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Drainage Statement

Proposed Residential Development at

**Land North of Water Lane
Angmering, West Sussex**

On behalf of

Rydon Homes Limited and Gleeson Land

December 2021

Document History and Status

Project Number 23544

Date	Version	Prepared By	Reviewed By	Approved By
6 Dec 2021	1.0	Steve Doughty Director	Stuart Magowan IEng MICE	Stuart Magowan IEng MICE

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1 Non Technical Summary

- 1.1 This Drainage Statement has been undertaken on behalf of Rydon Homes Limited and Gleeson Land in support of a Planning Application for the construction of 525 residential dwellings with associated access roads, car parking and landscaping, a bus link to Dappers Lane and provision of a future commercial development site on land north of Water Lane, Angmering, West Sussex.
- 1.2 This Statement seeks to satisfy conditions 27 and 28 of Outline Planning Permission A/40/18/OUT.
- 1.3 This Statement is to be read in conjunction with all planning, architectural and other reports that accompany the Planning Application for the proposed development.
- 1.4 The proposed development will incorporate sustainable drainage systems which will discharge surface water at a suitably restricted rate to the Black Ditch watercourse to the south of the site.
- 1.5 Storage will be provided for all storm return periods up to and including the 1:100 year rainfall event with an allowance for climate change.
- 1.6 Foul water will be discharged to the upgraded public foul sewer located beneath Water Lane.
- 1.7 This report concludes that a suitable surface water and foul water drainage system has been designed to accommodate the anticipated flows from the proposed development.

2 Planning Policy Context

2.1 National Planning Policy Framework

2.1.1 The National Planning Policy Framework was updated in July 2021.

2.1.2 With regard to planning and flood risk the policy framework states that *‘when determining any planning applications, local planning authorities should ensure that flood risk is not increased elsewhere. Where appropriate, applications should be supported by a site-specific flood-risk assessment.*

Development should only be allowed in areas at risk of flooding where, in the light of this assessment (and the sequential and exception tests, as applicable) it can be demonstrated that:

- a) within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location;*
- b) the development is appropriately flood resistant and resilient, such that, in the event of a flood, it could be quickly brought back into use without significant refurbishment;*
- c) it incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate;*
- d) any residual risk can be safely managed; and*
- e) safe access and escape routes are included where appropriate, as part of an agreed emergency plan.’*

2.1.3 With regard to major developments the NPPF states that *‘major developments should incorporate sustainable drainage systems unless there is clear evidence that this would be inappropriate. The systems used should:*

- a) take account of advice from the lead local flood authority;*
- b) have appropriate proposed minimum operational standards;*
- c) have maintenance arrangements in place to ensure an acceptable standard of operation for the lifetime of the development; and*
- d) where possible, provide multifunctional benefits’*

2.1.4 Major development is defined as follows:

‘For housing, development where 10 or more homes will be provided, or the site has an area of 0.5 hectares or more. For non-residential development it means additional floorspace of 1,000m² or more, or a site of 1 hectare or more, or as

otherwise provided in the Town and Country Planning (Development Management Procedure) (England) Order 2015.'

2.2 Lead Local Flood Authority

2.2.1 West Sussex County Council became a Lead Local Flood Authority under the Flood and Water Management Act 2010 and was given a series of new responsibilities including the role of statutory consultee for surface water management for Major Planning Applications.

2.2.2 As part of their role West Sussex County Council updated their Policy for the Management of Surface Water in November 2018.

2.2.3 That document has been reviewed in the preparation of this report.

2.3 Local Planning Policy

2.3.1 The Adur District Council Local Plan was adopted in December 2017.

2.3.2 **Policy 35** states that *'Development will be permitted provided that:*

It does not have an unacceptable impact on the quality and potential yield of local water resources and the water environment; also

It protects and enhances groundwater, surface water features and controls aquatic pollution to help achieve the objectives of the Water Framework Directive; and

It has an adequate means of water supply (even in a drought), sufficient foul and surface water drainage and adequate sewage treatment capacity.

Development must be phased to take into account the timing of any water and/or wastewater infrastructure required which must be in place prior to the occupation of development.

A preliminary risk assessment will be required for any development where there is potential risk of contamination of controlled waters.

New development within Groundwater Source Protection Zones will only be permitted provided that it has no adverse impact on the quality of the groundwater source or a risk to its ability to maintain a public water supply.'

2.3.3 **Policy 36** states that *'The Council will work with relevant bodies to ensure that flood risk in Adur is reduced.*

A site specific flood risk assessment must be submitted with planning applications for:

Proposals of 1 hectare or greater in Flood Zone 1

All development or changes of use to a more vulnerable use in Flood Zones 2 and 3.

All development or changes of use to a more vulnerable use, regardless of flood zone or size, where flood risk from other sources (surface water, sewer, groundwater) is identified by the Strategic Flood Risk Assessment.'

2.4 Planning Conditions of Outline Planning Permission A/40/18/OUT

- 2.4.1 Planning Condition 27 reads *'development shall not commence, other than works of site survey and investigation, until full details of the proposed surface water drainage scheme have been submitted to and approved in writing by the Local Planning Authority. The design should follow the hierarchy of preference for different types of surface water drainage disposal systems as set out in Approved Document H of the Building Regulations, and the recommendations of the SuDS Manual produced by CIRIA. Winter groundwater monitoring to establish highest annual ground water levels and winter Percolation testing to BRE 365, or similar approved, will be required to support the design of any Infiltration drainage. No building / No part of the extended building shall be occupied until the complete surface water drainage system serving the property has been implemented in accordance with the agreed details and the details so agreed shall be maintained in good working order in perpetuity.'*

Reason: To ensure that the proposed development is satisfactorily drained in accordance with Policy D DM1 and Policy W DM3 of the Arun Local Plan. It is considered necessary for this to be a pre-commencement condition to ensure that the surface water disposal scheme is agreed before construction commences.'

- 2.4.2 Planning Condition 28 reads *'Development shall not commence until full details of the maintenance and management of the surface water drainage system is set out in a site-specific maintenance manual and submitted to, and approved in writing, by the Local Planning Authority. The manual is to include details of financial management and arrangements for the replacement of major components at the end of the manufacturer's recommended design life. Upon completed construction of the surface water drainage system, the owner or management company shall strictly adhere to and implement the recommendations contained within the manual.'*

Reason: To ensure that the proposed development is satisfactorily drained in accordance with Policy W DM1, Policy W DM2 and Policy W DM3 of the Arun Local Plan. It is considered necessary for this to be a pre-commencement condition to ensure that the future maintenance and funding arrangements for the surface water disposal scheme are agreed before construction commences.'

3 Existing Site

3.1 Site Location

3.1.1 The main development site is located on land north of Water Lane, Angmering, West Sussex at Ordnance Survey reference TQ 076052. The nearest postcode is BN16 4QG.

3.1.2 The smaller development site is also located on land north of Water Lane, Angmering, West Sussex at Ordnance Survey reference TQ 074047. The nearest postcode is BN16 4EP.



Image 1: Site Location

3.1.3 A copy of the site location plan is located in Appendix 1 at the rear of this report.

3.2 Site Description

3.2.1 The main site is approximately 29.7ha in area and currently comprises agricultural land, a motor racing track and associated access road.

3.2.2 Existing ground levels are highest at the northeast corner of the site at approximately 44.7m AOD. The site falls towards its southern boundary to a level of approximately 14.2 m AOD.

3.2.3 The smaller site is approximately 1.23ha in area and currently comprises undeveloped grazing land.

3.2.4 Existing ground levels are highest at the northwest corner of the site at approximately 17m AOD. The site falls towards its southern corner to a level of approximately 12.8m AOD.

3.2.5 A copy of the existing site layout plan is located in Appendix 2 at the rear of this report.

3.3 Existing Drainage

- 3.3.1 The sites currently have no positive surface water or foul water drainage infrastructure.
- 3.3.2 Rainfall currently discharges in part to ground and in part overland as a greenfield runoff to the Black Ditch, an ordinary watercourse located to the south of the site.
- 3.3.3 Pre-developed greenfield runoff rates have been established using the HR Wallingford tool for Greenfield runoff estimation.



Greenfield runoff rate estimation for sites

www.ukseeds.com | Greenfield runoff tool

Calculated by: Steve Coughlin

Site name: 23544

Site location: Land North of Water Lane, Angmering

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance 'Planned runoff management for developments', SC030218 (2013), the SuDS Manual C793 (Defra, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the discharge of surface water runoff from sites.

Site Details

Latitude: 50.83543° N

Longitude: 0.47365° W

Reference: 510250965

Date: May 15 2021 14:17

Runoff estimation approach: M124

Site characteristics

Total site area (ha): 1

Methodology

Q_{peak} estimation method: Calculate from SPR and SAAR

SPR estimation method: Calculate from SCL type

Soil characteristics

	Default	Edited
Soil type:	2	2
HIST class:	10A	N/A
SPR/SPRHIST:	0.3	0.3

Hydrological characteristics

	Default	Edited
SAAR (mm)	761	781
Hydrological region:	7	7
Growth curve factor 1 year:	0.85	0.85
Growth curve factor 30 years:	2.3	2.3
Growth curve factor 100 years:	3.19	3.19
Growth curve factor 200 years:	3.74	3.74

Notes

(1) Is $Q_{peak} < 2.0 \text{ l/s/ha}$?

When Q_{peak} is $< 2.0 \text{ l/s/ha}$ then limiting discharge rates are set at 2.0 l/s/ha .

(2) Are flow rates $< 5.0 \text{ l/s}$?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if discharge from vegetation and other materials is possible. Lower consent flow rates may be set where the discharge risk is addressed by using appropriate drainage elements.

(3) Is $SPR/SPRHIST \leq 0.3$?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsets would normally be preferred for disposal of surface water runoff.

Greenfield runoff rates

	Default	Edited
Q_{peak} (l/s)	2.91	2.91
1 in 1 year (l/s)	1.71	1.71
1 in 30 years (l/s)	4.82	4.82
1 in 100 years (l/s)	6.41	6.41
1 in 200 years (l/s)	7.52	7.52

This report was produced using the greenfield runoff tool developed by HR Wallingford and available at www.ukseeds.com. The use of this tool is subject to the HR Wallingford terms and conditions and license agreement which can be found at www.ukseeds.com/termsandconditions.htm. The outputs from this tool are estimates of greenfield runoff rates. The use of these results is the responsibility of the user of the tool. No liability will be accepted by HR Wallingford, the Environment Agency, CEM, Hydrological or any other organisation for the use of the data or the design or operational characteristics of any drainage systems.

Image 2: Greenfield Runoff Calculation

3.3.1 The pre-developed greenfield runoff rates are as follows:

- Q_{bar} 2.01 l/s/ha
- 1:30 year 4.62 l/s/ha
- 1:100 year 6.41 l/s/ha

3.3.2 There are public sewers located beneath Water Lane to the south of the site.

3.3.3 That network is being upgraded to accommodate the proposed development and extended to the site boundary in consultation with Southern Water.

3.3.4 A plan showing the proposed sewer upgrades is located in Appendix 3 at the rear of this report.

3.4 Geology and Groundwater

3.4.1 A site investigation was undertaken in February 2018 and a Supplementary Site Investigation undertaken in February 2021 both by Idom.

3.4.2 The geology of the site has been summarised as follows:

Strata	Depth to top (m below ground level)	Thickness (m)
Topsoil	0	0.15-0.8
Made Ground	0-0.15	0.4->3.3
Head Deposits	0-0.8	0.2->3.0
London Clay	0.3-3.4	>9.0

Table 1: Summary of Site Geology

3.4.3 The summary which accompanied the 2018 site investigation noted that *'based upon the information available to date, it does not appear that soakaways will be feasible on this development parcel due to the impermeable geology and relatively high water table, and it is considered likely that any surface water attenuation features will need to be lined. The indicative drainage strategy has taken these findings into account.'*

3.4.4 The Supplementary Flood Risk Assessment dated February 21018 states at section 10.9.1 *'Given the absence of surface water sewers in close proximity to the site and the potential to increase the risk of groundwater flooding by use of infiltration SuDS, it is considered preferable to discharge attenuated surface water into the Black Ditch'*

4 Development Proposals

4.1 Description

- 4.1.1 The development proposals are for the construction of 525 residential dwellings with associated access roads, car parking and landscaping, a bus link to Dappers Lane and provision of a future commercial development site on land north of Water Lane, Angmering, West Sussex.
- 4.1.2 The development comprises two sites. The main site will accommodate 492 dwellings, the future commercial site and the bus link to Dappers Lane.
- 4.1.3 The smaller site will accommodate the remaining 33 dwellings.

4.2 Impermeable areas

- 4.2.1 The total impermeable area of main site will be 10.302ha plus 0.932 of future commercial development, a total of 11.234ha.
- 4.2.2 The total impermeable area of smaller site will be 0.487ha.
- 4.2.3 A copy of the proposed site layout plan is located in Appendix 4 at the rear of this report.

4.3 Surface Water Drainage

- 4.3.1 CIRIA report C753 The SuDS Manual-v6 provides guidance on surface water drainage. The aim for surface water runoff is to match greenfield runoff rates and volumes where reasonably achievable.
- 4.3.2 The preferred surface water drainage strategy should where possible be based on infiltration to ground, however, as noted in the Flood Risk Assessment undertaken by Idom Merebrook Limited dated February 21018 at section 10.9.1 *'Given the absence of surface water sewers in close proximity to the site and the potential to increase the risk of groundwater flooding by use of infiltration SuDS, it is considered preferable to discharge attenuated surface water into the Black Ditch'*
- 4.3.3 The proposed surface water drainage strategy has therefore been based on a restricted discharge to the Black Ditch to the south thereby mimicking the existing situation.

4.3.4 The total impermeable areas of the two sites and the equivalent greenfield runoff rates are as follows:

		Main Site (Impermeable area 10.302 ha plus 0.932ha from commercial site)	Smaller (Impermeable area 0.497 ha)
Q_{bar}	2.01 l/s/ha	22.6 l/s	0.98 l/s
1:30 year	4.62 l/s/ha	51.9 l/s	2.25 l/s
1:100 Year	6.41 l/s/ha	72.0 l/s	2.97 l/s

4.3.5 The drainage strategy as agreed with Adur District Council's drainage engineer is summarised as follows:

4.3.6 Main Site

- 4.3.6.1 The main will incorporate a series of swales which will discharge the surface water collected from the impermeable areas of the site into two storage ponds.
- 4.3.6.2 The northern most (Pond 1) will accept the runoff from approximately 50% of the site and has been designed with a restricted outlet of 680l/s on the 1:100year +40% storm event, (the minimum possible to provided 300mm of freeboard) and discharges into Pond 2.
- 4.3.6.3 Pond 2 will accept this this runoff and that from the remainder of the main site together with an additional 0.932ha from the future commercial development to the east.
- 4.3.6.4 Pond 2 has been designed with a compound outfall so as to limit runoff from the site to Q_{bar} (22.6l/s) up to and including the 1:50 year storm event and to the 1:30 year greenfield runoff rate (51.9l/s) for storms beyond the 1:50 year event and up to the 1:100 year +40% event. 300mm of freeboard has also been provided.
- 4.3.6.5 The central area to the east of Pond 1 is within an area which can accommodate some infiltration.
- 4.3.6.6 In that location permeable driveways will be unlined so as to allow an element of infiltration and high level overflows will be provided and connected to a positive drainage system discharging into Pond 1. The full impermeable area has been included within the hydraulic calculations.

4.3.7 Smaller Site

4.3.7.1 The smaller site will incorporate a restricted discharge to the Black Ditch of 2l/s for all storm durations up to and including the 1:100 year + 40% storm event.

4.3.7.2 Calculations confirm a total storage requirement of 434m³ which is proposed as a 95% voided crate storage system located adjacent to the southern site boundary.

4.3.8 Bus Link

4.3.8.1 The proposed bus link from the main site to Dappers Lane is within a small area which can support infiltration and will be constructed as a permeable surface with a discharge by infiltration to ground with a high level overflow to the existing ditch at its western end.

4.4 Foul Water Drainage

4.4.1 Foul drainage will be discharged by gravity to a section of new public foul sewer which will be located beneath Water Lane to the south of the site.

4.4.2 Copies of the proposed drainage strategy plans together with calculations are located in Appendix 5 at the rear of this report.

4.5 Water Quality

4.5.1 The proposed development is for residential use. In accordance with CIRIA SuDS Manual 2015 (Report C753), the pollution hazard level for this type of development is between very low and medium depending on the use / area of the site.

4.5.2 The surface water scheme will include mitigation to ensure that surface water is suitably treated and any pollution risk adequately managed prior to discharge.

4.5.3 Table 26.2 in Chapter 26 of CIRIA report C753 The SuDS Manual provides Pollution Hazard Indices for varying land types. Those of relevance to the development proposals are as follows:

Land Use	Pollution hazard level	Total suspended solids (TSS)	Metals	Hydrocarbons
Residential roofs	Very Low	0.2	0.2	0.05
Individual property driveways, residential car park, low-traffic roads	Low	0.5	0.4	0.4
All roads except low traffic roads, trunk roads and motorways	Medium	0.7	0.6	0.7

Table 2: Pollution Hazard Indices

- 4.5.4 Where multiple drainage components are used in series the individual mitigation index of secondary and tertiary components is lowered by 50% due to reduced performance associated with primary treatment.

SuDS Type	Total suspended solids (TSS)	Metals	Hydrocarbons
Swale	0.5	0.6	0.6
Permeable pavement	0.7	0.6	0.7
Detention basin	0.5	0.5	0.6

Table 3: Pollution Mitigation Indices

- 4.5.5 The surface water drainage design will combine the use of permeable paving, swales and detention basins and will meet the target treatment level required as follows:

	Total suspended solids (TSS)	Metals	Hydrocarbons
Swale	0.5	0.6	0.6
Detention basin at 50%	0.25	0.25	0.3
Total Treatment Provision	0.75	0.85	0.9

Table 4: Main Site Pollution Mitigation Provision

	Total suspended solids (TSS)	Metals	Hydrocarbons
Permeable pavement	0.7	0.6	0.7
Total Treatment Provision	0.7	0.6	0.7

Table 5: Smaller Site Pollution Mitigation Provision

	Total suspended solids (TSS)	Metals	Hydrocarbons
Permeable pavement	0.7	0.6	0.7
Soakaway with 300mm minimum depth underlying soil drainage media	0.4	0.4	0.4
Total Treatment Provision	1.1	1.0	1.1

Table 6: Bus Link Pollution Mitigation Provision

- 4.5.6 A drainage maintenance schedule is located in Appendix 6 at the rear of this report.

4.6 Risk to Others

- 4.6.1 The proposed surface water drainage system is designed to current standards incorporating SuDS elements providing treatment, attenuation and storage which will minimise runoff leaving the site during times of heavy rain.
- 4.6.2 Allowance has been made for a 40% increase in rainfall intensities which accords with the latest figures published by the Environment Agency and in accordance with the requirements under the National Planning Policy Framework.
- 4.6.3 The proposed drainage system will incorporate sufficient treatment prior to final discharge thus mitigating the risk of pollution from the site.
- 4.6.4 The risk of surface water flooding to others due to the development proposals is reduced and the resultant risk is negligible.
- 4.6.5 Sewerage undertakers have an obligation to upgrade the existing networks if a connection to an equivalent or larger sized public sewer is technically achievable.
- 4.6.6 The residual risk of sewer flooding from this development for the foreseeable future is therefore negligible.

5 Conclusions

- 5.1 Given the potential to increase the risk of groundwater flooding by use of infiltration as established in the Flood Risk Assessment which accompanied the outline planning application for the development, surface water from the main site and the smaller site will be discharged at a restricted rate to the Black Ditch watercourse to the south of the site.
- 5.2 The proposed bus link is however in an area which could support infiltration and will be constructed as a permeable surface with a discharge by infiltration to ground.
- 5.3 Preliminary calculations confirm that surface water runoff generated by the proposed development can be attenuated on site for all rainfall events up to the 1:100 year event including an allowance for climate change.
- 5.4 Water quality improvement will be provided to mitigate against any risk to any receiving waterbody.
- 5.5 Foul water will be discharged to the upgraded public foul sewer located beneath Water Lane.
- 5.6 A suitable surface water and foul water drainage has been designed to accommodate the anticipated flows from the proposed development and in terms of drainage the development proposals are suitable at this location.

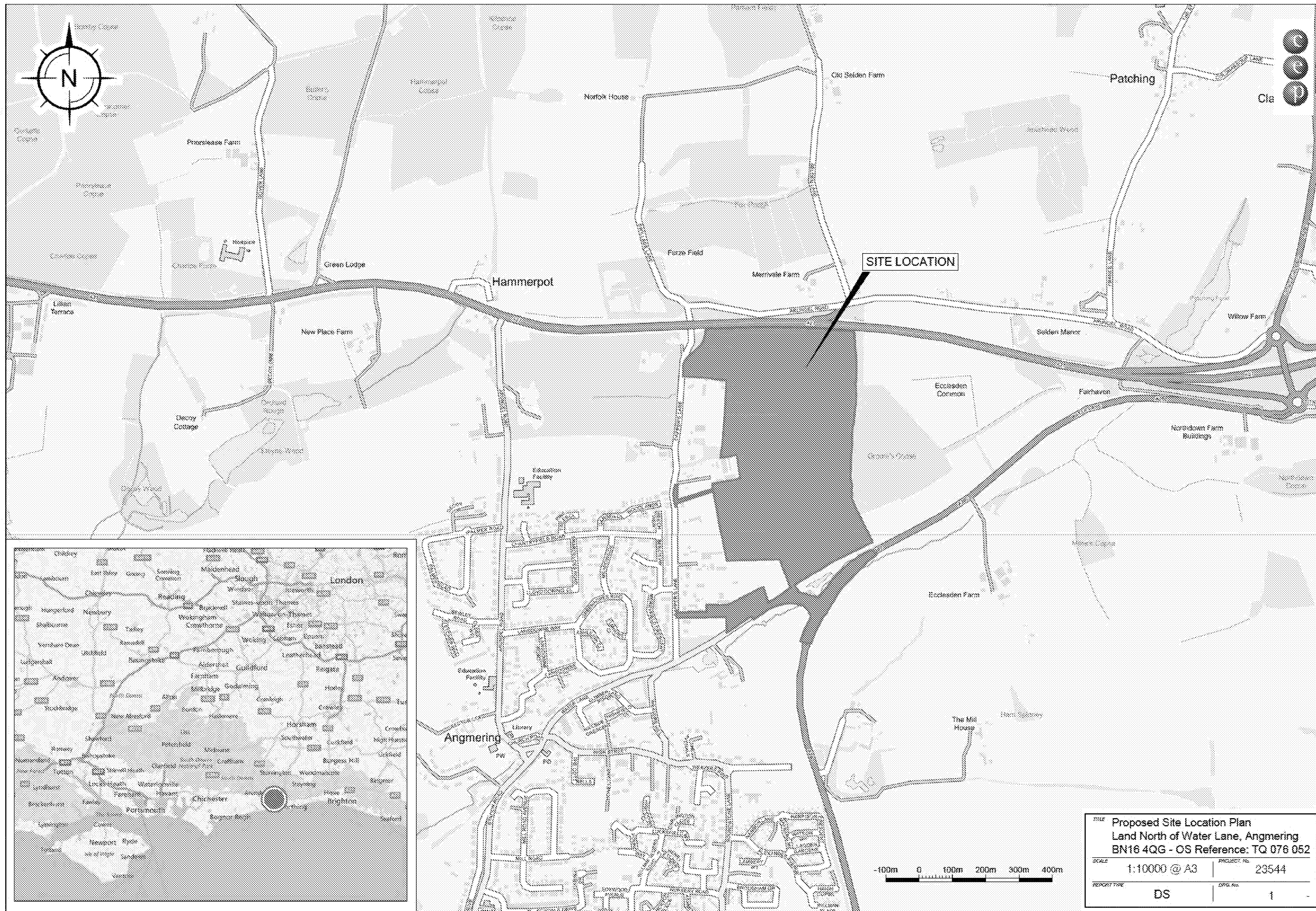
6 List of Appendices, Images and Tables

Appendix 1	Site Location Plan
Appendix 2	Existing Site Layout Plan
Appendix 3	Proposed Sewer Upgrades Plan
Appendix 4	Proposed Site Layout Plan
Appendix 5	Drainage Strategy Plans and Calculations
Appendix 6	Drainage Maintenance Schedule

Image 1	Site Location
Image 2	Greenfield Runoff Calculation

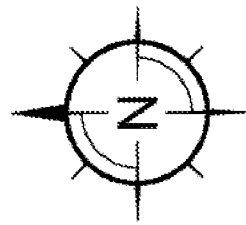
Table 1	Summary of Site Geology
Table 2	Pollution Hazard Indices
Table 3	Pollution Mitigation Indices
Table 4	Main Site Pollution Mitigation Provision
Table 5	Smaller Site Pollution Mitigation Provision
Table 6	Bus Link Pollution Mitigation Provision

Appendix 1
Site Location Plan



Appendix 2

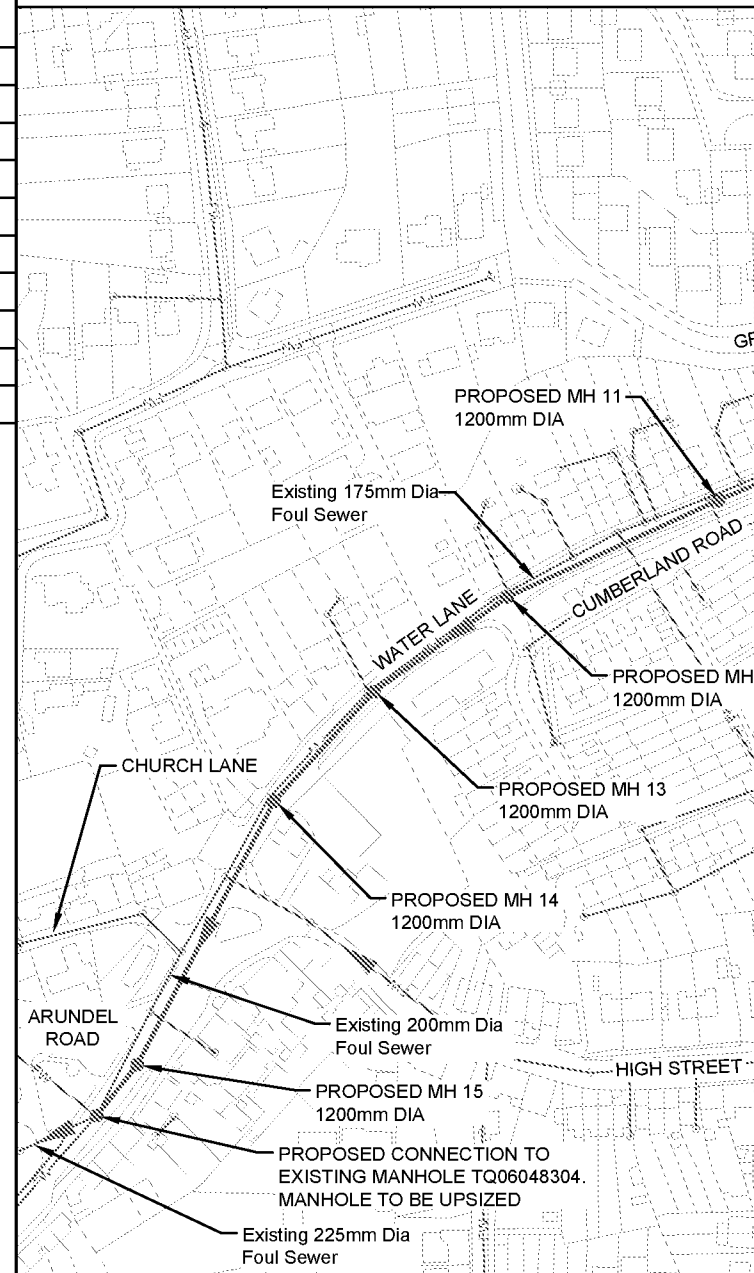
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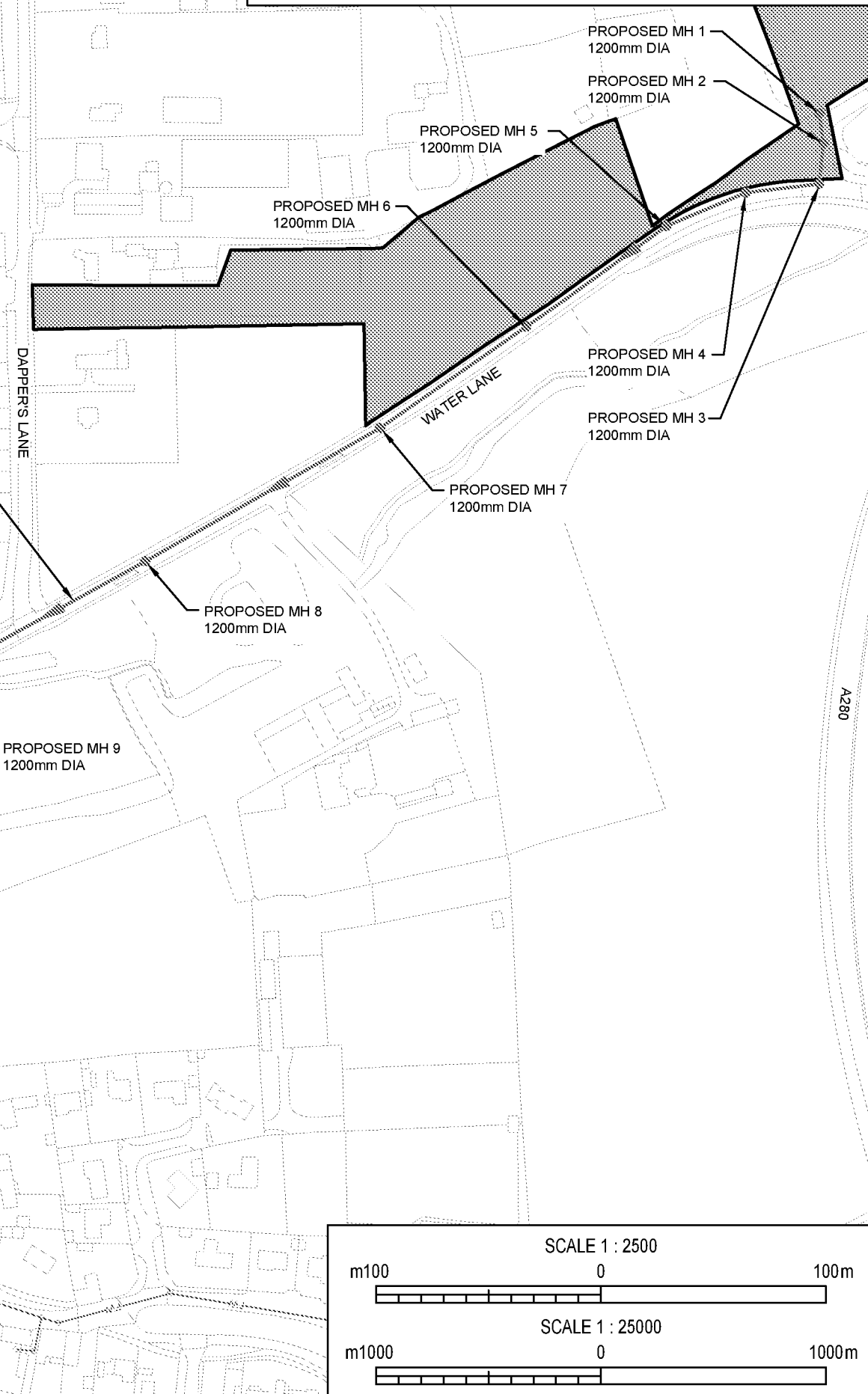
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SCALE	1:3000 @ A3		PROJECT No. 23544
	REPORT TYPE DS		DWG. No. 2

Appendix 3

Proposed Sewer Upgrades Plan



- THIS DRAWING IS BASED ON HISTORICAL AND O.S. DATA. INCONSISTENCY IN DATA SHOULD BE CHECKED AND VERIFIED BEFORE COMMENCING DETAIL DESIGN
- EXISTING AND INDICATIVE PIPE ROUTES BASED ON GIS DATA. SOUTHERN WATER SERVICES LTD. ACCEPT NO RESPONSIBILITY IN THE EVENT OF INACCURACY. THE ROUTES ARE TO BE CHECKED AND VERIFIED BEFORE DETAIL DESIGN AND ARE SHOWN PURELY FOR OUTLINE DESIGN.



NOTES

1. ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES UNLESS SHOWN OTHERWISE.
2. THIS OPTION CONSIDERS CONNECTING THE NEW SEWER FROM THE DEVELOPMENT TO AN EXISTING SEWER WITH SIZE EQUAL OR GREATER THAN THE NEW SEWER IN ACCORDANCE WITH THE S98 DEVELOPERS SERVICE GUIDANCE. TO MINIMISE DUPLICATION OF ASSETS CONSIDERATION SHOULD BE MADE TO UPSIZING SECTION OF THE SEWER DOWNSTREAM OF MANHOLE TO07042501 AT THE NEXT STAGE OF THE DESIGN.

LEGEND

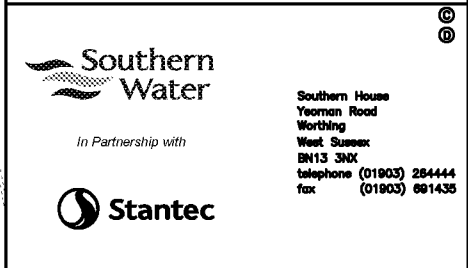
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- PROPOSED MANHOLE
- EXISTING FOUL WATER SEWER AND MANHOLE
- EXISTING PRIVATE MAIN AND MANHOLE
- FUTURE DEVELOPMENT

CURRENT VERSION INFORMATION

[illegible]

29.05.2020	NRS	RP	YF	A	FOR INFORMATION
DATE	DRWN	CHKD	REVD	REV	REASON FOR ISSUE

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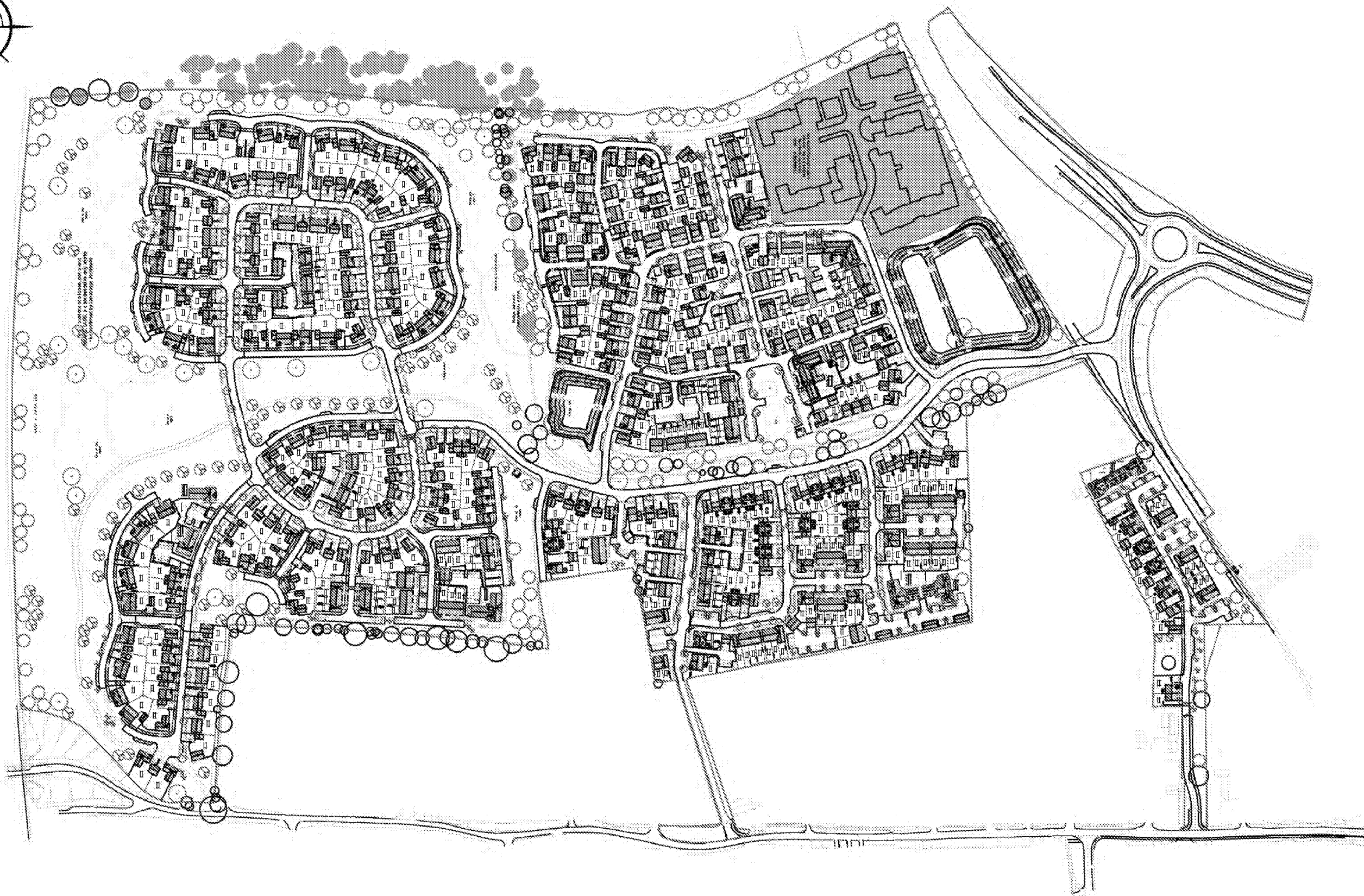
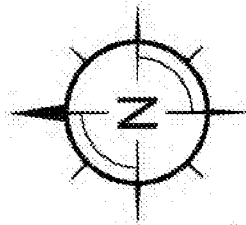
PROJECT TITLE	LAND NORTH OF WATER LANE
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DRAWING TITLE

S98 LAND NORTH OF WATER LANE

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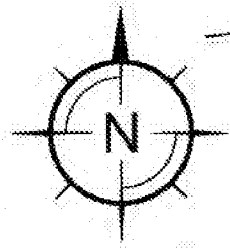
Appendix 4
Proposed Site Layout Plan



TITLE		Proposed Site Layout Plan	
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REPORT TYPE		DS	ENVS. No. 3

Appendix 5

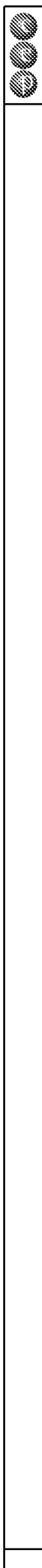
Drainage Strategy Plans and Calculations

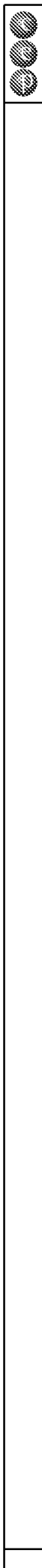


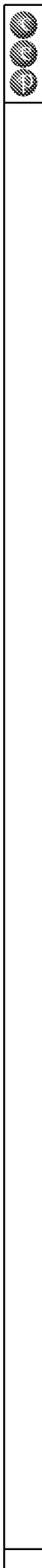
TITLE		Proposed Site Layout Plan	
		Sheet 1 of 2	
SCALE	1:2000 @ A3	PROJECT No.	23544
REPORT TYPE	DS	ENR. No.	4

ARUN DISTRICT COUNCIL A/256/21/RES

	The Civil Engineering Practice BN41 1RA	File: 23544 - ANGMERING Flow through Network: Steve Doughty 02/12/2021	Page 1 23544 Water Lane, Angmering Main Site																																																																																																																																																																																																																																																																																																																																																																																			
	Design Settings <table border="0" style="width: 100%;"> <tr> <td>Rainfall Methodology</td> <td>FEH-13</td> <td>Minimum Velocity (m/s)</td> <td>1.00</td> </tr> <tr> <td>Return Period (years)</td> <td>2</td> <td>Connection Type</td> <td>Level Soffits</td> </tr> <tr> <td>Additional Flow (%)</td> <td>0</td> <td>Minimum Backdrop Height (m)</td> <td>0.400</td> </tr> <tr> <td>CV</td> <td>0.850</td> <td>Preferred Cover Depth (m)</td> <td>0.900</td> </tr> <tr> <td>Time of Entry (mins)</td> <td>5.00</td> <td>Include Intermediate Ground</td> <td>✓</td> </tr> <tr> <td>Maximum Time of Concentration (mins)</td> <td>30.00</td> <td>Enforce best practice design rules</td> <td>x</td> </tr> <tr> <td>Maximum Rainfall (mm/hr)</td> <td>50.0</td> <td></td> <td></td> </tr> </table> Nodes <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Name</th> <th>Area (ha)</th> <th>T of E (mins)</th> <th>Cover Level (m)</th> <th>Diameter (mm)</th> <th>Easting (m)</th> <th>Northing (m)</th> <th>Depth (m)</th> </tr> </thead> <tbody> <tr><td>1</td><td>0.026</td><td>5.00</td><td>40.719</td><td></td><td>507618.673</td><td>105532.820</td><td>0.625</td></tr> <tr><td>2</td><td>0.014</td><td>5.00</td><td>40.900</td><td></td><td>507642.717</td><td>105540.138</td><td>0.954</td></tr> <tr><td>3</td><td>0.023</td><td>5.00</td><td>40.900</td><td></td><td>507653.493</td><td>105540.081</td><td>1.018</td></tr> <tr><td>4</td><td>0.014</td><td>5.00</td><td>40.851</td><td></td><td>507669.344</td><td>105537.002</td><td>1.065</td></tr> <tr><td>5</td><td></td><td></td><td>40.700</td><td></td><td>507685.878</td><td>105537.800</td><td>1.012</td></tr> <tr><td>6</td><td>0.022</td><td>5.00</td><td>40.625</td><td></td><td>507693.404</td><td>105536.432</td><td>0.983</td></tr> <tr><td>7</td><td>0.013</td><td>5.00</td><td>40.200</td><td></td><td>507702.527</td><td>105531.642</td><td>0.625</td></tr> <tr><td>8</td><td>0.013</td><td>5.00</td><td>40.130</td><td></td><td>507711.991</td><td>105531.015</td><td>0.700</td></tr> <tr><td>9</td><td>0.040</td><td>5.00</td><td>39.850</td><td></td><td>507722.653</td><td>105533.695</td><td>0.775</td></tr> <tr><td>10</td><td>0.018</td><td>5.00</td><td>39.825</td><td></td><td>507754.810</td><td>105531.015</td><td>0.850</td></tr> <tr><td>11</td><td>0.007</td><td>5.00</td><td>39.800</td><td></td><td>507769.121</td><td>105529.248</td><td>0.870</td></tr> <tr><td>12</td><td>0.012</td><td>5.00</td><td>39.750</td><td></td><td>507783.774</td><td>105522.919</td><td>0.870</td></tr> <tr><td>13</td><td></td><td></td><td>39.600</td><td></td><td>507788.108</td><td>105520.467</td><td>0.775</td></tr> <tr><td>14</td><td></td><td></td><td>39.530</td><td></td><td>507791.643</td><td>105515.735</td><td>0.775</td></tr> <tr><td>15</td><td></td><td></td><td>39.300</td><td></td><td>507794.208</td><td>105504.959</td><td>0.775</td></tr> <tr><td>16</td><td>0.011</td><td>5.00</td><td>38.700</td><td></td><td>507790.901</td><td>105489.736</td><td>0.775</td></tr> <tr><td>17</td><td>0.006</td><td>5.00</td><td>38.200</td><td></td><td>507793.866</td><td>105477.648</td><td>0.775</td></tr> <tr><td>18</td><td>0.024</td><td>5.00</td><td>37.700</td><td></td><td>507793.581</td><td>105463.394</td><td>0.775</td></tr> <tr><td>19</td><td>0.040</td><td>5.00</td><td>37.000</td><td></td><td>507791.072</td><td>105450.224</td><td>0.775</td></tr> <tr><td>20</td><td>0.009</td><td>5.00</td><td>36.200</td><td></td><td>507792.897</td><td>105434.316</td><td>0.775</td></tr> <tr><td>21</td><td>0.029</td><td>5.00</td><td>35.800</td><td></td><td>507792.783</td><td>105424.738</td><td>0.775</td></tr> <tr><td>22</td><td>0.016</td><td>5.00</td><td>35.100</td><td></td><td>507787.708</td><td>105405.808</td><td>0.775</td></tr> <tr><td>23</td><td>0.028</td><td>5.00</td><td>34.400</td><td></td><td>507788.108</td><td>105393.835</td><td>0.775</td></tr> <tr><td>24</td><td>0.011</td><td>5.00</td><td>33.700</td><td></td><td>507787.309</td><td>105374.963</td><td>0.775</td></tr> <tr><td>25</td><td>0.027</td><td>5.00</td><td>33.450</td><td></td><td>507784.858</td><td>105364.130</td><td>0.775</td></tr> <tr><td>26</td><td>0.008</td><td>5.00</td><td>32.800</td><td></td><td>507779.042</td><td>105352.784</td><td>0.850</td></tr> <tr><td>27</td><td>0.014</td><td>5.00</td><td>32.100</td><td></td><td>507774.424</td><td>105338.188</td><td>0.850</td></tr> <tr><td>28</td><td></td><td></td><td>31.800</td><td></td><td>507769.977</td><td>105329.350</td><td>0.850</td></tr> <tr><td>29</td><td>0.019</td><td>5.00</td><td>31.500</td><td></td><td>507764.332</td><td>105320.627</td><td>0.850</td></tr> <tr><td>30</td><td>0.018</td><td>5.00</td><td>31.200</td><td></td><td>507756.350</td><td>105312.132</td><td>0.850</td></tr> <tr><td>31</td><td>0.014</td><td>5.00</td><td>30.800</td><td></td><td>507748.824</td><td>105305.803</td><td>0.850</td></tr> <tr><td>32</td><td>0.008</td><td>5.00</td><td>30.500</td><td></td><td>507736.280</td><td>105299.873</td><td>0.925</td></tr> <tr><td>33</td><td>0.052</td><td>5.00</td><td>31.655</td><td>1200</td><td>507708.519</td><td>105343.478</td><td>1.050</td></tr> <tr><td>34</td><td>0.019</td><td>5.00</td><td>31.115</td><td>1200</td><td>507712.856</td><td>105328.376</td><td>1.125</td></tr> <tr><td>35</td><td></td><td></td><td>30.313</td><td>1200</td><td>507719.027</td><td>105305.102</td><td>1.125</td></tr> <tr><td>36</td><td>0.012</td><td>5.00</td><td>30.400</td><td></td><td>507720.816</td><td>105297.123</td><td>1.561</td></tr> <tr><td>37</td><td>0.011</td><td>5.00</td><td>30.200</td><td></td><td>507710.053</td><td>105293.316</td><td>1.460</td></tr> <tr><td>38</td><td>0.058</td><td>5.00</td><td>30.100</td><td></td><td>507701.558</td><td>105292.119</td><td>1.450</td></tr> <tr><td>39</td><td>0.011</td><td>5.00</td><td>29.600</td><td></td><td>507676.756</td><td>105291.891</td><td>1.150</td></tr> <tr><td>40</td><td>0.074</td><td>5.00</td><td>35.491</td><td>1200</td><td>507647.445</td><td>105418.497</td><td>1.200</td></tr> <tr><td>41</td><td>0.040</td><td>5.00</td><td>35.295</td><td>1350</td><td>507679.763</td><td>105420.668</td><td>1.350</td></tr> <tr><td>42</td><td>0.026</td><td>5.00</td><td>35.474</td><td>1500</td><td>507663.590</td><td>105420.806</td><td>1.644</td></tr> </tbody> </table>			Rainfall Methodology	FEH-13	Minimum Velocity (m/s)	1.00	Return Period (years)	2	Connection Type	Level Soffits	Additional Flow (%)	0	Minimum Backdrop Height (m)	0.400	CV	0.850	Preferred Cover Depth (m)	0.900	Time of Entry (mins)	5.00	Include Intermediate Ground	✓	Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	x	Maximum Rainfall (mm/hr)	50.0			Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)	1	0.026	5.00	40.719		507618.673	105532.820	0.625	2	0.014	5.00	40.900		507642.717	105540.138	0.954	3	0.023	5.00	40.900		507653.493	105540.081	1.018	4	0.014	5.00	40.851		507669.344	105537.002	1.065	5			40.700		507685.878	105537.800	1.012	6	0.022	5.00	40.625		507693.404	105536.432	0.983	7	0.013	5.00	40.200		507702.527	105531.642	0.625	8	0.013	5.00	40.130		507711.991	105531.015	0.700	9	0.040	5.00	39.850		507722.653	105533.695	0.775	10	0.018	5.00	39.825		507754.810	105531.015	0.850	11	0.007	5.00	39.800		507769.121	105529.248	0.870	12	0.012	5.00	39.750		507783.774	105522.919	0.870	13			39.600		507788.108	105520.467	0.775	14			39.530		507791.643	105515.735	0.775	15			39.300		507794.208	105504.959	0.775	16	0.011	5.00	38.700		507790.901	105489.736	0.775	17	0.006	5.00	38.200		507793.866	105477.648	0.775	18	0.024	5.00	37.700		507793.581	105463.394	0.775	19	0.040	5.00	37.000		507791.072	105450.224	0.775	20	0.009	5.00	36.200		507792.897	105434.316	0.775	21	0.029	5.00	35.800		507792.783	105424.738	0.775	22	0.016	5.00	35.100		507787.708	105405.808	0.775	23	0.028	5.00	34.400		507788.108	105393.835	0.775	24	0.011	5.00	33.700		507787.309	105374.963	0.775	25	0.027	5.00	33.450		507784.858	105364.130	0.775	26	0.008	5.00	32.800		507779.042	105352.784	0.850	27	0.014	5.00	32.100		507774.424	105338.188	0.850	28			31.800		507769.977	105329.350	0.850	29	0.019	5.00	31.500		507764.332	105320.627	0.850	30	0.018	5.00	31.200		507756.350	105312.132	0.850	31	0.014	5.00	30.800		507748.824	105305.803	0.850	32	0.008	5.00	30.500		507736.280	105299.873	0.925	33	0.052	5.00	31.655	1200	507708.519	105343.478	1.050	34	0.019	5.00	31.115	1200	507712.856	105328.376	1.125	35			30.313	1200	507719.027	105305.102	1.125	36	0.012	5.00	30.400		507720.816	105297.123	1.561	37	0.011	5.00	30.200		507710.053	105293.316	1.460	38	0.058	5.00	30.100		507701.558	105292.119	1.450	39	0.011	5.00	29.600		507676.756	105291.891	1.150	40	0.074	5.00	35.491	1200	507647.445	105418.497	1.200	41	0.040	5.00	35.295	1350	507679.763	105420.668	1.350	42	0.026	5.00	35.474	1500	507663.590	105420.806
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33	0.052	5.00	31.655	1200	507708.519	105343.478	1.050																																																																																																																																																																																																																																																																																																																																																																															
34	0.019	5.00	31.115	1200	507712.856	105328.376	1.125																																																																																																																																																																																																																																																																																																																																																																															
35			30.313	1200	507719.027	105305.102	1.125																																																																																																																																																																																																																																																																																																																																																																															
36	0.012	5.00	30.400		507720.816	105297.123	1.561																																																																																																																																																																																																																																																																																																																																																																															
37	0.011	5.00	30.200		507710.053	105293.316	1.460																																																																																																																																																																																																																																																																																																																																																																															
38	0.058	5.00	30.100		507701.558	105292.119	1.450																																																																																																																																																																																																																																																																																																																																																																															
39	0.011	5.00	29.600		507676.756	105291.891	1.150																																																																																																																																																																																																																																																																																																																																																																															
40	0.074	5.00	35.491	1200	507647.445	105418.497	1.200																																																																																																																																																																																																																																																																																																																																																																															
41	0.040	5.00	35.295	1350	507679.763	105420.668	1.350																																																																																																																																																																																																																																																																																																																																																																															
42	0.026	5.00	35.474	1500	507663.590	105420.806	1.644																																																																																																																																																																																																																																																																																																																																																																															
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	The Civil Engineering Practice BN41 1RA		File: 23544 - ANGMERING Flow through Network: Steve Doughty 02/12/2021			Page 2 23544 Water Lane, Angmering Main Site	
Nodes							
Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
43			37.646	1500	507664.408	105459.964	3.896
44	0.104	5.00	38.103	1200	507631.195	105465.557	1.125
45	0.047	5.00	39.237	1200	507664.303	105494.577	1.050
46	0.032	5.00	38.151	1200	507663.949	105472.495	1.050
47	0.128	5.00	37.778	1500	507666.359	105464.984	4.039
48			36.928	1500	507716.290	105463.891	3.290
49	0.047	5.00	38.161	1200	507735.947	105491.938	1.050
50	0.034	5.00	37.011	1200	507726.856	105466.782	1.050
51	0.030	5.00	36.751	1500	507721.520	105460.999	3.126
52	0.089	5.00	36.492	1500	507727.062	105454.682	2.884
53	0.036	5.00	34.969	1500	507725.532	105423.710	1.425
54	0.027	5.00	34.660	1200	507751.389	105407.770	1.050
55	0.105	5.00	34.256	1500	507724.767	105409.085	1.425
56	0.030	5.00	32.893	1500	507722.368	105378.852	1.500
57	0.026	5.00	32.658	1500	507719.451	105371.154	1.500
58	0.012	5.00	32.434	1500	507710.538	105364.591	1.500
59	0.157	5.00	32.236	1500	507695.408	105362.758	1.500
60	0.025	5.00	31.634	1500	507648.189	105358.485	1.575
61	0.050	5.00	31.510	1500	507635.592	105356.128	1.575
62	0.016	5.00	39.495	1200	507610.929	105503.463	1.050
63	0.032	5.00	39.050	1200	507608.125	105489.664	1.050
64	0.066	5.00	38.604	1200	507574.244	105459.302	1.125
65	0.018	5.00	38.275	1200	507608.044	105464.012	1.125
66	0.066	5.00	37.878	1200	507611.318	105457.268	1.125
67	0.039	5.00	35.586	1200	507612.195	105419.077	1.200
68	0.034	5.00	32.838	1200	507613.265	105373.237	1.200
69			31.713	1200	507620.200	105355.110	1.200
70			31.764	1500	507610.325	105346.183	1.870
71	0.053	5.00	31.450		507608.257	105334.980	1.573
72	0.004	5.00	30.919		507612.761	105321.166	1.075
73	0.026	5.00	30.800		507616.130	105315.229	1.075
74	0.016	5.00	30.300		507625.389	105304.250	1.075
75			30.000		507634.436	105296.617	1.075
76			29.900		507643.615	105291.206	1.075
77			31.417		507656.059	105288.356	2.611
78			29.500		507665.923	105288.755	1.225
79			29.932	1800	507666.275	105284.164	1.663
80			31.208	1800	507642.677	105285.135	2.967
81			28.471	1800	507607.308	105267.370	1.225
82	0.025	5.00	27.479	1200	507717.548	105242.480	1.050
83			27.645	1200	507691.236	105239.931	1.478
84	0.027	5.00	27.424	1200	507670.682	105235.521	1.541
85	0.033	5.00	27.044	1200	507643.935	105227.827	1.325
86	0.025	5.00	26.849	1200	507628.534	105226.004	1.222
87	0.007	5.00	26.731	1200	507613.057	105227.901	1.196
88			26.597	1800	507604.184	105229.947	1.725
88_OUT			25.000		507588.127	105217.801	1.963
89	0.018	5.00	38.740	1200	507337.022	105538.775	1.050
90	0.059	5.00	38.223	1200	507330.353	105522.431	1.125
91	0.115	5.00	37.674	1350	507329.176	105502.032	1.350
92	0.115	5.00	37.631	1500	507383.833	105496.802	1.517
93	0.037	5.00	39.040	1200	507418.172	105531.839	1.050
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Nodes								
	Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
	94	0.044	5.00	37.987	1500	507415.641	105493.988	1.938
	95	0.080	5.00	38.311	1500	507447.437	105490.595	2.327
	96	0.061	5.00	38.067	1500	507473.411	105482.308	2.139
	97	0.022	5.00	38.232	1500	507493.937	105470.918	2.352
	98	0.044	5.00	38.494	1500	507508.723	105458.467	2.654
	99			38.217	1500	507519.639	105446.257	2.411
	100	0.018	5.00	38.278	1200	507526.487	105446.160	1.050
	101	0.039	5.00	37.927	1500	507516.699	105439.090	2.137
	102	0.052	5.00	37.481	1500	507506.408	105429.535	1.720
	103	0.009	5.00	36.850	1500	507495.475	105415.616	1.425
	104	0.042	5.00	35.637	1200	507538.091	105391.933	1.050
	105	0.064	5.00	35.929	1200	507523.739	105394.965	1.563
	106			36.544	1500	507492.076	105409.183	2.683
	107	0.036	5.00	36.943	1200	507449.358	105450.022	1.050
	108	0.024	5.00	35.457	1200	507433.098	105426.067	1.050
	109	0.025	5.00	36.129	1200	507443.205	105432.544	1.916
	110	0.015	5.00	36.639	1200	507465.623	105416.511	2.589
	111	0.074	5.00	36.181	1500	507488.592	105402.592	2.590
	112	0.013	5.00	35.370	1500	507483.038	105389.234	1.809
	113	0.067	5.00	34.226	1500	507478.491	105370.724	1.425
	114	0.043	5.00	33.001		507481.205	105349.716	1.425
	115	0.133	5.00	32.179	1200	507545.756	105330.095	1.200
	116	0.058	5.00	31.856	1350	507510.104	105325.676	1.275
	117			32.298	1500	507489.889	105335.615	2.012
	118	0.006	5.00	32.036	1500	507484.699	105330.106	1.763
	119			31.565	1500	507475.845	105321.149	1.500
	120	0.022	5.00	31.119	1500	507481.514	105311.812	1.500
	121	0.064	5.00	30.398	1500	507480.847	105295.806	1.500
	122			29.135	1500	507483.848	105265.461	1.500
	123	0.091	5.00	34.051	1200	507449.141	105373.893	1.125
	124	0.029	5.00	32.557	1200	507420.270	105374.819	1.125
	125			31.736	1200	507418.902	105352.743	1.125
	126	0.022	5.00	30.797	1200	507419.013	105342.406	1.125
	127	0.102	5.00	31.157	1200	507465.817	105315.925	1.200
	128	0.014	5.00	29.859	1350	507417.931	105316.847	1.275
	129	0.050	5.00	29.096	1350	507416.457	105296.499	1.350
	130			28.350		507415.813	105258.346	1.425
	131			28.200		507423.365	105255.733	1.292
	132			28.100		507433.805	105256.878	1.289
	133	0.014	5.00	28.100		507442.696	105254.521	1.305
	134	0.029	5.00	29.898	1200	507447.332	105290.262	1.050
	135	0.017	5.00	29.211	1200	507449.643	105278.759	1.050
	136	0.015	5.00	28.907	1200	507450.959	105267.730	1.050
	137	0.013	5.00	28.200		507453.136	105254.925	1.575
	138			28.565		507484.540	105256.822	1.987
	139	0.039	5.00	28.151		507497.248	105256.689	1.592
	140	0.020	5.00	27.637		507514.708	105253.257	1.105
	141	0.023	5.00	39.600		507367.552	105565.453	0.550
	142			39.450		507375.918	105566.034	0.550
	143			39.400		507380.013	105565.970	0.625
	144	0.014	5.00	39.300		507389.212	105564.933	0.700
	145	0.023	5.00	39.275		507400.370	105561.440	0.723
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<u>Nodes</u>								
	Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
	146	0.023	5.00	39.250		507409.294	105558.347	0.812
	147			39.250		507418.658	105556.295	0.842
	148	0.013	5.00	39.275		507422.320	105556.044	0.879
	149	0.012	5.00	39.300		507431.396	105556.707	0.933
	150	0.012	5.00	39.400		507439.693	105558.736	1.060
	151	0.013	5.00	39.500		507447.027	105559.893	1.183
	152	0.010	5.00	39.600		507454.256	105559.828	1.306
	153	0.005	5.00	39.650		507462.891	105559.269	1.383
	154			39.700		507472.318	105557.721	1.463
	155	0.020	5.00	39.800		507480.185	105555.225	1.589
	156	0.003	5.00	39.790		507486.375	105552.507	1.600
	157	0.006	5.00	39.750		507491.784	105549.529	1.580
	158	0.014	5.00	39.750		507501.537	105545.914	1.613
	159	0.003	5.00	39.950		507508.195	105545.667	1.834
	160	0.037	5.00	39.993	1350	507514.941	105537.314	1.911
	161	0.019	5.00	38.627	1350	507519.473	105493.979	0.775
	162		5.00	38.589		507508.323	105469.819	0.550
	163			38.700		507515.879	105462.793	0.989
	164			38.550		507522.116	105456.001	0.868
	165	0.025	5.00	38.200		507550.212	105443.664	0.775
	166	0.026	5.00	37.550		507560.352	105431.002	0.775
	167	0.011	5.00	36.900		507565.996	105420.513	0.775
	168	0.016	5.00	36.500		507570.292	105409.774	0.775
	169	0.014	5.00	35.750		507573.388	105397.987	0.775
	170	0.023	5.00	35.475		507574.063	105390.620	0.775
	171	0.025	5.00	33.750		507574.718	105359.473	0.775
	172			32.800		507574.824	105349.330	0.775
	173	0.009	5.00	32.832	1200	507568.152	105343.853	1.050
	174	0.020	5.00	32.485	1350	507570.784	105336.149	1.275
	175	0.033	5.00	32.314	1200	507586.615	105331.145	1.050
	176			32.262		507567.460	105325.303	1.422
	177	0.015	5.00	31.446		507567.875	105318.220	0.775
	178	0.042	5.00	30.478		507567.699	105303.853	0.775
	179			29.521		507567.518	105288.404	0.775
	180	0.021	5.00	29.498	1350	507560.555	105288.090	0.775
	181	0.011	5.00	28.544	1350	507554.699	105273.488	0.775
	182	0.026	5.00	27.749		507552.939	105261.903	0.775
	183			27.396		507547.672	105256.370	0.850
	184	0.031	5.00	27.042	1350	507535.556	105254.047	0.850
	185			26.601	1800	507529.665	105245.242	1.225
	186			26.411		507535.052	105238.213	1.225
	187	0.081	5.00	26.104	1200	507455.743	105236.543	1.125
	188	0.015	5.00	25.967	1200	507494.008	105239.417	1.289
	189			26.123	1200	507523.830	105232.770	1.570
	190			26.104		507531.387	105229.930	2.184
	191			25.910		507528.591	105223.870	2.072
	191_OUT			25.500		507558.771	105212.239	2.463
	192	0.031	5.00	22.518	1200	507470.952	105091.558	1.125
	193	0.100	5.00	23.462	1200	507496.336	105125.357	1.125
	194	0.149	5.00	23.104	1350	507472.616	105126.082	2.065
	195	0.052	5.00	21.753	1200	507394.328	105105.673	1.200
	196	0.025	5.00	22.645	1200	507380.639	105136.180	1.050
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Nodes							
Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
197	0.045	5.00	22.404	1350	507397.723	105134.054	2.043
198			22.792	1200	507403.484	105146.622	1.050
199			22.295	1350	507406.716	105133.089	1.962
200	0.076	5.00	22.258	1350	507417.089	105131.975	2.033
201	0.103	5.00	21.794	1500	507414.132	105101.903	1.719
202	0.051	5.00	20.488	1350	507404.912	105026.003	1.275
203	0.004	5.00	21.107	1350	507402.399	105044.143	2.026
204	0.022	5.00	21.474	1500	507406.849	105055.934	2.574
205	0.016	5.00	21.433	1800	507421.764	105062.179	2.711
206			21.470	1800	507430.009	105056.411	2.762
207			21.920	1200	507480.777	105057.337	1.125
208	0.104	5.00	21.563	1800	507444.377	105055.988	2.874
209	0.045	5.00	21.407	1800	507445.479	105039.896	2.739
210	0.071	5.00	21.407	1800	507445.479	105039.896	2.739
211	0.046	5.00	20.787	1800	507445.618	105014.252	2.153
212	0.027	5.00	20.379	1800	507445.740	104997.641	1.767
213	0.057	5.00	20.535	1800	507452.439	104995.474	1.933
214	0.021	5.00	21.022	1800	507487.971	104996.393	2.467
215	0.018	5.00	20.732	1800	507522.461	104997.515	2.222
216	0.050	5.00	21.450	1200	507526.636	105045.547	1.125
217	0.062	5.00	21.090	1200	507531.560	105025.704	1.125
218	0.080	5.00	20.660	1800	507538.085	105001.714	2.171
219			23.090	1200	507575.171	105105.427	1.125
220			24.325	1200	507570.852	105136.159	2.618
221	0.005	5.00	24.304	1200	507585.714	105138.478	2.659
222	0.011	5.00	24.565	1200	507598.209	105150.173	1.050
223			24.229	1350	507597.081	105139.717	2.781
224			22.735	1350	507604.568	105091.279	1.408
225	0.044	5.00	22.518	1200	507579.200	105074.654	1.050
226	0.014	5.00	22.964	1350	507576.917	105086.948	1.920
227	0.035	5.00	25.540	1200	507518.940	105216.025	1.125
228	0.075	5.00	24.685	1200	507512.332	105191.272	1.125
229	0.092	5.00	24.337	1200	507480.457	105178.918	1.050
230	0.045	5.00	24.303	1200	507510.180	105176.871	1.462
231	5.00	5.00	25.000		507557.700	105203.278	2.000
232			25.000	1500	507550.712	105198.080	2.015
233			24.803	1500	507540.427	105190.419	1.840
234	24.794		24.582		507534.501	105180.999	1.851
235					507533.632	105172.515	2.139
236					507533.246	105164.588	1.981
237	24.410		24.274		507533.272	105158.148	1.857
238					507534.002	105152.232	1.890
239					507537.101	105148.452	1.851
240	0.021	5.00	24.092	1500	507510.192	105163.637	1.125
241	0.066	5.00	23.647	1200	507513.988	105130.647	1.125
242	5.00	5.00	24.294		507516.191	105167.996	0.550
243			24.035		507517.924	105151.080	0.550
244			23.848		507519.323	105136.612	0.550
245	23.790		23.955	1200	507520.095	105131.195	1.305
246					507538.043	105132.807	1.952
247					507538.221	105129.855	1.901
248	0.027	5.00	22.650		507543.838	105088.876	1.000
249			22.600		507545.803	105081.575	1.784
250							

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Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
249			22.146		507547.353	105070.248	1.350
250			21.939		507549.832	105060.150	1.161
251		5.00	23.750		507520.369	105128.189	1.050
252			23.414		507522.787	105113.705	1.125
253	0.049	5.00	23.421	1200	507514.267	105119.758	1.125
254	0.040	5.00	23.255	1200	507516.171	105110.268	1.125
255	0.059	5.00	22.557	1200	507519.531	105087.341	0.700
256	0.044	5.00	21.993	1200	507500.262	105059.333	1.125
257			21.806	1200	507520.106	105061.954	1.125
258	0.010	5.00	21.659	1350	507525.732	105054.762	1.275
259			21.954	1500	507549.932	105056.913	1.870
260			21.439		507550.947	105041.812	1.381
261	0.051	5.00	22.952	1200	507635.370	105081.359	1.125
262			22.360	1200	507607.674	105073.832	1.125
263	0.094	5.00	22.223	1200	507611.115	105061.411	1.200
264			21.495	1200	507554.442	105039.825	1.200
265			21.454		507551.904	105038.858	1.500
266			21.450		507554.865	105028.748	1.515
267	0.012	5.00	20.891		507560.812	105008.240	1.000
268	0.006	5.00	20.615		507564.964	104994.467	2.238
269	0.013	5.00	20.398		507568.328	104983.998	2.034
270			20.075		507571.412	104973.630	1.724
271	0.008	5.00	20.072		507576.746	104965.293	1.733
272	0.014	5.00	19.637		507584.896	104957.364	1.312
273	0.030	5.00	19.198	1800	507596.406	104952.900	1.225
274	0.147	5.00	19.474	1200	507426.817	104927.818	1.200
275	0.037	5.00	19.719	1200	507412.356	104995.182	1.050
276	0.019	5.00	19.604	1350	507415.146	104986.420	1.724
277	0.016	5.00	20.372	1350	507446.200	104992.584	2.570
278	0.018	5.00	19.781	1200	507501.491	104930.274	1.125
279	0.182	5.00	19.721	1350	507489.140	104932.005	1.289
280	0.022	5.00	21.027	1500	507488.388	104993.318	3.404
281	0.014	5.00	20.782	1500	507518.672	104994.263	3.221
282	0.058	5.00	20.647	1500	507540.260	104998.688	3.131
283	0.009	5.00	20.417	1500	507554.742	104975.438	2.957
284	0.052	5.00	19.779	1200	507548.011	104950.846	1.050
285	0.015	5.00	20.193	1500	507564.760	104966.388	2.761
286	0.022	5.00	19.355	1500	507583.043	104949.870	1.973
287			19.263	1800	507599.724	104950.233	2.215
287_OUT			18.788		507613.572	104945.923	4.491
288	0.037	5.00	26.129	1200	507707.540	105191.055	1.200
289	0.098	5.00	26.227		507726.072	105195.884	1.452
290	0.014	5.00	25.848	1350	507766.168	105194.102	1.275
291		5.00	27.504		507775.682	105254.054	0.550
292	0.026	5.00	27.217		507776.648	105241.737	0.550
293	0.036	5.00	26.800		507775.822	105223.362	0.550
294			25.873		507772.696	105199.620	0.550
295			25.576		507772.094	105188.843	1.275
296	0.014	5.00	25.267		507773.664	105179.993	0.994
297	0.007	5.00	25.051		507773.165	105173.283	0.799
298	0.023	5.00	24.677		507771.095	105160.578	0.775
299			24.498		507771.523	105155.083	0.775



Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
300			24.267		507773.450	105148.873	0.775
301			24.130		507774.093	105145.161	0.775
302	0.104	5.00	24.320	1200	507728.966	105140.102	1.125
303			24.667	1200	507760.354	105148.317	1.738
304			23.995		507772.094	105141.022	1.275
305	0.009	5.00	23.900		507770.768	105134.507	1.201
306			23.700		507771.319	105128.510	1.020
307			23.311		507774.586	105120.534	0.775
308	0.071	5.00	23.269	1200	507762.214	105111.394	1.125
309			23.091		507775.745	105114.654	1.350
310			22.011		507781.573	105085.079	0.850
311	0.005	5.00	21.892		507778.888	105081.344	0.850
312	0.048	5.00	21.917	1200	507726.967	105073.337	1.050
313			21.682		507727.177	105067.883	1.350
314			21.555		507713.683	105064.370	1.258
315	0.120	5.00	27.299	1200	507676.283	105230.632	1.125
316	0.025	5.00	26.102	1200	507677.969	105190.461	1.200
317	0.056	5.00	25.403	1350	507673.936	105167.079	1.275
318	0.032	5.00	25.375	1350	507673.097	105162.738	1.275
319	0.018	5.00	25.088	1350	507682.919	105157.797	1.275
320	0.142	5.00	24.865	1350	507686.544	105150.999	1.275
321	0.045	5.00	24.008	1200	507637.425	105115.726	1.125
322	0.032	5.00	23.855	1200	507647.681	105111.534	1.125
323	0.071	5.00	22.024	1350	507662.467	105049.769	1.350
324	0.063	5.00	23.237	1500	507654.597	105083.952	2.724
325	0.070	5.00	23.432	1200	507728.878	105102.681	1.125
326	0.013	5.00	22.927	1500	507700.617	105095.151	2.585
327	0.030	5.00	22.274	1500	507703.952	105078.945	1.961
328	0.004	5.00	21.792	1500	507704.402	105066.459	1.501
329	0.041	5.00	21.480		507712.203	105062.112	1.500
330	0.130	5.00	20.703	1200	507683.810	105034.569	1.200
331			20.761	1200	507705.785	105034.914	1.348
332			20.689		507712.466	105035.054	1.604
333			20.239		507712.628	105018.346	1.183
334			20.295		507706.111	105017.450	1.251
335			20.078	1500	507706.388	105009.038	1.049
336			19.927	1500	507701.686	105001.333	1.000
336_OUT			19.083		507676.747	104973.757	4.786
337	0.052	5.00	21.473		507590.259	105026.685	1.125
338			21.338	1200	507606.152	105028.804	1.125
339	0.080	5.00	21.881	1200	507618.189	105042.141	1.125
340			21.569	1200	507621.925	105031.667	1.451
341	0.054	5.00	20.599	1200	507602.970	105007.207	1.125
342	0.056	5.00	21.102	1200	507627.491	105016.064	1.857
343	0.113	5.00	19.848	1200	507685.962	104995.198	1.200
344			20.076	1200	507657.725	104985.301	1.551
345	0.016	5.00	20.139	1350	507640.998	104978.619	1.763
346	0.040	5.00	19.972	1350	507622.686	104971.862	1.657
346_OUT			19.274		507627.492	104956.481	4.977
347	0.187	5.00	25.635	1200	507645.422	105167.088	1.200
348	0.079	5.00	25.322	1200	507605.369	105174.747	1.200
349	0.023	5.00	24.904	1200	507550.486	105188.312	1.125

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
350			25.064	1350	507571.975	105183.367	1.640
350_OUT			25.000		507575.783	105198.581	1.963
351	0.049	5.00	16.405	1200	507604.807	104900.799	1.125
352	0.022	5.00	14.780	1200	507606.339	104869.336	0.825
353	0.026	5.00	14.170	1200	507612.364	104849.930	0.498
354		5.00	17.000		507635.801	104881.256	2.804
355			17.000	1800	507637.630	104873.545	2.837
356			14.362	1800	507640.007	104863.385	0.699
357			14.244	1350	507620.954	104851.519	0.754
353_OUT			14.207	1350	507620.795	104847.957	0.817
358	0.024	5.00	17.001	1200	507604.733	104911.243	1.125
359			17.000	1200	507617.580	104912.472	1.200
359_OUT			17.000		507626.449	104913.252	2.703
360	0.932	5.00	18.679	1350	507692.458	104973.386	1.350
360_OUT			18.735		507682.896	104969.559	4.438

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	1	2	25.133	0.600	40.094	39.946	0.148	169.8	225	5.42	50.0
1.001	2	3	10.776	0.600	39.946	39.882	0.064	168.4	225	5.60	50.0
1.002	3	4	16.147	0.600	39.882	39.786	0.096	168.2	225	5.87	50.0
1.003	4	5	16.553	0.600	39.786	39.688	0.098	168.9	225	6.14	50.0
1.004	5	6	7.649	0.600	39.688	39.642	0.046	166.3	225	6.27	50.0
1.005	6	7	10.304	0.600	39.642	39.575	0.067	153.8	225	6.43	50.0
1.006	7	8	9.485	0.600	39.575	39.505	0.070	135.5	225	6.57	50.0
1.007	8	9	10.994	0.600	39.430	39.150	0.280	39.3	300	6.64	50.0
1.008	9	10	32.268	0.600	39.075	38.975	0.100	322.7	375	7.18	49.8
1.009	10	11	14.420	0.600	38.975	38.930	0.045	320.4	375	7.42	49.1
1.010	11	12	15.961	0.600	38.930	38.880	0.050	319.2	375	7.68	48.2
1.011	12	13	4.980	0.600	38.880	38.825	0.055	90.5	375	7.73	48.1
1.012	13	14	5.907	0.600	38.825	38.755	0.070	84.4	375	7.78	47.9
1.013	14	15	11.077	0.600	38.755	38.525	0.230	48.2	375	7.85	47.7

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	1.000	39.8	4.0	0.400	0.729	0.026	0.0	48	0.643
1.001	1.005	39.9	6.1	0.729	0.793	0.040	0.0	59	0.731
1.002	1.005	40.0	9.7	0.793	0.840	0.063	0.0	75	0.831
1.003	1.003	39.9	11.8	0.840	0.787	0.077	0.0	84	0.877
1.004	1.011	40.2	11.8	0.787	0.758	0.077	0.0	83	0.879
1.005	1.052	41.8	15.2	0.758	0.400	0.099	0.0	94	0.969
1.006	1.121	44.6	17.2	0.400	0.400	0.112	0.0	97	1.052
1.007	2.516	177.9	19.2	0.400	0.400	0.125	0.0	66	1.661
1.008	1.003	110.8	25.3	0.400	0.475	0.165	0.0	121	0.817
1.009	1.006	111.2	27.6	0.475	0.495	0.183	0.0	127	0.840
1.010	1.008	111.4	28.2	0.495	0.495	0.190	0.0	128	0.845
1.011	1.905	210.3	29.8	0.495	0.400	0.202	0.0	95	1.363
1.012	1.973	217.9	29.7	0.400	0.400	0.202	0.0	93	1.394
1.013	2.616	288.9	29.6	0.400	0.400	0.202	0.0	80	1.705

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.014	15	16	19.578	0.600	38.525	37.925	0.600	26.0	375	7.92	47.5
1.015	16	17	12.446	0.600	37.925	37.425	0.500	24.9	375	7.98	47.3
1.016	17	18	14.257	0.600	37.425	36.925	0.500	28.5	375	8.05	47.1
1.017	18	19	13.407	0.600	36.925	36.225	0.700	19.2	375	8.10	47.0
1.018	19	20	16.012	0.600	36.225	35.425	0.800	20.0	375	8.17	46.8
1.019	20	21	9.579	0.600	35.425	35.025	0.400	23.9	375	8.21	46.7
1.020	21	22	19.598	0.600	35.025	34.325	0.700	28.0	375	8.30	46.4
1.021	22	23	11.980	0.600	34.325	33.625	0.700	17.1	375	8.35	46.3
1.022	23	24	18.889	0.600	33.625	32.925	0.700	27.0	375	8.44	46.0
1.023	24	25	11.107	0.600	32.925	32.675	0.250	44.4	375	8.51	45.8
1.024	25	26	12.750	0.600	32.675	32.025	0.650	19.6	375	8.56	45.7
1.025	26	27	15.309	0.600	31.950	31.250	0.700	21.9	450	8.62	45.5
1.026	27	28	9.894	0.600	31.250	30.950	0.300	33.0	450	8.66	45.4
1.027	28	29	10.390	0.600	30.950	30.650	0.300	34.6	450	8.71	45.3
1.028	29	30	11.657	0.600	30.650	30.350	0.300	38.9	450	8.77	45.1
1.029	30	31	9.833	0.600	30.350	29.950	0.400	24.6	450	8.81	45.0
1.030	31	32	13.875	0.600	29.950	29.650	0.300	46.3	450	8.89	44.8
1.031	32	36	15.707	0.600	29.575	29.475	0.100	157.1	525	9.04	44.4
2.000	33	34	15.712	0.600	30.605	30.065	0.540	29.1	150	5.14	50.0
2.001	34	35	24.078	0.600	29.990	29.188	0.802	30.0	225	5.31	50.0
2.002	35	36	8.177	0.600	29.188	29.139	0.049	166.9	225	5.44	50.0
1.032	36	37	11.416	0.600	28.839	28.815	0.024	475.7	525	9.22	44.0
1.033	37	38	8.579	0.600	28.740	28.725	0.015	571.9	600	9.36	43.6
1.034	38	39	24.803	0.600	28.650	28.525	0.125	198.4	675	9.59	43.1

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.014	3.568	394.0	29.5	0.400	0.400	0.202	0.0	68	2.125
1.015	3.644	402.5	31.0	0.400	0.400	0.213	0.0	70	2.197
1.016	3.404	375.9	31.7	0.400	0.400	0.219	0.0	73	2.102
1.017	4.156	459.0	35.1	0.400	0.400	0.243	0.0	69	2.491
1.018	4.065	449.0	40.7	0.400	0.400	0.283	0.0	76	2.569
1.019	3.715	410.4	41.9	0.400	0.400	0.292	0.0	80	2.424
1.020	3.435	379.4	45.8	0.400	0.400	0.321	0.0	88	2.354
1.021	4.397	485.7	47.9	0.400	0.400	0.337	0.0	79	2.840
1.022	3.499	386.5	51.6	0.400	0.400	0.365	0.0	92	2.465
1.023	2.724	300.9	53.0	0.400	0.400	0.376	0.0	106	2.071
1.024	4.107	453.6	56.6	0.400	0.400	0.403	0.0	89	2.841
1.025	4.361	693.7	57.5	0.400	0.400	0.411	0.0	87	2.685
1.026	3.549	564.5	59.3	0.400	0.400	0.425	0.0	97	2.332
1.027	3.463	550.8	59.1	0.400	0.400	0.425	0.0	99	2.299
1.028	3.269	519.9	61.5	0.400	0.400	0.444	0.0	103	2.223
1.029	4.113	654.1	63.9	0.400	0.400	0.462	0.0	94	2.648
1.030	2.995	476.3	65.5	0.400	0.400	0.476	0.0	112	2.131
1.031	1.784	386.3	66.0	0.400	0.400	0.484	0.0	146	1.348
2.000	1.873	33.1	8.0	0.900	0.900	0.052	0.0	50	1.546
2.001	2.396	95.3	10.9	0.900	0.900	0.071	0.0	51	1.612
2.002	1.009	40.1	10.9	0.900	1.036	0.071	0.0	80	0.859
1.032	1.020	220.8	76.6	1.036	0.860	0.567	0.0	213	0.930
1.033	1.011	285.8	77.5	0.860	0.775	0.578	0.0	212	0.865
1.034	1.857	664.4	84.2	0.775	0.400	0.636	0.0	161	1.291

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.035	39	78	11.278	0.600	28.450	28.350	0.100	112.8	750	9.66	42.9
3.000	40	42	16.309	0.600	34.291	34.055	0.236	69.1	300	5.14	50.0
4.000	41	42	16.174	0.600	33.945	33.905	0.040	404.3	450	5.27	50.0
3.001	42	43	39.167	0.600	33.830	33.750	0.080	489.6	525	5.92	50.0
3.002	43	47	5.386	0.600	33.750	33.739	0.011	489.6	525	6.01	50.0
5.000	44	47	35.169	0.600	36.978	36.653	0.325	108.2	225	5.47	50.0
6.000	45	46	22.085	0.600	38.187	37.101	1.086	20.3	150	5.16	50.0
6.001	46	47	7.888	0.600	37.101	36.728	0.373	21.1	150	5.22	50.0
3.003	47	48	49.943	0.600	33.739	33.638	0.101	494.5	525	6.84	50.0
3.004	48	51	5.976	0.600	33.638	33.625	0.013	459.7	525	6.94	50.0
7.000	49	50	26.748	0.600	37.111	35.961	1.150	23.3	150	5.21	50.0
7.001	50	51	7.269	0.600	35.961	35.701	0.260	30.3	150	5.28	50.0
3.005	51	52	8.403	0.600	33.625	33.608	0.017	494.3	525	7.08	50.0
3.006	52	53	31.010	0.600	33.608	33.544	0.064	484.5	525	7.59	48.5
3.007	53	55	14.645	0.600	33.544	32.831	0.713	20.5	525	7.64	48.4
8.000	54	55	26.654	0.600	33.610	33.206	0.404	66.0	150	5.36	50.0
3.008	55	56	30.328	0.600	32.831	31.468	1.363	22.3	525	7.74	48.0
3.009	56	57	8.232	0.600	31.393	31.158	0.235	35.0	600	7.78	47.9
3.010	57	58	11.069	0.600	31.158	30.934	0.224	49.4	600	7.83	47.8
3.011	58	59	15.241	0.600	30.934	30.736	0.198	77.0	600	7.92	47.5
3.012	59	60	47.412	0.600	30.736	30.134	0.602	78.8	600	8.21	46.7
3.013	60	61	12.816	0.600	30.059	29.935	0.124	103.4	675	8.29	46.4
3.014	61	70	27.154	0.600	29.935	29.894	0.041	662.3	675	8.74	45.2
9.000	62	63	14.081	0.600	38.445	38.000	0.445	31.6	150	5.13	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.035	2.634	1163.7	85.3	0.400	0.400	0.647	0.0	135	1.570
3.000	1.894	133.8	11.4	0.900	1.119	0.074	0.0	59	1.170
4.000	1.005	159.8	6.1	0.900	1.119	0.040	0.0	59	0.490
3.001	1.005	217.6	21.5	1.119	3.371	0.140	0.0	110	0.650
3.002	1.005	217.6	21.5	3.371	3.514	0.140	0.0	110	0.650
5.000	1.256	49.9	16.0	0.900	0.900	0.104	0.0	87	1.121
6.000	2.243	39.6	7.2	0.900	0.900	0.047	0.0	43	1.707
6.001	2.199	38.9	12.1	0.900	0.900	0.079	0.0	58	1.951
3.003	1.000	216.5	69.3	3.514	2.765	0.451	0.0	203	0.893
3.004	1.038	224.7	69.3	2.765	2.601	0.451	0.0	199	0.918
7.000	2.097	37.0	7.2	0.900	0.900	0.047	0.0	45	1.631
7.001	1.836	32.5	12.4	0.900	0.900	0.081	0.0	64	1.714
3.005	1.000	216.6	86.3	2.601	2.359	0.562	0.0	230	0.946
3.006	1.011	218.8	97.1	2.359	0.900	0.651	0.0	245	0.982
3.007	4.957	1073.1	102.1	0.900	0.900	0.687	0.0	108	3.177
8.000	1.240	21.9	4.1	0.900	0.900	0.027	0.0	44	0.956
3.008	4.762	1030.9	120.9	0.900	0.900	0.819	0.0	120	3.242
3.009	4.123	1165.7	125.0	0.900	0.900	0.849	0.0	131	2.736
3.010	3.469	980.9	128.4	0.900	0.900	0.875	0.0	145	2.435
3.011	2.777	785.2	129.4	0.900	0.900	0.887	0.0	163	2.077
3.012	2.745	776.2	149.7	0.900	0.900	1.044	0.0	177	2.145
3.013	2.578	922.4	152.5	0.900	0.900	1.069	0.0	184	1.933
3.014	1.011	361.7	155.4	0.900	1.195	1.119	0.0	309	0.974
9.000	1.796	31.7	2.5	0.900	0.900	0.016	0.0	28	1.074

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
9.001	63	65	25.652	0.600	38.000	37.225	0.775	33.1	150	5.37	50.0
10.000	64	65	34.127	0.600	37.479	37.150	0.329	103.7	225	5.44	50.0
9.002	65	66	7.497	0.600	37.150	36.753	0.397	18.9	225	5.48	50.0
9.003	66	67	38.201	0.600	36.753	34.461	2.292	16.7	225	5.68	50.0
9.004	67	68	45.852	0.600	34.386	31.638	2.748	16.7	300	5.88	50.0
9.005	68	69	19.408	0.600	31.638	30.513	1.125	17.3	300	5.96	50.0
9.006	69	70	13.312	0.600	30.513	30.269	0.244	54.6	300	6.07	50.0
3.015	70	71	11.392	0.600	29.894	29.877	0.017	670.1	675	8.93	44.7
3.016	71	72	14.530	0.600	29.877	29.844	0.033	440.3	675	9.12	44.2
3.017	72	73	6.826	0.600	29.844	29.725	0.119	57.4	675	9.16	44.1
3.018	73	74	14.362	0.600	29.725	29.225	0.500	28.7	675	9.20	44.0
3.019	74	75	11.837	0.600	29.225	28.925	0.300	39.5	675	9.25	43.9
3.020	75	76	10.655	0.600	28.925	28.825	0.100	106.6	675	9.32	43.7
3.021	76	77	12.766	0.600	28.825	28.806	0.019	671.9	675	9.53	43.2
3.022	77	78	9.872	0.600	28.806	28.425	0.381	25.9	675	9.56	43.2
1.036	78	79	4.604	0.600	28.275	28.269	0.006	767.4	825	9.73	42.8
1.037	79	80	23.618	0.600	28.269	28.241	0.028	843.5	825	10.12	41.9
1.038	80	81	39.580	0.600	28.241	27.246	0.995	39.8	825	10.26	41.6
1.039	81	88	37.553	0.600	27.246	25.372	1.874	20.0	825	10.35	41.4
11.000	82	83	26.435	0.600	26.429	26.167	0.262	100.9	150	5.44	50.0
11.001	83	84	21.022	0.600	26.167	25.958	0.209	100.6	150	5.79	50.0
11.002	84	85	27.832	0.600	25.833	25.719	0.114	169.7	225	6.25	50.0
11.003	85	86	15.509	0.600	25.719	25.627	0.092	168.6	225	6.51	50.0
11.004	86	87	15.593	0.600	25.627	25.535	0.092	169.5	225	6.77	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
9.001	1.755	31.0	7.4	0.900	0.900	0.048	0.0	50	1.440
10.000	1.283	51.0	10.1	0.900	0.900	0.066	0.0	68	1.008
9.002	3.025	120.3	20.3	0.900	0.900	0.132	0.0	62	2.260
9.003	3.220	128.0	30.4	0.900	0.900	0.198	0.0	74	2.650
9.004	3.867	273.3	36.4	0.900	0.900	0.237	0.0	74	2.718
9.005	3.803	268.8	41.6	0.900	0.900	0.271	0.0	79	2.788
9.006	2.133	150.8	41.6	0.900	1.195	0.271	0.0	108	1.832
3.015	1.005	359.5	190.9	1.195	0.898	1.390	0.0	350	1.019
3.016	1.242	444.5	196.0	0.898	0.400	1.443	0.0	313	1.205
3.017	3.464	1239.7	196.2	0.400	0.400	1.447	0.0	180	2.564
3.018	4.901	1753.8	199.2	0.400	0.400	1.473	0.0	152	3.313
3.019	4.180	1495.7	200.8	0.400	0.400	1.489	0.0	165	2.957
3.020	2.538	908.3	200.1	0.400	0.400	1.489	0.0	214	2.058
3.021	1.003	359.0	197.7	0.400	1.936	1.489	0.0	358	1.026
3.022	5.161	1846.8	197.4	1.936	0.400	1.489	0.0	147	3.430
1.036	1.064	568.6	280.6	0.400	0.838	2.136	0.0	409	1.060
1.037	1.014	542.0	274.7	0.838	2.142	2.136	0.0	416	1.017
1.038	4.715	2520.2	272.8	2.142	0.400	2.136	0.0	181	3.147
1.039	6.648	3553.7	271.5	0.400	0.400	2.136	0.0	152	4.025
11.000	1.000	17.7	3.8	0.900	1.328	0.025	0.0	47	0.798
11.001	1.002	17.7	3.8	1.328	1.316	0.025	0.0	47	0.800
11.002	1.001	39.8	8.0	1.316	1.100	0.052	0.0	68	0.785
11.003	1.004	39.9	13.1	1.100	0.997	0.085	0.0	88	0.900
11.004	1.001	39.8	16.9	0.997	0.971	0.110	0.0	102	0.962

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
11.005	87	88	9.106	0.600	25.535	25.472	0.063	144.5	225	6.91	50.0
1.040	88	88_OUT	20.133	0.600	24.872	23.775	1.097	18.4	825	10.40	41.3
12.000	89	90	17.652	0.600	37.690	37.173	0.517	34.1	150	5.17	50.0
12.001	90	91	20.433	0.600	37.098	36.549	0.549	37.2	225	5.33	50.0
12.002	91	92	54.907	0.600	36.324	36.189	0.135	406.7	450	6.24	50.0
12.003	92	94	31.932	0.600	36.114	36.049	0.065	491.3	525	6.77	50.0
13.000	93	94	37.936	0.600	37.990	36.937	1.053	36.0	150	5.38	50.0
12.004	94	95	31.977	0.600	36.049	35.934	0.065	491.9	525	7.30	49.4
12.005	95	96	27.264	0.600	35.984	35.928	0.056	486.9	525	7.75	48.0
12.006	96	97	23.474	0.600	35.928	35.880	0.048	489.1	525	8.14	46.8
12.007	97	98	19.330	0.600	35.880	35.840	0.040	483.3	525	8.46	46.0
12.008	98	99	16.378	0.600	35.840	35.806	0.034	481.7	525	8.73	45.2
12.009	99	101	7.747	0.600	35.806	35.790	0.016	484.2	525	8.86	44.9
14.000	100	101	12.074	0.600	37.228	36.877	0.351	34.4	150	5.12	50.0
12.010	101	102	14.043	0.600	35.790	35.761	0.029	484.2	525	9.09	44.3
12.011	102	103	17.699	0.600	35.761	35.425	0.336	52.7	525	9.19	44.1
12.012	103	106	7.276	0.600	35.425	35.119	0.306	23.8	525	9.21	44.0
15.000	104	105	14.669	0.600	34.587	34.441	0.146	100.5	150	5.24	50.0
15.001	105	106	34.709	0.600	34.366	34.161	0.205	169.3	225	5.82	50.0
12.013	106	111	7.455	0.600	33.861	33.591	0.270	27.6	525	9.24	43.9
16.000	107	109	13.529	0.600	35.893	35.079	0.814	22.8	150	5.15	50.0
17.000	108	109	12.004	0.600	34.407	34.282	0.119	100.9	150	5.20	50.0
16.001	109	110	27.561	0.600	34.213	34.050	0.163	169.1	225	5.66	50.0
16.002	110	111	26.857	0.600	34.050	33.891	0.159	168.9	225	6.10	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
11.005	1.085	43.1	18.0	0.971	0.900	0.117	0.0	102	1.038
1.040	6.947	3713.7	285.7	0.900	0.400	2.253	0.0	152	4.206
12.000	1.728	30.5	2.8	0.900	0.900	0.018	0.0	30	1.071
12.001	2.151	85.5	11.8	0.900	0.900	0.077	0.0	56	1.515
12.002	1.002	159.3	29.5	0.900	0.992	0.192	0.0	131	0.772
12.003	1.004	217.2	47.2	0.992	1.413	0.307	0.0	165	0.808
13.000	1.682	29.7	5.7	0.900	0.900	0.037	0.0	44	1.299
12.004	1.003	217.1	58.9	1.413	1.802	0.388	0.0	186	0.857
12.005	1.008	218.2	69.0	1.802	1.614	0.468	0.0	202	0.898
12.006	1.006	217.7	76.1	1.614	1.827	0.529	0.0	214	0.919
12.007	1.012	219.1	77.8	1.827	2.129	0.551	0.0	216	0.929
12.008	1.014	219.4	82.7	2.129	1.886	0.595	0.0	223	0.945
12.009	1.011	218.9	82.0	1.886	1.612	0.595	0.0	222	0.941
14.000	1.722	30.4	2.8	0.900	0.900	0.018	0.0	31	1.079
12.010	1.011	218.8	88.7	1.612	1.195	0.652	0.0	233	0.960
12.011	3.081	669.0	95.3	1.195	0.900	0.704	0.0	133	2.219
12.012	4.607	997.2	96.4	0.900	0.900	0.713	0.0	109	2.968
15.000	1.002	17.7	6.5	0.900	1.338	0.042	0.0	62	0.923
15.001	1.002	39.8	16.3	1.338	2.153	0.106	0.0	100	0.951
12.013	4.274	925.2	110.5	2.153	2.085	0.819	0.0	121	2.923
16.000	2.119	37.5	5.5	0.900	0.900	0.036	0.0	39	1.525
17.000	1.000	17.7	3.7	0.900	1.691	0.024	0.0	47	0.793
16.001	1.002	39.9	13.1	1.691	2.364	0.085	0.0	88	0.899
16.002	1.003	39.9	15.4	2.364	2.065	0.100	0.0	97	0.941

Links

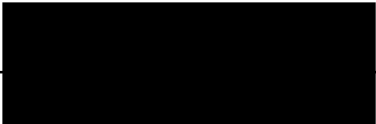
Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
12.014	111	112	14.467	0.600	33.591	33.561	0.030	482.2	525	9.48	43.4
12.015	112	113	19.060	0.600	33.561	32.801	0.760	25.1	525	9.55	43.2
12.016	113	114	21.183	0.600	32.801	31.576	1.225	17.3	525	9.62	43.0
12.017	114	117	16.560	0.600	31.576	30.873	0.703	23.6	525	9.68	42.9
18.000	115	116	35.925	0.600	30.979	30.656	0.323	111.2	300	5.40	50.0
18.001	116	117	22.526	0.600	30.581	30.511	0.070	321.8	375	5.78	50.0
12.018	117	118	7.569	0.600	30.286	30.273	0.013	582.2	600	9.80	42.6
12.019	118	119	12.594	0.600	30.273	30.065	0.208	60.6	600	9.87	42.4
12.020	119	120	10.923	0.600	30.065	29.619	0.446	24.5	600	9.90	42.3
12.021	120	121	16.020	0.600	29.619	28.898	0.721	22.2	600	9.96	42.2
12.022	121	122	30.493	0.600	28.898	27.635	1.263	24.1	600	10.06	42.0
12.023	122	138	8.667	0.600	27.635	27.065	0.570	15.2	600	10.08	41.9
19.000	123	124	28.886	0.600	32.926	31.432	1.494	19.3	225	5.16	50.0
19.001	124	125	22.118	0.600	31.432	30.611	0.821	26.9	225	5.31	50.0
19.002	125	126	10.338	0.600	30.611	29.672	0.939	11.0	225	5.35	50.0
19.003	126	128	25.582	0.600	29.672	28.734	0.938	27.3	225	5.52	50.0
20.000	127	128	47.895	0.600	29.957	28.659	1.298	36.9	300	5.31	50.0
19.004	128	129	20.401	0.600	28.584	27.821	0.763	26.7	375	5.62	50.0
19.005	129	130	38.158	0.600	27.746	27.000	0.746	51.2	450	5.84	50.0
19.006	130	131	7.991	0.600	26.925	26.908	0.017	470.1	525	5.97	50.0
19.007	131	132	10.503	0.600	26.908	26.886	0.022	477.4	525	6.14	50.0
19.008	132	133	9.198	0.600	26.811	26.795	0.016	574.9	600	6.29	50.0
19.009	133	137	10.448	0.600	26.795	26.700	0.095	110.0	600	6.37	50.0
21.000	134	135	11.733	0.600	28.848	28.161	0.687	17.1	150	5.08	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
12.014	1.013	219.3	132.3	2.065	1.284	0.993	0.0	295	1.058
12.015	4.485	970.9	133.5	1.284	0.900	1.006	0.0	130	3.187
12.016	5.404	1169.9	141.8	0.900	0.900	1.073	0.0	122	3.714
12.017	4.628	1001.9	147.0	0.900	0.900	1.116	0.0	135	3.352
18.000	1.490	105.3	20.4	0.900	0.900	0.133	0.0	89	1.163
18.001	1.004	110.9	29.3	0.900	1.412	0.191	0.0	131	0.853
12.018	1.002	283.2	171.0	1.412	1.163	1.307	0.0	337	1.046
12.019	3.123	885.8	171.1	1.163	0.900	1.313	0.0	177	2.448
12.020	4.933	1394.9	170.8	0.900	0.900	1.313	0.0	140	3.403
12.021	5.180	1464.7	173.2	0.900	0.900	1.335	0.0	137	3.532
12.022	4.969	1404.9	180.5	0.900	0.900	1.399	0.0	144	3.474
12.023	6.265	1771.4	180.3	0.900	0.900	1.399	0.0	127	4.097
19.000	2.989	118.8	14.0	0.900	0.900	0.091	0.0	51	2.011
19.001	2.530	100.6	18.4	0.900	0.900	0.120	0.0	65	1.933
19.002	3.966	157.7	18.4	0.900	0.900	0.120	0.0	51	2.670
19.003	2.515	100.0	21.8	0.900	0.900	0.142	0.0	71	2.017
20.000	2.596	183.5	15.7	0.900	0.900	0.102	0.0	59	1.606
19.004	3.525	388.3	39.6	0.900	0.900	0.258	0.0	80	2.293
19.005	2.847	452.8	47.3	0.900	0.900	0.308	0.0	97	1.870
19.006	1.026	222.1	47.3	0.900	0.767	0.308	0.0	163	0.821
19.007	1.018	220.4	47.3	0.767	0.689	0.308	0.0	164	0.818
19.008	1.008	285.1	47.3	0.689	0.705	0.308	0.0	164	0.755
19.009	2.321	656.3	49.5	0.705	0.900	0.322	0.0	110	1.392
21.000	2.449	43.3	4.5	0.900	0.900	0.029	0.0	33	1.588

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
21.001	135	136	11.107	0.600	28.161	27.857	0.304	36.5	150	5.19	50.0
21.002	136	137	12.989	0.600	27.857	27.150	0.707	18.4	150	5.28	50.0
19.010	137	138	31.461	0.600	26.625	26.578	0.047	669.4	675	6.89	50.0
12.024	138	139	12.709	0.600	26.578	26.559	0.019	668.9	675	10.29	41.5
12.025	139	140	17.794	0.600	26.559	26.532	0.027	659.0	675	10.59	40.9
12.026	140	185	16.969	0.600	26.532	25.526	1.006	16.9	675	10.63	40.8
22.000	141	142	8.386	0.600	39.050	38.900	0.150	55.9	150	5.10	50.0
22.001	142	143	4.096	0.600	38.900	38.850	0.050	81.9	150	5.17	50.0
22.002	143	144	9.257	0.600	38.775	38.675	0.100	92.6	225	5.28	50.0
22.003	144	145	11.692	0.600	38.600	38.552	0.048	243.6	300	5.47	50.0
22.004	145	146	9.445	0.600	38.552	38.513	0.039	242.2	300	5.63	50.0
22.005	146	147	9.586	0.600	38.428	38.408	0.030	319.5	375	5.79	50.0
22.006	147	148	3.671	0.600	38.408	38.396	0.012	305.9	375	5.85	50.0
22.007	148	149	9.100	0.600	38.396	38.367	0.029	313.8	375	6.00	50.0
22.008	149	150	8.541	0.600	38.367	38.340	0.027	316.4	375	6.14	50.0
22.009	150	151	7.425	0.600	38.340	38.317	0.023	322.8	375	6.26	50.0
22.010	151	152	7.229	0.600	38.317	38.294	0.023	314.3	375	6.38	50.0
22.011	152	153	8.653	0.600	38.294	38.267	0.027	320.5	375	6.52	50.0
22.012	153	154	9.553	0.600	38.267	38.237	0.030	318.4	375	6.68	50.0
22.013	154	155	8.253	0.600	38.237	38.211	0.026	317.4	375	6.82	50.0
22.014	155	156	6.760	0.600	38.211	38.190	0.021	321.9	375	6.93	50.0
22.015	156	157	6.175	0.600	38.190	38.170	0.020	308.7	375	7.03	50.0
22.016	157	158	10.401	0.600	38.170	38.137	0.033	315.2	375	7.20	49.8
22.017	158	159	6.663	0.600	38.137	38.116	0.021	317.3	375	7.31	49.4

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
21.001	1.670	29.5	7.1	0.900	0.900	0.046	0.0	50	1.378
21.002	2.361	41.7	9.4	0.900	0.900	0.061	0.0	48	1.913
19.010	1.005	359.7	60.8	0.900	1.312	0.396	0.0	186	0.756
12.024	1.006	359.8	228.9	1.312	0.917	1.795	0.0	392	1.062
12.025	1.013	362.6	230.4	0.917	0.430	1.834	0.0	391	1.070
12.026	6.400	2290.1	232.3	0.430	0.400	1.854	0.0	143	4.190
22.000	1.348	23.8	3.5	0.400	0.400	0.023	0.0	39	0.969
22.001	1.111	19.6	3.5	0.400	0.400	0.023	0.0	43	0.844
22.002	1.359	54.0	3.5	0.400	0.400	0.023	0.0	39	0.776
22.003	1.003	70.9	5.7	0.400	0.423	0.037	0.0	57	0.607
22.004	1.006	71.1	9.2	0.423	0.437	0.060	0.0	72	0.698
22.005	1.008	111.3	12.7	0.437	0.467	0.083	0.0	85	0.678
22.006	1.030	113.8	12.7	0.467	0.504	0.083	0.0	84	0.687
22.007	1.017	112.3	14.7	0.504	0.558	0.096	0.0	91	0.711
22.008	1.013	111.9	16.6	0.558	0.685	0.108	0.0	97	0.733
22.009	1.003	110.7	18.4	0.685	0.808	0.120	0.0	103	0.749
22.010	1.016	112.3	20.4	0.808	0.931	0.133	0.0	108	0.779
22.011	1.006	111.2	22.0	0.931	1.003	0.143	0.0	112	0.788
22.012	1.010	111.5	22.7	1.003	1.088	0.148	0.0	115	0.799
22.013	1.011	111.7	22.7	1.088	1.214	0.148	0.0	114	0.798
22.014	1.004	110.9	25.8	1.214	1.225	0.168	0.0	123	0.823
22.015	1.026	113.3	26.3	1.225	1.205	0.171	0.0	122	0.839
22.016	1.015	112.1	27.1	1.205	1.238	0.177	0.0	125	0.840
22.017	1.012	111.7	29.0	1.238	1.459	0.191	0.0	130	0.855

	The Civil Engineering Practice			File: 23544 - ANGMERING Flow through				Page 15			
	BN41 1RA			Network:				23544			
				Steve Doughty				Water Lane, Angmering			
02/12/2021				Main Site							
Links											
Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
22.018	159	160	10.797	0.600	38.116	38.082	0.034	315.8	375	7.49	48.9
22.019	160	161	43.571	0.600	38.082	37.852	0.230	189.4	375	8.04	47.1
22.020	161	163	31.392	0.600	37.852	37.711	0.141	222.6	375	8.47	45.9
23.000	162	163	10.318	0.600	38.039	37.936	0.103	100.2	150	5.17	50.0
22.021	163	164	9.221	0.600	37.711	37.682	0.029	318.0	375	8.62	45.5
22.022	164	165	30.685	0.600	37.682	37.425	0.257	119.4	375	8.93	44.7
22.023	165	166	16.222	0.600	37.425	36.775	0.650	25.0	375	9.01	44.5
22.024	166	167	11.911	0.600	36.775	36.125	0.650	18.3	375	9.05	44.4
22.025	167	168	11.566	0.600	36.125	35.725	0.400	28.9	375	9.11	44.2
22.026	168	169	12.187	0.600	35.725	34.975	0.750	16.2	375	9.16	44.1
22.027	169	170	7.398	0.600	34.975	34.700	0.275	26.9	375	9.19	44.0
22.028	170	171	31.154	0.600	34.700	32.975	1.725	12.1	375	9.31	43.8
22.029	171	172	10.144	0.600	32.975	32.025	0.950	10.7	375	9.34	43.7
22.030	172	174	13.786	0.600	32.025	31.710	0.315	43.8	375	9.43	43.5
24.000	173	174	8.141	0.600	31.782	31.435	0.347	23.5	150	5.06	50.0
22.031	174	176	11.344	0.600	31.210	30.840	0.370	30.7	375	9.48	43.4
25.000	175	176	20.026	0.600	31.264	31.065	0.199	100.6	150	5.33	50.0
22.032	176	177	7.095	0.600	30.840	30.671	0.169	42.0	375	9.53	43.2
22.033	177	178	14.368	0.600	30.671	29.703	0.968	14.8	375	9.58	43.1
22.034	178	179	15.450	0.600	29.703	28.746	0.957	16.1	375	9.63	43.0
22.035	179	180	6.970	0.600	28.746	28.723	0.023	303.0	375	9.75	42.7
22.036	180	181	15.732	0.600	28.723	27.769	0.954	16.5	375	9.80	42.6
22.037	181	182	11.718	0.600	27.769	26.974	0.795	14.7	375	9.84	42.5
22.038	182	183	7.639	0.600	26.974	26.621	0.353	21.6	375	9.88	42.4
Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)		
22.018	1.014	112.0	29.1	1.459	1.536	0.194	0.0	130	0.857		
22.019	1.313	145.0	33.4	1.536	0.400	0.231	0.0	122	1.074		
22.020	1.210	133.6	35.3	0.400	0.614	0.250	0.0	131	1.025		
23.000	1.004	17.7	0.0	0.400	0.614	0.000	0.0	0	0.000		
22.021	1.010	111.6	35.0	0.614	0.493	0.250	0.0	144	0.898		
22.022	1.657	183.0	34.3	0.493	0.400	0.250	0.0	109	1.282		
22.023	3.639	401.9	37.6	0.400	0.400	0.275	0.0	77	2.312		
22.024	4.249	469.3	41.0	0.400	0.400	0.301	0.0	74	2.655		
22.025	3.380	373.3	42.4	0.400	0.400	0.312	0.0	85	2.272		
22.026	4.513	498.5	44.5	0.400	0.400	0.328	0.0	75	2.836		
22.027	3.505	387.1	46.3	0.400	0.400	0.342	0.0	87	2.391		
22.028	4.280	472.7	49.1	0.400	0.400	0.365	0.0	81	2.808		
22.029	5.571	615.3	52.3	0.400	0.400	0.390	0.0	73	3.442		
22.030	2.745	303.2	52.1	0.400	0.400	0.390	0.0	104	2.071		
24.000	2.087	36.9	1.4	0.900	0.900	0.009	0.0	20	0.992		
22.031	3.282	362.5	55.8	0.900	1.047	0.419	0.0	99	2.401		
25.000	1.001	17.7	5.1	0.900	1.047	0.033	0.0	55	0.865		
22.032	2.803	309.6	60.1	1.047	0.400	0.452	0.0	111	2.185		
22.033	4.723	521.6	61.9	0.400	0.400	0.467	0.0	86	3.208		
22.034	4.528	500.1	67.2	0.400	0.400	0.509	0.0	92	3.190		
22.035	1.035	114.3	66.8	0.400	0.400	0.509	0.0	206	1.074		
22.036	4.480	494.8	69.3	0.400	0.400	0.530	0.0	94	3.198		
22.037	4.739	523.5	70.6	0.400	0.400	0.541	0.0	92	3.339		
22.038	3.909	431.7	73.9	0.400	0.400	0.567	0.0	104	2.951		

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Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
22.039	183	184	12.337	0.600	26.546	26.192	0.354	34.8	450	9.94	42.3
22.040	184	185	10.594	0.600	26.192	25.751	0.441	24.0	450	9.98	42.2
12.027	185	186	8.856	0.600	25.376	25.186	0.190	46.6	825	10.66	40.7
12.028	186	190	9.058	0.600	25.186	24.879	0.307	29.5	825	10.69	40.7
26.000	187	188	38.373	0.600	24.979	24.753	0.226	169.8	225	5.64	50.0
26.001	188	189	30.554	0.600	24.678	24.553	0.125	244.4	300	6.15	50.0
26.002	189	190	8.073	0.600	24.553	24.520	0.033	244.6	300	6.28	50.0
12.029	190	191	6.674	0.600	23.920	23.913	0.007	953.4	900	10.80	40.4
12.030	191	191_OUT	22.344	0.600	23.838	23.806	0.032	1010.7	975	11.33	39.4
27.000	192	194	34.564	0.600	21.393	21.189	0.204	169.4	225	5.58	50.0
28.000	193	194	23.731	0.600	22.337	21.979	0.358	66.3	225	5.25	50.0
27.001	194	200	55.839	0.600	21.039	20.866	0.173	322.8	375	6.50	50.0
29.000	195	197	28.583	0.600	20.553	20.436	0.117	244.3	300	5.48	50.0
30.000	196	197	17.216	0.600	21.595	21.354	0.241	71.4	150	5.24	50.0
29.001	197	199	9.045	0.600	20.361	20.333	0.028	323.0	375	5.63	50.0
31.000	198	199	13.914	0.600	21.742	21.245	0.497	28.0	150	5.12	50.0
29.002	199	200	10.433	0.600	20.333	20.300	0.033	316.1	375	5.80	50.0
27.002	200	201	30.217	0.600	20.225	20.150	0.075	402.9	450	7.00	50.0
27.003	201	205	40.451	0.600	20.075	19.993	0.082	493.3	525	7.68	48.3
32.000	202	203	18.313	0.600	19.213	19.156	0.057	321.3	375	5.30	50.0
32.001	203	204	12.603	0.600	19.081	19.050	0.031	406.5	450	5.51	50.0
32.002	204	205	16.170	0.600	18.900	18.872	0.028	577.5	600	5.78	50.0
27.004	205	206	10.062	0.600	18.722	18.708	0.014	718.7	750	7.84	47.7
27.005	206	208	14.374	0.600	18.708	18.689	0.019	756.5	750	8.08	47.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
22.039	3.452	549.1	73.6	0.400	0.400	0.567	0.0	110	2.436
22.040	4.161	661.8	77.5	0.400	0.400	0.598	0.0	103	2.831
12.027	4.354	2327.7	306.7	0.400	0.400	2.452	0.0	200	3.073
12.028	5.476	2927.5	306.3	0.400	0.400	2.452	0.0	178	3.620
26.000	1.000	39.8	12.4	0.900	0.989	0.081	0.0	87	0.888
26.001	1.001	70.8	14.7	0.989	1.270	0.096	0.0	92	0.794
26.002	1.001	70.7	14.7	1.270	1.284	0.096	0.0	93	0.796
12.029	1.006	640.1	316.5	1.284	1.097	2.548	0.0	447	1.003
12.030	1.027	766.6	308.4	1.097	0.719	2.548	0.0	429	0.973
27.000	1.001	39.8	4.8	0.900	1.690	0.031	0.0	52	0.678
28.000	1.608	64.0	15.4	0.900	0.900	0.100	0.0	75	1.331
27.001	1.003	110.8	43.0	1.690	1.017	0.280	0.0	162	0.942
29.000	1.001	70.8	8.0	0.900	1.668	0.052	0.0	68	0.669
30.000	1.191	21.0	3.8	0.900	0.900	0.025	0.0	43	0.905
29.001	1.002	110.7	11.8	1.668	1.587	0.077	0.0	82	0.661
31.000	1.910	33.8	6.9	0.900	0.900	0.045	0.0	46	1.506
29.002	1.013	111.9	18.7	1.587	1.583	0.122	0.0	103	0.757
27.002	1.006	160.1	73.4	1.583	1.194	0.478	0.0	214	0.986
27.003	1.001	216.8	86.1	1.194	0.915	0.581	0.0	229	0.946
32.000	1.005	111.0	7.8	0.900	1.576	0.051	0.0	67	0.588
32.001	1.002	159.3	8.4	1.576	1.974	0.055	0.0	70	0.540
32.002	1.006	284.4	11.8	1.974	1.961	0.077	0.0	82	0.506
27.004	1.036	457.6	96.5	1.961	2.012	0.658	0.0	233	0.829
27.005	1.009	445.9	97.4	2.012	2.124	0.674	0.0	236	0.815

Links

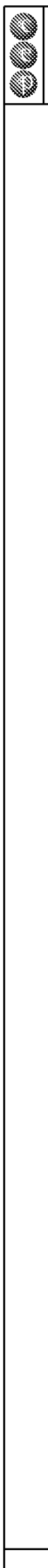
Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
33.000	207	208	36.425	0.600	20.795	20.438	0.357	102.0	225	5.47	50.0
27.006	208	209	16.130	0.600	18.689	18.668	0.021	768.1	750	8.34	46.3
27.007	209	210	25.644	0.600	18.668	18.634	0.034	754.2	750	8.77	45.1
27.008	210	211	16.611	0.600	18.634	18.612	0.022	755.1	750	9.04	44.4
27.009	211	212	7.041	0.600	18.612	18.602	0.010	704.1	750	9.15	44.1
27.010	212	213	35.544	0.600	18.602	18.555	0.047	756.3	750	9.74	42.7
27.011	213	214	34.508	0.600	18.555	18.510	0.045	766.8	750	10.31	41.5
27.012	214	217	16.178	0.600	18.510	18.489	0.021	770.4	750	10.58	40.9
34.000	215	216	20.445	0.600	20.325	19.965	0.360	56.2	225	5.20	50.0
34.001	216	217	24.862	0.600	19.965	19.535	0.430	57.8	225	5.44	50.0
27.013	217	268	27.839	0.600	18.489	18.452	0.037	752.4	750	11.04	39.9
35.000	218	219	31.034	0.600	21.965	21.782	0.183	169.6	225	5.52	50.0
35.001	219	220	15.042	0.600	21.707	21.645	0.062	242.6	300	5.77	50.0
35.002	220	222	11.434	0.600	21.645	21.598	0.047	243.3	300	5.96	50.0
36.000	221	222	10.517	0.600	23.515	23.179	0.336	31.3	150	5.10	50.0
35.003	222	223	49.013	0.600	21.448	21.327	0.121	405.1	450	6.77	50.0
35.004	223	225	27.988	0.600	21.327	21.044	0.283	98.9	450	7.00	50.0
37.000	224	225	12.504	0.600	21.468	21.344	0.124	100.8	150	5.21	50.0
35.005	225	248	31.575	0.600	21.044	20.966	0.078	404.8	450	7.52	48.7
38.000	226	227	25.620	0.600	24.415	23.560	0.855	30.0	225	5.18	50.0
38.001	227	229	14.561	0.600	23.560	22.916	0.644	22.6	225	5.27	50.0
39.000	228	229	29.793	0.600	23.267	22.991	0.296	100.7	150	5.50	50.0
38.002	229	234	23.853	0.600	22.841	22.743	0.098	243.4	300	5.89	50.0
40.000	230	231	8.709	0.600	23.000	22.985	0.015	580.6	600	5.14	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
33.000	1.294	51.4	16.0	0.900	0.900	0.104	0.0	86	1.144
27.006	1.002	442.5	117.0	2.124	1.989	0.823	0.0	262	0.852
27.007	1.011	446.6	124.0	1.989	1.403	0.894	0.0	269	0.871
27.008	1.010	446.4	128.2	1.403	1.017	0.940	0.0	274	0.878
27.009	1.047	462.4	131.1	1.017	1.183	0.967	0.0	272	0.907
27.010	1.010	446.0	134.4	1.183	1.717	1.024	0.0	281	0.888
27.011	1.002	442.9	133.1	1.717	1.472	1.045	0.0	281	0.882
27.012	1.000	441.8	133.5	1.472	1.421	1.063	0.0	282	0.881
34.000	1.739	69.1	7.7	0.900	0.900	0.050	0.0	51	1.157
34.001	1.723	68.5	17.2	0.900	0.900	0.112	0.0	77	1.443
27.013	1.012	447.2	144.2	1.421	1.413	1.175	0.0	292	0.907
35.000	1.001	39.8	12.3	0.900	2.318	0.080	0.0	86	0.884
35.001	1.005	71.0	13.1	2.318	2.359	0.085	0.0	87	0.772
35.002	1.003	70.9	13.1	2.359	2.331	0.085	0.0	87	0.771
36.000	1.806	31.9	1.7	0.900	0.900	0.011	0.0	23	0.952
35.003	1.004	159.6	31.0	2.331	0.958	0.202	0.0	134	0.785
35.004	2.044	325.1	37.8	0.958	1.470	0.246	0.0	102	1.382
37.000	1.000	17.7	2.2	0.900	1.470	0.014	0.0	35	0.680
35.005	1.004	159.7	44.2	1.470	1.184	0.295	0.0	161	0.863
38.000	2.399	95.4	11.5	0.900	0.900	0.075	0.0	52	1.629
38.001	2.763	109.9	25.7	0.900	1.162	0.167	0.0	73	2.260
39.000	1.001	17.7	6.9	0.900	1.162	0.045	0.0	65	0.942
38.002	1.003	70.9	32.6	1.162	1.539	0.212	0.0	143	0.982
40.000	1.003	283.6	0.0	1.400	1.415	0.000	0.0	0	0.000

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
40.001	231	232	12.825	0.600	22.985	22.963	0.022	582.9	600	5.36	50.0
40.002	232	233	11.129	0.600	22.963	22.943	0.020	556.4	600	5.54	50.0
40.003	233	234	8.528	0.600	22.943	22.928	0.015	568.6	600	5.68	50.0
38.003	234	235	7.936	0.600	22.443	22.429	0.014	566.9	600	6.02	50.0
38.004	235	236	6.440	0.600	22.429	22.417	0.012	536.7	600	6.13	50.0
38.005	236	237	5.961	0.600	22.417	22.406	0.011	541.9	600	6.22	50.0
38.006	237	238	4.888	0.600	22.406	22.397	0.009	543.1	600	6.30	50.0
38.007	238	245	15.673	0.600	22.397	22.003	0.394	39.8	600	6.37	50.0
41.000	239	240	33.208	0.600	22.967	22.522	0.445	74.6	225	5.37	50.0
41.001	240	244	6.132	0.600	22.522	22.485	0.037	165.7	225	5.47	50.0
42.000	241	242	17.005	0.600	23.744	23.485	0.259	65.7	150	5.23	50.0
42.001	242	243	14.535	0.600	23.485	23.298	0.187	77.7	150	5.44	50.0
42.002	243	244	5.472	0.600	23.298	23.240	0.058	94.3	150	5.53	50.0
41.002	244	245	18.020	0.600	22.485	22.378	0.107	168.4	225	5.83	50.0
38.008	245	246	2.957	0.600	22.003	21.997	0.006	492.9	600	6.41	50.0
38.009	246	247	41.362	0.600	21.997	21.650	0.347	119.2	600	6.72	50.0
38.010	247	248	7.561	0.600	21.650	21.600	0.050	151.2	600	6.79	50.0
35.006	248	249	11.433	0.600	20.816	20.796	0.020	571.6	600	7.71	48.1
35.007	249	250	10.398	0.600	20.796	20.778	0.018	577.7	600	7.88	47.6
35.008	250	259	3.239	0.600	20.778	20.772	0.006	539.8	600	7.94	47.4
43.000	251	252	14.684	0.600	22.700	22.364	0.336	43.7	150	5.16	50.0
43.001	252	254	7.455	0.600	22.369	22.130	0.159	46.9	225	5.23	50.0
44.000	253	254	9.679	0.600	22.296	22.130	0.166	58.3	225	5.09	50.0
43.002	254	255	23.172	0.600	22.130	21.932	0.198	117.0	225	5.55	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
40.001	1.001	283.1	0.0	1.415	1.240	0.000	0.0	0	0.000
40.002	1.025	289.8	0.0	1.240	1.251	0.000	0.0	0	0.000
40.003	1.014	286.7	0.0	1.251	1.054	0.000	0.0	0	0.000
38.003	1.015	287.1	32.6	1.539	1.381	0.212	0.0	135	0.683
38.004	1.044	295.2	32.6	1.381	1.257	0.212	0.0	133	0.697
38.005	1.039	293.7	32.6	1.257	1.290	0.212	0.0	133	0.693
38.006	1.038	293.4	32.6	1.290	1.251	0.212	0.0	134	0.694
38.007	3.868	1093.7	35.8	1.251	1.352	0.233	0.0	73	1.823
41.000	1.515	60.2	10.1	0.900	0.900	0.066	0.0	62	1.130
41.001	1.013	40.3	10.1	0.900	1.080	0.066	0.0	77	0.847
42.000	1.243	22.0	0.0	0.400	0.400	0.000	0.0	0	0.000
42.001	1.141	20.2	0.0	0.400	0.400	0.000	0.0	0	0.000
42.002	1.035	18.3	0.0	0.400	0.400	0.000	0.0	0	0.000
41.002	1.004	39.9	10.1	1.080	1.352	0.066	0.0	77	0.840
38.008	1.090	308.1	45.9	1.352	1.301	0.299	0.0	155	0.791
38.009	2.229	630.3	50.1	1.301	0.400	0.326	0.0	113	1.357
38.010	1.978	559.2	50.1	0.400	0.400	0.326	0.0	120	1.246
35.006	1.011	285.9	91.8	1.184	0.750	0.621	0.0	233	0.904
35.007	1.006	284.4	90.8	0.750	0.561	0.621	0.0	232	0.899
35.008	1.041	294.3	90.5	0.561	0.582	0.621	0.0	228	0.921
43.000	1.526	27.0	0.0	0.900	0.900	0.000	0.0	0	0.000
43.001	1.915	76.1	0.0	0.900	0.900	0.000	0.0	0	0.000
44.000	1.716	68.2	7.5	0.900	0.900	0.049	0.0	51	1.142
43.002	1.207	48.0	13.7	0.900	0.400	0.089	0.0	82	1.045

	The Civil Engineering Practice BN41 1RA 	File: 23544 - ANGMERING Flow through Network: Steve Doughty 02/12/2021	Page 19 23544 Water Lane, Angmering Main Site									
Links												
Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)	
43.003	255	258	33.164	0.600	21.857	20.959	0.898	36.9	300	5.76	50.0	
45.000	256	257	20.016	0.600	20.868	20.681	0.187	107.0	225	5.26	50.0	
45.001	257	258	9.131	0.600	20.681	20.534	0.147	62.1	225	5.36	50.0	
43.004	258	259	24.295	0.600	20.584	20.309	0.075	323.9	375	6.16	50.0	
35.009	259	260	15.135	0.600	20.084	20.058	0.026	582.1	600	8.19	46.7	
35.010	260	265	3.105	0.600	20.058	19.954	0.104	29.9	600	8.20	46.7	
46.000	261	262	28.701	0.600	21.827	21.235	0.592	48.5	225	5.25	50.0	
46.001	262	263	12.889	0.600	21.235	21.098	0.137	94.1	225	5.41	50.0	
46.002	263	264	60.645	0.600	21.023	20.295	0.728	83.3	300	6.00	50.0	
46.003	264	265	2.716	0.600	20.295	20.254	0.041	66.2	300	6.02	50.0	
35.011	265	266	10.535	0.600	19.954	19.935	0.019	554.5	600	8.37	46.2	
35.012	266	267	21.352	0.600	19.935	19.891	0.044	485.3	600	8.69	45.3	
35.013	267	268	14.385	0.600	19.891	19.615	0.276	52.1	600	8.76	45.1	
27.014	268	269	10.996	0.600	18.377	18.364	0.013	845.9	825	11.22	39.6	
27.015	269	270	10.817	0.600	18.364	18.351	0.013	832.1	825	11.40	39.3	
27.016	270	271	9.897	0.600	18.351	18.339	0.012	824.8	825	11.56	39.0	
27.017	271	272	11.371	0.600	18.339	18.325	0.014	812.2	825	11.74	38.6	
27.018	272	273	12.345	0.600	18.325	17.973	0.352	35.1	825	11.78	38.5	
27.019	273	287	4.257	0.600	17.973	17.968	0.005	851.4	825	11.86	38.4	
47.000	274	276	59.753	0.600	18.274	18.030	0.244	244.9	300	6.00	50.0	
48.000	275	276	9.195	0.600	18.669	18.180	0.489	18.8	150	5.07	50.0	
47.001	276	277	31.660	0.600	17.860	17.802	0.078	405.9	450	6.52	50.0	
47.002	277	280	42.194	0.600	17.802	17.698	0.104	405.7	450	7.22	49.7	
49.000	278	279	12.472	0.600	18.656	18.582	0.074	168.5	225	5.21	50.0	
Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)			
43.003	2.595	183.4	22.7	0.400	0.400	0.148	0.0	71	1.781			
45.000	1.263	50.2	6.8	0.900	0.900	0.044	0.0	56	0.888			
45.001	1.662	66.1	6.8	0.900	0.900	0.044	0.0	49	1.083			
43.004	1.001	110.6	31.0	0.900	1.270	0.202	0.0	135	0.862			
35.009	1.002	283.3	118.1	1.270	0.781	0.823	0.0	270	0.958			
35.010	4.467	1263.0	118.0	0.781	0.900	0.823	0.0	122	2.851			
46.000	1.883	74.9	7.8	0.900	0.900	0.051	0.0	49	1.228			
46.001	1.348	53.6	7.8	0.900	0.900	0.051	0.0	58	0.965			
46.002	1.724	121.8	22.3	0.900	0.900	0.145	0.0	86	1.321			
46.003	1.934	136.7	22.3	0.900	0.900	0.145	0.0	81	1.434			
35.011	1.027	290.3	137.5	0.900	0.915	0.968	0.0	290	1.013			
35.012	1.098	310.6	134.8	0.915	0.400	0.968	0.0	276	1.062			
35.013	3.378	955.0	135.9	0.400	0.400	0.980	0.0	151	2.428			
27.014	1.012	541.2	262.9	1.413	1.209	2.161	0.0	406	1.006			
27.015	1.021	545.8	262.3	1.209	0.899	2.174	0.0	403	1.012			
27.016	1.026	548.2	260.2	0.899	0.908	2.174	0.0	400	1.013			
27.017	1.034	552.5	258.9	0.908	0.487	2.182	0.0	397	1.017			
27.018	5.022	2684.5	260.0	0.487	0.400	2.196	0.0	171	3.252			
27.019	1.009	539.5	262.7	0.400	0.470	2.226	0.0	406	1.003			
47.000	1.000	70.7	22.6	0.900	1.274	0.147	0.0	116	0.892			
48.000	2.333	41.2	5.7	0.900	1.274	0.037	0.0	38	1.651			
47.001	1.003	159.5	31.2	1.274	2.120	0.203	0.0	134	0.784			
47.002	1.003	159.5	33.4	2.120	2.879	0.219	0.0	139	0.800			
49.000	1.004	39.9	2.8	0.900	0.914	0.018	0.0	40	0.580			
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Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
49.001	279	280	61.318	0.600	18.432	18.243	0.189	324.4	375	6.23	50.0
47.003	280	281	30.299	0.600	17.623	17.561	0.062	488.7	525	7.73	48.1
47.004	281	282	22.037	0.600	17.561	17.516	0.045	489.7	525	8.09	47.0
47.005	282	283	27.391	0.600	17.516	17.460	0.056	489.1	525	8.54	45.7
47.006	283	285	13.500	0.600	17.460	17.432	0.028	482.2	525	8.77	45.1
50.000	284	285	22.849	0.600	18.729	18.502	0.227	100.7	150	5.38	50.0
47.007	285	286	24.640	0.600	17.432	17.382	0.050	492.8	525	9.18	44.1
47.008	286	287	16.685	0.600	17.382	17.348	0.034	490.7	525	9.45	43.4
27.020	287	287_OUT	14.503	0.600	17.048	17.031	0.017	853.1	825	12.09	38.0
51.000	288	289	19.151	0.600	24.929	24.850	0.079	242.4	300	5.32	50.0
51.001	289	290	40.136	0.600	24.775	24.573	0.202	198.7	375	5.84	50.0
51.002	290	295	7.923	0.600	24.573	24.301	0.272	29.1	375	5.88	50.0
52.000	291	292	12.355	0.600	26.954	26.667	0.287	43.0	150	5.13	50.0
52.001	292	293	18.394	0.600	26.667	26.250	0.417	44.1	150	5.34	50.0
52.002	293	294	23.947	0.600	26.250	25.323	0.927	25.8	150	5.54	50.0
52.003	294	295	10.794	0.600	25.323	25.026	0.297	36.3	150	5.64	50.0
51.003	295	296	8.988	0.600	24.301	24.273	0.028	321.0	375	6.03	50.0
51.004	296	297	6.729	0.600	24.273	24.252	0.021	320.4	375	6.14	50.0
51.005	297	298	12.873	0.600	24.252	23.902	0.350	36.8	375	6.21	50.0
51.006	298	299	5.512	0.600	23.902	23.723	0.179	30.8	375	6.24	50.0
51.007	299	300	6.502	0.600	23.723	23.492	0.231	28.1	375	6.27	50.0
51.008	300	301	3.767	0.600	23.492	23.355	0.137	27.5	375	6.29	50.0
51.009	301	304	4.596	0.600	23.355	23.220	0.135	34.0	375	6.31	50.0
53.000	302	303	32.445	0.600	23.195	23.004	0.191	169.9	225	5.54	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
49.001	1.000	110.5	30.7	0.914	2.409	0.200	0.0	134	0.859
47.003	1.006	217.8	65.2	2.879	2.696	0.441	0.0	196	0.883
47.004	1.005	217.6	65.7	2.696	2.606	0.455	0.0	197	0.885
47.005	1.006	217.7	72.1	2.606	2.432	0.513	0.0	207	0.907
47.006	1.013	219.3	72.4	2.432	2.236	0.522	0.0	207	0.912
50.000	1.001	17.7	8.0	0.900	1.541	0.052	0.0	71	0.976
47.007	1.002	216.9	79.8	2.236	1.448	0.589	0.0	220	0.928
47.008	1.004	217.4	81.5	1.448	1.390	0.611	0.0	222	0.935
27.020	1.008	538.9	331.1	1.390	0.932	2.837	0.0	468	1.057
51.000	1.005	71.1	5.7	0.900	1.077	0.037	0.0	57	0.608
51.001	1.282	141.5	20.7	1.077	0.900	0.135	0.0	96	0.924
51.002	3.368	371.9	22.9	0.900	0.900	0.149	0.0	63	1.902
52.000	1.538	27.2	0.0	0.400	0.400	0.000	0.0	0	0.000
52.001	1.519	26.8	4.0	0.400	0.400	0.026	0.0	39	1.092
52.002	1.989	35.1	9.5	0.400	0.400	0.062	0.0	53	1.691
52.003	1.675	29.6	9.5	0.400	0.400	0.062	0.0	58	1.493
51.003	1.006	111.1	32.4	0.900	0.619	0.211	0.0	138	0.875
51.004	1.007	111.2	34.6	0.619	0.424	0.225	0.0	143	0.892
51.005	2.996	330.8	35.6	0.424	0.400	0.232	0.0	82	1.984
51.006	3.275	361.7	39.2	0.400	0.400	0.255	0.0	82	2.169
51.007	3.426	378.4	39.2	0.400	0.400	0.255	0.0	81	2.246
51.008	3.466	382.8	39.2	0.400	0.400	0.255	0.0	80	2.261
51.009	3.114	343.9	39.2	0.400	0.400	0.255	0.0	85	2.093
53.000	1.000	39.8	16.0	0.900	1.438	0.104	0.0	99	0.946

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
53.001	303	304	13.822	0.600	22.929	22.795	0.134	103.1	300	5.69	50.0
51.010	304	305	6.649	0.600	22.720	22.699	0.021	316.6	375	6.42	50.0
51.011	305	306	6.022	0.600	22.699	22.680	0.019	317.0	375	6.52	50.0
51.012	306	307	8.619	0.600	22.680	22.536	0.144	59.9	375	6.58	50.0
51.013	307	309	5.993	0.600	22.536	22.316	0.220	27.2	375	6.61	50.0
54.000	308	309	13.918	0.600	22.144	21.966	0.178	78.2	225	5.16	50.0
51.014	309	310	20.144	0.600	21.741	21.161	0.580	52.0	450	6.79	50.0
51.015	310	311	4.600	0.600	21.161	21.042	0.119	38.7	450	6.81	50.0
51.016	311	313	53.434	0.600	21.042	20.832	0.210	254.4	450	7.51	48.8
55.000	312	313	5.458	0.600	20.867	20.632	0.235	23.2	150	5.04	50.0
51.017	313	314	13.944	0.600	20.332	20.297	0.035	398.4	450	7.74	48.0
51.018	314	329	2.700	0.600	20.297	20.055	0.242	11.2	450	7.75	48.0
56.000	315	316	40.206	0.600	26.174	24.977	1.197	33.6	225	5.30	50.0
56.001	316	317	23.727	0.600	24.902	24.203	0.699	33.9	300	5.44	50.0
56.002	317	318	4.421	0.600	24.128	24.100	0.028	157.9	375	5.49	50.0
56.003	318	319	10.995	0.600	24.100	23.813	0.287	38.3	375	5.56	50.0
56.004	319	320	7.704	0.600	23.813	23.590	0.223	34.5	375	5.60	50.0
56.005	320	326	57.594	0.600	23.590	21.652	1.938	29.7	375	5.89	50.0
57.000	321	322	11.080	0.600	22.883	22.730	0.153	72.4	225	5.12	50.0
57.001	322	324	28.436	0.600	22.730	22.112	0.618	46.0	225	5.37	50.0
58.000	323	324	35.077	0.600	20.674	20.588	0.086	407.9	450	5.53	50.0
57.002	324	326	47.363	0.600	20.513	20.417	0.096	493.4	525	6.37	50.0
59.000	325	326	29.247	0.600	22.307	21.802	0.505	57.9	225	5.28	50.0
56.006	326	327	16.546	0.600	20.342	20.313	0.029	570.5	600	6.65	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
53.001	1.548	109.4	16.0	1.438	0.900	0.104	0.0	77	1.114
51.010	1.013	111.8	55.1	0.900	0.826	0.359	0.0	186	1.009
51.011	1.012	111.8	56.5	0.826	0.645	0.368	0.0	189	1.014
51.012	2.345	259.0	56.5	0.645	0.400	0.368	0.0	118	1.890
51.013	3.483	384.7	56.5	0.400	0.400	0.368	0.0	96	2.517
54.000	1.480	58.8	10.9	0.900	0.900	0.071	0.0	65	1.138
51.014	2.825	449.2	67.4	0.900	0.400	0.439	0.0	116	2.052
51.015	3.277	521.2	67.4	0.400	0.400	0.439	0.0	109	2.292
51.016	1.270	201.9	66.5	0.400	0.400	0.444	0.0	177	1.142
55.000	2.098	37.1	7.4	0.900	0.900	0.048	0.0	45	1.644
51.017	1.012	161.0	72.6	0.900	0.308	0.492	0.0	211	0.986
51.018	6.112	972.0	72.6	0.308	0.375	0.492	0.0	82	3.653
56.000	2.265	90.0	18.4	0.900	0.900	0.120	0.0	69	1.792
56.001	2.707	191.4	22.3	0.900	0.900	0.145	0.0	69	1.832
56.002	1.439	158.9	30.9	0.900	0.900	0.201	0.0	112	1.125
56.003	2.935	324.1	35.8	0.900	0.900	0.233	0.0	83	1.953
56.004	3.091	341.4	38.6	0.900	0.900	0.251	0.0	85	2.078
56.005	3.334	368.2	60.4	0.900	0.900	0.393	0.0	102	2.488
57.000	1.538	61.2	6.9	0.900	0.900	0.045	0.0	51	1.023
57.001	1.933	76.9	11.8	0.900	0.900	0.077	0.0	59	1.409
58.000	1.000	159.1	10.9	0.900	2.199	0.071	0.0	79	0.579
57.002	1.001	216.8	32.4	2.199	1.985	0.211	0.0	136	0.727
59.000	1.722	68.5	10.8	0.900	0.900	0.070	0.0	60	1.265
56.006	1.012	286.2	105.5	1.985	1.361	0.687	0.0	252	0.938

	The Civil Engineering Practice BN41 1RA			File: 23544 - ANGMERING Flow through Network: Steve Doughty 02/12/2021					Page 22 23544 Water Lane, Angmering Main Site		
Links											
Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
56.007	327	328	12.494	0.600	20.313	20.291	0.022	567.9	600	6.85	50.0
56.008	328	329	8.930	0.600	20.291	19.980	0.311	28.7	600	6.88	50.0
51.019	329	332	27.059	0.600	19.980	19.764	0.216	125.3	525	7.98	47.3
60.000	330	331	21.978	0.600	19.503	19.413	0.090	244.2	300	5.37	50.0
60.001	331	332	6.682	0.600	19.413	19.385	0.028	238.7	300	5.48	50.0
51.020	332	333	16.709	0.600	19.085	19.056	0.029	576.2	600	8.25	46.5
51.021	333	334	6.578	0.600	19.056	19.044	0.012	548.2	600	8.36	46.3
51.022	334	335	8.417	0.600	19.044	19.029	0.015	561.1	600	8.50	45.9
51.023	335	336	9.026	0.600	19.029	18.927	0.102	88.5	600	8.56	45.7
51.024	336	336_OUT	37.180	0.600	18.927	18.083	0.844	44.1	600	8.72	45.3
61.000	337	338	16.034	0.600	20.348	20.213	0.135	118.8	225	5.22	50.0
61.001	338	340	16.031	0.600	20.213	20.118	0.095	168.7	225	5.49	50.0
62.000	339	340	11.120	0.600	20.756	20.118	0.638	17.4	225	5.06	50.0
61.002	340	342	16.566	0.600	20.118	19.977	0.141	117.5	225	5.72	50.0
63.000	341	342	26.072	0.600	19.474	19.320	0.154	169.3	225	5.43	50.0
61.003	342	345	39.807	0.600	19.245	18.939	0.306	130.1	300	6.20	50.0
64.000	343	344	29.921	0.600	18.648	18.525	0.123	243.3	300	5.50	50.0
64.001	344	345	18.012	0.600	18.525	18.451	0.074	243.4	300	5.80	50.0
61.004	345	346	19.519	0.600	18.376	18.315	0.061	320.0	375	6.52	50.0
61.005	346	346_OUT	16.114	0.600	18.315	17.999	0.316	51.0	375	6.63	50.0
65.000	347	348	40.779	0.600	24.435	24.127	0.313	130.3	300	5.49	50.0
65.001	348	350	34.489	0.600	24.122	23.574	0.548	62.9	300	5.78	50.0
66.000	349	350	22.051	0.600	23.779	23.649	0.130	169.6	225	5.37	50.0
65.002	350	350_OUT	15.683	0.600	23.424	23.385	0.039	402.1	450	6.04	50.0
Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)		
56.007	1.014	286.8	110.1	1.361	0.901	0.717	0.0	258	0.951		
56.008	4.555	1287.9	110.7	0.901	0.900	0.721	0.0	117	2.844		
51.019	2.000	432.9	182.2	0.975	0.400	1.254	0.0	237	1.917		
60.000	1.001	70.8	20.0	0.900	1.048	0.130	0.0	109	0.864		
60.001	1.013	71.6	20.0	1.048	1.094	0.130	0.0	108	0.872		
51.020	1.007	284.7	197.9	1.004	0.583	1.384	0.0	369	1.084		
51.021	1.033	292.0	196.6	0.583	0.651	1.384	0.0	361	1.104		
51.022	1.021	288.6	195.0	0.651	0.449	1.384	0.0	362	1.092		
51.023	2.589	732.1	194.4	0.449	0.400	1.384	0.0	210	2.205		
51.024	3.675	1039.1	192.4	0.400	0.400	1.384	0.0	173	2.838		
61.000	1.198	47.6	8.0	0.900	0.900	0.052	0.0	62	0.894		
61.001	1.003	39.9	8.0	0.900	1.226	0.052	0.0	68	0.787		
62.000	3.149	125.2	12.3	0.900	1.226	0.080	0.0	47	2.013		
61.002	1.205	47.9	20.3	1.226	0.900	0.132	0.0	102	1.157		
63.000	1.002	39.8	8.3	0.900	1.557	0.054	0.0	70	0.797		
61.003	1.377	97.3	37.2	1.557	0.900	0.242	0.0	129	1.288		
64.000	1.003	70.9	17.4	0.900	1.251	0.113	0.0	100	0.832		
64.001	1.003	70.9	17.4	1.251	1.388	0.113	0.0	100	0.832		
61.004	1.007	111.2	57.0	1.388	1.282	0.371	0.0	190	1.013		
61.005	2.542	280.8	63.1	1.282	0.900	0.411	0.0	120	2.069		
65.000	1.376	97.2	28.7	0.900	0.900	0.187	0.0	112	1.203		
65.001	1.985	140.3	40.9	0.900	1.190	0.266	0.0	110	1.728		
66.000	1.001	39.8	3.5	0.900	1.190	0.023	0.0	45	0.623		
65.002	1.007	160.2	44.4	1.190	1.165	0.289	0.0	161	0.866		
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Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
67.000	351	352	31.500	0.600	15.280	13.955	1.325	23.8	225	5.19	50.0
67.001	352	353	20.320	0.600	13.955	13.672	0.283	71.8	225	5.41	50.0
67.002	353	357	8.736	0.600	13.672	13.565	0.107	81.6	225	5.51	50.0
68.000	354	355	7.925	0.600	14.196	14.163	0.033	240.1	375	5.11	50.0
68.001	355	356	10.434	0.600	14.163	13.663	0.500	20.9	375	5.16	50.0
68.002	356	357	22.446	0.600	13.663	13.490	0.173	129.7	375	5.39	50.0
67.003	357	353_OUT	3.566	0.600	13.490	13.390	0.100	35.7	375	5.53	50.0
69.000	358	359	12.906	0.600	15.876	15.800	0.076	169.8	225	5.22	50.0
69.001	359	359_OUT	8.903	0.600	15.800	15.747	0.053	162.0	225	5.36	50.0
70.000	360	360_OUT	10.299	0.600	17.329	17.303	0.026	396.1	450	5.17	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
67.000	2.694	107.1	7.5	0.900	0.600	0.049	0.0	40	1.564
67.001	1.545	61.4	10.9	0.600	0.273	0.071	0.0	64	1.171
67.002	1.448	57.6	14.9	0.273	0.454	0.097	0.0	78	1.219
68.000	1.165	128.6	0.0	2.429	2.462	0.000	0.0	0	0.000
68.001	3.981	439.7	0.0	2.462	0.324	0.000	0.0	0	0.000
68.002	1.589	175.5	0.0	0.324	0.379	0.000	0.0	0	0.000
67.003	3.042	336.0	14.9	0.379	0.442	0.097	0.0	53	1.556
69.000	1.000	39.8	3.7	0.900	0.975	0.024	0.0	46	0.629
69.001	1.006	40.0	3.7	0.975	1.028	0.024	0.0	46	0.633
70.000	1.015	161.4	143.2	0.900	0.982	0.932	0.0	332	1.140

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	25.133	169.8	225	Swale "pipe"	40.719	40.094	0.400	40.900	39.946	0.729
1.001	10.776	168.4	225	Swale "pipe"	40.900	39.946	0.729	40.900	39.882	0.793
1.002	16.147	168.2	225	Swale "pipe"	40.900	39.882	0.793	40.851	39.786	0.840
1.003	16.553	168.9	225	Swale "pipe"	40.851	39.786	0.840	40.700	39.688	0.787
1.004	7.649	166.3	225	Swale "pipe"	40.700	39.688	0.787	40.625	39.642	0.758
1.005	10.304	153.8	225	Swale "pipe"	40.625	39.642	0.758	40.200	39.575	0.400
1.006	9.485	135.5	225	Swale "pipe"	40.200	39.575	0.400	40.130	39.505	0.400
1.007	10.994	39.3	300	Swale "pipe"	40.130	39.430	0.400	39.850	39.150	0.400
1.008	32.268	322.7	375	Swale "pipe"	39.850	39.075	0.400	39.825	38.975	0.475
1.009	14.420	320.4	375	Swale "pipe"	39.825	38.975	0.475	39.800	38.930	0.495

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	1		Junction		2		Junction	
1.001	2		Junction		3		Junction	
1.002	3		Junction		4		Junction	
1.003	4		Junction		5		Junction	
1.004	5		Junction		6		Junction	
1.005	6		Junction		7		Junction	
1.006	7		Junction		8		Junction	
1.007	8		Junction		9		Junction	
1.008	9		Junction		10		Junction	
1.009	10		Junction		11		Junction	

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.010	15.961	319.2	375	Swale "pipe"	39.800	38.930	0.495	39.750	38.880	0.495
1.011	4.980	90.5	375	Swale "pipe"	39.750	38.880	0.495	39.600	38.825	0.400
1.012	5.907	84.4	375	Swale "pipe"	39.600	38.825	0.400	39.530	38.755	0.400
1.013	11.077	48.2	375	Swale "pipe"	39.530	38.755	0.400	39.300	38.525	0.400
1.014	15.578	26.0	375	Swale "pipe"	39.300	38.525	0.400	38.700	37.925	0.400
1.015	12.446	24.9	375	Swale "pipe"	38.700	37.925	0.400	38.200	37.425	0.400
1.016	14.257	28.5	375	Swale "pipe"	38.200	37.425	0.400	37.700	36.925	0.400
1.017	13.407	19.2	375	Swale "pipe"	37.700	36.925	0.400	37.000	36.225	0.400
1.018	16.012	20.0	375	Swale "pipe"	37.000	36.225	0.400	36.200	35.425	0.400
1.019	9.579	23.9	375	Swale "pipe"	36.200	35.425	0.400	35.800	35.025	0.400
1.020	19.598	28.0	375	Swale "pipe"	35.800	35.025	0.400	35.100	34.325	0.400
1.021	11.980	17.1	375	Swale "pipe"	35.100	34.325	0.400	34.400	33.625	0.400
1.022	18.889	27.0	375	Swale "pipe"	34.400	33.625	0.400	33.700	32.925	0.400
1.023	11.107	44.4	375	Swale "pipe"	33.700	32.925	0.400	33.450	32.675	0.400
1.024	12.750	19.6	375	Swale "pipe"	33.450	32.675	0.400	32.800	32.025	0.400
1.025	15.309	21.9	450	Swale "pipe"	32.800	31.950	0.400	32.100	31.250	0.400
1.026	9.894	33.0	450	Swale "pipe"	32.100	31.250	0.400	31.800	30.950	0.400
1.027	10.390	34.6	450	Swale "pipe"	31.800	30.950	0.400	31.500	30.650	0.400
1.028	11.687	38.9	450	Swale "pipe"	31.500	30.650	0.400	31.200	30.350	0.400
1.029	9.833	24.6	450	Swale "pipe"	31.200	30.350	0.400	30.800	29.950	0.400
1.030	13.875	46.3	450	Swale "pipe"	30.800	29.950	0.400	30.500	29.650	0.400
1.031	15.707	157.1	525	Swale "pipe"	30.500	29.575	0.400	30.400	29.475	0.400
2.000	15.712	29.1	350	Circular	31.655	30.605	0.900	31.115	30.065	0.900
2.001	24.078	30.0	225	Circular	31.115	29.990	0.900	30.313	29.188	0.900
2.002	8.177	166.9	225	Circular	30.313	29.188	0.900	30.400	29.139	1.036

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.010	11		Junction		12		Junction	
1.011	12		Junction		13		Junction	
1.012	13		Junction		14		Junction	
1.013	14		Junction		15		Junction	
1.014	15		Junction		16		Junction	
1.015	16		Junction		17		Junction	
1.016	17		Junction		18		Junction	
1.017	18		Junction		19		Junction	
1.018	19		Junction		20		Junction	
1.019	20		Junction		21		Junction	
1.020	21		Junction		22		Junction	
1.021	22		Junction		23		Junction	
1.022	23		Junction		24		Junction	
1.023	24		Junction		25		Junction	
1.024	25		Junction		26		Junction	
1.025	26		Junction		27		Junction	
1.026	27		Junction		28		Junction	
1.027	28		Junction		29		Junction	
1.028	29		Junction		30		Junction	
1.029	30		Junction		31		Junction	
1.030	31		Junction		32		Junction	
1.031	32		Junction		36		Junction	
2.000	33	1200	Manhole	Adoptable	34	1200	Manhole	Adoptable
2.001	34	1200	Manhole	Adoptable	35	1200	Manhole	Adoptable
2.002	35	1200	Manhole	Adoptable	36		Junction	

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.032	11.416	475.7	525	Swale "pipe"	30.400	28.839	1.036	30.200	28.815	0.860
1.033	8.579	571.9	600	Swale "pipe"	30.200	28.740	0.860	30.100	28.725	0.775
1.034	24.803	198.4	675	Swale "pipe"	30.100	28.650	0.775	29.600	28.525	0.400
1.035	11.278	112.8	750	Swale "pipe"	29.600	28.450	0.400	29.500	28.350	0.400
3.000	16.309	69.1	300	Circular	35.491	34.291	0.900	35.474	34.055	1.119
4.000	16.174	404.3	450	Circular	35.295	33.945	0.900	35.474	33.905	1.119
3.001	39.167	489.6	525	Circular	35.474	33.830	1.119	37.646	33.750	3.371
3.002	5.386	489.6	525	Circular	37.646	33.750	3.371	37.778	33.739	3.514
5.000	35.169	108.2	225	Circular	38.103	36.978	0.900	37.778	36.653	0.900
6.000	22.085	20.3	150	Circular	39.237	38.187	0.900	38.151	37.101	0.900
6.001	7.888	21.1	150	Circular	38.151	37.101	0.900	37.778	36.728	0.900
3.003	49.943	494.5	525	Circular	37.778	33.739	3.514	36.928	33.638	2.765
3.004	5.976	459.7	525	Circular	36.928	33.638	2.765	36.751	33.625	2.601
7.000	26.748	23.3	150	Circular	38.161	37.111	0.900	37.011	35.961	0.900
7.001	7.860	30.3	150	Circular	37.011	35.961	0.900	36.751	35.701	0.900
3.005	8.403	494.3	525	Circular	36.751	33.625	2.601	36.492	33.608	2.359
3.006	31.010	484.5	525	Circular	36.492	33.608	2.359	34.969	33.544	0.900
3.007	14.645	20.5	525	Circular	34.969	33.544	0.900	34.256	32.831	0.900
8.000	26.654	66.0	150	Circular	34.660	33.610	0.900	34.256	33.206	0.900
3.008	30.328	22.3	525	Circular	34.256	32.831	0.900	32.893	31.468	0.900
3.009	8.232	35.0	600	Circular	32.893	31.393	0.900	32.658	31.158	0.900
3.010	11.069	49.4	600	Circular	32.658	31.158	0.900	32.434	30.934	0.900
3.011	15.241	77.0	600	Circular	32.434	30.934	0.900	32.236	30.736	0.900
3.012	47.412	78.8	600	Circular	32.236	30.736	0.900	31.634	30.134	0.900
3.013	12.816	103.4	675	Circular	31.634	30.059	0.900	31.510	29.935	0.900

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.032	36		Junction		37		Junction	
1.033	37		Junction		38		Junction	
1.034	38		Junction		39		Junction	
1.035	39		Junction		78		Junction	
3.000	40	1200	Manhole	Adoptable	42	1500	Manhole	Adoptable
4.000	41	1350	Manhole	Adoptable	42	1500	Manhole	Adoptable
3.001	42	1500	Manhole	Adoptable	43	1500	Manhole	Adoptable
3.002	43	1500	Manhole	Adoptable	47	1500	Manhole	Adoptable
5.000	44	1200	Manhole	Adoptable	47	1500	Manhole	Adoptable
6.000	45	1200	Manhole	Adoptable	46	1200	Manhole	Adoptable
6.001	46	1200	Manhole	Adoptable	47	1500	Manhole	Adoptable
3.003	47	1500	Manhole	Adoptable	48	1500	Manhole	Adoptable
3.004	48	1500	Manhole	Adoptable	51	1500	Manhole	Adoptable
7.000	49	1200	Manhole	Adoptable	50	1200	Manhole	Adoptable
7.001	50	1200	Manhole	Adoptable	51	1500	Manhole	Adoptable
3.005	51	1500	Manhole	Adoptable	52	1500	Manhole	Adoptable
3.006	52	1500	Manhole	Adoptable	53	1500	Manhole	Adoptable
3.007	53	1500	Manhole	Adoptable	55	1500	Manhole	Adoptable
8.000	54	1200	Manhole	Adoptable	55	1500	Manhole	Adoptable
3.008	55	1500	Manhole	Adoptable	56	1500	Manhole	Adoptable
3.009	56	1500	Manhole	Adoptable	57	1500	Manhole	Adoptable
3.010	57	1500	Manhole	Adoptable	58	1500	Manhole	Adoptable
3.011	58	1500	Manhole	Adoptable	59	1500	Manhole	Adoptable
3.012	59	1500	Manhole	Adoptable	60	1500	Manhole	Adoptable
3.013	60	1500	Manhole	Adoptable	61	1500	Manhole	Adoptable



Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
3.014	27.154	662.3	675	Circular	31.510	29.935	0.900	31.764	29.894	1.195
9.000	14.081	31.6	150	Circular	39.495	38.445	0.900	39.050	38.000	0.900
9.001	25.652	33.1	150	Circular	39.050	38.000	0.900	38.275	37.225	0.900
10.000	34.127	103.7	225	Circular	38.604	37.479	0.900	38.275	37.150	0.900
9.002	7.497	18.9	225	Circular	38.275	37.150	0.900	37.878	36.753	0.900
9.003	38.201	16.7	225	Circular	37.878	36.753	0.900	35.586	34.461	0.900
9.004	45.852	16.7	300	Circular	35.586	34.386	0.900	32.838	31.638	0.900
9.005	19.408	17.3	300	Circular	32.838	31.638	0.900	31.713	30.513	0.900
9.006	13.312	54.6	300	Circular	31.713	30.513	0.900	31.764	30.269	1.195
3.015	11.392	670.1	675	Swale "pipe"	31.764	29.894	1.195	31.450	29.877	0.898
3.016	14.520	440.3	675	Swale "pipe"	31.450	29.877	0.898	30.919	29.844	0.400
3.017	6.826	57.4	675	Swale "pipe"	30.919	29.844	0.400	30.800	29.725	0.400
3.018	14.362	28.7	675	Swale "pipe"	30.800	29.725	0.400	30.300	29.225	0.400
3.019	11.837	39.5	675	Swale "pipe"	30.300	29.225	0.400	30.000	28.925	0.400
3.020	10.655	106.6	675	Swale "pipe"	30.000	28.925	0.400	29.900	28.825	0.400
3.021	12.766	671.9	675	Swale "pipe"	29.900	28.825	0.400	31.417	28.806	1.936
3.022	9.872	25.9	675	Swale "pipe"	31.417	28.806	1.936	29.500	28.425	0.400
1.036	4.604	767.4	825	Swale "pipe"	29.500	28.275	0.400	29.932	28.269	0.838
1.037	23.618	843.5	825	Swale "pipe"	29.932	28.269	0.838	31.208	28.241	2.142
1.038	39.580	39.8	825	Swale "pipe"	31.208	28.241	2.142	28.471	27.246	0.400
1.039	37.552	20.0	825	Swale "pipe"	28.471	27.246	0.400	26.597	25.372	0.400
11.000	26.425	100.9	150	Circular	27.479	26.429	0.900	27.645	26.167	1.328
11.001	21.022	100.6	150	Circular	27.645	26.167	1.328	27.424	25.958	1.316
11.002	27.832	169.7	225	Circular	27.424	25.883	1.316	27.044	25.719	1.100
11.003	15.509	168.6	225	Circular	27.044	25.719	1.100	26.849	25.627	0.997

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
3.014	61	1500	Manhole	Adoptable	70	1500	Manhole	Adoptable
9.000	62	1200	Manhole	Adoptable	63	1200	Manhole	Adoptable
9.001	63	1200	Manhole	Adoptable	65	1200	Manhole	Adoptable
10.000	64	1200	Manhole	Adoptable	65	1200	Manhole	Adoptable
9.002	65	1200	Manhole	Adoptable	66	1200	Manhole	Adoptable
9.003	66	1200	Manhole	Adoptable	67	1200	Manhole	Adoptable
9.004	67	1200	Manhole	Adoptable	68	1200	Manhole	Adoptable
9.005	68	1200	Manhole	Adoptable	69	1200	Manhole	Adoptable
9.006	69	1200	Manhole	Adoptable	70	1500	Manhole	Adoptable
3.015	70	1500	Manhole	Adoptable	71		Junction	
3.016	71		Junction		72		Junction	
3.017	72		Junction		73		Junction	
3.018	73		Junction		74		Junction	
3.019	74		Junction		75		Junction	
3.020	75		Junction		76		Junction	
3.021	76		Junction		77		Junction	
3.022	77		Junction		78		Junction	
1.036	78		Junction		79	1800	Manhole	Adoptable
1.037	79	1800	Manhole	Adoptable	80	1800	Manhole	Adoptable
1.038	80	1800	Manhole	Adoptable	81	1800	Manhole	Adoptable
1.039	81	1800	Manhole	Adoptable	88	1800	Manhole	Adoptable
11.000	82	1200	Manhole	Adoptable	83	1200	Manhole	Adoptable
11.001	83	1200	Manhole	Adoptable	84	1200	Manhole	Adoptable
11.002	84	1200	Manhole	Adoptable	85	1200	Manhole	Adoptable
11.003	85	1200	Manhole	Adoptable	86	1200	Manhole	Adoptable

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
11.004	15.593	169.5	225	Circular	26.849	25.627	0.997	26.731	25.535	0.971
11.005	9.106	144.5	225	Circular	26.731	25.535	0.971	26.597	25.472	0.900
1.040	20.133	18.4	825	Swale "pipe"	26.597	24.872	0.900	25.000	23.775	0.400
12.000	17.652	34.1	150	Circular	38.740	37.690	0.900	38.223	37.173	0.900
12.001	20.433	37.2	225	Circular	38.223	37.098	0.900	37.674	36.549	0.900
12.002	54.907	406.7	450	Circular	37.674	36.324	0.900	37.631	36.189	0.992
12.003	31.932	491.3	525	Circular	37.631	36.114	0.992	37.987	36.049	1.413
13.000	37.936	36.0	150	Circular	39.040	37.990	0.900	37.987	36.937	0.900
12.004	31.977	491.9	525	Circular	37.987	36.049	1.413	38.311	35.984	1.802
12.005	27.264	486.9	525	Circular	38.311	35.984	1.802	38.067	35.928	1.614
12.006	23.474	489.1	525	Circular	38.067	35.928	1.614	38.232	35.880	1.827
12.007	19.330	483.3	525	Circular	38.232	35.880	1.827	38.494	35.840	2.129
12.008	16.378	481.7	525	Circular	38.494	35.840	2.129	38.217	35.806	1.886
12.009	7.747	484.2	525	Circular	38.217	35.806	1.886	37.927	35.790	1.612
14.000	12.074	34.4	150	Circular	38.278	37.228	0.900	37.927	36.877	0.900
12.010	14.043	484.2	525	Circular	37.927	35.790	1.612	37.481	35.761	1.195
12.011	17.699	52.7	525	Circular	37.481	35.761	1.195	36.850	35.425	0.900
12.012	7.276	23.8	525	Circular	36.850	35.425	0.900	36.544	35.119	0.900
15.000	14.669	100.5	150	Circular	35.637	34.587	0.900	35.929	34.441	1.338
15.001	34.709	169.3	225	Circular	35.929	34.366	1.338	36.544	34.161	2.158
12.013	7.455	27.6	525	Circular	36.544	33.861	2.158	36.181	33.591	2.065
16.000	18.529	22.8	150	Circular	36.943	35.893	0.900	36.129	35.079	0.900
17.000	12.004	100.9	150	Circular	35.457	34.407	0.900	36.129	34.288	1.691
16.001	27.561	169.1	225	Circular	36.129	34.213	1.691	36.639	34.050	2.364
16.002	26.857	168.9	225	Circular	36.639	34.050	2.364	36.181	33.891	2.065

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
11.004	86	1200	Manhole	Adoptable	87	1200	Manhole	Adoptable
11.005	87	1200	Manhole	Adoptable	88	1800	Manhole	Adoptable
1.040	88	1800	Manhole	Adoptable	88_OUT		Junction	
12.000	89	1200	Manhole	Adoptable	90	1200	Manhole	Adoptable
12.001	90	1200	Manhole	Adoptable	91	1350	Manhole	Adoptable
12.002	91	1350	Manhole	Adoptable	92	1500	Manhole	Adoptable
12.003	92	1500	Manhole	Adoptable	94	1500	Manhole	Adoptable
13.000	93	1200	Manhole	Adoptable	94	1500	Manhole	Adoptable
12.004	94	1500	Manhole	Adoptable	95	1500	Manhole	Adoptable
12.005	95	1500	Manhole	Adoptable	96	1500	Manhole	Adoptable
12.006	96	1500	Manhole	Adoptable	97	1500	Manhole	Adoptable
12.007	97	1500	Manhole	Adoptable	98	1500	Manhole	Adoptable
12.008	98	1500	Manhole	Adoptable	99	1500	Manhole	Adoptable
12.009	99	1500	Manhole	Adoptable	101	1500	Manhole	Adoptable
14.000	100	1200	Manhole	Adoptable	101	1500	Manhole	Adoptable
12.010	101	1500	Manhole	Adoptable	102	1500	Manhole	Adoptable
12.011	102	1500	Manhole	Adoptable	103	1500	Manhole	Adoptable
12.012	103	1500	Manhole	Adoptable	106	1500	Manhole	Adoptable
15.000	104	1200	Manhole	Adoptable	105	1200	Manhole	Adoptable
15.001	105	1200	Manhole	Adoptable	106	1500	Manhole	Adoptable
12.013	106	1500	Manhole	Adoptable	111	1500	Manhole	Adoptable
16.000	107	1200	Manhole	Adoptable	109	1200	Manhole	Adoptable
17.000	108	1200	Manhole	Adoptable	109	1200	Manhole	Adoptable
16.001	109	1200	Manhole	Adoptable	110	1200	Manhole	Adoptable
16.002	110	1200	Manhole	Adoptable	111	1500	Manhole	Adoptable



Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
12.014	14.487	482.2	525	Circular	36.181	33.591	2.065	35.370	33.561	1.284
12.015	19.050	25.1	525	Circular	35.370	33.561	1.284	34.226	32.801	0.900
12.016	21.183	17.3	525	Circular	34.226	32.801	0.900	33.001	31.576	0.900
12.017	16.560	23.6	525	Circular	33.001	31.576	0.900	32.298	30.873	0.900
18.000	35.925	111.2	300	Circular	32.179	30.979	0.900	31.856	30.656	0.900
18.001	22.526	321.8	375	Circular	31.856	30.581	0.900	32.298	30.511	1.412
12.018	7.569	582.2	600	Circular	32.298	30.286	1.412	32.036	30.273	1.163
12.019	12.594	60.6	600	Circular	32.036	30.273	1.163	31.565	30.065	0.900
12.020	10.923	24.5	600	Circular	31.565	30.065	0.900	31.119	29.619	0.900
12.021	16.020	22.2	600	Circular	31.119	29.619	0.900	30.398	28.898	0.900
12.022	30.493	24.1	600	Circular	30.398	28.898	0.900	29.135	27.635	0.900
12.023	8.667	15.2	600	Circular	29.135	27.635	0.900	28.565	27.065	0.900
19.000	28.886	19.3	225	Circular	34.051	32.926	0.900	32.557	31.432	0.900
19.001	22.118	26.9	225	Circular	32.557	31.432	0.900	31.736	30.611	0.900
19.002	10.338	11.0	225	Circular	31.736	30.611	0.900	30.797	29.672	0.900
19.003	25.582	27.3	225	Circular	30.797	29.672	0.900	29.859	28.734	0.900
20.000	47.895	36.9	300	Circular	31.157	29.957	0.900	29.859	28.659	0.900
19.004	20.401	26.7	375	Circular	29.859	28.584	0.900	29.096	27.821	0.900
19.005	38.158	51.2	450	Circular	29.096	27.746	0.900	28.350	27.000	0.900
19.006	7.991	470.1	525	Swale "pipe"	28.350	26.925	0.900	28.200	26.908	0.767
19.007	10.503	477.4	525	Swale "pipe"	28.200	26.908	0.767	28.100	26.886	0.689
19.008	9.198	574.9	600	Swale "pipe"	28.100	26.811	0.689	28.100	26.795	0.705
19.009	10.448	110.0	600	Swale "pipe"	28.100	26.795	0.705	28.200	26.700	0.900
21.000	11.733	17.1	150	Circular	29.898	28.848	0.900	29.211	28.161	0.900
21.001	11.107	36.5	150	Circular	29.211	28.161	0.900	28.907	27.857	0.900

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
12.014	111	1500	Manhole	Adoptable	112	1500	Manhole	Adoptable
12.015	112	1500	Manhole	Adoptable	113	1500	Manhole	Adoptable
12.016	113	1500	Manhole	Adoptable	114		Junction	
12.017	114		Junction		117	1500	Manhole	Adoptable
18.000	115	1200	Manhole	Adoptable	116	1350	Manhole	Adoptable
18.001	116	1350	Manhole	Adoptable	117	1500	Manhole	Adoptable
12.018	117	1500	Manhole	Adoptable	118	1500	Manhole	Adoptable
12.019	118	1500	Manhole	Adoptable	119	1500	Manhole	Adoptable
12.020	119	1500	Manhole	Adoptable	120	1500	Manhole	Adoptable
12.021	120	1500	Manhole	Adoptable	121	1500	Manhole	Adoptable
12.022	121	1500	Manhole	Adoptable	122	1500	Manhole	Adoptable
12.023	122	1500	Manhole	Adoptable	138		Junction	
19.000	123	1200	Manhole	Adoptable	124	1200	Manhole	Adoptable
19.001	124	1200	Manhole	Adoptable	125	1200	Manhole	Adoptable
19.002	125	1200	Manhole	Adoptable	126	1200	Manhole	Adoptable
19.003	126	1200	Manhole	Adoptable	128	1350	Manhole	Adoptable
20.000	127	1200	Manhole	Adoptable	128	1350	Manhole	Adoptable
19.004	128	1350	Manhole	Adoptable	129	1350	Manhole	Adoptable
19.005	129	1350	Manhole	Adoptable	130		Junction	
19.006	130		Junction		131		Junction	
19.007	131		Junction		132		Junction	
19.008	132		Junction		133		Junction	
19.009	133		Junction		137		Junction	
21.000	134	1200	Manhole	Adoptable	135	1200	Manhole	Adoptable
21.001	135	1200	Manhole	Adoptable	136	1200	Manhole	Adoptable

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Pipeline Schedule											
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)	
21.002	12.989	18.4	150	Circular	28.907	27.857	0.900	28.200	27.150	0.900	
19.010	31.461	669.4	675	Swale "pipe"	28.200	26.625	0.900	28.565	26.578	1.312	
12.024	12.709	668.9	675	Swale "pipe"	28.565	26.578	1.312	28.151	26.559	0.917	
12.025	17.794	659.0	675	Swale "pipe"	28.151	26.559	0.917	27.637	26.532	0.430	
12.026	16.969	16.9	675	Swale "pipe"	27.637	26.532	0.430	26.601	25.526	0.400	
22.000	8.386	55.9	150	Swale "pipe"	39.600	39.050	0.400	39.450	38.900	0.400	
22.001	4.096	81.9	150	Swale "pipe"	39.450	38.900	0.400	39.400	38.850	0.400	
22.002	9.257	92.6	225	Swale "pipe"	39.400	38.775	0.400	39.300	38.675	0.400	
22.003	11.692	243.6	300	Swale "pipe"	39.300	38.600	0.400	39.275	38.552	0.423	
22.004	9.445	242.2	300	Swale "pipe"	39.275	38.552	0.423	39.250	38.513	0.437	
22.005	9.586	319.5	375	Swale "pipe"	39.250	38.438	0.437	39.250	38.408	0.467	
22.006	3.671	305.9	375	Swale "pipe"	39.250	38.408	0.467	39.275	38.396	0.504	
22.007	9.100	313.8	375	Swale "pipe"	39.275	38.396	0.504	39.300	38.367	0.558	
22.008	8.541	316.4	375	Swale "pipe"	39.300	38.367	0.558	39.400	38.340	0.685	
22.009	7.425	322.8	375	Swale "pipe"	39.400	38.340	0.685	39.500	38.317	0.808	
22.010	7.229	314.3	375	Swale "pipe"	39.500	38.317	0.808	39.600	38.294	0.931	
22.011	8.653	320.5	375	Swale "pipe"	39.600	38.294	0.931	39.650	38.267	1.008	
22.012	9.553	318.4	375	Swale "pipe"	39.650	38.267	1.008	39.700	38.237	1.088	
22.013	8.253	317.4	375	Swale "pipe"	39.700	38.237	1.088	39.800	38.211	1.214	
22.014	6.760	321.9	375	Swale "pipe"	39.800	38.211	1.214	39.790	38.190	1.225	
22.015	6.175	308.7	375	Swale "pipe"	39.790	38.190	1.225	39.750	38.170	1.205	
22.016	10.401	315.2	375	Swale "pipe"	39.750	38.170	1.205	39.750	38.137	1.238	
22.017	6.663	317.3	375	Swale "pipe"	39.750	38.137	1.238	39.950	38.116	1.459	
22.018	10.737	315.8	375	Swale "pipe"	39.950	38.116	1.459	39.993	38.082	1.536	
22.019	43.571	189.4	375	Swale "pipe"	39.993	38.082	1.536	38.627	37.852	0.400	
Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type			
21.002	136	1200	Manhole	Adoptable	137		Junction				
19.010	137		Junction		138		Junction				
12.024	138		Junction		139		Junction				
12.025	139		Junction		140		Junction				
12.026	140		Junction		185	1800	Manhole	Adoptable			
22.000	141		Junction		142		Junction				
22.001	142		Junction		143		Junction				
22.002	143		Junction		144		Junction				
22.003	144		Junction		145		Junction				
22.004	145		Junction		146		Junction				
22.005	146		Junction		147		Junction				
22.006	147		Junction		148		Junction				
22.007	148		Junction		149		Junction				
22.008	149		Junction		150		Junction				
22.009	150		Junction		151		Junction				
22.010	151		Junction		152		Junction				
22.011	152		Junction		153		Junction				
22.012	153		Junction		154		Junction				
22.013	154		Junction		155		Junction				
22.014	155		Junction		156		Junction				
22.015	156		Junction		157		Junction				
22.016	157		Junction		158		Junction				
22.017	158		Junction		159		Junction				
22.018	159		Junction		160	1350	Manhole	Adoptable			
22.019	160	1350	Manhole	Adoptable	161	1350	Manhole	Adoptable			

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Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
22.020	31.392	222.6	375	Swale "pipe"	38.627	37.852	0.400	38.700	37.711	0.614
23.000	10.318	100.2	150	Swale "pipe"	38.589	38.039	0.400	38.700	37.936	0.614
22.021	9.221	318.0	375	Swale "pipe"	38.700	37.711	0.614	38.550	37.682	0.493
22.022	30.685	119.4	375	Swale "pipe"	38.550	37.682	0.493	38.200	37.425	0.400
22.023	16.222	25.0	375	Swale "pipe"	38.200	37.425	0.400	37.550	36.775	0.400
22.024	11.911	18.3	375	Swale "pipe"	37.550	36.775	0.400	36.900	36.125	0.400
22.025	11.566	28.9	375	Swale "pipe"	36.900	36.125	0.400	36.500	35.725	0.400
22.026	12.187	16.2	375	Swale "pipe"	36.500	35.725	0.400	35.750	34.975	0.400
22.027	7.398	26.9	375	Swale "pipe"	35.750	34.975	0.400	35.475	34.700	0.400
22.028	31.154	18.1	375	Swale "pipe"	35.475	34.700	0.400	33.750	32.975	0.400
22.029	10.144	10.7	375	Swale "pipe"	33.750	32.975	0.400	32.800	32.025	0.400
22.030	13.786	43.8	375	Swale "pipe"	32.800	32.025	0.400	32.485	31.710	0.400
24.000	8.141	23.5	150	Circular	32.832	31.782	0.900	32.485	31.435	0.900
22.031	11.344	30.7	375	Swale "pipe"	32.485	31.210	0.900	32.262	30.840	1.047
25.000	20.026	100.6	150	Circular	32.314	31.264	0.900	32.262	31.065	1.047
22.032	7.095	42.0	375	Swale "pipe"	32.262	30.840	1.047	31.446	30.671	0.400
22.033	14.368	14.8	375	Swale "pipe"	31.446	30.671	0.400	30.478	29.703	0.400
22.034	15.450	16.1	375	Swale "pipe"	30.478	29.703	0.400	29.521	28.746	0.400
22.035	6.970	303.0	375	Swale "pipe"	29.521	28.746	0.400	29.498	28.723	0.400
22.036	15.732	16.5	375	Swale "pipe"	29.498	28.723	0.400	28.544	27.769	0.400
22.037	11.718	14.7	375	Swale "pipe"	28.544	27.769	0.400	27.749	26.974	0.400
22.038	7.639	21.6	375	Swale "pipe"	27.749	26.974	0.400	27.396	26.621	0.400
22.039	12.337	34.8	450	Swale "pipe"	27.396	26.546	0.400	27.042	26.192	0.400
22.040	10.594	24.0	450	Swale "pipe"	27.042	26.192	0.400	26.601	25.751	0.400
12.027	8.856	46.6	825	Swale "pipe"	26.601	25.376	0.400	26.411	25.186	0.400

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
22.020	161	1350	Manhole	Adoptable	163		Junction	
23.000	162		Junction		163		Junction	
22.021	163		Junction		164		Junction	
22.022	164		Junction		165		Junction	
22.023	165		Junction		166		Junction	
22.024	166		Junction		167		Junction	
22.025	167		Junction		168		Junction	
22.026	168		Junction		169		Junction	
22.027	169		Junction		170		Junction	
22.028	170		Junction		171		Junction	
22.029	171		Junction		172		Junction	
22.030	172		Junction		174	1350	Manhole	Adoptable
24.000	173	1200	Manhole	Adoptable	174	1350	Manhole	Adoptable
22.031	174	1350	Manhole	Adoptable	176		Junction	
25.000	175	1200	Manhole	Adoptable	176		Junction	
22.032	176		Junction		177		Junction	
22.033	177		Junction		178		Junction	
22.034	178		Junction		179		Junction	
22.035	179		Junction		180	1350	Manhole	Adoptable
22.036	180	1350	Manhole	Adoptable	181	1350	Manhole	Adoptable
22.037	181	1350	Manhole	Adoptable	182		Junction	
22.038	182		Junction		183		Junction	
22.039	183		Junction		184	1350	Manhole	Adoptable
22.040	184	1350	Manhole	Adoptable	185	1800	Manhole	Adoptable
12.027	185	1800	Manhole	Adoptable	186		Junction	



Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
12.028	9.058	29.5	825	Swale "pipe"	26.411	25.186	0.400	26.104	24.879	0.400
26.000	38.373	169.8	225	Circular	26.104	24.979	0.900	25.967	24.753	0.989
26.001	30.554	244.4	300	Circular	25.967	24.678	0.989	26.123	24.553	1.270
26.002	8.073	244.6	300	Circular	26.123	24.553	1.270	26.104	24.520	1.284
12.029	6.674	953.4	900	Swale "pipe"	26.104	23.920	1.284	25.910	23.913	1.097
12.030	32.344	1010.7	975	Swale "pipe"	25.910	23.838	1.097	25.500	23.806	0.719
27.000	34.564	169.4	225	Circular	22.518	21.393	0.900	23.104	21.189	1.690
28.000	23.731	66.3	225	Circular	23.462	22.337	0.900	23.104	21.979	0.900
27.001	55.839	322.8	375	Circular	23.104	21.039	1.690	22.258	20.866	1.017
29.000	28.583	244.3	300	Circular	21.753	20.553	0.900	22.404	20.436	1.668
30.000	17.216	71.4	150	Circular	22.645	21.595	0.900	22.404	21.354	0.900
29.001	9.045	323.0	375	Circular	22.404	20.361	1.668	22.295	20.333	1.587
31.000	13.914	28.0	150	Circular	22.792	21.742	0.900	22.295	21.245	0.900
29.002	10.433	316.1	375	Circular	22.295	20.333	1.587	22.258	20.300	1.583
27.002	30.217	402.9	450	Circular	22.258	20.225	1.583	21.794	20.150	1.194
27.003	40.451	493.3	525	Circular	21.794	20.075	1.194	21.433	19.993	0.915
32.000	18.313	321.3	375	Circular	20.488	19.213	0.900	21.107	19.156	1.576
32.001	12.603	406.5	450	Circular	21.107	19.081	1.576	21.474	19.050	1.974
32.002	16.170	577.5	600	Circular	21.474	18.900	1.974	21.433	18.872	1.961
27.004	10.062	713.7	750	Circular	21.433	18.722	1.961	21.470	18.708	2.012
27.005	14.374	756.5	750	Circular	21.470	18.708	2.012	21.563	18.689	2.124
33.000	36.425	102.0	225	Circular	21.920	20.795	0.900	21.563	20.438	0.900
27.006	16.130	768.1	750	Circular	21.563	18.689	2.124	21.407	18.668	1.989
27.007	25.644	754.2	750	Circular	21.407	18.668	1.989	20.787	18.634	1.403
27.008	16.611	755.1	750	Circular	20.787	18.634	1.403	20.379	18.612	1.017

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
12.028	186		Junction		190		Junction	
26.000	187	1200	Manhole	Adoptable	188	1200	Manhole	Adoptable
26.001	188	1200	Manhole	Adoptable	189	1200	Manhole	Adoptable
26.002	189	1200	Manhole	Adoptable	190		Junction	
12.029	190		Junction		191		Junction	
12.030	191		Junction		191_OUT		Junction	
27.000	192	1200	Manhole	Adoptable	194	1350	Manhole	Adoptable
28.000	193	1200	Manhole	Adoptable	194	1350	Manhole	Adoptable
27.001	194	1350	Manhole	Adoptable	200	1350	Manhole	Adoptable
29.000	195	1200	Manhole	Adoptable	197	1350	Manhole	Adoptable
30.000	196	1200	Manhole	Adoptable	197	1350	Manhole	Adoptable
29.001	197	1350	Manhole	Adoptable	199	1350	Manhole	Adoptable
31.000	198	1200	Manhole	Adoptable	199	1350	Manhole	Adoptable
29.002	199	1350	Manhole	Adoptable	200	1350	Manhole	Adoptable
27.002	200	1350	Manhole	Adoptable	201	1500	Manhole	Adoptable
27.003	201	1500	Manhole	Adoptable	205	1800	Manhole	Adoptable
32.000	202	1350	Manhole	Adoptable	203	1350	Manhole	Adoptable
32.001	203	1350	Manhole	Adoptable	204	1500	Manhole	Adoptable
32.002	204	1500	Manhole	Adoptable	205	1800	Manhole	Adoptable
27.004	205	1800	Manhole	Adoptable	206	1800	Manhole	Adoptable
27.005	206	1800	Manhole	Adoptable	208	1800	Manhole	Adoptable
33.000	207	1200	Manhole	Adoptable	208	1800	Manhole	Adoptable
27.006	208	1800	Manhole	Adoptable	209	1800	Manhole	Adoptable
27.007	209	1800	Manhole	Adoptable	210	1800	Manhole	Adoptable
27.008	210	1800	Manhole	Adoptable	211	1800	Manhole	Adoptable

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
27.009	7.041	704.1	750	Circular	20.379	18.612	1.017	20.535	18.602	1.183
27.010	35.544	756.3	750	Circular	20.535	18.602	1.183	21.022	18.555	1.717
27.011	34.508	766.8	750	Circular	21.022	18.555	1.717	20.732	18.510	1.472
27.012	16.178	770.4	750	Circular	20.732	18.510	1.472	20.660	18.489	1.421
34.000	20.445	56.8	225	Circular	21.450	20.325	0.900	21.090	19.965	0.900
34.001	24.862	57.8	225	Circular	21.090	19.965	0.900	20.660	19.535	0.900
27.013	27.839	752.4	750	Circular	20.660	18.489	1.421	20.615	18.452	1.413
35.000	31.034	169.6	225	Circular	23.090	21.965	0.900	24.325	21.782	2.318
35.001	15.042	242.6	300	Circular	24.325	21.707	2.318	24.304	21.645	2.359
35.002	11.434	243.3	300	Circular	24.304	21.645	2.359	24.229	21.598	2.331
36.000	10.517	31.3	150	Circular	24.565	23.515	0.900	24.229	23.179	0.900
35.003	49.013	405.1	450	Circular	24.229	21.448	2.331	22.735	21.327	0.958
35.004	27.988	98.9	450	Circular	22.735	21.327	0.958	22.964	21.044	1.470
37.000	12.504	100.8	150	Circular	22.518	21.468	0.900	22.964	21.344	1.470
35.005	31.575	404.8	450	Circular	22.964	21.044	1.470	22.600	20.966	1.184
38.000	25.620	30.0	225	Circular	25.540	24.415	0.900	24.685	23.560	0.900
38.001	14.561	22.6	225	Circular	24.685	23.560	0.900	24.303	22.916	1.162
39.000	29.793	100.7	150	Circular	24.337	23.287	0.900	24.303	22.891	1.162
38.002	23.853	243.4	300	Circular	24.303	22.841	1.162	24.582	22.743	1.539
40.000	8.709	580.6	600	Circular	25.000	23.000	1.400	25.000	22.985	1.415
40.001	12.825	582.9	600	Circular	25.000	22.985	1.415	24.803	22.963	1.240
40.002	11.129	556.4	600	Circular	24.803	22.963	1.240	24.794	22.943	1.251
40.003	8.528	568.6	600	Circular	24.794	22.943	1.251	24.582	22.928	1.054
38.003	7.936	566.9	600	Circular	24.582	22.443	1.539	24.410	22.429	1.381
38.004	6.440	536.7	600	Circular	24.410	22.429	1.381	24.274	22.417	1.257

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
27.009	211	1800	Manhole	Adoptable	212	1800	Manhole	Adoptable
27.010	212	1800	Manhole	Adoptable	213	1800	Manhole	Adoptable
27.011	213	1800	Manhole	Adoptable	214	1800	Manhole	Adoptable
27.012	214	1800	Manhole	Adoptable	217	1800	Manhole	Adoptable
34.000	215	1200	Manhole	Adoptable	216	1200	Manhole	Adoptable
34.001	216	1200	Manhole	Adoptable	217	1800	Manhole	Adoptable
27.013	217	1800	Manhole	Adoptable	268		Junction	
35.000	218	1200	Manhole	Adoptable	219	1200	Manhole	Adoptable
35.001	219	1200	Manhole	Adoptable	220	1200	Manhole	Adoptable
35.002	220	1200	Manhole	Adoptable	222	1350	Manhole	Adoptable
36.000	221	1200	Manhole	Adoptable	222	1350	Manhole	Adoptable
35.003	222	1350	Manhole	Adoptable	223	1350	Manhole	Adoptable
35.004	223	1350	Manhole	Adoptable	225	1350	Manhole	Adoptable
37.000	224	1200	Manhole	Adoptable	225	1350	Manhole	Adoptable
35.005	225	1350	Manhole	Adoptable	248		Junction	
38.000	226	1200	Manhole	Adoptable	227	1200	Manhole	Adoptable
38.001	227	1200	Manhole	Adoptable	229	1200	Manhole	Adoptable
39.000	228	1200	Manhole	Adoptable	229	1200	Manhole	Adoptable
38.002	229	1200	Manhole	Adoptable	234		Junction	
40.000	230		Junction		231	1500	Manhole	Adoptable
40.001	231	1500	Manhole	Adoptable	232	1500	Manhole	Adoptable
40.002	232	1500	Manhole	Adoptable	233		Junction	
40.003	233		Junction		234		Junction	
38.003	234		Junction		235		Junction	
38.004	235		Junction		236		Junction	

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
38.005	5.981	541.9	600	Swale "pipe"	24.274	22.417	1.257	24.296	22.406	1.290
38.006	4.888	543.1	600	Swale "pipe"	24.296	22.406	1.290	24.248	22.397	1.251
38.007	15.673	39.8	600	Swale "pipe"	24.248	22.397	1.251	23.955	22.003	1.352
41.000	33.208	74.6	225	Circular	24.092	22.967	0.900	23.647	22.522	0.900
41.001	6.132	165.7	225	Circular	23.647	22.522	0.900	23.790	22.485	1.080
42.000	17.005	65.7	150	Swale "pipe"	24.294	23.744	0.400	24.035	23.485	0.400
42.001	14.535	77.7	150	Swale "pipe"	24.035	23.485	0.400	23.848	23.298	0.400
42.002	5.472	94.3	150	Swale "pipe"	23.848	23.298	0.400	23.790	23.240	0.400
41.002	12.020	168.4	225	Circular	23.790	22.485	1.080	23.955	22.378	1.352
38.008	2.957	492.9	600	Swale "pipe"	23.955	22.003	1.352	23.898	21.997	1.301
38.009	41.362	119.2	600	Swale "pipe"	23.898	21.997	1.301	22.650	21.650	0.400
38.010	7.561	151.2	600	Swale "pipe"	22.650	21.650	0.400	22.600	21.600	0.400
35.006	11.433	571.6	600	Swale "pipe"	22.600	20.816	1.184	22.146	20.796	0.750
35.007	10.398	577.7	600	Swale "pipe"	22.146	20.796	0.750	21.939	20.778	0.561
35.008	3.239	539.8	600	Swale "pipe"	21.939	20.778	0.561	21.954	20.772	0.582
43.000	14.684	43.7	150	Circular	23.750	22.700	0.900	23.414	22.364	0.900
43.001	7.455	46.9	225	Swale "pipe"	23.414	22.289	0.900	23.255	22.130	0.900
44.000	9.679	58.3	225	Circular	23.421	22.296	0.900	23.255	22.130	0.900
43.002	23.172	117.0	225	Swale "pipe"	23.255	22.130	0.900	22.557	21.932	0.400
43.003	33.164	36.9	300	Swale "pipe"	22.557	21.857	0.400	21.659	20.959	0.400
45.000	20.016	107.0	225	Circular	21.993	20.868	0.900	21.806	20.681	0.900
45.001	9.131	62.1	225	Circular	21.806	20.681	0.900	21.659	20.534	0.900
43.004	24.295	323.9	375	Swale "pipe"	21.659	20.384	0.900	21.954	20.309	1.270
35.009	15.135	582.1	600	Swale "pipe"	21.954	20.084	1.270	21.439	20.058	0.781
35.010	3.105	29.9	600	Swale "pipe"	21.439	20.058	0.781	21.454	19.954	0.900

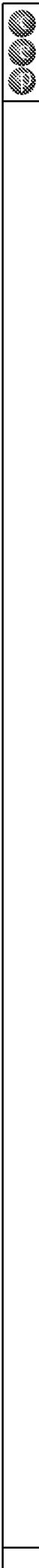
Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
38.005	236		Junction		237		Junction	
38.006	237		Junction		238	1500	Manhole	Adoptable
38.007	238	1500	Manhole	Adoptable	245	1500	Manhole	Adoptable
41.000	239	1200	Manhole	Adoptable	240	1200	Manhole	Adoptable
41.001	240	1200	Manhole	Adoptable	244	1200	Manhole	Adoptable
42.000	241		Junction		242		Junction	
42.001	242		Junction		243		Junction	
42.002	243		Junction		244	1200	Manhole	Adoptable
41.002	244	1200	Manhole	Adoptable	245	1500	Manhole	Adoptable
38.008	245	1500	Manhole	Adoptable	246		Junction	
38.009	246		Junction		247		Junction	
38.010	247		Junction		248		Junction	
35.006	248		Junction		249		Junction	
35.007	249		Junction		250		Junction	
35.008	250		Junction		259	1500	Manhole	Adoptable
43.000	251		Junction		252		Junction	
43.001	252		Junction		254	1200	Manhole	Adoptable
44.000	253	1200	Manhole	Adoptable	254	1200	Manhole	Adoptable
43.002	254	1200	Manhole	Adoptable	255	1200	Manhole	Adoptable
43.003	255	1200	Manhole	Adoptable	258	1350	Manhole	Adoptable
45.000	256	1200	Manhole	Adoptable	257	1200	Manhole	Adoptable
45.001	257	1200	Manhole	Adoptable	258	1350	Manhole	Adoptable
43.004	258	1350	Manhole	Adoptable	259	1500	Manhole	Adoptable
35.009	259	1500	Manhole	Adoptable	260		Junction	
35.010	260		Junction		265		Junction	



Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
46.000	28.701	48.5	225	Circular	22.952	21.827	0.900	22.360	21.235	0.900
46.001	12.889	94.1	225	Circular	22.360	21.235	0.900	22.223	21.098	0.900
46.002	60.645	83.3	300	Circular	22.223	21.023	0.900	21.495	20.295	0.900
46.003	2.716	66.2	300	Circular	21.495	20.295	0.900	21.454	20.254	0.900
35.011	10.535	554.5	600	Swale "pipe"	21.454	19.954	0.900	21.450	19.935	0.915
35.012	21.353	485.3	600	Swale "pipe"	21.450	19.935	0.915	20.891	19.891	0.400
35.013	14.385	52.1	600	Swale "pipe"	20.891	19.891	0.400	20.615	19.615	0.400
27.014	10.996	845.9	825	Circular	20.615	18.377	1.413	20.398	18.364	1.209
27.015	10.817	832.1	825	Swale "pipe"	20.398	18.364	1.209	20.075	18.351	0.899
27.016	9.897	824.8	825	Swale "pipe"	20.075	18.351	0.899	20.072	18.339	0.908
27.017	11.971	812.2	825	Swale "pipe"	20.072	18.339	0.908	19.637	18.325	0.487
27.018	12.345	35.1	825	Swale "pipe"	19.637	18.325	0.487	19.198	17.973	0.400
27.019	4.257	851.4	825	Swale "pipe"	19.198	17.973	0.400	19.263	17.968	0.470
47.000	59.753	244.9	300	Circular	19.474	18.274	0.900	19.604	18.030	1.274
48.000	9.195	18.8	150	Circular	19.719	18.669	0.900	19.604	18.180	1.274
47.001	31.660	405.9	450	Circular	19.604	17.880	1.274	20.372	17.802	2.120
47.002	42.194	405.7	450	Circular	20.372	17.802	2.120	21.027	17.698	2.879
49.000	12.472	168.5	225	Circular	19.781	18.656	0.900	19.721	18.582	0.914
49.001	61.318	324.4	375	Circular	19.721	18.432	0.914	21.027	18.243	2.409
47.003	30.299	488.7	525	Circular	21.027	17.623	2.879	20.782	17.561	2.696
47.004	22.037	489.7	525	Circular	20.782	17.561	2.696	20.647	17.516	2.606
47.005	27.391	489.1	525	Circular	20.647	17.516	2.606	20.417	17.460	2.432
47.006	13.500	482.2	525	Circular	20.417	17.460	2.432	20.193	17.432	2.296
50.000	22.849	100.7	150	Circular	19.779	18.729	0.900	20.193	18.502	1.541
47.007	24.640	492.6	525	Circular	20.193	17.432	2.296	19.355	17.382	1.448

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
46.000	261	1200	Manhole	Adoptable	262	1200	Manhole	Adoptable
46.001	262	1200	Manhole	Adoptable	263	1200	Manhole	Adoptable
46.002	263	1200	Manhole	Adoptable	264	1200	Manhole	Adoptable
46.003	264	1200	Manhole	Adoptable	265		Junction	
35.011	265		Junction		266		Junction	
35.012	266		Junction		267		Junction	
35.013	267		Junction		268		Junction	
27.014	268		Junction		269		Junction	
27.015	269		Junction		270		Junction	
27.016	270		Junction		271		Junction	
27.017	271		Junction		272		Junction	
27.018	272		Junction		273	1800	Manhole	Adoptable
27.019	273	1800	Manhole	Adoptable	287	1800	Manhole	Adoptable
47.000	274	1200	Manhole	Adoptable	276	1350	Manhole	Adoptable
48.000	275	1200	Manhole	Adoptable	276	1350	Manhole	Adoptable
47.001	276	1350	Manhole	Adoptable	277	1350	Manhole	Adoptable
47.002	277	1350	Manhole	Adoptable	280	1500	Manhole	Adoptable
49.000	278	1200	Manhole	Adoptable	279	1350	Manhole	Adoptable
49.001	279	1350	Manhole	Adoptable	280	1500	Manhole	Adoptable
47.003	280	1500	Manhole	Adoptable	281	1500	Manhole	Adoptable
47.004	281	1500	Manhole	Adoptable	282	1500	Manhole	Adoptable
47.005	282	1500	Manhole	Adoptable	283	1500	Manhole	Adoptable
47.006	283	1500	Manhole	Adoptable	285	1500	Manhole	Adoptable
50.000	284	1200	Manhole	Adoptable	285	1500	Manhole	Adoptable
47.007	285	1500	Manhole	Adoptable	286	1500	Manhole	Adoptable

 The Civil Engineering Practice BN41 1RA	File: 23544 - ANGMERING Flow through Network: Steve Doughty 02/12/2021	Page 35 23544 Water Lane, Angmering Main Site
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Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
47.008	16.685	490.7	525	Circular	19.355	17.382	1.448	19.263	17.348	1.390
27.020	14.503	853.1	825	Swale "pipe"	19.263	17.048	1.390	18.788	17.031	0.932
51.000	19.151	242.4	300	Circular	26.129	24.929	0.900	26.227	24.850	1.077
51.001	40.136	198.7	375	Circular	26.227	24.775	1.077	25.848	24.573	0.900
51.002	7.923	29.1	375	Circular	25.848	24.573	0.900	25.576	24.301	0.900
52.000	12.355	43.0	150	Swale "pipe"	27.504	26.954	0.400	27.217	26.667	0.400
52.001	18.394	44.1	150	Swale "pipe"	27.217	26.667	0.400	26.800	26.250	0.400
52.002	23.947	25.8	150	Swale "pipe"	26.800	26.250	0.400	25.873	25.323	0.400
52.003	10.794	36.3	150	Swale "pipe"	25.873	25.323	0.400	25.576	25.026	0.400
51.003	8.988	321.0	375	Swale "pipe"	25.576	24.301	0.900	25.267	24.273	0.619
51.004	6.729	320.4	375	Swale "pipe"	25.267	24.273	0.619	25.051	24.252	0.424
51.005	12.873	36.8	375	Swale "pipe"	25.051	24.252	0.424	24.677	23.902	0.400
51.006	5.512	30.8	375	Swale "pipe"	24.677	23.902	0.400	24.498	23.723	0.400
51.007	6.502	28.1	375	Swale "pipe"	24.498	23.723	0.400	24.267	23.492	0.400
51.008	3.767	27.5	375	Swale "pipe"	24.267	23.492	0.400	24.130	23.355	0.400
51.009	4.596	34.0	375	Swale "pipe"	24.130	23.355	0.400	23.995	23.220	0.400
53.000	32.445	169.9	225	Circular	24.320	23.195	0.900	24.667	23.004	1.438
53.001	13.822	103.1	300	Circular	24.667	22.929	1.438	23.995	22.795	0.900
51.010	6.649	316.6	375	Swale "pipe"	23.995	22.720	0.900	23.900	22.699	0.826
51.011	6.022	317.0	375	Swale "pipe"	23.900	22.699	0.826	23.700	22.680	0.645
51.012	8.619	59.9	375	Swale "pipe"	23.700	22.680	0.645	23.311	22.536	0.400
51.013	5.993	27.2	375	Swale "pipe"	23.311	22.536	0.400	23.091	22.316	0.400
54.000	13.918	78.2	225	Circular	23.269	22.144	0.900	23.091	21.966	0.900
51.014	30.144	52.0	450	Swale "pipe"	23.091	21.741	0.900	22.011	21.161	0.400
51.015	4.600	38.7	450	Swale "pipe"	22.011	21.161	0.400	21.892	21.042	0.400

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
47.008	286	1500	Manhole	Adoptable	287	1800	Manhole	Adoptable
27.020	287	1800	Manhole	Adoptable	287_OUT		Junction	
51.000	288	1200	Manhole	Adoptable	289		Junction	
51.001	289		Junction		290	1350	Manhole	Adoptable
51.002	290	1350	Manhole	Adoptable	295		Junction	
52.000	291		Junction		292		Junction	
52.001	292		Junction		293		Junction	
52.002	293		Junction		294		Junction	
52.003	294		Junction		295		Junction	
51.003	295		Junction		296		Junction	
51.004	296		Junction		297		Junction	
51.005	297		Junction		298		Junction	
51.006	298		Junction		299		Junction	
51.007	299		Junction		300		Junction	
51.008	300		Junction		301		Junction	
51.009	301		Junction		304		Junction	
53.000	302	1200	Manhole	Adoptable	303	1200	Manhole	Adoptable
53.001	303	1200	Manhole	Adoptable	304		Junction	
51.010	304		Junction		305		Junction	
51.011	305		Junction		306		Junction	
51.012	306		Junction		307		Junction	
51.013	307		Junction		309		Junction	
54.000	308	1200	Manhole	Adoptable	309		Junction	
51.014	309		Junction		310		Junction	
51.015	310		Junction		311		Junction	



Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
S1.016	53.434	254.4	450	Swale "pipe"	21.892	21.042	0.400	21.682	20.832	0.400
S5.000	5.458	23.2	150	Circular	21.917	20.867	0.900	21.682	20.632	0.900
S1.017	13.944	398.4	450	Swale "pipe"	21.682	20.332	0.900	21.555	20.297	0.808
S1.018	2.700	11.2	450	Swale "pipe"	21.555	20.297	0.808	21.480	20.055	0.975
S6.000	40.206	33.6	225	Circular	27.299	26.174	0.900	26.102	24.977	0.900
S6.001	23.727	33.9	300	Circular	26.102	24.902	0.900	25.403	24.203	0.900
S6.002	4.421	157.9	375	Circular	25.403	24.128	0.900	25.375	24.100	0.900
S6.003	10.995	38.3	375	Circular	25.375	24.100	0.900	25.088	23.813	0.900
S6.004	7.704	34.5	375	Circular	25.088	23.813	0.900	24.865	23.590	0.900
S6.005	57.594	29.7	375	Circular	24.865	23.590	0.900	22.927	21.652	0.900
S7.000	11.080	72.4	225	Circular	24.008	22.883	0.900	23.855	22.730	0.900
S7.001	22.436	46.0	225	Circular	23.855	22.730	0.900	23.237	22.112	0.900
S8.000	35.077	407.9	450	Circular	22.024	20.674	0.900	23.237	20.588	2.199
S7.002	47.363	493.4	525	Circular	23.237	20.513	2.199	22.927	20.417	1.985
S9.000	29.247	57.9	225	Circular	23.432	22.307	0.900	22.927	21.802	0.900
S6.006	16.546	570.5	600	Circular	22.927	20.342	1.985	22.274	20.313	1.361
S6.007	12.494	567.9	600	Circular	22.274	20.313	1.361	21.792	20.291	0.901
S6.008	8.930	28.7	600	Circular	21.792	20.291	0.901	21.480	19.980	0.900
S1.019	27.059	125.3	525	Swale "pipe"	21.480	19.980	0.975	20.689	19.764	0.400
S0.000	21.978	244.2	300	Circular	20.703	19.503	0.900	20.761	19.413	1.048
S0.001	6.682	238.7	300	Swale "pipe"	20.761	19.413	1.048	20.689	19.385	1.004
S1.020	16.709	576.2	600	Swale "pipe"	20.689	19.085	1.004	20.239	19.056	0.583
S1.021	6.578	548.2	600	Swale "pipe"	20.239	19.056	0.583	20.295	19.044	0.651
S1.022	8.417	561.1	600	Swale "pipe"	20.295	19.044	0.651	20.078	19.029	0.449
S1.023	9.026	88.5	600	Swale "pipe"	20.078	19.029	0.449	19.927	18.927	0.400

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
S1.016	311		Junction		313		Junction	
S5.000	312	1200	Manhole	Adoptable	313		Junction	
S1.017	313		Junction		314		Junction	
S1.018	314		Junction		329		Junction	
S6.000	315	1200	Manhole	Adoptable	316	1200	Manhole	Adoptable
S6.001	316	1200	Manhole	Adoptable	317	1350	Manhole	Adoptable
S6.002	317	1350	Manhole	Adoptable	318	1350	Manhole	Adoptable
S6.003	318	1350	Manhole	Adoptable	319	1350	Manhole	Adoptable
S6.004	319	1350	Manhole	Adoptable	320	1350	Manhole	Adoptable
S6.005	320	1350	Manhole	Adoptable	326	1500	Manhole	Adoptable
S7.000	321	1200	Manhole	Adoptable	322	1200	Manhole	Adoptable
S7.001	322	1200	Manhole	Adoptable	324	1500	Manhole	Adoptable
S8.000	323	1350	Manhole	Adoptable	324	1500	Manhole	Adoptable
S7.002	324	1500	Manhole	Adoptable	326	1500	Manhole	Adoptable
S9.000	325	1200	Manhole	Adoptable	326	1500	Manhole	Adoptable
S6.006	326	1500	Manhole	Adoptable	327	1500	Manhole	Adoptable
S6.007	327	1500	Manhole	Adoptable	328	1500	Manhole	Adoptable
S6.008	328	1500	Manhole	Adoptable	329		Junction	
S1.019	329		Junction		332		Junction	
S0.000	330	1200	Manhole	Adoptable	331	1200	Manhole	Adoptable
S0.001	331	1200	Manhole	Adoptable	332		Junction	
S1.020	332		Junction		333		Junction	
S1.021	333		Junction		334		Junction	
S1.022	334		Junction		335	1500	Manhole	Adoptable
S1.023	335	1500	Manhole	Adoptable	336	1500	Manhole	Adoptable



Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
51.024	37.180	44.1	600	Swale "pipe"	19.927	18.927	0.400	19.083	18.083	0.400
61.000	16.034	118.8	225	Circular	21.473	20.348	0.900	21.338	20.213	0.900
61.001	16.031	168.7	225	Circular	21.338	20.213	0.900	21.569	20.118	1.226
62.000	11.120	17.4	225	Circular	21.881	20.756	0.900	21.569	20.118	1.226
61.002	16.566	117.5	225	Circular	21.569	20.118	1.226	21.102	19.977	0.900
63.000	26.072	169.3	225	Circular	20.599	19.474	0.900	21.102	19.320	1.557
61.003	39.807	130.1	300	Circular	21.102	19.245	1.557	20.139	18.939	0.900
64.000	29.921	243.3	300	Circular	19.848	18.648	0.900	20.076	18.525	1.251
64.001	18.012	243.4	300	Circular	20.076	18.525	1.251	20.139	18.451	1.388
61.004	19.519	320.0	375	Circular	20.139	18.376	1.388	19.972	18.315	1.282
61.005	16.114	51.0	375	Circular	19.972	18.315	1.282	19.274	17.999	0.900
65.000	40.779	130.3	300	Circular	25.635	24.435	0.900	25.322	24.122	0.900
65.001	34.489	62.9	300	Circular	25.322	24.122	0.900	25.064	23.574	1.190
66.000	22.051	169.6	225	Circular	24.904	23.779	0.900	25.064	23.649	1.190
65.002	15.683	402.1	450	Circular	25.064	23.424	1.190	25.000	23.385	1.165
67.000	31.500	23.8	225	Circular	16.405	15.280	0.900	14.780	13.955	0.600
67.001	20.320	71.8	225	Circular	14.780	13.955	0.600	14.170	13.672	0.273
67.002	8.736	81.6	225	Circular	14.170	13.672	0.273	14.244	13.565	0.454
68.000	7.925	240.1	375	Circular	17.000	14.196	2.429	17.000	14.163	2.462
68.001	10.434	20.9	375	Circular	17.000	14.163	2.462	14.362	13.663	0.324
68.002	22.446	129.7	375	Circular	14.362	13.663	0.324	14.244	13.490	0.379
67.003	3.566	35.7	375	Circular	14.244	13.490	0.379	14.207	13.390	0.442
69.000	12.906	169.8	225	Circular	17.001	15.876	0.900	17.000	15.800	0.975
69.001	8.903	168.0	225	Circular	17.000	15.800	0.975	17.000	15.747	1.028
70.000	10.239	396.1	450	Circular	18.679	17.329	0.900	18.735	17.303	0.982

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
51.024	336	1500	Manhole	Adoptable	336_OUT		Junction	
61.000	337		Junction		338	1200	Manhole	Adoptable
61.001	338	1200	Manhole	Adoptable	340	1200	Manhole	Adoptable
62.000	339	1200	Manhole	Adoptable	340	1200	Manhole	Adoptable
61.002	340	1200	Manhole	Adoptable	342	1200	Manhole	Adoptable
63.000	341	1200	Manhole	Adoptable	342	1200	Manhole	Adoptable
61.003	342	1200	Manhole	Adoptable	345	1350	Manhole	Adoptable
64.000	343	1200	Manhole	Adoptable	344	1200	Manhole	Adoptable
64.001	344	1200	Manhole	Adoptable	345	1350	Manhole	Adoptable
61.004	345	1350	Manhole	Adoptable	346	1350	Manhole	Adoptable
61.005	346	1350	Manhole	Adoptable	346_OUT		Junction	
65.000	347	1200	Manhole	Adoptable	348	1200	Manhole	Adoptable
65.001	348	1200	Manhole	Adoptable	350	1350	Manhole	Adoptable
66.000	349	1200	Manhole	Adoptable	350	1350	Manhole	Adoptable
65.002	350	1350	Manhole	Adoptable	350_OUT		Junction	
67.000	351	1200	Manhole	Adoptable	352	1200	Manhole	Adoptable
67.001	352	1200	Manhole	Adoptable	353	1200	Manhole	Adoptable
67.002	353	1200	Manhole	Adoptable	357	1350	Manhole	Adoptable
68.000	354		Junction		355	1800	Manhole	Adoptable
68.001	355	1800	Manhole	Adoptable	356	1800	Manhole	Adoptable
68.002	356	1800	Manhole	Adoptable	357	1350	Manhole	Adoptable
67.003	357	1350	Manhole	Adoptable	353_OUT	1350	Manhole	Adoptable
69.000	358	1200	Manhole	Adoptable	359	1200	Manhole	Adoptable
69.001	359	1200	Manhole	Adoptable	359_OUT		Junction	
70.000	360	1350	Manhole	Adoptable	360_OUT		Junction	

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Simulation Settings			
Rainfall Methodology	FEH-13	Analysis Speed	Detailed
Summer CV	0.850	Skip Steady State	x
Winter CV	0.900	Drain Down Time (mins)	120
		Additional Storage (m ³ /ha)	20.0
		Check Discharge Rate(s)	x
		Check Discharge Volume	x
Storm Durations			
		15	30
		60	960
		1440	2160
Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
50	0	0	0
100	40	0	0
Node 191 OUT Online Orifice Control			
Flap Valve	x	Invert Level (m)	23.038
Replaces Downstream Link	x	Diameter (m)	1.000
		Discharge Coefficient	0.600
Node 88 OUT Online Orifice Control			
Flap Valve	x	Invert Level (m)	23.038
Replaces Downstream Link	x	Diameter (m)	0.900
		Discharge Coefficient	0.600
Node 350 OUT Online Orifice Control			
Flap Valve	x	Invert Level (m)	23.038
Replaces Downstream Link	x	Diameter (m)	0.500
		Discharge Coefficient	0.600
Node 231 Online Orifice Control			
Flap Valve	x	Design Depth (m)	1.700
Replaces Downstream Link	✓	Design Flow (l/s)	710.0
Invert Level (m)	22.985	Diameter (m)	0.590
		Discharge Coefficient	0.600
Node 287 OUT Online Orifice Control			
Flap Valve	x	Invert Level (m)	14.297
Replaces Downstream Link	x	Diameter (m)	0.900
		Discharge Coefficient	0.600
Node 346 OUT Online Orifice Control			
Flap Valve	x	Invert Level (m)	14.297
Replaces Downstream Link	x	Diameter (m)	0.400
		Discharge Coefficient	0.600
Node 336 OUT Online Orifice Control			
Flap Valve	x	Invert Level (m)	14.297
Replaces Downstream Link	x	Diameter (m)	0.700
		Discharge Coefficient	0.600
Node 360 OUT Online Orifice Control			
Flap Valve	x	Invert Level (m)	14.297
Replaces Downstream Link	x	Diameter (m)	0.500
		Discharge Coefficient	0.600

Node 359 OUT Online Orifice Control

Flap Valve	x	Invert Level (m)	14.297	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.300		

Node 355 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	14.163	Product Number	CTL-SHE-0190-2060-1770-2060
Design Depth (m)	1.770	Min Outlet Diameter (m)	0.225
Design Flow (l/s)	20.6	Min Node Diameter (mm)	1800

Node 355 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	16.081	Product Number	CTL-SHE-0228-2565-0503-2565
Design Depth (m)	0.503	Min Outlet Diameter (m)	0.300
Design Flow (l/s)	51.9	Min Node Diameter (mm)	1200

Node 353 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	13.672	Product Number	CTL-SHE-0075-2000-0490-2000
Design Depth (m)	0.490	Min Outlet Diameter (m)	0.100
Design Flow (l/s)	2.0	Min Node Diameter (mm)	1200

Node 230 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Main Channel Length (m)	37.500
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	23.000	Main Channel Slope (1:X)	1000.0
Safety Factor	2.0	Time to half empty (mins)	35	Main Channel n	0.035

Inlets

88_OUT 350_OUT 191_OUT

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	632.0	0.0	0.750	880.0	0.0	1.500	1161.0	0.0
0.250	710.0	0.0	1.000	970.0	0.0	1.750	1286.0	0.0
0.500	794.0	0.0	1.250	1064.0	0.0	2.000	1396.0	0.0

Node 354 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Main Channel Length (m)	101.158
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	14.196	Main Channel Slope (1:X)	1000.0
Safety Factor	2.0	Time to half empty (mins)		Main Channel n	0.350

Inlets

336_OUT 360_OUT 346_OUT 287_OUT 359_OUT



Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	2964.0	0.0	1.804	4274.0	0.0	1.886	5682.0	0.0
0.804	3520.0	0.0	1.885	4337.0	0.0	2.804	6520.0	0.0

Node 353 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	13.672
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.90	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	134.0	0.0	0.400	134.0	0.0	0.401	0.0	0.0



Results for 50 year Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	40.177	0.083	12.0	0.0694	0.0000	OK
15 minute summer	2	10	40.055	0.109	18.3	0.0322	0.0000	OK
15 minute summer	3	10	40.024	0.142	28.5	0.0640	0.0000	OK
15 minute summer	4	11	39.949	0.163	34.6	0.0428	0.0000	OK
15 minute summer	5	11	39.865	0.177	34.6	0.0000	0.0000	OK
15 minute summer	6	11	39.838	0.196	44.4	0.0876	0.0000	OK
15 minute summer	7	11	39.772	0.197	50.1	0.0818	0.0000	OK
15 minute summer	8	11	39.544	0.114	55.8	0.0424	0.0000	OK
15 minute summer	9	11	39.295	0.220	73.3	0.2268	0.0000	OK
15 minute summer	10	11	39.201	0.226	81.3	0.0959	0.0000	OK
15 minute summer	11	11	39.151	0.221	84.2	0.0356	0.0000	OK
15 minute summer	12	11	39.050	0.170	94.8	0.0469	0.0000	OK
15 minute summer	13	12	38.988	0.163	88.7	0.0000	0.0000	OK
15 minute summer	14	12	38.896	0.141	88.0	0.0000	0.0000	OK
15 minute summer	15	12	38.645	0.120	89.1	0.0000	0.0000	OK
15 minute summer	16	11	38.047	0.122	93.6	0.0346	0.0000	OK
15 minute summer	17	11	37.555	0.130	96.9	0.0201	0.0000	OK
15 minute summer	18	11	37.046	0.121	107.1	0.0750	0.0000	OK
15 minute summer	19	11	36.357	0.132	123.6	0.1366	0.0000	OK
15 minute summer	20	11	35.566	0.141	126.6	0.0327	0.0000	OK
15 minute summer	21	11	35.182	0.157	138.7	0.1176	0.0000	OK
15 minute summer	22	11	34.464	0.139	145.1	0.0572	0.0000	OK
15 minute summer	23	11	33.789	0.164	156.9	0.1184	0.0000	OK
15 minute summer	24	11	33.117	0.192	161.2	0.0545	0.0000	OK
15 minute summer	25	11	32.833	0.158	172.2	0.1102	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.000	2	11.9	0.730	0.298	0.4089	
15 minute summer	2	1.001	3	17.9	0.792	0.449	0.2449	
15 minute summer	3	1.002	4	28.3	0.994	0.708	0.4597	
15 minute summer	4	1.003	5	34.6	1.085	0.869	0.5320	
15 minute summer	5	1.004	6	34.7	1.003	0.863	0.2684	
15 minute summer	6	1.005	7	44.4	1.209	1.062	0.3785	
15 minute summer	7	1.006	8	50.1	1.391	1.123	0.3412	
15 minute summer	8	1.007	9	55.8	1.950	0.313	0.3205	
15 minute summer	9	1.008	10	73.4	1.074	0.662	2.2036	
15 minute summer	10	1.009	11	81.1	1.188	0.730	0.9887	
15 minute summer	11	1.010	12	89.6	1.541	0.804	0.9271	
15 minute summer	12	1.011	13	88.7	1.887	0.422	0.2348	
15 minute summer	13	1.012	14	88.0	2.103	0.404	0.2477	
15 minute summer	14	1.013	15	89.1	2.613	0.309	0.3783	
15 minute summer	15	1.014	16	89.6	2.925	0.227	0.4772	
15 minute summer	16	1.015	17	94.3	2.917	0.234	0.4039	
15 minute summer	17	1.016	18	96.6	2.990	0.257	0.4608	
15 minute summer	18	1.017	19	106.1	3.241	0.231	0.4391	
15 minute summer	19	1.018	20	122.7	3.387	0.273	0.5803	
15 minute summer	20	1.019	21	126.0	3.092	0.307	0.3905	
15 minute summer	21	1.020	22	138.1	3.425	0.364	0.7909	
15 minute summer	22	1.021	23	144.6	3.483	0.298	0.4980	
15 minute summer	23	1.022	24	156.4	3.040	0.405	0.9721	
15 minute summer	24	1.023	25	160.4	3.184	0.533	0.5599	
15 minute summer	25	1.024	26	171.7	3.899	0.379	0.5617	

Results for 50 year Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	26	11	32.102	0.152	175.2	0.0285	0.0000	OK
15 minute summer	27	11	31.423	0.173	181.2	0.0568	0.0000	OK
15 minute summer	28	11	31.125	0.175	181.5	0.0000	0.0000	OK
15 minute summer	29	11	30.836	0.186	190.1	0.0833	0.0000	OK
15 minute summer	30	11	30.516	0.166	197.1	0.0705	0.0000	OK
15 minute winter	31	11	30.152	0.202	202.1	0.0663	0.0000	OK
15 minute summer	32	11	29.841	0.266	204.1	0.0460	0.0000	OK
15 minute summer	33	10	30.706	0.101	23.9	0.2148	0.0000	OK
15 minute summer	34	10	30.080	0.090	32.3	0.1317	0.0000	OK
15 minute summer	35	11	29.347	0.159	32.2	0.1796	0.0000	OK
15 minute summer	36	11	29.193	0.354	240.6	0.0545	0.0000	OK
15 minute summer	37	11	29.075	0.335	243.7	0.0506	0.0000	OK
15 minute summer	38	12	28.978	0.328	267.3	0.2626	0.0000	OK
15 minute winter	39	12	28.967	0.517	272.0	0.0988	0.0000	OK
15 minute summer	40	10	34.401	0.110	34.0	0.2593	0.0000	OK
15 minute summer	41	12	34.188	0.243	18.4	0.4927	0.0000	OK
15 minute summer	42	12	34.187	0.357	58.0	0.7431	0.0000	OK
15 minute summer	43	12	34.180	0.430	56.0	0.7591	0.0000	OK
15 minute summer	44	10	37.160	0.182	47.8	0.5426	0.0000	OK
15 minute summer	45	10	38.266	0.079	21.6	0.1594	0.0000	OK
15 minute summer	46	11	37.272	0.171	36.2	0.2972	0.0000	SURCHARGED
15 minute summer	47	12	34.176	0.437	184.7	1.0499	0.0000	OK
15 minute summer	48	12	34.098	0.460	181.3	0.8129	0.0000	OK
15 minute summer	49	10	37.193	0.082	21.6	0.1660	0.0000	OK
15 minute summer	50	11	36.274	0.313	37.0	0.5565	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	26	1.025	27	175.1	3.405	0.252	0.7879	
15 minute summer	27	1.026	28	181.5	3.210	0.322	0.5595	
15 minute summer	28	1.027	29	181.8	3.052	0.330	0.6190	
15 minute summer	29	1.028	30	189.3	3.288	0.364	0.6714	
15 minute summer	30	1.029	31	196.2	3.228	0.300	0.5981	
15 minute winter	31	1.030	32	201.4	2.938	0.423	0.9512	
15 minute summer	32	1.031	36	204.3	1.877	0.529	1.7160	
15 minute summer	33	2.000	34	23.6	1.952	0.714	0.1903	
15 minute summer	34	2.001	35	32.2	1.444	0.338	0.5369	
15 minute summer	35	2.002	36	31.9	1.101	0.796	0.2371	
15 minute summer	36	1.032	37	238.9	1.612	1.082	1.7010	
15 minute summer	37	1.033	38	243.8	1.552	0.853	1.3493	
15 minute summer	38	1.034	39	264.3	1.583	0.398	4.9638	
15 minute winter	39	1.035	78	267.4	0.949	0.230	3.9734	
15 minute summer	40	3.000	42	33.7	1.521	0.252	0.4052	
15 minute summer	41	4.000	42	14.7	0.540	0.092	1.5519	
15 minute summer	42	3.001	43	56.0	0.397	0.257	6.7641	
15 minute summer	43	3.002	47	68.0	0.425	0.312	1.0271	
15 minute summer	44	5.000	47	46.6	1.401	0.933	1.1685	
15 minute summer	45	6.000	46	21.5	1.597	0.542	0.2950	
15 minute summer	46	6.001	47	35.1	2.264	0.902	0.1238	
15 minute summer	47	3.003	48	181.3	0.923	0.837	9.8103	
15 minute summer	48	3.004	51	182.9	0.928	0.814	1.1774	
15 minute summer	49	7.000	50	21.5	1.395	0.579	0.3671	
15 minute summer	50	7.001	51	35.5	2.017	1.094	0.1385	

Results for 50 year Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	51	12	34.065	0.440	227.2	0.8627	0.0000	OK
15 minute summer	52	12	33.990	0.382	260.1	0.9117	0.0000	OK
15 minute summer	53	12	33.750	0.206	275.2	0.4685	0.0000	OK
15 minute summer	54	10	33.693	0.083	12.4	0.1360	0.0000	OK
15 minute summer	55	11	33.048	0.217	328.5	0.7042	0.0000	OK
15 minute summer	56	11	31.693	0.300	340.0	0.6499	0.0000	OK
15 minute summer	57	11	31.482	0.324	348.8	0.6857	0.0000	OK
15 minute summer	58	11	31.282	0.348	354.5	0.6711	0.0000	OK
15 minute summer	59	11	31.081	0.345	418.6	1.3324	0.0000	OK
15 minute summer	60	12	30.661	0.602	429.7	1.2561	0.0000	OK
15 minute summer	61	12	30.609	0.674	450.9	1.6185	0.0000	OK
15 minute summer	62	10	38.494	0.049	7.4	0.0705	0.0000	OK
15 minute summer	63	10	38.097	0.097	22.0	0.1685	0.0000	OK
15 minute summer	64	10	37.608	0.129	30.4	0.2966	0.0000	OK
15 minute summer	65	10	37.279	0.129	60.0	0.1871	0.0000	OK
15 minute summer	66	10	36.898	0.145	89.9	0.3341	0.0000	OK
15 minute summer	67	10	34.518	0.132	106.7	0.2346	0.0000	OK
15 minute summer	68	11	31.779	0.141	121.7	0.2400	0.0000	OK
15 minute summer	69	11	30.758	0.245	122.1	0.2771	0.0000	OK
15 minute summer	70	12	30.514	0.620	562.2	1.0950	0.0000	OK
15 minute summer	71	12	30.425	0.548	581.7	0.3690	0.0000	OK
30 minute summer	72	19	30.165	0.321	609.1	0.0238	0.0000	OK
15 minute summer	73	12	29.995	0.270	596.7	0.1305	0.0000	OK
15 minute winter	74	11	29.569	0.344	604.5	0.1024	0.0000	OK
15 minute summer	75	12	29.415	0.490	581.3	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	51	3.005	52	228.0	1.256	1.053	1.5207	
15 minute summer	52	3.006	53	262.2	2.105	1.198	3.8322	
15 minute summer	53	3.007	55	276.2	3.406	0.257	1.1877	
15 minute summer	54	8.000	55	12.1	1.250	0.554	0.2590	
15 minute summer	55	3.008	56	326.8	3.830	0.317	2.6177	
15 minute summer	56	3.009	57	339.2	2.296	0.291	1.2193	
15 minute summer	57	3.010	58	350.2	2.157	0.357	1.7989	
15 minute summer	58	3.011	59	356.9	2.143	0.455	2.5711	
15 minute summer	59	3.012	60	420.7	2.151	0.542	10.1373	
15 minute summer	60	3.013	61	432.9	1.239	0.469	4.4403	
15 minute summer	61	3.014	70	450.0	1.279	1.244	9.5008	
15 minute summer	62	9.000	63	7.3	0.864	0.231	0.1199	
15 minute summer	63	9.001	65	21.6	1.852	0.698	0.2999	
15 minute summer	64	10.000	65	30.0	1.278	0.589	0.8020	
15 minute summer	65	9.002	66	59.5	2.353	0.495	0.1896	
15 minute summer	66	9.003	67	89.0	3.404	0.695	0.9998	
15 minute summer	67	9.004	68	106.5	3.418	0.390	1.4304	
15 minute summer	68	9.005	69	122.1	2.570	0.454	0.9143	
15 minute summer	69	9.006	70	122.2	2.164	0.810	0.7958	
15 minute summer	70	3.015	71	562.6	1.716	1.565	3.7207	
15 minute summer	71	3.016	72	598.7	2.559	1.347	3.4370	
30 minute summer	72	3.017	73	565.1	3.905	0.456	0.9944	
15 minute summer	73	3.018	74	597.4	3.882	0.341	2.2120	
15 minute winter	74	3.019	75	595.7	2.723	0.398	2.7169	
15 minute summer	75	3.020	76	582.6	1.963	0.641	3.2437	

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Results for 50 year Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	76	12	29.416	0.591	582.6	0.0000	0.0000	OK
15 minute winter	77	13	29.111	0.305	581.4	0.0000	0.0000	OK
15 minute summer	78	12	28.964	0.689	879.1	0.0000	0.0000	OK
15 minute summer	79	12	28.875	0.606	895.1	1.5412	0.0000	OK
15 minute winter	80	12	28.616	0.375	868.5	0.9543	0.0000	OK
15 minute summer	81	12	27.553	0.307	868.0	0.7816	0.0000	OK
15 minute summer	82	10	26.520	0.091	11.5	0.1457	0.0000	OK
15 minute summer	83	11	26.258	0.091	11.4	0.1026	0.0000	OK
15 minute summer	84	12	26.055	0.172	23.3	0.2543	0.0000	OK
15 minute summer	85	12	26.009	0.290	38.0	0.4726	0.0000	SURCHARGED
15 minute summer	86	11	25.920	0.293	44.4	0.4513	0.0000	SURCHARGED
15 minute summer	87	11	25.773	0.238	47.1	0.2970	0.0000	SURCHARGED
15 minute summer	88	12	25.173	0.301	908.0	0.7671	0.0000	OK
60 minute winter	88_OUT	46	24.181	1.144	540.2	0.0000	0.0000	OK
15 minute summer	89	10	37.745	0.055	8.3	0.0810	0.0000	OK
15 minute summer	90	10	37.204	0.106	35.3	0.2315	0.0000	OK
15 minute summer	91	10	36.568	0.244	87.9	0.7641	0.0000	OK
15 minute summer	92	12	36.522	0.408	139.3	1.3390	0.0000	OK
15 minute summer	93	10	38.073	0.083	17.0	0.1516	0.0000	OK
15 minute summer	94	12	36.500	0.451	158.2	1.0023	0.0000	OK
15 minute summer	95	12	36.465	0.481	183.2	1.1819	0.0000	OK
15 minute summer	96	12	36.419	0.491	200.9	1.1481	0.0000	OK
15 minute summer	97	12	36.363	0.483	207.6	0.9443	0.0000	OK
15 minute summer	98	12	36.306	0.466	223.4	0.9771	0.0000	OK
15 minute summer	99	12	36.232	0.426	223.4	0.7520	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	76	3.021	77	695.5	2.843	1.937	3.0247	
15 minute winter	77	3.022	78	622.0	2.826	0.337	2.2317	
15 minute summer	78	1.036	79	895.1	1.994	1.574	2.0610	
15 minute summer	79	1.037	80	852.7	2.615	1.573	7.7051	
15 minute winter	80	1.038	81	858.5	4.160	0.341	8.1770	
15 minute summer	81	1.039	88	862.4	5.249	0.243	6.2154	
15 minute summer	82	11.000	83	11.4	1.036	0.643	0.2910	
15 minute summer	83	11.001	84	11.3	1.035	0.638	0.2334	
15 minute summer	84	11.002	85	22.8	0.753	0.573	1.0060	
15 minute summer	85	11.003	86	34.6	0.870	0.866	0.6168	
15 minute summer	86	11.004	87	44.1	1.109	1.108	0.6202	
15 minute summer	87	11.005	88	46.9	1.219	1.088	0.3368	
15 minute summer	88	1.040	88_OUT	908.1	5.570	0.245	3.2843	
60 minute winter	88_OUT	Flow through pond	230	824.0	0.163	0.013	936.2449	
15 minute summer	89	12.000	90	8.2	1.437	0.269	0.1007	
15 minute summer	90	12.001	91	35.0	1.978	0.409	0.3613	
15 minute summer	91	12.002	92	86.5	0.956	0.543	5.7077	
15 minute summer	92	12.003	94	122.5	0.810	0.564	6.0280	
15 minute summer	93	13.000	94	16.7	1.706	0.560	0.3703	
15 minute summer	94	12.004	95	148.3	0.816	0.683	6.4749	
15 minute summer	95	12.005	96	177.6	0.885	0.814	5.6917	
15 minute summer	96	12.006	97	199.7	0.955	0.917	4.9068	
15 minute summer	97	12.007	98	207.5	1.011	0.947	3.9671	
15 minute summer	98	12.008	99	223.4	1.143	1.018	3.1938	
15 minute summer	99	12.009	101	223.3	1.292	1.020	1.3475	

Results for 50 year Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	100	10	37.284	0.056	8.3	0.0824	0.0000	OK
15 minute summer	101	12	36.155	0.365	244.2	0.7786	0.0000	OK
15 minute summer	102	12	36.025	0.264	263.1	0.6263	0.0000	OK
15 minute summer	103	12	35.667	0.242	266.6	0.4574	0.0000	OK
15 minute summer	104	11	34.813	0.226	19.3	0.4365	0.0000	SURCHARGED
15 minute summer	105	11	34.627	0.261	46.0	0.5083	0.0000	SURCHARGED
15 minute summer	106	12	34.183	0.322	310.1	0.5682	0.0000	OK
15 minute summer	107	10	35.966	0.073	16.6	0.1323	0.0000	OK
15 minute winter	108	10	34.498	0.091	11.0	0.1449	0.0000	OK
15 minute summer	109	11	34.419	0.206	38.9	0.2869	0.0000	OK
15 minute summer	110	11	34.284	0.234	44.7	0.2917	0.0000	SURCHARGED
15 minute summer	111	12	34.051	0.460	379.4	1.0752	0.0000	OK
15 minute summer	112	12	33.830	0.269	385.0	0.5144	0.0000	OK
15 minute summer	113	12	33.023	0.222	409.6	0.6002	0.0000	OK
15 minute summer	114	12	31.839	0.263	425.8	0.1591	0.0000	OK
15 minute summer	115	10	31.150	0.171	61.2	0.5722	0.0000	OK
15 minute summer	116	12	30.870	0.289	87.2	0.6776	0.0000	OK
15 minute summer	117	12	30.830	0.544	501.7	0.9620	0.0000	OK
15 minute summer	118	12	30.679	0.406	505.0	0.7453	0.0000	OK
15 minute summer	119	12	30.386	0.321	505.6	0.5679	0.0000	OK
15 minute summer	120	12	29.912	0.293	513.8	0.6027	0.0000	OK
15 minute summer	121	12	29.185	0.287	537.4	0.7507	0.0000	OK
15 minute summer	122	12	27.898	0.263	538.8	0.4644	0.0000	OK
15 minute summer	123	10	33.018	0.092	41.9	0.2516	0.0000	OK
15 minute summer	124	10	31.564	0.132	55.0	0.2166	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	100	14.000	101	8.2	1.420	0.270	0.0699	
15 minute summer	101	12.010	102	244.4	1.817	1.117	1.8892	
15 minute summer	102	12.011	103	263.4	2.561	0.394	1.8204	
15 minute summer	103	12.012	106	266.5	3.272	0.267	0.5941	
15 minute summer	104	15.000	105	17.9	1.063	1.008	0.2582	
15 minute summer	105	15.001	106	45.5	1.176	1.142	1.2759	
15 minute summer	106	12.013	111	310.2	1.802	0.335	1.2639	
15 minute summer	107	16.000	109	16.4	1.997	0.439	0.1526	
15 minute winter	108	17.000	109	10.9	0.933	0.616	0.1558	
15 minute summer	109	16.001	110	37.8	1.028	0.948	1.0736	
15 minute summer	110	16.002	111	43.3	1.163	1.086	0.9769	
15 minute summer	111	12.014	112	380.3	2.377	1.734	2.2563	
15 minute summer	112	12.015	113	385.5	3.895	0.397	1.8876	
15 minute summer	113	12.016	114	410.3	4.210	0.351	2.0653	
15 minute summer	114	12.017	117	426.7	4.236	0.426	1.6685	
15 minute summer	115	18.000	116	60.5	1.437	0.574	1.6505	
15 minute summer	116	18.001	117	84.4	1.102	0.760	2.1551	
15 minute summer	117	12.018	118	502.8	2.100	1.775	1.7853	
15 minute summer	118	12.019	119	505.6	2.829	0.571	2.2460	
15 minute summer	119	12.020	120	505.9	3.489	0.363	1.5841	
15 minute summer	120	12.021	121	514.3	3.821	0.351	2.1564	
15 minute summer	121	12.022	122	538.8	4.286	0.383	3.8339	
15 minute summer	122	12.023	138	538.3	5.020	0.304	0.9426	
15 minute summer	123	19.000	124	41.7	2.124	0.351	0.5668	
15 minute summer	124	19.001	125	54.5	2.752	0.541	0.4377	

Results for 50 year Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	125	10	30.704	0.093	54.5	0.1052	0.0000	OK
15 minute summer	126	10	29.812	0.140	64.3	0.2124	0.0000	OK
15 minute summer	127	10	30.062	0.105	46.9	0.2970	0.0000	OK
15 minute summer	128	10	28.737	0.153	116.2	0.2521	0.0000	OK
15 minute summer	129	10	27.917	0.171	138.6	0.3715	0.0000	OK
15 minute summer	130	11	27.260	0.335	138.6	0.0000	0.0000	OK
15 minute summer	131	13	27.283	0.375	133.0	0.0000	0.0000	OK
15 minute summer	132	13	27.268	0.457	128.9	0.0000	0.0000	OK
15 minute summer	133	13	27.271	0.476	145.6	0.1022	0.0000	OK
15 minute summer	134	10	28.905	0.057	13.3	0.0959	0.0000	OK
15 minute summer	135	10	28.264	0.103	21.0	0.1496	0.0000	OK
15 minute summer	136	10	27.950	0.093	27.8	0.1320	0.0000	OK
15 minute summer	137	12	27.246	0.621	190.9	0.1024	0.0000	OK
15 minute summer	138	12	27.295	0.717	699.7	0.0000	0.0000	SURCHARGED
15 minute summer	139	12	27.190	0.631	745.4	0.3090	0.0000	OK
15 minute winter	140	12	26.826	0.294	853.2	0.1066	0.0000	OK
15 minute summer	141	10	39.120	0.070	10.6	0.0584	0.0000	OK
15 minute summer	142	10	38.978	0.078	10.5	0.0000	0.0000	OK
15 minute summer	143	10	38.842	0.067	10.5	0.0000	0.0000	OK
15 minute summer	144	10	38.702	0.102	16.8	0.0407	0.0000	OK
15 minute summer	145	10	38.679	0.127	27.3	0.0805	0.0000	OK
15 minute summer	146	10	38.592	0.154	37.6	0.0875	0.0000	OK
15 minute summer	147	11	38.572	0.164	37.3	0.0000	0.0000	OK
15 minute summer	148	11	38.566	0.170	43.1	0.0505	0.0000	OK
15 minute summer	149	11	38.550	0.183	48.5	0.0470	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	125	19.002	126	54.2	2.622	0.344	0.2137	
15 minute summer	126	19.003	128	63.9	2.581	0.639	0.6334	
15 minute summer	127	20.000	128	46.1	2.148	0.251	1.0284	
15 minute summer	128	19.004	129	116.0	2.937	0.299	0.8063	
15 minute summer	129	19.005	130	138.6	2.265	0.306	2.8441	
15 minute summer	130	19.006	131	133.0	1.182	0.599	1.2203	
15 minute summer	131	19.007	132	128.9	1.219	0.585	1.7503	
15 minute summer	132	19.008	133	139.5	1.168	0.489	2.1621	
15 minute summer	133	19.009	137	158.0	1.107	0.241	2.6454	
15 minute summer	134	21.000	135	13.2	1.388	0.306	0.1115	
15 minute summer	135	21.001	136	20.9	1.712	0.707	0.1353	
15 minute summer	136	21.002	137	27.6	2.464	0.661	0.1454	
15 minute summer	137	19.010	138	189.8	0.559	0.528	11.0185	
15 minute summer	138	12.024	139	731.3	2.051	2.032	4.4727	
15 minute summer	139	12.025	140	699.4	2.970	1.929	4.4140	
15 minute winter	140	12.026	185	735.4	5.433	0.321	2.3906	
15 minute summer	141	22.000	142	10.5	1.223	0.443	0.0724	
15 minute summer	142	22.001	143	10.5	1.136	0.533	0.0378	
15 minute summer	143	22.002	144	10.4	1.062	0.192	0.0907	
15 minute summer	144	22.003	145	16.7	0.681	0.235	0.2882	
15 minute summer	145	22.004	146	27.0	0.965	0.380	0.2652	
15 minute summer	146	22.005	147	37.3	0.843	0.335	0.4257	
15 minute summer	147	22.006	148	37.4	0.788	0.329	0.1742	
15 minute summer	148	22.007	149	43.2	0.848	0.385	0.4642	
15 minute summer	149	22.008	150	48.7	0.879	0.435	0.4731	

Results for 50 year Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	150	11	38.534	0.194	54.0	0.0438	0.0000	OK
15 minute summer	151	11	38.519	0.202	59.8	0.0444	0.0000	OK
15 minute summer	152	11	38.502	0.208	64.2	0.0319	0.0000	OK
15 minute summer	153	11	38.481	0.214	66.4	0.0154	0.0000	OK
15 minute summer	154	11	38.458	0.221	66.2	0.0000	0.0000	OK
15 minute summer	155	11	38.441	0.230	74.7	0.0580	0.0000	OK
15 minute summer	156	11	38.424	0.234	75.6	0.0087	0.0000	OK
15 minute summer	157	11	38.410	0.240	77.9	0.0183	0.0000	OK
15 minute summer	158	11	38.387	0.250	83.4	0.0435	0.0000	OK
15 minute summer	159	11	38.371	0.255	84.1	0.0084	0.0000	OK
15 minute summer	160	11	38.322	0.240	99.6	0.4368	0.0000	OK
15 minute summer	161	12	38.113	0.261	106.3	0.5024	0.0000	OK
15 minute summer	162	1	38.039	0.000	0.0	0.0000	0.0000	OK
15 minute summer	163	12	37.965	0.254	106.8	0.0000	0.0000	OK
15 minute summer	164	12	37.886	0.204	100.8	0.0000	0.0000	OK
15 minute summer	165	12	37.561	0.136	115.0	0.0880	0.0000	OK
15 minute summer	166	12	36.905	0.130	124.1	0.0872	0.0000	OK
15 minute summer	167	12	36.276	0.151	128.0	0.0430	0.0000	OK
15 minute summer	168	12	35.856	0.131	133.6	0.0540	0.0000	OK
15 minute summer	169	12	35.128	0.153	138.5	0.0554	0.0000	OK
15 minute summer	170	12	34.844	0.144	146.6	0.0857	0.0000	OK
15 minute winter	171	12	33.102	0.127	155.1	0.0818	0.0000	OK
15 minute winter	172	12	32.231	0.206	155.4	0.0000	0.0000	OK
15 minute winter	173	10	31.817	0.035	4.1	0.0457	0.0000	OK
15 minute summer	174	12	31.405	0.195	166.6	0.3395	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	150	22.009	151	54.1	0.918	0.488	0.4376	
15 minute summer	151	22.010	152	59.8	0.971	0.533	0.4454	
15 minute summer	152	22.011	153	64.2	1.006	0.578	0.5521	
15 minute summer	153	22.012	154	66.2	1.002	0.594	0.6313	
15 minute summer	154	22.013	155	65.9	0.953	0.590	0.5709	
15 minute summer	155	22.014	156	74.3	1.037	0.670	0.4848	
15 minute summer	156	22.015	157	75.3	1.024	0.664	0.4538	
15 minute summer	157	22.016	158	77.3	1.017	0.690	0.7936	
15 minute summer	158	22.017	159	82.8	1.051	0.741	0.5260	
15 minute summer	159	22.018	160	84.5	1.096	0.755	0.8286	
15 minute summer	160	22.019	161	99.5	1.271	0.686	3.4095	
15 minute summer	161	22.020	163	106.8	1.321	0.799	2.5370	
15 minute summer	162	23.000	163	0.0	0.000	0.000	0.0126	
15 minute summer	163	22.021	164	100.8	1.506	0.903	0.6493	
15 minute summer	164	22.022	165	106.0	2.199	0.580	1.4942	
15 minute summer	165	22.023	166	114.7	3.290	0.285	0.5681	
15 minute summer	166	22.024	167	124.0	3.287	0.264	0.4496	
15 minute summer	167	22.025	168	127.8	3.375	0.342	0.4385	
15 minute summer	168	22.026	169	133.5	3.489	0.268	0.4666	
15 minute summer	169	22.027	170	138.3	3.398	0.357	0.3012	
15 minute summer	170	22.028	171	146.3	4.075	0.309	1.1188	
15 minute winter	171	22.029	172	155.4	3.287	0.253	0.4815	
15 minute winter	172	22.030	174	155.6	2.654	0.513	0.8081	
15 minute winter	173	24.000	174	4.1	1.338	0.110	0.0247	
15 minute summer	174	22.031	176	167.0	2.824	0.461	0.6711	

Results for 50 year Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	175	10	31.373	0.109	15.2	0.1910	0.0000	OK
15 minute summer	176	12	31.042	0.202	180.0	0.0000	0.0000	OK
15 minute summer	177	12	30.824	0.153	185.6	0.0591	0.0000	OK
15 minute summer	178	12	29.866	0.163	200.9	0.1769	0.0000	OK
30 minute summer	179	20	29.079	0.333	191.4	0.0000	0.0000	OK
15 minute winter	180	11	28.921	0.198	209.5	0.3904	0.0000	OK
15 minute summer	181	12	27.948	0.179	213.4	0.3074	0.0000	OK
15 minute summer	182	12	27.162	0.188	222.7	0.1260	0.0000	OK
15 minute winter	183	11	26.763	0.217	220.4	0.0000	0.0000	OK
15 minute summer	184	12	26.422	0.230	233.6	0.4965	0.0000	OK
15 minute winter	185	13	25.797	0.421	958.0	1.0720	0.0000	OK
15 minute winter	186	13	25.506	0.320	977.2	0.0000	0.0000	OK
15 minute summer	187	11	25.155	0.176	37.3	0.4535	0.0000	OK
15 minute summer	188	11	24.856	0.178	42.9	0.2427	0.0000	OK
15 minute summer	189	11	24.726	0.173	43.1	0.1957	0.0000	OK
15 minute summer	190	14	24.579	0.659	963.5	0.0000	0.0000	OK
15 minute winter	191	12	24.481	0.643	1028.1	0.0000	0.0000	OK
60 minute winter	191_OUT	46	24.176	1.139	604.7	0.0000	0.0000	OK
15 minute summer	192	10	21.484	0.091	14.3	0.1538	0.0000	OK
15 minute summer	193	10	22.487	0.150	46.0	0.4367	0.0000	OK
15 minute summer	194	11	21.389	0.350	127.9	1.0062	0.0000	OK
15 minute summer	195	12	20.707	0.153	23.9	0.3067	0.0000	OK
15 minute summer	196	10	21.677	0.082	11.5	0.1325	0.0000	OK
15 minute summer	197	11	20.694	0.333	35.0	0.4772	0.0000	OK
15 minute summer	198	10	21.833	0.091	20.7	0.1808	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	175	25.000	176	14.9	1.113	0.840	0.2683	
15 minute summer	176	22.032	177	180.2	3.514	0.582	0.3642	
15 minute summer	177	22.033	178	185.8	4.220	0.356	0.6328	
15 minute summer	178	22.034	179	201.2	2.605	0.402	1.1532	
30 minute summer	179	22.035	180	195.2	2.416	1.708	0.5525	
15 minute winter	180	22.036	181	208.4	3.824	0.421	0.8617	
15 minute summer	181	22.037	182	213.3	3.982	0.408	0.6279	
15 minute summer	182	22.038	183	222.0	4.022	0.514	0.4217	
15 minute winter	183	22.039	184	219.0	2.844	0.399	0.9498	
15 minute summer	184	22.040	185	238.9	3.361	0.361	0.7535	
15 minute winter	185	12.027	186	977.2	4.254	0.420	2.0566	
15 minute winter	186	12.028	190	974.6	5.162	0.333	1.7104	
15 minute summer	187	26.000	188	36.3	1.140	0.912	1.2188	
15 minute summer	188	26.001	189	43.1	1.006	0.609	1.3078	
15 minute summer	189	26.002	190	43.0	1.069	0.607	0.3243	
15 minute summer	190	12.029	191	1064.4	2.343	1.663	3.1573	
15 minute winter	191	12.030	191_OUT	1000.3	2.047	1.305	15.8605	
60 minute winter	191_OUT	Flow through pond	230	824.0	0.163	0.013	936.2449	
15 minute summer	192	27.000	194	14.0	0.729	0.353	0.9033	
15 minute summer	193	28.000	194	45.3	1.686	0.709	0.6383	
15 minute summer	194	27.001	200	122.9	1.286	1.110	5.2536	
15 minute summer	195	29.000	197	23.6	0.763	0.334	1.4371	
15 minute summer	196	30.000	197	11.3	1.181	0.539	0.1653	
15 minute summer	197	29.001	199	34.1	0.454	0.308	0.9591	
15 minute summer	198	31.000	199	20.5	1.918	0.607	0.1487	



Results for 50 year Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	199	11	20.691	0.358	51.0	0.5124	0.0000	OK
15 minute summer	200	11	20.682	0.457	202.6	0.9949	0.0000	SURCHARGED
15 minute summer	201	11	20.517	0.442	247.0	1.3109	0.0000	OK
15 minute winter	202	14	19.369	0.156	23.3	0.3488	0.0000	OK
30 minute summer	203	21	19.363	0.282	23.2	0.4154	0.0000	OK
30 minute summer	204	21	19.365	0.465	30.1	0.9010	0.0000	OK
30 minute summer	205	21	19.364	0.642	246.4	1.6338	0.0000	OK
30 minute summer	206	21	19.353	0.645	243.5	1.7174	0.0000	OK
15 minute summer	207	10	20.972	0.177	47.8	0.5276	0.0000	OK
15 minute winter	208	13	19.341	0.652	312.0	1.8642	0.0000	OK
15 minute winter	209	13	19.325	0.657	328.8	2.0122	0.0000	OK
15 minute winter	210	13	19.301	0.667	335.1	1.9830	0.0000	OK
30 minute summer	211	21	19.282	0.670	313.4	1.9106	0.0000	OK
30 minute summer	212	21	19.269	0.667	323.6	2.0905	0.0000	OK
30 minute winter	213	21	19.258	0.703	313.6	1.9077	0.0000	OK
30 minute summer	214	21	19.223	0.713	332.6	1.9308	0.0000	OK
15 minute summer	215	10	20.413	0.088	23.0	0.1787	0.0000	OK
15 minute summer	216	10	20.119	0.154	51.3	0.3443	0.0000	OK
30 minute winter	217	22	19.189	0.700	370.4	1.7808	0.0000	OK
15 minute summer	218	10	22.141	0.176	36.8	0.4491	0.0000	OK
15 minute summer	219	11	21.880	0.173	38.1	0.2024	0.0000	OK
15 minute summer	220	11	21.815	0.170	38.2	0.1917	0.0000	OK
15 minute summer	221	10	23.557	0.042	5.1	0.0563	0.0000	OK
15 minute summer	222	11	21.690	0.242	90.0	0.5305	0.0000	OK
60 minute winter	223	39	21.542	0.215	60.1	0.4410	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	199	29.002	200	52.3	0.616	0.467	1.1413	
15 minute summer	200	27.002	201	201.8	1.328	1.261	4.4851	
15 minute summer	201	27.003	205	243.2	1.431	1.122	6.8484	
15 minute winter	202	32.000	203	22.8	0.807	0.205	0.9382	
30 minute summer	203	32.001	204	20.8	0.706	0.131	1.4063	
30 minute summer	204	32.002	205	26.6	0.478	0.094	3.8938	
30 minute summer	205	27.004	206	237.4	0.672	0.519	4.0467	
30 minute summer	206	27.005	208	237.1	0.656	0.532	5.8108	
15 minute summer	207	33.000	208	46.6	1.440	0.906	1.1782	
15 minute winter	208	27.006	209	302.6	0.839	0.684	6.5764	
15 minute winter	209	27.007	210	318.7	0.884	0.714	10.5487	
15 minute winter	210	27.008	211	323.5	0.892	0.725	6.8661	
30 minute summer	211	27.009	212	306.1	0.867	0.662	2.9185	
30 minute summer	212	27.010	213	308.1	0.884	0.691	14.8825	
30 minute winter	213	27.011	214	297.0	0.785	0.671	14.6699	
30 minute summer	214	27.012	217	336.9	0.860	0.762	6.8338	
15 minute summer	215	34.000	216	22.8	1.049	0.330	0.4444	
15 minute summer	216	34.001	217	50.4	1.823	0.735	0.6890	
30 minute winter	217	27.013	268	395.6	0.950	0.885	11.9142	
15 minute summer	218	35.000	219	35.9	1.133	0.901	0.9815	
15 minute summer	219	35.001	220	38.2	0.920	0.538	0.6253	
15 minute summer	220	35.002	222	38.3	1.001	0.540	0.4373	
15 minute summer	221	36.000	222	5.0	1.286	0.158	0.0412	
15 minute summer	222	35.003	223	90.8	1.234	0.569	3.6957	
60 minute winter	223	35.004	225	70.1	0.971	0.216	3.2601	

Results for 50 year Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	224	38	21.551	0.083	4.5	0.1161	0.0000	OK
60 minute winter	225	38	21.561	0.517	80.9	0.9286	0.0000	SURCHARGED
15 minute summer	226	10	24.508	0.093	34.5	0.2286	0.0000	OK
15 minute summer	227	10	23.708	0.148	76.6	0.4102	0.0000	OK
15 minute summer	228	11	23.563	0.276	20.7	0.5489	0.0000	SURCHARGED
15 minute summer	229	11	23.173	0.332	93.1	0.3754	0.0000	SURCHARGED
60 minute winter	230	47	24.159	1.159	824.0	0.0000	0.0000	SURCHARGED
60 minute winter	231	47	24.069	1.084	514.4	1.9146	0.0000	SURCHARGED
60 minute winter	232	47	23.567	0.604	514.5	1.0681	0.0000	SURCHARGED
60 minute winter	233	47	23.445	0.502	514.5	0.0000	0.0000	OK
60 minute winter	234	61	23.027	0.584	531.4	0.0000	0.0000	OK
60 minute winter	235	61	22.974	0.545	531.3	0.0000	0.0000	OK
60 minute summer	236	36	22.939	0.522	524.4	0.0000	0.0000	OK
60 minute winter	237	45	22.896	0.490	531.4	0.0000	0.0000	OK
60 minute winter	238	44	22.792	0.395	533.0	0.7881	0.0000	OK
15 minute summer	239	10	23.079	0.112	30.4	0.2575	0.0000	OK
15 minute summer	240	11	22.691	0.169	30.1	0.1912	0.0000	OK
15 minute summer	241	1	23.744	0.000	0.0	0.0000	0.0000	OK
15 minute summer	242	1	23.485	0.000	0.0	0.0000	0.0000	OK
15 minute summer	243	1	23.298	0.000	0.0	0.0000	0.0000	OK
15 minute summer	244	11	22.640	0.155	29.6	0.1750	0.0000	OK
60 minute winter	245	36	22.547	0.544	540.0	0.9608	0.0000	OK
30 minute winter	246	37	22.430	0.433	591.1	0.1231	0.0000	OK
60 minute winter	247	38	22.108	0.458	550.1	0.0000	0.0000	OK
60 minute winter	248	38	21.560	0.744	595.0	0.0000	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute summer	224	37.000	225	5.8	0.815	0.327	0.1726	
60 minute winter	225	35.005	248	65.3	0.804	0.409	5.0029	
15 minute summer	226	38.000	227	34.3	1.585	0.360	0.5529	
15 minute summer	227	38.001	229	75.7	2.299	0.689	0.4915	
15 minute summer	228	39.000	229	19.3	1.133	1.088	0.5245	
15 minute summer	229	38.002	234	93.6	1.356	1.320	1.5549	
60 minute winter	230	40.000	231	514.4	1.826	1.814	2.4531	
60 minute winter	231	Orifice	232	514.5				
60 minute winter	232	40.002	233	514.5	1.894	1.775	2.9682	
60 minute winter	233	40.003	234	514.5	2.105	1.795	2.0828	
60 minute winter	234	38.003	235	531.3	1.948	1.851	2.1760	
60 minute winter	235	38.004	236	531.3	2.026	1.800	1.6883	
60 minute summer	236	38.005	237	524.4	2.104	1.785	1.4858	
60 minute winter	237	38.006	238	531.4	2.402	1.811	1.0833	
60 minute winter	238	38.007	245	533.1	2.383	0.487	3.5474	
15 minute summer	239	41.000	240	30.1	1.186	0.500	0.8509	
15 minute summer	240	41.001	244	29.6	0.978	0.735	0.1874	
15 minute summer	241	42.000	242	0.0	0.000	0.000	0.0000	
15 minute summer	242	42.001	243	0.0	0.000	0.000	0.0000	
15 minute summer	243	42.002	244	0.0	0.000	0.000	0.0000	
15 minute summer	244	41.002	245	29.7	1.067	0.745	0.5018	
60 minute winter	245	38.008	246	539.9	2.433	1.752	0.6886	
30 minute winter	246	38.009	247	529.0	2.460	0.839	8.9256	
60 minute winter	247	38.010	248	542.4	2.359	0.970	1.7387	
60 minute winter	248	35.006	249	593.8	2.108	2.077	3.2204	

Results for 50 year Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	249	38	21.467	0.671	593.8	0.0000	0.0000	SURCHARGED
60 minute winter	250	38	21.385	0.607	592.2	0.0000	0.0000	SURCHARGED
15 minute summer	251	1	22.700	0.000	0.0	0.0000	0.0000	OK
15 minute summer	252	10	22.298	0.009	0.0	0.0000	0.0000	OK
15 minute summer	253	10	22.391	0.095	22.5	0.1899	0.0000	OK
15 minute summer	254	11	22.297	0.167	40.9	0.3084	0.0000	OK
15 minute summer	255	11	21.987	0.130	66.7	0.3665	0.0000	OK
15 minute summer	256	10	20.972	0.104	20.2	0.1991	0.0000	OK
60 minute summer	257	37	20.806	0.125	14.0	0.1409	0.0000	OK
30 minute winter	258	21	20.811	0.427	72.8	0.6776	0.0000	SURCHARGED
60 minute winter	259	47	20.811	0.727	621.3	1.2838	0.0000	SURCHARGED
30 minute winter	260	20	20.604	0.546	630.0	0.0000	0.0000	OK
15 minute summer	261	10	21.913	0.086	23.5	0.1747	0.0000	OK
15 minute summer	262	10	21.346	0.111	23.3	0.1255	0.0000	OK
15 minute summer	263	10	21.183	0.160	66.1	0.4308	0.0000	OK
60 minute winter	264	47	20.652	0.357	35.6	0.4035	0.0000	SURCHARGED
60 minute winter	265	47	20.612	0.658	641.4	0.0000	0.0000	SURCHARGED
60 minute winter	266	47	20.560	0.625	644.5	0.0000	0.0000	SURCHARGED
60 minute summer	267	35	20.252	0.361	681.0	0.0866	0.0000	OK
60 minute summer	268	36	19.224	0.847	1003.9	0.0458	0.0000	SURCHARGED
60 minute summer	269	36	19.152	0.788	1012.4	0.1009	0.0000	OK
60 minute summer	270	36	19.113	0.762	1010.0	0.0000	0.0000	OK
60 minute summer	271	36	19.066	0.727	1015.6	0.0669	0.0000	OK
15 minute winter	272	14	18.867	0.542	1059.6	0.1155	0.0000	OK
30 minute summer	273	21	18.785	0.812	1084.9	2.4639	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute winter	249	35.007	250	592.2	2.103	2.083	2.9289	
60 minute winter	250	35.008	259	589.9	2.171	2.004	0.8623	
15 minute summer	251	43.000	252	0.0	0.000	0.000	0.0000	
15 minute summer	252	43.001	254	0.2	0.013	0.002	0.1199	
15 minute summer	253	44.000	254	22.4	0.937	0.329	0.2302	
15 minute summer	254	43.002	255	40.0	1.314	0.833	0.7050	
15 minute summer	255	43.003	258	66.4	2.343	0.362	0.9395	
15 minute summer	256	45.000	257	20.0	1.200	0.399	0.3339	
60 minute summer	257	45.001	258	20.7	1.226	0.313	0.2845	
30 minute winter	258	43.004	259	69.9	1.063	0.632	2.6797	
60 minute winter	259	35.009	260	620.7	2.222	2.191	4.1410	
30 minute winter	260	35.010	265	631.3	2.270	0.500	0.8551	
15 minute summer	261	46.000	262	23.3	1.399	0.311	0.4787	
15 minute summer	262	46.001	263	22.9	1.244	0.428	0.2380	
15 minute summer	263	46.002	264	65.5	1.672	0.538	2.6147	
60 minute winter	264	46.003	265	41.3	1.357	0.302	0.1913	
60 minute winter	265	35.011	266	644.5	2.326	2.220	2.9675	
60 minute winter	266	35.012	267	680.1	3.053	2.190	4.7017	
60 minute summer	267	35.013	268	668.9	3.814	0.700	2.5230	
60 minute summer	269	27.015	270	1010.0	2.121	1.851	5.6205	
60 minute summer	270	27.016	271	1014.0	2.230	1.850	5.0074	
60 minute summer	271	27.017	272	1037.7	2.713	1.878	4.4810	
15 minute winter	272	27.018	273	1006.7	2.271	0.375	5.3544	
30 minute summer	273	27.019	287	1075.7	2.179	1.994	2.0576	

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Results for 50 year Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	274	11	18.510	0.236	67.6	0.8461	0.0000	OK
15 minute summer	275	10	18.742	0.073	17.0	0.1335	0.0000	OK
15 minute summer	276	12	18.145	0.265	89.6	0.4370	0.0000	OK
15 minute summer	277	12	18.110	0.308	95.7	0.4797	0.0000	OK
15 minute summer	278	9	18.726	0.070	8.3	0.1018	0.0000	OK
15 minute summer	279	11	18.694	0.262	92.0	1.1167	0.0000	OK
15 minute winter	280	12	18.080	0.457	182.7	0.8674	0.0000	OK
15 minute winter	281	13	18.040	0.479	178.6	0.8875	0.0000	OK
30 minute summer	282	21	18.050	0.534	187.7	1.1419	0.0000	SURCHARGED
30 minute summer	283	22	17.993	0.533	184.4	0.9747	0.0000	SURCHARGED
15 minute summer	284	11	19.020	0.291	23.9	0.6181	0.0000	SURCHARGED
30 minute summer	285	20	17.948	0.516	204.2	0.9671	0.0000	OK
30 minute winter	286	21	17.963	0.581	193.5	1.1559	0.0000	SURCHARGED
30 minute summer	287	21	17.895	0.847	1254.4	2.1558	0.0000	SURCHARGED
2160 minute winter	287_OUT	2100	15.989	1.692	118.4	0.0000	0.0000	OK
15 minute summer	288	10	25.030	0.101	17.0	0.1770	0.0000	OK
15 minute summer	289	10	24.950	0.175	61.9	0.2369	0.0000	OK
15 minute summer	290	10	24.697	0.124	67.7	0.2051	0.0000	OK
15 minute summer	291	1	26.954	0.000	0.0	0.0000	0.0000	OK
15 minute summer	292	10	26.737	0.070	12.0	0.0660	0.0000	OK
15 minute summer	293	10	26.352	0.102	28.5	0.1332	0.0000	OK
15 minute summer	294	10	25.439	0.116	28.2	0.0000	0.0000	OK
15 minute summer	295	11	24.555	0.254	95.0	0.0000	0.0000	OK
15 minute summer	296	11	24.525	0.252	101.7	0.0710	0.0000	OK
15 minute summer	297	11	24.396	0.144	104.2	0.0252	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	274	47.000	276	65.0	1.188	0.920	3.2599	
15 minute summer	275	48.000	276	16.9	2.104	0.410	0.0738	
15 minute summer	276	47.001	277	88.7	0.929	0.556	3.3662	
15 minute summer	277	47.002	280	86.5	0.824	0.542	5.4693	
15 minute summer	278	49.000	279	8.3	0.684	0.209	0.1862	
15 minute summer	279	49.001	280	88.9	1.191	0.805	4.5710	
15 minute winter	280	47.003	281	172.6	0.932	0.792	6.1444	
15 minute winter	281	47.004	282	173.3	0.872	0.796	4.5971	
30 minute summer	282	47.005	283	181.6	0.932	0.834	5.8590	
30 minute summer	283	47.006	285	177.8	0.899	0.811	2.8890	
15 minute summer	284	50.000	285	22.1	1.258	1.251	0.3907	
30 minute summer	285	47.007	286	202.9	1.047	0.935	5.3110	
30 minute winter	286	47.008	287	192.8	1.181	0.887	3.6030	
30 minute summer	287	27.020	287_OUT	1215.5	2.376	2.256	7.2021	
2160 minute winter	287_OUT	Flow through pond	354	89.8	0.013	0.002	6086.5269	
15 minute summer	288	51.000	289	16.8	0.819	0.236	0.3980	
15 minute summer	289	51.001	290	61.3	1.492	0.433	1.6537	
15 minute summer	290	51.002	295	67.1	1.207	0.181	0.4406	
15 minute summer	291	52.000	292	0.0	0.000	0.000	0.0496	
15 minute summer	292	52.001	293	11.9	1.142	0.443	0.1909	
15 minute summer	293	52.002	294	28.2	2.061	0.803	0.3273	
15 minute summer	294	52.003	295	27.9	1.915	0.942	0.1574	
15 minute summer	295	51.003	296	95.6	1.209	0.861	0.7106	
15 minute summer	296	51.004	297	101.0	1.738	0.909	0.3955	
15 minute summer	297	51.005	298	105.3	2.712	0.318	0.4998	



Results for 50 year Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	298	11	24.046	0.144	115.4	0.0853	0.0000	OK
15 minute summer	299	11	23.863	0.140	115.3	0.0000	0.0000	OK
15 minute summer	300	11	23.632	0.140	115.3	0.0000	0.0000	OK
15 minute summer	301	11	23.502	0.147	115.3	0.0000	0.0000	OK
15 minute summer	302	11	23.458	0.263	47.8	0.7844	0.0000	SURCHARGED
15 minute summer	303	11	23.090	0.161	45.9	0.1819	0.0000	OK
15 minute summer	304	11	23.082	0.362	160.6	0.0000	0.0000	OK
15 minute summer	305	11	23.034	0.335	164.4	0.0502	0.0000	OK
15 minute winter	306	11	22.900	0.220	155.5	0.0000	0.0000	OK
15 minute winter	307	11	22.707	0.171	169.1	0.0000	0.0000	OK
15 minute summer	308	10	22.268	0.124	32.7	0.2970	0.0000	OK
15 minute winter	309	11	21.947	0.206	200.7	0.0000	0.0000	OK
15 minute summer	310	11	21.416	0.255	195.9	0.0000	0.0000	OK
15 minute summer	311	12	21.381	0.339	196.4	0.0400	0.0000	OK
15 minute summer	312	10	20.957	0.090	22.1	0.1844	0.0000	OK
30 minute summer	313	19	20.689	0.357	202.8	0.0000	0.0000	OK
15 minute summer	314	12	20.538	0.241	216.9	0.0000	0.0000	OK
15 minute summer	315	10	26.305	0.131	55.2	0.4284	0.0000	OK
15 minute summer	316	10	25.027	0.125	65.8	0.1934	0.0000	OK
15 minute summer	317	10	24.349	0.221	91.4	0.5095	0.0000	OK
15 minute summer	318	10	24.269	0.169	105.5	0.3267	0.0000	OK
15 minute summer	319	10	23.995	0.182	113.3	0.3112	0.0000	OK
15 minute summer	320	11	23.780	0.190	178.1	0.6934	0.0000	OK
15 minute summer	321	10	22.980	0.097	20.7	0.1882	0.0000	OK
15 minute summer	322	10	22.841	0.111	35.2	0.1885	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	298	51.006	299	115.3	3.021	0.319	0.2104	
15 minute summer	299	51.007	300	115.3	3.072	0.305	0.2440	
15 minute summer	300	51.008	301	115.3	2.968	0.301	0.1463	
15 minute summer	301	51.009	304	115.2	2.866	0.335	0.1848	
15 minute summer	302	53.000	303	45.9	1.177	1.153	1.1947	
15 minute summer	303	53.001	304	45.4	0.968	0.415	0.7450	
15 minute summer	304	51.010	305	160.5	1.504	1.435	0.7076	
15 minute summer	305	51.011	306	193.5	2.217	1.731	0.5145	
15 minute winter	306	51.012	307	169.1	2.879	0.653	0.5059	
15 minute winter	307	51.013	309	169.8	3.459	0.441	0.2943	
15 minute summer	308	54.000	309	32.3	1.486	0.550	0.3029	
15 minute winter	309	51.014	310	198.6	2.444	0.442	2.4489	
15 minute summer	310	51.015	311	194.2	1.828	0.372	0.5059	
15 minute summer	311	51.016	313	198.3	1.611	0.982	6.5759	
15 minute summer	312	55.000	313	22.0	2.085	0.592	0.0575	
30 minute summer	313	51.017	314	194.7	1.931	1.210	1.3942	
15 minute summer	314	51.018	329	221.5	2.621	0.228	0.3303	
15 minute summer	315	56.000	316	54.3	2.326	0.603	0.9392	
15 minute summer	316	56.001	317	65.6	2.142	0.343	0.7313	
15 minute summer	317	56.002	318	90.8	1.574	0.571	0.2555	
15 minute summer	318	56.003	319	105.0	2.084	0.324	0.5553	
15 minute summer	319	56.004	320	112.8	2.080	0.330	0.4183	
15 minute summer	320	56.005	326	176.9	3.268	0.481	3.1185	
15 minute summer	321	57.000	322	20.5	1.144	0.336	0.1991	
15 minute summer	322	57.001	324	34.7	1.844	0.452	0.5361	

Results for 50 year Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	323	11	20.847	0.173	32.7	0.4289	0.0000	OK
15 minute summer	324	11	20.833	0.320	92.5	0.7129	0.0000	OK
15 minute summer	325	10	22.419	0.112	32.2	0.2668	0.0000	OK
15 minute summer	326	11	20.806	0.464	299.9	0.8675	0.0000	OK
15 minute summer	327	11	20.698	0.385	313.6	0.7984	0.0000	OK
15 minute summer	328	11	20.559	0.268	313.9	0.4872	0.0000	OK
15 minute summer	329	12	20.577	0.597	545.5	0.3265	0.0000	SURCHARGED
15 minute summer	330	11	19.939	0.436	59.8	1.4380	0.0000	SURCHARGED
15 minute summer	331	11	19.868	0.455	54.5	0.5151	0.0000	SURCHARGED
15 minute summer	332	12	19.847	0.762	594.6	0.0000	0.0000	SURCHARGED
15 minute summer	333	12	19.725	0.669	595.3	0.0000	0.0000	SURCHARGED
15 minute summer	334	12	19.677	0.633	595.7	0.0000	0.0000	SURCHARGED
15 minute summer	335	12	19.524	0.495	596.1	0.8747	0.0000	OK
15 minute summer	336	12	19.268	0.341	597.1	0.6031	0.0000	OK
1440 minute winter	336_OUT	1380	15.949	1.652	36.2	0.0000	0.0000	OK
15 minute summer	337	11	20.478	0.130	23.9	0.1199	0.0000	OK
15 minute summer	338	11	20.463	0.250	23.8	0.2830	0.0000	SURCHARGED
15 minute summer	339	10	20.839	0.083	36.8	0.2120	0.0000	OK
15 minute summer	340	11	20.422	0.304	57.4	0.3440	0.0000	SURCHARGED
15 minute summer	341	10	19.601	0.127	24.8	0.2652	0.0000	OK
15 minute summer	342	11	19.564	0.319	105.5	0.5532	0.0000	SURCHARGED
15 minute summer	343	10	18.851	0.203	52.0	0.6117	0.0000	OK
15 minute summer	344	11	18.770	0.245	51.0	0.2769	0.0000	OK
15 minute summer	345	11	18.730	0.354	158.9	0.5714	0.0000	OK
15 minute summer	346	11	18.544	0.229	175.2	0.4388	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	323	58.000	324	30.1	0.679	0.189	2.5263	
15 minute summer	324	57.002	326	90.9	0.684	0.419	7.3267	
15 minute summer	325	59.000	326	31.7	1.654	0.463	0.5611	
15 minute summer	326	56.006	327	300.4	1.408	1.050	3.5173	
15 minute summer	327	56.007	328	312.1	1.993	1.088	1.9533	
15 minute summer	328	56.008	329	311.4	1.684	0.242	1.7992	
15 minute summer	329	51.019	332	543.7	2.518	1.256	5.7204	
15 minute summer	330	60.000	331	54.5	1.050	0.770	1.5477	
15 minute summer	331	60.001	332	50.8	1.031	0.710	0.4705	
15 minute summer	332	51.020	333	595.3	2.114	2.091	4.7065	
15 minute summer	333	51.021	334	595.7	2.115	2.040	1.8529	
15 minute summer	334	51.022	335	596.1	2.168	2.065	2.2320	
15 minute summer	335	51.023	336	597.1	2.848	0.816	1.8691	
15 minute summer	336	51.024	336_OUT	599.7	3.778	0.577	5.9015	
1440 minute winter	336_OUT	Flow through pond	354	118.8	0.017	0.003	6087.3882	
15 minute summer	337	61.000	338	23.8	1.048	0.499	0.5089	
15 minute summer	338	61.001	340	23.3	0.632	0.585	0.6376	
15 minute summer	339	62.000	340	36.7	1.397	0.293	0.2950	
15 minute summer	340	61.002	342	57.3	1.444	1.195	0.6346	
15 minute summer	341	63.000	342	24.7	0.876	0.620	0.8127	
15 minute summer	342	61.003	345	102.1	1.564	1.049	2.6386	
15 minute summer	343	64.000	344	51.0	0.977	0.718	1.6759	
15 minute summer	344	64.001	345	49.8	0.783	0.703	1.1698	
15 minute summer	345	61.004	346	157.7	1.731	1.417	1.7418	
15 minute summer	346	61.005	346_OUT	174.8	2.602	0.623	1.0824	

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Results for 50 year Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	346_OUT	1410	15.954	1.657	8.4	0.0000	0.0000	OK
15 minute summer	347	10	24.666	0.231	86.0	0.9828	0.0000	OK
15 minute summer	348	11	24.353	0.231	120.8	0.5659	0.0000	OK
60 minute winter	349	47	24.162	0.383	5.6	0.5898	0.0000	SURCHARGED
60 minute winter	350	47	24.161	0.737	72.1	1.0543	0.0000	SURCHARGED
60 minute winter	350_OUT	47	24.160	1.123	65.6	0.0000	0.0000	OK
15 minute summer	351	10	15.349	0.069	22.5	0.1391	0.0000	OK
15 minute summer	352	10	14.087	0.132	32.5	0.2192	0.0000	OK
60 minute winter	353	62	13.914	0.242	23.8	29.6535	0.0000	FLOOD RISK
1440 minute winter	354	1440	15.951	1.755	118.8	0.0000	0.0000	SURCHARGED
1440 minute winter	355	1440	15.949	1.786	20.7	4.5464	0.0000	SURCHARGED
2160 minute winter	356	900	13.753	0.090	20.6	0.2300	0.0000	OK
15 minute winter	357	33	13.567	0.077	22.6	0.1105	0.0000	OK
15 minute winter	353_OUT	33	13.455	0.065	22.6	0.0000	0.0000	OK
15 minute summer	358	10	15.961	0.085	11.0	0.1323	0.0000	OK
1440 minute winter	359	1440	15.950	0.150	0.5	0.1699	0.0000	OK
1440 minute winter	359_OUT	1440	15.952	1.654	1.8	0.0000	0.0000	OK
15 minute summer	360	10	18.003	0.674	428.5	10.2697	0.0000	SURCHARGED
2160 minute winter	360_OUT	2160	15.955	1.658	13.9	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
1440 minute winter	346_OUT	Flow through pond	354	118.8	0.017	0.003	6087.3882	
15 minute summer	347	65.000	348	84.5	1.457	0.869	2.3643	
15 minute summer	348	65.001	350	120.0	2.159	0.855	1.9150	
60 minute winter	349	66.000	350	5.7	0.701	0.142	0.8770	
60 minute winter	350	65.002	350_OUT	65.6	1.027	0.409	2.4849	
60 minute winter	350_OUT	Flow through pond	230	824.0	0.163	0.013	936.2449	
15 minute summer	351	67.000	352	22.4	1.320	0.209	0.5440	
15 minute summer	352	67.001	353	32.6	2.033	0.531	0.3882	
60 minute winter	353	Hydro-Brake®	357	2.0				
1440 minute winter	354	68.000	355	20.7	0.247	0.161	0.8741	
1440 minute winter	355	68.001	356	20.6	1.382	0.047	0.1581	
2160 minute winter	356	68.002	357	20.6	1.155	0.117	0.4044	
15 minute winter	357	67.003	353_OUT	22.6	1.555	0.067	0.0519	156.8
15 minute summer	358	69.000	359	10.9	0.813	0.274	0.1728	
1440 minute winter	359	69.001	359_OUT	0.5	0.350	0.013	0.2932	
1440 minute winter	359_OUT	Flow through pond	354	118.8	0.017	0.003	6087.3882	
15 minute summer	360	70.000	360_OUT	421.8	2.663	2.613	1.6120	
2160 minute winter	360_OUT	Flow through pond	354	89.8	0.013	0.002	6086.5269	



Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	12	40.418	0.324	19.1	0.2692	0.0000	SURCHARGED
15 minute summer	2	12	40.393	0.447	27.3	0.1314	0.0000	SURCHARGED
15 minute summer	3	12	40.366	0.484	41.4	0.2189	0.0000	SURCHARGED
15 minute summer	4	12	40.269	0.483	49.4	0.1271	0.0000	SURCHARGED
15 minute summer	5	12	40.119	0.431	48.6	0.0000	0.0000	SURCHARGED
15 minute summer	6	12	40.048	0.406	62.2	0.1817	0.0000	SURCHARGED
15 minute summer	7	12	39.893	0.318	70.0	0.1321	0.0000	SURCHARGED
15 minute summer	8	11	39.569	0.139	78.4	0.0514	0.0000	OK
15 minute summer	9	11	39.359	0.284	106.0	0.2933	0.0000	OK
15 minute summer	10	11	39.260	0.285	118.2	0.1209	0.0000	OK
15 minute summer	11	11	39.200	0.270	123.2	0.0435	0.0000	OK
15 minute summer	12	11	39.090	0.210	134.0	0.0580	0.0000	OK
15 minute summer	13	11	39.029	0.204	130.0	0.0000	0.0000	OK
15 minute summer	14	11	38.929	0.174	129.3	0.0000	0.0000	OK
15 minute summer	15	11	38.672	0.147	130.5	0.0000	0.0000	OK
15 minute summer	16	11	38.074	0.149	138.5	0.0424	0.0000	OK
15 minute summer	17	11	37.583	0.158	141.8	0.0245	0.0000	OK
15 minute summer	18	11	37.075	0.150	158.0	0.0927	0.0000	OK
15 minute summer	19	11	36.391	0.166	185.9	0.1711	0.0000	OK
15 minute summer	20	11	35.603	0.178	192.1	0.0412	0.0000	OK
15 minute summer	21	11	35.225	0.200	212.2	0.1498	0.0000	OK
15 minute summer	22	11	34.501	0.176	223.1	0.0726	0.0000	OK
15 minute summer	23	11	33.837	0.212	242.6	0.1533	0.0000	OK
15 minute summer	24	11	33.181	0.256	250.3	0.0727	0.0000	OK
15 minute summer	25	11	32.880	0.205	269.3	0.1429	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.000	2	17.5	0.785	0.440	0.9996	
15 minute summer	2	1.001	3	25.4	0.785	0.635	0.4286	
15 minute summer	3	1.002	4	39.6	0.996	0.991	0.6422	
15 minute summer	4	1.003	5	48.6	1.221	1.218	0.6583	
15 minute summer	5	1.004	6	49.2	1.237	1.224	0.3042	
15 minute summer	6	1.005	7	62.5	1.571	1.494	0.4098	
15 minute summer	7	1.006	8	70.3	1.768	1.577	0.3714	
15 minute summer	8	1.007	9	78.0	2.047	0.439	0.4633	
15 minute summer	9	1.008	10	105.6	1.177	0.954	2.8969	
15 minute summer	10	1.009	11	118.3	1.353	1.065	1.2612	
15 minute summer	11	1.010	12	126.2	1.719	1.133	1.1853	
15 minute summer	12	1.011	13	130.0	2.084	0.618	0.3111	
15 minute summer	13	1.012	14	129.3	2.324	0.593	0.3291	
15 minute summer	14	1.013	15	130.5	2.896	0.452	0.4996	
15 minute summer	15	1.014	16	130.8	3.230	0.332	0.6310	
15 minute summer	16	1.015	17	137.6	3.239	0.342	0.5289	
15 minute summer	17	1.016	18	141.2	3.330	0.376	0.6070	
15 minute summer	18	1.017	19	157.9	3.594	0.344	0.5898	
15 minute summer	19	1.018	20	185.8	3.777	0.414	0.7878	
15 minute summer	20	1.019	21	191.9	3.450	0.468	0.5329	
15 minute summer	21	1.020	22	211.9	3.833	0.558	1.0833	
15 minute summer	22	1.021	23	223.0	3.879	0.459	0.6885	
15 minute summer	23	1.022	24	242.6	3.355	0.628	1.3637	
15 minute summer	24	1.023	25	250.4	3.525	0.832	0.7875	
15 minute summer	25	1.024	26	269.8	4.378	0.595	0.7858	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	26	11	32.144	0.194	275.4	0.0364	0.0000	OK
15 minute summer	27	11	31.473	0.223	285.2	0.0734	0.0000	OK
15 minute summer	28	11	31.177	0.227	285.4	0.0000	0.0000	OK
15 minute summer	29	11	30.889	0.239	297.9	0.1069	0.0000	OK
15 minute summer	30	11	30.564	0.214	309.6	0.0907	0.0000	OK
15 minute winter	31	11	30.215	0.265	316.7	0.0871	0.0000	OK
15 minute summer	32	11	29.936	0.361	323.8	0.0625	0.0000	OK
15 minute summer	33	11	30.966	0.361	38.2	0.7663	0.0000	SURCHARGED
15 minute summer	34	11	30.104	0.114	49.1	0.1671	0.0000	OK
15 minute summer	35	12	29.451	0.263	49.1	0.2971	0.0000	SURCHARGED
15 minute summer	36	12	29.364	0.525	386.5	0.0809	0.0000	SURCHARGED
15 minute winter	37	12	29.305	0.565	382.4	0.0853	0.0000	OK
15 minute summer	38	12	29.276	0.626	441.8	0.5008	0.0000	OK
15 minute summer	39	11	29.250	0.800	438.5	0.1529	0.0000	SURCHARGED
15 minute winter	40	11	34.712	0.421	54.0	0.9943	0.0000	SURCHARGED
15 minute winter	41	11	34.691	0.746	29.2	1.5095	0.0000	SURCHARGED
15 minute summer	42	11	34.683	0.853	99.1	1.7765	0.0000	SURCHARGED
15 minute summer	43	11	34.655	0.905	94.7	1.5994	0.0000	SURCHARGED
15 minute summer	44	11	37.621	0.643	76.4	1.9150	0.0000	SURCHARGED
15 minute summer	45	11	38.523	0.336	34.5	0.6799	0.0000	SURCHARGED
15 minute summer	46	11	37.771	0.670	53.1	1.1653	0.0000	SURCHARGED
15 minute summer	47	11	34.649	0.910	294.8	2.1847	0.0000	SURCHARGED
15 minute summer	48	11	34.416	0.778	296.4	1.3756	0.0000	SURCHARGED
15 minute summer	49	12	37.597	0.486	34.5	0.9840	0.0000	SURCHARGED
15 minute summer	50	11	36.743	0.782	53.7	1.3914	0.0000	FLOOD RISK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	26	1.025	27	275.4	3.837	0.397	1.0995	
15 minute summer	27	1.026	28	285.4	3.603	0.506	0.7838	
15 minute summer	28	1.027	29	284.6	3.435	0.517	0.8608	
15 minute summer	29	1.028	30	297.0	3.715	0.571	0.9319	
15 minute summer	30	1.029	31	309.1	3.613	0.473	0.8410	
15 minute winter	31	1.030	32	317.8	3.171	0.667	1.3935	
15 minute summer	32	1.031	36	328.8	2.078	0.851	2.4858	
15 minute summer	33	2.000	34	35.8	2.077	1.081	0.2765	
15 minute summer	34	2.001	35	49.1	1.552	0.515	0.7211	
15 minute summer	35	2.002	36	49.3	1.273	1.229	0.3251	
15 minute summer	36	1.032	37	385.6	1.961	1.746	2.4232	
15 minute winter	37	1.033	38	381.8	1.683	1.336	2.3335	
15 minute summer	38	1.034	39	430.8	1.591	0.648	8.7106	
15 minute summer	39	1.035	78	434.6	0.988	0.373	4.9637	
15 minute winter	40	3.000	42	49.3	1.572	0.368	1.1485	
15 minute winter	41	4.000	42	27.9	0.544	0.175	2.5627	
15 minute summer	42	3.001	43	94.7	0.438	0.435	8.4614	
15 minute summer	43	3.002	47	98.2	0.463	0.451	1.1636	
15 minute summer	44	5.000	47	72.1	1.812	1.443	1.3787	
15 minute summer	45	6.000	46	30.7	1.804	0.776	0.3888	
15 minute summer	46	6.001	47	51.3	2.913	1.320	0.1375	
15 minute summer	47	3.003	48	296.4	1.372	1.369	10.7893	
15 minute summer	48	3.004	51	293.9	1.361	1.308	1.2910	
15 minute summer	49	7.000	50	29.9	1.712	0.808	0.4709	
15 minute summer	50	7.001	51	51.3	2.915	1.581	0.1385	



Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	51	11	34.347	0.722	366.2	1.4145	0.0000	SURCHARGED
15 minute winter	52	11	34.230	0.621	420.9	1.4817	0.0000	SURCHARGED
15 minute summer	53	12	33.825	0.281	441.9	0.6394	0.0000	OK
15 minute summer	54	10	33.726	0.116	19.8	0.1909	0.0000	OK
15 minute summer	55	12	33.122	0.291	526.2	0.9430	0.0000	OK
15 minute summer	56	12	32.171	0.778	551.7	1.6852	0.0000	SURCHARGED
15 minute summer	57	12	32.026	0.868	555.7	1.8348	0.0000	SURCHARGED
15 minute summer	58	12	31.854	0.920	563.0	1.7725	0.0000	SURCHARGED
15 minute summer	59	12	31.649	0.913	653.8	3.5227	0.0000	SURCHARGED
15 minute summer	60	12	31.083	1.024	670.0	2.1344	0.0000	SURCHARGED
15 minute summer	61	12	30.926	0.991	698.5	2.3812	0.0000	SURCHARGED
15 minute summer	62	10	38.508	0.063	11.7	0.0903	0.0000	OK
15 minute summer	63	12	38.360	0.360	35.1	0.6264	0.0000	SURCHARGED
15 minute summer	64	12	37.740	0.261	48.5	0.6022	0.0000	SURCHARGED
15 minute summer	65	12	37.498	0.348	90.7	0.5053	0.0000	SURCHARGED
15 minute summer	66	12	37.194	0.441	134.3	1.0168	0.0000	SURCHARGED
30 minute summer	67	18	34.548	0.162	157.3	0.2879	0.0000	OK
30 minute summer	68	18	31.866	0.228	180.3	0.3865	0.0000	OK
30 minute summer	69	19	31.172	0.659	178.3	0.7451	0.0000	SURCHARGED
15 minute summer	70	12	30.677	0.783	869.1	1.3842	0.0000	SURCHARGED
30 minute winter	71	20	30.516	0.639	768.9	0.4306	0.0000	OK
15 minute summer	72	12	30.260	0.416	943.8	0.0308	0.0000	OK
30 minute summer	73	18	30.074	0.349	874.0	0.1691	0.0000	OK
15 minute summer	74	12	29.675	0.450	930.6	0.1341	0.0000	OK
15 minute winter	75	12	29.536	0.611	921.5	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	51	3.005	52	364.3	1.686	1.682	1.8153	
15 minute winter	52	3.006	53	417.3	2.226	1.907	5.1631	
15 minute summer	53	3.007	55	444.2	3.857	0.414	1.7620	
15 minute summer	54	8.000	55	19.3	1.368	0.883	0.3778	
15 minute summer	55	3.008	56	530.7	3.848	0.515	5.1381	
15 minute summer	56	3.009	57	540.7	2.311	0.464	2.3188	
15 minute summer	57	3.010	58	556.1	2.177	0.567	3.1179	
15 minute summer	58	3.011	59	563.5	2.232	0.718	4.2930	
15 minute summer	59	3.012	60	655.6	2.328	0.845	13.3549	
15 minute summer	60	3.013	61	669.7	1.876	0.726	4.5750	
15 minute summer	61	3.014	70	699.7	1.960	1.935	9.6934	
15 minute summer	62	9.000	63	11.6	0.923	0.367	0.1732	
15 minute summer	63	9.001	65	31.1	1.860	1.001	0.4516	
15 minute summer	64	10.000	65	47.8	1.341	0.937	1.3573	
15 minute summer	65	9.002	66	85.8	2.421	0.714	0.2982	
15 minute summer	66	9.003	67	123.2	3.510	0.962	1.3919	
30 minute summer	67	9.004	68	157.3	3.527	0.576	2.2018	
30 minute summer	68	9.005	69	178.3	2.612	0.663	1.2399	
30 minute summer	69	9.006	70	177.0	2.513	1.174	0.9374	
15 minute summer	70	3.015	71	867.0	2.431	2.412	3.9991	
30 minute winter	71	3.016	72	876.5	3.139	1.972	3.9909	
15 minute summer	72	3.017	73	909.0	4.358	0.733	1.4231	
30 minute summer	73	3.018	74	886.0	4.229	0.505	3.0287	
15 minute summer	74	3.019	75	921.2	3.105	0.616	3.4950	
15 minute winter	75	3.020	76	921.4	2.704	1.014	3.6307	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	76	12	29.489	0.664	937.2	0.0000	0.0000	OK
15 minute winter	77	12	29.301	0.495	934.4	0.0000	0.0000	OK
15 minute summer	78	12	29.230	0.955	1354.5	0.0000	0.0000	FLOOD RISK
15 minute summer	79	12	29.125	0.856	1369.9	2.1786	0.0000	SURCHARGED
15 minute summer	80	12	28.737	0.496	1328.2	1.2617	0.0000	OK
15 minute winter	81	12	27.645	0.399	1331.8	1.0165	0.0000	OK
15 minute summer	82	12	26.897	0.468	18.4	0.7517	0.0000	SURCHARGED
15 minute summer	83	12	26.708	0.541	16.4	0.6116	0.0000	SURCHARGED
15 minute summer	84	12	26.556	0.673	33.5	0.9974	0.0000	SURCHARGED
15 minute summer	85	12	26.444	0.725	50.7	1.1815	0.0000	SURCHARGED
15 minute summer	86	12	26.254	0.627	66.1	0.9660	0.0000	SURCHARGED
15 minute summer	87	12	25.929	0.394	69.6	0.4918	0.0000	SURCHARGED
30 minute summer	88	21	25.307	0.435	1359.2	1.1078	0.0000	OK
30 minute summer	88_OUT	21	24.824	1.787	1355.9	0.0000	0.0000	OK
15 minute summer	89	10	37.762	0.072	13.2	0.1058	0.0000	OK
15 minute summer	90	12	37.606	0.508	56.4	1.1068	0.0000	SURCHARGED
15 minute summer	91	12	37.388	1.064	132.9	3.3351	0.0000	FLOOD RISK
15 minute summer	92	12	37.298	1.184	201.4	3.8887	0.0000	SURCHARGED
15 minute summer	93	10	38.106	0.116	27.2	0.2129	0.0000	OK
15 minute summer	94	12	37.231	1.182	239.2	2.6246	0.0000	SURCHARGED
15 minute summer	95	12	37.121	1.137	286.4	2.7919	0.0000	SURCHARGED
15 minute summer	96	12	36.980	1.052	324.3	2.4587	0.0000	SURCHARGED
15 minute summer	97	12	36.816	0.936	339.3	1.8290	0.0000	SURCHARGED
15 minute summer	98	12	36.658	0.818	366.0	1.7169	0.0000	SURCHARGED
15 minute summer	99	12	36.491	0.685	367.2	1.2111	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	76	3.021	77	937.3	3.097	2.611	3.9745	
15 minute winter	77	3.022	78	925.5	2.938	0.501	3.1470	
15 minute summer	78	1.036	79	1369.9	2.570	2.409	2.4545	
15 minute summer	79	1.037	80	1328.2	2.917	2.451	10.2455	
15 minute summer	80	1.038	81	1333.4	4.520	0.529	11.6690	
15 minute winter	81	1.039	88	1327.4	5.766	0.374	8.6640	
15 minute summer	82	11.000	83	16.4	1.114	0.928	0.4654	
15 minute summer	83	11.001	84	16.9	1.104	0.955	0.3701	
15 minute summer	84	11.002	85	30.5	0.769	0.767	1.1069	
15 minute summer	85	11.003	86	49.9	1.256	1.251	0.6168	
15 minute summer	86	11.004	87	65.3	1.641	1.640	0.6202	
15 minute summer	87	11.005	88	69.6	1.751	1.613	0.3563	
30 minute summer	88	1.040	88_OUT	1355.9	5.593	0.365	8.2375	
30 minute summer	88_OUT	Flow through pond	230	1782.2	0.225	0.029	1436.2341	
15 minute summer	89	12.000	90	13.1	1.583	0.430	0.2230	
15 minute summer	90	12.001	91	51.5	2.148	0.602	0.8126	
15 minute summer	91	12.002	92	120.9	0.966	0.759	8.6997	
15 minute summer	92	12.003	94	188.8	0.874	0.869	6.8984	
15 minute summer	93	13.000	94	26.6	1.862	0.893	0.5957	
15 minute summer	94	12.004	95	240.4	1.113	1.107	6.9081	
15 minute summer	95	12.005	96	289.3	1.339	1.325	5.8899	
15 minute summer	96	12.006	97	326.6	1.512	1.500	5.0712	
15 minute summer	97	12.007	98	340.7	1.577	1.555	4.1759	
15 minute summer	98	12.008	99	367.2	1.700	1.673	3.5382	
15 minute summer	99	12.009	101	367.9	1.703	1.681	1.6736	



Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	100	10	37.301	0.073	13.2	0.1081	0.0000	OK
15 minute summer	101	12	36.373	0.583	401.1	1.2434	0.0000	SURCHARGED
15 minute summer	102	12	36.136	0.375	432.1	0.8888	0.0000	OK
15 minute summer	103	12	35.764	0.339	439.0	0.6423	0.0000	OK
15 minute summer	104	12	35.584	0.997	30.8	1.9254	0.0000	FLOOD RISK
15 minute summer	105	12	35.228	0.862	70.3	1.6805	0.0000	SURCHARGED
15 minute summer	106	12	34.626	0.765	503.2	1.3525	0.0000	SURCHARGED
15 minute summer	107	10	35.992	0.099	26.4	0.1793	0.0000	OK
15 minute summer	108	12	35.272	0.865	17.6	1.3743	0.0000	FLOOD RISK
15 minute summer	109	12	35.172	0.959	54.8	1.3354	0.0000	SURCHARGED
15 minute summer	110	12	34.848	0.798	61.7	0.9947	0.0000	SURCHARGED
15 minute summer	111	12	34.407	0.816	607.2	1.9097	0.0000	SURCHARGED
15 minute summer	112	12	33.937	0.376	615.8	0.7184	0.0000	OK
15 minute summer	113	12	33.100	0.299	655.0	0.8100	0.0000	OK
15 minute winter	114	11	31.934	0.358	678.6	0.2161	0.0000	OK
15 minute summer	115	11	31.579	0.600	97.6	2.0081	0.0000	SURCHARGED
15 minute summer	116	12	31.350	0.769	130.5	1.8011	0.0000	SURCHARGED
15 minute summer	117	12	31.246	0.960	797.4	1.6956	0.0000	SURCHARGED
15 minute summer	118	12	30.938	0.665	805.9	1.2202	0.0000	SURCHARGED
15 minute summer	119	12	30.525	0.460	807.3	0.8137	0.0000	OK
15 minute summer	120	12	30.030	0.411	820.5	0.8470	0.0000	OK
15 minute winter	121	12	29.291	0.393	855.4	1.0287	0.0000	OK
15 minute winter	122	12	27.996	0.361	855.5	0.6381	0.0000	OK
15 minute summer	123	10	33.046	0.120	66.8	0.3287	0.0000	OK
15 minute summer	124	10	31.621	0.189	87.8	0.3119	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	100	14.000	101	13.1	1.594	0.430	0.0991	
15 minute summer	101	12.010	102	402.2	1.993	1.838	2.6746	
15 minute summer	102	12.011	103	433.8	2.774	0.648	2.7650	
15 minute summer	103	12.012	106	440.0	3.611	0.441	0.8847	
15 minute summer	104	15.000	105	25.7	1.458	1.449	0.2582	
15 minute summer	105	15.001	106	63.7	1.601	1.599	1.3804	
15 minute summer	106	12.013	111	504.1	2.334	0.545	1.6105	
15 minute summer	107	16.000	109	26.2	2.211	0.698	0.2192	
15 minute summer	108	17.000	109	16.5	0.938	0.934	0.2113	
15 minute summer	109	16.001	110	51.4	1.292	1.289	1.0961	
15 minute summer	110	16.002	111	60.5	1.522	1.518	1.0681	
15 minute summer	111	12.014	112	608.3	2.952	2.774	2.7596	
15 minute summer	112	12.015	113	616.5	4.210	0.635	2.7881	
15 minute summer	113	12.016	114	655.7	4.639	0.560	2.9904	
15 minute winter	114	12.017	117	677.9	4.617	0.677	2.6020	
15 minute summer	115	18.000	116	89.9	1.464	0.853	2.5298	
15 minute summer	116	18.001	117	125.0	1.133	1.127	2.4846	
15 minute summer	117	12.018	118	802.4	2.849	2.833	2.1320	
15 minute summer	118	12.019	119	807.3	3.012	0.911	3.2353	
15 minute summer	119	12.020	120	807.8	3.691	0.579	2.3919	
15 minute summer	120	12.021	121	819.5	4.105	0.560	3.2091	
15 minute winter	121	12.022	122	855.5	4.612	0.609	5.6803	
15 minute winter	122	12.023	138	836.6	5.399	0.472	1.5852	
15 minute summer	123	19.000	124	66.5	2.306	0.559	0.8248	
15 minute summer	124	19.001	125	86.7	2.934	0.862	0.6485	



Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	125	11	30.742	0.131	86.7	0.1484	0.0000	OK
15 minute summer	126	11	30.043	0.371	102.8	0.5649	0.0000	SURCHARGED
15 minute summer	127	10	30.094	0.137	74.9	0.3873	0.0000	OK
15 minute winter	128	10	28.786	0.202	181.4	0.3332	0.0000	OK
15 minute winter	129	10	27.967	0.221	217.1	0.4790	0.0000	OK
15 minute summer	130	10	27.596	0.671	220.4	0.0000	0.0000	SURCHARGED
15 minute summer	131	10	27.532	0.624	241.2	0.0000	0.0000	SURCHARGED
15 minute winter	132	13	27.494	0.683	222.7	0.0000	0.0000	SURCHARGED
15 minute winter	133	11	27.453	0.658	218.6	0.1414	0.0000	SURCHARGED
15 minute summer	134	11	28.929	0.081	21.3	0.1367	0.0000	OK
15 minute summer	135	12	28.565	0.404	33.4	0.5875	0.0000	SURCHARGED
15 minute summer	136	12	28.174	0.317	40.4	0.4490	0.0000	SURCHARGED
15 minute winter	137	12	27.445	0.820	264.3	0.1352	0.0000	SURCHARGED
15 minute winter	138	12	27.447	0.869	1086.4	0.0000	0.0000	SURCHARGED
30 minute winter	139	20	27.304	0.745	964.1	0.3652	0.0000	SURCHARGED
15 minute winter	140	12	26.910	0.378	1203.2	0.1370	0.0000	OK
15 minute summer	141	10	39.143	0.093	16.9	0.0781	0.0000	OK
15 minute summer	142	10	39.006	0.106	16.8	0.0000	0.0000	OK
15 minute summer	143	10	38.860	0.085	16.7	0.0000	0.0000	OK
15 minute summer	144	10	38.736	0.136	26.9	0.0544	0.0000	OK
15 minute summer	145	10	38.716	0.164	43.6	0.1044	0.0000	OK
15 minute summer	146	11	38.653	0.215	60.2	0.1220	0.0000	OK
15 minute summer	147	11	38.641	0.233	59.6	0.0000	0.0000	OK
15 minute summer	148	12	38.640	0.244	68.2	0.0721	0.0000	OK
15 minute summer	149	12	38.641	0.274	76.1	0.0704	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	125	19.002	126	86.6	2.747	0.549	0.3298	
15 minute summer	126	19.003	128	99.0	2.694	0.990	1.0174	
15 minute summer	127	20.000	128	73.8	2.426	0.402	1.4573	
15 minute winter	128	19.004	129	180.7	3.236	0.465	1.1389	
15 minute winter	129	19.005	130	215.7	2.320	0.476	4.4276	
15 minute summer	130	19.006	131	241.2	1.216	1.086	1.7263	
15 minute summer	131	19.007	132	238.0	1.226	1.080	2.2690	
15 minute winter	132	19.008	133	210.6	1.193	0.739	2.5909	
15 minute winter	133	19.009	137	218.2	1.137	0.332	2.9430	
15 minute summer	134	21.000	135	20.9	1.456	0.483	0.1604	
15 minute summer	135	21.001	136	29.8	1.739	1.009	0.1955	
15 minute summer	136	21.002	137	39.4	2.512	0.945	0.2287	
15 minute winter	137	19.010	138	260.8	0.731	0.725	11.2309	
15 minute winter	138	12.024	139	1151.1	3.225	3.199	4.5368	
30 minute winter	139	12.025	140	1002.1	3.676	2.764	4.7362	
15 minute winter	140	12.026	185	1121.8	5.448	0.490	3.5656	
15 minute summer	141	22.000	142	16.8	1.353	0.706	0.1042	
15 minute summer	142	22.001	143	16.7	1.255	0.849	0.0544	
15 minute summer	143	22.002	144	16.6	1.210	0.307	0.1269	
15 minute summer	144	22.003	145	26.7	0.762	0.377	0.4119	
15 minute summer	145	22.004	146	43.3	1.114	0.609	0.3678	
15 minute summer	146	22.005	147	59.6	0.904	0.536	0.6586	
15 minute summer	147	22.006	148	58.9	0.833	0.517	0.2705	
15 minute summer	148	22.007	149	67.7	0.899	0.603	0.7374	
15 minute summer	149	22.008	150	75.4	0.932	0.674	0.7678	



Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	150	12	38.637	0.297	83.8	0.0670	0.0000	OK
15 minute summer	151	12	38.630	0.313	92.0	0.0689	0.0000	OK
15 minute summer	152	12	38.623	0.329	97.9	0.0503	0.0000	OK
15 minute summer	153	12	38.612	0.345	99.8	0.0248	0.0000	OK
15 minute summer	154	12	38.597	0.360	97.7	0.0000	0.0000	OK
15 minute summer	155	12	38.582	0.371	109.7	0.0935	0.0000	OK
15 minute summer	156	12	38.566	0.376	110.0	0.0139	0.0000	SURCHARGED
15 minute summer	157	12	38.550	0.380	112.7	0.0289	0.0000	SURCHARGED
15 minute summer	158	12	38.519	0.382	121.0	0.0665	0.0000	SURCHARGED
15 minute summer	159	12	38.496	0.380	122.6	0.0125	0.0000	SURCHARGED
15 minute summer	160	12	38.446	0.364	147.2	0.6617	0.0000	OK
15 minute summer	161	12	38.217	0.365	157.2	0.7013	0.0000	OK
15 minute summer	162	1	38.039	0.000	0.0	0.0000	0.0000	OK
15 minute winter	163	12	38.018	0.307	154.5	0.0000	0.0000	OK
15 minute summer	164	12	37.945	0.263	164.6	0.0000	0.0000	OK
15 minute summer	165	12	37.593	0.168	172.1	0.1086	0.0000	OK
15 minute winter	166	12	36.936	0.161	185.0	0.1082	0.0000	OK
15 minute winter	167	11	36.315	0.190	192.1	0.0540	0.0000	OK
15 minute summer	168	11	35.889	0.164	202.2	0.0676	0.0000	OK
15 minute summer	169	11	35.170	0.195	211.4	0.0704	0.0000	OK
15 minute summer	170	11	34.884	0.184	226.9	0.1096	0.0000	OK
15 minute winter	171	11	33.136	0.161	242.0	0.1040	0.0000	OK
15 minute winter	172	11	32.311	0.286	242.5	0.0000	0.0000	OK
15 minute summer	173	10	31.827	0.045	6.6	0.0589	0.0000	OK
15 minute winter	174	11	31.483	0.273	264.8	0.4765	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	150	22.009	151	83.0	0.974	0.749	0.7124	
15 minute summer	151	22.010	152	90.9	1.033	0.810	0.7261	
15 minute summer	152	22.011	153	96.3	1.065	0.866	0.9023	
15 minute summer	153	22.012	154	97.7	1.048	0.876	1.0265	
15 minute summer	154	22.013	155	95.7	0.984	0.857	0.9034	
15 minute summer	155	22.014	156	107.9	1.083	0.973	0.7446	
15 minute summer	156	22.015	157	108.5	1.063	0.957	0.6809	
15 minute summer	157	22.016	158	111.2	1.057	0.992	1.1472	
15 minute summer	158	22.017	159	120.5	1.113	1.078	0.7349	
15 minute summer	159	22.018	160	121.3	1.152	1.083	1.1790	
15 minute summer	160	22.019	161	143.9	1.341	0.993	4.7660	
15 minute summer	161	22.020	163	154.2	1.492	1.154	3.2016	
15 minute summer	162	23.000	163	0.0	0.000	0.000	0.0454	
15 minute winter	163	22.021	164	160.2	1.828	1.436	0.8147	
15 minute summer	164	22.022	165	157.7	2.414	0.862	2.0013	
15 minute summer	165	22.023	166	169.1	3.631	0.421	0.7555	
15 minute winter	166	22.024	167	184.7	3.669	0.393	0.6032	
15 minute winter	167	22.025	168	191.3	3.765	0.513	0.5911	
15 minute summer	168	22.026	169	201.6	3.891	0.404	0.6343	
15 minute summer	169	22.027	170	210.8	3.797	0.545	0.4136	
15 minute summer	170	22.028	171	225.9	4.573	0.478	1.5452	
15 minute winter	171	22.029	172	242.5	3.555	0.394	0.6867	
15 minute winter	172	22.030	174	244.7	2.903	0.807	1.1601	
15 minute summer	173	24.000	174	6.6	1.522	0.178	0.0351	
15 minute winter	174	22.031	176	264.7	3.050	0.730	0.9843	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	175	11	31.552	0.288	24.2	0.5063	0.0000	SURCHARGED
15 minute winter	176	11	31.118	0.278	287.4	0.0000	0.0000	OK
15 minute winter	177	11	30.870	0.199	296.0	0.0769	0.0000	OK
15 minute winter	178	11	29.925	0.222	323.6	0.2406	0.0000	OK
15 minute summer	179	11	29.321	0.575	318.7	0.0000	0.0000	FLOOD RISK
15 minute summer	180	11	28.994	0.271	332.2	0.5346	0.0000	OK
15 minute summer	181	12	28.014	0.245	339.4	0.4210	0.0000	OK
15 minute summer	182	11	27.229	0.255	355.9	0.1708	0.0000	OK
15 minute summer	183	12	26.848	0.302	357.4	0.0000	0.0000	OK
15 minute summer	184	12	26.511	0.319	376.4	0.6893	0.0000	OK
15 minute summer	185	12	25.950	0.574	1549.0	1.4601	0.0000	OK
15 minute winter	186	13	25.605	0.419	1512.2	0.0000	0.0000	OK
30 minute summer	187	19	25.456	0.477	54.7	1.2271	0.0000	SURCHARGED
30 minute summer	188	18	24.971	0.293	62.6	0.3996	0.0000	OK
30 minute summer	189	18	24.890	0.337	75.6	0.3814	0.0000	SURCHARGED
30 minute summer	190	18	25.050	1.130	1538.6	0.0000	0.0000	SURCHARGED
60 minute winter	191	42	24.922	1.084	1009.3	0.0000	0.0000	SURCHARGED
60 minute winter	191_OUT	46	24.800	1.762	1040.4	0.0000	0.0000	OK
15 minute summer	192	11	21.830	0.437	22.8	0.7352	0.0000	SURCHARGED
15 minute summer	193	11	22.710	0.373	73.4	1.0839	0.0000	SURCHARGED
15 minute summer	194	11	21.761	0.722	200.0	2.0757	0.0000	SURCHARGED
15 minute summer	195	11	21.292	0.739	38.2	1.4764	0.0000	SURCHARGED
15 minute summer	196	10	21.711	0.116	18.4	0.1859	0.0000	OK
15 minute summer	197	11	21.252	0.891	53.9	1.2747	0.0000	SURCHARGED
15 minute summer	198	10	21.881	0.139	33.0	0.2760	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	175	25.000	176	23.0	1.305	1.298	0.3439	
15 minute winter	176	22.032	177	285.7	3.868	0.923	0.5210	
15 minute winter	177	22.033	178	294.8	4.672	0.565	0.9138	
15 minute winter	178	22.034	179	320.2	3.218	0.640	1.3766	
15 minute summer	179	22.035	180	319.4	3.031	2.794	0.6816	
15 minute summer	180	22.036	181	333.1	4.122	0.673	1.2704	
15 minute summer	181	22.037	182	340.9	4.371	0.651	0.9140	
15 minute summer	182	22.038	183	357.4	4.483	0.828	0.6090	
15 minute summer	183	22.039	184	358.6	3.077	0.653	1.4378	
15 minute summer	184	22.040	185	378.8	3.666	0.572	1.0907	
15 minute summer	185	12.027	186	1590.9	4.757	0.683	2.9513	
15 minute winter	186	12.028	190	1566.3	5.805	0.535	2.4444	
30 minute summer	187	26.000	188	53.4	1.344	1.344	1.5184	
30 minute summer	188	26.001	189	75.6	1.141	1.069	2.1449	
30 minute summer	189	26.002	190	78.6	1.340	1.111	0.5685	
30 minute summer	190	12.029	191	1557.8	2.714	2.434	4.1103	
60 minute winter	191	12.030	191_OUT	1040.4	2.000	1.357	24.0800	
60 minute winter	191_OUT	Flow through pond	230	1373.9	0.193	0.022	1619.5365	
15 minute summer	192	27.000	194	22.9	0.729	0.575	1.3746	
15 minute summer	193	28.000	194	70.8	1.780	1.107	0.9294	
15 minute summer	194	27.001	200	192.3	1.745	1.736	6.0164	
15 minute summer	195	29.000	197	36.1	0.770	0.510	2.0128	
15 minute summer	196	30.000	197	18.1	1.293	0.858	0.2408	
15 minute summer	197	29.001	199	54.8	0.497	0.495	0.9976	
15 minute summer	198	31.000	199	32.3	2.035	0.957	0.2214	



Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	199	11	21.239	0.906	84.3	1.2964	0.0000	SURCHARGED
15 minute summer	200	11	21.207	0.982	328.1	2.1389	0.0000	SURCHARGED
15 minute summer	201	11	20.780	0.705	398.6	2.0918	0.0000	SURCHARGED
30 minute summer	202	20	20.442	1.229	34.4	2.7416	0.0000	FLOOD RISK
30 minute summer	203	20	20.442	1.361	31.5	2.0020	0.0000	SURCHARGED
30 minute summer	204	20	20.445	1.545	45.3	2.9945	0.0000	SURCHARGED
30 minute summer	205	20	20.454	1.732	406.5	4.4079	0.0000	SURCHARGED
30 minute summer	206	20	20.429	1.721	401.2	4.5797	0.0000	SURCHARGED
15 minute summer	207	11	21.425	0.630	76.4	1.8784	0.0000	SURCHARGED
30 minute summer	208	20	20.397	1.708	478.2	4.8803	0.0000	SURCHARGED
30 minute summer	209	20	20.345	1.677	507.9	5.1354	0.0000	SURCHARGED
30 minute summer	210	20	20.267	1.633	531.6	4.8547	0.0000	SURCHARGED
30 minute summer	211	20	20.200	1.587	544.4	4.5244	0.0000	FLOOD RISK
30 minute summer	212	20	20.147	1.545	570.8	4.8408	0.0000	SURCHARGED
30 minute summer	213	20	20.024	1.469	579.0	3.9892	0.0000	SURCHARGED
30 minute summer	214	20	19.902	1.392	584.9	3.7683	0.0000	SURCHARGED
15 minute summer	215	11	20.479	0.154	36.7	0.3114	0.0000	OK
15 minute summer	216	11	20.397	0.432	79.4	0.9654	0.0000	SURCHARGED
30 minute summer	217	20	19.820	1.331	646.1	3.3870	0.0000	SURCHARGED
15 minute summer	218	11	22.372	0.407	58.7	1.0392	0.0000	SURCHARGED
30 minute summer	219	20	22.105	0.398	56.0	0.4655	0.0000	SURCHARGED
30 minute summer	220	20	22.078	0.433	55.6	0.4899	0.0000	SURCHARGED
15 minute summer	221	10	23.569	0.054	8.1	0.0725	0.0000	OK
30 minute summer	222	20	22.045	0.596	133.8	1.3087	0.0000	SURCHARGED
30 minute summer	223	21	22.002	0.675	153.4	1.3880	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	199	29.002	200	85.7	0.777	0.766	1.1507	
15 minute summer	200	27.002	201	326.5	2.061	2.040	4.7877	
15 minute summer	201	27.003	205	396.6	1.866	1.830	8.1563	
30 minute summer	202	32.000	203	29.0	0.850	0.261	2.0199	
30 minute summer	203	32.001	204	41.7	0.679	0.262	1.9969	
30 minute summer	204	32.002	205	56.0	0.486	0.197	4.5547	
30 minute summer	205	27.004	206	391.4	0.889	0.855	4.4285	
30 minute summer	206	27.005	208	388.7	0.883	0.872	6.3263	
15 minute summer	207	33.000	208	71.9	1.807	1.397	1.4277	
30 minute summer	208	27.006	209	472.9	1.075	1.069	7.0991	
30 minute summer	209	27.007	210	508.9	1.156	1.139	11.2865	
30 minute summer	210	27.008	211	531.1	1.207	1.190	7.3108	
30 minute summer	211	27.009	212	542.7	1.233	1.174	3.0989	
30 minute summer	212	27.010	213	568.7	1.292	1.275	15.6437	
30 minute summer	213	27.011	214	576.0	1.309	1.301	15.1877	
30 minute summer	214	27.012	217	584.7	1.329	1.323	7.1203	
15 minute summer	215	34.000	216	34.4	1.100	0.497	0.7030	
15 minute summer	216	34.001	217	77.4	1.948	1.130	0.9786	
30 minute summer	217	27.013	268	646.6	1.469	1.446	12.2525	
15 minute summer	218	35.000	219	56.6	1.427	1.421	1.1865	
30 minute summer	219	35.001	220	55.6	1.005	0.783	1.0592	
30 minute summer	220	35.002	222	54.9	1.114	0.774	0.8052	
15 minute summer	221	36.000	222	8.0	1.455	0.252	0.0580	
30 minute summer	222	35.003	223	123.7	1.249	0.775	7.7658	
30 minute summer	223	35.004	225	125.3	1.202	0.386	4.4345	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	224	21	21.987	0.519	9.5	0.7259	0.0000	SURCHARGED
30 minute summer	225	21	21.970	0.926	153.8	1.6638	0.0000	SURCHARGED
15 minute summer	226	11	24.586	0.171	55.1	0.4219	0.0000	OK
15 minute summer	227	11	24.340	0.780	120.0	2.1596	0.0000	SURCHARGED
15 minute summer	228	12	24.282	0.995	33.0	1.9776	0.0000	FLOOD RISK
30 minute summer	229	20	23.462	0.621	129.6	0.7026	0.0000	SURCHARGED
60 minute winter	230	48	24.759	1.759	1373.9	0.0000	0.0000	FLOOD RISK
60 minute winter	231	48	24.600	1.615	680.4	2.8530	0.0000	SURCHARGED
60 minute winter	232	48	23.725	0.762	679.8	1.3458	0.0000	SURCHARGED
60 minute winter	233	48	23.546	0.603	679.5	0.0000	0.0000	SURCHARGED
60 minute winter	234	45	23.389	0.946	704.8	0.0000	0.0000	SURCHARGED
60 minute winter	235	45	23.307	0.878	704.9	0.0000	0.0000	SURCHARGED
60 minute winter	236	45	23.240	0.823	705.0	0.0000	0.0000	SURCHARGED
60 minute winter	237	45	23.178	0.772	705.1	0.0000	0.0000	SURCHARGED
60 minute winter	238	45	23.048	0.651	708.2	1.2974	0.0000	SURCHARGED
15 minute summer	239	11	23.120	0.153	48.5	0.3535	0.0000	OK
15 minute summer	240	11	22.829	0.307	47.3	0.3471	0.0000	SURCHARGED
15 minute summer	241	1	23.744	0.000	0.0	0.0000	0.0000	OK
15 minute summer	242	1	23.485	0.000	0.0	0.0000	0.0000	OK
15 minute summer	243	1	23.298	0.000	0.0	0.0000	0.0000	OK
15 minute summer	244	11	22.742	0.257	46.8	0.2903	0.0000	SURCHARGED
60 minute winter	245	45	22.723	0.720	718.4	1.2719	0.0000	SURCHARGED
60 minute winter	246	45	22.609	0.612	722.6	0.1738	0.0000	SURCHARGED
60 minute winter	247	44	22.207	0.557	722.2	0.0000	0.0000	OK
30 minute summer	248	21	21.926	1.110	798.1	0.0000	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	224	37.000	225	8.1	0.943	0.457	0.2201	
30 minute summer	225	35.005	248	152.0	0.963	0.952	5.0029	
15 minute summer	226	38.000	227	52.5	1.621	0.551	0.9249	
15 minute summer	227	38.001	229	111.4	2.801	1.014	0.5791	
15 minute summer	228	39.000	229	27.8	1.579	1.571	0.5245	
30 minute summer	229	38.002	234	128.2	1.822	1.808	1.6797	
60 minute winter	230	40.000	231	680.4	2.416	2.399	2.4531	
60 minute winter	231	Orifice	232	679.8				
60 minute winter	232	40.002	233	679.5	2.413	2.345	3.1341	
60 minute winter	233	40.003	234	679.2	2.467	2.369	2.3223	
60 minute winter	234	38.003	235	704.9	2.503	2.455	2.2354	
60 minute winter	235	38.004	236	705.0	2.503	2.389	1.8140	
60 minute winter	236	38.005	237	705.1	2.504	2.401	1.6791	
60 minute winter	237	38.006	238	705.2	2.504	2.404	1.3768	
60 minute winter	238	38.007	245	708.3	2.515	0.648	4.4147	
15 minute summer	239	41.000	240	47.3	1.284	0.785	1.1392	
15 minute summer	240	41.001	244	46.8	1.176	1.162	0.2439	
15 minute summer	241	42.000	242	0.0	0.000	0.000	0.0000	
15 minute summer	242	42.001	243	0.0	0.000	0.000	0.0000	
15 minute summer	243	42.002	244	0.0	0.000	0.000	0.0000	
15 minute summer	244	41.002	245	46.7	1.197	1.170	0.6659	
60 minute winter	245	38.008	246	718.4	2.551	2.331	0.8329	
60 minute winter	246	38.009	247	722.2	2.620	1.146	11.4679	
60 minute winter	247	38.010	248	722.1	2.676	1.291	2.0399	
30 minute summer	248	35.006	249	798.2	2.834	2.792	3.2204	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	249	21	21.774	0.978	798.2	0.0000	0.0000	SURCHARGED
30 minute summer	250	21	21.635	0.857	798.3	0.0000	0.0000	SURCHARGED
15 minute summer	251	1	22.700	0.000	0.0	0.0000	0.0000	OK
15 minute summer	252	11	22.486	0.197	4.5	0.0000	0.0000	OK
15 minute summer	253	11	22.545	0.249	36.0	0.4984	0.0000	SURCHARGED
15 minute summer	254	11	22.486	0.356	61.5	0.6552	0.0000	SURCHARGED
15 minute summer	255	11	22.026	0.169	101.2	0.4756	0.0000	OK
30 minute summer	256	20	21.601	0.733	29.7	1.4026	0.0000	SURCHARGED
30 minute summer	257	21	21.570	0.889	28.4	1.0049	0.0000	FLOOD RISK
30 minute summer	258	21	21.555	1.171	119.1	1.8590	0.0000	FLOOD RISK
30 minute summer	259	21	21.489	1.405	897.4	2.4828	0.0000	SURCHARGED
30 minute summer	260	21	21.110	1.052	895.6	0.0000	0.0000	SURCHARGED
15 minute summer	261	10	21.939	0.112	37.4	0.2281	0.0000	OK
15 minute summer	262	10	21.387	0.152	37.1	0.1720	0.0000	OK
30 minute summer	263	20	21.302	0.279	97.7	0.7517	0.0000	OK
30 minute summer	264	21	21.080	0.785	94.7	0.8881	0.0000	SURCHARGED
30 minute summer	265	21	21.059	1.105	966.6	0.0000	0.0000	SURCHARGED
30 minute summer	266	21	20.857	0.922	965.8	0.0000	0.0000	SURCHARGED
30 minute summer	267	21	20.436	0.545	969.5	0.1309	0.0000	OK
30 minute summer	268	20	19.716	1.339	1604.6	0.0723	0.0000	SURCHARGED
30 minute summer	269	20	19.609	1.245	1610.1	0.1593	0.0000	SURCHARGED
30 minute summer	270	20	19.502	1.151	1610.9	0.0000	0.0000	SURCHARGED
30 minute summer	271	20	19.403	1.064	1615.3	0.0979	0.0000	SURCHARGED
30 minute summer	272	20	19.288	0.963	1621.4	0.2052	0.0000	SURCHARGED
30 minute summer	273	20	19.046	1.073	1636.2	3.2563	0.0000	FLOOD RISK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	249	35.007	250	798.3	2.834	2.807	2.9289	
30 minute summer	250	35.008	259	798.4	2.835	2.713	0.9124	
15 minute summer	251	43.000	252	0.0	0.000	0.000	0.1122	
15 minute summer	252	43.001	254	5.2	0.169	0.069	0.2854	
15 minute summer	253	44.000	254	33.4	1.004	0.489	0.3849	
15 minute summer	254	43.002	255	59.9	1.507	1.247	0.8929	
15 minute summer	255	43.003	258	101.1	2.584	0.551	1.7434	
30 minute summer	256	45.000	257	28.4	1.257	0.566	0.7961	
30 minute summer	257	45.001	258	25.7	1.243	0.388	0.3631	
30 minute summer	258	43.004	259	108.8	1.105	0.984	2.6797	
30 minute summer	259	35.009	260	895.6	3.180	3.162	4.2632	
30 minute summer	260	35.010	265	894.8	3.177	0.708	0.8746	
15 minute summer	261	46.000	262	37.1	1.534	0.496	0.6927	
15 minute summer	262	46.001	263	36.7	1.361	0.684	0.3578	
30 minute summer	263	46.002	264	94.7	1.609	0.777	4.2039	
30 minute summer	264	46.003	265	87.1	1.569	0.637	0.1913	
30 minute summer	265	35.011	266	965.8	3.429	3.326	2.9675	
30 minute summer	266	35.012	267	963.6	3.457	3.103	5.8794	
30 minute summer	267	35.013	268	958.8	4.041	1.004	3.9606	
30 minute summer	268	27.014	269	1603.7	3.008	2.963	5.8623	
30 minute summer	269	27.015	270	1610.9	3.022	2.952	5.7669	
30 minute summer	270	27.016	271	1611.4	3.023	2.939	5.2764	
30 minute summer	271	27.017	272	1614.5	3.029	2.922	6.0623	
30 minute summer	272	27.018	273	1621.4	3.042	0.604	6.5815	
30 minute summer	273	27.019	287	1636.0	3.071	3.033	2.2145	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	274	12	19.391	1.117	107.2	3.9987	0.0000	FLOOD RISK
30 minute summer	275	20	19.154	0.485	25.0	0.8900	0.0000	SURCHARGED
30 minute summer	276	20	19.009	1.129	122.3	1.8647	0.0000	SURCHARGED
30 minute summer	277	20	18.964	1.162	123.3	1.8075	0.0000	SURCHARGED
15 minute winter	278	12	19.105	0.449	13.1	0.6512	0.0000	SURCHARGED
15 minute winter	279	12	19.104	0.672	143.1	2.8573	0.0000	SURCHARGED
30 minute summer	280	20	18.898	1.275	232.5	2.4169	0.0000	SURCHARGED
15 minute winter	281	12	18.799	1.238	245.1	2.2955	0.0000	SURCHARGED
30 minute summer	282	20	18.710	1.194	269.7	2.5538	0.0000	SURCHARGED
30 minute summer	283	20	18.588	1.128	273.6	2.0624	0.0000	SURCHARGED
15 minute summer	284	11	19.587	0.858	38.2	1.8194	0.0000	FLOOD RISK
30 minute summer	285	20	18.503	1.071	313.3	2.0084	0.0000	SURCHARGED
30 minute summer	286	20	18.344	0.962	325.1	1.9149	0.0000	SURCHARGED
30 minute summer	287	20	18.212	1.164	1960.9	2.9621	0.0000	SURCHARGED
1440 minute winter	287_OUT	1440	16.591	2.294	255.6	0.0000	0.0000	OK
15 minute summer	288	10	25.063	0.134	27.2	0.2338	0.0000	OK
15 minute summer	289	10	25.005	0.230	98.9	0.3105	0.0000	OK
15 minute summer	290	10	24.739	0.166	108.1	0.2743	0.0000	OK
15 minute summer	291	12	27.002	0.048	1.6	0.0000	0.0000	OK
15 minute summer	292	12	27.000	0.333	19.1	0.3148	0.0000	FLOOD RISK
15 minute summer	293	11	26.800	0.550	42.9	0.7748	0.0000	FLOOD RISK
15 minute summer	294	12	25.674	0.351	38.0	0.0000	0.0000	FLOOD RISK
15 minute summer	295	11	24.642	0.341	144.8	0.0000	0.0000	OK
15 minute summer	296	11	24.602	0.329	155.5	0.0929	0.0000	OK
15 minute winter	297	11	24.441	0.189	168.3	0.0330	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	274	47.000	276	85.1	1.209	1.204	4.2078	
30 minute summer	275	48.000	276	24.7	2.281	0.598	0.1619	
30 minute summer	276	47.001	277	112.5	0.954	0.705	5.0163	
30 minute summer	277	47.002	280	115.9	0.800	0.726	6.6854	
15 minute winter	278	49.000	279	14.1	0.716	0.353	0.4960	
15 minute winter	279	49.001	280	129.1	1.270	1.169	6.7632	
30 minute summer	280	47.003	281	233.7	1.082	1.073	6.5456	
15 minute winter	281	47.004	282	241.3	1.117	1.109	4.7607	
30 minute summer	282	47.005	283	269.2	1.246	1.236	5.9174	
30 minute summer	283	47.006	285	275.1	1.274	1.254	2.9164	
15 minute summer	284	50.000	285	33.8	1.922	1.912	0.3982	
30 minute summer	285	47.007	286	314.3	1.455	1.449	5.3230	
30 minute summer	286	47.008	287	324.9	1.504	1.495	3.6045	
30 minute summer	287	27.020	287_OUT	1960.2	3.677	3.637	7.6464	
1440 minute winter	287_OUT	Flow through pond	354	183.2	0.020	0.005	9457.0342	
15 minute summer	288	51.000	289	26.9	0.822	0.379	0.6423	
15 minute summer	289	51.001	290	97.8	1.670	0.691	2.3669	
15 minute summer	290	51.002	295	108.2	1.372	0.291	0.6016	
15 minute summer	291	52.000	292	-1.6	-0.153	-0.058	0.1385	
15 minute summer	292	52.001	293	17.7	1.189	0.658	0.3238	
15 minute summer	293	52.002	294	38.0	2.158	1.081	0.4216	
15 minute summer	294	52.003	295	37.9	2.154	1.281	0.1881	
15 minute summer	295	51.003	296	145.7	1.409	1.312	0.9345	
15 minute summer	296	51.004	297	152.4	2.118	1.371	0.5214	
15 minute winter	297	51.005	298	164.2	3.010	0.496	0.7023	



Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	298	11	24.086	0.184	180.0	0.1090	0.0000	OK
15 minute summer	299	11	23.900	0.177	176.5	0.0000	0.0000	OK
15 minute summer	300	11	23.670	0.178	176.4	0.0000	0.0000	OK
15 minute summer	301	11	23.542	0.187	176.7	0.0000	0.0000	OK
15 minute summer	302	11	23.949	0.754	76.4	2.2468	0.0000	SURCHARGED
15 minute winter	303	11	23.240	0.311	69.6	0.3512	0.0000	SURCHARGED
15 minute winter	304	11	23.166	0.446	248.3	0.0000	0.0000	SURCHARGED
15 minute summer	305	10	23.068	0.369	254.4	0.0554	0.0000	OK
15 minute summer	306	11	22.975	0.295	255.5	0.0000	0.0000	OK
15 minute winter	307	11	22.762	0.226	254.4	0.0000	0.0000	OK
15 minute summer	308	10	22.317	0.173	52.1	0.4135	0.0000	OK
15 minute summer	309	12	22.068	0.327	304.7	0.0000	0.0000	OK
15 minute summer	310	12	21.904	0.743	298.3	0.0000	0.0000	FLOOD RISK
15 minute summer	311	12	21.867	0.825	292.4	0.0973	0.0000	FLOOD RISK
15 minute summer	312	12	21.582	0.715	35.2	1.4632	0.0000	SURCHARGED
15 minute summer	313	12	21.414	1.082	325.2	0.0000	0.0000	FLOOD RISK
15 minute summer	314	12	21.272	0.975	342.3	0.0000	0.0000	FLOOD RISK
15 minute summer	315	10	26.365	0.191	88.1	0.6225	0.0000	OK
15 minute summer	316	10	25.066	0.164	104.6	0.2543	0.0000	OK
15 minute summer	317	10	24.429	0.301	145.2	0.6953	0.0000	OK
15 minute summer	318	10	24.335	0.235	168.0	0.4536	0.0000	OK
15 minute summer	319	10	24.068	0.255	180.5	0.4372	0.0000	OK
15 minute summer	320	11	23.850	0.260	283.9	0.9504	0.0000	OK
15 minute summer	321	10	23.016	0.133	33.0	0.2572	0.0000	OK
15 minute summer	322	10	22.881	0.151	56.3	0.2568	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	298	51.006	299	175.7	3.355	0.486	0.2886	
15 minute summer	299	51.007	300	176.4	3.430	0.466	0.3344	
15 minute summer	300	51.008	301	176.7	3.317	0.461	0.2007	
15 minute summer	301	51.009	304	176.2	3.204	0.512	0.2528	
15 minute summer	302	53.000	303	71.4	1.796	1.796	1.2904	
15 minute winter	303	53.001	304	74.2	1.053	0.678	0.9733	
15 minute winter	304	51.010	305	244.4	2.216	2.185	0.7289	
15 minute summer	305	51.011	306	255.5	2.503	2.286	0.6073	
15 minute summer	306	51.012	307	255.5	3.169	0.986	0.6902	
15 minute winter	307	51.013	309	259.1	3.780	0.674	0.4109	
15 minute summer	308	54.000	309	51.5	1.631	0.875	0.4396	
15 minute summer	309	51.014	310	298.3	2.566	0.664	4.2455	
15 minute summer	310	51.015	311	289.5	1.869	0.555	0.7288	
15 minute summer	311	51.016	313	296.8	1.879	1.470	8.4663	
15 minute summer	312	55.000	313	32.6	2.221	0.879	0.0961	
15 minute summer	313	51.017	314	342.3	2.161	2.127	2.2093	
15 minute summer	314	51.018	329	348.2	2.662	0.358	0.4278	
15 minute summer	315	56.000	316	86.2	2.509	0.957	1.3851	
15 minute summer	316	56.001	317	104.1	2.177	0.544	1.1438	
15 minute summer	317	56.002	318	144.5	1.720	0.909	0.3699	
15 minute summer	318	56.003	319	167.3	2.199	0.516	0.8377	
15 minute summer	319	56.004	320	179.6	2.232	0.526	0.6210	
15 minute summer	320	56.005	326	282.0	3.604	0.766	4.5059	
15 minute summer	321	57.000	322	32.8	1.240	0.536	0.2925	
15 minute summer	322	57.001	324	55.5	2.043	0.722	0.7733	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	323	12	21.619	0.945	52.1	2.3461	0.0000	SURCHARGED
15 minute summer	324	12	21.612	1.099	134.0	2.4514	0.0000	SURCHARGED
15 minute summer	325	10	22.460	0.153	51.4	0.3640	0.0000	OK
15 minute summer	326	12	21.570	1.228	471.4	2.2941	0.0000	SURCHARGED
15 minute summer	327	12	21.442	1.129	487.0	2.3412	0.0000	SURCHARGED
15 minute summer	328	12	21.319	1.028	476.0	1.8711	0.0000	SURCHARGED
15 minute summer	329	12	21.244	1.264	813.5	0.6915	0.0000	FLOOD RISK
15 minute summer	330	12	20.672	1.169	95.4	3.8538	0.0000	FLOOD RISK
15 minute summer	331	12	20.532	1.119	80.8	1.2654	0.0000	FLOOD RISK
15 minute summer	332	12	20.482	1.397	892.5	0.0000	0.0000	FLOOD RISK
15 minute summer	333	12	20.204	1.148	893.0	0.0000	0.0000	FLOOD RISK
15 minute summer	334	12	20.094	1.050	893.4	0.0000	0.0000	FLOOD RISK
15 minute summer	335	12	19.826	0.797	893.7	1.4078	0.0000	FLOOD RISK
15 minute summer	336	12	19.385	0.458	894.1	0.8096	0.0000	OK
2160 minute winter	336_OUT	1740	16.588	2.290	45.0	0.0000	0.0000	OK
15 minute summer	337	11	21.015	0.666	38.2	0.6158	0.0000	SURCHARGED
15 minute summer	338	11	20.922	0.709	36.6	0.8022	0.0000	SURCHARGED
15 minute summer	339	11	20.990	0.234	58.7	0.5966	0.0000	SURCHARGED
15 minute summer	340	11	20.821	0.703	90.0	0.7956	0.0000	SURCHARGED
15 minute summer	341	11	20.353	0.879	39.6	1.8377	0.0000	FLOOD RISK
15 minute summer	342	11	20.203	0.958	163.5	1.6619	0.0000	SURCHARGED
15 minute summer	343	11	19.382	0.734	83.0	2.2111	0.0000	SURCHARGED
15 minute summer	344	11	19.201	0.676	77.0	0.7644	0.0000	SURCHARGED
15 minute summer	345	11	19.082	0.706	249.3	1.1390	0.0000	SURCHARGED
15 minute summer	346	11	18.650	0.335	276.0	0.6405	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	323	58.000	324	48.4	0.678	0.304	5.5577	
15 minute summer	324	57.002	326	134.7	0.754	0.621	10.2320	
15 minute summer	325	59.000	326	50.6	1.831	0.740	0.8095	
15 minute summer	326	56.006	327	466.0	1.655	1.629	4.6606	
15 minute summer	327	56.007	328	473.2	2.010	1.650	3.5193	
15 minute summer	328	56.008	329	468.7	1.677	0.364	2.5154	
15 minute summer	329	51.019	332	814.1	3.769	1.881	5.8456	
15 minute summer	330	60.000	331	80.8	1.147	1.141	1.5477	
15 minute summer	331	60.001	332	78.4	1.113	1.094	0.4705	
15 minute summer	332	51.020	333	893.0	3.171	3.136	4.7065	
15 minute summer	333	51.021	334	893.4	3.172	3.059	1.8529	
15 minute summer	334	51.022	335	893.7	3.173	3.097	2.3709	
15 minute summer	335	51.023	336	894.1	3.270	1.221	2.3134	
15 minute summer	336	51.024	336_OUT	892.2	4.074	0.859	8.1516	
2160 minute winter	336_OUT	Flow through pond	354	135.3	0.017	0.003	9435.3477	
15 minute summer	337	61.000	338	36.6	1.046	0.768	0.6377	
15 minute summer	338	61.001	340	36.3	0.914	0.911	0.6376	
15 minute summer	339	62.000	340	55.8	1.499	0.445	0.4423	
15 minute summer	340	61.002	342	89.2	2.243	1.862	0.6587	
15 minute summer	341	63.000	342	35.6	0.897	0.894	1.0369	
15 minute summer	342	61.003	345	161.9	2.300	1.664	2.7748	
15 minute summer	343	64.000	344	77.0	1.093	1.085	2.1070	
15 minute summer	344	64.001	345	76.1	1.081	1.074	1.2684	
15 minute summer	345	61.004	346	248.0	2.251	2.230	2.0899	
15 minute summer	346	61.005	346_OUT	274.2	2.802	0.977	1.5786	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	346_OUT	1380	16.577	2.280	13.4	0.0000	0.0000	OK
15 minute summer	347	11	25.507	1.072	137.3	4.5536	0.0000	FLOOD RISK
30 minute summer	348	20	24.931	0.809	166.3	1.9802	0.0000	SURCHARGED
60 minute winter	349	48	24.762	0.983	11.3	1.5140	0.0000	FLOOD RISK
60 minute winter	350	49	24.762	1.338	105.4	1.9150	0.0000	SURCHARGED
60 minute winter	350_OUT	49	24.760	1.723	102.0	0.0000	0.0000	OK
15 minute summer	351	10	15.369	0.089	36.0	0.1784	0.0000	OK
60 minute winter	352	62	14.137	0.182	28.0	0.3034	0.0000	OK
60 minute winter	353	62	14.128	0.456	38.3	49.2922	0.0000	FLOOD RISK
1440 minute winter	354	1410	16.576	2.380	183.2	0.0000	0.0000	SURCHARGED
1440 minute winter	355	1410	16.569	2.406	48.7	6.1228	0.0000	SURCHARGED
1440 minute winter	356	1410	13.806	0.143	48.7	0.3631	0.0000	OK
1440 minute summer	357	1110	13.613	0.123	50.3	0.1753	0.0000	OK
1440 minute summer	353_OUT	1110	13.487	0.097	50.3	0.0000	0.0000	OK
1440 minute winter	358	1410	16.576	0.700	0.8	1.0909	0.0000	SURCHARGED
1440 minute winter	359	1380	16.576	0.776	0.8	0.8775	0.0000	SURCHARGED
1440 minute winter	359_OUT	1380	16.578	2.281	1.9	0.0000	0.0000	OK
15 minute summer	360	10	18.410	1.081	684.2	16.4691	0.0000	FLOOD RISK
2160 minute winter	360_OUT	1860	16.577	2.280	22.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
1440 minute winter	346_OUT	Flow through pond	354	183.2	0.020	0.005	9457.0342	
15 minute summer	347	65.000	348	124.0	1.761	1.275	2.8716	
30 minute summer	348	65.001	350	156.1	2.217	1.112	2.4287	
60 minute winter	349	66.000	350	8.0	0.739	0.200	0.8770	
60 minute winter	350	65.002	350_OUT	102.0	1.059	0.636	2.4849	
60 minute winter	350_OUT	Flow through pond	230	1373.9	0.193	0.022	1619.5365	
15 minute summer	351	67.000	352	35.8	1.466	0.334	0.7598	
60 minute winter	352	67.001	353	28.0	1.442	0.456	0.7543	
60 minute winter	353	Hydro-Brake®	357	2.0				
1440 minute winter	354	68.000	355	48.7	0.442	0.379	0.8741	
1440 minute winter	355	68.001	356	48.7	1.732	0.111	0.2975	
1440 minute winter	356	68.002	357	48.7	1.411	0.278	0.7787	
1440 minute summer	357	67.003	353_OUT	50.3	1.876	0.150	0.0958	2875.9
1440 minute winter	358	69.000	359	0.8	0.395	0.020	0.5133	
1440 minute winter	359	69.001	359_OUT	0.8	0.400	0.020	0.3541	
1440 minute winter	359_OUT	Flow through pond	354	183.2	0.020	0.005	9457.0342	
15 minute summer	360	70.000	360_OUT	665.1	4.198	4.120	1.6153	
2160 minute winter	360_OUT	Flow through pond	354	135.3	0.017	0.003	9435.3477	

Design Settings

Rainfall Methodology	FEH-13	Minimum Velocity (m/s)	1.00
Return Period (years)	2	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.500
CV	0.850	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	x
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Depth (m)
1	0.508	5.00	13.500	1200	1.800

Simulation Settings

Rainfall Methodology	FEH-13	Analysis Speed	Normal	Additional Storage (m³/ha)	20.0
Summer CV	0.850	Skip Steady State	x	Check Discharge Rate(s)	x
Winter CV	0.900	Drain Down Time (mins)	5760	Check Discharge Volume	x

Storm Durations

600 720 960 1440 2160

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
10	0	0	0
50	0	0	0
100	40	0	0

Node 1 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	11.700	Product Number	CTL-SHE-0064-2000-1200-2000
Design Depth (m)	1.200	Min Outlet Diameter (m)	0.100
Design Flow (l/s)	2.0	Min Node Diameter (mm)	1200

Node 1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	11.700
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	2160

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	375.0	0.0	1.200	375.0	0.0	1.201	0.0	0.0



Results for 10 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
600 minute winter	1	585	12.188	0.488	15.5	177.2473	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)	Discharge Vol (m ³)
600 minute winter	1	Hydro-Brake®	1.8	222.8



Results for 50 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
960 minute winter	1	930	12.404	0.704	14.4	255.4238	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)	Discharge Vol (m ³)
960 minute winter	1	Hydro-Brake®	1.8	328.8



Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
1440 minute winter	1	1380	12.897	1.197	16.5	434.4908	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)	Discharge Vol (m ³)
1440 minute winter	1	Hydro-Brake®	2.0	564.3

Appendix 6

Drainage Maintenance Schedule

Drainage Management and Maintenance Schedule

The Civil Engineering Practice
11 Tungsten Building
George Street
Fishergate
Sussex
BN41 1RA

Project	Land North of Water Lane, Angmering
Project Number	23544

By Stuart Magowan

Date 30 November 2021

1 Schedule of Maintenance

- 1.1 Once appointed the Contractor will prepare a site specific method statement for the control of silt and other pollutants during construction. CIRIA Report C532, Control of water pollution from construction sites, provides further guidance on this.
- 1.2 The Contractor will maintain the proposed drainage system during construction and until the handing over of the site.
- 1.3 Upon completion management of the shared drainage facilities will be passed on to Southern Water.
- 1.4 Where not adopted, upon completion management of the shared drainage facilities will be passed on to a Management Company appointed by the Developer on behalf of the Residents.
- 1.5 In the event that the Management Company becomes unable to discharge its duties within two years of first appointment the Developer will endeavour to appoint an alternative on behalf of the Residents.
- 1.6 Regular maintenance of all private drainage, gullies, gutters, rainwater pipes and connections will be the responsibility of the individual homeowner and should be undertaken every 3 months.

Maintenance Schedule	Required Action	Frequency
Regular Maintenance	Manage vegetation and remove nuisance plants – aesthetics	As required
	Litter and debris removal – catch pits, swales, headwalls and detention basins	Monthly or as required
	Cleaning of gutters and any filters on down pipes.	3 Monthly
	Mow all dry swales, SuDS basins and margins to low flow channels and other SuDS features at to be maintained between 100mm and 150mm max.	As required
	Remove any debris or obstructions from the existing watercourses.	Monthly or as required
	Remove sediment and debris from silt trap chambers, channel drains and inlet chambers	6 monthly
	Surface and foul water pipework – jetting / rodding	Every 2 years or as required
	Inspect for sediment and debris in pre-treatment components and floor of detention basins.	Annually
	Trim any roots that may cause blockages to the system.	Annually (or as required)



Maintenance Schedule	Required Action	Frequency
Occasional Maintenance	Remove sediment and debris from pre-treatment components and floor of storage structure inspection tubes or chambers and inside of concrete manhole rings.	As required based on inspections
Corrective Maintenance	Repairs to access chambers / manhole covers	As required
	Remove debris / blockages to silt traps / channel drains / headwalls	As required
	Surface remedial works to any depressions or rutting	As required
	Inspect inlet, outlet from downpipes, channel drains, infiltration basin, swales, headwalls and gullies for blockages, standing water and clear	As required
	Reconstruct storage structures if performance deteriorates or failure occurs	As required
	Where there is a build-up of silt in the swales or at inlets, i.e. 50mm or more above the design level, then remove and spread on site. Undertake when ground is damp in autumn or early spring and transplant turf and overseed to original design levels.	As required
Monitoring	Inspect silt traps and note the rate sediment has accumulated	Monthly in the first year and then annually
	Inspect storage structures to ensure they are fully emptying	Annually

Schedule of Regular and Corrective Maintenance

- 1.7 Any parts, materials or products that require replacement or come to the end of the manufactures recommended design life will be replaced by the private Management Company or individual homeowner as required.

Component	Inspection Frequency						
	1 Month	3 Months	6 Months	1 Year	After leaf fall in Autumn	2 Years	When alarm indicates
Gullies, Channels and Gutters		✓			✓		
Catchpits	✓				✓		
Surface and Foul Water Pipework						✓	
Permeable Paving				✓			
Swale / Detention Basins		✓					
Flow Controls			✓				
Storage Facilities				✓			
Existing Watercourse	✓						

Inspection Frequency Summary

2 Financing

- 2.1 The regular maintenance of all private drainage, channels, gutters, rainwater pipes and connections will be the responsibility of the individual property owners.
- 2.2 The regular and corrective maintenance of all shared elements of the drainage system will be managed and funded through the Management Company on behalf of the Residents.

3 Design Life

- 3.1 The design life of the development is likely to exceed the design life of the components within the SuDS network. During the routine drainage inspections it may be determined that some components have reached the end of their functional life cycle.
- 3.2 Where possible repairs should be the first option considered however if repairs are unviable, it will be necessary for the property owner of Management Company to replace the faulty component.

4 Emergency Plan

- 4.1 Potential flood and maintenance indicators:
 - Manhole chambers / PPICs overflowing
 - Gullies overflowing or ponding
 - Channel drains overflowing or ponding
 - Other visual indicators of the drainage system not performing as it should
- 4.2 Should any of the items above occur then immediate action as outlined below should be undertaken:
 - Inspect for blockages in the problem area
 - Should the problem not be identified via an initial inspection:
 - For unadopted onsite drainage the Management Company should appoint a suitable drainage engineer to inspect and survey the system and jet any blockages
 - For adopted onsite drainage the relevant statutory undertaker should be alerted
 - Where it is suspected that there is a problem with the downstream drainage network the owner or relevant statutory undertaker of that system should be alerted
- 4.3 Spillages
 - 4.3.1 If a serious spillage in volume or toxicity occurs on site then the spillage should be isolated with soil, turf or specialist fabric and all downstream outlets should be bunged / blocked.
 - 4.3.2 Once the spillage is contained the Environment Agency should be contacted immediately on 0 [REDACTED]