 32.550 | 30.710 | 0.355 |
| 16.000 | S1600 | 720 minute 30 year Winter I+0% | 720 | 88 | 32.545 | 31.441 | -0.209 |
| 16.001 | S1601 | 720 minute 30 year Winter I+0% | 720 | 38 | 32.545 | 30.708 | 0.023 |
| 1.009 | S109 | 720 minute 30 year Winter I+0% | 720 | 38 | 32.500 | 30.708 | 0.678 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 2.715 | 0.4 | 0.2 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.254 | 152.725 | 0.1 | 4.8 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.628 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 1.083 | 0.1 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.03 | | 0.006 | 28.252 | 0.6 | 1.7 | OK |
| 9.002 | S902 | 0.000 | 0.02 | | 0.018 | 37.489 | 1.3 | 2.2 | OK |
| 11.000 | S1100 | 0.000 | 0.03 | | 0.002 | 8.151 | 0.5 | 0.5 | OK |
| 9.003 | S903 | 0.000 | 0.03 | | 0.892 | 48.357 | 0.6 | 2.7 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 83.006 | 208.678 | 0.0 | 4.7 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 2.173 | 0.3 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.04 | | 0.002 | 12.498 | 0.5 | 0.7 | OK |
| 13.001 | S1301 | 0.000 | 0.04 | | 0.008 | 19.563 | 0.9 | 1.1 | OK |
| 12.001 | S1201 | 0.000 | 0.03 | | 0.006 | 38.038 | 0.8 | 2.2 | OK |
| 12.002 | S1202 | 0.000 | 0.07 | | 0.022 | 52.166 | 0.6 | 3.1 | OK |
| 12.003 | S1203 | 0.000 | 0.06 | | 0.028 | 52.166 | 0.8 | 3.1 | OK |
| 12.004 | S1204 | 0.000 | 0.05 | | 0.016 | 63.034 | 1.1 | 3.7 | OK |
| 14.000 | S1400 | 0.000 | 0.04 | | 0.002 | 13.042 | 0.6 | 0.8 | OK |

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## Summary Wizard of 720 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.03 | | 0.006 | 23.367 | 0.6 | 1.4 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.002 | 4.891 | 0.4 | 0.3 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.004 | 13.041 | 1.1 | 0.8 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.019 | 43.472 | 1.3 | 2.5 | OK |
| 12.005 | 1205 | 0.000 | 0.08 | | 0.503 | 118.461 | 1.3 | 6.9 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.07 | | 86.053 | 331.447 | 0.2 | 6.6 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.003 | 18.476 | 0.9 | 1.1 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.318 | 20.649 | 1.1 | 1.2 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.42 | | 3.666 | 352.079 | 1.0 | 7.0 | SURCHARGED |

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## Summary Wizard of 960 minute 30 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.680 | 31.784 | -0.136 |
| 1.001 | S101 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.680 | 31.710 | -0.140 |
| 2.000 | S200 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.600 | 31.490 | -0.140 |
| 1.002 | S102 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.630 | 31.241 | -0.204 |
| 3.000 | S300 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.550 | 31.854 | -0.146 |
| 1.003 | S103 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.600 | 31.073 | -0.202 |
| 4.000 | S400 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.550 | 31.705 | -0.145 |
| 4.001 | S401 | 960 minute 30 year Winter I+0% | 960 | 43 | 32.550 | 30.655 | -0.095 |
| 1.004 | S104 | 960 minute 30 year Winter I+0% | 960 | 40 | 32.600 | 30.654 | 0.124 |
| 1.005 | S105 | 960 minute 30 year Winter I+0% | 960 | 40 | 32.600 | 30.654 | 0.144 |
| 5.000 | S500 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.550 | 31.858 | -0.142 |
| 5.001 | S501 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.665 | 31.148 | -0.142 |
| 6.000 | S600 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.665 | 31.851 | -0.149 |
| 6.001 | S601 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.665 | 31.141 | -0.149 |
| 5.002 | S502 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.665 | 30.849 | -0.201 |
| 5.003 | S503 | 960 minute 30 year Winter I+0% | 960 | 82 | 32.680 | 30.656 | -0.199 |
| 7.000 | S700 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.680 | 31.899 | -0.131 |
| 7.001 | S701 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.635 | 31.818 | -0.127 |
| 5.004 | S504 | 960 minute 30 year Winter I+0% | 960 | 40 | 32.635 | 30.654 | 0.109 |

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## Summary Wizard of 960 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.02 | | 0.001 | 7.577 | 0.5 | 0.3 | OK |
| 1.001 | S101 | 0.000 | 0.01 | | 0.003 | 11.656 | 1.0 | 0.5 | OK |
| 2.000 | S200 | 0.000 | 0.01 | | 0.001 | 7.577 | 0.6 | 0.3 | OK |
| 1.002 | S102 | 0.000 | 0.02 | | 0.005 | 23.313 | 0.6 | 1.0 | OK |
| 3.000 | S300 | 0.000 | 0.00 | | 0.000 | 4.661 | 0.5 | 0.2 | OK |
| 1.003 | S103 | 0.000 | 0.02 | | 0.015 | 42.544 | 1.1 | 1.9 | OK |
| 4.000 | S400 | 0.000 | 0.01 | | 0.000 | 8.740 | 0.9 | 0.4 | OK |
| 4.001 | S401 | 0.000 | 0.03 | | 0.011 | 12.237 | 0.6 | 0.5 | OK |
| 1.004 | S104 | 0.000 | 0.06 | | 0.574 | 60.609 | 0.4 | 2.6 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.02 | | 1.301 | 63.523 | 0.3 | 2.6 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.01 | | 0.000 | 8.159 | 0.8 | 0.4 | OK |
| 5.001 | S501 | 0.000 | 0.01 | | 0.001 | 8.158 | 0.8 | 0.4 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 1.159 | 0.1 | 0.1 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.000 | 1.157 | 0.1 | 0.1 | OK |
| 5.002 | S502 | 0.000 | 0.03 | | 0.006 | 30.881 | 0.7 | 1.4 | OK |
| 5.003 | S503 | 0.000 | 0.02 | | 0.017 | 34.960 | 1.0 | 1.5 | OK |
| 7.000 | S700 | 0.000 | 0.04 | | 0.002 | 15.154 | 0.5 | 0.7 | OK |
| 7.001 | S701 | 0.000 | 0.06 | | 0.010 | 22.731 | 0.6 | 1.0 | OK |
| 5.004 | S504 | 0.000 | 0.04 | | 0.856 | 57.692 | 0.5 | 2.4 | SURCHARGED |

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## Summary Wizard of 960 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.525 | 31.202 | -0.148 |
| 1.006 | S106 | 960 minute 30 year Winter I+0% | 960 | 40 | 32.500 | 30.654 | -0.992 |
| 9.000 | S900 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.665 | 31.020 | -0.200 |
| 9.002 | S902 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.640 | 30.779 | -0.206 |
| 11.000 | S1100 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.680 | 31.565 | -0.135 |
| 9.003 | S903 | 960 minute 30 year Winter I+0% | 960 | 40 | 32.630 | 30.654 | 0.159 |
| 1.007 | S107 | 960 minute 30 year Winter I+0% | 960 | 40 | 32.500 | 30.654 | -0.882 |
| 12.000 | S1200 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.635 | 31.852 | -0.148 |
| 13.000 | S1300 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.635 | 31.868 | -0.132 |
| 13.001 | S1301 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.635 | 31.778 | -0.132 |
| 12.001 | S1201 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.635 | 31.435 | -0.200 |
| 12.002 | S1202 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.680 | 31.070 | -0.190 |
| 12.003 | S1203 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.660 | 30.976 | -0.194 |
| 12.004 | S1204 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.660 | 30.838 | -0.197 |
| 14.000 | S1400 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.650 | 31.643 | -0.132 |
| 14.001 | S1401 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.680 | 31.293 | -0.202 |
| 15.000 | S1500 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.680 | 31.662 | -0.138 |
| 15.001 | S1501 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.600 | 31.617 | -0.138 |
| 14.002 | S1402 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.600 | 31.036 | -0.204 |
| 12.005 | 1205 | 960 minute 30 year Winter I+0% | 960 | 41 | 32.600 | 30.656 | -0.049 |
| 1.008 | S108 | 960 minute 30 year Winter I+0% | 960 | 40 | 32.550 | 30.654 | 0.299 |
| 16.000 | S1600 | 960 minute 30 year Winter I+0% | 960 | 98 | 32.545 | 31.438 | -0.212 |
| 16.001 | S1601 | 960 minute 30 year Winter I+0% | 960 | 40 | 32.545 | 30.652 | -0.033 |
| 1.009 | S109 | 960 minute 30 year Winter I+0% | 960 | 40 | 32.500 | 30.652 | 0.622 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 2.912 | 0.3 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.238 | 163.801 | 0.1 | 4.2 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.745 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 1.157 | 0.1 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.03 | | 0.006 | 30.296 | 0.6 | 1.3 | OK |
| 9.002 | S902 | 0.000 | 0.02 | | 0.014 | 40.204 | 1.3 | 1.8 | OK |
| 11.000 | S1100 | 0.000 | 0.02 | | 0.002 | 8.743 | 0.5 | 0.4 | OK |
| 9.003 | S903 | 0.000 | 0.03 | | 0.784 | 51.861 | 0.6 | 2.2 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 76.533 | 223.880 | 0.0 | 4.4 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 2.330 | 0.2 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.03 | | 0.002 | 13.406 | 0.5 | 0.6 | OK |
| 13.001 | S1301 | 0.000 | 0.03 | | 0.007 | 20.983 | 0.8 | 0.9 | OK |
| 12.001 | S1201 | 0.000 | 0.03 | | 0.006 | 40.798 | 0.8 | 1.8 | OK |
| 12.002 | S1202 | 0.000 | 0.06 | | 0.019 | 55.952 | 0.6 | 2.5 | OK |
| 12.003 | S1203 | 0.000 | 0.05 | | 0.025 | 55.952 | 0.7 | 2.5 | OK |
| 12.004 | S1204 | 0.000 | 0.04 | | 0.014 | 67.609 | 1.1 | 3.0 | OK |
| 14.000 | S1400 | 0.000 | 0.03 | | 0.002 | 13.988 | 0.5 | 0.6 | OK |

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## Summary Wizard of 960 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.02 | | 0.005 | 25.062 | 0.6 | 1.1 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.001 | 5.246 | 0.4 | 0.2 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.003 | 13.988 | 1.1 | 0.6 | OK |
| 14.002 | S1402 | 0.000 | 0.02 | | 0.016 | 46.627 | 1.3 | 2.0 | OK |
| 12.005 | 1205 | 0.000 | 0.07 | | 0.349 | 127.058 | 1.3 | 5.6 | OK |
| 1.008 | S108 | 0.000 | 0.07 | | 79.923 | 355.601 | 0.2 | 6.4 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.002 | 19.817 | 0.9 | 0.9 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.204 | 22.148 | 1.0 | 1.0 | OK |
| 1.009 | S109 | 0.000 | 0.41 | | 3.520 | 377.746 | 1.0 | 6.8 | SURCHARGED |

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## Summary Wizard of 1440 minute 30 year Winter I+0% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.680 | 31.780 | -0.140 |
| 1.001 | S101 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.680 | 31.708 | -0.142 |
| 2.000 | S200 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.600 | 31.488 | -0.142 |
| 1.002 | S102 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.630 | 31.236 | -0.209 |
| 3.000 | S300 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.550 | 31.853 | -0.147 |
| 1.003 | S103 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.600 | 31.067 | -0.208 |
| 4.000 | S400 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.550 | 31.704 | -0.146 |
| 4.001 | S401 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.550 | 30.613 | -0.137 |
| 1.004 | S104 | 1440 minute 30 year Winter I+0% | 1440 | 44 | 32.600 | 30.552 | 0.022 |
| 1.005 | S105 | 1440 minute 30 year Winter I+0% | 1440 | 44 | 32.600 | 30.552 | 0.042 |
| 5.000 | S500 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.550 | 31.856 | -0.144 |
| 5.001 | S501 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.665 | 31.146 | -0.144 |
| 6.000 | S600 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.665 | 31.851 | -0.149 |
| 6.001 | S601 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.665 | 31.141 | -0.149 |
| 5.002 | S502 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.665 | 30.846 | -0.204 |
| 5.003 | S503 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.680 | 30.645 | -0.210 |
| 7.000 | S700 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.680 | 31.897 | -0.133 |
| 7.001 | S701 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.635 | 31.815 | -0.130 |
| 5.004 | S504 | 1440 minute 30 year Winter I+0% | 1440 | 44 | 32.635 | 30.552 | 0.007 |

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## Summary Wizard of 1440 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.01 | | 0.001 | 8.353 | 0.5 | 0.2 | OK |
| 1.001 | S101 | 0.000 | 0.01 | | 0.001 | 12.848 | 0.8 | 0.4 | OK |
| 2.000 | S200 | 0.000 | 0.01 | | 0.000 | 8.352 | 0.5 | 0.2 | OK |
| 1.002 | S102 | 0.000 | 0.01 | | 0.003 | 25.696 | 0.7 | 0.8 | OK |
| 3.000 | S300 | 0.000 | 0.00 | | 0.000 | 5.138 | 0.3 | 0.2 | OK |
| 1.003 | S103 | 0.000 | 0.02 | | 0.010 | 46.895 | 1.1 | 1.4 | OK |
| 4.000 | S400 | 0.000 | 0.01 | | 0.000 | 9.635 | 0.6 | 0.3 | OK |
| 4.001 | S401 | 0.000 | 0.02 | | 0.002 | 13.489 | 0.6 | 0.4 | OK |
| 1.004 | S104 | 0.000 | 0.04 | | 0.334 | 66.809 | 0.4 | 1.9 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.02 | | 1.113 | 70.022 | 0.3 | 2.0 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.01 | | 0.000 | 8.993 | 0.6 | 0.3 | OK |
| 5.001 | S501 | 0.000 | 0.01 | | 0.000 | 8.993 | 0.6 | 0.3 | OK |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 1.247 | 0.1 | 0.0 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.000 | 1.217 | 0.1 | 0.0 | OK |
| 5.002 | S502 | 0.000 | 0.02 | | 0.004 | 33.984 | 0.7 | 1.0 | OK |
| 5.003 | S503 | 0.000 | 0.01 | | 0.009 | 38.481 | 1.0 | 1.1 | OK |
| 7.000 | S700 | 0.000 | 0.03 | | 0.002 | 16.706 | 0.5 | 0.5 | OK |
| 7.001 | S701 | 0.000 | 0.04 | | 0.008 | 25.060 | 0.5 | 0.7 | OK |
| 5.004 | S504 | 0.000 | 0.03 | | 0.609 | 63.540 | 0.4 | 1.8 | SURCHARGED |

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## Summary Wizard of 1440 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.525 | 31.202 | -0.148 |
| 1.006 | S106 | 1440 minute 30 year Winter I+0% | 1440 | 44 | 32.500 | 30.551 | -1.095 |
| 9.000 | S900 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.665 | 31.851 | -0.149 |
| 10.000 | S901 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.665 | 31.017 | -0.203 |
| 9.002 | S902 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.640 | 30.774 | -0.211 |
| 11.000 | S1100 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.680 | 31.562 | -0.138 |
| 9.003 | S903 | 1440 minute 30 year Winter I+0% | 1440 | 44 | 32.630 | 30.552 | 0.057 |
| 1.007 | S107 | 1440 minute 30 year Winter I+0% | 1440 | 44 | 32.500 | 30.551 | -0.985 |
| 12.000 | S1200 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.635 | 31.852 | -0.148 |
| 13.000 | S1300 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.635 | 31.866 | -0.134 |
| 13.001 | S1301 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.635 | 31.776 | -0.134 |
| 12.001 | S1201 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.635 | 31.431 | -0.204 |
| 12.002 | S1202 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.680 | 31.065 | -0.195 |
| 12.003 | S1203 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.660 | 30.972 | -0.198 |
| 12.004 | S1204 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.660 | 30.835 | -0.200 |
| 14.000 | S1400 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.650 | 31.641 | -0.134 |
| 14.001 | S1401 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.680 | 31.288 | -0.207 |
| 15.000 | S1500 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.680 | 31.659 | -0.141 |
| 15.001 | S1501 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.600 | 31.614 | -0.141 |
| 14.002 | S1402 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.600 | 31.031 | -0.209 |
| 12.005 | 1205 | 1440 minute 30 year Winter I+0% | 1440 | 67 | 32.600 | 30.553 | -0.152 |
| 1.008 | S108 | 1440 minute 30 year Winter I+0% | 1440 | 44 | 32.550 | 30.551 | 0.196 |
| 16.000 | S1600 | 1440 minute 30 year Winter I+0% | 1440 | 108 | 32.545 | 31.435 | -0.215 |
| 16.001 | S1601 | 1440 minute 30 year Winter I+0% | 1440 | 44 | 32.545 | 30.550 | -0.135 |
| 1.009 | S109 | 1440 minute 30 year Winter I+0% | 1440 | 44 | 32.500 | 30.550 | 0.520 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.000 | 3.206 | 0.2 | 0.1 | OK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.200 | 180.579 | 0.1 | 3.5 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 1.919 | 0.1 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 1.238 | 0.1 | 0.0 | OK |
| 9.001 | S901 | 0.000 | 0.02 | | 0.005 | 33.356 | 0.6 | 1.0 | OK |
| 9.002 | S902 | 0.000 | 0.01 | | 0.009 | 44.279 | 1.3 | 1.3 | OK |
| 11.000 | S1100 | 0.000 | 0.02 | | 0.001 | 9.638 | 0.5 | 0.3 | OK |
| 9.003 | S903 | 0.000 | 0.02 | | 0.586 | 57.130 | 0.6 | 1.6 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 64.726 | 246.661 | 0.0 | 4.0 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 2.566 | 0.2 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.03 | | 0.002 | 14.779 | 0.5 | 0.4 | OK |
| 13.001 | S1301 | 0.000 | 0.02 | | 0.006 | 23.132 | 0.8 | 0.7 | OK |
| 12.001 | S1201 | 0.000 | 0.02 | | 0.005 | 44.974 | 0.8 | 1.3 | OK |
| 12.002 | S1202 | 0.000 | 0.04 | | 0.016 | 61.680 | 0.6 | 1.8 | OK |
| 12.003 | S1203 | 0.000 | 0.03 | | 0.021 | 61.680 | 0.7 | 1.8 | OK |
| 12.004 | S1204 | 0.000 | 0.03 | | 0.012 | 74.531 | 1.0 | 2.2 | OK |
| 14.000 | S1400 | 0.000 | 0.02 | | 0.002 | 15.421 | 0.5 | 0.5 | OK |

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## Summary Wizard of 1440 minute 30 year Winter I+0% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.02 | | 0.004 | 27.630 | 0.6 | 0.8 | OK |
| 15.000 | S1500 | 0.000 | 0.01 | | 0.001 | 5.783 | 0.4 | 0.2 | OK |
| 15.001 | S1501 | 0.000 | 0.01 | | 0.002 | 15.419 | 1.0 | 0.5 | OK |
| 14.002 | S1402 | 0.000 | 0.01 | | 0.010 | 51.401 | 1.3 | 1.5 | OK |
| 12.005 | 1205 | 0.000 | 0.05 | | 0.117 | 140.067 | 1.2 | 4.1 | OK |
| 1.008 | S108 | 0.000 | 0.06 | | 68.723 | 391.868 | 0.2 | 6.0 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.01 | | 0.001 | 21.846 | 0.6 | 0.6 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 0.053 | 24.414 | 0.7 | 0.7 | OK |
| 1.009 | S109 | 0.000 | 0.38 | | 3.238 | 416.279 | 1.0 | 6.3 | SURCHARGED |

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## Summary Wizard of 15 minute 100 year Winter I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 15 minute 100 year Winter I+45% | 15 | 14 | 32.680 | 31.847 | -0.073 |
| 1.001 | S101 | 15 minute 100 year Winter I+45% | 15 | 14 | 32.680 | 31.764 | -0.086 |
| 2.000 | S200 | 15 minute 100 year Winter I+45% | 15 | 16 | 32.600 | 31.544 | -0.086 |
| 1.002 | S102 | 15 minute 100 year Winter I+45% | 15 | 20 | 32.630 | 31.337 | -0.108 |
| 3.000 | S300 | 15 minute 100 year Winter I+45% | 15 | 12 | 32.550 | 31.886 | -0.114 |
| 1.003 | S103 | 15 minute 100 year Winter I+45% | 15 | 22 | 32.600 | 31.172 | -0.103 |
| 4.000 | S400 | 15 minute 100 year Winter I+45% | 15 | 14 | 32.550 | 31.745 | -0.105 |
| 4.001 | S401 | 15 minute 100 year Winter I+45% | 15 | 29 | 32.550 | 30.769 | 0.019 |
| 1.004 | S104 | 15 minute 100 year Winter I+45% | 15 | 29 | 32.600 | 30.768 | 0.238 |
| 1.005 | S105 | 15 minute 100 year Winter I+45% | 15 | 29 | 32.600 | 30.767 | 0.257 |
| 5.000 | S500 | 15 minute 100 year Winter I+45% | 15 | 12 | 32.550 | 31.905 | -0.095 |
| 5.001 | S501 | 15 minute 100 year Winter I+45% | 15 | 22 | 32.665 | 31.196 | -0.094 |
| 6.000 | S600 | 15 minute 100 year Winter I+45% | 15 | 13 | 32.665 | 31.868 | -0.132 |
| 6.001 | S601 | 15 minute 100 year Winter I+45% | 15 | 22 | 32.665 | 31.160 | -0.130 |
| 5.002 | S502 | 15 minute 100 year Winter I+45% | 15 | 24 | 32.665 | 30.965 | -0.085 |
| 5.003 | S503 | 15 minute 100 year Winter I+45% | 15 | 29 | 32.680 | 30.767 | -0.088 |
| 7.000 | S700 | 15 minute 100 year Winter I+45% | 15 | 8 | 32.680 | 32.144 | 0.114 |
| 7.001 | S701 | 15 minute 100 year Winter I+45% | 15 | 10 | 32.635 | 32.055 | 0.110 |
| 5.004 | S504 | 15 minute 100 year Winter I+45% | 15 | 29 | 32.635 | 30.767 | 0.222 |

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## Summary Wizard of 15 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.52 | | 0.011 | 3.994 | 0.9 | 8.6 | OK |
| 1.001 | S101 | 0.000 | 0.38 | | 0.031 | 6.144 | 1.9 | 13.4 | OK |
| 2.000 | S200 | 0.000 | 0.38 | | 0.009 | 3.994 | 1.2 | 8.6 | OK |
| 1.002 | S102 | 0.000 | 0.53 | | 0.040 | 12.287 | 1.3 | 26.7 | OK |
| 3.000 | S300 | 0.000 | 0.13 | | 0.005 | 2.458 | 1.7 | 5.3 | OK |
| 1.003 | S103 | 0.000 | 0.57 | | 0.127 | 22.423 | 2.3 | 49.3 | OK |
| 4.000 | S400 | 0.000 | 0.20 | | 0.006 | 4.608 | 2.2 | 9.9 | OK |
| 4.001 | S401 | 0.000 | 0.67 | | 0.042 | 6.430 | 1.3 | 14.0 | SURCHARGED |
| 1.004 | S104 | 0.000 | 1.49 | | 0.776 | 31.255 | 1.0 | 70.0 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.63 | | 1.502 | 31.404 | 0.7 | 70.8 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.29 | | 0.008 | 4.301 | 1.6 | 9.2 | OK |
| 5.001 | S501 | 0.000 | 0.30 | | 0.016 | 4.301 | 1.5 | 9.1 | OK |
| 6.000 | S600 | 0.000 | 0.04 | | 0.002 | 0.614 | 1.1 | 1.3 | OK |
| 6.001 | S601 | 0.000 | 0.04 | | 0.004 | 0.614 | 1.0 | 1.3 | OK |
| 5.002 | S502 | 0.000 | 0.70 | | 0.044 | 16.279 | 1.4 | 36.4 | OK |
| 5.003 | S503 | 0.000 | 0.52 | | 0.160 | 18.376 | 2.0 | 41.2 | OK |
| 7.000 | S700 | 0.000 | 1.00 | | 0.041 | 7.987 | 1.0 | 17.1 | SURCHARGED |
| 7.001 | S701 | 0.000 | 1.51 | | 0.150 | 11.980 | 1.5 | 26.0 | SURCHARGED |
| 5.004 | S504 | 0.000 | 1.07 | | 1.106 | 29.398 | 1.0 | 65.4 | SURCHARGED |

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## Summary Wizard of 15 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 15 minute 100 year Winter I+45% | 15 | 22 | 32.525 | 31.229 | -0.121 |
| 1.006 | S106 | 15 minute 100 year Winter I+45% | 15 | 29 | 32.500 | 30.767 | -0.879 |
| 9.000 | S900 | 15 minute 100 year Winter I+45% | 15 | 13 | 32.665 | 31.872 | -0.128 |
| 10.000 | S901 | 15 minute 100 year Winter I+45% | 15 | 13 | 32.665 | 31.868 | -0.132 |
| 9.001 | S901 | 15 minute 100 year Winter I+45% | 15 | 22 | 32.665 | 31.143 | -0.077 |
| 9.002 | S902 | 15 minute 100 year Winter I+45% | 15 | 24 | 32.640 | 30.871 | -0.114 |
| 11.000 | S1100 | 15 minute 100 year Winter I+45% | 15 | 15 | 32.680 | 31.634 | -0.066 |
| 9.003 | S903 | 15 minute 100 year Winter I+45% | 15 | 29 | 32.630 | 30.767 | 0.272 |
| 1.007 | S107 | 15 minute 100 year Winter I+45% | 15 | 29 | 32.500 | 30.767 | -0.769 |
| 12.000 | S1200 | 15 minute 100 year Winter I+45% | 15 | 11 | 32.635 | 32.013 | 0.013 |
| 13.000 | S1300 | 15 minute 100 year Winter I+45% | 15 | 7 | 32.635 | 32.255 | 0.255 |
| 13.001 | S1301 | 15 minute 100 year Winter I+45% | 15 | 9 | 32.635 | 32.190 | 0.280 |
| 12.001 | S1201 | 15 minute 100 year Winter I+45% | 15 | 11 | 32.635 | 32.005 | 0.370 |
| 12.002 | S1202 | 15 minute 100 year Winter I+45% | 15 | 15 | 32.680 | 31.850 | 0.590 |
| 12.003 | S1203 | 15 minute 100 year Winter I+45% | 15 | 15 | 32.660 | 31.683 | 0.513 |
| 12.004 | S1204 | 15 minute 100 year Winter I+45% | 15 | 17 | 32.660 | 31.515 | 0.480 |
| 14.000 | S1400 | 15 minute 100 year Winter I+45% | 15 | 14 | 32.650 | 31.731 | -0.044 |
| 14.001 | S1401 | 15 minute 100 year Winter I+45% | 15 | 20 | 32.680 | 31.448 | -0.047 |
| 15.000 | S1500 | 15 minute 100 year Winter I+45% | 15 | 14 | 32.680 | 31.720 | -0.080 |
| 15.001 | S1501 | 15 minute 100 year Winter I+45% | 15 | 14 | 32.600 | 31.676 | -0.079 |
| 14.002 | S1402 | 15 minute 100 year Winter I+45% | 15 | 20 | 32.600 | 31.376 | 0.136 |
| 12.005 | 1205 | 15 minute 100 year Winter I+45% | 15 | 23 | 32.600 | 31.266 | 0.561 |
| 1.008 | S108 | 15 minute 100 year Winter I+45% | 15 | 29 | 32.550 | 30.767 | 0.412 |
| 16.000 | S1600 | 15 minute 100 year Winter I+45% | 15 | 16 | 32.545 | 31.511 | -0.139 |
| 16.001 | S1601 | 15 minute 100 year Winter I+45% | 15 | 29 | 32.545 | 30.766 | 0.081 |
| 1.009 | S109 | 15 minute 100 year Winter I+45% | 15 | 30 | 32.500 | 30.765 | 0.735 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.08 | | 0.027 | 1.536 | 1.4 | 3.3 | OK |
| 1.006 | S106 | 0.000 | 0.03 | | 1.272 | 42.671 | 0.3 | 79.5 | OK |
| 9.000 | S900 | 0.000 | 0.05 | | 0.003 | 0.922 | 1.2 | 2.0 | OK |
| 10.000 | S901 | 0.000 | 0.03 | | 0.002 | 0.614 | 1.1 | 1.3 | OK |
| 9.001 | S901 | 0.000 | 0.76 | | 0.055 | 15.970 | 1.3 | 36.3 | OK |
| 9.002 | S902 | 0.000 | 0.49 | | 0.117 | 21.191 | 2.5 | 48.2 | OK |
| 11.000 | S1100 | 0.000 | 0.60 | | 0.013 | 4.608 | 1.0 | 9.9 | OK |
| 9.003 | S903 | 0.000 | 0.74 | | 1.002 | 26.460 | 1.3 | 61.4 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 89.699 | 30.752 | 0.2 | 46.6 | OK |
| 12.000 | S1200 | 0.000 | 0.08 | | 0.025 | 1.229 | 1.1 | 2.5 | SURCHARGED |
| 13.000 | S1300 | 0.000 | 0.85 | | 0.064 | 7.065 | 1.1 | 14.5 | SURCHARGED |
| 13.001 | S1301 | 0.000 | 0.80 | | 0.187 | 11.058 | 1.7 | 22.4 | SURCHARGED |
| 12.001 | S1201 | 0.000 | 0.66 | | 0.455 | 21.501 | 1.7 | 43.1 | SURCHARGED |
| 12.002 | S1202 | 0.000 | 1.39 | | 0.967 | 29.486 | 1.5 | 58.8 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 1.13 | | 0.532 | 29.486 | 1.5 | 58.6 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.88 | | 0.449 | 35.629 | 2.0 | 70.5 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.83 | | 0.016 | 7.371 | 1.2 | 15.6 | OK |

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## Summary Wizard of 15 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.59 | | 0.101 | 13.205 | 1.3 | 28.5 | OK |
| 15.000 | S1500 | 0.000 | 0.45 | | 0.010 | 2.765 | 0.7 | 5.9 | OK |
| 15.001 | S1501 | 0.000 | 0.45 | | 0.028 | 7.372 | 2.0 | 16.4 | OK |
| 14.002 | S1402 | 0.000 | 0.46 | | 1.018 | 24.571 | 2.5 | 47.1 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 1.55 | | 1.737 | 66.481 | 3.2 | 129.1 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.08 | | 92.387 | 14.805 | 0.0 | 7.2 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.31 | | 0.023 | 10.443 | 1.6 | 22.0 | OK |
| 16.001 | S1601 | 0.000 | 0.29 | | 0.443 | 11.383 | 1.9 | 24.6 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.43 | | 3.812 | 22.476 | 1.0 | 7.2 | SURCHARGED |

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## Summary Wizard of 30 minute 100 year Winter I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 30 minute 100 year Winter I+45% | 30 | 16 | 32.680 | 31.837 | -0.083 |
| 1.001 | S101 | 30 minute 100 year Winter I+45% | 30 | 16 | 32.680 | 31.756 | -0.094 |
| 2.000 | S200 | 30 minute 100 year Winter I+45% | 30 | 18 | 32.600 | 31.536 | -0.094 |
| 1.002 | S102 | 30 minute 100 year Winter I+45% | 30 | 22 | 32.630 | 31.321 | -0.124 |
| 3.000 | S300 | 30 minute 100 year Winter I+45% | 30 | 14 | 32.550 | 31.882 | -0.118 |
| 1.003 | S103 | 30 minute 100 year Winter I+45% | 30 | 24 | 32.600 | 31.155 | -0.120 |
| 4.000 | S400 | 30 minute 100 year Winter I+45% | 30 | 16 | 32.550 | 31.739 | -0.111 |
| 4.001 | S401 | 30 minute 100 year Winter I+45% | 30 | 21 | 32.550 | 31.023 | 0.273 |
| 1.004 | S104 | 30 minute 100 year Winter I+45% | 30 | 21 | 32.600 | 31.021 | 0.491 |
| 1.005 | S105 | 30 minute 100 year Winter I+45% | 30 | 21 | 32.600 | 31.021 | 0.511 |
| 5.000 | S500 | 30 minute 100 year Winter I+45% | 30 | 14 | 32.550 | 31.898 | -0.102 |
| 5.001 | S501 | 30 minute 100 year Winter I+45% | 30 | 24 | 32.665 | 31.190 | -0.100 |
| 6.000 | S600 | 30 minute 100 year Winter I+45% | 30 | 15 | 32.665 | 31.867 | -0.133 |
| 6.001 | S601 | 30 minute 100 year Winter I+45% | 30 | 24 | 32.665 | 31.158 | -0.132 |
| 5.002 | S502 | 30 minute 100 year Winter I+45% | 30 | 21 | 32.665 | 31.024 | -0.026 |
| 5.003 | S503 | 30 minute 100 year Winter I+45% | 30 | 21 | 32.680 | 31.021 | 0.166 |
| 7.000 | S700 | 30 minute 100 year Winter I+45% | 30 | 12 | 32.680 | 32.033 | 0.003 |
| 7.001 | S701 | 30 minute 100 year Winter I+45% | 30 | 12 | 32.635 | 31.978 | 0.033 |
| 5.004 | S504 | 30 minute 100 year Winter I+45% | 30 | 21 | 32.635 | 31.021 | 0.476 |

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## Summary Wizard of 30 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.41 | | 0.010 | 5.347 | 0.9 | 6.8 | OK |
| 1.001 | S101 | 0.000 | 0.30 | | 0.027 | 8.225 | 1.8 | 10.5 | OK |
| 2.000 | S200 | 0.000 | 0.30 | | 0.008 | 5.347 | 1.1 | 6.8 | OK |
| 1.002 | S102 | 0.000 | 0.42 | | 0.028 | 16.451 | 1.2 | 21.1 | OK |
| 3.000 | S300 | 0.000 | 0.10 | | 0.004 | 3.290 | 1.5 | 4.2 | OK |
| 1.003 | S103 | 0.000 | 0.44 | | 0.084 | 30.022 | 2.1 | 38.6 | OK |
| 4.000 | S400 | 0.000 | 0.16 | | 0.005 | 6.169 | 2.1 | 7.9 | OK |
| 4.001 | S401 | 0.000 | 0.53 | | 0.126 | 8.523 | 1.2 | 11.1 | SURCHARGED |
| 1.004 | S104 | 0.000 | 1.17 | | 1.144 | 41.571 | 0.8 | 54.7 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.48 | | 1.949 | 41.755 | 0.6 | 54.4 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.23 | | 0.007 | 5.758 | 1.5 | 7.4 | OK |
| 5.001 | S501 | 0.000 | 0.24 | | 0.014 | 5.758 | 1.4 | 7.4 | OK |
| 6.000 | S600 | 0.000 | 0.03 | | 0.002 | 0.823 | 1.0 | 1.1 | OK |
| 6.001 | S601 | 0.000 | 0.03 | | 0.003 | 0.823 | 0.9 | 1.1 | OK |
| 5.002 | S502 | 0.000 | 0.55 | | 0.069 | 21.736 | 1.3 | 28.2 | OK |
| 5.003 | S503 | 0.000 | 0.41 | | 0.685 | 23.980 | 1.9 | 31.8 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.81 | | 0.024 | 10.693 | 1.0 | 13.7 | SURCHARGED |
| 7.001 | S701 | 0.000 | 1.20 | | 0.121 | 16.039 | 1.2 | 20.6 | SURCHARGED |
| 5.004 | S504 | 0.000 | 0.83 | | 1.567 | 38.539 | 1.0 | 51.2 | SURCHARGED |

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## Summary Wizard of 30 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 30 minute 100 year Winter I+45% | 30 | 24 | 32.525 | 31.225 | -0.125 |
| 1.006 | S106 | 30 minute 100 year Winter I+45% | 30 | 21 | 32.500 | 31.021 | -0.625 |
| 9.000 | S900 | 30 minute 100 year Winter I+45% | 30 | 15 | 32.665 | 31.870 | -0.130 |
| 10.000 | S901 | 30 minute 100 year Winter I+45% | 30 | 15 | 32.665 | 31.866 | -0.134 |
| 9.001 | S901 | 30 minute 100 year Winter I+45% | 30 | 24 | 32.665 | 31.120 | -0.100 |
| 9.002 | S902 | 30 minute 100 year Winter I+45% | 30 | 21 | 32.640 | 31.021 | 0.036 |
| 11.000 | S1100 | 30 minute 100 year Winter I+45% | 30 | 17 | 32.680 | 31.623 | -0.077 |
| 9.003 | S903 | 30 minute 100 year Winter I+45% | 30 | 21 | 32.630 | 31.021 | 0.526 |
| 1.007 | S107 | 30 minute 100 year Winter I+45% | 30 | 21 | 32.500 | 31.021 | -0.515 |
| 12.000 | S1200 | 30 minute 100 year Winter I+45% | 30 | 15 | 32.635 | 31.875 | -0.125 |
| 13.000 | S1300 | 30 minute 100 year Winter I+45% | 30 | 14 | 32.635 | 31.944 | -0.056 |
| 13.001 | S1301 | 30 minute 100 year Winter I+45% | 30 | 16 | 32.635 | 31.851 | -0.059 |
| 12.001 | S1201 | 30 minute 100 year Winter I+45% | 30 | 18 | 32.635 | 31.633 | -0.002 |
| 12.002 | S1202 | 30 minute 100 year Winter I+45% | 30 | 19 | 32.680 | 31.539 | 0.279 |
| 12.003 | S1203 | 30 minute 100 year Winter I+45% | 30 | 22 | 32.660 | 31.438 | 0.268 |
| 12.004 | S1204 | 30 minute 100 year Winter I+45% | 30 | 23 | 32.660 | 31.317 | 0.282 |
| 14.000 | S1400 | 30 minute 100 year Winter I+45% | 30 | 16 | 32.650 | 31.715 | -0.060 |
| 14.001 | S1401 | 30 minute 100 year Winter I+45% | 30 | 21 | 32.680 | 31.379 | -0.116 |
| 15.000 | S1500 | 30 minute 100 year Winter I+45% | 30 | 16 | 32.680 | 31.712 | -0.088 |
| 15.001 | S1501 | 30 minute 100 year Winter I+45% | 30 | 16 | 32.600 | 31.666 | -0.089 |
| 14.002 | S1402 | 30 minute 100 year Winter I+45% | 30 | 24 | 32.600 | 31.196 | -0.044 |
| 12.005 | 1205 | 30 minute 100 year Winter I+45% | 30 | 24 | 32.600 | 31.132 | 0.427 |
| 1.008 | S108 | 30 minute 100 year Winter I+45% | 30 | 21 | 32.550 | 31.020 | 0.665 |
| 16.000 | S1600 | 30 minute 100 year Winter I+45% | 30 | 19 | 32.545 | 31.501 | -0.149 |
| 16.001 | S1601 | 30 minute 100 year Winter I+45% | 30 | 21 | 32.545 | 31.019 | 0.334 |
| 1.009 | S109 | 30 minute 100 year Winter I+45% | 30 | 21 | 32.500 | 31.018 | 0.988 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.07 | | 0.023 | 2.056 | 1.3 | 2.6 | OK |
| 1.006 | S106 | 0.000 | 0.02 | | 1.348 | 53.850 | 0.2 | 58.3 | OK |
| 9.000 | S900 | 0.000 | 0.04 | | 0.002 | 1.234 | 1.1 | 1.6 | OK |
| 10.000 | S901 | 0.000 | 0.03 | | 0.002 | 0.823 | 1.1 | 1.1 | OK |
| 9.001 | S901 | 0.000 | 0.58 | | 0.041 | 21.385 | 1.2 | 27.9 | OK |
| 9.002 | S902 | 0.000 | 0.37 | | 0.616 | 27.943 | 2.3 | 36.9 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.48 | | 0.011 | 6.169 | 0.9 | 7.9 | OK |
| 9.003 | S903 | 0.000 | 0.54 | | 1.420 | 34.811 | 1.2 | 44.7 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 118.973 | 35.996 | 0.2 | 30.9 | OK |
| 12.000 | S1200 | 0.000 | 0.07 | | 0.003 | 1.645 | 1.1 | 2.1 | OK |
| 13.000 | S1300 | 0.000 | 0.71 | | 0.014 | 9.459 | 1.0 | 12.1 | OK |
| 13.001 | S1301 | 0.000 | 0.68 | | 0.049 | 14.806 | 1.7 | 19.0 | OK |
| 12.001 | S1201 | 0.000 | 0.56 | | 0.125 | 28.788 | 1.7 | 37.0 | OK |
| 12.002 | S1202 | 0.000 | 1.11 | | 0.841 | 39.481 | 1.2 | 47.0 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.91 | | 0.463 | 39.461 | 1.4 | 47.0 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.70 | | 0.393 | 47.532 | 2.1 | 56.5 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.67 | | 0.013 | 9.870 | 1.1 | 12.6 | OK |

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## Summary Wizard of 30 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.47 | | 0.034 | 17.684 | 1.2 | 22.7 | OK |
| 15.000 | S1500 | 0.000 | 0.36 | | 0.009 | 3.701 | 0.7 | 4.7 | OK |
| 15.001 | S1501 | 0.000 | 0.35 | | 0.024 | 9.870 | 1.9 | 12.8 | OK |
| 14.002 | S1402 | 0.000 | 0.40 | | 0.339 | 32.900 | 2.5 | 41.7 | OK |
| 12.005 | 1205 | 0.000 | 1.26 | | 1.531 | 88.232 | 2.6 | 105.0 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.08 | | 120.074 | 12.746 | 0.1 | 8.0 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.25 | | 0.020 | 13.983 | 1.5 | 17.9 | OK |
| 16.001 | S1601 | 0.000 | 0.24 | | 0.995 | 14.736 | 1.7 | 19.9 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.49 | | 4.456 | 23.081 | 1.1 | 8.1 | SURCHARGED |

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## Summary Wizard of 60 minute 100 year Winter I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.680 | 31.824 | -0.096 |
| 1.001 | S101 | 60 minute 100 year Winter I+45% | 60 | 20 | 32.680 | 31.746 | -0.104 |
| 2.000 | S200 | 60 minute 100 year Winter I+45% | 60 | 21 | 32.600 | 31.526 | -0.104 |
| 1.002 | S102 | 60 minute 100 year Winter I+45% | 60 | 26 | 32.630 | 31.301 | -0.144 |
| 3.000 | S300 | 60 minute 100 year Winter I+45% | 60 | 18 | 32.550 | 31.876 | -0.124 |
| 1.003 | S103 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.600 | 31.277 | 0.002 |
| 4.000 | S400 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.550 | 31.732 | -0.118 |
| 4.001 | S401 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.550 | 31.276 | 0.526 |
| 1.004 | S104 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.600 | 31.274 | 0.744 |
| 1.005 | S105 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.600 | 31.274 | 0.764 |
| 5.000 | S500 | 60 minute 100 year Winter I+45% | 60 | 17 | 32.550 | 31.889 | -0.111 |
| 5.001 | S501 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.665 | 31.278 | -0.012 |
| 6.000 | S600 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.665 | 31.864 | -0.136 |
| 6.001 | S601 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.665 | 31.277 | -0.013 |
| 5.002 | S502 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.665 | 31.277 | 0.227 |
| 5.003 | S503 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.680 | 31.275 | 0.420 |
| 7.000 | S700 | 60 minute 100 year Winter I+45% | 60 | 16 | 32.680 | 31.959 | -0.071 |
| 7.001 | S701 | 60 minute 100 year Winter I+45% | 60 | 18 | 32.635 | 31.898 | -0.047 |
| 5.004 | S504 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.635 | 31.274 | 0.729 |

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## Summary Wizard of 60 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.28 | | 0.008 | 6.842 | 0.8 | 4.7 | OK |
| 1.001 | S101 | 0.000 | 0.20 | | 0.021 | 10.525 | 1.6 | 7.2 | OK |
| 2.000 | S200 | 0.000 | 0.21 | | 0.007 | 6.842 | 1.0 | 4.7 | OK |
| 1.002 | S102 | 0.000 | 0.28 | | 0.023 | 21.051 | 1.1 | 14.4 | OK |
| 3.000 | S300 | 0.000 | 0.07 | | 0.003 | 4.210 | 1.4 | 2.9 | OK |
| 1.003 | S103 | 0.000 | 0.30 | | 0.390 | 38.321 | 1.9 | 26.2 | SURCHARGED |
| 4.000 | S400 | 0.000 | 0.11 | | 0.004 | 7.894 | 1.9 | 5.4 | OK |
| 4.001 | S401 | 0.000 | 0.36 | | 0.209 | 10.874 | 1.1 | 7.4 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.76 | | 1.379 | 53.129 | 0.7 | 35.4 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.32 | | 2.396 | 53.561 | 0.5 | 35.6 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.16 | | 0.005 | 7.368 | 1.4 | 5.0 | OK |
| 5.001 | S501 | 0.000 | 0.16 | | 0.050 | 7.365 | 1.3 | 5.0 | OK |
| 6.000 | S600 | 0.000 | 0.02 | | 0.001 | 1.052 | 1.0 | 0.7 | OK |
| 6.001 | S601 | 0.000 | 0.02 | | 0.041 | 1.049 | 0.9 | 0.7 | OK |
| 5.002 | S502 | 0.000 | 0.37 | | 0.193 | 27.712 | 1.2 | 19.1 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.27 | | 0.769 | 30.652 | 1.7 | 21.6 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.55 | | 0.012 | 13.683 | 1.0 | 9.3 | OK |
| 7.001 | S701 | 0.000 | 0.82 | | 0.055 | 20.525 | 1.1 | 14.0 | OK |
| 5.004 | S504 | 0.000 | 0.54 | | 2.014 | 49.371 | 0.8 | 33.4 | SURCHARGED |

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## Summary Wizard of 60 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.525 | 31.274 | -0.076 |
| 1.006 | S106 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.500 | 31.274 | -0.372 |
| 9.000 | S900 | 60 minute 100 year Winter I+45% | 60 | 18 | 32.665 | 31.867 | -0.133 |
| 10.000 | S901 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.665 | 31.863 | -0.137 |
| 9.001 | S901 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.665 | 31.276 | 0.056 |
| 9.002 | S902 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.640 | 31.274 | 0.289 |
| 11.000 | S1100 | 60 minute 100 year Winter I+45% | 60 | 20 | 32.680 | 31.609 | -0.091 |
| 9.003 | S903 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.630 | 31.274 | 0.779 |
| 1.007 | S107 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.500 | 31.273 | -0.263 |
| 12.000 | S1200 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.635 | 31.870 | -0.130 |
| 13.000 | S1300 | 60 minute 100 year Winter I+45% | 60 | 17 | 32.635 | 31.924 | -0.076 |
| 13.001 | S1301 | 60 minute 100 year Winter I+45% | 60 | 20 | 32.635 | 31.832 | -0.078 |
| 12.001 | S1201 | 60 minute 100 year Winter I+45% | 60 | 25 | 32.635 | 31.506 | -0.129 |
| 12.002 | S1202 | 60 minute 100 year Winter I+45% | 60 | 24 | 32.680 | 31.310 | 0.050 |
| 12.003 | S1203 | 60 minute 100 year Winter I+45% | 60 | 24 | 32.660 | 31.282 | 0.112 |
| 12.004 | S1204 | 60 minute 100 year Winter I+45% | 60 | 24 | 32.660 | 31.279 | 0.244 |
| 14.000 | S1400 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.650 | 31.696 | -0.079 |
| 14.001 | S1401 | 60 minute 100 year Winter I+45% | 60 | 26 | 32.680 | 31.358 | -0.137 |
| 15.000 | S1500 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.680 | 31.700 | -0.100 |
| 15.001 | S1501 | 60 minute 100 year Winter I+45% | 60 | 21 | 32.600 | 31.654 | -0.101 |
| 14.002 | S1402 | 60 minute 100 year Winter I+45% | 60 | 22 | 32.600 | 31.277 | 0.037 |
| 12.005 | 1205 | 60 minute 100 year Winter I+45% | 60 | 21 | 32.600 | 31.275 | 0.570 |
| 1.008 | S108 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.550 | 31.273 | 0.918 |
| 16.000 | S1600 | 60 minute 100 year Winter I+45% | 60 | 23 | 32.545 | 31.487 | -0.163 |
| 16.001 | S1601 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.545 | 31.271 | 0.586 |
| 1.009 | S109 | 60 minute 100 year Winter I+45% | 60 | 19 | 32.500 | 31.270 | 1.240 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.05 | | 0.078 | 2.631 | 1.2 | 1.8 | OK |
| 1.006 | S106 | 0.000 | 0.02 | | 1.419 | 74.121 | 0.2 | 40.1 | OK |
| 9.000 | S900 | 0.000 | 0.03 | | 0.002 | 1.579 | 1.0 | 1.1 | OK |
| 10.000 | S901 | 0.000 | 0.02 | | 0.001 | 1.052 | 1.1 | 0.7 | OK |
| 9.001 | S901 | 0.000 | 0.39 | | 0.158 | 27.279 | 1.1 | 18.8 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.25 | | 1.057 | 35.223 | 2.1 | 24.9 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.33 | | 0.009 | 7.894 | 0.8 | 5.4 | OK |
| 9.003 | S903 | 0.000 | 0.36 | | 1.782 | 44.124 | 1.0 | 30.3 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 148.180 | 56.520 | 0.1 | 21.8 | OK |
| 12.000 | S1200 | 0.000 | 0.04 | | 0.002 | 2.105 | 1.0 | 1.4 | OK |
| 13.000 | S1300 | 0.000 | 0.49 | | 0.011 | 12.104 | 1.0 | 8.2 | OK |
| 13.001 | S1301 | 0.000 | 0.46 | | 0.038 | 18.946 | 1.6 | 12.9 | OK |
| 12.001 | S1201 | 0.000 | 0.38 | | 0.027 | 36.839 | 1.6 | 25.2 | OK |
| 12.002 | S1202 | 0.000 | 0.82 | | 0.387 | 50.423 | 1.2 | 34.5 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.67 | | 0.419 | 50.122 | 1.4 | 34.5 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.51 | | 0.382 | 60.287 | 2.0 | 40.6 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.46 | | 0.010 | 12.630 | 1.0 | 8.6 | OK |

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## Summary Wizard of 60 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.32 | | 0.025 | 22.630 | 1.1 | 15.4 | OK |
| 15.000 | S1500 | 0.000 | 0.24 | | 0.007 | 4.736 | 0.6 | 3.2 | OK |
| 15.001 | S1501 | 0.000 | 0.24 | | 0.019 | 12.630 | 1.7 | 8.6 | OK |
| 14.002 | S1402 | 0.000 | 0.28 | | 0.665 | 41.883 | 2.2 | 28.8 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 0.89 | | 1.750 | 112.140 | 2.3 | 74.6 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.09 | | 147.678 | 37.941 | 0.1 | 8.7 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.17 | | 0.016 | 17.893 | 1.4 | 12.2 | OK |
| 16.001 | S1601 | 0.000 | 0.15 | | 1.547 | 18.699 | 1.6 | 12.7 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.54 | | 5.097 | 51.766 | 1.1 | 8.9 | SURCHARGED |

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## Summary Wizard of 120 minute 100 year Winter I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 120 minute 100 year Winter I+45% | 120 | 28 | 32.680 | 31.812 | -0.108 |
| 1.001 | S101 | 120 minute 100 year Winter I+45% | 120 | 27 | 32.680 | 31.736 | -0.114 |
| 2.000 | S200 | 120 minute 100 year Winter I+45% | 120 | 30 | 32.600 | 31.516 | -0.114 |
| 1.002 | S102 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.630 | 31.512 | 0.067 |
| 3.000 | S300 | 120 minute 100 year Winter I+45% | 120 | 27 | 32.550 | 31.870 | -0.130 |
| 1.003 | S103 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.600 | 31.510 | 0.235 |
| 4.000 | S400 | 120 minute 100 year Winter I+45% | 120 | 28 | 32.550 | 31.725 | -0.125 |
| 4.001 | S401 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.550 | 31.509 | 0.759 |
| 1.004 | S104 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.600 | 31.507 | 0.977 |
| 1.005 | S105 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.600 | 31.507 | 0.997 |
| 5.000 | S500 | 120 minute 100 year Winter I+45% | 120 | 27 | 32.550 | 31.881 | -0.119 |
| 5.001 | S501 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.665 | 31.510 | 0.220 |
| 6.000 | S600 | 120 minute 100 year Winter I+45% | 120 | 28 | 32.665 | 31.859 | -0.141 |
| 6.001 | S601 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.665 | 31.510 | 0.220 |
| 5.002 | S502 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.665 | 31.510 | 0.460 |
| 5.003 | S503 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.680 | 31.508 | 0.653 |
| 7.000 | S700 | 120 minute 100 year Winter I+45% | 120 | 27 | 32.680 | 31.941 | -0.089 |
| 7.001 | S701 | 120 minute 100 year Winter I+45% | 120 | 26 | 32.635 | 31.871 | -0.074 |
| 5.004 | S504 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.635 | 31.507 | 0.962 |

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## Summary Wizard of 120 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.18 | | 0.006 | 8.474 | 0.7 | 2.9 | OK |
| 1.001 | S101 | 0.000 | 0.13 | | 0.016 | 13.037 | 1.4 | 4.5 | OK |
| 2.000 | S200 | 0.000 | 0.13 | | 0.005 | 8.474 | 0.9 | 2.9 | OK |
| 1.002 | S102 | 0.000 | 0.18 | | 0.232 | 26.068 | 1.0 | 9.1 | SURCHARGED |
| 3.000 | S300 | 0.000 | 0.04 | | 0.002 | 5.214 | 1.3 | 1.8 | OK |
| 1.003 | S103 | 0.000 | 0.19 | | 0.720 | 47.262 | 1.7 | 16.6 | SURCHARGED |
| 4.000 | S400 | 0.000 | 0.07 | | 0.003 | 9.778 | 1.7 | 3.4 | OK |
| 4.001 | S401 | 0.000 | 0.22 | | 0.287 | 13.480 | 0.9 | 4.6 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.48 | | 1.449 | 65.870 | 0.6 | 22.6 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.20 | | 2.808 | 66.775 | 0.4 | 22.7 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.10 | | 0.004 | 9.126 | 1.2 | 3.2 | OK |
| 5.001 | S501 | 0.000 | 0.10 | | 0.193 | 9.096 | 1.1 | 3.2 | SURCHARGED |
| 6.000 | S600 | 0.000 | 0.01 | | 0.001 | 1.304 | 1.0 | 0.5 | OK |
| 6.001 | S601 | 0.000 | 0.01 | | 0.155 | 1.278 | 0.9 | 0.5 | SURCHARGED |
| 5.002 | S502 | 0.000 | 0.23 | | 0.260 | 34.268 | 1.1 | 12.0 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.17 | | 0.835 | 38.060 | 1.5 | 13.1 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.35 | | 0.009 | 16.948 | 0.9 | 5.9 | OK |
| 7.001 | S701 | 0.000 | 0.52 | | 0.040 | 25.422 | 1.0 | 8.8 | OK |
| 5.004 | S504 | 0.000 | 0.33 | | 2.425 | 61.524 | 0.7 | 20.5 | SURCHARGED |

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## Summary Wizard of 120 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.525 | 31.507 | 0.157 |
| 1.006 | S106 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.500 | 31.506 | -0.140 |
| 9.000 | S900 | 120 minute 100 year Winter I+45% | 120 | 28 | 32.665 | 31.863 | -0.137 |
| 10.000 | S901 | 120 minute 100 year Winter I+45% | 120 | 28 | 32.665 | 31.858 | -0.142 |
| 9.001 | S901 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.665 | 31.508 | 0.288 |
| 9.002 | S902 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.640 | 31.506 | 0.521 |
| 11.000 | S1100 | 120 minute 100 year Winter I+45% | 120 | 29 | 32.680 | 31.596 | -0.104 |
| 9.003 | S903 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.630 | 31.505 | 1.010 |
| 1.007 | S107 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.500 | 31.505 | -0.031 |
| 12.000 | S1200 | 120 minute 100 year Winter I+45% | 120 | 28 | 32.635 | 31.867 | -0.133 |
| 13.000 | S1300 | 120 minute 100 year Winter I+45% | 120 | 27 | 32.635 | 31.907 | -0.093 |
| 13.001 | S1301 | 120 minute 100 year Winter I+45% | 120 | 27 | 32.635 | 31.815 | -0.095 |
| 12.001 | S1201 | 120 minute 100 year Winter I+45% | 120 | 20 | 32.635 | 31.515 | -0.120 |
| 12.002 | S1202 | 120 minute 100 year Winter I+45% | 120 | 20 | 32.680 | 31.512 | 0.252 |
| 12.003 | S1203 | 120 minute 100 year Winter I+45% | 120 | 18 | 32.660 | 31.509 | 0.339 |
| 12.004 | S1204 | 120 minute 100 year Winter I+45% | 120 | 18 | 32.660 | 31.507 | 0.472 |
| 14.000 | S1400 | 120 minute 100 year Winter I+45% | 120 | 28 | 32.650 | 31.680 | -0.095 |
| 14.001 | S1401 | 120 minute 100 year Winter I+45% | 120 | 17 | 32.680 | 31.508 | 0.013 |
| 15.000 | S1500 | 120 minute 100 year Winter I+45% | 120 | 28 | 32.680 | 31.689 | -0.111 |
| 15.001 | S1501 | 120 minute 100 year Winter I+45% | 120 | 27 | 32.600 | 31.643 | -0.112 |
| 14.002 | S1402 | 120 minute 100 year Winter I+45% | 120 | 16 | 32.600 | 31.506 | 0.266 |
| 12.005 | 1205 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.600 | 31.504 | 0.799 |
| 1.008 | S108 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.550 | 31.501 | 1.146 |
| 16.000 | S1600 | 120 minute 100 year Winter I+45% | 120 | 18 | 32.545 | 31.504 | -0.146 |
| 16.001 | S1601 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.545 | 31.501 | 0.816 |
| 1.009 | S109 | 120 minute 100 year Winter I+45% | 120 | 15 | 32.500 | 31.501 | 1.471 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.03 | | 0.341 | 3.216 | 1.1 | 1.1 | SURCHARGED |
| 1.006 | S106 | 0.000 | 0.01 | | 1.427 | 103.556 | 0.2 | 25.8 | OK |
| 9.000 | S900 | 0.000 | 0.02 | | 0.001 | 1.955 | 1.1 | 0.7 | OK |
| 10.000 | S901 | 0.000 | 0.01 | | 0.001 | 1.303 | 1.0 | 0.5 | OK |
| 9.001 | S901 | 0.000 | 0.25 | | 0.371 | 33.730 | 1.0 | 11.8 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.16 | | 1.122 | 43.746 | 1.9 | 15.7 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.21 | | 0.007 | 9.778 | 0.7 | 3.4 | OK |
| 9.003 | S903 | 0.000 | 0.23 | | 2.141 | 55.033 | 0.8 | 19.1 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 174.953 | 93.672 | 0.1 | 14.9 | OK |
| 12.000 | S1200 | 0.000 | 0.03 | | 0.002 | 2.607 | 0.9 | 0.9 | OK |
| 13.000 | S1300 | 0.000 | 0.31 | | 0.008 | 14.992 | 0.9 | 5.2 | OK |
| 13.001 | S1301 | 0.000 | 0.29 | | 0.029 | 23.466 | 1.4 | 8.2 | OK |
| 12.001 | S1201 | 0.000 | 0.24 | | 0.030 | 45.629 | 1.4 | 15.9 | OK |
| 12.002 | S1202 | 0.000 | 0.52 | | 0.797 | 62.323 | 1.1 | 21.8 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.42 | | 0.483 | 61.923 | 1.3 | 21.8 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.32 | | 0.447 | 74.564 | 1.8 | 26.0 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.29 | | 0.008 | 15.644 | 0.9 | 5.4 | OK |

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## Summary Wizard of 120 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.20 | | 0.180 | 28.029 | 1.0 | 9.8 | SURCHARGED |
| 15.000 | S1500 | 0.000 | 0.15 | | 0.005 | 5.867 | 0.6 | 2.0 | OK |
| 15.001 | S1501 | 0.000 | 0.15 | | 0.014 | 15.644 | 1.5 | 5.5 | OK |
| 14.002 | S1402 | 0.000 | 0.18 | | 1.232 | 51.622 | 2.0 | 18.2 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 0.57 | | 2.079 | 138.782 | 2.1 | 47.3 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.10 | | 172.642 | 93.253 | 0.1 | 9.6 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.11 | | 0.021 | 22.162 | 1.2 | 7.7 | OK |
| 16.001 | S1601 | 0.000 | 0.09 | | 2.004 | 23.285 | 1.3 | 7.4 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.58 | | 5.685 | 111.467 | 1.1 | 9.6 | SURCHARGED |

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## Summary Wizard of 180 minute 100 year Winter I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.680 | 31.953 | 0.033 |
| 1.001 | S101 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.680 | 31.952 | 0.102 |
| 2.000 | S200 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.600 | 31.952 | 0.322 |
| 1.002 | S102 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.630 | 31.951 | 0.506 |
| 3.000 | S300 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.550 | 31.951 | -0.049 |
| 1.003 | S103 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.600 | 31.950 | 0.675 |
| 4.000 | S400 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.550 | 31.950 | 0.100 |
| 4.001 | S401 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.550 | 31.949 | 1.199 |
| 1.004 | S104 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.600 | 31.947 | 1.417 |
| 1.005 | S105 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.600 | 31.947 | 1.437 |
| 5.000 | S500 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.550 | 31.951 | -0.049 |
| 5.001 | S501 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.665 | 31.950 | 0.660 |
| 6.000 | S600 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.665 | 31.950 | -0.050 |
| 6.001 | S601 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.665 | 31.950 | 0.660 |
| 5.002 | S502 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.665 | 31.950 | 0.900 |
| 5.003 | S503 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.680 | 31.948 | 1.093 |
| 7.000 | S700 | 180 minute 100 year Winter I+45% | 180 | 20 | 32.680 | 31.950 | -0.080 |
| 7.001 | S701 | 180 minute 100 year Winter I+45% | 180 | 15 | 32.635 | 31.949 | 0.004 |
| 5.004 | S504 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.635 | 31.947 | 1.402 |

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## Summary Wizard of 180 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.13 | | 0.028 | 9.479 | 0.7 | 2.2 | SURCHARGED |
| 1.001 | S101 | 0.000 | 0.10 | | 0.126 | 14.582 | 1.3 | 3.4 | SURCHARGED |
| 2.000 | S200 | 0.000 | 0.10 | | 0.074 | 9.478 | 0.8 | 2.2 | SURCHARGED |
| 1.002 | S102 | 0.000 | 0.13 | | 0.483 | 29.165 | 0.9 | 6.8 | SURCHARGED |
| 3.000 | S300 | 0.000 | 0.03 | | 0.015 | 5.833 | 1.2 | 1.4 | OK |
| 1.003 | S103 | 0.000 | 0.14 | | 0.950 | 53.023 | 1.6 | 12.4 | SURCHARGED |
| 4.000 | S400 | 0.000 | 0.05 | | 0.039 | 10.937 | 1.6 | 2.6 | SURCHARGED |
| 4.001 | S401 | 0.000 | 0.16 | | 0.403 | 15.119 | 0.9 | 3.4 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.36 | | 1.573 | 74.071 | 0.5 | 16.9 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.15 | | 3.586 | 75.441 | 0.4 | 17.0 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.07 | | 0.015 | 10.208 | 1.1 | 2.4 | OK |
| 5.001 | S501 | 0.000 | 0.08 | | 0.454 | 10.191 | 1.1 | 2.4 | SURCHARGED |
| 6.000 | S600 | 0.000 | 0.01 | | 0.015 | 1.458 | 0.8 | 0.3 | OK |
| 6.001 | S601 | 0.000 | 0.01 | | 0.362 | 1.444 | 0.8 | 0.3 | SURCHARGED |
| 5.002 | S502 | 0.000 | 0.17 | | 0.385 | 38.413 | 1.0 | 9.0 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.12 | | 0.959 | 42.760 | 1.4 | 9.4 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.26 | | 0.010 | 18.957 | 0.8 | 4.4 | OK |
| 7.001 | S701 | 0.000 | 0.39 | | 0.097 | 28.436 | 0.9 | 6.6 | SURCHARGED |
| 5.004 | S504 | 0.000 | 0.24 | | 3.283 | 69.315 | 0.6 | 15.0 | SURCHARGED |

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## Summary Wizard of 180 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.525 | 31.947 | 0.597 |
| 1.006 | S106 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.500 | 31.946 | 0.300 |
| 9.000 | S900 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.665 | 31.950 | -0.050 |
| 10.000 | S901 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.665 | 31.950 | -0.050 |
| 9.001 | S901 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.665 | 31.950 | 0.730 |
| 9.002 | S902 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.640 | 31.948 | 0.963 |
| 11.000 | S1100 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.680 | 31.948 | 0.248 |
| 9.003 | S903 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.630 | 31.947 | 1.452 |
| 1.007 | S107 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.500 | 31.946 | 0.410 |
| 12.000 | S1200 | 180 minute 100 year Winter I+45% | 180 | 13 | 32.635 | 31.958 | -0.042 |
| 13.000 | S1300 | 180 minute 100 year Winter I+45% | 180 | 13 | 32.635 | 31.961 | -0.039 |
| 13.001 | S1301 | 180 minute 100 year Winter I+45% | 180 | 13 | 32.635 | 31.960 | 0.050 |
| 12.001 | S1201 | 180 minute 100 year Winter I+45% | 180 | 13 | 32.635 | 31.958 | 0.323 |
| 12.002 | S1202 | 180 minute 100 year Winter I+45% | 180 | 11 | 32.680 | 31.956 | 0.696 |
| 12.003 | S1203 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.660 | 31.954 | 0.784 |
| 12.004 | S1204 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.660 | 31.952 | 0.917 |
| 14.000 | S1400 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.650 | 31.955 | 0.180 |
| 14.001 | S1401 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.680 | 31.953 | 0.458 |
| 15.000 | S1500 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.680 | 31.953 | 0.153 |
| 15.001 | S1501 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.600 | 31.953 | 0.198 |
| 14.002 | S1402 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.600 | 31.951 | 0.711 |
| 12.005 | 1205 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.600 | 31.950 | 1.245 |
| 1.008 | S108 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.550 | 31.946 | 1.591 |
| 16.000 | S1600 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.545 | 31.946 | 0.296 |
| 16.001 | S1601 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.545 | 31.944 | 1.259 |
| 1.009 | S109 | 180 minute 100 year Winter I+45% | 180 | 10 | 32.500 | 31.944 | 1.914 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.02 | | 0.839 | 3.645 | 1.1 | 0.9 | SURCHARGED |
| 1.006 | S106 | 0.000 | 0.01 | | 1.427 | 128.253 | 0.2 | 20.1 | SURCHARGED |
| 9.000 | S900 | 0.000 | 0.01 | | 0.015 | 2.187 | 1.1 | 0.5 | OK |
| 10.000 | S901 | 0.000 | 0.01 | | 0.015 | 1.458 | 0.8 | 0.3 | OK |
| 9.001 | S901 | 0.000 | 0.19 | | 0.754 | 37.794 | 0.9 | 8.9 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.12 | | 1.248 | 49.147 | 1.7 | 11.6 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.15 | | 0.062 | 10.937 | 0.7 | 2.6 | SURCHARGED |
| 9.003 | S903 | 0.000 | 0.17 | | 2.839 | 62.044 | 0.7 | 14.2 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 185.495 | 128.945 | 0.1 | 12.4 | SURCHARGED |
| 12.000 | S1200 | 0.000 | 0.02 | | 0.016 | 2.916 | 0.9 | 0.7 | OK |
| 13.000 | S1300 | 0.000 | 0.23 | | 0.017 | 16.770 | 0.8 | 3.9 | OK |
| 13.001 | S1301 | 0.000 | 0.22 | | 0.143 | 26.248 | 1.3 | 6.1 | SURCHARGED |
| 12.001 | S1201 | 0.000 | 0.18 | | 0.437 | 51.038 | 1.3 | 11.9 | SURCHARGED |
| 12.002 | S1202 | 0.000 | 0.39 | | 0.997 | 69.822 | 1.0 | 16.3 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.32 | | 0.609 | 69.472 | 1.2 | 16.3 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.24 | | 0.573 | 83.675 | 1.7 | 19.4 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.22 | | 0.052 | 17.499 | 0.9 | 4.1 | SURCHARGED |

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## Summary Wizard of 180 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.15 | | 0.574 | 31.350 | 0.9 | 7.3 | SURCHARGED |
| 15.000 | S1500 | 0.000 | 0.12 | | 0.047 | 6.562 | 0.5 | 1.5 | SURCHARGED |
| 15.001 | S1501 | 0.000 | 0.11 | | 0.106 | 17.499 | 1.4 | 4.1 | SURCHARGED |
| 14.002 | S1402 | 0.000 | 0.13 | | 1.421 | 57.972 | 1.9 | 13.6 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 0.43 | | 2.716 | 156.010 | 1.9 | 35.5 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.11 | | 176.087 | 151.211 | 0.1 | 10.6 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.08 | | 0.146 | 24.789 | 1.1 | 5.8 | SURCHARGED |
| 16.001 | S1601 | 0.000 | 0.07 | | 2.254 | 26.313 | 1.2 | 5.6 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.65 | | 6.811 | 172.541 | 1.2 | 10.7 | SURCHARGED |

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## Summary Wizard of 240 minute 100 year Winter I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.680 | 32.333 | 0.413 |
| 1.001 | S101 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.680 | 32.332 | 0.482 |
| 2.000 | S200 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.600 | 32.332 | 0.702 |
| 1.002 | S102 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.630 | 32.331 | 0.886 |
| 3.000 | S300 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.550 | 32.331 | 0.331 |
| 1.003 | S103 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.600 | 32.330 | 1.055 |
| 4.000 | S400 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.550 | 32.330 | 0.480 |
| 4.001 | S401 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.550 | 32.329 | 1.579 |
| 1.004 | S104 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.600 | 32.327 | 1.797 |
| 1.005 | S105 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.600 | 32.326 | 1.816 |
| 5.000 | S500 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.550 | 32.331 | 0.331 |
| 5.001 | S501 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.665 | 32.330 | 1.040 |
| 6.000 | S600 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.665 | 32.330 | 0.330 |
| 6.001 | S601 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.665 | 32.330 | 1.040 |
| 5.002 | S502 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.665 | 32.330 | 1.280 |
| 5.003 | S503 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.680 | 32.328 | 1.473 |
| 7.000 | S700 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.680 | 32.330 | 0.300 |
| 7.001 | S701 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.635 | 32.329 | 0.384 |
| 5.004 | S504 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.635 | 32.327 | 1.782 |

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## Summary Wizard of 240 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.11 | | 0.089 | 10.200 | 0.6 | 1.8 | SURCHARGED |
| 1.001 | S101 | 0.000 | 0.08 | | 0.187 | 15.693 | 1.2 | 2.8 | SURCHARGED |
| 2.000 | S200 | 0.000 | 0.08 | | 0.135 | 10.200 | 0.8 | 1.8 | FLOOD RISK |
| 1.002 | S102 | 0.000 | 0.11 | | 0.590 | 31.386 | 0.9 | 5.5 | FLOOD RISK |
| 3.000 | S300 | 0.000 | 0.03 | | 0.076 | 6.277 | 1.2 | 1.1 | FLOOD RISK |
| 1.003 | S103 | 0.000 | 0.12 | | 1.060 | 57.241 | 1.5 | 10.0 | FLOOD RISK |
| 4.000 | S400 | 0.000 | 0.04 | | 0.099 | 11.769 | 1.5 | 2.1 | FLOOD RISK |
| 4.001 | S401 | 0.000 | 0.13 | | 0.464 | 16.319 | 0.8 | 2.8 | FLOOD RISK |
| 1.004 | S104 | 0.000 | 0.29 | | 1.680 | 80.144 | 0.5 | 13.7 | FLOOD RISK |
| 1.005 | S105 | 0.000 | 0.12 | | 4.257 | 81.973 | 0.4 | 13.8 | FLOOD RISK |
| 5.000 | S500 | 0.000 | 0.06 | | 0.076 | 10.985 | 1.1 | 1.9 | FLOOD RISK |
| 5.001 | S501 | 0.000 | 0.06 | | 0.518 | 10.985 | 1.0 | 1.9 | SURCHARGED |
| 6.000 | S600 | 0.000 | 0.01 | | 0.075 | 1.569 | 0.6 | 0.3 | SURCHARGED |
| 6.001 | S601 | 0.000 | 0.01 | | 0.426 | 1.569 | 0.6 | 0.3 | SURCHARGED |
| 5.002 | S502 | 0.000 | 0.14 | | 0.492 | 41.450 | 0.9 | 7.2 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.10 | | 1.066 | 46.217 | 1.3 | 7.6 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.21 | | 0.071 | 20.401 | 0.8 | 3.6 | SURCHARGED |
| 7.001 | S701 | 0.000 | 0.31 | | 0.195 | 30.601 | 0.9 | 5.4 | SURCHARGED |
| 5.004 | S504 | 0.000 | 0.20 | | 3.972 | 75.117 | 0.6 | 12.3 | SURCHARGED |

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## Summary Wizard of 240 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.525 | 32.327 | 0.977 |
| 1.006 | S106 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.500 | 32.326 | 0.680 |
| 9.000 | S900 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.665 | 32.330 | 0.330 |
| 10.000 | S901 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.665 | 32.330 | 0.330 |
| 9.001 | S901 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.665 | 32.330 | 1.110 |
| 9.002 | S902 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.640 | 32.328 | 1.343 |
| 11.000 | S1100 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.680 | 32.328 | 0.628 |
| 9.003 | S903 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.630 | 32.327 | 1.832 |
| 1.007 | S107 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.500 | 32.326 | 0.790 |
| 12.000 | S1200 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.635 | 32.339 | 0.339 |
| 13.000 | S1300 | 240 minute 100 year Winter I+45% | 240 | 2 | 32.635 | 32.342 | 0.342 |
| 13.001 | S1301 | 240 minute 100 year Winter I+45% | 240 | 2 | 32.635 | 32.341 | 0.431 |
| 12.001 | S1201 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.635 | 32.339 | 0.704 |
| 12.002 | S1202 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.680 | 32.336 | 1.076 |
| 12.003 | S1203 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.660 | 32.334 | 1.164 |
| 12.004 | S1204 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.660 | 32.332 | 1.297 |
| 14.000 | S1400 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.650 | 32.335 | 0.560 |
| 14.001 | S1401 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.680 | 32.333 | 0.838 |
| 15.000 | S1500 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.680 | 32.333 | 0.533 |
| 15.001 | S1501 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.600 | 32.333 | 0.578 |
| 14.002 | S1402 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.600 | 32.331 | 1.091 |
| 12.005 | 1205 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.600 | 32.330 | 1.625 |
| 1.008 | S108 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.550 | 32.326 | 1.971 |
| 16.000 | S1600 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.545 | 32.326 | 0.676 |
| 16.001 | S1601 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.545 | 32.324 | 1.639 |
| 1.009 | S109 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.500 | 32.323 | 2.293 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.02 | | 1.269 | 3.923 | 1.1 | 0.7 | FLOOD RISK |
| 1.006 | S106 | 0.000 | 0.01 | | 1.427 | 150.594 | 0.1 | 16.9 | FLOOD RISK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.076 | 2.354 | 0.9 | 0.4 | SURCHARGED |
| 10.000 | S901 | 0.000 | 0.01 | | 0.076 | 1.569 | 0.6 | 0.3 | SURCHARGED |
| 9.001 | S901 | 0.000 | 0.15 | | 0.872 | 40.757 | 0.9 | 7.2 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.09 | | 1.355 | 53.224 | 1.6 | 9.2 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.13 | | 0.123 | 11.770 | 0.7 | 2.1 | SURCHARGED |
| 9.003 | S903 | 0.000 | 0.14 | | 3.382 | 67.377 | 0.7 | 11.3 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 185.558 | 163.295 | 0.1 | 10.8 | FLOOD RISK |
| 12.000 | S1200 | 0.000 | 0.02 | | 0.077 | 3.138 | 0.9 | 0.6 | FLOOD RISK |
| 13.000 | S1300 | 0.000 | 0.19 | | 0.077 | 18.047 | 0.7 | 3.2 | FLOOD RISK |
| 13.001 | S1301 | 0.000 | 0.18 | | 0.211 | 28.247 | 1.2 | 5.0 | FLOOD RISK |
| 12.001 | S1201 | 0.000 | 0.15 | | 0.550 | 54.925 | 1.2 | 9.6 | FLOOD RISK |
| 12.002 | S1202 | 0.000 | 0.31 | | 1.104 | 75.285 | 0.9 | 13.2 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.26 | | 0.716 | 75.098 | 1.1 | 13.2 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.19 | | 0.680 | 90.470 | 1.6 | 15.6 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.17 | | 0.112 | 18.831 | 0.8 | 3.3 | SURCHARGED |

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## Summary Wizard of 240 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.12 | | 0.682 | 33.739 | 0.8 | 5.9 | SURCHARGED |
| 15.000 | S1500 | 0.000 | 0.09 | | 0.108 | 7.062 | 0.5 | 1.2 | SURCHARGED |
| 15.001 | S1501 | 0.000 | 0.09 | | 0.167 | 18.831 | 1.3 | 3.3 | FLOOD RISK |
| 14.002 | S1402 | 0.000 | 0.11 | | 1.528 | 62.691 | 1.7 | 11.0 | FLOOD RISK |
| 12.005 | 1205 | 0.000 | 0.34 | | 3.260 | 168.920 | 1.8 | 28.7 | FLOOD RISK |
| 1.008 | S108 | 0.000 | 0.12 | | 176.758 | 210.038 | 0.2 | 11.2 | FLOOD RISK |
| 16.000 | S1600 | 0.000 | 0.07 | | 0.253 | 26.678 | 1.1 | 4.7 | FLOOD RISK |
| 16.001 | S1601 | 0.000 | 0.05 | | 2.361 | 28.649 | 1.2 | 4.5 | FLOOD RISK |
| 1.009 | S109 | 0.000 | 0.70 | | 7.777 | 233.965 | 1.2 | 11.6 | FLOOD RISK |

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## Summary Wizard of 360 minute 100 year Winter I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.680 | 32.307 | 0.387 |
| 1.001 | S101 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.680 | 32.307 | 0.457 |
| 2.000 | S200 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.600 | 32.307 | 0.677 |
| 1.002 | S102 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.630 | 32.306 | 0.861 |
| 3.000 | S300 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.550 | 32.305 | 0.305 |
| 1.003 | S103 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.600 | 32.305 | 1.030 |
| 4.000 | S400 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.550 | 32.304 | 0.454 |
| 4.001 | S401 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.550 | 32.303 | 1.553 |
| 1.004 | S104 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.600 | 32.302 | 1.772 |
| 1.005 | S105 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.600 | 32.301 | 1.791 |
| 5.000 | S500 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.550 | 32.306 | 0.306 |
| 5.001 | S501 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.665 | 32.305 | 1.015 |
| 6.000 | S600 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.665 | 32.304 | 0.304 |
| 6.001 | S601 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.665 | 32.304 | 1.014 |
| 5.002 | S502 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.665 | 32.304 | 1.254 |
| 5.003 | S503 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.680 | 32.302 | 1.447 |
| 7.000 | S700 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.680 | 32.304 | 0.274 |
| 7.001 | S701 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.635 | 32.303 | 0.358 |
| 5.004 | S504 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.635 | 32.302 | 1.757 |

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## Summary Wizard of 360 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.08 | | 0.085 | 11.215 | 0.6 | 1.3 | SURCHARGED |
| 1.001 | S101 | 0.000 | 0.06 | | 0.183 | 17.253 | 1.2 | 2.0 | SURCHARGED |
| 2.000 | S200 | 0.000 | 0.06 | | 0.131 | 11.215 | 0.8 | 1.3 | FLOOD RISK |
| 1.002 | S102 | 0.000 | 0.08 | | 0.583 | 34.507 | 0.8 | 4.0 | SURCHARGED |
| 3.000 | S300 | 0.000 | 0.02 | | 0.072 | 6.901 | 1.2 | 0.8 | FLOOD RISK |
| 1.003 | S103 | 0.000 | 0.08 | | 1.053 | 62.975 | 1.4 | 7.4 | FLOOD RISK |
| 4.000 | S400 | 0.000 | 0.03 | | 0.095 | 12.940 | 1.5 | 1.5 | FLOOD RISK |
| 4.001 | S401 | 0.000 | 0.10 | | 0.460 | 18.044 | 0.7 | 2.0 | FLOOD RISK |
| 1.004 | S104 | 0.000 | 0.21 | | 1.673 | 88.736 | 0.4 | 10.1 | FLOOD RISK |
| 1.005 | S105 | 0.000 | 0.09 | | 4.212 | 91.393 | 0.4 | 10.2 | FLOOD RISK |
| 5.000 | S500 | 0.000 | 0.04 | | 0.072 | 12.077 | 1.0 | 1.4 | FLOOD RISK |
| 5.001 | S501 | 0.000 | 0.05 | | 0.514 | 12.077 | 1.0 | 1.4 | SURCHARGED |
| 6.000 | S600 | 0.000 | 0.01 | | 0.071 | 1.725 | 0.4 | 0.2 | SURCHARGED |
| 6.001 | S601 | 0.000 | 0.01 | | 0.422 | 1.725 | 0.4 | 0.2 | SURCHARGED |
| 5.002 | S502 | 0.000 | 0.10 | | 0.485 | 45.713 | 0.8 | 5.3 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.07 | | 1.059 | 51.384 | 1.2 | 5.7 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.15 | | 0.067 | 22.430 | 0.7 | 2.6 | SURCHARGED |
| 7.001 | S701 | 0.000 | 0.23 | | 0.191 | 33.644 | 0.8 | 3.9 | SURCHARGED |
| 5.004 | S504 | 0.000 | 0.15 | | 3.927 | 83.763 | 0.5 | 9.2 | SURCHARGED |

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## Summary Wizard of 360 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.525 | 32.301 | 0.951 |
| 1.006 | S106 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.500 | 32.301 | 0.655 |
| 9.000 | S900 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.665 | 32.305 | 0.305 |
| 10.000 | S901 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.665 | 32.305 | 0.305 |
| 9.001 | S901 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.665 | 32.305 | 1.085 |
| 9.002 | S902 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.640 | 32.303 | 1.318 |
| 11.000 | S1100 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.680 | 32.302 | 0.602 |
| 9.003 | S903 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.630 | 32.302 | 1.807 |
| 1.007 | S107 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.500 | 32.301 | 0.765 |
| 12.000 | S1200 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.635 | 32.313 | 0.313 |
| 13.000 | S1300 | 360 minute 100 year Winter I+45% | 360 | 4 | 32.635 | 32.316 | 0.316 |
| 13.001 | S1301 | 360 minute 100 year Winter I+45% | 360 | 3 | 32.635 | 32.315 | 0.405 |
| 12.001 | S1201 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.635 | 32.313 | 0.678 |
| 12.002 | S1202 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.680 | 32.311 | 1.051 |
| 12.003 | S1203 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.660 | 32.309 | 1.139 |
| 12.004 | S1204 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.660 | 32.307 | 1.272 |
| 14.000 | S1400 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.650 | 32.310 | 0.535 |
| 14.001 | S1401 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.680 | 32.308 | 0.813 |
| 15.000 | S1500 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.680 | 32.308 | 0.508 |
| 15.001 | S1501 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.600 | 32.307 | 0.552 |
| 14.002 | S1402 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.600 | 32.306 | 1.066 |
| 12.005 | 1205 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.600 | 32.304 | 1.599 |
| 1.008 | S108 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.550 | 32.301 | 1.946 |
| 16.000 | S1600 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.545 | 32.301 | 0.651 |
| 16.001 | S1601 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.545 | 32.299 | 1.614 |
| 1.009 | S109 | 360 minute 100 year Winter I+45% | 360 | 2 | 32.500 | 32.298 | 2.268 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 1.240 | 4.313 | 1.1 | 0.5 | FLOOD RISK |
| 1.006 | S106 | 0.000 | 0.01 | | 1.427 | 188.681 | 0.1 | 13.1 | FLOOD RISK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.072 | 2.588 | 0.7 | 0.3 | SURCHARGED |
| 10.000 | S901 | 0.000 | 0.01 | | 0.072 | 1.725 | 0.4 | 0.2 | SURCHARGED |
| 9.001 | S901 | 0.000 | 0.11 | | 0.865 | 44.858 | 0.8 | 5.3 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.07 | | 1.348 | 59.436 | 1.5 | 6.6 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.09 | | 0.119 | 12.940 | 0.6 | 1.5 | SURCHARGED |
| 9.003 | S903 | 0.000 | 0.10 | | 3.346 | 75.528 | 0.6 | 8.2 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 185.554 | 224.838 | 0.1 | 9.4 | FLOOD RISK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.073 | 3.450 | 0.9 | 0.4 | SURCHARGED |
| 13.000 | S1300 | 0.000 | 0.14 | | 0.073 | 19.842 | 0.7 | 2.3 | SURCHARGED |
| 13.001 | S1301 | 0.000 | 0.13 | | 0.207 | 31.056 | 1.1 | 3.6 | SURCHARGED |
| 12.001 | S1201 | 0.000 | 0.11 | | 0.543 | 60.387 | 1.1 | 7.1 | SURCHARGED |
| 12.002 | S1202 | 0.000 | 0.23 | | 1.097 | 82.817 | 0.9 | 9.7 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.19 | | 0.709 | 82.816 | 1.0 | 9.7 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.14 | | 0.673 | 100.046 | 1.5 | 11.4 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.13 | | 0.108 | 20.704 | 0.8 | 2.4 | SURCHARGED |

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## Summary Wizard of 360 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.09 | | 0.675 | 37.093 | 0.8 | 4.3 | SURCHARGED |
| 15.000 | S1500 | 0.000 | 0.07 | | 0.104 | 7.764 | 0.5 | 0.9 | SURCHARGED |
| 15.001 | S1501 | 0.000 | 0.07 | | 0.162 | 20.704 | 1.2 | 2.4 | FLOOD RISK |
| 14.002 | S1402 | 0.000 | 0.08 | | 1.521 | 69.012 | 1.6 | 8.1 | FLOOD RISK |
| 12.005 | 1205 | 0.000 | 0.25 | | 3.224 | 187.105 | 1.7 | 21.1 | FLOOD RISK |
| 1.008 | S108 | 0.000 | 0.12 | | 176.714 | 317.301 | 0.2 | 11.0 | FLOOD RISK |
| 16.000 | S1600 | 0.000 | 0.05 | | 0.246 | 29.332 | 1.0 | 3.4 | FLOOD RISK |
| 16.001 | S1601 | 0.000 | 0.04 | | 2.354 | 32.154 | 1.1 | 3.3 | FLOOD RISK |
| 1.009 | S109 | 0.000 | 0.70 | | 7.712 | 345.366 | 1.2 | 11.6 | FLOOD RISK |

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## Summary Wizard of 480 minute 100 year Winter I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.680 | 32.270 | 0.350 |
| 1.001 | S101 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.680 | 32.269 | 0.419 |
| 2.000 | S200 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.600 | 32.269 | 0.639 |
| 1.002 | S102 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.630 | 32.268 | 0.823 |
| 3.000 | S300 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.550 | 32.267 | 0.267 |
| 1.003 | S103 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.600 | 32.267 | 0.992 |
| 4.000 | S400 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.550 | 32.266 | 0.416 |
| 4.001 | S401 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.550 | 32.265 | 1.515 |
| 1.004 | S104 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.600 | 32.264 | 1.734 |
| 1.005 | S105 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.600 | 32.263 | 1.753 |
| 5.000 | S500 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.550 | 32.268 | 0.268 |
| 5.001 | S501 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.665 | 32.267 | 0.977 |
| 6.000 | S600 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.665 | 32.266 | 0.266 |
| 6.001 | S601 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.665 | 32.266 | 0.976 |
| 5.002 | S502 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.665 | 32.266 | 1.216 |
| 5.003 | S503 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.680 | 32.265 | 1.410 |
| 7.000 | S700 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.680 | 32.267 | 0.237 |
| 7.001 | S701 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.635 | 32.265 | 0.320 |
| 5.004 | S504 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.635 | 32.264 | 1.719 |

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## Summary Wizard of 480 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.06 | | 0.079 | 12.002 | 0.6 | 1.1 | SURCHARGED |
| 1.001 | S101 | 0.000 | 0.05 | | 0.177 | 18.465 | 1.1 | 1.6 | SURCHARGED |
| 2.000 | S200 | 0.000 | 0.05 | | 0.125 | 12.002 | 0.7 | 1.1 | SURCHARGED |
| 1.002 | S102 | 0.000 | 0.06 | | 0.572 | 36.930 | 0.8 | 3.2 | SURCHARGED |
| 3.000 | S300 | 0.000 | 0.02 | | 0.066 | 7.386 | 1.2 | 0.6 | FLOOD RISK |
| 1.003 | S103 | 0.000 | 0.07 | | 1.042 | 67.397 | 1.3 | 5.9 | SURCHARGED |
| 4.000 | S400 | 0.000 | 0.02 | | 0.089 | 13.849 | 1.5 | 1.2 | FLOOD RISK |
| 4.001 | S401 | 0.000 | 0.08 | | 0.454 | 19.386 | 0.7 | 1.6 | FLOOD RISK |
| 1.004 | S104 | 0.000 | 0.17 | | 1.663 | 95.531 | 0.4 | 8.1 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.07 | | 4.145 | 98.917 | 0.4 | 8.2 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.04 | | 0.066 | 12.926 | 0.9 | 1.1 | FLOOD RISK |
| 5.001 | S501 | 0.000 | 0.04 | | 0.508 | 12.925 | 0.9 | 1.1 | SURCHARGED |
| 6.000 | S600 | 0.000 | 0.00 | | 0.065 | 1.846 | 0.4 | 0.2 | SURCHARGED |
| 6.001 | S601 | 0.000 | 0.01 | | 0.416 | 1.846 | 0.4 | 0.2 | SURCHARGED |
| 5.002 | S502 | 0.000 | 0.08 | | 0.474 | 48.932 | 0.8 | 4.2 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.06 | | 1.049 | 55.395 | 1.1 | 4.6 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.12 | | 0.061 | 24.005 | 0.7 | 2.1 | SURCHARGED |
| 7.001 | S701 | 0.000 | 0.18 | | 0.185 | 36.007 | 0.8 | 3.2 | SURCHARGED |
| 5.004 | S504 | 0.000 | 0.12 | | 3.860 | 90.651 | 0.5 | 7.4 | SURCHARGED |

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## Summary Wizard of 480 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.525 | 32.263 | 0.913 |
| 1.006 | S106 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.500 | 32.263 | 0.617 |
| 9.000 | S900 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.665 | 32.267 | 0.267 |
| 10.000 | S901 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.665 | 32.267 | 0.267 |
| 9.001 | S901 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.665 | 32.267 | 1.047 |
| 9.002 | S902 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.640 | 32.265 | 1.280 |
| 11.000 | S1100 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.680 | 32.264 | 0.564 |
| 9.003 | S903 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.630 | 32.264 | 1.769 |
| 1.007 | S107 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.500 | 32.263 | 0.727 |
| 12.000 | S1200 | 480 minute 100 year Winter I+45% | 480 | 4 | 32.635 | 32.276 | 0.276 |
| 13.000 | S1300 | 480 minute 100 year Winter I+45% | 480 | 5 | 32.635 | 32.279 | 0.279 |
| 13.001 | S1301 | 480 minute 100 year Winter I+45% | 480 | 4 | 32.635 | 32.277 | 0.367 |
| 12.001 | S1201 | 480 minute 100 year Winter I+45% | 480 | 4 | 32.635 | 32.275 | 0.640 |
| 12.002 | S1202 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.680 | 32.273 | 1.013 |
| 12.003 | S1203 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.660 | 32.271 | 1.101 |
| 12.004 | S1204 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.660 | 32.269 | 1.234 |
| 14.000 | S1400 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.650 | 32.272 | 0.497 |
| 14.001 | S1401 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.680 | 32.270 | 0.775 |
| 15.000 | S1500 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.680 | 32.270 | 0.470 |
| 15.001 | S1501 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.600 | 32.269 | 0.514 |
| 14.002 | S1402 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.600 | 32.268 | 1.028 |
| 12.005 | 1205 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.600 | 32.266 | 1.561 |
| 1.008 | S108 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.550 | 32.263 | 1.908 |
| 16.000 | S1600 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.545 | 32.263 | 0.613 |
| 16.001 | S1601 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.545 | 32.261 | 1.576 |
| 1.009 | S109 | 480 minute 100 year Winter I+45% | 480 | 3 | 32.500 | 32.260 | 2.230 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 1.197 | 4.616 | 0.9 | 0.4 | FLOOD RISK |
| 1.006 | S106 | 0.000 | 0.00 | | 1.427 | 221.575 | 0.1 | 11.0 | FLOOD RISK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.066 | 2.769 | 0.5 | 0.2 | SURCHARGED |
| 10.000 | S901 | 0.000 | 0.00 | | 0.066 | 1.846 | 0.4 | 0.2 | SURCHARGED |
| 9.001 | S901 | 0.000 | 0.09 | | 0.854 | 48.008 | 0.7 | 4.2 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.05 | | 1.337 | 63.704 | 1.4 | 5.3 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.07 | | 0.113 | 13.849 | 0.6 | 1.2 | SURCHARGED |
| 9.003 | S903 | 0.000 | 0.08 | | 3.292 | 81.465 | 0.6 | 6.5 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 185.548 | 278.371 | 0.1 | 8.6 | FLOOD RISK |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.067 | 3.692 | 0.7 | 0.3 | SURCHARGED |
| 13.000 | S1300 | 0.000 | 0.11 | | 0.067 | 21.235 | 0.6 | 1.9 | SURCHARGED |
| 13.001 | S1301 | 0.000 | 0.10 | | 0.201 | 33.238 | 1.0 | 2.9 | SURCHARGED |
| 12.001 | S1201 | 0.000 | 0.09 | | 0.532 | 64.628 | 1.0 | 5.7 | SURCHARGED |
| 12.002 | S1202 | 0.000 | 0.18 | | 1.087 | 88.633 | 0.8 | 7.8 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.15 | | 0.699 | 88.633 | 1.0 | 7.8 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.11 | | 0.662 | 107.098 | 1.4 | 9.2 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.10 | | 0.102 | 22.158 | 0.7 | 1.9 | SURCHARGED |

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## Summary Wizard of 480 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.07 | | 0.664 | 39.701 | 0.7 | 3.5 | SURCHARGED |
| 15.000 | S1500 | 0.000 | 0.05 | | 0.098 | 8.309 | 0.4 | 0.7 | SURCHARGED |
| 15.001 | S1501 | 0.000 | 0.05 | | 0.156 | 22.158 | 1.2 | 1.9 | SURCHARGED |
| 14.002 | S1402 | 0.000 | 0.06 | | 1.510 | 73.861 | 1.6 | 6.5 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 0.20 | | 3.170 | 201.028 | 1.6 | 17.0 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.12 | | 176.647 | 411.534 | 0.2 | 11.0 | FLOOD RISK |
| 16.000 | S1600 | 0.000 | 0.04 | | 0.235 | 31.392 | 1.0 | 2.8 | FLOOD RISK |
| 16.001 | S1601 | 0.000 | 0.03 | | 2.343 | 34.950 | 1.1 | 2.7 | FLOOD RISK |
| 1.009 | S109 | 0.000 | 0.69 | | 7.616 | 443.022 | 1.2 | 11.5 | FLOOD RISK |

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## Summary Wizard of 600 minute 100 year Winter I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.680 | 32.105 | 0.185 |
| 1.001 | S101 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.680 | 32.104 | 0.254 |
| 2.000 | S200 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.600 | 32.104 | 0.474 |
| 1.002 | S102 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.630 | 32.103 | 0.658 |
| 3.000 | S300 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.550 | 32.103 | 0.103 |
| 1.003 | S103 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.600 | 32.102 | 0.827 |
| 4.000 | S400 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.550 | 32.102 | 0.252 |
| 4.001 | S401 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.550 | 32.101 | 1.351 |
| 1.004 | S104 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.600 | 32.099 | 1.569 |
| 1.005 | S105 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.600 | 32.099 | 1.589 |
| 5.000 | S500 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.550 | 32.103 | 0.103 |
| 5.001 | S501 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.665 | 32.102 | 0.812 |
| 6.000 | S600 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.665 | 32.102 | 0.102 |
| 6.001 | S601 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.665 | 32.102 | 0.812 |
| 5.002 | S502 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.665 | 32.102 | 1.052 |
| 5.003 | S503 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.680 | 32.100 | 1.245 |
| 7.000 | S700 | 600 minute 100 year Winter I+45% | 600 | 11 | 32.680 | 32.102 | 0.072 |
| 7.001 | S701 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.635 | 32.101 | 0.156 |
| 5.004 | S504 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.635 | 32.099 | 1.554 |

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## Summary Wizard of 600 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.05 | | 0.052 | 12.641 | 0.5 | 0.9 | SURCHARGED |
| 1.001 | S101 | 0.000 | 0.04 | | 0.151 | 19.447 | 1.1 | 1.4 | SURCHARGED |
| 2.000 | S200 | 0.000 | 0.04 | | 0.098 | 12.641 | 0.7 | 0.9 | SURCHARGED |
| 1.002 | S102 | 0.000 | 0.05 | | 0.526 | 38.895 | 0.7 | 2.7 | SURCHARGED |
| 3.000 | S300 | 0.000 | 0.01 | | 0.039 | 7.779 | 1.2 | 0.5 | SURCHARGED |
| 1.003 | S103 | 0.000 | 0.06 | | 0.996 | 70.983 | 1.3 | 5.0 | SURCHARGED |
| 4.000 | S400 | 0.000 | 0.02 | | 0.063 | 14.585 | 1.5 | 1.0 | SURCHARGED |
| 4.001 | S401 | 0.000 | 0.07 | | 0.428 | 20.419 | 0.7 | 1.4 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.15 | | 1.616 | 101.053 | 0.4 | 6.8 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.06 | | 3.854 | 105.203 | 0.3 | 6.9 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.03 | | 0.039 | 13.613 | 0.9 | 1.0 | SURCHARGED |
| 5.001 | S501 | 0.000 | 0.03 | | 0.482 | 13.613 | 0.9 | 1.0 | SURCHARGED |
| 6.000 | S600 | 0.000 | 0.00 | | 0.039 | 1.944 | 0.3 | 0.1 | SURCHARGED |
| 6.001 | S601 | 0.000 | 0.00 | | 0.389 | 1.944 | 0.3 | 0.1 | SURCHARGED |
| 5.002 | S502 | 0.000 | 0.07 | | 0.428 | 51.535 | 0.8 | 3.6 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.05 | | 1.002 | 58.342 | 1.1 | 3.9 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.10 | | 0.035 | 25.282 | 0.6 | 1.8 | SURCHARGED |
| 7.001 | S701 | 0.000 | 0.16 | | 0.158 | 37.923 | 0.7 | 2.7 | SURCHARGED |
| 5.004 | S504 | 0.000 | 0.10 | | 3.570 | 96.002 | 0.5 | 6.3 | SURCHARGED |

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## Summary Wizard of 600 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.525 | 32.099 | 0.749 |
| 1.006 | S106 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.500 | 32.098 | 0.452 |
| 9.000 | S900 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.665 | 32.102 | 0.102 |
| 10.000 | S901 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.665 | 32.102 | 0.102 |
| 9.001 | S901 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.665 | 32.102 | 0.882 |
| 9.002 | S902 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.640 | 32.100 | 1.115 |
| 11.000 | S1100 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.680 | 32.100 | 0.400 |
| 9.003 | S903 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.630 | 32.099 | 1.604 |
| 1.007 | S107 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.500 | 32.099 | 0.563 |
| 12.000 | S1200 | 600 minute 100 year Winter I+45% | 600 | 9 | 32.635 | 32.111 | 0.111 |
| 13.000 | S1300 | 600 minute 100 year Winter I+45% | 600 | 11 | 32.635 | 32.113 | 0.113 |
| 13.001 | S1301 | 600 minute 100 year Winter I+45% | 600 | 11 | 32.635 | 32.112 | 0.202 |
| 12.001 | S1201 | 600 minute 100 year Winter I+45% | 600 | 9 | 32.635 | 32.110 | 0.475 |
| 12.002 | S1202 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.680 | 32.108 | 0.848 |
| 12.003 | S1203 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.660 | 32.106 | 0.936 |
| 12.004 | S1204 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.660 | 32.104 | 1.069 |
| 14.000 | S1400 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.650 | 32.107 | 0.332 |
| 14.001 | S1401 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.680 | 32.105 | 0.610 |
| 15.000 | S1500 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.680 | 32.105 | 0.305 |
| 15.001 | S1501 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.600 | 32.105 | 0.350 |
| 14.002 | S1402 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.600 | 32.103 | 0.863 |
| 12.005 | 1205 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.600 | 32.102 | 1.397 |
| 1.008 | S108 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.550 | 32.099 | 1.744 |
| 16.000 | S1600 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.545 | 32.098 | 0.448 |
| 16.001 | S1601 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.545 | 32.096 | 1.411 |
| 1.009 | S109 | 600 minute 100 year Winter I+45% | 600 | 8 | 32.500 | 32.096 | 2.066 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 1.011 | 4.861 | 0.8 | 0.3 | SURCHARGED |
| 1.006 | S106 | 0.000 | 0.00 | | 1.427 | 249.830 | 0.1 | 9.7 | SURCHARGED |
| 9.000 | S900 | 0.000 | 0.01 | | 0.039 | 2.916 | 0.5 | 0.2 | SURCHARGED |
| 10.000 | S901 | 0.000 | 0.00 | | 0.039 | 1.944 | 0.3 | 0.1 | SURCHARGED |
| 9.001 | S901 | 0.000 | 0.07 | | 0.808 | 50.564 | 0.7 | 3.6 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.05 | | 1.291 | 67.094 | 1.4 | 4.4 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.06 | | 0.087 | 14.586 | 0.6 | 1.0 | SURCHARGED |
| 9.003 | S903 | 0.000 | 0.07 | | 3.057 | 86.247 | 0.6 | 5.5 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 185.520 | 324.769 | 0.1 | 7.8 | SURCHARGED |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.041 | 3.889 | 0.6 | 0.3 | SURCHARGED |
| 13.000 | S1300 | 0.000 | 0.09 | | 0.041 | 22.365 | 0.6 | 1.6 | SURCHARGED |
| 13.001 | S1301 | 0.000 | 0.09 | | 0.175 | 35.006 | 1.0 | 2.5 | SURCHARGED |
| 12.001 | S1201 | 0.000 | 0.07 | | 0.485 | 68.066 | 1.0 | 4.8 | SURCHARGED |
| 12.002 | S1202 | 0.000 | 0.16 | | 1.040 | 93.348 | 0.8 | 6.6 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.13 | | 0.652 | 93.348 | 0.9 | 6.6 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.10 | | 0.616 | 112.795 | 1.3 | 7.7 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.09 | | 0.076 | 23.337 | 0.7 | 1.6 | SURCHARGED |

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## Summary Wizard of 600 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.06 | | 0.617 | 41.811 | 0.7 | 2.9 | SURCHARGED |
| 15.000 | S1500 | 0.000 | 0.05 | | 0.072 | 8.751 | 0.4 | 0.6 | SURCHARGED |
| 15.001 | S1501 | 0.000 | 0.05 | | 0.130 | 23.337 | 1.1 | 1.6 | SURCHARGED |
| 14.002 | S1402 | 0.000 | 0.05 | | 1.464 | 77.789 | 1.5 | 5.5 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 0.17 | | 2.934 | 211.977 | 1.5 | 14.3 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.11 | | 176.356 | 493.099 | 0.2 | 10.6 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.03 | | 0.189 | 33.060 | 0.9 | 2.3 | SURCHARGED |
| 16.001 | S1601 | 0.000 | 0.03 | | 2.296 | 36.950 | 1.1 | 2.3 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.67 | | 7.198 | 527.273 | 1.2 | 11.1 | SURCHARGED |

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## Summary Wizard of 720 minute 100 year Winter I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.680 | 31.867 | -0.053 |
| 1.001 | S101 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.680 | 31.867 | 0.017 |
| 2.000 | S200 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.600 | 31.867 | 0.237 |
| 1.002 | S102 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.630 | 31.866 | 0.421 |
| 3.000 | S300 | 720 minute 100 year Winter I+45% | 720 | 44 | 32.550 | 31.865 | -0.135 |
| 1.003 | S103 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.600 | 31.865 | 0.590 |
| 4.000 | S400 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.550 | 31.864 | 0.014 |
| 4.001 | S401 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.550 | 31.863 | 1.113 |
| 1.004 | S104 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.600 | 31.862 | 1.332 |
| 1.005 | S105 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.600 | 31.861 | 1.351 |
| 5.000 | S500 | 720 minute 100 year Winter I+45% | 720 | 60 | 32.550 | 31.867 | -0.133 |
| 5.001 | S501 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.665 | 31.865 | 0.575 |
| 6.000 | S600 | 720 minute 100 year Winter I+45% | 720 | 18 | 32.665 | 31.864 | -0.136 |
| 6.001 | S601 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.665 | 31.864 | 0.574 |
| 5.002 | S502 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.665 | 31.864 | 0.814 |
| 5.003 | S503 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.680 | 31.863 | 1.008 |
| 7.000 | S700 | 720 minute 100 year Winter I+45% | 720 | 63 | 32.680 | 31.910 | -0.120 |
| 7.001 | S701 | 720 minute 100 year Winter I+45% | 720 | 29 | 32.635 | 31.863 | -0.082 |
| 5.004 | S504 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.635 | 31.862 | 1.317 |

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## Summary Wizard of 720 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.05 | | 0.015 | 13.181 | 0.5 | 0.8 | OK |
| 1.001 | S101 | 0.000 | 0.03 | | 0.093 | 20.279 | 1.0 | 1.2 | SURCHARGED |
| 2.000 | S200 | 0.000 | 0.03 | | 0.061 | 13.181 | 0.6 | 0.8 | SURCHARGED |
| 1.002 | S102 | 0.000 | 0.05 | | 0.458 | 40.557 | 0.7 | 2.4 | SURCHARGED |
| 3.000 | S300 | 0.000 | 0.01 | | 0.002 | 8.111 | 1.1 | 0.5 | OK |
| 1.003 | S103 | 0.000 | 0.05 | | 0.911 | 74.016 | 1.2 | 4.3 | SURCHARGED |
| 4.000 | S400 | 0.000 | 0.02 | | 0.025 | 15.209 | 1.5 | 0.9 | SURCHARGED |
| 4.001 | S401 | 0.000 | 0.06 | | 0.389 | 21.292 | 0.7 | 1.2 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.13 | | 1.549 | 105.447 | 0.4 | 5.9 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.05 | | 3.435 | 110.262 | 0.3 | 6.0 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.03 | | 0.002 | 14.195 | 0.9 | 0.8 | OK |
| 5.001 | S501 | 0.000 | 0.03 | | 0.411 | 14.195 | 0.9 | 0.8 | SURCHARGED |
| 6.000 | S600 | 0.000 | 0.00 | | 0.002 | 2.027 | 0.3 | 0.1 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.328 | 2.026 | 0.3 | 0.1 | SURCHARGED |
| 5.002 | S502 | 0.000 | 0.06 | | 0.361 | 53.737 | 0.8 | 3.1 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.04 | | 0.935 | 60.834 | 1.0 | 3.4 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.09 | | 0.004 | 26.362 | 0.6 | 1.5 | OK |
| 7.001 | S701 | 0.000 | 0.13 | | 0.036 | 39.544 | 0.7 | 2.3 | OK |
| 5.004 | S504 | 0.000 | 0.09 | | 3.117 | 100.378 | 0.5 | 5.5 | SURCHARGED |

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## Summary Wizard of 720 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.525 | 31.862 | 0.512 |
| 1.006 | S106 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.500 | 31.861 | 0.215 |
| 9.000 | S900 | 720 minute 100 year Winter I+45% | 720 | 23 | 32.665 | 31.865 | -0.135 |
| 10.000 | S901 | 720 minute 100 year Winter I+45% | 720 | 17 | 32.665 | 31.865 | -0.135 |
| 9.001 | S901 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.665 | 31.865 | 0.645 |
| 9.002 | S902 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.640 | 31.863 | 0.878 |
| 11.000 | S1100 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.680 | 31.863 | 0.163 |
| 9.003 | S903 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.630 | 31.862 | 1.367 |
| 1.007 | S107 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.500 | 31.861 | 0.325 |
| 12.000 | S1200 | 720 minute 100 year Winter I+45% | 720 | 17 | 32.635 | 31.873 | -0.127 |
| 13.000 | S1300 | 720 minute 100 year Winter I+45% | 720 | 63 | 32.635 | 31.878 | -0.122 |
| 13.001 | S1301 | 720 minute 100 year Winter I+45% | 720 | 15 | 32.635 | 31.874 | -0.036 |
| 12.001 | S1201 | 720 minute 100 year Winter I+45% | 720 | 15 | 32.635 | 31.873 | 0.238 |
| 12.002 | S1202 | 720 minute 100 year Winter I+45% | 720 | 14 | 32.680 | 31.870 | 0.610 |
| 12.003 | S1203 | 720 minute 100 year Winter I+45% | 720 | 13 | 32.660 | 31.868 | 0.698 |
| 12.004 | S1204 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.660 | 31.867 | 0.832 |
| 14.000 | S1400 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.650 | 31.869 | 0.094 |
| 14.001 | S1401 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.680 | 31.867 | 0.372 |
| 15.000 | S1500 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.680 | 31.867 | 0.067 |
| 15.001 | S1501 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.600 | 31.867 | 0.112 |
| 14.002 | S1402 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.600 | 31.866 | 0.626 |
| 12.005 | 1205 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.600 | 31.864 | 1.159 |
| 1.008 | S108 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.550 | 31.861 | 1.506 |
| 16.000 | S1600 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.545 | 31.861 | 0.211 |
| 16.001 | S1601 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.545 | 31.859 | 1.174 |
| 1.009 | S109 | 720 minute 100 year Winter I+45% | 720 | 12 | 32.500 | 31.859 | 1.829 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.743 | 5.068 | 0.7 | 0.3 | SURCHARGED |
| 1.006 | S106 | 0.000 | 0.00 | | 1.427 | 273.763 | 0.1 | 8.7 | SURCHARGED |
| 9.000 | S900 | 0.000 | 0.00 | | 0.002 | 3.041 | 0.4 | 0.2 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.002 | 2.027 | 0.3 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.06 | | 0.698 | 52.723 | 0.7 | 3.1 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.04 | | 1.223 | 69.960 | 1.3 | 3.9 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.05 | | 0.049 | 15.209 | 0.5 | 0.9 | SURCHARGED |
| 9.003 | S903 | 0.000 | 0.06 | | 2.717 | 90.225 | 0.6 | 4.8 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 185.481 | 364.303 | 0.0 | 7.3 | SURCHARGED |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.003 | 4.055 | 0.5 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.08 | | 0.004 | 23.321 | 0.6 | 1.4 | OK |
| 13.001 | S1301 | 0.000 | 0.08 | | 0.066 | 36.502 | 1.0 | 2.1 | OK |
| 12.001 | S1201 | 0.000 | 0.06 | | 0.386 | 70.975 | 1.0 | 4.2 | SURCHARGED |
| 12.002 | S1202 | 0.000 | 0.13 | | 0.973 | 97.337 | 0.8 | 5.7 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.11 | | 0.585 | 97.337 | 0.9 | 5.7 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.08 | | 0.549 | 117.616 | 1.2 | 6.7 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.08 | | 0.038 | 24.335 | 0.7 | 1.4 | SURCHARGED |

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## Summary Wizard of 720 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.05 | | 0.550 | 43.599 | 0.7 | 2.6 | SURCHARGED |
| 15.000 | S1500 | 0.000 | 0.04 | | 0.034 | 9.125 | 0.4 | 0.5 | SURCHARGED |
| 15.001 | S1501 | 0.000 | 0.04 | | 0.092 | 24.334 | 1.1 | 1.4 | SURCHARGED |
| 14.002 | S1402 | 0.000 | 0.05 | | 1.397 | 81.114 | 1.4 | 4.7 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 0.15 | | 2.594 | 221.036 | 1.5 | 12.4 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.11 | | 175.937 | 562.609 | 0.2 | 10.0 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.03 | | 0.122 | 34.474 | 0.9 | 2.0 | SURCHARGED |
| 16.001 | S1601 | 0.000 | 0.02 | | 2.229 | 38.529 | 1.1 | 2.0 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.63 | | 6.594 | 599.400 | 1.1 | 10.5 | SURCHARGED |

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## Summary Wizard of 960 minute 100 year Winter I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 960 minute 100 year Winter I+45% | 960 | 74 | 32.680 | 31.789 | -0.131 |
| 1.001 | S101 | 960 minute 100 year Winter I+45% | 960 | 74 | 32.680 | 31.716 | -0.134 |
| 2.000 | S200 | 960 minute 100 year Winter I+45% | 960 | 15 | 32.600 | 31.546 | -0.084 |
| 1.002 | S102 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.630 | 31.545 | 0.100 |
| 3.000 | S300 | 960 minute 100 year Winter I+45% | 960 | 74 | 32.550 | 31.857 | -0.143 |
| 1.003 | S103 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.600 | 31.544 | 0.269 |
| 4.000 | S400 | 960 minute 100 year Winter I+45% | 960 | 74 | 32.550 | 31.710 | -0.140 |
| 4.001 | S401 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.550 | 31.543 | 0.793 |
| 1.004 | S104 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.600 | 31.542 | 1.012 |
| 1.005 | S105 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.600 | 31.541 | 1.031 |
| 5.000 | S500 | 960 minute 100 year Winter I+45% | 960 | 74 | 32.550 | 31.865 | -0.135 |
| 5.001 | S501 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.665 | 31.544 | 0.254 |
| 6.000 | S600 | 960 minute 100 year Winter I+45% | 960 | 74 | 32.665 | 31.852 | -0.148 |
| 6.001 | S601 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.665 | 31.544 | 0.254 |
| 5.002 | S502 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.665 | 31.544 | 0.494 |
| 5.003 | S503 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.680 | 31.542 | 0.687 |
| 7.000 | S700 | 960 minute 100 year Winter I+45% | 960 | 74 | 32.680 | 31.906 | -0.124 |
| 7.001 | S701 | 960 minute 100 year Winter I+45% | 960 | 74 | 32.635 | 31.828 | -0.117 |
| 5.004 | S504 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.635 | 31.542 | 0.997 |

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## Summary Wizard of 960 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.04 | | 0.002 | 14.069 | 0.5 | 0.6 | OK |
| 1.001 | S101 | 0.000 | 0.03 | | 0.006 | 21.644 | 1.0 | 1.0 | OK |
| 2.000 | S200 | 0.000 | 0.03 | | 0.010 | 14.069 | 0.7 | 0.6 | OK |
| 1.002 | S102 | 0.000 | 0.04 | | 0.269 | 43.287 | 0.7 | 1.9 | SURCHARGED |
| 3.000 | S300 | 0.000 | 0.01 | | 0.000 | 8.655 | 0.8 | 0.4 | OK |
| 1.003 | S103 | 0.000 | 0.04 | | 0.739 | 78.998 | 1.2 | 3.5 | SURCHARGED |
| 4.000 | S400 | 0.000 | 0.01 | | 0.001 | 16.232 | 1.5 | 0.7 | OK |
| 4.001 | S401 | 0.000 | 0.05 | | 0.298 | 22.725 | 0.6 | 1.0 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.10 | | 1.458 | 112.545 | 0.4 | 4.8 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.04 | | 2.869 | 117.956 | 0.3 | 4.8 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.02 | | 0.002 | 15.151 | 0.9 | 0.7 | OK |
| 5.001 | S501 | 0.000 | 0.02 | | 0.214 | 15.150 | 0.9 | 0.7 | SURCHARGED |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 2.162 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.172 | 2.161 | 0.2 | 0.1 | SURCHARGED |
| 5.002 | S502 | 0.000 | 0.05 | | 0.270 | 57.353 | 0.7 | 2.5 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.03 | | 0.844 | 64.928 | 1.0 | 2.7 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.07 | | 0.003 | 28.137 | 0.6 | 1.2 | OK |
| 7.001 | S701 | 0.000 | 0.11 | | 0.015 | 42.206 | 0.7 | 1.9 | OK |
| 5.004 | S504 | 0.000 | 0.07 | | 2.487 | 107.134 | 0.5 | 4.4 | SURCHARGED |

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## Summary Wizard of 960 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.525 | 31.541 | 0.191 |
| 1.006 | S106 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.500 | 31.541 | -0.105 |
| 9.000 | S900 | 960 minute 100 year Winter I+45% | 960 | 74 | 32.665 | 31.853 | -0.147 |
| 10.000 | S901 | 960 minute 100 year Winter I+45% | 960 | 74 | 32.665 | 31.852 | -0.148 |
| 9.001 | S901 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.665 | 31.542 | 0.322 |
| 9.002 | S902 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.640 | 31.540 | 0.555 |
| 11.000 | S1100 | 960 minute 100 year Winter I+45% | 960 | 74 | 32.680 | 31.570 | -0.130 |
| 9.003 | S903 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.630 | 31.539 | 1.044 |
| 1.007 | S107 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.500 | 31.539 | 0.003 |
| 12.000 | S1200 | 960 minute 100 year Winter I+45% | 960 | 74 | 32.635 | 31.854 | -0.146 |
| 13.000 | S1300 | 960 minute 100 year Winter I+45% | 960 | 74 | 32.635 | 31.875 | -0.125 |
| 13.001 | S1301 | 960 minute 100 year Winter I+45% | 960 | 74 | 32.635 | 31.784 | -0.126 |
| 12.001 | S1201 | 960 minute 100 year Winter I+45% | 960 | 19 | 32.635 | 31.549 | -0.086 |
| 12.002 | S1202 | 960 minute 100 year Winter I+45% | 960 | 18 | 32.680 | 31.547 | 0.287 |
| 12.003 | S1203 | 960 minute 100 year Winter I+45% | 960 | 17 | 32.660 | 31.545 | 0.375 |
| 12.004 | S1204 | 960 minute 100 year Winter I+45% | 960 | 16 | 32.660 | 31.544 | 0.509 |
| 14.000 | S1400 | 960 minute 100 year Winter I+45% | 960 | 74 | 32.650 | 31.649 | -0.126 |
| 14.001 | S1401 | 960 minute 100 year Winter I+45% | 960 | 15 | 32.680 | 31.544 | 0.049 |
| 15.000 | S1500 | 960 minute 100 year Winter I+45% | 960 | 74 | 32.680 | 31.667 | -0.133 |
| 15.001 | S1501 | 960 minute 100 year Winter I+45% | 960 | 73 | 32.600 | 31.622 | -0.133 |
| 14.002 | S1402 | 960 minute 100 year Winter I+45% | 960 | 15 | 32.600 | 31.543 | 0.303 |
| 12.005 | 1205 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.600 | 31.541 | 0.836 |
| 1.008 | S108 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.550 | 31.539 | 1.184 |
| 16.000 | S1600 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.545 | 31.538 | -0.112 |
| 16.001 | S1601 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.545 | 31.537 | 0.852 |
| 1.009 | S109 | 960 minute 100 year Winter I+45% | 960 | 14 | 32.500 | 31.536 | 1.506 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.01 | | 0.380 | 5.409 | 0.5 | 0.2 | SURCHARGED |
| 1.006 | S106 | 0.000 | 0.00 | | 1.427 | 304.051 | 0.0 | 7.3 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 3.245 | 0.3 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 2.161 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.05 | | 0.403 | 56.269 | 0.7 | 2.5 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.03 | | 1.132 | 74.666 | 1.3 | 3.1 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.04 | | 0.002 | 16.233 | 0.5 | 0.7 | OK |
| 9.003 | S903 | 0.000 | 0.05 | | 2.199 | 96.310 | 0.6 | 3.9 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 178.892 | 415.625 | 0.0 | 6.7 | SURCHARGED |
| 12.000 | S1200 | 0.000 | 0.01 | | 0.000 | 4.328 | 0.4 | 0.2 | OK |
| 13.000 | S1300 | 0.000 | 0.06 | | 0.003 | 24.891 | 0.6 | 1.1 | OK |
| 13.001 | S1301 | 0.000 | 0.06 | | 0.011 | 38.959 | 0.9 | 1.7 | OK |
| 12.001 | S1201 | 0.000 | 0.05 | | 0.055 | 75.753 | 0.9 | 3.3 | OK |
| 12.002 | S1202 | 0.000 | 0.11 | | 0.848 | 103.890 | 0.7 | 4.6 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.09 | | 0.493 | 103.890 | 0.8 | 4.6 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.07 | | 0.457 | 125.533 | 1.2 | 5.4 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.06 | | 0.003 | 25.973 | 0.6 | 1.1 | OK |

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## Summary Wizard of 960 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.04 | | 0.240 | 46.535 | 0.7 | 2.0 | SURCHARGED |
| 15.000 | S1500 | 0.000 | 0.03 | | 0.002 | 9.740 | 0.4 | 0.4 | OK |
| 15.001 | S1501 | 0.000 | 0.03 | | 0.005 | 25.973 | 1.1 | 1.1 | OK |
| 14.002 | S1402 | 0.000 | 0.04 | | 1.260 | 86.575 | 1.4 | 3.8 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 0.12 | | 2.132 | 235.917 | 1.4 | 10.0 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.10 | | 173.895 | 658.988 | 0.2 | 9.2 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.031 | 36.795 | 0.9 | 1.6 | OK |
| 16.001 | S1601 | 0.000 | 0.02 | | 2.041 | 41.123 | 1.1 | 1.6 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.58 | | 5.774 | 700.021 | 1.1 | 9.7 | SURCHARGED |

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## Summary Wizard of 1440 minute 100 year Winter I+45% for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.680 | 31.786 | -0.134 |
| 1.001 | S101 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.680 | 31.714 | -0.136 |
| 2.000 | S200 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.600 | 31.494 | -0.136 |
| 1.002 | S102 | 1440 minute 100 year Winter I+45% | 1440 | 18 | 32.630 | 31.375 | -0.070 |
| 3.000 | S300 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.550 | 31.855 | -0.145 |
| 1.003 | S103 | 1440 minute 100 year Winter I+45% | 1440 | 18 | 32.600 | 31.374 | 0.099 |
| 4.000 | S400 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.550 | 31.707 | -0.143 |
| 4.001 | S401 | 1440 minute 100 year Winter I+45% | 1440 | 18 | 32.550 | 31.373 | 0.623 |
| 1.004 | S104 | 1440 minute 100 year Winter I+45% | 1440 | 18 | 32.600 | 31.372 | 0.842 |
| 1.005 | S105 | 1440 minute 100 year Winter I+45% | 1440 | 18 | 32.600 | 31.371 | 0.861 |
| 5.000 | S500 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.550 | 31.861 | -0.139 |
| 5.001 | S501 | 1440 minute 100 year Winter I+45% | 1440 | 18 | 32.665 | 31.374 | 0.084 |
| 6.000 | S600 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.665 | 31.851 | -0.149 |
| 6.001 | S601 | 1440 minute 100 year Winter I+45% | 1440 | 18 | 32.665 | 31.374 | 0.084 |
| 5.002 | S502 | 1440 minute 100 year Winter I+45% | 1440 | 18 | 32.665 | 31.374 | 0.324 |
| 5.003 | S503 | 1440 minute 100 year Winter I+45% | 1440 | 18 | 32.680 | 31.373 | 0.518 |
| 7.000 | S700 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.680 | 31.902 | -0.128 |
| 7.001 | S701 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.635 | 31.823 | -0.122 |
| 5.004 | S504 | 1440 minute 100 year Winter I+45% | 1440 | 18 | 32.635 | 31.372 | 0.827 |

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## Summary Wizard of 1440 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.03 | | 0.002 | 15.394 | 0.5 | 0.5 | OK |
| 1.001 | S101 | 0.000 | 0.02 | | 0.005 | 23.683 | 1.0 | 0.7 | OK |
| 2.000 | S200 | 0.000 | 0.02 | | 0.001 | 15.394 | 0.6 | 0.5 | OK |
| 1.002 | S102 | 0.000 | 0.03 | | 0.072 | 47.367 | 0.7 | 1.4 | OK |
| 3.000 | S300 | 0.000 | 0.01 | | 0.000 | 9.471 | 0.6 | 0.3 | OK |
| 1.003 | S103 | 0.000 | 0.03 | | 0.608 | 86.442 | 1.1 | 2.5 | SURCHARGED |
| 4.000 | S400 | 0.000 | 0.01 | | 0.000 | 17.762 | 1.2 | 0.5 | OK |
| 4.001 | S401 | 0.000 | 0.03 | | 0.242 | 24.867 | 0.6 | 0.7 | SURCHARGED |
| 1.004 | S104 | 0.000 | 0.07 | | 1.409 | 123.151 | 0.4 | 3.5 | SURCHARGED |
| 1.005 | S105 | 0.000 | 0.03 | | 2.569 | 129.071 | 0.3 | 3.6 | SURCHARGED |
| 5.000 | S500 | 0.000 | 0.02 | | 0.001 | 16.578 | 0.9 | 0.5 | OK |
| 5.001 | S501 | 0.000 | 0.02 | | 0.108 | 16.578 | 0.9 | 0.5 | SURCHARGED |
| 6.000 | S600 | 0.000 | 0.00 | | 0.000 | 2.362 | 0.2 | 0.1 | OK |
| 6.001 | S601 | 0.000 | 0.00 | | 0.088 | 2.360 | 0.2 | 0.1 | SURCHARGED |
| 5.002 | S502 | 0.000 | 0.04 | | 0.222 | 62.752 | 0.7 | 1.8 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.02 | | 0.796 | 71.042 | 1.0 | 2.0 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.05 | | 0.003 | 30.789 | 0.6 | 0.9 | OK |
| 7.001 | S701 | 0.000 | 0.08 | | 0.013 | 46.183 | 0.6 | 1.4 | OK |
| 5.004 | S504 | 0.000 | 0.05 | | 2.187 | 117.225 | 0.4 | 3.2 | SURCHARGED |

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## Summary Wizard of 1440 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 1440 minute 100 year Winter I+45% | 1440 | 18 | 32.525 | 31.371 | 0.021 |
| 1.006 | S106 | 1440 minute 100 year Winter I+45% | 1440 | 18 | 32.500 | 31.371 | -0.275 |
| 9.000 | S900 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.665 | 31.852 | -0.148 |
| 10.000 | S901 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.665 | 31.851 | -0.149 |
| 9.001 | S901 | 1440 minute 100 year Winter I+45% | 1440 | 18 | 32.665 | 31.374 | 0.154 |
| 9.002 | S902 | 1440 minute 100 year Winter I+45% | 1440 | 18 | 32.640 | 31.372 | 0.387 |
| 11.000 | S1100 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.680 | 31.567 | -0.133 |
| 9.003 | S903 | 1440 minute 100 year Winter I+45% | 1440 | 18 | 32.630 | 31.371 | 0.876 |
| 1.007 | S107 | 1440 minute 100 year Winter I+45% | 1440 | 18 | 32.500 | 31.370 | -0.166 |
| 12.000 | S1200 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.635 | 31.853 | -0.147 |
| 13.000 | S1300 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.635 | 31.871 | -0.129 |
| 13.001 | S1301 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.635 | 31.780 | -0.130 |
| 12.001 | S1201 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.635 | 31.438 | -0.197 |
| 12.002 | S1202 | 1440 minute 100 year Winter I+45% | 1440 | 23 | 32.680 | 31.378 | 0.118 |
| 12.003 | S1203 | 1440 minute 100 year Winter I+45% | 1440 | 23 | 32.660 | 31.376 | 0.206 |
| 12.004 | S1204 | 1440 minute 100 year Winter I+45% | 1440 | 22 | 32.660 | 31.375 | 0.340 |
| 14.000 | S1400 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.650 | 31.645 | -0.130 |
| 14.001 | S1401 | 1440 minute 100 year Winter I+45% | 1440 | 23 | 32.680 | 31.375 | -0.120 |
| 15.000 | S1500 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.680 | 31.666 | -0.134 |
| 15.001 | S1501 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.600 | 31.620 | -0.135 |
| 14.002 | S1402 | 1440 minute 100 year Winter I+45% | 1440 | 21 | 32.600 | 31.374 | 0.134 |
| 12.005 | 1205 | 1440 minute 100 year Winter I+45% | 1440 | 19 | 32.600 | 31.373 | 0.668 |
| 1.008 | S108 | 1440 minute 100 year Winter I+45% | 1440 | 18 | 32.550 | 31.370 | 1.015 |
| 16.000 | S1600 | 1440 minute 100 year Winter I+45% | 1440 | 86 | 32.545 | 31.443 | -0.207 |
| 16.001 | S1601 | 1440 minute 100 year Winter I+45% | 1440 | 18 | 32.545 | 31.368 | 0.683 |
| 1.009 | S109 | 1440 minute 100 year Winter I+45% | 1440 | 18 | 32.500 | 31.368 | 1.338 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.00 | | 0.188 | 5.918 | 0.4 | 0.2 | SURCHARGED |
| 1.006 | S106 | 0.000 | 0.00 | | 1.423 | 332.736 | 0.0 | 5.8 | OK |
| 9.000 | S900 | 0.000 | 0.00 | | 0.000 | 3.549 | 0.2 | 0.1 | OK |
| 10.000 | S901 | 0.000 | 0.00 | | 0.000 | 2.361 | 0.2 | 0.1 | OK |
| 9.001 | S901 | 0.000 | 0.04 | | 0.248 | 61.567 | 0.6 | 1.8 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.02 | | 1.085 | 81.698 | 1.3 | 2.3 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.03 | | 0.002 | 17.763 | 0.5 | 0.5 | OK |
| 9.003 | S903 | 0.000 | 0.04 | | 1.922 | 105.382 | 0.6 | 2.9 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 159.428 | 454.610 | 0.0 | 6.0 | OK |
| 12.000 | S1200 | 0.000 | 0.00 | | 0.000 | 4.735 | 0.3 | 0.1 | OK |
| 13.000 | S1300 | 0.000 | 0.05 | | 0.003 | 27.236 | 0.5 | 0.8 | OK |
| 13.001 | S1301 | 0.000 | 0.04 | | 0.009 | 42.631 | 0.9 | 1.2 | OK |
| 12.001 | S1201 | 0.000 | 0.04 | | 0.007 | 82.891 | 0.9 | 2.4 | OK |
| 12.002 | S1202 | 0.000 | 0.08 | | 0.539 | 113.680 | 0.7 | 3.3 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.06 | | 0.446 | 113.680 | 0.8 | 3.3 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.05 | | 0.410 | 137.364 | 1.1 | 4.0 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.04 | | 0.002 | 28.421 | 0.6 | 0.8 | OK |

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## Summary Wizard of 1440 minute 100 year Winter I+45% for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.03 | | 0.030 | 50.920 | 0.6 | 1.5 | OK |
| 15.000 | S1500 | 0.000 | 0.02 | | 0.002 | 10.658 | 0.4 | 0.3 | OK |
| 15.001 | S1501 | 0.000 | 0.02 | | 0.004 | 28.420 | 1.1 | 0.8 | OK |
| 14.002 | S1402 | 0.000 | 0.03 | | 1.011 | 94.735 | 1.3 | 2.8 | SURCHARGED |
| 12.005 | 1205 | 0.000 | 0.09 | | 1.890 | 258.151 | 1.3 | 7.4 | SURCHARGED |
| 1.008 | S108 | 0.000 | 0.09 | | 158.297 | 722.234 | 0.2 | 8.7 | SURCHARGED |
| 16.000 | S1600 | 0.000 | 0.02 | | 0.004 | 40.262 | 0.9 | 1.2 | OK |
| 16.001 | S1601 | 0.000 | 0.01 | | 1.757 | 44.999 | 1.0 | 1.2 | SURCHARGED |
| 1.009 | S109 | 0.000 | 0.55 | | 5.345 | 767.229 | 1.1 | 9.2 | SURCHARGED |

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## STORM SEWER DESIGN by the Modified Rational Method

### Design Criteria for Storm

Pipe Sizes STANDARD Manhole Sizes STANDARD

FSR Rainfall Model - England and Wales

| | | | |
|---|---|---|---|
| Return Period (years) | 100 | PIMP (%) | 100 |
| M5-60 (mm) | 18.000 | Add Flow / Climate Change (%) | 0 |
| Ratio R | 0.360 | Minimum Backdrop Height (m) | 0.200 |
| Maximum Rainfall (mm/hr) | 50 | Maximum Backdrop Height (m) | 1.500 |
| Maximum Time of Concentration (mins) | 30 | Min Design Depth for Optimisation (m) | 1.200 |
| Foul Sewage (l/s/ha) | 0.000 | Min Vel for Auto Design only (m/s) | 1.00 |
| Volumetric Runoff Coeff. | 1.000 | Min Slope for Optimisation (1:X) | 500 |

Designed with Level Soffits

### Time Area Diagram for Storm

| Time (mins) | Area (ha) | Time (mins) | Area (ha) |
|---|---|---|---|
| 0-4 | 0.424 | 4-8 | 0.224 |

Total Area Contributing (ha) = 0.648

Total Pipe Volume (m³) = 387.060

### Network Design Table for Storm

« - Indicates pipe capacity < flow

| PN | Length (m) | Fall (m) | Slope (1:X) | I.Area (ha) | T.E. (mins) | Base Flow (l/s) | k (mm) | n | HYD SECT | DIA (mm) | Section Type | Auto Design |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.000 | 5.374 | 0.070 | 76.8 | 0.013 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 1.001 | 7.756 | 0.405 | 19.2 | 0.007 | 0.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 2.000 | 9.000 | 0.185 | 48.6 | 0.013 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |

### Network Results Table

| PN | Rain (mm/hr) | T.C. (mins) | US/IL (m) | Σ I.Area (ha) | Σ Base Flow (l/s) | Foul (l/s) | Add Flow (l/s) | Vel (m/s) | Cap (l/s) | Flow (l/s) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.000 | 50.00 | 5.08 | 31.770 | 0.013 | 0.0 | 0.0 | 0.0 | 1.15 | 20.3 | 2.3 |
| 1.001 | 50.00 | 5.13 | 31.700 | 0.020 | 0.0 | 0.0 | 0.0 | 2.31 | 40.9 | 3.6 |
| 2.000 | 50.00 | 5.10 | 31.480 | 0.013 | 0.0 | 0.0 | 0.0 | 1.45 | 25.6 | 2.3 |

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## Network Design Table for Storm

| PN | Length (m) | Fall (m) | Slope (1:X) | I.Area (ha) | T.E. (mins) | Base Flow (l/s) | k (mm) | n | HYD SECT | DIA (mm) | Section Type | Auto Design |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.002 | 13.504 | 0.170 | 79.4 | 0.007 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 3.000 | 11.080 | 0.725 | 15.3 | 0.008 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 1.003 | 22.317 | 0.745 | 30.0 | 0.025 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 4.000 | 11.186 | 1.100 | 10.2 | 0.015 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 4.001 | 13.280 | 0.220 | 60.4 | 0.006 | 0.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 1.004 | 4.731 | 0.020 | 236.6 | 0.010 | 0.00 | 0.0 | 0.600 | | o | 300 | Pipe/Conduit | |
| 1.005 | 5.683 | 0.015 | 378.9 | 0.005 | 0.00 | 0.0 | 0.600 | | o | 450 | Pipe/Conduit | |
| 5.000 | 19.097 | 0.710 | 26.9 | 0.014 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 5.001 | 2.498 | 0.240 | 10.4 | 0.000 | 0.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 6.000 | 13.877 | 0.710 | 19.5 | 0.002 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 6.001 | 2.416 | 0.240 | 10.1 | 0.000 | 0.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 5.002 | 15.383 | 0.195 | 78.9 | 0.037 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 5.003 | 6.184 | 0.310 | 19.9 | 0.007 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 7.000 | 6.710 | 0.085 | 78.9 | 0.026 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |

## Network Results Table

| PN | Rain (mm/hr) | T.C. (mins) | US/IL (m) | Σ I.Area (ha) | Σ Base Flow (l/s) | Foul (l/s) | Add Flow (l/s) | Vel (m/s) | Cap (l/s) | Flow (l/s) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.002 | 50.00 | 5.29 | 31.220 | 0.040 | 0.0 | 0.0 | 0.0 | 1.47 | 58.4 | 7.2 |
| 3.000 | 50.00 | 5.07 | 31.850 | 0.008 | 0.0 | 0.0 | 0.0 | 2.59 | 45.8 | 1.4 |
| 1.003 | 50.00 | 5.44 | 31.050 | 0.073 | 0.0 | 0.0 | 0.0 | 2.40 | 95.4 | 13.2 |
| 4.000 | 50.00 | 5.06 | 31.700 | 0.015 | 0.0 | 0.0 | 0.0 | 3.18 | 56.2 | 2.7 |
| 4.001 | 50.00 | 5.23 | 30.600 | 0.021 | 0.0 | 0.0 | 0.0 | 1.30 | 22.9 | 3.8 |
| 1.004 | 50.00 | 5.52 | 30.230 | 0.104 | 0.0 | 0.0 | 0.0 | 1.02 | 72.0 | 18.8 |
| 1.005 | 50.00 | 5.61 | 30.060 | 0.109 | 0.0 | 0.0 | 0.0 | 1.04 | 165.2 | 19.7 |
| 5.000 | 50.00 | 5.16 | 31.850 | 0.014 | 0.0 | 0.0 | 0.0 | 1.95 | 34.4 | 2.5 |
| 5.001 | 50.00 | 5.18 | 31.140 | 0.014 | 0.0 | 0.0 | 0.0 | 3.14 | 55.5 | 2.5 |
| 6.000 | 50.00 | 5.10 | 31.850 | 0.002 | 0.0 | 0.0 | 0.0 | 2.29 | 40.4 | 0.4 |
| 6.001 | 50.00 | 5.11 | 31.140 | 0.002 | 0.0 | 0.0 | 0.0 | 3.19 | 56.4 | 0.4 |
| 5.002 | 50.00 | 5.35 | 30.825 | 0.053 | 0.0 | 0.0 | 0.0 | 1.47 | 58.6 | 9.6 |
| 5.003 | 50.00 | 5.39 | 30.630 | 0.060 | 0.0 | 0.0 | 0.0 | 2.94 | 117.0 | 10.8 |
| 7.000 | 50.00 | 5.10 | 31.880 | 0.026 | 0.0 | 0.0 | 0.0 | 1.13 | 20.0 | 4.7 |

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## Network Design Table for Storm

| PN | Length (m) | Fall (m) | Slope (1:X) | I.Area (ha) | T.E. (mins) | Base Flow (l/s) | k (mm) | n | HYD SECT | DIA (mm) | Section Type | Auto Design |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.001 | 6.500 | 0.085 | 76.5 | 0.013 | 0.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 5.004 | 6.184 | 0.050 | 123.7 | 0.000 | 0.00 | 0.0 | 0.600 | | o | 300 | Pipe/Conduit | |
| 8.000 | 15.200 | 0.855 | 17.8 | 0.005 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 1.006 | 45.189 | 0.110 | 410.8 | 0.068 | 0.00 | 0.0 | | 0.050 | →[↓] | | Cellular Storage | |
| 9.000 | 15.917 | 0.780 | 20.4 | 0.003 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 10.000 | 13.195 | 0.780 | 16.9 | 0.002 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 9.001 | 23.561 | 0.235 | 100.3 | 0.047 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 9.002 | 7.157 | 0.490 | 14.6 | 0.017 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 11.000 | 6.111 | 0.075 | 81.5 | 0.015 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 9.003 | 6.184 | 0.110 | 56.2 | 0.005 | 0.00 | 0.0 | 0.600 | | o | 300 | Pipe/Conduit | |
| 1.007 | 10.786 | 0.030 | 359.5 | 0.014 | 0.00 | 0.0 | | 0.050 | →[↓] | | Cellular Storage | |
| 12.000 | 8.740 | 0.365 | 23.9 | 0.004 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |

## Network Results Table

| PN | Rain (mm/hr) | T.C. (mins) | US/IL (m) | Σ I.Area (ha) | Σ Base Flow (l/s) | Foul (l/s) | Add Flow (l/s) | Vel (m/s) | Cap (l/s) | Flow (l/s) |
|---|---|---|---|---|---|---|---|---|---|---|
| 7.001 | 50.00 | 5.19 | 31.795 | 0.039 | 0.0 | 0.0 | 0.0 | 1.15 | 20.3 | 7.0 |
| 5.004 | 50.00 | 5.46 | 30.245 | 0.099 | 0.0 | 0.0 | 0.0 | 1.41 | 99.8 | 17.9 |
| 8.000 | 50.00 | 5.11 | 31.200 | 0.005 | 0.0 | 0.0 | 0.0 | 2.40 | 42.4 | 0.9 |
| 1.006 | 50.00 | 6.86 | 30.045 | 0.281 | 0.0 | 0.0 | 0.0 | 0.60 | 2469.0 | 50.7 |
| 9.000 | 50.00 | 5.12 | 31.850 | 0.003 | 0.0 | 0.0 | 0.0 | 2.24 | 39.6 | 0.5 |
| 10.000 | 50.00 | 5.09 | 31.850 | 0.002 | 0.0 | 0.0 | 0.0 | 2.46 | 43.5 | 0.4 |
| 9.001 | 50.00 | 5.42 | 30.995 | 0.052 | 0.0 | 0.0 | 0.0 | 1.31 | 51.9 | 9.4 |
| 9.002 | 50.00 | 5.45 | 30.760 | 0.069 | 0.0 | 0.0 | 0.0 | 3.44 | 136.8 | 12.5 |
| 11.000 | 50.00 | 5.09 | 31.550 | 0.015 | 0.0 | 0.0 | 0.0 | 1.11 | 19.7 | 2.7 |
| 9.003 | 50.00 | 5.50 | 30.195 | 0.089 | 0.0 | 0.0 | 0.0 | 2.10 | 148.5 | 16.1 |
| 1.007 | 50.00 | 7.08 | 29.935 | 0.384 | 0.0 | 0.0 | 0.0 | 0.80 | 13810.0 | 69.3 |
| 12.000 | 50.00 | 5.07 | 31.850 | 0.004 | 0.0 | 0.0 | 0.0 | 2.07 | 36.5 | 0.7 |

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## Network Design Table for Storm

| PN | Length (m) | Fall (m) | Slope (1:X) | I.Area (ha) | T.E. (mins) | Base Flow (l/s) | k (mm) | n | HYD SECT | DIA (mm) | Section Type | Auto Design |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13.000 | 7.229 | 0.090 | 80.3 | 0.023 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 13.001 | 8.641 | 0.275 | 31.4 | 0.013 | 0.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 12.001 | 19.161 | 0.375 | 51.1 | 0.030 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 12.002 | 8.777 | 0.090 | 97.5 | 0.026 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 12.003 | 6.920 | 0.135 | 51.3 | 0.000 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 12.004 | 9.598 | 0.330 | 29.1 | 0.020 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 14.000 | 22.183 | 0.280 | 79.2 | 0.024 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 14.001 | 25.590 | 0.255 | 100.4 | 0.019 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 15.000 | 3.368 | 0.045 | 74.8 | 0.009 | 5.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 15.001 | 9.798 | 0.515 | 19.0 | 0.015 | 0.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |
| 14.002 | 7.938 | 0.535 | 14.8 | 0.013 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 12.005 | 5.964 | 0.350 | 17.0 | 0.022 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 1.008 | 10.282 | 0.025 | 411.3 | 0.008 | 0.00 | 0.0 | 0.600 | | o | 450 | Pipe/Conduit | |
| 16.000 | 46.756 | 0.965 | 48.5 | 0.034 | 5.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |

## Network Results Table

| PN | Rain (mm/hr) | T.C. (mins) | US/IL (m) | Σ I.Area (ha) | Σ Base Flow (l/s) | Foul (l/s) | Add Flow (l/s) | Vel (m/s) | Cap (l/s) | Flow (l/s) |
|---|---|---|---|---|---|---|---|---|---|---|
| 13.000 | 50.00 | 5.11 | 31.850 | 0.023 | 0.0 | 0.0 | 0.0 | 1.12 | 19.8 | 4.2 |
| 13.001 | 50.00 | 5.19 | 31.760 | 0.036 | 0.0 | 0.0 | 0.0 | 1.80 | 31.9 | 6.5 |
| 12.001 | 50.00 | 5.36 | 31.410 | 0.070 | 0.0 | 0.0 | 0.0 | 1.83 | 72.9 | 12.6 |
| 12.002 | 50.00 | 5.47 | 31.035 | 0.096 | 0.0 | 0.0 | 0.0 | 1.32 | 52.6 | 17.3 |
| 12.003 | 50.00 | 5.53 | 30.945 | 0.096 | 0.0 | 0.0 | 0.0 | 1.83 | 72.8 | 17.3 |
| 12.004 | 50.00 | 5.60 | 30.810 | 0.116 | 0.0 | 0.0 | 0.0 | 2.44 | 96.8 | 20.9 |
| 14.000 | 50.00 | 5.33 | 31.625 | 0.024 | 0.0 | 0.0 | 0.0 | 1.13 | 20.0 | 4.3 |
| 14.001 | 50.00 | 5.65 | 31.270 | 0.043 | 0.0 | 0.0 | 0.0 | 1.31 | 51.9 | 7.8 |
| 15.000 | 50.00 | 5.05 | 31.650 | 0.009 | 0.0 | 0.0 | 0.0 | 1.16 | 20.6 | 1.6 |
| 15.001 | 50.00 | 5.12 | 31.605 | 0.024 | 0.0 | 0.0 | 0.0 | 2.32 | 41.0 | 4.3 |
| 14.002 | 50.00 | 5.69 | 31.015 | 0.080 | 0.0 | 0.0 | 0.0 | 3.41 | 135.8 | 14.4 |
| 12.005 | 50.00 | 5.72 | 30.480 | 0.218 | 0.0 | 0.0 | 0.0 | 3.19 | 126.7 | 39.4 |
| 1.008 | 50.00 | 7.26 | 29.905 | 0.610 | 0.0 | 0.0 | 0.0 | 1.00 | 158.4 | 110.1 |
| 16.000 | 50.00 | 5.41 | 31.425 | 0.034 | 0.0 | 0.0 | 0.0 | 1.88 | 74.9 | 6.1 |

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## Network Design Table for Storm

| PN | Length (m) | Fall (m) | Slope (1:X) | I.Area (ha) | T.E. (mins) | Base Flow (l/s) | k (mm) | n | HYD SECT | DIA (mm) | Section Type | Auto Design |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16.001 | 6.201 | 0.355 | 17.5 | 0.004 | 0.00 | 0.0 | 0.600 | | o | 225 | Pipe/Conduit | |
| 1.009 | 5.950 | 0.075 | 79.3 | 0.000 | 0.00 | 0.0 | 0.600 | | o | 150 | Pipe/Conduit | |

## Network Results Table

| PN | Rain (mm/hr) | T.C. (mins) | US/IL (m) | Σ I.Area (ha) | Σ Base Flow (l/s) | Foul (l/s) | Add Flow (l/s) | Vel (m/s) | Cap (l/s) | Flow (l/s) |
|---|---|---|---|---|---|---|---|---|---|---|
| 16.001 | 50.00 | 5.45 | 30.460 | 0.038 | 0.0 | 0.0 | 0.0 | 3.15 | 125.1 | 6.9 |
| 1.009 | 50.00 | 7.34 | 29.880 | 0.648 | 0.0 | 0.0 | 0.0 | 1.13 | 20.0« | 117.0 |

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## Manhole Schedules for Storm

| MH Name | MH CL (m) | MH Depth (m) | MH Connection | MH Diam.,L*W (mm) | Pipe Out PN | Pipe Out Invert Level (m) | Pipe Out Diameter (mm) | Pipes In PN | Pipes In Invert Level (m) | Pipes In Diameter (mm) | Backdrop (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| S100 | 32.680 | 0.910 | Open Manhole | 450 | 1.000 | 31.770 | 150 | | | | |
| S101 | 32.680 | 0.980 | Open Manhole | 450 | 1.001 | 31.700 | 150 | 1.000 | 31.700 | 150 | |
| S200 | 32.600 | 1.120 | Open Manhole | 450 | 2.000 | 31.480 | 150 | | | | |
| S102 | 32.630 | 1.410 | Open Manhole | 600 | 1.002 | 31.220 | 225 | 1.001 | 31.295 | 150 | |
| | | | | | | | | 2.000 | 31.295 | 150 | |
| S300 | 32.550 | 0.700 | Open Manhole | 450 | 3.000 | 31.850 | 150 | | | | |
| S103 | 32.600 | 1.550 | Open Manhole | 600 | 1.003 | 31.050 | 225 | 1.002 | 31.050 | 225 | |
| | | | | | | | | 3.000 | 31.125 | 150 | |
| S400 | 32.550 | 0.850 | Open Manhole | 450 | 4.000 | 31.700 | 150 | | | | |
| S401 | 32.550 | 1.950 | Open Manhole | 450 | 4.001 | 30.600 | 150 | 4.000 | 30.600 | 150 | |
| S104 | 32.600 | 2.370 | Open Manhole | 600 | 1.004 | 30.230 | 300 | 1.003 | 30.305 | 225 | |
| | | | | | | | | 4.001 | 30.380 | 150 | |
| S105 | 32.600 | 2.540 | Open Manhole | 1500 | 1.005 | 30.060 | 450 | 1.004 | 30.210 | 300 | |
| S500 | 32.550 | 0.700 | Open Manhole | 450 | 5.000 | 31.850 | 150 | | | | |
| S501 | 32.665 | 1.525 | Open Manhole | 450 | 5.001 | 31.140 | 150 | 5.000 | 31.140 | 150 | |
| S600 | 32.665 | 0.815 | Open Manhole | 450 | 6.000 | 31.850 | 150 | | | | |
| S601 | 32.665 | 1.525 | Open Manhole | 450 | 6.001 | 31.140 | 150 | 6.000 | 31.140 | 150 | |
| S502 | 32.665 | 1.840 | Open Manhole | 600 | 5.002 | 30.825 | 225 | 5.001 | 30.900 | 150 | |
| | | | | | | | | 6.001 | 30.900 | 150 | |
| S503 | 32.680 | 2.050 | Open Manhole | 600 | 5.003 | 30.630 | 225 | 5.002 | 30.630 | 225 | |
| S700 | 32.680 | 0.800 | Open Manhole | 450 | 7.000 | 31.880 | 150 | | | | |
| S701 | 32.635 | 0.840 | Open Manhole | 450 | 7.001 | 31.795 | 150 | 7.000 | 31.795 | 150 | |
| S504 | 32.635 | 2.390 | Open Manhole | 1500 | 5.004 | 30.245 | 300 | 5.003 | 30.320 | 225 | |
| | | | | | | | | 7.001 | 31.710 | 150 | 1315 |
| S800 | 32.525 | 1.325 | Open Manhole | 1200 | 8.000 | 31.200 | 150 | | | | |
| S106 | 32.500 | 2.455 | Open Manhole | 1 | 1.006 | 30.045 | | 1.005 | 30.045 | 450 | |
| | | | | | | | | 5.004 | 30.195 | 300 | |
| | | | | | | | | 8.000 | 30.345 | 150 | |
| S900 | 32.665 | 0.815 | Open Manhole | 450 | 9.000 | 31.850 | 150 | | | | |
| S901 | 32.665 | 0.815 | Open Manhole | 450 | 10.000 | 31.850 | 150 | | | | |
| S901 | 32.665 | 1.670 | Open Manhole | 600 | 9.001 | 30.995 | 225 | 9.000 | 31.070 | 150 | |
| | | | | | | | | 10.000 | 31.070 | 150 | |
| S902 | 32.640 | 1.880 | Open Manhole | 600 | 9.002 | 30.760 | 225 | 9.001 | 30.760 | 225 | |
| S1100 | 32.680 | 1.130 | Open Manhole | 450 | 11.000 | 31.550 | 150 | | | | |
| S903 | 32.630 | 2.435 | Open Manhole | 1350 | 9.003 | 30.195 | 300 | 9.002 | 30.270 | 225 | |
| | | | | | | | | 11.000 | 31.475 | 150 | 1130 |
| S107 | 32.500 | 2.565 | Open Manhole | 1 | 1.007 | 29.935 | | 1.006 | 29.935 | | |
| | | | | | | | | 9.003 | 30.085 | 300 | |

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## Manhole Schedules for Storm

| MH Name | MH CL (m) | MH Depth (m) | MH Connection | MH Diam.,L*W (mm) | Pipe Out PN | Pipe Out Invert Level (m) | Pipe Out Diameter (mm) | Pipes In PN | Pipes In Invert Level (m) | Pipes In Diameter (mm) | Backdrop (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| S1200 | 32.635 | 0.785 | Open Manhole | 450 | 12.000 | 31.850 | 150 | | | | |
| S1300 | 32.635 | 0.785 | Open Manhole | 450 | 13.000 | 31.850 | 150 | | | | |
| S1301 | 32.635 | 0.875 | Open Manhole | 450 | 13.001 | 31.760 | 150 | 13.000 | 31.760 | 150 | |
| S1201 | 32.635 | 1.225 | Open Manhole | 600 | 12.001 | 31.410 | 225 | 12.000 | 31.485 | 150 | |
| | | | | | | | | 13.001 | 31.485 | 150 | |
| S1202 | 32.680 | 1.645 | Open Manhole | 600 | 12.002 | 31.035 | 225 | 12.001 | 31.035 | 225 | |
| S1203 | 32.660 | 1.715 | Open Manhole | 600 | 12.003 | 30.945 | 225 | 12.002 | 30.945 | 225 | |
| S1204 | 32.660 | 1.850 | Open Manhole | 600 | 12.004 | 30.810 | 225 | 12.003 | 30.810 | 225 | |
| S1400 | 32.650 | 1.025 | Open Manhole | 450 | 14.000 | 31.625 | 150 | | | | |
| S1401 | 32.680 | 1.410 | Open Manhole | 600 | 14.001 | 31.270 | 225 | 14.000 | 31.345 | 150 | |
| S1500 | 32.680 | 1.030 | Open Manhole | 450 | 15.000 | 31.650 | 150 | | | | |
| S1501 | 32.600 | 0.995 | Open Manhole | 450 | 15.001 | 31.605 | 150 | 15.000 | 31.605 | 150 | |
| S1402 | 32.600 | 1.585 | Open Manhole | 600 | 14.002 | 31.015 | 225 | 14.001 | 31.015 | 225 | |
| | | | | | | | | 15.001 | 31.090 | 150 | |
| 1205 | 32.600 | 2.120 | Open Manhole | 1350 | 12.005 | 30.480 | 225 | 12.004 | 30.480 | 225 | |
| | | | | | | | | 14.002 | 30.480 | 225 | |
| S108 | 32.550 | 2.645 | Open Manhole | 1500 | 1.008 | 29.905 | 450 | 1.007 | 29.905 | | |
| | | | | | | | | 12.005 | 30.130 | 225 | |
| S1600 | 32.545 | 1.120 | Open Manhole | 600 | 16.000 | 31.425 | 225 | | | | |
| S1601 | 32.545 | 2.085 | Open Manhole | 600 | 16.001 | 30.460 | 225 | 16.000 | 30.460 | 225 | |
| S109 | 32.500 | 2.620 | Open Manhole | 1800 | 1.009 | 29.880 | 150 | 1.008 | 29.880 | 450 | |
| | | | | | | | | 16.001 | 30.105 | 225 | 300 |
| | 32.550 | 2.745 | Open Manhole | 0 | | OUTFALL | | 1.009 | 29.805 | 150 | |

| MH Name | Manhole Easting (m) | Manhole Northing (m) | Intersection Easting (m) | Intersection Northing (m) | Manhole Access | Layout (North) |
|---|---|---|---|---|---|---|
| S100 | 383859.784 | 395717.514 | 383859.784 | 395717.514 | Required | |
| S101 | 383859.721 | 395712.141 | 383859.721 | 395712.141 | Required | |
| S200 | 383850.631 | 395704.491 | 383850.631 | 395704.491 | Required | |
| S102 | 383859.630 | 395704.385 | 383859.630 | 395704.385 | Required | |



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## Manhole Schedules for Storm

| MH Name | Manhole Easting (m) | Manhole Northing (m) | Intersection Easting (m) | Intersection Northing (m) | Manhole Access | Layout (North) |
|---|---|---|---|---|---|---|
| S300 | 383884.212 | 395704.099 | 383884.212 | 395704.099 | Required | |
| S103 | 383873.132 | 395704.229 | 383873.132 | 395704.229 | Required | |
| S400 | 383886.542 | 395715.203 | 383886.542 | 395715.203 | Required | |
| S401 | 383886.674 | 395726.387 | 383886.674 | 395726.387 | Required | |
| S104 | 383873.395 | 395726.544 | 383873.395 | 395726.544 | Required | |
| S105 | 383870.089 | 395729.929 | 383870.089 | 395729.929 | Required | |
| S500 | 383840.186 | 395715.101 | 383840.186 | 395715.101 | Required | |
| S501 | 383840.620 | 395734.193 | 383840.620 | 395734.193 | Required | |
| S600 | 383840.673 | 395751.543 | 383840.673 | 395751.543 | Required | |
| S601 | 383840.719 | 395737.667 | 383840.719 | 395737.667 | Required | |
| S502 | 383842.407 | 395735.938 | 383842.407 | 395735.938 | Required | |
| S503 | 383857.789 | 395735.757 | 383857.789 | 395735.757 | Required | |
| S700 | 383857.339 | 395742.263 | 383857.339 | 395742.263 | Required | |
| S701 | 383864.049 | 395742.184 | 383864.049 | 395742.184 | Required | |
| S504 | 383863.972 | 395735.684 | 383863.972 | 395735.684 | Required | |

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## Manhole Schedules for Storm

| MH Name | Manhole Easting (m) | Manhole Northing (m) | Intersection Easting (m) | Intersection Northing (m) | Manhole Access | Layout (North) |
|---|---|---|---|---|---|---|
| S800 | 383885.355 | 395735.436 | 383885.355 | 395735.436 | Required | |
| S106 | 383870.156 | 395735.612 | 383870.156 | 395735.612 | Required | |
| S900 | 383840.775 | 395758.074 | 383840.775 | 395758.074 | Required | |
| S901 | 383841.016 | 395787.185 | 383841.016 | 395787.185 | Required | |
| S901 | 383840.861 | 395773.991 | 383840.861 | 395773.991 | Required | |
| S902 | 383864.420 | 395773.713 | 383864.420 | 395773.713 | Required | |
| S1100 | 383858.393 | 395780.942 | 383858.393 | 395780.942 | Required | |
| S903 | 383864.504 | 395780.870 | 383864.504 | 395780.870 | Required | |
| S107 | 383870.688 | 395780.797 | 383870.688 | 395780.797 | Required | |
| S1200 | 383841.324 | 395805.623 | 383841.324 | 395805.623 | Required | |
| S1300 | 383843.520 | 395830.096 | 383843.520 | 395830.096 | Required | |
| S1301 | 383843.359 | 395822.869 | 383843.359 | 395822.869 | Required | |
| S1201 | 383841.979 | 395814.338 | 383841.979 | 395814.338 | Required | |
| S1202 | 383861.132 | 395813.759 | 383861.132 | 395813.759 | Required | |
| S1203 | 383861.382 | 395804.986 | 383861.382 | 395804.986 | Required | |

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## Manhole Schedules for Storm

| MH Name | Manhole Easting (m) | Manhole Northing (m) | Intersection Easting (m) | Intersection Northing (m) | Manhole Access | Layout (North) |
|---|---|---|---|---|---|---|
| S1204 | 383861.301 | 395798.066 | 383861.301 | 395798.066 | Required | |
| S1400 | 383862.345 | 395836.184 | 383862.345 | 395836.184 | Required | |
| S1401 | 383883.217 | 395828.672 | 383883.217 | 395828.672 | Required | |
| S1500 | 383885.286 | 395807.635 | 383885.286 | 395807.635 | Required | |
| S1501 | 383884.303 | 395804.414 | 383884.303 | 395804.414 | Required | |
| S1402 | 383874.507 | 395804.609 | 383874.507 | 395804.609 | Required | |
| 1205 | 383870.885 | 395797.546 | 383870.885 | 395797.546 | Required | |
| S108 | 383870.812 | 395791.583 | 383870.812 | 395791.583 | Required | |
| S1600 | 383886.745 | 395744.636 | 383886.745 | 395744.636 | Required | |
| S1601 | 383887.293 | 395791.389 | 383887.293 | 395791.389 | Required | |
| S109 | 383881.093 | 395791.462 | 383881.093 | 395791.462 | Required | |
| | 383881.165 | 395797.411 | | | No Entry | |

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## PIPELINE SCHEDULES for Storm

### Upstream Manhole

| PN | Hyd Sect | Diam (mm) | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | o | 150 | S100 | 32.680 | 31.770 | 0.760 | Open Manhole | 450 |
| 1.001 | o | 150 | S101 | 32.680 | 31.700 | 0.830 | Open Manhole | 450 |
| 2.000 | o | 150 | S200 | 32.600 | 31.480 | 0.970 | Open Manhole | 450 |
| 1.002 | o | 225 | S102 | 32.630 | 31.220 | 1.185 | Open Manhole | 600 |
| 3.000 | o | 150 | S300 | 32.550 | 31.850 | 0.550 | Open Manhole | 450 |
| 1.003 | o | 225 | S103 | 32.600 | 31.050 | 1.325 | Open Manhole | 600 |
| 4.000 | o | 150 | S400 | 32.550 | 31.700 | 0.700 | Open Manhole | 450 |
| 4.001 | o | 150 | S401 | 32.550 | 30.600 | 1.800 | Open Manhole | 450 |
| 1.004 | o | 300 | S104 | 32.600 | 30.230 | 2.070 | Open Manhole | 600 |
| 1.005 | o | 450 | S105 | 32.600 | 30.060 | 2.090 | Open Manhole | 1500 |
| 5.000 | o | 150 | S500 | 32.550 | 31.850 | 0.550 | Open Manhole | 450 |
| 5.001 | o | 150 | S501 | 32.665 | 31.140 | 1.375 | Open Manhole | 450 |
| 6.000 | o | 150 | S600 | 32.665 | 31.850 | 0.665 | Open Manhole | 450 |

### Downstream Manhole

| PN | Length (m) | Slope (1:X) | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |
|---|---|---|---|---|---|---|---|---|
| 1.000 | 5.374 | 76.8 | S101 | 32.680 | 31.700 | 0.830 | Open Manhole | 450 |
| 1.001 | 7.756 | 19.2 | S102 | 32.630 | 31.295 | 1.185 | Open Manhole | 600 |
| 2.000 | 9.000 | 48.6 | S102 | 32.630 | 31.295 | 1.185 | Open Manhole | 600 |
| 1.002 | 13.504 | 79.4 | S103 | 32.600 | 31.050 | 1.325 | Open Manhole | 600 |
| 3.000 | 11.080 | 15.3 | S103 | 32.600 | 31.125 | 1.325 | Open Manhole | 600 |
| 1.003 | 22.317 | 30.0 | S104 | 32.600 | 30.305 | 2.070 | Open Manhole | 600 |
| 4.000 | 11.186 | 10.2 | S401 | 32.550 | 30.600 | 1.800 | Open Manhole | 450 |
| 4.001 | 13.280 | 60.4 | S104 | 32.600 | 30.380 | 2.070 | Open Manhole | 600 |
| 1.004 | 4.731 | 236.6 | S105 | 32.600 | 30.210 | 2.090 | Open Manhole | 1500 |
| 1.005 | 5.683 | 378.9 | S106 | 32.500 | 30.045 | 2.005 | Open Manhole | 1 |
| 5.000 | 19.097 | 26.9 | S501 | 32.665 | 31.140 | 1.375 | Open Manhole | 450 |
| 5.001 | 2.498 | 10.4 | S502 | 32.665 | 30.900 | 1.615 | Open Manhole | 600 |
| 6.000 | 13.877 | 19.5 | S601 | 32.665 | 31.140 | 1.375 | Open Manhole | 450 |

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## PIPELINE SCHEDULES for Storm

### Upstream Manhole

| PN | Hyd Sect | Diam (mm) | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |
|---|---|---|---|---|---|---|---|---|
| 6.001 | o | 150 | S601 | 32.665 | 31.140 | 1.375 | Open Manhole | 450 |
| 5.002 | o | 225 | S502 | 32.665 | 30.825 | 1.615 | Open Manhole | 600 |
| 5.003 | o | 225 | S503 | 32.680 | 30.630 | 1.825 | Open Manhole | 600 |
| 7.000 | o | 150 | S700 | 32.680 | 31.880 | 0.650 | Open Manhole | 450 |
| 7.001 | o | 150 | S701 | 32.635 | 31.795 | 0.690 | Open Manhole | 450 |
| 5.004 | o | 300 | S504 | 32.635 | 30.245 | 2.090 | Open Manhole | 1500 |
| 8.000 | o | 150 | S800 | 32.525 | 31.200 | 1.175 | Open Manhole | 1200 |
| 1.006 | →[↓] | | S106 | 32.500 | 30.045 | 0.854 | Open Manhole | 1 |
| 9.000 | o | 150 | S900 | 32.665 | 31.850 | 0.665 | Open Manhole | 450 |
| 10.000 | o | 150 | S901 | 32.665 | 31.850 | 0.665 | Open Manhole | 450 |
| 9.001 | o | 225 | S901 | 32.665 | 30.995 | 1.445 | Open Manhole | 600 |
| 9.002 | o | 225 | S902 | 32.640 | 30.760 | 1.655 | Open Manhole | 600 |

### Downstream Manhole

| PN | Length (m) | Slope (1:X) | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |
|---|---|---|---|---|---|---|---|---|
| 6.001 | 2.416 | 10.1 | S502 | 32.665 | 30.900 | 1.615 | Open Manhole | 600 |
| 5.002 | 15.383 | 78.9 | S503 | 32.680 | 30.630 | 1.825 | Open Manhole | 600 |
| 5.003 | 6.184 | 19.9 | S504 | 32.635 | 30.320 | 2.090 | Open Manhole | 1500 |
| 7.000 | 6.710 | 78.9 | S701 | 32.635 | 31.795 | 0.690 | Open Manhole | 450 |
| 7.001 | 6.500 | 76.5 | S504 | 32.635 | 31.710 | 0.775 | Open Manhole | 1500 |
| 5.004 | 6.184 | 123.7 | S106 | 32.500 | 30.195 | 2.005 | Open Manhole | 1 |
| 8.000 | 15.200 | 17.8 | S106 | 32.500 | 30.345 | 2.005 | Open Manhole | 1 |
| 1.006 | 45.189 | 410.8 | S107 | 32.500 | 29.935 | 0.964 | Open Manhole | 1 |
| 9.000 | 15.917 | 20.4 | S901 | 32.665 | 31.070 | 1.445 | Open Manhole | 600 |
| 10.000 | 13.195 | 16.9 | S901 | 32.665 | 31.070 | 1.445 | Open Manhole | 600 |
| 9.001 | 23.561 | 100.3 | S902 | 32.640 | 30.760 | 1.655 | Open Manhole | 600 |
| 9.002 | 7.157 | 14.6 | S903 | 32.630 | 30.270 | 2.135 | Open Manhole | 1350 |

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## PIPELINE SCHEDULES for Storm

### Upstream Manhole

| PN | Hyd Sect | Diam (mm) | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |
|---|---|---|---|---|---|---|---|---|
| 11.000 | o | 150 | S1100 | 32.680 | 31.550 | 0.980 | Open Manhole | 450 |
| 9.003 | o | | S903 | 32.630 | 30.195 | 2.135 | Open Manhole | 1350 |
| 1.007 | →[↓] | | S107 | 32.500 | 29.935 | 0.964 | Open Manhole | 1 |
| 12.000 | o | 150 | S1200 | 32.635 | 31.850 | 0.635 | Open Manhole | 450 |
| 13.000 | o | 150 | S1300 | 32.635 | 31.850 | 0.635 | Open Manhole | 450 |
| 13.001 | o | 150 | S1301 | 32.635 | 31.760 | 0.725 | Open Manhole | 450 |
| 12.001 | o | 225 | S1201 | 32.635 | 31.410 | 1.000 | Open Manhole | 600 |
| 12.002 | o | 225 | S1202 | 32.680 | 31.035 | 1.420 | Open Manhole | 600 |
| 12.003 | o | 225 | S1203 | 32.660 | 30.945 | 1.490 | Open Manhole | 600 |
| 12.004 | o | 225 | S1204 | 32.660 | 30.810 | 1.625 | Open Manhole | 600 |
| 14.000 | o | 150 | S1400 | 32.650 | 31.625 | 0.875 | Open Manhole | 450 |
| 14.001 | o | 225 | S1401 | 32.680 | 31.270 | 1.185 | Open Manhole | 600 |
| 15.000 | o | 150 | S1500 | 32.680 | 31.650 | 0.880 | Open Manhole | 450 |
| 15.001 | o | 150 | S1501 | 32.600 | 31.605 | 0.845 | Open Manhole | 450 |

### Downstream Manhole

| PN | Length (m) | Slope (1:X) | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |
|---|---|---|---|---|---|---|---|---|
| 11.000 | 6.111 | 81.5 | S903 | 32.630 | 31.475 | 1.005 | Open Manhole | 1350 |
| 9.003 | 6.184 | 56.2 | S107 | 32.500 | 30.085 | 2.115 | Open Manhole | 1 |
| 1.007 | 10.786 | 359.5 | S108 | 32.550 | 29.905 | 1.044 | Open Manhole | 1500 |
| 12.000 | 8.740 | 23.9 | S1201 | 32.635 | 31.485 | 1.000 | Open Manhole | 600 |
| 13.000 | 7.229 | 80.3 | S1301 | 32.635 | 31.760 | 0.725 | Open Manhole | 450 |
| 13.001 | 8.641 | 31.4 | S1201 | 32.635 | 31.485 | 1.000 | Open Manhole | 600 |
| 12.001 | 19.161 | 51.1 | S1202 | 32.680 | 31.035 | 1.420 | Open Manhole | 600 |
| 12.002 | 8.777 | 97.5 | S1203 | 32.660 | 30.945 | 1.490 | Open Manhole | 600 |
| 12.003 | 6.920 | 51.3 | S1204 | 32.660 | 30.810 | 1.625 | Open Manhole | 600 |
| 12.004 | 9.598 | 29.1 | 1205 | 32.600 | 30.480 | 1.895 | Open Manhole | 1350 |
| 14.000 | 22.183 | 79.2 | S1401 | 32.680 | 31.345 | 1.185 | Open Manhole | 600 |
| 14.001 | 25.590 | 100.4 | S1402 | 32.600 | 31.015 | 1.360 | Open Manhole | 600 |
| 15.000 | 3.368 | 74.8 | S1501 | 32.600 | 31.605 | 0.845 | Open Manhole | 450 |
| 15.001 | 9.798 | 19.0 | S1402 | 32.600 | 31.090 | 1.360 | Open Manhole | 600 |

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## PIPELINE SCHEDULES for Storm

### Upstream Manhole

| PN | Hyd Sect | Diam (mm) | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |
|---|---|---|---|---|---|---|---|---|
| 14.002 | o | 225 | S1402 | 32.600 | 31.015 | 1.360 | Open Manhole | 600 |
| 12.005 | o | 225 | 1205 | 32.600 | 30.480 | 1.895 | Open Manhole | 1350 |
| 1.008 | o | 450 | S108 | 32.550 | 29.905 | 2.195 | Open Manhole | 1500 |
| 16.000 | o | 225 | S1600 | 32.545 | 31.425 | 0.895 | Open Manhole | 600 |
| 16.001 | o | 225 | S1601 | 32.545 | 30.460 | 1.860 | Open Manhole | 600 |
| 1.009 | o | 150 | S109 | 32.500 | 29.880 | 2.470 | Open Manhole | 1800 |

### Downstream Manhole

| PN | Length (m) | Slope (1:X) | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |
|---|---|---|---|---|---|---|---|---|
| 14.002 | 7.938 | 14.8 | 1205 | 32.600 | 30.480 | 1.895 | Open Manhole | 1350 |
| 12.005 | 5.964 | 17.0 | S108 | 32.550 | 30.130 | 2.195 | Open Manhole | 1500 |
| 1.008 | 10.282 | 411.3 | S109 | 32.500 | 29.880 | 2.170 | Open Manhole | 1800 |
| 16.000 | 46.756 | 48.5 | S1601 | 32.545 | 30.460 | 1.860 | Open Manhole | 600 |
| 16.001 | 6.201 | 17.5 | S109 | 32.500 | 30.105 | 2.170 | Open Manhole | 1800 |
| 1.009 | 5.950 | 79.3 | | 32.550 | 29.805 | 2.595 | Open Manhole | 0 |

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## Area Summary for Storm

| Pipe Number | PIMP Type | PIMP Name | PIMP (%) | Gross Area (ha) | Imp. Area (ha) | Pipe Total (ha) |
|---|---|---|---|---|---|---|
| 1.000 | - | - | 100 | 0.013 | 0.013 | 0.013 |
| 1.001 | - | - | 100 | 0.007 | 0.007 | 0.007 |
| 2.000 | - | - | 100 | 0.013 | 0.013 | 0.013 |
| 1.002 | - | - | 100 | 0.007 | 0.007 | 0.007 |
| 3.000 | - | - | 100 | 0.008 | 0.008 | 0.008 |
| 1.003 | - | - | 100 | 0.025 | 0.025 | 0.025 |
| 4.000 | - | - | 100 | 0.015 | 0.015 | 0.015 |
| 4.001 | - | - | 100 | 0.006 | 0.006 | 0.006 |
| 1.004 | - | - | 100 | 0.010 | 0.010 | 0.010 |
| 1.005 | - | - | 100 | 0.005 | 0.005 | 0.005 |
| 5.000 | - | - | 100 | 0.014 | 0.014 | 0.014 |
| 5.001 | - | - | 100 | 0.000 | 0.000 | 0.000 |
| 6.000 | - | - | 100 | 0.002 | 0.002 | 0.002 |
| 6.001 | - | - | 100 | 0.000 | 0.000 | 0.000 |
| 5.002 | - | - | 100 | 0.037 | 0.037 | 0.037 |
| 5.003 | - | - | 100 | 0.007 | 0.007 | 0.007 |
| 7.000 | - | - | 100 | 0.026 | 0.026 | 0.026 |
| 7.001 | - | - | 100 | 0.013 | 0.013 | 0.013 |
| 5.004 | - | - | 100 | 0.000 | 0.000 | 0.000 |
| 8.000 | - | - | 100 | 0.005 | 0.005 | 0.005 |
| 1.006 | - | - | 100 | 0.068 | 0.068 | 0.068 |
| 9.000 | - | - | 100 | 0.003 | 0.003 | 0.003 |
| 10.000 | - | - | 100 | 0.002 | 0.002 | 0.002 |
| 9.001 | - | - | 100 | 0.047 | 0.047 | 0.047 |
| 9.002 | - | - | 100 | 0.017 | 0.017 | 0.017 |
| 11.000 | - | - | 100 | 0.015 | 0.015 | 0.015 |
| 9.003 | - | - | 100 | 0.005 | 0.005 | 0.005 |
| 1.007 | - | - | 100 | 0.014 | 0.014 | 0.014 |
| 12.000 | - | - | 100 | 0.004 | 0.004 | 0.004 |
| 13.000 | - | - | 100 | 0.023 | 0.023 | 0.023 |
| 13.001 | - | - | 100 | 0.013 | 0.013 | 0.013 |
| 12.001 | - | - | 100 | 0.030 | 0.030 | 0.030 |
| 12.002 | - | - | 100 | 0.026 | 0.026 | 0.026 |
| 12.003 | - | - | 100 | 0.000 | 0.000 | 0.000 |
| 12.004 | - | - | 100 | 0.020 | 0.020 | 0.020 |
| 14.000 | - | - | 100 | 0.024 | 0.024 | 0.024 |
| 14.001 | - | - | 100 | 0.019 | 0.019 | 0.019 |
| 15.000 | - | - | 100 | 0.009 | 0.009 | 0.009 |
| 15.001 | - | - | 100 | 0.015 | 0.015 | 0.015 |
| 14.002 | - | - | 100 | 0.013 | 0.013 | 0.013 |
| 12.005 | - | - | 100 | 0.022 | 0.022 | 0.022 |
| 1.008 | - | - | 100 | 0.008 | 0.008 | 0.008 |
| 16.000 | - | - | 100 | 0.034 | 0.034 | 0.034 |
| 16.001 | - | - | 100 | 0.004 | 0.004 | 0.004 |
| 1.009 | - | - | 100 | 0.000 | 0.000 | 0.000 |
| | | | | Total | Total | Total |
| | | | | 0.648 | 0.648 | 0.648 |

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## Network Classifications for Storm

| PN | USMH Name | Pipe Dia (mm) | Min Cover Depth (m) | Max Cover Depth (m) | Pipe Type | MH Dia (mm) | MH Width (mm) | MH Ring Depth (m) | MH Type |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 150 | 0.760 | 0.830 | Unclassified | 450 | 0 | 0.760 | Unclassified |
| 1.001 | S101 | 150 | 0.830 | 1.185 | Unclassified | 450 | 0 | 0.830 | Unclassified |
| 2.000 | S200 | 150 | 0.970 | 1.185 | Unclassified | 450 | 0 | 0.970 | Unclassified |
| 1.002 | S102 | 225 | 1.185 | 1.325 | Unclassified | 600 | 0 | 1.185 | Unclassified |
| 3.000 | S300 | 150 | 0.550 | 1.325 | Unclassified | 450 | 0 | 0.550 | Unclassified |
| 1.003 | S103 | 225 | 1.325 | 2.070 | Unclassified | 600 | 0 | 1.325 | Unclassified |
| 4.000 | S400 | 150 | 0.700 | 1.800 | Unclassified | 450 | 0 | 0.700 | Unclassified |
| 4.001 | S401 | 150 | 1.800 | 2.070 | Unclassified | 450 | 0 | 1.800 | Unclassified |
| 1.004 | S104 | 300 | 2.070 | 2.090 | Unclassified | 600 | 0 | 2.070 | Unclassified |
| 1.005 | S105 | 450 | 2.005 | 2.090 | Unclassified | 1500 | 0 | 2.090 | Unclassified |
| 5.000 | S500 | 150 | 0.550 | 1.375 | Unclassified | 450 | 0 | 0.550 | Unclassified |
| 5.001 | S501 | 150 | 1.375 | 1.615 | Unclassified | 450 | 0 | 1.375 | Unclassified |
| 6.000 | S600 | 150 | 0.665 | 1.375 | Unclassified | 450 | 0 | 0.665 | Unclassified |
| 6.001 | S601 | 150 | 1.375 | 1.615 | Unclassified | 450 | 0 | 1.375 | Unclassified |
| 5.002 | S502 | 225 | 1.615 | 1.825 | Unclassified | 600 | 0 | 1.615 | Unclassified |
| 5.003 | S503 | 225 | 1.825 | 2.090 | Unclassified | 600 | 0 | 1.825 | Unclassified |
| 7.000 | S700 | 150 | 0.650 | 0.690 | Unclassified | 450 | 0 | 0.650 | Unclassified |
| 7.001 | S701 | 150 | 0.690 | 0.775 | Unclassified | 450 | 0 | 0.690 | Unclassified |
| 5.004 | S504 | 300 | 2.005 | 2.090 | Unclassified | 1500 | 0 | 2.090 | Unclassified |
| 8.000 | S800 | 150 | 1.175 | 2.005 | Unclassified | 1200 | 0 | 1.175 | Unclassified |
| 1.006 | S106 | | | | Cellular Storage | 1 | 0 | 0.854 | Unclassified |
| 9.000 | S900 | 150 | 0.665 | 1.445 | Unclassified | 450 | 0 | 0.665 | Unclassified |
| 10.000 | S901 | 150 | 0.665 | 1.445 | Unclassified | 450 | 0 | 0.665 | Unclassified |
| 9.001 | S901 | 225 | 1.445 | 1.655 | Unclassified | 600 | 0 | 1.445 | Unclassified |
| 9.002 | S902 | 225 | 1.655 | 2.135 | Unclassified | 600 | 0 | 1.655 | Unclassified |
| 11.000 | S1100 | 150 | 0.980 | 1.005 | Unclassified | 450 | 0 | 0.980 | Unclassified |
| 9.003 | S903 | 300 | 2.115 | 2.135 | Unclassified | 1350 | 0 | 2.135 | Unclassified |
| 1.007 | S107 | | | | Cellular Storage | 1 | 0 | 0.964 | Unclassified |
| 12.000 | S1200 | 150 | 0.635 | 1.000 | Unclassified | 450 | 0 | 0.635 | Unclassified |
| 13.000 | S1300 | 150 | 0.635 | 0.725 | Unclassified | 450 | 0 | 0.635 | Unclassified |
| 13.001 | S1301 | 150 | 0.725 | 1.000 | Unclassified | 450 | 0 | 0.725 | Unclassified |
| 12.001 | S1201 | 225 | 1.000 | 1.420 | Unclassified | 600 | 0 | 1.000 | Unclassified |
| 12.002 | S1202 | 225 | 1.420 | 1.490 | Unclassified | 600 | 0 | 1.420 | Unclassified |
| 12.003 | S1203 | 225 | 1.490 | 1.625 | Unclassified | 600 | 0 | 1.490 | Unclassified |
| 12.004 | S1204 | 225 | 1.625 | 1.895 | Unclassified | 600 | 0 | 1.625 | Unclassified |
| 14.000 | S1400 | 150 | 0.875 | 1.185 | Unclassified | 450 | 0 | 0.875 | Unclassified |
| 14.001 | S1401 | 225 | 1.185 | 1.360 | Unclassified | 600 | 0 | 1.185 | Unclassified |
| 15.000 | S1500 | 150 | 0.845 | 0.880 | Unclassified | 450 | 0 | 0.880 | Unclassified |
| 15.001 | S1501 | 150 | 0.845 | 1.360 | Unclassified | 450 | 0 | 0.845 | Unclassified |
| 14.002 | S1402 | 225 | 1.360 | 1.895 | Unclassified | 600 | 0 | 1.360 | Unclassified |
| 12.005 | 1205 | 225 | 1.895 | 2.195 | Unclassified | 1350 | 0 | 1.895 | Unclassified |
| 1.008 | S108 | 450 | 2.170 | 2.195 | Unclassified | 1500 | 0 | 2.195 | Unclassified |
| 16.000 | S1600 | 225 | 0.895 | 1.860 | Unclassified | 600 | 0 | 0.895 | Unclassified |
| 16.001 | S1601 | 225 | 1.860 | 2.170 | Unclassified | 600 | 0 | 1.860 | Unclassified |
| 1.009 | S109 | 150 | 2.470 | 2.595 | Unclassified | 1800 | 0 | 2.470 | Unclassified |

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## Free Flowing Outfall Details for Storm

| Outfall Pipe Number | Outfall Name | C. Level (m) | I. Level (m) | Min I. Level (m) | D,L (mm) | W (mm) |
|---|---|---|---|---|---|---|
| 1.009 | | 32.550 | 29.805 | 0.000 | 0 | 0 |

## Simulation Criteria for Storm

| | | | |
|---|---|---|---|
| Volumetric Runoff Coeff | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Areal Reduction Factor | 1.000 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start (mins) | 0 | Inlet Coeffiecient | 0.800 |
| Hot Start Level (mm) | 0 | Flow per Person per Day (l/per/day) | 0.000 |
| Manhole Headloss Coeff (Global) | 0.500 | Run Time (mins) | 60 |
| Foul Sewage per hectare (l/s) | 0.000 | Output Interval (mins) | 1 |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

## Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | FSR | Profile Type | Winter |
| Return Period (years) | 100 | Cv (Summer) | 1.000 |
| Region | England and Wales | Cv (Winter) | 1.000 |
| M5-60 (mm) | 18.000 | Storm Duration (mins) | 30 |
| Ratio R | 0.360 | | |

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## Online Controls for Storm

### Hydro-Brake® Optimum Manhole: S109, DS/PN: 1.009, Volume (m³): 8.2

| | |
|---|---|
| Unit Reference | MD-SCU-0086-1200-2600-1200 |
| Design Head (m) | 2.600 |
| Design Flow (l/s) | 12.0 |
| Flush-Flo™ | Calculated |
| Objective | Linear discharge profile |
| Application | Surface |
| Sump Available | Yes |
| Diameter (mm) | 86 |
| Invert Level (m) | 29.880 |
| Minimum Outlet Pipe Diameter (mm) | 100 |
| Suggested Manhole Diameter (mm) | 1200 |

| Control Points | Head (m) | Flow (l/s) |
|---|---|---|
| Design Point (Calculated) | 2.600 | 12.0 |
| Flush-Flo™ | 0.106 | 3.0 |
| Kick-Flo® | 0.130 | 3.0 |
| Mean Flow over Head Range | - | 8.1 |

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

| Depth (m) | Flow (l/s) | Depth (m) | Flow (l/s) | Depth (m) | Flow (l/s) | Depth (m) | Flow (l/s) |
|---|---|---|---|---|---|---|---|
| 0.100 | 2.9 | 1.200 | 8.3 | 3.000 | 12.8 | 7.000 | 19.3 |
| 0.200 | 3.6 | 1.400 | 8.9 | 3.500 | 13.8 | 7.500 | 19.9 |
| 0.300 | 4.4 | 1.600 | 9.5 | 4.000 | 14.7 | 8.000 | 20.6 |
| 0.400 | 5.0 | 1.800 | 10.1 | 4.500 | 15.6 | 8.500 | 21.2 |
| 0.500 | 5.5 | 2.000 | 10.6 | 5.000 | 16.4 | 9.000 | 21.8 |
| 0.600 | 6.0 | 2.200 | 11.1 | 5.500 | 17.2 | 9.500 | 22.4 |
| 0.800 | 6.9 | 2.400 | 11.6 | 6.000 | 17.9 | | |
| 1.000 | 7.6 | 2.600 | 12.0 | 6.500 | 18.6 | | |

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## Storage Structures for Storm

### Cellular Storage Pipe: 1.006

| | | | |
|---|---|---|---|
| Manning's N | 0.050 | Infiltration Coefficient Side (m/hr) | 0.00000 |
| Invert Level (m) | 30.045 | Safety Factor | 1.0 |
| Infiltration Coefficient Base (m/hr) | 0.00000 | Porosity | 0.95 |

| Depth (m) | Area (m²) | Inf. Area (m²) | Depth (m) | Area (m²) | Inf. Area (m²) |
|---|---|---|---|---|---|
| 0.000 | 121.8 | 0.0 | 1.601 | 0.0 | 0.0 |
| 1.600 | 121.8 | 0.0 | | | |

### Cellular Storage Pipe: 1.007

| | | | |
|---|---|---|---|
| Manning's N | 0.050 | Infiltration Coefficient Side (m/hr) | 0.00000 |
| Invert Level (m) | 29.935 | Safety Factor | 1.0 |
| Infiltration Coefficient Base (m/hr) | 0.00000 | Porosity | 0.95 |

| Depth (m) | Area (m²) | Inf. Area (m²) | Depth (m) | Area (m²) | Inf. Area (m²) |
|---|---|---|---|---|---|
| 0.000 | 121.8 | 0.0 | 1.601 | 0.0 | 0.0 |
| 1.600 | 121.8 | 0.0 | | | |

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## Volume Summary (Static)

Length Calculations based on Centre-Centre

| Pipe Number | USMH Name | Manhole Volume (m³) | Pipe Volume (m³) | Storage Structure Volume (m³) | Total Volume (m³) |
|---|---|---|---|---|---|
| 1.000 | S100 | 0.145 | 0.095 | 0.000 | 0.240 |
| 1.001 | S101 | 0.156 | 0.137 | 0.000 | 0.293 |
| 2.000 | S200 | 0.178 | 0.159 | 0.000 | 0.337 |
| 1.002 | S102 | 0.399 | 0.537 | 0.000 | 0.936 |
| 3.000 | S300 | 0.111 | 0.196 | 0.000 | 0.307 |
| 1.003 | S103 | 0.438 | 0.887 | 0.000 | 1.326 |
| 4.000 | S400 | 0.135 | 0.198 | 0.000 | 0.333 |
| 4.001 | S401 | 0.310 | 0.235 | 0.000 | 0.545 |
| 1.004 | S104 | 0.670 | 0.334 | 0.000 | 1.005 |
| 1.005 | S105 | 4.489 | 0.904 | 0.000 | 5.392 |
| 5.000 | S500 | 0.111 | 0.337 | 0.000 | 0.449 |
| 5.001 | S501 | 0.243 | 0.044 | 0.000 | 0.287 |
| 6.000 | S600 | 0.130 | 0.245 | 0.000 | 0.375 |
| 6.001 | S601 | 0.243 | 0.043 | 0.000 | 0.285 |
| 5.002 | S502 | 0.520 | 0.612 | 0.000 | 1.132 |
| 5.003 | S503 | 0.580 | 0.246 | 0.000 | 0.826 |
| 7.000 | S700 | 0.127 | 0.119 | 0.000 | 0.246 |
| 7.001 | S701 | 0.134 | 0.115 | 0.000 | 0.248 |
| 5.004 | S504 | 4.223 | 0.437 | 0.000 | 4.661 |
| 8.000 | S800 | 1.499 | 0.269 | 0.000 | 1.767 |
| 1.006 | S106 | 0.000 | 185.194 | 0.000 | 185.194 |
| 9.000 | S900 | 0.130 | 0.281 | 0.000 | 0.411 |
| 10.000 | S901 | 0.130 | 0.233 | 0.000 | 0.363 |
| 9.001 | S901 | 0.472 | 0.937 | 0.000 | 1.409 |
| 9.002 | S902 | 0.532 | 0.285 | 0.000 | 0.816 |
| 11.000 | S1100 | 0.180 | 0.108 | 0.000 | 0.288 |
| 9.003 | S903 | 3.485 | 0.437 | 0.000 | 3.923 |
| 1.007 | S107 | 0.000 | 185.194 | 0.000 | 185.194 |
| 12.000 | S1200 | 0.125 | 0.154 | 0.000 | 0.279 |
| 13.000 | S1300 | 0.125 | 0.128 | 0.000 | 0.253 |
| 13.001 | S1301 | 0.139 | 0.153 | 0.000 | 0.292 |
| 12.001 | S1201 | 0.346 | 0.762 | 0.000 | 1.108 |
| 12.002 | S1202 | 0.465 | 0.349 | 0.000 | 0.814 |
| 12.003 | S1203 | 0.485 | 0.275 | 0.000 | 0.760 |
| 12.004 | S1204 | 0.523 | 0.382 | 0.000 | 0.905 |
| 14.000 | S1400 | 0.163 | 0.392 | 0.000 | 0.555 |
| 14.001 | S1401 | 0.399 | 1.017 | 0.000 | 1.416 |
| 15.000 | S1500 | 0.164 | 0.060 | 0.000 | 0.223 |
| 15.001 | S1501 | 0.158 | 0.173 | 0.000 | 0.331 |
| 14.002 | S1402 | 0.448 | 0.316 | 0.000 | 0.764 |
| 12.005 | 1205 | 3.035 | 0.237 | 0.000 | 3.272 |
| 1.008 | S108 | 4.674 | 1.635 | 0.000 | 6.309 |
| 16.000 | S1600 | 0.317 | 1.859 | 0.000 | 2.176 |
| 16.001 | S1601 | 0.590 | 0.247 | 0.000 | 0.836 |
| 1.009 | S109 | 6.667 | 0.105 | 0.000 | 6.772 |
| Total | | 38.590 | 387.060 | 0.000 | 425.650 |

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## Volume Summary (Static)

Length Calculations based on True Length

| Pipe Number | USMH Name | Manhole Volume (m³) | Pipe Volume (m³) | Storage Structure Volume (m³) | Total Volume (m³) |
|---|---|---|---|---|---|
| 1.000 | S100 | 0.145 | 0.087 | 0.000 | 0.232 |
| 1.001 | S101 | 0.156 | 0.128 | 0.000 | 0.284 |
| 2.000 | S200 | 0.178 | 0.150 | 0.000 | 0.328 |
| 1.002 | S102 | 0.399 | 0.513 | 0.000 | 0.912 |
| 3.000 | S300 | 0.111 | 0.187 | 0.000 | 0.298 |
| 1.003 | S103 | 0.438 | 0.863 | 0.000 | 1.302 |
| 4.000 | S400 | 0.135 | 0.190 | 0.000 | 0.325 |
| 4.001 | S401 | 0.310 | 0.225 | 0.000 | 0.536 |
| 1.004 | S104 | 0.670 | 0.260 | 0.000 | 0.930 |
| 1.005 | S105 | 4.489 | 0.784 | 0.000 | 5.273 |
| 5.000 | S500 | 0.111 | 0.330 | 0.000 | 0.441 |
| 5.001 | S501 | 0.243 | 0.035 | 0.000 | 0.277 |
| 6.000 | S600 | 0.130 | 0.237 | 0.000 | 0.367 |
| 6.001 | S601 | 0.243 | 0.033 | 0.000 | 0.276 |
| 5.002 | S502 | 0.520 | 0.588 | 0.000 | 1.108 |
| 5.003 | S503 | 0.580 | 0.204 | 0.000 | 0.784 |
| 7.000 | S700 | 0.127 | 0.111 | 0.000 | 0.238 |
| 7.001 | S701 | 0.134 | 0.098 | 0.000 | 0.231 |
| 5.004 | S504 | 4.223 | 0.384 | 0.000 | 4.608 |
| 8.000 | S800 | 1.499 | 0.258 | 0.000 | 1.757 |
| 1.006 | S106 | 0.000 | 185.190 | 0.000 | 185.190 |
| 9.000 | S900 | 0.130 | 0.272 | 0.000 | 0.402 |
| 10.000 | S901 | 0.130 | 0.224 | 0.000 | 0.354 |
| 9.001 | S901 | 0.472 | 0.913 | 0.000 | 1.385 |
| 9.002 | S902 | 0.532 | 0.246 | 0.000 | 0.777 |
| 11.000 | S1100 | 0.180 | 0.092 | 0.000 | 0.272 |
| 9.003 | S903 | 3.485 | 0.389 | 0.000 | 3.875 |
| 1.007 | S107 | 0.000 | 172.308 | 0.000 | 172.308 |
| 12.000 | S1200 | 0.125 | 0.145 | 0.000 | 0.270 |
| 13.000 | S1300 | 0.125 | 0.120 | 0.000 | 0.245 |
| 13.001 | S1301 | 0.139 | 0.143 | 0.000 | 0.283 |
| 12.001 | S1201 | 0.346 | 0.738 | 0.000 | 1.084 |
| 12.002 | S1202 | 0.465 | 0.325 | 0.000 | 0.790 |
| 12.003 | S1203 | 0.485 | 0.251 | 0.000 | 0.736 |
| 12.004 | S1204 | 0.523 | 0.343 | 0.000 | 0.866 |
| 14.000 | S1400 | 0.163 | 0.383 | 0.000 | 0.546 |
| 14.001 | S1401 | 0.399 | 0.994 | 0.000 | 1.392 |
| 15.000 | S1500 | 0.164 | 0.052 | 0.000 | 0.215 |
| 15.001 | S1501 | 0.158 | 0.164 | 0.000 | 0.322 |
| 14.002 | S1402 | 0.448 | 0.277 | 0.000 | 0.725 |
| 12.005 | 1205 | 3.035 | 0.180 | 0.000 | 3.215 |
| 1.008 | S108 | 4.674 | 1.373 | 0.000 | 6.047 |
| 16.000 | S1600 | 0.317 | 1.835 | 0.000 | 2.152 |
| 16.001 | S1601 | 0.590 | 0.199 | 0.000 | 0.788 |
| 1.009 | S109 | 6.667 | 0.089 | 0.000 | 6.756 |
| Total | | 38.590 | 372.909 | 0.000 | 411.499 |

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## Summary of Critical Results by Maximum Level (Rank 1) for Storm

### Simulation Criteria

| | | | |
|---|---|---|---|
| Areal Reduction Factor | 1.000 | Additional Flow - % of Total Flow | 0.000 |
| Hot Start (mins) | 0 | MADD Factor * 10m³/ha Storage | 0.000 |
| Hot Start Level (mm) | 0 | Inlet Coeffiecient | 0.800 |
| Manhole Headloss Coeff (Global) | 0.500 | Flow per Person per Day (l/per/day) | 0.000 |
| Foul Sewage per hectare (l/s) | 0.000 | | |

| | | | |
|---|---|---|---|
| Number of Input Hydrographs | 0 | Number of Storage Structures | 2 |
| Number of Online Controls | 1 | Number of Time/Area Diagrams | 0 |
| Number of Offline Controls | 0 | Number of Real Time Controls | 0 |

### Synthetic Rainfall Details

| | | | |
|---|---|---|---|
| Rainfall Model | | FSR | Ratio R 0.360 |
| Region | England and Wales | Cv (Summer) | 1.000 |
| M5-60 (mm) | 18.000 | Cv (Winter) | 1.000 |

| | |
|---|---|
| Margin for Flood Risk Warning (mm) | 300.0 |
| Analysis Timestep | 2.5 Second Increment (Extended) |
| DTS Status | OFF |
| DVD Status | ON |
| Inertia Status | ON |

| | |
|---|---|
| Profile(s) | Summer and Winter |
| Duration(s) (mins) | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 |
| Return Period(s) (years) | 1, 2, 5, 30, 100 |
| Climate Change (%) | 0, 0, 0, 0, 45 |

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.680 | 32.333 | 0.413 |
| 1.001 | S101 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.680 | 32.332 | 0.482 |
| 2.000 | S200 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.600 | 32.332 | 0.702 |
| 1.002 | S102 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.630 | 32.331 | 0.886 |
| 3.000 | S300 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.550 | 32.331 | 0.331 |
| 1.003 | S103 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.600 | 32.330 | 1.055 |
| 4.000 | S400 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.550 | 32.330 | 0.480 |
| 4.001 | S401 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.550 | 32.329 | 1.579 |
| 1.004 | S104 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.600 | 32.327 | 1.797 |
| 1.005 | S105 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.600 | 32.326 | 1.816 |
| 5.000 | S500 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.550 | 32.331 | 0.331 |
| 5.001 | S501 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.665 | 32.330 | 1.040 |
| 6.000 | S600 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.665 | 32.330 | 0.330 |
| 6.001 | S601 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.665 | 32.330 | 1.040 |
| 5.002 | S502 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.665 | 32.330 | 1.280 |
| 5.003 | S503 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.680 | 32.328 | 1.473 |
| 7.000 | S700 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.680 | 32.330 | 0.300 |
| 7.001 | S701 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.635 | 32.329 | 0.384 |
| 5.004 | S504 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.635 | 32.327 | 1.782 |

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## Summary of Critical Results by Maximum Level (Rank 1) for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 1.000 | S100 | 0.000 | 0.11 | | 0.089 | 10.200 | 0.6 | 1.8 | SURCHARGED |
| 1.001 | S101 | 0.000 | 0.08 | | 0.187 | 15.693 | 1.2 | 2.8 | SURCHARGED |
| 2.000 | S200 | 0.000 | 0.08 | | 0.135 | 10.200 | 0.8 | 1.8 | FLOOD RISK |
| 1.002 | S102 | 0.000 | 0.11 | | 0.590 | 31.386 | 0.9 | 5.5 | FLOOD RISK |
| 3.000 | S300 | 0.000 | 0.03 | | 0.076 | 6.277 | 1.2 | 1.1 | FLOOD RISK |
| 1.003 | S103 | 0.000 | 0.12 | | 1.060 | 57.241 | 1.5 | 10.0 | FLOOD RISK |
| 4.000 | S400 | 0.000 | 0.04 | | 0.099 | 11.769 | 1.5 | 2.1 | FLOOD RISK |
| 4.001 | S401 | 0.000 | 0.13 | | 0.464 | 16.319 | 0.8 | 2.8 | FLOOD RISK |
| 1.004 | S104 | 0.000 | 0.29 | | 1.680 | 80.144 | 0.5 | 13.7 | FLOOD RISK |
| 1.005 | S105 | 0.000 | 0.12 | | 4.257 | 81.973 | 0.4 | 13.8 | FLOOD RISK |
| 5.000 | S500 | 0.000 | 0.06 | | 0.076 | 10.985 | 1.1 | 1.9 | FLOOD RISK |
| 5.001 | S501 | 0.000 | 0.06 | | 0.518 | 10.985 | 1.0 | 1.9 | SURCHARGED |
| 6.000 | S600 | 0.000 | 0.01 | | 0.075 | 1.569 | 0.6 | 0.3 | SURCHARGED |
| 6.001 | S601 | 0.000 | 0.01 | | 0.426 | 1.569 | 0.6 | 0.3 | SURCHARGED |
| 5.002 | S502 | 0.000 | 0.14 | | 0.492 | 41.450 | 0.9 | 7.2 | SURCHARGED |
| 5.003 | S503 | 0.000 | 0.10 | | 1.066 | 46.217 | 1.3 | 7.6 | SURCHARGED |
| 7.000 | S700 | 0.000 | 0.21 | | 0.071 | 20.401 | 0.8 | 3.6 | SURCHARGED |
| 7.001 | S701 | 0.000 | 0.31 | | 0.195 | 30.601 | 0.9 | 5.4 | SURCHARGED |
| 5.004 | S504 | 0.000 | 0.20 | | 3.972 | 75.117 | 0.6 | 12.3 | SURCHARGED |

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## Summary of Critical Results by Maximum Level (Rank 1) for Storm

| PN | US/MH Name | Event | Duration (mins) | Storm Rank | US/CL (m) | Water Level (m) | Surcharged Depth (m) |
|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.525 | 32.327 | 0.977 |
| 1.006 | S106 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.500 | 32.326 | 0.680 |
| 9.000 | S900 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.665 | 32.330 | 0.330 |
| 10.000 | S901 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.665 | 32.330 | 0.330 |
| 9.001 | S901 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.665 | 32.330 | 1.110 |
| 9.002 | S902 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.640 | 32.328 | 1.343 |
| 11.000 | S1100 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.680 | 32.328 | 0.628 |
| 9.003 | S903 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.630 | 32.327 | 1.832 |
| 1.007 | S107 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.500 | 32.326 | 0.790 |
| 12.000 | S1200 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.635 | 32.339 | 0.339 |
| 13.000 | S1300 | 15 minute 100 year Summer I+45% | 15 | 1 | 32.635 | 32.571 | 0.571 |
| 13.001 | S1301 | 15 minute 100 year Summer I+45% | 15 | 1 | 32.635 | 32.502 | 0.592 |
| 12.001 | S1201 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.635 | 32.339 | 0.704 |
| 12.002 | S1202 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.680 | 32.336 | 1.076 |
| 12.003 | S1203 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.660 | 32.334 | 1.164 |
| 12.004 | S1204 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.660 | 32.332 | 1.297 |
| 14.000 | S1400 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.650 | 32.335 | 0.560 |
| 14.001 | S1401 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.680 | 32.333 | 0.838 |
| 15.000 | S1500 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.680 | 32.333 | 0.533 |
| 15.001 | S1501 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.600 | 32.333 | 0.578 |
| 14.002 | S1402 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.600 | 32.331 | 1.091 |
| 12.005 | 1205 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.600 | 32.330 | 1.625 |
| 1.008 | S108 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.550 | 32.326 | 1.971 |
| 16.000 | S1600 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.545 | 32.326 | 0.676 |
| 16.001 | S1601 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.545 | 32.324 | 1.639 |
| 1.009 | S109 | 240 minute 100 year Winter I+45% | 240 | 1 | 32.500 | 32.323 | 2.293 |

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 8.000 | S800 | 0.000 | 0.02 | | 1.269 | 3.923 | 1.1 | 0.7 | FLOOD RISK |
| 1.006 | S106 | 0.000 | 0.01 | | 1.427 | 150.594 | 0.1 | 16.9 | FLOOD RISK |
| 9.000 | S900 | 0.000 | 0.01 | | 0.076 | 2.354 | 0.9 | 0.4 | SURCHARGED |
| 10.000 | S901 | 0.000 | 0.01 | | 0.076 | 1.569 | 0.6 | 0.3 | SURCHARGED |
| 9.001 | S901 | 0.000 | 0.15 | | 0.872 | 40.757 | 0.9 | 7.2 | SURCHARGED |
| 9.002 | S902 | 0.000 | 0.09 | | 1.355 | 53.224 | 1.6 | 9.2 | SURCHARGED |
| 11.000 | S1100 | 0.000 | 0.13 | | 0.123 | 11.770 | 0.7 | 2.1 | SURCHARGED |
| 9.003 | S903 | 0.000 | 0.14 | | 3.382 | 67.377 | 0.7 | 11.3 | SURCHARGED |
| 1.007 | S107 | 0.000 | 0.00 | | 185.558 | 163.295 | 0.1 | 10.8 | FLOOD RISK |
| 12.000 | S1200 | 0.000 | 0.02 | | 0.077 | 3.138 | 0.9 | 0.6 | FLOOD RISK |
| 13.000 | S1300 | 0.000 | 0.91 | | 0.114 | 7.066 | 1.1 | 15.6 | FLOOD RISK |
| 13.001 | S1301 | 0.000 | 0.86 | | 0.237 | 11.059 | 1.7 | 24.1 | FLOOD RISK |
| 12.001 | S1201 | 0.000 | 0.15 | | 0.550 | 54.925 | 1.2 | 9.6 | FLOOD RISK |
| 12.002 | S1202 | 0.000 | 0.31 | | 1.104 | 75.285 | 0.9 | 13.2 | SURCHARGED |
| 12.003 | S1203 | 0.000 | 0.26 | | 0.716 | 75.098 | 1.1 | 13.2 | SURCHARGED |
| 12.004 | S1204 | 0.000 | 0.19 | | 0.680 | 90.470 | 1.6 | 15.6 | SURCHARGED |
| 14.000 | S1400 | 0.000 | 0.17 | | 0.112 | 18.831 | 0.8 | 3.3 | SURCHARGED |

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## Summary of Critical Results by Maximum Level (Rank 1) for Storm

| PN | US/MH Name | Flooded Volume (m³) | Flow / Cap. | Overflow (l/s) | Maximum Vol (m³) | Discharge Vol (m³) | Maximum Velocity (m/s) | Pipe Flow (l/s) | Status |
|---|---|---|---|---|---|---|---|---|---|
| 14.001 | S1401 | 0.000 | 0.12 | | 0.682 | 33.739 | 0.8 | 5.9 | SURCHARGED |
| 15.000 | S1500 | 0.000 | 0.09 | | 0.108 | 7.062 | 0.5 | 1.2 | SURCHARGED |
| 15.001 | S1501 | 0.000 | 0.09 | | 0.167 | 18.831 | 1.3 | 3.3 | FLOOD RISK |
| 14.002 | S1402 | 0.000 | 0.11 | | 1.528 | 62.691 | 1.7 | 11.0 | FLOOD RISK |
| 12.005 | 1205 | 0.000 | 0.34 | | 3.260 | 168.920 | 1.8 | 28.7 | FLOOD RISK |
| 1.008 | S108 | 0.000 | 0.12 | | 176.758 | 210.038 | 0.2 | 11.2 | FLOOD RISK |
| 16.000 | S1600 | 0.000 | 0.07 | | 0.253 | 26.678 | 1.1 | 4.7 | FLOOD RISK |
| 16.001 | S1601 | 0.000 | 0.05 | | 2.361 | 28.649 | 1.2 | 4.5 | FLOOD RISK |
| 1.009 | S109 | 0.000 | 0.70 | | 7.777 | 233.965 | 1.2 | 11.6 | FLOOD RISK |

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FIGURE B.12
TYPICAL MANHOLE DETAIL - TYPE 2
Maximum depth from cover level to soffit of pipe 3.0 m

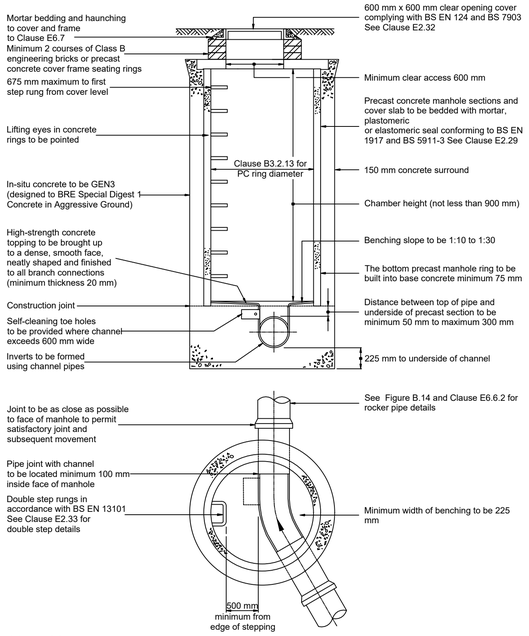
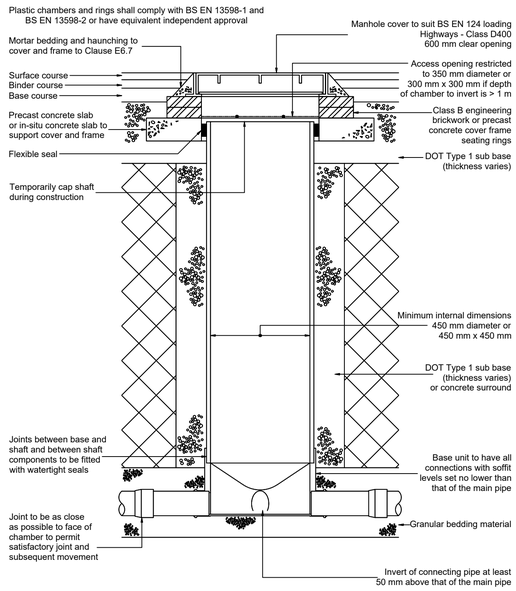
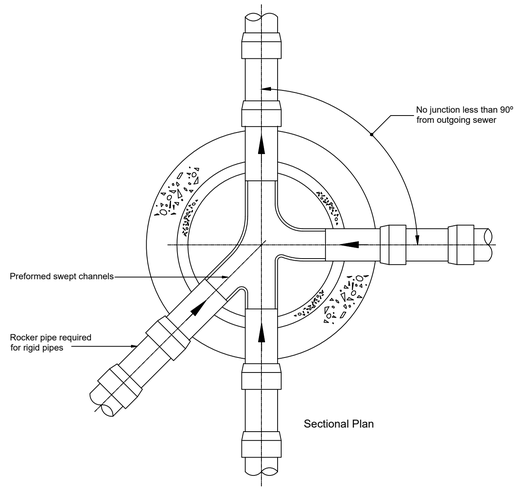



FIGURE B.16
TYPICAL INSPECTION CHAMBER DETAIL - TYPE 3 (Flexible material detail)
Maximum depth from cover level to soffit of pipe in areas subject to vehicle loading 3 m, non-entry




Note: Where the access chamber is in the highway the Highway Authority can have specific requirements

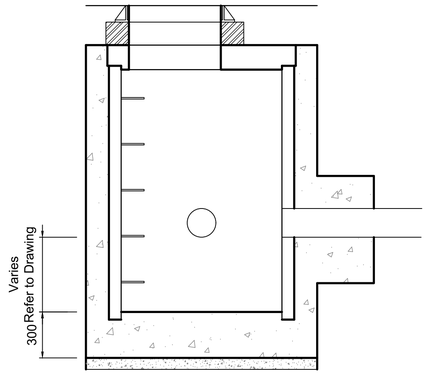
FIGURE B.14
TYPICAL ARRANGEMENT OF PIPE JUNCTIONS WITHIN MANHOLES




Rigid pipes built into manhole should have a flexible joint as close as feasible to the external face of the structure and the length of the next rocker pipe should be as shown.

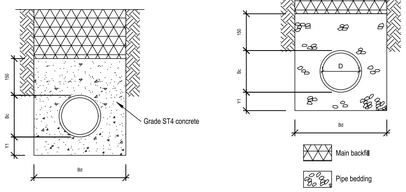
| Nominal diameter (mm) | Maximum effective length (m) |
|---|---|
| 150 - 600 | 0.6 |
| 601 - 750 | 1.00 |
| over 750 | 1.25 |

All pipes entering the bottom of the manhole to have soffits level.




## CATCHPIT MANHOLE DETAIL

CONSTRUCTION AS PER TYPE 2 MANHOLE




## NOTES

1. Construction and specification of the drainage network to be in accordance with the Civil Engineering Specification for the Water Industry and Sewers for Adoption 7th Edition.
2. Concrete base and pipe surround to be placed in a single continuous operation from top of base slab to top of benching and pipe surround.
3. Cut ends of earthenware and concrete pipes shall be treated with epoxy cut ends of pipes shall be treated with epoxy resin/paint/mortar approved by the engineer. Resin/paint/mortar approved by the engineer.
4. A joint sealant (Hydrotite or similar approved) shall be bonded to the segment joint face prior to erection.
5. In addition to the requirements of the specification Class B engineering bricks shall not contain frogs or holes.
6. Safety ladder to be to specification to be in accordance with Sewers for Adoption 7th Edition and approved by the engineer.
7. Standard concrete mixes in accordance with BS 5328 shall be used with a 20mm nominal maximum size of aggregate and a 75mm slump.
8. Suitable applications of concrete mixes are:

| Standard mix | Grade of concrete | Application |
|---|---|---|
| ST1 | C7.5 | Fillings, blindings, soft spots and drainage sumps. |
| ST4 | C20 | All other applications. |

9. High strength concrete topping to benching shall be produced, laid and finished in accordance with the relevant provisions of BS 8204: part 2 and the following approximate mix proportions by weight shall be used: 1 part cement, 1 part natural sand and 2 parts single sized coarse aggregate.
10. Fixings for metalwork mild steel bolts and nuts shall be hot dip galvanised in accordance with BS EN ISO 1460 and stainless steel bolts accordance with BS EN ISO 1460. Stainless steel bolts and nuts shall be manufactured from grade 316S31 steel complying with BS 970: part 1 or BS 1449: part 2.
11. Stainless steel proprietary fixings shall be manufactured stainless steel proprietary fixings shall be manufactured from grade 316S31 steel complying with BS 970: part 1 or BS 1449 part 2. Mild and high tensile steel proprietary fixings shall be protected in accordance with the relevant provisions of the appropriate British Standard as per Sewers for Adoption 7th edition.
12. Covers to chambers should be such so as the lifting effort does not exceed 25kgF.

## COVER SCHEDULE

MANHOLE COVERS, GULLY GRATINGS AND FRAMES, TO BE IN ACCORDANCE WITH EN124

| LOCATION | CLASS | DESCRIPTION |
|---|---|---|
| MANHOLES | | |
| CARRIAGEWAYS & SERVICE YARDS TAKING ALL TYPES OF HEAVY GOODS VEHICLES | D-400 | DUCTILE IRON 600mm MIN OPENING. IN AREAS OF BLOCK/SLAB PAVING THE COVER IS TO BE A RECESSED UNIT |
| PARKING AREAS, AND AREAS OF SLOW MOVING LIGHT COMMERICAIL VEHICLES | C250 | DUCTILE IRON 600mm MIN OPENING. IN AREAS OF BLOCK/SLAB PAVING THE COVER IS TO BE A RECESSED UNIT |
| PEDESTRIAN PRECINCTS, LIGHT VEHICLES, PRIVATE CAR PARKS & DRIVES | B125 | DUCTILE IRON 600mm MIN OPENING. IN AREAS OF BLOCK/SLAB PAVING THE COVER IS TO BE A RECESSED UNIT |
| STRUCTURES INTERNAL | A15 | ALL INTERNAL MANHOLES AND INSPECTION CHAMBERS SHALL HAVE MECHANICALLY DOUBLE SEALED AIRTIGHT RECESSED COVERS TO TAKE FLOOR FINISH AS SPECIFIED BY THE ARCHITECT |
| POLYPROPYLENE INSPECTION CHAMBERS | | |
| PEDESTRIAN PRECINCTS, LIGHT VEHICLES, PRIVATE CAR PARKS & DRIVES | B125 | CAST IRON 450mm MIN OPENING. IN AREAS OF BLOCK/SLAB PAVING THE COVER IS TO BE A RECESSED UNIT. |
| STRUCTURES INTERNAL | A15 | ALL INTERNAL MANHOLES AND INSPECTION CHAMBERS SHALL HAVE MECHANICALLY DOUBLE SEALED AIRTIGHT RECESSED COVERS TO TAKE FLOOR FINISH AS SPECIFIED BY THE ARCHITECT |
| GULLIES | | |
| CARRIAGEWAYS | D-400 | STRAIGHT BAR, NOMINAL WIDTH 450mm MINIMUM WATERWAY 900 sq cm |
| CAR PARKS | D-400 | CAST IRON, HINGED, STRAIGHT BAR FLAT SURFACE, NOMINAL WIDTH 325mm MINIMUM WATERWAY 650 sq cm |
| LINEAR DRAINAGE CHANNEL AND SUMPS | | |
| CAR PARKS | BOLT DOWN C250 | EXTERNAL LINEAR CHANNEL SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE MANUFACTURER. THE GRATING SHALL BE A CAST IRON SYSTEM A SUITABLE FOR PEDSERIAN TO WALK ON SAFELY |
| SERVICE YARDS | BOLT DOWN D400 | |



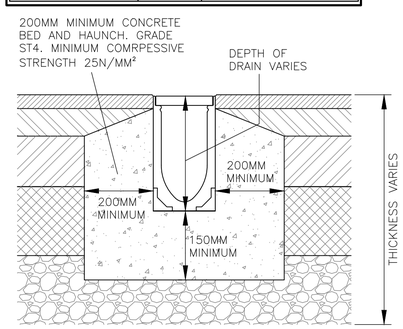

## PIPE PASSING THROUGH WALL

| Nominal internal pipe diameter | Dimension Y1, even trench bottom (min) | Dimension Y2, rock or uneven trench bottom (min) | Granular bedding surround type single sized | Maximum permitted trench width | Thickness of compressible filler |
|---|---|---|---|---|---|
| 100 | 100 | 200 | A 10 | 600 | 18 |
| 150 | 100 | 200 | A 10 | 750 | 18 |
| 225 | 100 | 200 | A 10 | 825 | 18 |
| 300 | 100 | 200 | A 14 | 925 | 18 |
| 375 | 100 | 200 | A 14 | 1050 | 18 |
| 450 | 150 | 200 | A 14 | 1150 | 36 |
| 525 | 150 | 250 | A 14 | 1200 | 36 |
| 600 | 150 | 250 | A 20 | 1350 | 36 |
| 675 | 150 | 250 | A 20 | 1450 | 36 |
| 750 | 225 | 300 | A 20 | 1500 | 36 |
| 825 | 225 | 300 | A 20 | 1600 | 36 |
| 900 | 225 | 300 | A 20 | 1900 | 36 |
| 975 | 225 | 300 | A 20 | 2000 | 36 |
| 1050 | 225 | 300 | A 20 | 2100 | 36 |
| 1125 | 225 | 300 | A 20 | 2200 | 36 |
| 1200 | 250 | 350 | A 20 | 2300 | 36 |
| 1350 | 375 | 450 | A 20 | 2500 | 54 |
| 1500 | 375 | 450 | A 20 | 2700 | 54 |
| 1650 | 375 | 450 | A 20 | 2800 | 54 |
| 1800 | 375 | 500 | A 40 | 3100 | 54 |
| 1950 | 400 | 500 | A 40 | 3200 | 54 |
| 2100 | 425 | 650 | A 40 | 3400 | 54 |
| 2400 | 450 | 675 | A 40 | 3700 | 54 |

TRENCH TABLE

Notes

1. All trench excavations to be undertaken to narrow trench conditions
2. Y1 shall be used on all occasions except where Y2 is specified by the engineer
3. Dimension Y shall be increased by 40 for each additional 1000 cover in excess of 5000.
4. Dimension Y2 to be used in lieu of y1 where excavation is in rock or mixed soils
5. Limestone pipe bedding will not be permitted in acidic ground water conditions refer to contract specification for specific details.




## TYPICAL LINEAR CHANNEL DRAIN DETAIL




## TYPICAL FOUL CONNECTION




PIPE BEDDING CLASS Z

Pipe bedding material shall consist of free draining clean, chemically stable gravel, crushed stone or crushed slag in accordance with the table, the material shall have a compaction fraction value not exceeding 0.2




## BACKDROP MANHOLE DETAIL

| B.S.410 Test sieve | %Passing Type A20 |
|---|---|
| 63mm | – |
| 37.5mm | 100 |
| 20mm | 85-100 |
| 14mm | – |
| 10mm | 0-25 |
| 5mm | 0-5 |
| 2.36mm | – |

PIPE BEDDING MATERIAL

Selected excavated material, compacted in layers not exceeding 225mm in cohesive soils, trenches under roads and hardstandings shall be backfilled with imported fill type 6F1




TYPICAL PERMEABLE SURFACING DETAIL
SCALE 1:20

| Rev. | Description | By | Date |
|---|---|---|---|


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Client
MOSSCARE ST VINCENT'S HOUSING GROUP LIMITED

Architect

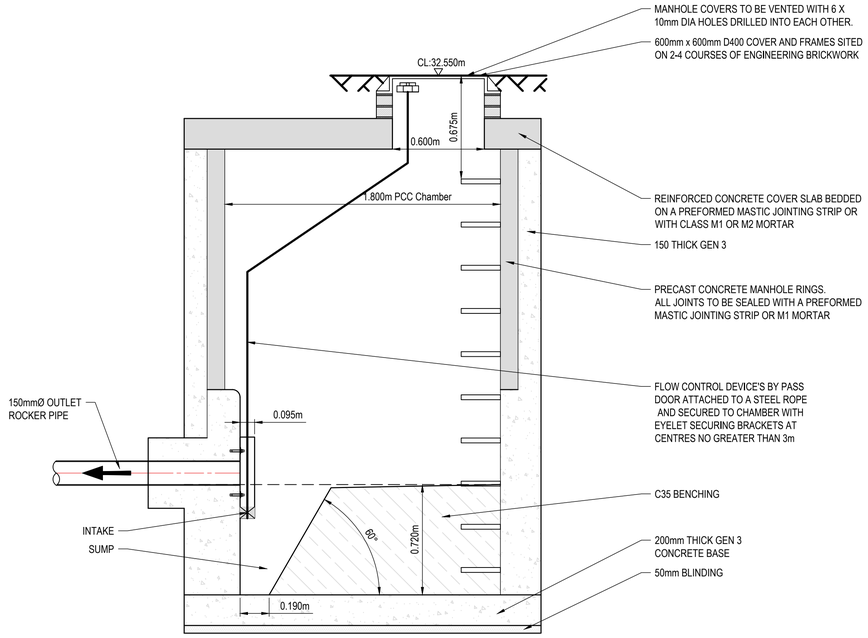
Project
**LAND AT BARNHILL STREET/ RABY STREET MOSS SIDE, MANCHESTER**

Title
**DRAINAGE STRATEGY**
**PROPOSED DRAINAGE DETAILS**

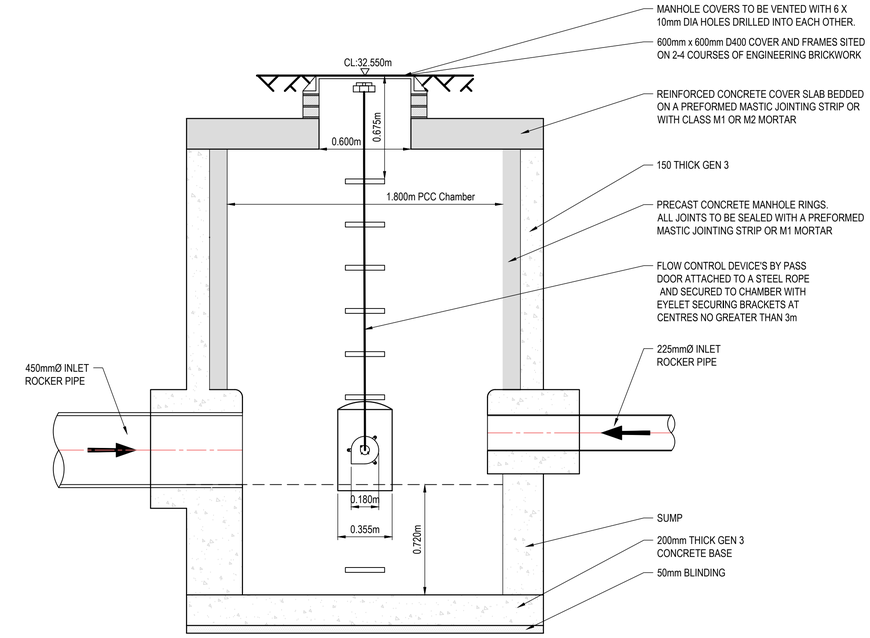
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| Size | A1 | Checked By | RBG |
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| SGI Proj No. | RIBA | Status Code | Issue Status |
|---|---|---|---|
| C1876 | 4 | C3 | STAGE 4 |

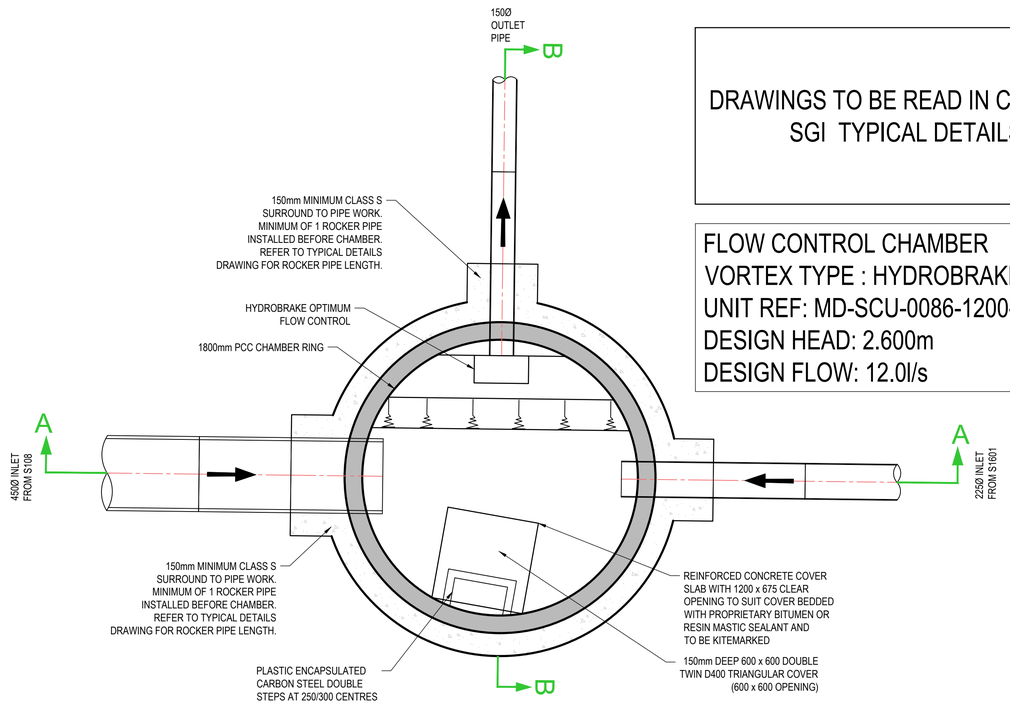
Dwg No. C1876-002-009 Rev. P01




MANHOLE S109 SECTION B-B




MANHOLE S109 SECTION A-A




MANHOLE S109 PLAN VIEW

DRAWINGS TO BE READ IN CONJUNCTION WITH SGI TYPICAL DETAILS DRAWING

FLOW CONTROL CHAMBER
VORTEX TYPE : HYDROBRAKE OPTIMUM
UNIT REF: MD-SCU-0086-1200-2600-1200
DESIGN HEAD: 2.600m
DESIGN FLOW: 12.0l/s

| Rev. | Description | By | Date |
|---|---|---|---|

Shepherd Gilmour Consulting Engineers
Phoenix House, 45 Cross Street, Manchester, M2 4JF
t: 0161 837 1500 w: www.sgiconsulting.co.uk

Client
MOSSCARE ST VINCENT'S HOUSING GROUP LIMITED

Architect

Project
**LAND AT BARNHILL STREET/ RABY STREET MOSS SIDE, MANCHESTER**

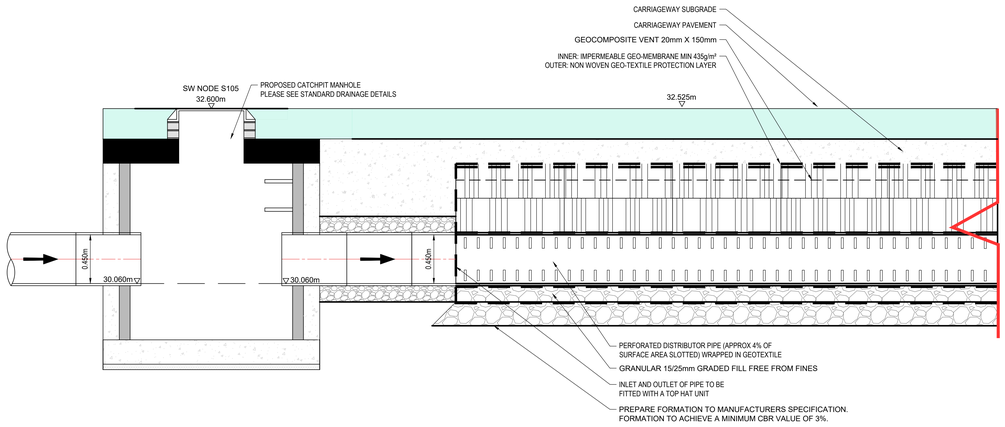
Title
**PROPOSED HYDROBRAKE DETAILS/ FLOW CONTROL CHAMBER**

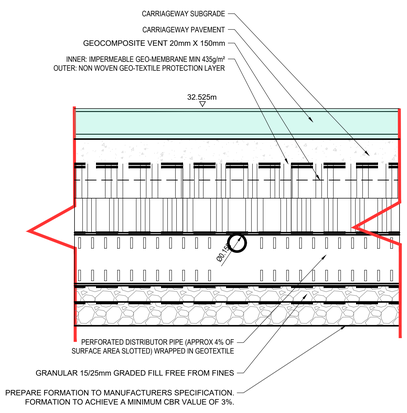
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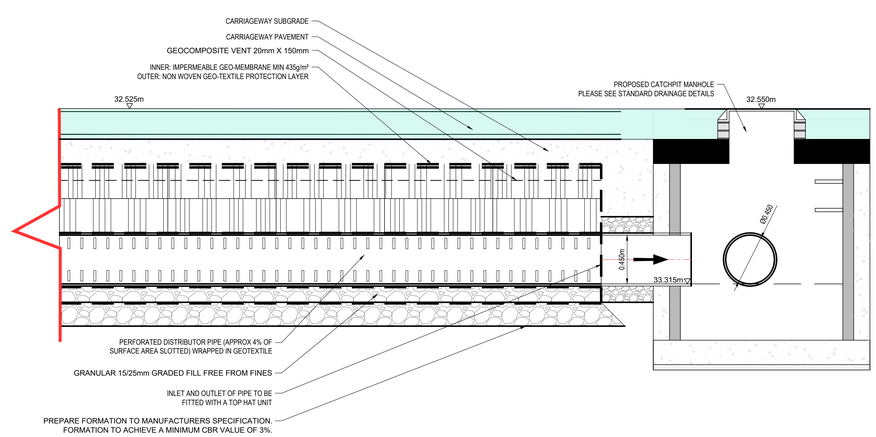
| SGi Proj No. | RIBA | Status Code | Issue Status |
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| C1876 | 4 | C3 | STAGE 4 |

Dwg No. **C1876-002-013** Rev. **P01**

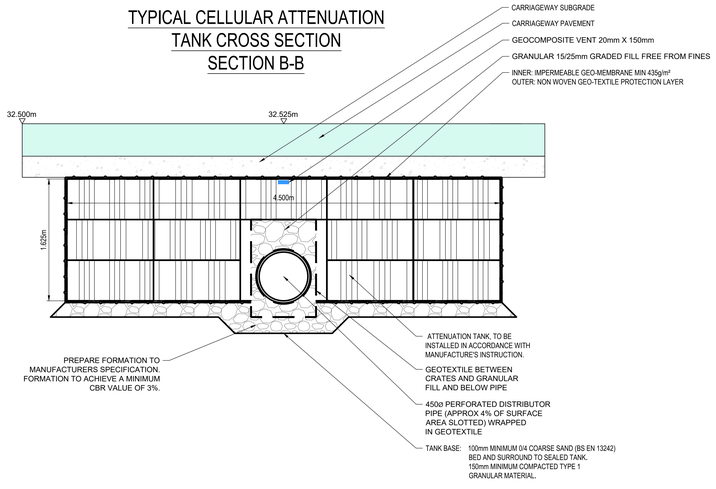
## TYPICAL CELLULAR ATTENUATION TANK LONGSECTION
## SECTION A-A




## TYPICAL CELLULAR ATTENUATION
## TANK CROSS SECTION
## SECTION B-B




| Rev. | Description | By | Date |
|---|---|---|---|


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Client
MOSSCARE ST VINCENT'S HOUSING GROUP LIMITED

Project
**LAND AT BARNHILL STREET/ RABY STREET MOSS SIDE, MANCHESTER**

Title
**DRAINAGE STRATEGY TYPICAL ATTENUATION TANK DETAILS**

| | | | |
|---|---|---|---|
| Date | 03-07-2026 | Drawn By | PMB |
| Size | A0 | Checked By | RBG |
| Scale | 1:20 | Approved By | EAJ |

| SG Proj No. | RIBA | Status Code | Issue Status |
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| C1876 | 4 | C3 | STAGE 4 |

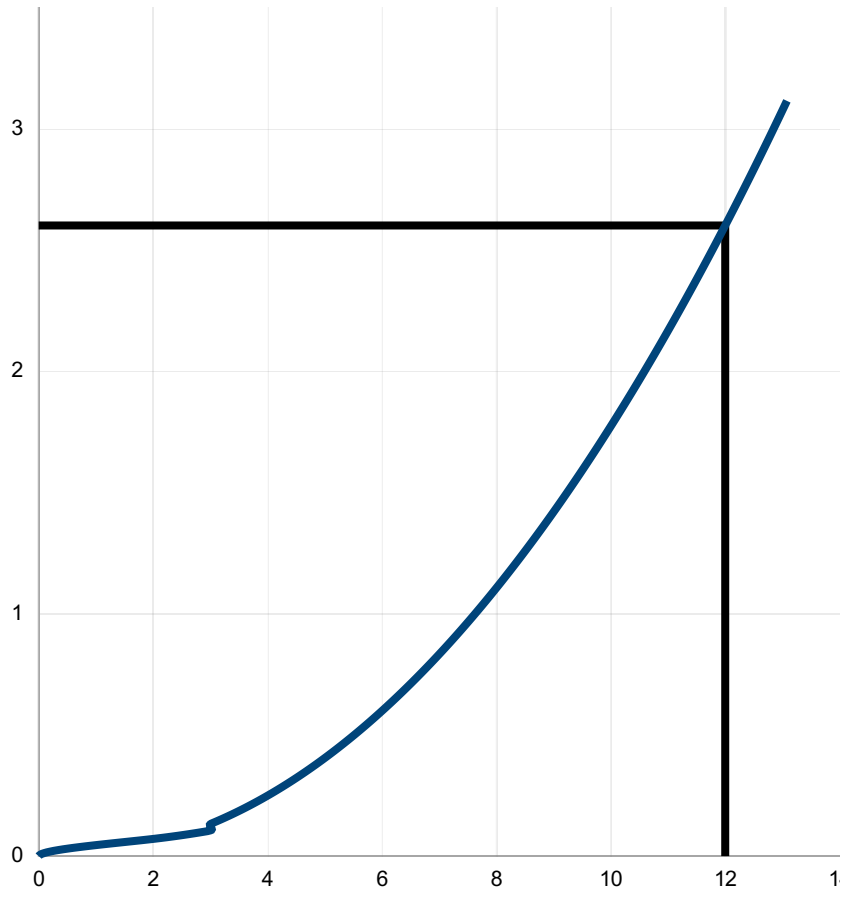
Dwg No. C1876-002-014 Ref. P01

| Technical Specification | | |
|---|---|---|
| Control Point | Head (m) | Flow (l/s) |
| Primary Design | 2.600 | 12.000 |
| Flush-Flo™ | 0.106 | 3.029 |
| Kick-Flo® | 0.130 | 2.976 |
| Mean Flow | | 8.144 |

BBA APPROVAL INSPECTION TESTING CERTIFICATION
CERTIFICATE No 08/4596

wrc approved™
PT/503/0422
Valid: 01/04/2022 - 31/03/2027

hydro-int.com/patents




| Head (m) | Flow (l/s) |
|---|---|
| 0.000 | 0.000 |
| 0.090 | 2.600 |
| 0.179 | 3.442 |
| 0.269 | 4.143 |
| 0.359 | 4.730 |
| 0.448 | 5.245 |
| 0.538 | 5.708 |
| 0.628 | 6.134 |
| 0.717 | 6.529 |
| 0.807 | 6.899 |
| 0.897 | 7.249 |
| 0.986 | 7.581 |
| 1.076 | 7.898 |
| 1.166 | 8.202 |
| 1.255 | 8.493 |
| 1.345 | 8.775 |
| 1.434 | 9.047 |
| 1.524 | 9.310 |
| 1.614 | 9.565 |
| 1.703 | 9.814 |
| 1.793 | 10.055 |
| 1.883 | 10.291 |
| 1.972 | 10.521 |
| 2.062 | 10.746 |
| 2.152 | 10.965 |
| 2.241 | 11.180 |
| 2.331 | 11.391 |
| 2.421 | 11.598 |
| 2.510 | 11.800 |
| 2.600 | 12.000 |

DESIGN ADVICE

The head/flow characteristics of this SCU-0086-1200-2600-1200 Hydro-Brake® Optimum Flow Control are unique. Dynamic hydraulic modelling evaluates the full head/flow characteristic curve.

! **The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.**

Hydro International
A CRH COMPANY

| | |
|---|---|
| DATE | 05/07/2026 03:55 |
| Site | |
| DESIGNER | Phillip Makinde-Barth |
| Ref | |

SCU-0086-1200-2600-1200

Hydro-Brake® Optimum

© 2024 Hydro International, Rivermead Court, Kenn Business Park, Windmill Road, Kenn, Clevedon, BS21 6FT. Tel 01275 878371 Fax 01275 874979 Web www.hydro-int.com Email designtools@hydro-int.com

## Technical Specification

| Control Point | Head (m) | Flow (l/s) |
|---|---|---|
| Primary Design | 2.600 | 12.000 |
| Flush-Flo™ | 0.106 | 3.029 |
| Kick-Flo® | 0.130 | 2.976 |
| Mean Flow | | 8.144 |

This Hydro-Brake® Optimum includes:

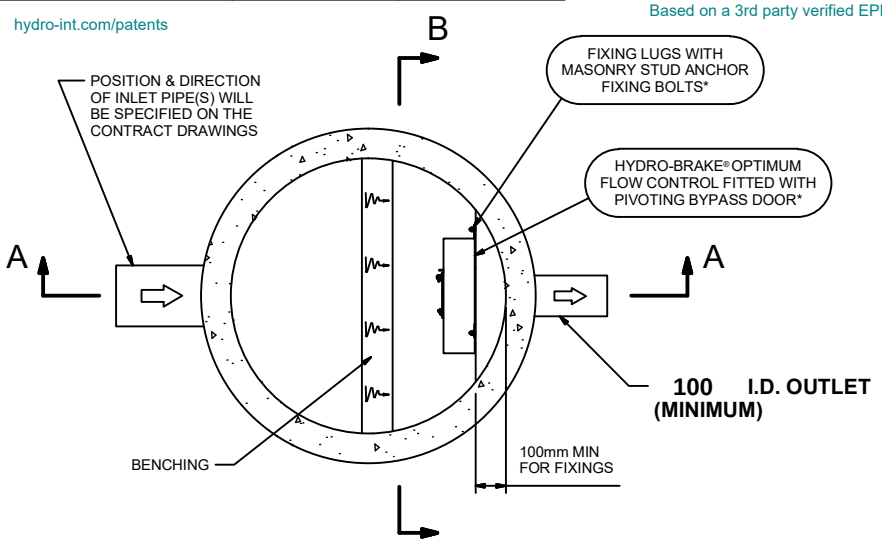
- •All in 3 mm Grade 304L stainless steel
- • Integral pivoting by-pass door allowing clear line of sight through to outlet, c/w operating rope
- • Media blasted for corrosion resistance
- • Variable flow rate post installation via adjustable inlet (if necessary)
- • Indicative Weight: 5 kg
- • Product Carbon Footprint: 9.27 kgCO2e

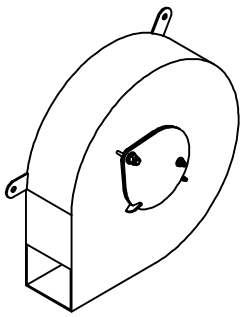
Based on a 3rd party verified EPD: hydro-int.com/epd

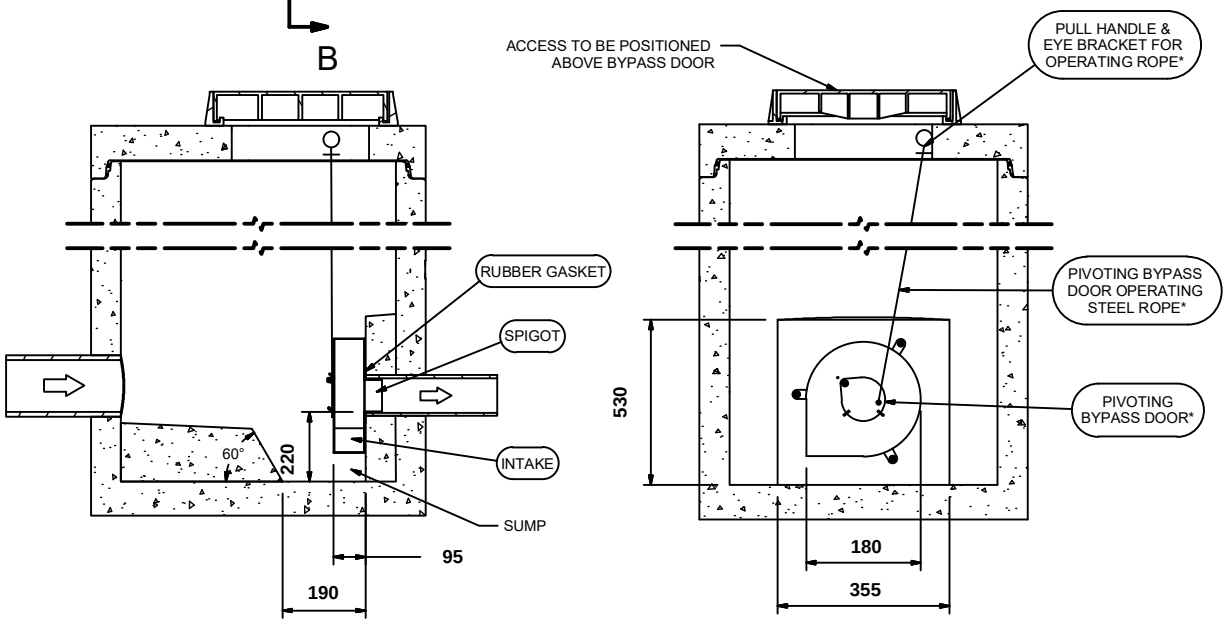
BBA APPROVAL INSPECTION TESTING CERTIFICATION CERTIFICATE 08/4596

wrc approved PT/503/0422 Valid: 01/04/2022 - 31/03/2027

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SECTION A-A

SECTION B-B

**IMPORTANT:**

⬭ LIMIT OF HYDRO INTERNATIONAL SUPPLY
THE DEVICE WILL BE HANDED TO SUIT SITE CONDITIONS
FOR SITE SPECIFIC DETAILS AND MINIMUM CHAMBER SIZE REFER TO HYDRO INTERNATIONAL
ALL CIVIL AND INSTALLATION WORK BY OTHERS
* WHERE SUPPLIED
HYDRO-BRAKE® IS A REGISTERED TRADEMARK FOR FLOW CONTROLS DESIGNED AND MANUFACTURED EXCLUSIVELY BY HYDRO INTERNATIONAL

**THIS DESIGN LAYOUT IS FOR ILLUSTRATIVE PURPOSES ONLY. NOT TO SCALE.**

DESIGN ADVICE

The head/flow characteristics of this SCU-0086-1200-2600-1200 Hydro-Brake® Optimum Flow Control are unique. Dynamic hydraulic modelling evaluates the full head/flow characteristic curve.
**The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.**

Hydro International A CRH COMPANY

| | |
|---|---|
| DATE | 05/07/2026 03:55 |
| SITE | |
| DESIGNER | Phillip Makinde-Barth |
| REF | |

SCU-0086-1200-2600-1200

Hydro-Brake® Optimum

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pmakinde@sgiconsulting.co.uk

KEY:

DIRECTION OF SW OVERLAND FLOW ROUTE

MOSS LANE EAST

PRINCESS ROAD

BARNHILL STREET

RABY STREET

BLOCK A

BLOCK B

BLOCK C

BLOCK D

BLOCK E

BLOCK F

Demarcation studs to ownership boundary.

Refer to engineers' S278 drawings.

Paving laid to fall to aco drain - subject to design by the drainage engineer.

700mm wide paving strip along linear boundary planting bed.

Entrance

FFL 32.70

Pedestrian access

Vehicular access

Refer to engineers' S278 drawings for kerb details.

Refer to engineers' S278 drawings.

Disabled bays to be identified with a sign on kerb.

Doors opening onto highway/ public footpath.

5b 6p

4b 6p

New Sub station location

BUS STOP

SHELTER

| Rev. | Description | By | Date |
|---|---|---|---|


Shepherd Gilmour Consulting Engineers

Phoenix House, 45 Cross Street, Manchester, M2 4JF

t: 0161 837 1500 w: www.sgiconsulting.co.uk


Client
MOSSCARE ST VINCENT'S HOUSING GROUP LIMITED

Project
LAND AT BARNHILL STREET/RABY STREET
MOSS SIDE, MANCHESTER

Title
SW OVERLAND FLOW ROUTE

| Date | | Drawn By | |
|---|---|---|---|
| Size | A0 | Checked By | |
| Scale | 1:100 | Approved By | |

| SGi Proj No. | RIBA | Status Code | Issue Status |
|---|---|---|---|
| C1876 | 4 | C3 | STAGE 4 |

| Dwg No. | Ref. |
|---|---|
| C1876-002-007 | P01 |