

Surface Water Drainage Technical Note

June 2025

Prepared for:

Scratchings Ltd

Location:

Bacons Farm

Sloop Lane

Scaynes Hill

Haywards Heath

West Sussex

RH17 7NP

Our reference:

92601-NFP-BcnsFrm_cond



Document Issue Record

Project Details	
Project:	Surface Water Drainage Technical Note
Prepared for:	Scratchings Ltd
Application:	Proposed winery building for existing vineyard
Location:	Bacons Farm, Sloop Lane, Scaynes Hill, Haywards Heath, West Sussex, RH17 7NP
Our reference:	92601-NFP-BcnsFrm_cond
Issue no.:	v1.0
Issue date:	19 th June 2025

Project Consultants	
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1. Introduction

- 1.1. This Surface Water Drainage Technical Note has been prepared by Unda Consulting Limited on behalf of Scratchings Ltd, to address Condition 1 of a planning application.
- 1.2. The planning application relates to the proposed winery building for existing vineyard. These works are proposed to be undertaken at Bacons Farm, Sloop Lane, Scaynes Hill, Haywards Heath, West Sussex, RH17 7NP.
- 1.3. Post development the roof area of the winery building will cover approximately 467m².
- 1.4. This report assesses the surface water drainage arrangement for the proposed development, which forms Condition 1 of a planning application. Condition 1 states the following:

Condition 1:

Prior to commencement of development, in accordance with the submitted Flood Risk Assessment and Drainage Strategy 92601-NFP-BcnsFrm-v3 by UNDA, January 2025, Version 3 and Dwg. 92601-01 v1 Drainage Strategy, 31/01/25 detailed designs of a surface water drainage scheme incorporating the following measures shall be submitted to and agreed with the Local Planning Authority. The approved scheme will be implemented prior to the first occupation of the development. The scheme shall address the following matters:

- I. *Additional detailed infiltration testing in accordance with BRE Digest 365 (or equivalent) along the length and proposed depth of the proposed attenuation basin.
If infiltration is proven to be unfavourable then greenfield runoff rates will be attenuated to Qbar.*
- II. *Provision of surface water attenuation storage, sized and designed to accommodate the volume of water generated in all rainfall events up to and including the critical storm duration for the 3.33% and 1% annual probability rainfall events (both including allowances for climate change).*
- III. *Detailed designs, modelling calculations using up to date parameters and plans of the of the drainage conveyance network in the:*
 - *3.33% annual probability critical rainfall event plus climate change to show no above ground flooding on any part of the site.*
 - *1% annual probability critical rainfall plus climate change event to show, if any, the depth, volume and storage location of any above ground flooding from the drainage network ensuring that flooding does not occur in any part of a building or any utility plant susceptible to water (e.g. pumping station or electricity substation) within the development.*
- IV. *The design of the infiltration / attenuation basin will incorporate an emergency spillway and any drainage structures include appropriate freeboard allowances. Plans to be submitted showing the routes for the management of exceedance surface water flow routes that minimise the risk to people and property during rainfall events in excess of 1% annual probability rainfall event.*
- V. *Finished ground floor levels of properties are a minimum of 300mm above expected flood levels of all sources of flooding (including the ordinary watercourses, SuDS features and within any proposed drainage scheme) or 150mm above ground level, whichever is the more precautionary.*
- VI. *Details of how all surface water management features to be designed in accordance with The SuDS Manual (CIRIA C753, 2015), including appropriate treatment stages for water quality prior to discharge.*

Reason: To prevent flooding in accordance with National Planning Policy Framework paragraph 173 and 175 by ensuring the satisfactory management of local sources of flooding surface water flow paths, storage and disposal

of surface water from the site in a range of rainfall events and ensuring the SuDS proposed operates as designed for the lifetime of the development.

- 1.5. This Technical Note provides the information required to address the surface water drainage elements of planning application Condition 1.

2. Existing Site

- 2.1. Bacons Farm is a mixed enterprise of 24.71 hectares made up of approx. 11 hectares of grassland, 3.5 hectares of existing woodland, 2.5 hectares of new tree planting and 5.5 hectares of vineyard.
- 2.2. The surrounding area is characterised by residential dwellings.



Figure 1: Aerial view of the site and surrounding area (Source: Google Earth)

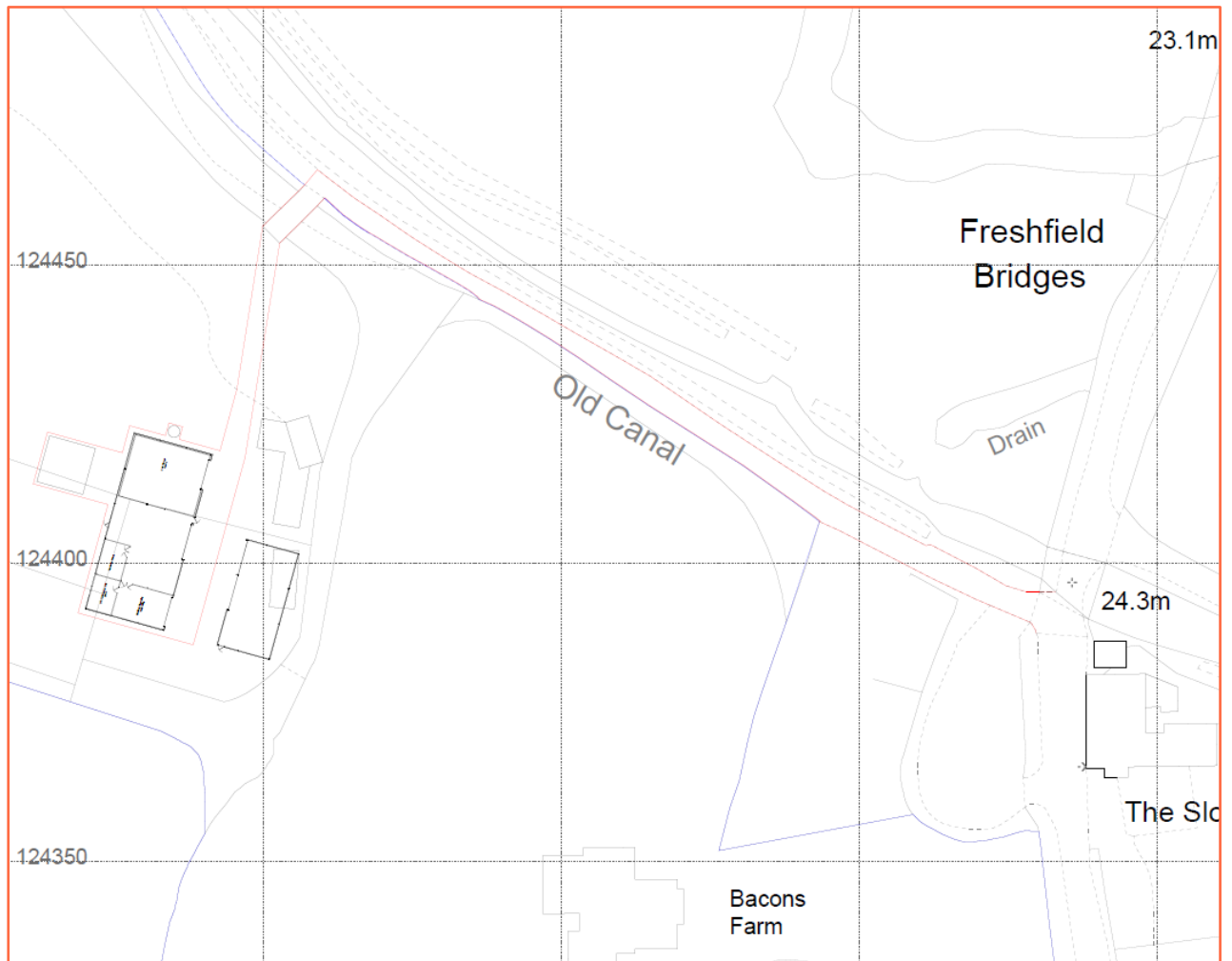


Figure 2: Site location plan (Source: N Field Projects Ltd)

Site Topography:

- 2.3. A topographic survey undertaken in June 2025 on behalf of the Applicant shows that ground topography on the site in the location of the proposed barn ranges between approximately 24.39mAOD to 24.92mAOD. Refer to Appendix.

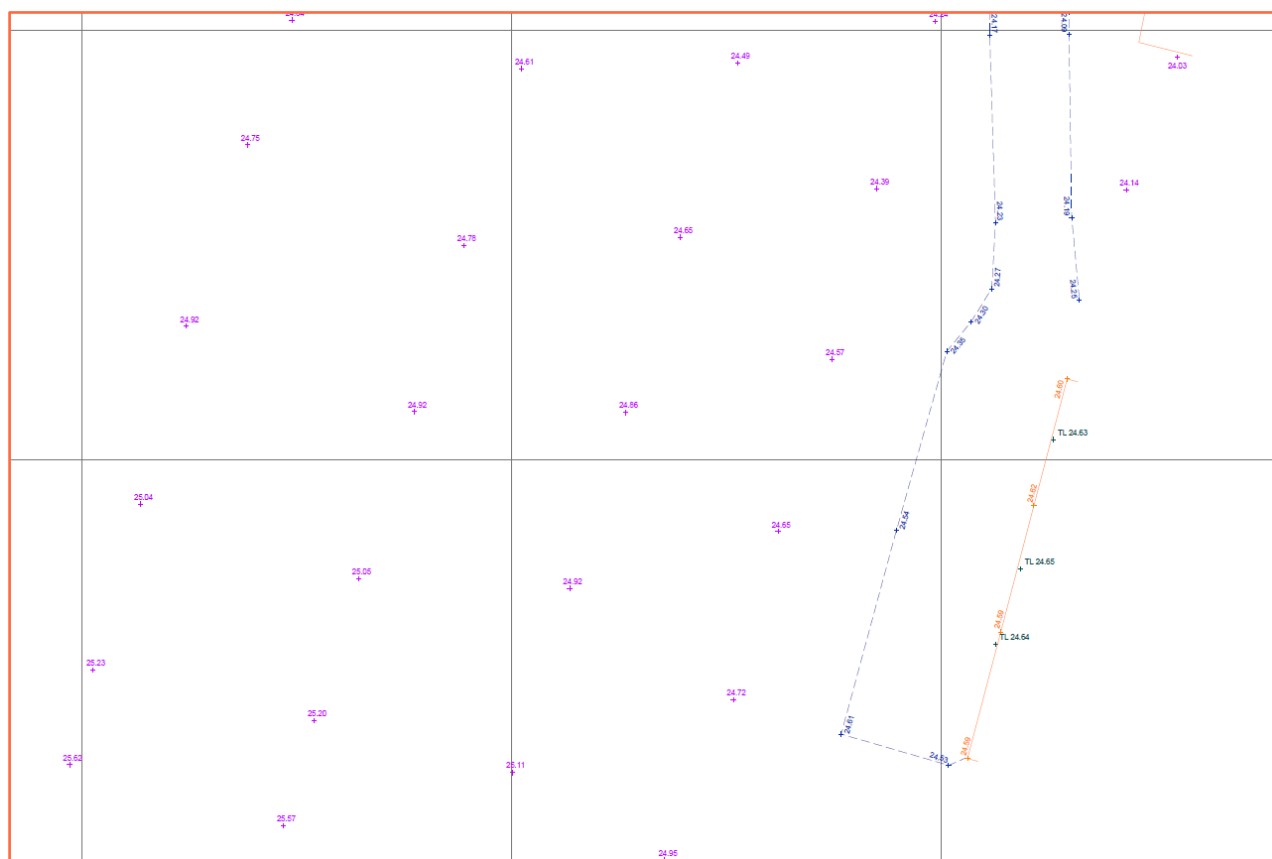


Figure 3: Topographic survey – refer to Appendix (Source: Applicant)

Existing Ground Conditions:

- 2.4. The British Geological Survey (BGS) Map indicates that the bedrock underlying the site is Cuckfield Stone Bed – Sandstone, Calcareous.
- 2.5. The superficial geology underlying the site comprises of River Terrace Deposits, 1 – Sand and Gravel, and Alluvium – Clay, Silt, Sand and Gravel.
- 2.6. The soil type on site, taken from the UKSO data, is relatively deep soils from River Terrace Sand / Gravel soil parent material with a Sandy Loam soil texture and intermediate soils from Sandstone soil parent material with a Sand to Sandy Loam soil texture.
- 2.7. The published Environment Agency Groundwater Source Protection zone map shows the site is not located within a Source Protection Zone.

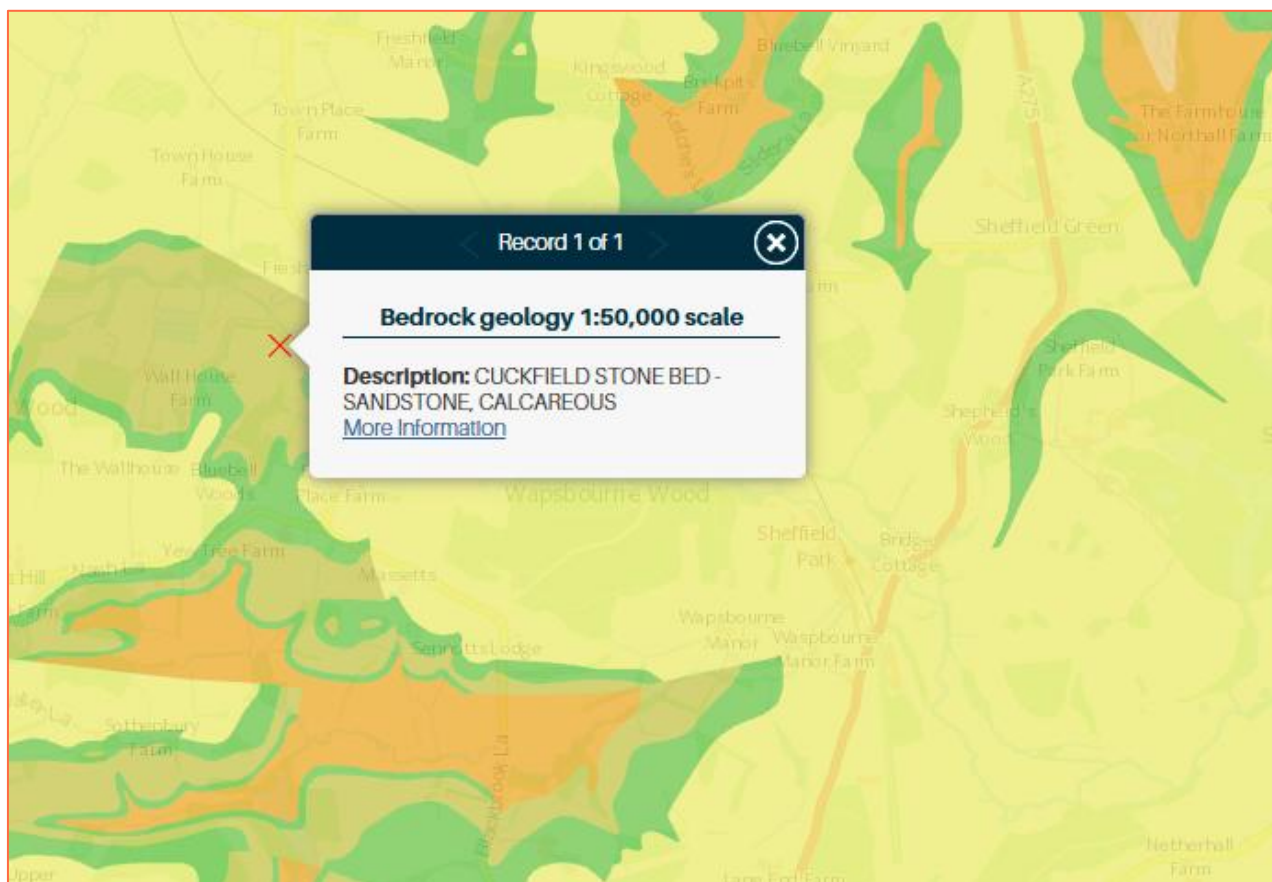


Figure 4: BGS Bedrock Geology (Source: BGS)

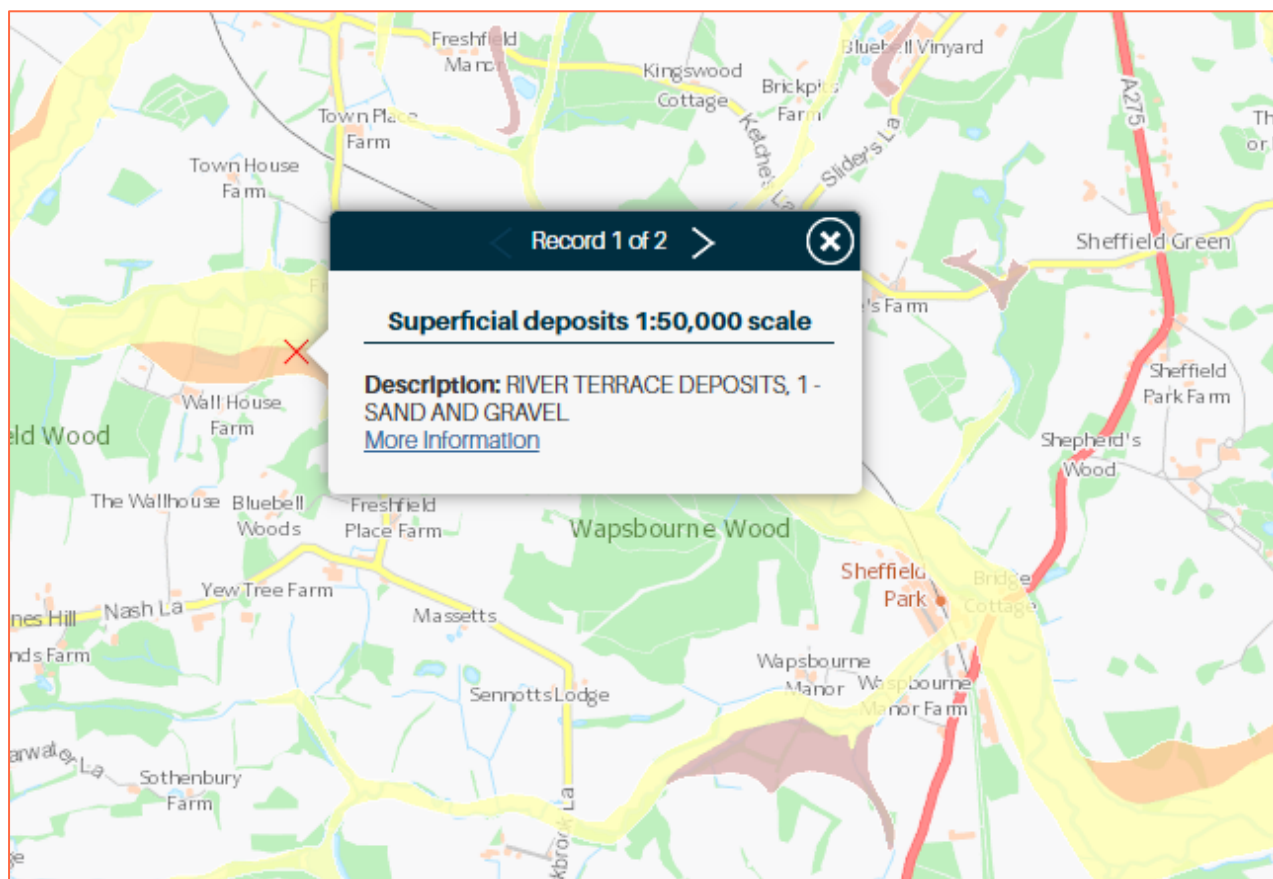


Figure 5: BGS superficial deposits (Source: BGS)



Figure 6: Soil map (Source: UK Soils, BGS)

Nearby Watercourses / Drainage Features:

- 2.8. The nearest watercourse to the site is a ditch south of Sloop Lane within the Applicant's ownership boundary.
- 2.9. The River Ouse (Old Canal / Canal Cut / Freshfield) is located approximately 55m to the north of the proposed barn.

3. Development Proposal

- 3.1. Discharge of Surface Water Planning Condition 1 is for the *proposed winery building for existing vineyard* at Bacons Farm, Sloop Lane, Scaynes Hill, Haywards Heath, West Sussex, RH17 7NP.
- 3.2. Post development the roof area of the proposed winery building will cover approximately 467m². The SuDS sizing within the strategy has been based on attenuating the proposed roof area.
- 3.3. The maximum existing ground level in the area of the proposed building is 24.92mAOD. Applying the most precautionary approach, the finished floor level of the proposed building will be set at least 150mm above the ground level to 25.07mAOD.
- 3.4. Proposed plans are provided in the report Appendix.



Figure 7: Proposed site plan – please note proposed surface water drainage strategy differs from this plan. Refer to report and Appendix (Source: N Field Projects Ltd)

4. Surface Water Drainage Strategy

Existing Drainage:

- 4.1. The existing site is understood to discharge its surface water via runoff and infiltration.

Drainage Hierarchy:

- 4.2. In order to mitigate flood risk posed by post development runoff, adequate control measures will need to be considered within the site. This will ensure that surface water runoff is dealt with at source and flood risk is not increased elsewhere.
- 4.3. The drainage strategy for the site has been prepared according to the drainage discharge hierarchy from CIRIA C753 The SuDS Manual, as follows:
1. Infiltration to the maximum extent that is practical;
 2. Discharge to surface waters;
 3. Discharge to surface water sewer;
 4. Discharge to combined sewer.

Infiltration Potential:

- 4.4. Infiltration testing trial pits conducted at the area of the previously proposed soakaway encountered groundwater at a minimum depth of 1.3m bgl. Refer to Appendix. Therefore, infiltration SuDS are not considered to be viable at the site.

Proposed Discharge Rate and Location:

- 4.5. The greenfield runoff rate for the area of the site being attenuated has been calculated as 0.2 l/s for the 1:1 annual runoff event, 0.6 l/s for the 1:30 year event and 0.9 l/s for the 1:100 year event. QBar has been calculated as 0.3 l/s. Refer to calculations in Appendix.
- 4.6. Runoff from the proposed winery building's roof area will be directed into the cellular storage attenuation located west of the building.
- 4.7. From the cellular storage, runoff will be gradually discharged to the ditch located south of Sloop Lane within the Applicant's ownership boundary. The discharge will be limited to 0.3 l/s (QBar) for all storms up to the 1:100 year + 45% climate change event via an orifice plate. An overflow will be provided on the cellular storage attenuation tank to allow discharge of runoff should the orifice become obstructed.
- 4.8. The forecourt will drain using its existing drainage arrangements. All remaining ground surfaces will be of permeable construction or direct runoff to adjacent permeable areas.

Cellular Storage Attenuation:

- 4.9. The proposed area discharging into the cellular storage attenuation amounts to approximately 467m².
- 4.10. Preliminary calculations indicate that sufficient storage required to attenuate runoff from the proposed roof area arising from the critical 1:100 year + 45% climate change event can be provided by cellular storage of dimensions 80m² x 0.66m x 0.95 (voids).

- 4.11. Preliminary calculations indicated that some 50.16m³ of storage is required to attenuate the runoff for all storms up to and including the 1:100 year + 45% climate change event.
- 4.12. *Please note that the locations of the cellular storage within the Causeway calculations are arbitrary for modelling purposes.*
- 4.13. All preliminary surface water drainage calculations have been undertaken using Causeway software. Refer to Appendix.

Water Use:

- 4.14. Runoff from the new roof area will be collected and stored in an above-ground rainwater harvesting tank.
- 4.15. If the rainwater harvesting tank contains more water than required, the additional water will be directed into the cellular storage attenuation.

Water Quality:

- 4.16. Roof water will contain negligible contaminant concentrations and does not warrant treatment. Nevertheless, it is suggested to include debris / sediment traps on any new drainage.

Design Exceedance:

- 4.17. Should the onsite drainage system fail under extreme rainfall events or blockage, flooding may occur within the site. In the event of the drainage system failure, the runoff flow can be managed through detailing the new external levels to direct water away from structures.

Adoption and Maintenance:

- 4.18. It is proposed that all SuDS facilities will be maintained privately by the end users.
- 4.19. A draft Maintenance Schedule is outlined below.
- 4.20. In addition, it is recommended that all drainage elements are inspected following the first storm event and monthly for the first 3 months following commissioning.

Cellular Storage:

- 4.21. It is not envisaged that silt build up within the cellular crate systems will require a rigorous maintenance regime so long as silt is removed from upstream catch pits and inspection chambers on a regular basis. Notwithstanding this, a suitable maintenance regime is outlined in the table below.

Maintenance Schedule	Action	Frequency
Routine Maintenance	• Remove silt build-up from system.	Action as required.
	• Remove debris from catchment surface if it may cause risks to performance.	Action as required.
Remedial Actions	• Repair inlets, outlets and overflows.	Action as required.
Monitoring	• CCTV inspection of crates for silt build-up to establish silt removal frequencies.	Following first storm event and every five years thereafter.
	• Inspection of inlet, outlet and overflow pipework for silt accumulation to establish silt removal frequencies.	Monthly for first 3 months and annually thereafter.
	• Inspection of inlets, outlets and overflows to ensure they are functioning correctly.	Annually.

Table 1: Suggested maintenance regime for cellular storage

- 4.22. Inspection and maintenance access can be gained via inspection chambers and inlet pipework.
- 4.23. Jetting should be undertaken in accordance with current jetting guidelines, particularly the Sewer Jetting Code of Practice published by The Water Research Centre. Jetting at 150 bar at 300 l/min should be more than adequate in removing any build-up of material. However, unlike regular jetting which relies heavily on high pressure to remove hardened deposits on the inner bore of pipes, effective cleansing of a crate system relies more on the delivery flow rate to flush solids back through the system.
- 4.24. A standard jet head with rear facing nozzles should be used. The head should be fed to the far end of the crate tunnel via the nearest inspection chamber, activated and retracted. As the nozzle is removed, debris will be swept back into the inspection chamber where it can then be removed with the use of a standard gully sucker. This method will ensure the effective removal of gross solids (carrier bags, cans, leaf litter etc.) from the system. Whilst 100% removal cannot be guaranteed, it has been shown that this jetting method will also remove an element of finer material which would otherwise be 'lost' within the system.

Pipework, Inspection Chambers, Catchpits and Flow Controls

- 4.25. It is not envisaged that silt build up within the pipework systems will require a rigorous maintenance regime so long as silt is removed from upstream catch pits on a regular basis. Notwithstanding this, a suitable maintenance regime for the systems is outlined in the table below.

Maintenance Schedule	Action	Frequency
Routine Maintenance	• Remove silt and debris from inspection chambers, catchpits and flow controls.	Annually or as required.
	• Cleaning of gutters and downpipe filters.	
Monitoring	• Remove root ingress.	Action as required.
	• Inspect for silt and debris.	Every three months.
	• CCTV survey of drainage system to identify alignment issues, cracked pipes or leaking joints.	Every 10 years.

Table 2: Suggested maintenance regime for pipework, inspection chambers, catchpits and flow controls

5. Discussion and Conclusion

- 5.1. This Surface Water Drainage Technical Note has been prepared by Unda Consulting Limited on behalf of Scratchings Ltd, to address Condition 1 of a planning application.
- 5.2. The planning application relates to the proposed winery building for existing vineyard. These works are proposed to be undertaken at Bacons Farm, Sloop Lane, Scaynes Hill, Haywards Heath, West Sussex, RH17 7NP.
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- VII. *Additional detailed infiltration testing in accordance with BRE Digest 365 (or equivalent) along the length and proposed depth of the proposed attenuation basin.
If infiltration is proven to be unfavourable then greenfield runoff rates will be attenuated to Qbar.*
- VIII. *Provision of surface water attenuation storage, sized and designed to accommodate the volume of water generated in all rainfall events up to and including the critical storm duration for the 3.33% and 1% annual probability rainfall events (both including allowances for climate change).*
- IX. *Detailed designs, modelling calculations using up to date parameters and plans of the of the drainage conveyance network in the:*
 - *3.33% annual probability critical rainfall event plus climate change to show no above ground flooding on any part of the site.*
 - *1% annual probability critical rainfall plus climate change event to show, if any, the depth, volume and storage location of any above ground flooding from the drainage network ensuring that flooding does not occur in any part of a building or any utility plant susceptible to water (e.g. pumping station or electricity substation) within the development.*
- X. *The design of the infiltration / attenuation basin will incorporate an emergency spillway and any drainage structures include appropriate freeboard allowances. Plans to be submitted showing the routes for the management of exceedance surface water flow routes that minimise the risk to people and property during rainfall events in excess of 1% annual probability rainfall event.*
- XI. *Finished ground floor levels of properties are a minimum of 300mm above expected flood levels of all sources of flooding (including the ordinary watercourses, SuDS features and within any proposed drainage scheme) or 150mm above ground level, whichever is the more precautionary.*
- XII. *Details of how all surface water management features to be designed in accordance with The SuDS Manual (CIRIA C753, 2015), including appropriate treatment stages for water quality prior to discharge.*

Reason: To prevent flooding in accordance with National Planning Policy Framework paragraph 173 and 175 by ensuring the satisfactory management of local sources of flooding surface water flow paths, storage and disposal

of surface water from the site in a range of rainfall events and ensuring the SuDS proposed operates as designed for the lifetime of the development.

- 5.5. Bacons Farm is a mixed enterprise of 24.71 hectares made up of approx. 11 hectares of grassland, 3.5 hectares of existing woodland, 2.5 hectares of new tree planting and 5.5 hectares of vineyard.
- 5.6. A topographic survey undertaken in June 2025 on behalf of the Applicant shows that ground topography on the site in the location of the proposed barn ranges between approximately 24.39mAOD to 24.92mAOD.
- 5.7. The maximum existing ground level in the area of the proposed building is 24.92mAOD. Applying the most precautionary approach, the finished floor level of the proposed building will be set at least 150mm above the ground level to 25.07mAOD.
- 5.8. The British Geological Survey (BGS) Map indicates that the bedrock underlying the site is Cuckfield Stone Bed – Sandstone, Calcareous.
- 5.9. The superficial geology underlying the site comprises of River Terrace Deposits, 1 – Sand and Gravel, and Alluvium – Clay, Silt, Sand and Gravel.
- 5.10. The soil type on site, taken from the UKSO data, is relatively deep soils from River Terrace Sand / Gravel soil parent material with a Sandy Loam soil texture and intermediate soils from Sandstone soil parent material with a Sand to Sandy Loam soil texture.
- 5.11. The published Environment Agency Groundwater Source Protection zone map shows the site is not located within a Source Protection Zone.
- 5.12. The nearest watercourse to the site is a ditch south of Sloop Lane within the Applicant's ownership boundary.
- 5.13. The River Ouse (Old Canal / Canal Cut / Freshfield) is located approximately 55m to the north of the proposed barn.
- 5.14. Infiltration testing trial pits conducted at the area of the previously proposed soakaway encountered groundwater at a minimum depth of 1.3m bgl. Refer to Appendix. Therefore, infiltration SuDS are not considered to be viable at the site.
- 5.15. The greenfield runoff rate for the area of the site being attenuated has been calculated as 0.2 l/s for the 1:1 annual runoff event, 0.6 l/s for the 1:30 year event and 0.9 l/s for the 1:100 year event. QBar has been calculated as 0.3 l/s. Refer to calculations in Appendix.
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- 5.18. The forecourt will drain using its existing drainage arrangements. All remaining ground surfaces will be of permeable construction or direct runoff to adjacent permeable areas.
- 5.19. The proposed area discharging into the cellular storage attenuation amounts to approximately 467m².
- 5.20. Preliminary calculations indicate that sufficient storage required to attenuate runoff from the proposed roof area arising from the critical 1:100 year + 45% climate change event can be provided by cellular storage of dimensions 80m² x 0.66m x 0.95 (voids).

- 5.21. Preliminary calculations indicated that some 50.16m³ of storage is required to attenuate the runoff for all storms up to and including the 1:100 year + 45% climate change event.
- 5.22. Runoff from the new roof area will be collected and stored in an above-ground rainwater harvesting tank.
- 5.23. If the rainwater harvesting tank contains more water than required, the additional water will be directed into the cellular storage attenuation.
- 5.24. Roof water will contain negligible contaminant concentrations and does not warrant treatment. Nevertheless, it is suggested to include debris / sediment traps on any new drainage.
- 5.25. It is proposed that all SuDS facilities will be maintained privately by the end users. A draft Maintenance Schedule is outlined within the report.
- 5.26. Should the onsite drainage system fail under extreme rainfall events or blockage, flooding may occur within the site. In the event of the drainage system failure, the runoff flow can be managed through detailing the new external levels to direct water away from structures.

This drainage strategy has been undertaken in accordance with the principles set out in NPPF. We can conclude that providing the development adheres to the conditions advised above, the said development proposals can be accommodated without increasing flood risk within the locality in accordance with objectives set by Central Government and the EA.

**Unda Consulting Limited
June 2025**

Appendix

A – Development Plans:

- Site location and proposed plans – N Field Projects Ltd.

B – Topographic Survey:

- Topographic Survey to OS Datum – Applicant.

C – Infiltration Testing:

- Infiltration Test Results (TP01, TP02);
- Infiltration Test Pit Logs.

D – Specifications:

- Cellular Storage Crate Specification – Hydro International.

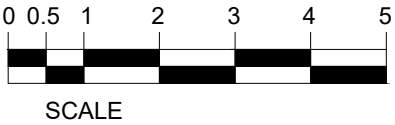
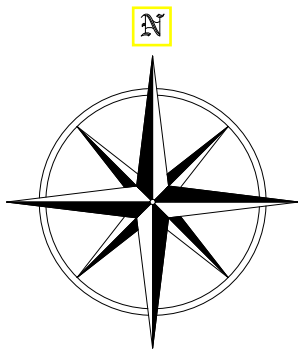
E – Causeway Calculations:

- IH124 Pre-Development Greenfield Runoff Calculations for the area of the site being attenuated;
- Cellular Storage Attenuation Network Calculations.

F – Drainage Layout Plans:

- Proposed Drainage Layout [92602-01 cond].

Appendix A



N Field Projects Ltd
5 Woodlands Close, Heathfield, East Sussex, TN21 8BH
Tel: 07738 703498
E-mail: nick@nfieldprojects.co.uk

PROJECT TITLE
Bacons Farm, Sloop Lane, Scaynes Hill, RH17 7NP

DRAWING
Winery Site Plan

REV	DESCRIPTION	DATE	BY

SCALE 1:100 on A1	DRAWN NRF
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DATE 14/01/2025	DRAWING No. NFP194S004
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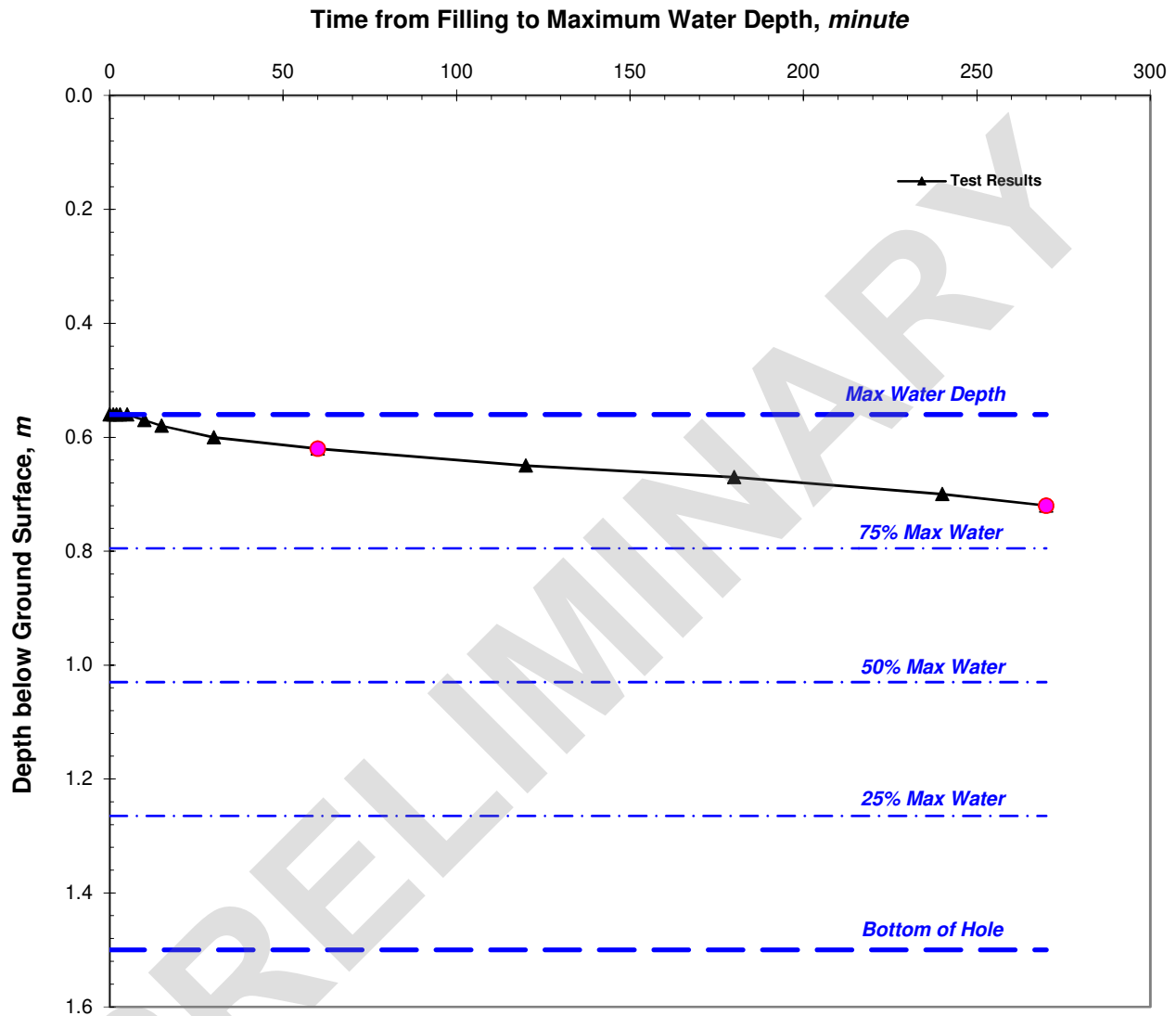
Appendix B

Appendix C

BRE Digest DG365 Soakage Test

Test Hole No: TP01

Test No: Test No 1 (Initial)



Pit Length, m	1.800	Depth to Water at Start of Test, m	0.560
Pit Width, m	0.300	Max Water Dropdown during Test, m	0.160
Depth to Pit Base, m	1.500	Total Soakage Test Time, min	270.0
Depth to Top of Permeable Soils, m		Mean Internal Discharge Area, m ²	4.026
Depth to Groundwater Surface, m		Discharge Rate, litre/min	0.257
Depth to Top of Granular Fill, m		Soakage Rate, litre/m ² /min	0.064
Voids Assumed for Granular Fill, %	100%	BRE Soil Infiltration Rate, m/sec	1.06E-06

Comments:

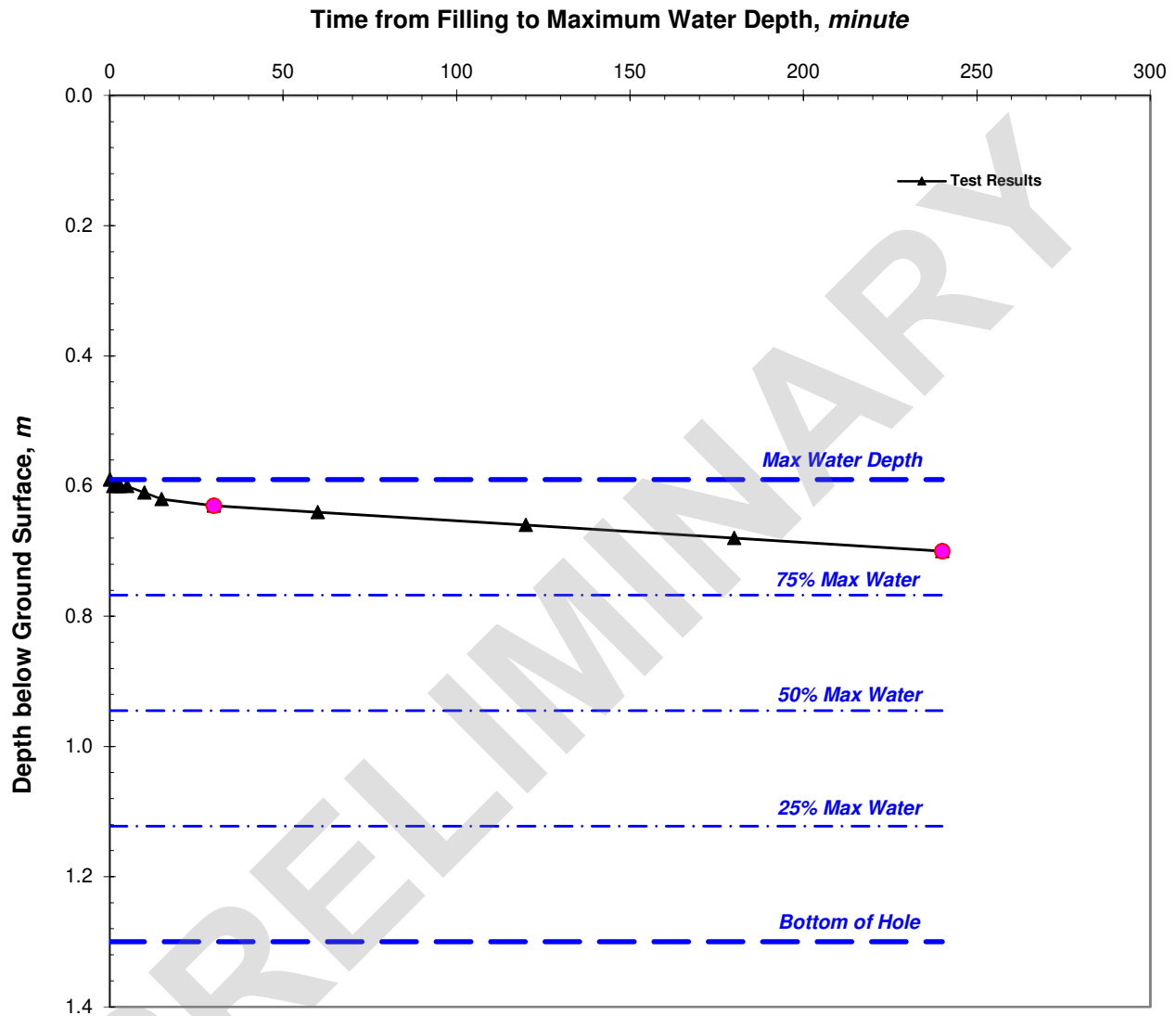
Water level did not fall to 75% max water depth, calculations were based on actual fall of water level achieved.
Result not compliant with BRE365 requirement since water did not fall to 25% max water depth.

Client: N Field Projects	Job No: J15974	Test Date: 04/Apr/2025
Site: Bacons Farm, Sloop Lane, Scaynes Hill	Tested By: CP	Engineer: CL
		Fig. S1

BRE Digest DG365 Soakage Test

Test Hole No: TP02

Test No: Test No 1 (Initial)

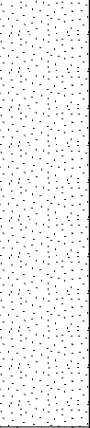


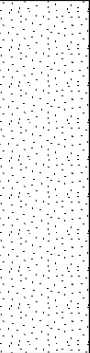
Pit Length, m	1.500	Depth to Water at Start of Test, m	0.590
Pit Width, m	0.300	Max Water Dropdown during Test, m	0.110
Depth to Pit Base, m	1.300	Total Soakage Test Time, min	240.0
Depth to Top of Permeable Soils, m		Mean Internal Discharge Area, m ²	2.736
Depth to Groundwater Surface, m		Discharge Rate, litre/min	0.150
Depth to Top of Granular Fill, m		Soakage Rate, litre/m ² /min	0.055
Voids Assumed for Granular Fill, %	100%	BRE Soil Infiltration Rate, m/sec	9.14E-07

Comments:

Water level did not fall to 75% max water depth, calculations were based on actual fall of water level achieved.
Result not compliant with BRE365 requirement since water did not fall to 25% max water depth.

Client: N Field Projects	Job No: J15974	Test Date: 04/Apr/2025
Site: Bacons Farm, Sloop Lane, Scaynes Hill	Tested By: CP	Engineer: CL
		Fig. S2

Southern Testing ST Consult www.southerntesting.co.uk tel:01342 333100 www.stconsult.co.uk tel:01604 500020				Start - End Date: 04/04/2025		Project ID: J15974		Machine Type: 3T-tracked		TP01 Sheet 1 of 1	
Project Name: Bacons Farm, Sloop Lane, Scaynes Hill				Remarks:		Co-ordinates:		Level (m AOD):		Logger: CL	
Location:				1. Groundwater seepages below approx. 1.4m, standing water level around 1.45m after approx. 5 mins.							
Client: N Field Projects				2. Pit sides slightly unstable below approx. 1.0m due to seepages. 3. BRE365 soakage test pit.							
Samples and Insitu Testing			Level (m AOD)	Thickness (m)	Legend	Depth (m bgl)	Stratum Description				
Depth (m)	Type	Results									
0.80	PPT			(0.15)		0.15	Brown, slightly clayey, slightly sandy SILT, with frequent rootlets (TOPSOIL).		1		
							Loose to medium dense, orange brown, slightly clayey, very silty, fine SAND.				
1.50	PPT			(0.85)		1.00	Loose to medium dense, orange brown, very clayey, very silty, fine SAND.		2		
				(0.20)		1.20	Medium dense, orange brown, very clayey, fine SAND/ SILT.		3		
				(0.30)		1.50	Pit terminated at 1.50m.				
Pit Dimension (m)			Pit Stability:				Water Strikes:				
Width:	0.30		Pit sides slightly unstable below approx. 1.0m due to seepages.								
Length:	1.80										
Depth:	1.50										

 Southern Testing ST Consult				Start - End Date: 04/04/2025		Project ID: J15974		Machine Type: 3T-tracked		TP02 Sheet 1 of 1	
www.southerntesting.co.uk tel:01342 333100 www.stconsult.co.uk tel:01604 500020				Project Name: Bacons Farm, Sloop Lane, Scaynes Hill		Co-ordinates:		Level (m AOD):		Logger: CL	
Location:				Remarks:		1. Very slight groundwater seepages at base of pit (1.3m) - pit terminated at this depth. 2. BRE365 soakage test pit.					
Client: N Field Projects											
Samples and Insitu Testing			Level (m AOD)	Thickness (m)	Legend	Depth (m bgl)	Stratum Description				
Depth (m)	Type	Results									
0.80	PPT			(0.20)		0.20	Brown, slightly clayey, slightly sandy SILT, with frequent rootlets (TOPSOIL).		1		
				(0.70)			Loose, orange brown, slightly clayey, very silt, fine SAND.				
				(0.20)		0.90	Loose, orange brown, very clayey, very silt, fine SAND.				
				(0.20)		1.10	Medium dense, orange brown, very clayey, fine SAND/ SILT.				
1.30	PPT					1.30	Pit terminated at 1.30m.		2		
									3		
Pit Dimension (m)			Pit Stability:				Water Strikes:				
Width:		0.30									
Length:		1.50									
Depth:		1.30									

Appendix D

Stormbloc® Optimum Range

Attenuate or infiltrate surface water effectively even in challenging urban environments

Product Summary

The Stormbloc® Optimum range comprises two resilient geocellular storage systems that provide underground storage and infiltration of surface water runoff; **Stormbloc® Extra** and **Stormbloc®**, plus an inspection chamber, the **Stormbloc® Inspect**.

The system helps meet Sustainable Drainage System (SuDS) objectives by returning stormwater back to the natural water cycle at or near its source, without taking up valuable space for amenity or development above ground.

The lightweight materials, combined with robust design make them easy to transport, quick to install and extremely durable. With an optimum-strength option for high-traffic areas and a lighter option for landscape and low-traffic areas, the Stormbloc® Optimum range provides a space-saving solution for many applications.

Applications

- » New and retrofit Sustainable Drainage (SuDS) schemes.
- » Infiltration / soakaway schemes.
- » Attenuation schemes.
- » Highways and infrastructure projects.
- » To increase swale / pond capacity.
- » Car parks and Park & Ride schemes.
- » Housing Developments.
- » Schools and Public / Civil schemes.
- » Aquifer re-charge.
- » Storage for rainwater harvesting and re-use

Benefits

Maximise storage

The Stormbloc® Optimum range can store 960 litres of stormwater below ground in 1 cubic metre of volume, more than 60% more stormwater storage in the same volume when compared to conventional gravel infiltration trenches.

Save space on site

Both Stormbloc® Extra and Stormbloc® stack into compact nests for transport and storage, saving up to 75% of valuable space. The nested units save time and cost during installation, enabling more storage volume to be lifted into excavations at any one time.

Lightweight with two strength options

For more flexible designs choose between the high-strength Stormbloc® Extra for deep or high-loaded installations and Stormbloc® for shallower installations with lighter loads such as landscaped or low-traffic areas.

Stormbloc® Optimum range

Stormbloc®

A lighter, cost-effective option suitable for landscaped or low-traffic areas. Access for inspection and maintenance can be included where required using Stormbloc® Inspect chambers and Stormbloc® Extra blocks.



Stormbloc® Extra

A high-strength option ideal for installation beneath high-traffic areas such as roads, car parks and warehouse yards. Access for inspection and maintenance is via Stormbloc® Inspect chambers and the channels in the blocks allow access for CCTV and cleaning to ensure that the storage volume of the system isn't reduced by the build up of silts.



Stormbloc® Inspect

The Stormbloc® Inspect offers an unrivalled level of accessibility to any Stormbloc® Extra or Stormbloc® installation. This modular access chamber, sited within the tank, has identical dimensions to a Stormbloc® Extra module and so can be easily incorporated into the layout of the infiltration or storage system.



Find out about the Stormbloc® Optimum range can help you design cost-effective, space-saving surface water control systems:

→ <https://hydro-int.com/en/stormbloc-optimum>

Technical information

	Stormbloc®		Stormbloc® Extra		
Application suitability	Lighter loaded areas, such as landscaped or low traffic areas (cars ≤ 2.5t)		Heavy loaded area and High-traffic areas such as car parks, roads and warehouse yards.		
Maximum installation depth	3 m		4 m		
Cover depth	Landscaped area, no traffic	Light traffic loading ≤ 2.5 t	Landscaped area, no traffic	Light traffic loading ≤ 2.5 t	Roads & HGV loading yards with traffic loading ≤ 44 t
	0.5 m - 1.5 m	0.8 m - 1.5 m	≥ 0.4 m	≥ 0.6 m	≥ 0.8 m
Material	Polypropylene (up to 100% recycled material)		Polypropylene		
	Half block		Full block	Half block	
Length / Width / Height	800 / 800 / 330 mm (Note: for the bottom layer add 30 mm for the base plate)		800 / 800 / 660 mm	800 / 800 / 360 mm	
Nominal block volume	0.230 m³		0.422 m³	0.230 m³	
Nominal storage capacity per unit	0.220 m³		0.405 m³	0.221 m³	
Constructed weight	10 kg (1 element and 1 baseplate)		18.6 kg	13.7 kg	
Porosity	96%		96 %	96%	
Vertical ultimate compressive strength	313 kN/m²		420 kN/m²	420 kN/m²	
Horizontal ultimate compressive strength	93 kN/m²		165 kN/m²	225 kN/m²	

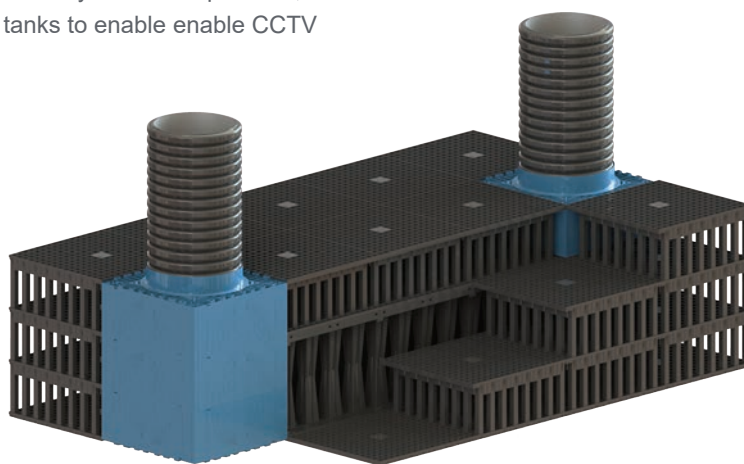
Inspection and maintenance

To ensure that the storage volume of the systems aren't compromised by the build up of silts, Stormbloc® Inspect chambers can be added to Stormbloc® Extra tanks to enable CCTV inspection, maintenance and cleaning.

Access for inspection and maintenance of Stormbloc® tanks can be provided by adding Stormbloc® Inspect chambers and constructing a row of Stormbloc® Extra blocks through the tank.

Smart Maintenance

A Hydro-Logic® Smart Maintenance package can be added to either Stormbloc® Extra or Stormbloc® tanks to provide near real-time level information and send automated alerts when the tank requires maintenance.



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Find out more about our flow control and storage/infiltration solutions. Book a free training session at:

→ hydro-int.com/en/uk-cpd

Appendix E



Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	100	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	1.000	Preferred Cover Depth (m)	0.300
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
SW1	0.024	5.00	24.712		538322.677	124407.619	0.450
SW2			24.675	600	538322.373	124413.194	0.525
SW3	0.023	5.00	24.650		538325.153	124416.436	0.450
SW4			24.712		538320.280	124413.774	1.049
SW5		5.00	24.712	600	538321.351	124418.924	1.060
SW6			23.460		538349.236	124461.618	0.150

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	SW1	SW2	5.583	0.600	24.262	24.150	0.112	50.0	150	5.07	50.0
1.001	SW2	SW4	2.172	0.600	24.150	24.087	0.063	34.5	225	5.08	50.0
1.002	SW5	SW6	50.994	0.600	23.652	23.310	0.342	149.1	150	6.04	50.0
2.000	SW3	SW2	4.271	0.600	24.200	24.150	0.050	85.5	150	5.07	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)
1.000	1.426	25.2	4.3	0.300	0.375	0.024	0.0	42	1.068
1.001	2.234	88.8	8.5	0.300	0.400	0.047	0.0	47	1.427
1.002	0.820	14.5	0.0	0.910	0.000	0.000	0.0	0	0.000
2.000	1.087	19.2	4.2	0.300	0.375	0.023	0.0	47	0.868

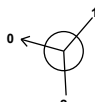
Pipeline Schedule

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	5.583	50.0	150	Circular	24.712	24.262	0.300	24.675	24.150	0.375
1.001	2.172	34.5	225	Circular	24.675	24.150	0.300	24.712	24.087	0.400
1.002	50.994	149.1	150	Circular	24.712	23.652	0.910	23.460	23.310	0.000
2.000	4.271	85.5	150	Circular	24.650	24.200	0.300	24.675	24.150	0.375

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	SW1		Junction		SW2	600	Manhole	Adoptable
1.001	SW2	600	Manhole	Adoptable	SW4		Junction	
1.002	SW5	600	Manhole	Adoptable	SW6		Junction	
2.000	SW3		Junction		SW2	600	Manhole	Adoptable



Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
SW1	538322.677	124407.619	24.712	0.450			0	1.000	24.262	150
SW2	538322.373	124413.194	24.675	0.525	600		1 2 0	2.000 1.000 1.001	24.150 24.150 24.150	150 150 225
SW3	538325.153	124416.436	24.650	0.450			0	2.000	24.200	150
SW4	538320.280	124413.774	24.712	1.049			1	1.001	24.087	225
SW5	538321.351	124418.924	24.712	1.060	600		0	1.002	23.652	150
SW6	538349.236	124461.618	23.460	0.150			1	1.002	23.310	150

Simulation Settings

Rainfall Methodology	FEH-22	Skip Steady State	x	1 year (l/s)	0.2
Rainfall Events	Singular	Drain Down Time (mins)	240	30 year (l/s)	0.6
Summer CV	1.000	Additional Storage (m³/ha)	0.0	100 year (l/s)	0.9
Winter CV	1.000	Starting Level (m)		Check Discharge Volume	x
Analysis Speed	Detailed	Check Discharge Rate(s)	✓		

Storm Durations

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

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
30	45	0	0
100	45	0	0

Pre-development Discharge Rate

Site Makeup	Greenfield	Growth Factor 30 year	2.40
Greenfield Method	IH124	Growth Factor 100 year	3.19
Positively Drained Area (ha)	0.047	Betterment (%)	0
SAAR (mm)	813	QBar	0.3
Soil Index	4	Q 1 year (l/s)	0.2
SPR	0.47	Q 30 year (l/s)	0.6
Region	7	Q 100 year (l/s)	0.9
Growth Factor 1 year	0.85		

Node SW5 Online Orifice Control

Flap Valve	x	Invert Level (m)	23.652	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.014		

Node SW5 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Main Channel Length (m)	5.261
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	23.652	Main Channel Slope (1:X)	500.0
Safety Factor	2.0	Time to half empty (mins)		Main Channel n	0.012

Inlets
 SW4

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	80.0	0.0	0.660	80.0	0.0	0.661	0.0	0.0

**Results for 30 year +45% 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
15 minute summer	SW1	10	24.360	0.098	16.7	0.0000	0.0000	OK
15 minute summer	SW2	10	24.259	0.109	32.6	0.0308	0.0000	OK
15 minute summer	SW3	10	24.315	0.115	16.0	0.0000	0.0000	OK
2160 minute summer	SW4	1560	24.148	0.485	1.6	0.0000	0.0000	OK
2160 minute summer	SW5	1560	24.148	0.496	0.9	0.1405	0.0000	SURCHARGED
2160 minute summer	SW6	1560	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute summer	SW1	1.000	SW2	16.6	1.287	0.660	0.0721	
15 minute summer	SW2	1.001	SW4	32.5	1.878	0.366	0.0376	
15 minute summer	SW3	2.000	SW2	15.9	1.129	0.828	0.0602	
2160 minute summer	SW4	Flow through Pond	SW5	0.9	0.001	0.000	37.3169	
2160 minute summer	SW5	1.002	SW6	0.3	0.325	0.020	0.0446	27.5

**Results for 100 year +45% 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
15 minute summer	SW1	10	24.380	0.118	21.0	0.0000	0.0000	OK
4320 minute summer	SW2	2880	24.300	0.150	3.5	0.0424	0.0000	OK
15 minute summer	SW3	10	24.345	0.145	20.1	0.0000	0.0000	OK
4320 minute summer	SW4	2880	24.300	0.637	4.7	0.0000	0.0000	OK
4320 minute summer	SW5	2880	24.300	0.648	3.1	0.1835	0.0000	SURCHARGED
4320 minute summer	SW6	2880	23.326	0.016	0.3	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute summer	SW1	1.000	SW2	20.9	1.368	0.830	0.0853	
4320 minute summer	SW2	1.001	SW4	4.7	0.792	0.052	0.0728	
15 minute summer	SW3	2.000	SW2	19.9	1.196	1.034	0.0708	
4320 minute summer	SW4	Flow through Pond	SW5	3.1	0.001	0.000	48.6346	
4320 minute summer	SW5	1.002	SW6	0.3	0.338	0.022	0.0490	59.8

**Results for 30 year +45% CC 15 minute summer. 255 minute analysis at 1 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	SW1	10	24.360	0.098	16.7	0.0000	0.0000	OK
15 minute summer	SW2	10	24.259	0.109	32.6	0.0308	0.0000	OK
15 minute summer	SW3	10	24.315	0.115	16.0	0.0000	0.0000	OK
15 minute summer	SW4	23	23.840	0.177	32.5	0.0000	0.0000	OK
15 minute summer	SW5	21	23.840	0.188	19.2	0.0533	0.0000	SURCHARGED
15 minute summer	SW6	23	23.321	0.011	0.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	SW1	1.000	SW2	16.6	1.287	0.660	0.0721	
15 minute summer	SW2	1.001	SW4	32.5	1.878	0.366	0.0376	
15 minute summer	SW3	2.000	SW2	15.9	1.129	0.828	0.0602	
15 minute summer	SW4	Flow through Pond	SW5	19.2	0.056	0.001	13.8905	
15 minute summer	SW5	1.002	SW6	0.2	0.283	0.012	0.0310	2.4

**Results for 30 year +45% CC 15 minute winter. 255 minute analysis at 1 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	SW1	10	24.355	0.093	15.6	0.0000	0.0000	OK
15 minute winter	SW2	10	24.254	0.104	30.4	0.0296	0.0000	OK
15 minute winter	SW3	10	24.310	0.110	15.0	0.0000	0.0000	OK
15 minute winter	SW4	20	23.840	0.178	30.3	0.0000	0.0000	OK
15 minute winter	SW5	22	23.841	0.189	20.4	0.0534	0.0000	SURCHARGED
15 minute winter	SW6	23	23.321	0.011	0.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	SW1	1.000	SW2	15.5	1.264	0.616	0.0685	
15 minute winter	SW2	1.001	SW4	30.3	1.847	0.342	0.0357	
15 minute winter	SW3	2.000	SW2	14.9	1.109	0.776	0.0574	
15 minute winter	SW4	Flow through Pond	SW5	20.4	0.059	0.001	13.9028	
15 minute winter	SW5	1.002	SW6	0.2	0.283	0.012	0.0310	2.4

**Results for 30 year +45% CC 30 minute summer. 270 minute analysis at 1 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	SW1	18	24.353	0.091	15.2	0.0000	0.0000	OK
30 minute summer	SW2	18	24.253	0.103	29.8	0.0292	0.0000	OK
30 minute summer	SW3	18	24.308	0.108	14.6	0.0000	0.0000	OK
30 minute summer	SW4	35	23.900	0.238	29.8	0.0000	0.0000	OK
30 minute summer	SW5	36	23.901	0.249	16.4	0.0704	0.0000	SURCHARGED
30 minute summer	SW6	37	23.322	0.012	0.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	SW1	1.000	SW2	15.2	1.259	0.603	0.0674	
30 minute summer	SW2	1.001	SW4	29.8	1.841	0.335	0.0352	
30 minute summer	SW3	2.000	SW2	14.6	1.103	0.760	0.0565	
30 minute summer	SW4	Flow through Pond	SW5	16.4	0.061	0.001	18.4870	
30 minute summer	SW5	1.002	SW6	0.2	0.292	0.014	0.0347	2.9

**Results for 30 year +45% CC 30 minute winter. 270 minute analysis at 1 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	SW1	18	24.341	0.079	12.3	0.0000	0.0000	OK
30 minute winter	SW2	18	24.241	0.091	24.1	0.0258	0.0000	OK
30 minute winter	SW3	18	24.293	0.093	11.8	0.0000	0.0000	OK
30 minute winter	SW4	35	23.900	0.238	24.1	0.0000	0.0000	OK
30 minute winter	SW5	35	23.901	0.249	16.5	0.0703	0.0000	SURCHARGED
30 minute winter	SW6	36	23.322	0.012	0.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute winter	SW1	1.000	SW2	12.3	1.195	0.488	0.0574	
30 minute winter	SW2	1.001	SW4	24.1	1.747	0.271	0.0300	
30 minute winter	SW3	2.000	SW2	11.8	1.042	0.614	0.0484	
30 minute winter	SW4	Flow through Pond	SW5	16.5	0.047	0.001	18.4728	
30 minute winter	SW5	1.002	SW6	0.2	0.292	0.014	0.0347	2.9

**Results for 30 year +45% CC 60 minute summer. 300 minute analysis at 1 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	SW1	33	24.338	0.076	11.6	0.0000	0.0000	OK
60 minute summer	SW2	33	24.238	0.088	22.7	0.0249	0.0000	OK
60 minute summer	SW3	33	24.289	0.089	11.1	0.0000	0.0000	OK
60 minute summer	SW4	65	23.965	0.303	22.7	0.0000	0.0000	OK
60 minute summer	SW5	65	23.966	0.314	14.0	0.0887	0.0000	SURCHARGED
60 minute summer	SW6	66	23.323	0.013	0.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute summer	SW1	1.000	SW2	11.6	1.179	0.460	0.0549	
60 minute summer	SW2	1.001	SW4	22.7	1.721	0.256	0.0287	
60 minute summer	SW3	2.000	SW2	11.1	1.025	0.578	0.0462	
60 minute summer	SW4	Flow through Pond	SW5	14.0	0.043	0.001	23.4180	
60 minute summer	SW5	1.002	SW6	0.2	0.303	0.015	0.0377	3.6



Results for 30 year +45% CC 60 minute winter. 300 minute analysis at 1 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	SW1	33	24.324	0.062	8.4	0.0000	0.0000	OK
60 minute winter	SW2	33	24.223	0.073	16.4	0.0207	0.0000	OK
60 minute winter	SW3	33	24.273	0.073	8.0	0.0000	0.0000	OK
60 minute winter	SW4	64	23.966	0.303	16.4	0.0000	0.0000	OK
60 minute winter	SW5	64	23.966	0.314	10.8	0.0889	0.0000	SURCHARGED
60 minute winter	SW6	65	23.323	0.013	0.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute winter	SW1	1.000	SW2	8.4	1.090	0.333	0.0430	
60 minute winter	SW2	1.001	SW4	16.4	1.586	0.185	0.0225	
60 minute winter	SW3	2.000	SW2	8.0	0.943	0.416	0.0363	
60 minute winter	SW4	Flow through Pond	SW5	10.8	0.041	0.001	23.4548	
60 minute winter	SW5	1.002	SW6	0.2	0.303	0.015	0.0378	3.6

**Results for 30 year +45% CC 120 minute summer. 360 minute analysis at 2 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute summer	SW1	64	24.320	0.058	7.4	0.0000	0.0000	OK
120 minute summer	SW2	64	24.218	0.068	14.5	0.0193	0.0000	OK
120 minute summer	SW3	64	24.268	0.068	7.1	0.0000	0.0000	OK
120 minute summer	SW4	126	24.019	0.357	14.5	0.0000	0.0000	OK
120 minute summer	SW5	126	24.020	0.368	8.0	0.1040	0.0000	SURCHARGED
120 minute summer	SW6	126	23.324	0.014	0.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute summer	SW1	1.000	SW2	7.4	1.055	0.294	0.0392	
120 minute summer	SW2	1.001	SW4	14.5	1.537	0.163	0.0205	
120 minute summer	SW3	2.000	SW2	7.1	0.916	0.369	0.0331	
120 minute summer	SW4	Flow through Pond	SW5	8.0	0.024	0.000	27.5212	
120 minute summer	SW5	1.002	SW6	0.2	0.311	0.017	0.0400	4.4



Results for 30 year +45% CC 120 minute winter. 360 minute analysis at 2 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	SW1	64	24.309	0.047	5.1	0.0000	0.0000	OK
120 minute winter	SW2	64	24.206	0.056	10.0	0.0158	0.0000	OK
120 minute winter	SW3	64	24.255	0.055	4.9	0.0000	0.0000	OK
120 minute winter	SW4	124	24.020	0.358	10.0	0.0000	0.0000	OK
120 minute winter	SW5	124	24.021	0.369	5.8	0.1044	0.0000	SURCHARGED
120 minute winter	SW6	124	23.324	0.014	0.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute winter	SW1	1.000	SW2	5.1	0.961	0.202	0.0297	
120 minute winter	SW2	1.001	SW4	10.0	1.395	0.113	0.0156	
120 minute winter	SW3	2.000	SW2	4.9	0.835	0.255	0.0251	
120 minute winter	SW4	Flow through Pond	SW5	5.8	0.022	0.000	27.6192	
120 minute winter	SW5	1.002	SW6	0.2	0.311	0.017	0.0400	4.4

**Results for 30 year +45% CC 180 minute summer. 420 minute analysis at 4 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
180 minute summer	SW1	96	24.311	0.049	5.5	0.0000	0.0000	OK
180 minute summer	SW2	96	24.208	0.058	10.7	0.0164	0.0000	OK
180 minute summer	SW3	96	24.256	0.056	5.2	0.0000	0.0000	OK
180 minute summer	SW4	188	24.050	0.387	10.7	0.0000	0.0000	OK
180 minute summer	SW5	188	24.050	0.398	5.7	0.1126	0.0000	SURCHARGED
180 minute summer	SW6	188	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
180 minute summer	SW1	1.000	SW2	5.5	0.982	0.218	0.0313	
180 minute summer	SW2	1.001	SW4	10.7	1.421	0.120	0.0164	
180 minute summer	SW3	2.000	SW2	5.2	0.845	0.271	0.0263	
180 minute summer	SW4	Flow through Pond	SW5	5.7	0.015	0.000	29.8314	
180 minute summer	SW5	1.002	SW6	0.3	0.314	0.017	0.0412	5.2

**Results for 30 year +45% CC 180 minute winter. 420 minute analysis at 4 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	SW1	96	24.302	0.040	3.8	0.0000	0.0000	OK
180 minute winter	SW2	96	24.197	0.047	7.4	0.0134	0.0000	OK
180 minute winter	SW3	96	24.246	0.046	3.6	0.0000	0.0000	OK
180 minute winter	SW4	184	24.052	0.389	7.4	0.0000	0.0000	OK
180 minute winter	SW5	184	24.052	0.400	3.9	0.1133	0.0000	SURCHARGED
180 minute winter	SW6	184	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
180 minute winter	SW1	1.000	SW2	3.8	0.894	0.151	0.0238	
180 minute winter	SW2	1.001	SW4	7.4	1.289	0.083	0.0125	
180 minute winter	SW3	2.000	SW2	3.6	0.770	0.187	0.0200	
180 minute winter	SW4	Flow through Pond	SW5	3.9	0.013	0.000	30.0152	
180 minute winter	SW5	1.002	SW6	0.3	0.315	0.018	0.0412	5.2

**Results for 30 year +45% CC 240 minute summer. 480 minute analysis at 4 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
240 minute summer	SW1	124	24.306	0.044	4.6	0.0000	0.0000	OK
240 minute summer	SW2	124	24.203	0.053	9.0	0.0149	0.0000	OK
240 minute summer	SW3	124	24.251	0.051	4.4	0.0000	0.0000	OK
240 minute summer	SW4	248	24.073	0.411	9.0	0.0000	0.0000	OK
240 minute summer	SW5	248	24.074	0.422	4.7	0.1193	0.0000	SURCHARGED
240 minute summer	SW6	248	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
240 minute summer	SW1	1.000	SW2	4.6	0.937	0.182	0.0274	
240 minute summer	SW2	1.001	SW4	9.0	1.356	0.101	0.0144	
240 minute summer	SW3	2.000	SW2	4.4	0.811	0.228	0.0231	
240 minute summer	SW4	Flow through Pond	SW5	4.7	0.015	0.000	31.6216	
240 minute summer	SW5	1.002	SW6	0.3	0.317	0.018	0.0420	5.9

**Results for 30 year +45% CC 240 minute winter. 480 minute analysis at 4 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
240 minute winter	SW1	124	24.297	0.035	3.0	0.0000	0.0000	OK
240 minute winter	SW2	124	24.192	0.042	5.9	0.0119	0.0000	OK
240 minute winter	SW3	124	24.241	0.041	2.9	0.0000	0.0000	OK
240 minute winter	SW4	244	24.072	0.410	5.9	0.0000	0.0000	OK
240 minute winter	SW5	244	24.073	0.421	3.1	0.1191	0.0000	SURCHARGED
240 minute winter	SW6	244	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
240 minute winter	SW1	1.000	SW2	3.0	0.837	0.119	0.0200	
240 minute winter	SW2	1.001	SW4	5.9	1.211	0.066	0.0106	
240 minute winter	SW3	2.000	SW2	2.9	0.731	0.151	0.0169	
240 minute winter	SW4	Flow through Pond	SW5	3.1	0.014	0.000	31.5637	
240 minute winter	SW5	1.002	SW6	0.3	0.317	0.018	0.0420	5.9



Results for 30 year +45% CC 360 minute summer. 600 minute analysis at 8 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute summer	SW1	184	24.299	0.037	3.4	0.0000	0.0000	OK
360 minute summer	SW2	184	24.195	0.045	6.7	0.0127	0.0000	OK
360 minute summer	SW3	184	24.244	0.044	3.3	0.0000	0.0000	OK
360 minute summer	SW4	368	24.095	0.433	6.7	0.0000	0.0000	OK
360 minute summer	SW5	368	24.096	0.444	3.5	0.1256	0.0000	SURCHARGED
360 minute summer	SW6	368	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
360 minute summer	SW1	1.000	SW2	3.4	0.864	0.135	0.0220	
360 minute summer	SW2	1.001	SW4	6.7	1.253	0.075	0.0116	
360 minute summer	SW3	2.000	SW2	3.3	0.756	0.171	0.0186	
360 minute summer	SW4	Flow through Pond	SW5	3.5	0.013	0.000	33.3047	
360 minute summer	SW5	1.002	SW6	0.3	0.319	0.018	0.0428	7.3

**Results for 30 year +45% CC 360 minute winter. 600 minute analysis at 8 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	SW1	184	24.292	0.030	2.2	0.0000	0.0000	OK
360 minute winter	SW2	184	24.186	0.036	4.3	0.0101	0.0000	OK
360 minute winter	SW3	184	24.235	0.035	2.1	0.0000	0.0000	OK
360 minute winter	SW4	360	24.099	0.437	4.3	0.0000	0.0000	OK
360 minute winter	SW5	360	24.100	0.448	2.3	0.1268	0.0000	SURCHARGED
360 minute winter	SW6	360	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
360 minute winter	SW1	1.000	SW2	2.2	0.772	0.087	0.0159	
360 minute winter	SW2	1.001	SW4	4.3	1.113	0.048	0.0084	
360 minute winter	SW3	2.000	SW2	2.1	0.670	0.109	0.0134	
360 minute winter	SW4	Flow through Pond	SW5	2.3	0.009	0.000	33.6308	
360 minute winter	SW5	1.002	SW6	0.3	0.320	0.019	0.0430	7.4

**Results for 30 year +45% CC 480 minute summer. 720 minute analysis at 8 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute summer	SW1	248	24.295	0.033	2.7	0.0000	0.0000	OK
480 minute summer	SW2	248	24.190	0.040	5.3	0.0113	0.0000	OK
480 minute summer	SW3	248	24.239	0.039	2.6	0.0000	0.0000	OK
480 minute summer	SW4	480	24.107	0.445	5.3	0.0000	0.0000	OK
480 minute summer	SW5	480	24.108	0.456	2.8	0.1289	0.0000	SURCHARGED
480 minute summer	SW6	488	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute summer	SW1	1.000	SW2	2.7	0.815	0.107	0.0185	
480 minute summer	SW2	1.001	SW4	5.3	1.177	0.060	0.0098	
480 minute summer	SW3	2.000	SW2	2.6	0.710	0.135	0.0156	
480 minute summer	SW4	Flow through Pond	SW5	2.8	0.006	0.000	34.2139	
480 minute summer	SW5	1.002	SW6	0.3	0.321	0.019	0.0432	8.7

**Results for 30 year +45% CC 480 minute winter. 720 minute analysis at 8 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
480 minute winter	SW1	248	24.289	0.027	1.8	0.0000	0.0000	OK
480 minute winter	SW2	248	24.182	0.032	3.5	0.0091	0.0000	OK
480 minute winter	SW3	248	24.231	0.031	1.7	0.0000	0.0000	OK
480 minute winter	SW4	472	24.115	0.453	3.5	0.0000	0.0000	OK
480 minute winter	SW5	472	24.116	0.464	1.9	0.1312	0.0000	SURCHARGED
480 minute winter	SW6	472	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
480 minute winter	SW1	1.000	SW2	1.8	0.731	0.071	0.0138	
480 minute winter	SW2	1.001	SW4	3.5	1.050	0.039	0.0072	
480 minute winter	SW3	2.000	SW2	1.7	0.632	0.088	0.0115	
480 minute winter	SW4	Flow through Pond	SW5	1.9	0.008	0.000	34.8262	
480 minute winter	SW5	1.002	SW6	0.3	0.322	0.019	0.0435	8.8



Results for 30 year +45% CC 600 minute summer. 840 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute summer	SW1	315	24.292	0.030	2.2	0.0000	0.0000	OK
600 minute summer	SW2	315	24.186	0.036	4.3	0.0101	0.0000	OK
600 minute summer	SW3	315	24.235	0.035	2.1	0.0000	0.0000	OK
600 minute summer	SW4	600	24.112	0.449	4.3	0.0000	0.0000	OK
600 minute summer	SW5	600	24.112	0.460	2.3	0.1303	0.0000	SURCHARGED
600 minute summer	SW6	600	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute summer	SW1	1.000	SW2	2.2	0.772	0.087	0.0159	
600 minute summer	SW2	1.001	SW4	4.3	1.113	0.048	0.0084	
600 minute summer	SW3	2.000	SW2	2.1	0.670	0.109	0.0134	
600 minute summer	SW4	Flow through Pond	SW5	2.3	0.007	0.000	34.5674	
600 minute summer	SW5	1.002	SW6	0.3	0.321	0.019	0.0434	9.9

**Results for 30 year +45% CC 600 minute winter. 840 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	SW1	315	24.287	0.025	1.5	0.0000	0.0000	OK
600 minute winter	SW2	315	24.179	0.029	2.9	0.0083	0.0000	OK
600 minute winter	SW3	315	24.228	0.028	1.4	0.0000	0.0000	OK
600 minute winter	SW4	600	24.129	0.466	2.9	0.0000	0.0000	OK
600 minute winter	SW5	600	24.129	0.477	1.6	0.1350	0.0000	SURCHARGED
600 minute winter	SW6	600	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute winter	SW1	1.000	SW2	1.5	0.696	0.060	0.0121	
600 minute winter	SW2	1.001	SW4	2.9	0.995	0.033	0.0063	
600 minute winter	SW3	2.000	SW2	1.4	0.598	0.073	0.0100	
600 minute winter	SW4	Flow through Pond	SW5	1.6	0.008	0.000	35.8465	
600 minute winter	SW5	1.002	SW6	0.3	0.323	0.019	0.0440	10.2

**Results for 30 year +45% CC 720 minute summer. 960 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute summer	SW1	375	24.290	0.028	1.9	0.0000	0.0000	OK
720 minute summer	SW2	375	24.183	0.033	3.7	0.0094	0.0000	OK
720 minute summer	SW3	375	24.232	0.032	1.8	0.0000	0.0000	OK
720 minute summer	SW4	720	24.124	0.461	3.7	0.0000	0.0000	OK
720 minute summer	SW5	720	24.124	0.472	2.0	0.1336	0.0000	SURCHARGED
720 minute summer	SW6	720	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute summer	SW1	1.000	SW2	1.9	0.742	0.075	0.0143	
720 minute summer	SW2	1.001	SW4	3.7	1.066	0.042	0.0075	
720 minute summer	SW3	2.000	SW2	1.8	0.643	0.094	0.0120	
720 minute summer	SW4	Flow through Pond	SW5	2.0	0.007	0.000	35.4731	
720 minute summer	SW5	1.002	SW6	0.3	0.322	0.019	0.0438	11.4

**Results for 30 year +45% CC 720 minute winter. 960 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	SW1	375	24.285	0.023	1.3	0.0000	0.0000	OK
720 minute winter	SW2	375	24.177	0.027	2.5	0.0077	0.0000	OK
720 minute winter	SW3	390	24.226	0.026	1.2	0.0000	0.0000	OK
720 minute winter	SW4	705	24.122	0.459	2.5	0.0000	0.0000	OK
720 minute winter	SW5	705	24.122	0.470	1.4	0.1331	0.0000	SURCHARGED
720 minute winter	SW6	705	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute winter	SW1	1.000	SW2	1.3	0.669	0.052	0.0109	
720 minute winter	SW2	1.001	SW4	2.5	0.954	0.028	0.0057	
720 minute winter	SW3	2.000	SW2	1.2	0.580	0.062	0.0090	
720 minute winter	SW4	Flow through Pond	SW5	1.4	0.006	0.000	35.3356	
720 minute winter	SW5	1.002	SW6	0.3	0.322	0.019	0.0437	11.3



Results for 30 year +45% CC 960 minute summer. 1200 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute summer	SW1	495	24.288	0.026	1.6	0.0000	0.0000	OK
960 minute summer	SW2	495	24.180	0.030	3.1	0.0086	0.0000	OK
960 minute summer	SW3	495	24.229	0.029	1.5	0.0000	0.0000	OK
960 minute summer	SW4	870	24.128	0.465	3.1	0.0000	0.0000	OK
960 minute summer	SW5	870	24.128	0.476	1.7	0.1348	0.0000	SURCHARGED
960 minute summer	SW6	870	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
960 minute summer	SW1	1.000	SW2	1.6	0.707	0.063	0.0126	
960 minute summer	SW2	1.001	SW4	3.1	1.015	0.035	0.0066	
960 minute summer	SW3	2.000	SW2	1.5	0.610	0.078	0.0105	
960 minute summer	SW4	Flow through Pond	SW5	1.7	0.003	0.000	35.7745	
960 minute summer	SW5	1.002	SW6	0.3	0.323	0.019	0.0439	14.0

**Results for 30 year +45% CC 960 minute winter. 1200 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	SW1	465	24.282	0.020	1.0	0.0000	0.0000	OK
960 minute winter	SW2	480	24.174	0.024	2.0	0.0069	0.0000	OK
960 minute winter	SW3	480	24.224	0.024	1.0	0.0000	0.0000	OK
960 minute winter	SW4	915	24.134	0.472	2.0	0.0000	0.0000	OK
960 minute winter	SW5	915	24.135	0.483	1.1	0.1366	0.0000	SURCHARGED
960 minute winter	SW6	915	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
960 minute winter	SW1	1.000	SW2	1.0	0.622	0.040	0.0092	
960 minute winter	SW2	1.001	SW4	2.0	0.895	0.023	0.0073	
960 minute winter	SW3	2.000	SW2	1.0	0.551	0.052	0.0078	
960 minute winter	SW4	Flow through Pond	SW5	1.1	0.004	0.000	36.2608	
960 minute winter	SW5	1.002	SW6	0.3	0.324	0.019	0.0441	14.2

**Results for 30 year +45% CC 1440 minute summer. 1680 minute analysis at 30 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
1440 minute summer	SW1	750	24.283	0.021	1.1	0.0000	0.0000	OK
1440 minute summer	SW2	750	24.176	0.026	2.2	0.0072	0.0000	OK
1440 minute summer	SW3	750	24.225	0.025	1.1	0.0000	0.0000	OK
1440 minute summer	SW4	1110	24.122	0.459	2.2	0.0000	0.0000	OK
1440 minute summer	SW5	1110	24.122	0.470	1.2	0.1331	0.0000	SURCHARGED
1440 minute summer	SW6	1110	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
1440 minute summer	SW1	1.000	SW2	1.1	0.628	0.044	0.0098	
1440 minute summer	SW2	1.001	SW4	2.2	0.921	0.025	0.0052	
1440 minute summer	SW3	2.000	SW2	1.1	0.566	0.057	0.0083	
1440 minute summer	SW4	Flow through Pond	SW5	1.2	0.003	0.000	35.3295	
1440 minute summer	SW5	1.002	SW6	0.3	0.322	0.019	0.0437	19.0

**Results for 30 year +45% CC 1440 minute winter. 1680 minute analysis at 30 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
1440 minute winter	SW1	750	24.280	0.018	0.8	0.0000	0.0000	OK
1440 minute winter	SW2	750	24.171	0.021	1.5	0.0060	0.0000	OK
1440 minute winter	SW3	690	24.220	0.020	0.7	0.0000	0.0000	OK
1440 minute winter	SW4	1140	24.122	0.460	1.5	0.0000	0.0000	OK
1440 minute winter	SW5	1140	24.123	0.471	0.9	0.1332	0.0000	SURCHARGED
1440 minute winter	SW6	1140	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
1440 minute winter	SW1	1.000	SW2	0.8	0.587	0.032	0.0076	
1440 minute winter	SW2	1.001	SW4	1.5	0.825	0.017	0.0050	
1440 minute winter	SW3	2.000	SW2	0.7	0.498	0.036	0.0061	
1440 minute winter	SW4	Flow through Pond	SW5	0.9	0.001	0.000	35.3584	
1440 minute winter	SW5	1.002	SW6	0.3	0.322	0.019	0.0437	19.0

**Results for 30 year +45% CC 2160 minute summer. 2400 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
2160 minute summer	SW1	1140	24.280	0.018	0.8	0.0000	0.0000	OK
2160 minute summer	SW2	1140	24.172	0.022	1.6	0.0062	0.0000	OK
2160 minute summer	SW3	1140	24.221	0.021	0.8	0.0000	0.0000	OK
2160 minute summer	SW4	1560	24.148	0.485	1.6	0.0000	0.0000	OK
2160 minute summer	SW5	1560	24.148	0.496	0.9	0.1405	0.0000	SURCHARGED
2160 minute summer	SW6	1560	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
2160 minute summer	SW1	1.000	SW2	0.8	0.572	0.032	0.0078	
2160 minute summer	SW2	1.001	SW4	1.6	0.840	0.018	0.0101	
2160 minute summer	SW3	2.000	SW2	0.8	0.518	0.042	0.0066	
2160 minute summer	SW4	Flow through Pond	SW5	0.9	0.001	0.000	37.3169	
2160 minute summer	SW5	1.002	SW6	0.3	0.325	0.020	0.0446	27.5

**Results for 30 year +45% CC 2160 minute winter. 2400 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
2160 minute winter	SW1	1140	24.278	0.016	0.6	0.0000	0.0000	OK
2160 minute winter	SW2	1140	24.168	0.018	1.1	0.0051	0.0000	OK
2160 minute winter	SW3	1020	24.217	0.017	0.5	0.0000	0.0000	OK
2160 minute winter	SW4	1620	24.130	0.468	1.1	0.0000	0.0000	OK
2160 minute winter	SW5	1620	24.131	0.479	0.7	0.1355	0.0000	SURCHARGED
2160 minute winter	SW6	1620	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
2160 minute winter	SW1	1.000	SW2	0.6	0.543	0.024	0.0062	
2160 minute winter	SW2	1.001	SW4	1.1	0.752	0.012	0.0065	
2160 minute winter	SW3	2.000	SW2	0.5	0.452	0.026	0.0049	
2160 minute winter	SW4	Flow through Pond	SW5	0.7	0.003	0.000	35.9778	
2160 minute winter	SW5	1.002	SW6	0.3	0.323	0.019	0.0440	27.1

**Results for 30 year +45% CC 2880 minute summer. 3120 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
2880 minute summer	SW1	1500	24.279	0.017	0.7	0.0000	0.0000	OK
2880 minute summer	SW2	1500	24.170	0.020	1.4	0.0058	0.0000	OK
2880 minute summer	SW3	1500	24.220	0.020	0.7	0.0000	0.0000	OK
2880 minute summer	SW4	1980	24.146	0.483	1.4	0.0000	0.0000	OK
2880 minute summer	SW5	1980	24.146	0.494	0.8	0.1398	0.0000	SURCHARGED
2880 minute summer	SW6	1980	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
2880 minute summer	SW1	1.000	SW2	0.7	0.549	0.028	0.0071	
2880 minute summer	SW2	1.001	SW4	1.4	0.810	0.016	0.0096	
2880 minute summer	SW3	2.000	SW2	0.7	0.498	0.036	0.0060	
2880 minute summer	SW4	Flow through Pond	SW5	0.8	0.001	0.000	37.1372	
2880 minute summer	SW5	1.002	SW6	0.3	0.325	0.020	0.0445	36.0

**Results for 30 year +45% CC 2880 minute winter. 3120 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
2880 minute winter	SW1	1500	24.277	0.015	0.5	0.0000	0.0000	OK
2880 minute winter	SW2	1500	24.167	0.017	0.9	0.0047	0.0000	OK
2880 minute winter	SW3	1320	24.215	0.015	0.4	0.0000	0.0000	OK
2880 minute winter	SW4	2100	24.124	0.462	0.9	0.0000	0.0000	OK
2880 minute winter	SW5	2100	24.125	0.473	0.6	0.1338	0.0000	SURCHARGED
2880 minute winter	SW6	2100	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
2880 minute winter	SW1	1.000	SW2	0.5	0.518	0.020	0.0054	
2880 minute winter	SW2	1.001	SW4	0.9	0.708	0.010	0.0053	
2880 minute winter	SW3	2.000	SW2	0.4	0.423	0.021	0.0042	
2880 minute winter	SW4	Flow through Pond	SW5	0.6	0.003	0.000	35.5093	
2880 minute winter	SW5	1.002	SW6	0.3	0.323	0.019	0.0438	34.9

**Results for 30 year +45% CC 4320 minute summer. 4560 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
4320 minute summer	SW1	2160	24.277	0.015	0.5	0.0000	0.0000	OK
4320 minute summer	SW2	2220	24.167	0.017	1.0	0.0049	0.0000	OK
4320 minute summer	SW3	2220	24.217	0.017	0.5	0.0000	0.0000	OK
4320 minute summer	SW4	2820	24.132	0.470	1.0	0.0000	0.0000	OK
4320 minute summer	SW5	2820	24.133	0.481	0.6	0.1360	0.0000	SURCHARGED
4320 minute summer	SW6	2820	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
4320 minute summer	SW1	1.000	SW2	0.5	0.518	0.020	0.0056	
4320 minute summer	SW2	1.001	SW4	1.0	0.731	0.011	0.0068	
4320 minute summer	SW3	2.000	SW2	0.5	0.452	0.026	0.0047	
4320 minute summer	SW4	Flow through Pond	SW5	0.6	0.001	0.000	36.1171	
4320 minute summer	SW5	1.002	SW6	0.3	0.323	0.019	0.0441	48.6

**Results for 30 year +45% CC 4320 minute winter. 4560 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
4320 minute winter	SW1	1860	24.274	0.012	0.3	0.0000	0.0000	OK
4320 minute winter	SW2	1860	24.164	0.014	0.6	0.0039	0.0000	OK
4320 minute winter	SW3	1860	24.213	0.013	0.3	0.0000	0.0000	OK
4320 minute winter	SW4	2940	24.107	0.445	0.6	0.0000	0.0000	OK
4320 minute winter	SW5	2940	24.108	0.456	0.4	0.1290	0.0000	SURCHARGED
4320 minute winter	SW6	2940	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
4320 minute winter	SW1	1.000	SW2	0.3	0.427	0.012	0.0039	
4320 minute winter	SW2	1.001	SW4	0.6	0.628	0.007	0.0026	
4320 minute winter	SW3	2.000	SW2	0.3	0.390	0.016	0.0033	
4320 minute winter	SW4	Flow through Pond	SW5	0.4	0.003	0.000	34.2204	
4320 minute winter	SW5	1.002	SW6	0.3	0.321	0.019	0.0432	50.5

**Results for 30 year +45% CC 5760 minute summer. 6000 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
5760 minute summer	SW1	2820	24.275	0.013	0.4	0.0000	0.0000	OK
5760 minute summer	SW2	2880	24.166	0.016	0.8	0.0044	0.0000	OK
5760 minute summer	SW3	2880	24.215	0.015	0.4	0.0000	0.0000	OK
5760 minute summer	SW4	3600	24.107	0.444	0.8	0.0000	0.0000	OK
5760 minute summer	SW5	3600	24.107	0.455	0.5	0.1288	0.0000	SURCHARGED
5760 minute summer	SW6	3600	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
5760 minute summer	SW1	1.000	SW2	0.4	0.488	0.016	0.0048	
5760 minute summer	SW2	1.001	SW4	0.8	0.684	0.009	0.0025	
5760 minute summer	SW3	2.000	SW2	0.4	0.423	0.021	0.0040	
5760 minute summer	SW4	Flow through Pond	SW5	0.5	0.001	0.000	34.1839	
5760 minute summer	SW5	1.002	SW6	0.3	0.321	0.019	0.0432	56.6

**Results for 30 year +45% CC 5760 minute winter. 6000 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
5760 minute winter	SW1	2700	24.274	0.012	0.3	0.0000	0.0000	OK
5760 minute winter	SW2	2760	24.164	0.014	0.6	0.0039	0.0000	OK
5760 minute winter	SW3	2760	24.213	0.013	0.3	0.0000	0.0000	OK
5760 minute winter	SW4	3780	24.088	0.426	0.6	0.0000	0.0000	OK
5760 minute winter	SW5	3780	24.089	0.437	0.4	0.1236	0.0000	SURCHARGED
5760 minute winter	SW6	3780	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
5760 minute winter	SW1	1.000	SW2	0.3	0.457	0.012	0.0039	
5760 minute winter	SW2	1.001	SW4	0.6	0.628	0.007	0.0021	
5760 minute winter	SW3	2.000	SW2	0.3	0.390	0.016	0.0033	
5760 minute winter	SW4	Flow through Pond	SW5	0.4	0.001	0.000	32.7651	
5760 minute winter	SW5	1.002	SW6	0.3	0.319	0.018	0.0426	59.3

**Results for 30 year +45% CC 7200 minute summer. 7440 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
7200 minute summer	SW1	3600	24.275	0.013	0.4	0.0000	0.0000	OK
7200 minute summer	SW2	3660	24.166	0.016	0.8	0.0044	0.0000	OK
7200 minute summer	SW3	3660	24.215	0.015	0.4	0.0000	0.0000	OK
7200 minute summer	SW4	4380	24.107	0.444	0.8	0.0000	0.0000	OK
7200 minute summer	SW5	4380	24.107	0.455	0.5	0.1288	0.0000	SURCHARGED
7200 minute summer	SW6	4380	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
7200 minute summer	SW1	1.000	SW2	0.4	0.488	0.016	0.0048	
7200 minute summer	SW2	1.001	SW4	0.8	0.684	0.009	0.0025	
7200 minute summer	SW3	2.000	SW2	0.4	0.423	0.021	0.0040	
7200 minute summer	SW4	Flow through Pond	SW5	0.5	0.001	0.000	34.1729	
7200 minute summer	SW5	1.002	SW6	0.3	0.321	0.019	0.0432	64.4

**Results for 30 year +45% CC 7200 minute winter. 7440 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
7200 minute winter	SW1	2820	24.272	0.010	0.2	0.0000	0.0000	OK
7200 minute winter	SW2	2820	24.161	0.011	0.4	0.0032	0.0000	OK
7200 minute winter	SW3	2820	24.211	0.011	0.2	0.0000	0.0000	OK
7200 minute winter	SW4	4560	24.036	0.374	0.4	0.0000	0.0000	OK
7200 minute winter	SW5	4560	24.037	0.385	0.3	0.1088	0.0000	SURCHARGED
7200 minute winter	SW6	4560	23.324	0.014	0.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
7200 minute winter	SW1	1.000	SW2	0.2	0.380	0.008	0.0030	
7200 minute winter	SW2	1.001	SW4	0.4	0.558	0.005	0.0016	
7200 minute winter	SW3	2.000	SW2	0.2	0.345	0.010	0.0025	
7200 minute winter	SW4	Flow through Pond	SW5	0.3	0.001	0.000	28.8150	
7200 minute winter	SW5	1.002	SW6	0.2	0.313	0.017	0.0406	62.9

**Results for 30 year +45% CC 8640 minute summer. 8880 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
8640 minute summer	SW1	4080	24.274	0.012	0.3	0.0000	0.0000	OK
8640 minute summer	SW2	4140	24.164	0.014	0.6	0.0039	0.0000	OK
8640 minute summer	SW3	4140	24.213	0.013	0.3	0.0000	0.0000	OK
8640 minute summer	SW4	5160	24.090	0.427	0.6	0.0000	0.0000	OK
8640 minute summer	SW5	5160	24.090	0.438	0.4	0.1241	0.0000	SURCHARGED
8640 minute summer	SW6	5160	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
8640 minute summer	SW1	1.000	SW2	0.3	0.457	0.012	0.0039	
8640 minute summer	SW2	1.001	SW4	0.6	0.628	0.007	0.0021	
8640 minute summer	SW3	2.000	SW2	0.3	0.390	0.016	0.0033	
8640 minute summer	SW4	Flow through Pond	SW5	0.4	0.001	0.000	32.8996	
8640 minute summer	SW5	1.002	SW6	0.3	0.319	0.018	0.0426	68.8

**Results for 30 year +45% CC 8640 minute winter. 8880 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
8640 minute winter	SW1	3480	24.272	0.010	0.2	0.0000	0.0000	OK
8640 minute winter	SW2	3600	24.161	0.011	0.4	0.0032	0.0000	OK
8640 minute winter	SW3	3600	24.211	0.011	0.2	0.0000	0.0000	OK
8640 minute winter	SW4	5340	24.040	0.378	0.4	0.0000	0.0000	OK
8640 minute winter	SW5	5340	24.041	0.389	0.3	0.1100	0.0000	SURCHARGED
8640 minute winter	SW6	5340	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
8640 minute winter	SW1	1.000	SW2	0.2	0.419	0.008	0.0030	
8640 minute winter	SW2	1.001	SW4	0.4	0.558	0.005	0.0016	
8640 minute winter	SW3	2.000	SW2	0.2	0.345	0.010	0.0025	
8640 minute winter	SW4	Flow through Pond	SW5	0.3	0.001	0.000	29.1150	
8640 minute winter	SW5	1.002	SW6	0.3	0.313	0.017	0.0408	71.2

**Results for 30 year +45% CC 10080 minute summer. 10320 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
10080 minute summer	SW1	4860	24.274	0.012	0.3	0.0000	0.0000	OK
10080 minute summer	SW2	4920	24.164	0.014	0.6	0.0039	0.0000	OK
10080 minute summer	SW3	4920	24.213	0.013	0.3	0.0000	0.0000	OK
10080 minute summer	SW4	5880	24.084	0.421	0.6	0.0000	0.0000	OK
10080 minute summer	SW5	5880	24.084	0.432	0.4	0.1224	0.0000	SURCHARGED
10080 minute summer	SW6	5880	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
10080 minute summer	SW1	1.000	SW2	0.3	0.457	0.012	0.0039	
10080 minute summer	SW2	1.001	SW4	0.6	0.628	0.007	0.0021	
10080 minute summer	SW3	2.000	SW2	0.3	0.390	0.016	0.0033	
10080 minute summer	SW4	Flow through Pond	SW5	0.4	0.001	0.000	32.4445	
10080 minute summer	SW5	1.002	SW6	0.3	0.318	0.018	0.0424	73.3

**Results for 30 year +45% CC 10080 minute winter. 10320 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
10080 minute winter	SW1	5940	24.272	0.010	0.2	0.0000	0.0000	OK
10080 minute winter	SW2	4320	24.161	0.011	0.4	0.0032	0.0000	OK
10080 minute winter	SW3	4320	24.211	0.011	0.2	0.0000	0.0000	OK
10080 minute winter	SW4	5940	24.042	0.379	0.4	0.0000	0.0000	OK
10080 minute winter	SW5	5940	24.042	0.390	0.3	0.1105	0.0000	SURCHARGED
10080 minute winter	SW6	6000	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
10080 minute winter	SW1	1.000	SW2	0.2	0.419	0.008	0.0030	
10080 minute winter	SW2	1.001	SW4	0.4	0.558	0.005	0.0016	
10080 minute winter	SW3	2.000	SW2	0.2	0.345	0.010	0.0025	
10080 minute winter	SW4	Flow through Pond	SW5	0.3	0.001	0.000	29.2537	
10080 minute winter	SW5	1.002	SW6	0.3	0.313	0.017	0.0409	78.4

**Results for 100 year +45% CC 15 minute summer. 255 minute analysis at 1 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	SW1	10	24.380	0.118	21.0	0.0000	0.0000	OK
15 minute summer	SW2	10	24.275	0.125	40.8	0.0354	0.0000	OK
15 minute summer	SW3	10	24.345	0.145	20.1	0.0000	0.0000	OK
15 minute summer	SW4	20	23.888	0.226	40.7	0.0000	0.0000	OK
15 minute summer	SW5	21	23.889	0.237	26.7	0.0670	0.0000	SURCHARGED
15 minute summer	SW6	23	23.322	0.012	0.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	SW1	1.000	SW2	20.9	1.368	0.830	0.0853	
15 minute summer	SW2	1.001	SW4	40.7	1.982	0.458	0.0446	
15 minute summer	SW3	2.000	SW2	19.9	1.196	1.034	0.0708	
15 minute summer	SW4	Flow through Pond	SW5	26.7	0.083	0.002	17.5672	
15 minute summer	SW5	1.002	SW6	0.2	0.290	0.013	0.0340	2.7

**Results for 100 year +45% CC 15 minute winter. 255 minute analysis at 1 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	SW1	10	24.373	0.111	19.7	0.0000	0.0000	OK
15 minute winter	SW2	10	24.270	0.120	38.3	0.0340	0.0000	OK
15 minute winter	SW3	10	24.333	0.133	18.9	0.0000	0.0000	OK
15 minute winter	SW4	21	23.888	0.226	38.3	0.0000	0.0000	OK
15 minute winter	SW5	20	23.889	0.237	22.5	0.0670	0.0000	SURCHARGED
15 minute winter	SW6	22	23.322	0.012	0.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	SW1	1.000	SW2	19.6	1.343	0.778	0.0814	
15 minute winter	SW2	1.001	SW4	38.3	1.953	0.431	0.0426	
15 minute winter	SW3	2.000	SW2	18.7	1.183	0.976	0.0675	
15 minute winter	SW4	Flow through Pond	SW5	22.5	0.057	0.001	17.5854	
15 minute winter	SW5	1.002	SW6	0.2	0.290	0.013	0.0341	2.7

**Results for 100 year +45% CC 30 minute summer. 270 minute analysis at 1 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	SW1	18	24.372	0.110	19.4	0.0000	0.0000	OK
30 minute summer	SW2	18	24.270	0.120	38.0	0.0339	0.0000	OK
30 minute summer	SW3	18	24.331	0.131	18.6	0.0000	0.0000	OK
30 minute summer	SW4	36	23.967	0.305	38.0	0.0000	0.0000	OK
30 minute summer	SW5	35	23.968	0.316	24.5	0.0894	0.0000	SURCHARGED
30 minute summer	SW6	37	23.323	0.013	0.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	SW1	1.000	SW2	19.4	1.340	0.770	0.0808	
30 minute summer	SW2	1.001	SW4	38.0	1.952	0.428	0.0423	
30 minute summer	SW3	2.000	SW2	18.6	1.183	0.968	0.0670	
30 minute summer	SW4	Flow through Pond	SW5	24.5	0.056	0.001	23.5778	
30 minute summer	SW5	1.002	SW6	0.2	0.304	0.016	0.0378	3.3

**Results for 100 year +45% CC 30 minute winter. 270 minute analysis at 1 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
30 minute winter	SW1	18	24.355	0.093	15.7	0.0000	0.0000	OK
30 minute winter	SW2	18	24.255	0.105	30.7	0.0297	0.0000	OK
30 minute winter	SW3	18	24.310	0.110	15.0	0.0000	0.0000	OK
30 minute winter	SW4	35	23.967	0.305	30.7	0.0000	0.0000	OK
30 minute winter	SW5	35	23.968	0.316	20.2	0.0894	0.0000	SURCHARGED
30 minute winter	SW6	37	23.323	0.013	0.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
30 minute winter	SW1	1.000	SW2	15.7	1.270	0.623	0.0690	
30 minute winter	SW2	1.001	SW4	30.7	1.854	0.346	0.0360	
30 minute winter	SW3	2.000	SW2	15.0	1.111	0.781	0.0577	
30 minute winter	SW4	Flow through Pond	SW5	20.2	0.076	0.001	23.5945	
30 minute winter	SW5	1.002	SW6	0.2	0.304	0.016	0.0378	3.3

**Results for 100 year +45% CC 60 minute summer. 300 minute analysis at 1 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	SW1	33	24.352	0.090	14.9	0.0000	0.0000	OK
60 minute summer	SW2	33	24.252	0.102	29.2	0.0289	0.0000	OK
60 minute summer	SW3	33	24.306	0.106	14.3	0.0000	0.0000	OK
60 minute summer	SW4	65	24.054	0.392	29.2	0.0000	0.0000	OK
60 minute summer	SW5	65	24.055	0.403	14.8	0.1139	0.0000	SURCHARGED
60 minute summer	SW6	67	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute summer	SW1	1.000	SW2	14.9	1.253	0.591	0.0664	
60 minute summer	SW2	1.001	SW4	29.2	1.832	0.329	0.0346	
60 minute summer	SW3	2.000	SW2	14.3	1.097	0.744	0.0557	
60 minute summer	SW4	Flow through Pond	SW5	14.8	0.040	0.001	30.1856	
60 minute summer	SW5	1.002	SW6	0.3	0.315	0.018	0.0413	4.1

**Results for 100 year +45% CC 60 minute winter. 300 minute analysis at 1 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	SW1	33	24.335	0.073	10.8	0.0000	0.0000	OK
60 minute winter	SW2	33	24.234	0.084	21.1	0.0239	0.0000	OK
60 minute winter	SW3	33	24.285	0.085	10.3	0.0000	0.0000	OK
60 minute winter	SW4	64	24.054	0.392	21.1	0.0000	0.0000	OK
60 minute winter	SW5	64	24.055	0.403	14.2	0.1140	0.0000	SURCHARGED
60 minute winter	SW6	66	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute winter	SW1	1.000	SW2	10.8	1.159	0.429	0.0520	
60 minute winter	SW2	1.001	SW4	21.1	1.690	0.237	0.0271	
60 minute winter	SW3	2.000	SW2	10.3	1.005	0.536	0.0438	
60 minute winter	SW4	Flow through Pond	SW5	14.2	0.041	0.001	30.1932	
60 minute winter	SW5	1.002	SW6	0.3	0.315	0.018	0.0413	4.1

**Results for 100 year +45% CC 120 minute summer. 360 minute analysis at 2 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute summer	SW1	64	24.328	0.066	9.3	0.0000	0.0000	OK
120 minute summer	SW2	64	24.228	0.078	18.2	0.0220	0.0000	OK
120 minute summer	SW3	64	24.278	0.078	8.9	0.0000	0.0000	OK
120 minute summer	SW4	126	24.115	0.452	18.2	0.0000	0.0000	OK
120 minute summer	SW5	126	24.115	0.463	9.3	0.1311	0.0000	SURCHARGED
120 minute summer	SW6	126	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute summer	SW1	1.000	SW2	9.3	1.117	0.369	0.0465	
120 minute summer	SW2	1.001	SW4	18.2	1.628	0.205	0.0243	
120 minute summer	SW3	2.000	SW2	8.9	0.969	0.463	0.0392	
120 minute summer	SW4	Flow through Pond	SW5	9.3	0.022	0.001	34.7979	
120 minute summer	SW5	1.002	SW6	0.3	0.322	0.019	0.0435	5.0

**Results for 100 year +45% CC 120 minute winter. 360 minute analysis at 2 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
120 minute winter	SW1	64	24.315	0.053	6.4	0.0000	0.0000	OK
120 minute winter	SW2	64	24.213	0.063	12.5	0.0178	0.0000	OK
120 minute winter	SW3	64	24.262	0.062	6.1	0.0000	0.0000	OK
120 minute winter	SW4	124	24.115	0.452	12.5	0.0000	0.0000	OK
120 minute winter	SW5	124	24.115	0.463	7.3	0.1311	0.0000	SURCHARGED
120 minute winter	SW6	126	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
120 minute winter	SW1	1.000	SW2	6.4	1.019	0.254	0.0351	
120 minute winter	SW2	1.001	SW4	12.5	1.479	0.141	0.0184	
120 minute winter	SW3	2.000	SW2	6.1	0.881	0.317	0.0296	
120 minute winter	SW4	Flow through Pond	SW5	7.3	0.022	0.000	34.8020	
120 minute winter	SW5	1.002	SW6	0.3	0.322	0.019	0.0435	5.0



Results for 100 year +45% CC 180 minute summer. 420 minute analysis at 4 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	SW1	96	24.317	0.055	6.8	0.0000	0.0000	OK
180 minute summer	SW2	96	24.215	0.065	13.3	0.0184	0.0000	OK
180 minute summer	SW3	96	24.264	0.064	6.5	0.0000	0.0000	OK
180 minute summer	SW4	188	24.149	0.487	13.3	0.0000	0.0000	OK
180 minute summer	SW5	188	24.150	0.498	7.0	0.1409	0.0000	SURCHARGED
180 minute summer	SW6	188	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
180 minute summer	SW1	1.000	SW2	6.8	1.034	0.270	0.0368	
180 minute summer	SW2	1.001	SW4	13.3	1.503	0.150	0.0192	
180 minute summer	SW3	2.000	SW2	6.5	0.896	0.338	0.0310	
180 minute summer	SW4	Flow through Pond	SW5	7.0	0.014	0.000	37.4257	
180 minute summer	SW5	1.002	SW6	0.3	0.325	0.020	0.0446	5.8

**Results for 100 year +45% CC 180 minute winter. 420 minute analysis at 4 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	SW1	96	24.307	0.045	4.7	0.0000	0.0000	OK
180 minute winter	SW2	96	24.203	0.053	9.2	0.0151	0.0000	OK
180 minute winter	SW3	96	24.252	0.052	4.5	0.0000	0.0000	OK
180 minute winter	SW4	184	24.150	0.488	9.2	0.0000	0.0000	OK
180 minute winter	SW5	184	24.151	0.499	4.7	0.1412	0.0000	SURCHARGED
180 minute winter	SW6	184	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
180 minute winter	SW1	1.000	SW2	4.7	0.942	0.187	0.0279	
180 minute winter	SW2	1.001	SW4	9.2	1.365	0.104	0.0146	
180 minute winter	SW3	2.000	SW2	4.5	0.817	0.234	0.0235	
180 minute winter	SW4	Flow through Pond	SW5	4.7	0.022	0.000	37.5038	
180 minute winter	SW5	1.002	SW6	0.3	0.325	0.020	0.0447	5.8



Results for 100 year +45% CC 240 minute summer. 480 minute analysis at 4 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute summer	SW1	124	24.312	0.050	5.7	0.0000	0.0000	OK
240 minute summer	SW2	124	24.209	0.059	11.1	0.0167	0.0000	OK
240 minute summer	SW3	124	24.258	0.058	5.4	0.0000	0.0000	OK
240 minute summer	SW4	244	24.174	0.511	11.1	0.0000	0.0000	OK
240 minute summer	SW5	244	24.174	0.522	5.6	0.1478	0.0000	SURCHARGED
240 minute summer	SW6	248	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
240 minute summer	SW1	1.000	SW2	5.7	0.990	0.226	0.0321	
240 minute summer	SW2	1.001	SW4	11.1	1.432	0.125	0.0184	
240 minute summer	SW3	2.000	SW2	5.4	0.853	0.281	0.0270	
240 minute summer	SW4	Flow through Pond	SW5	5.6	0.015	0.000	39.2815	
240 minute summer	SW5	1.002	SW6	0.3	0.327	0.020	0.0454	6.6

**Results for 100 year +45% CC 240 minute winter. 480 minute analysis at 4 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	SW1	124	24.302	0.040	3.8	0.0000	0.0000	OK
240 minute winter	SW2	124	24.197	0.047	7.4	0.0134	0.0000	OK
240 minute winter	SW3	124	24.246	0.046	3.6	0.0000	0.0000	OK
240 minute winter	SW4	244	24.176	0.513	7.4	0.0000	0.0000	OK
240 minute winter	SW5	244	24.176	0.524	3.8	0.1484	0.0000	SURCHARGED
240 minute winter	SW6	244	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
240 minute winter	SW1	1.000	SW2	3.8	0.894	0.151	0.0238	
240 minute winter	SW2	1.001	SW4	7.4	1.288	0.083	0.0195	
240 minute winter	SW3	2.000	SW2	3.6	0.774	0.187	0.0200	
240 minute winter	SW4	Flow through Pond	SW5	3.8	0.013	0.000	39.4378	
240 minute winter	SW5	1.002	SW6	0.3	0.328	0.020	0.0455	6.7



Results for 100 year +45% CC 360 minute summer. 600 minute analysis at 8 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute summer	SW1	184	24.304	0.042	4.2	0.0000	0.0000	OK
360 minute summer	SW2	360	24.215	0.065	8.3	0.0185	0.0000	OK
360 minute summer	SW3	184	24.249	0.049	4.1	0.0000	0.0000	OK
360 minute summer	SW4	368	24.205	0.543	8.3	0.0000	0.0000	OK
360 minute summer	SW5	368	24.206	0.554	4.3	0.1567	0.0000	SURCHARGED
360 minute summer	SW6	368	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
360 minute summer	SW1	1.000	SW2	4.2	0.912	0.166	0.0257	
360 minute summer	SW2	1.001	SW4	8.3	1.327	0.093	0.0332	
360 minute summer	SW3	2.000	SW2	4.1	0.800	0.213	0.0218	
360 minute summer	SW4	Flow through Pond	SW5	4.3	0.013	0.000	41.6580	
360 minute summer	SW5	1.002	SW6	0.3	0.330	0.021	0.0464	8.2

**Results for 100 year +45% CC 360 minute winter. 600 minute analysis at 8 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	SW1	184	24.295	0.033	2.7	0.0000	0.0000	OK
360 minute winter	SW2	360	24.210	0.060	5.3	0.0170	0.0000	OK
360 minute winter	SW3	184	24.239	0.039	2.6	0.0000	0.0000	OK
360 minute winter	SW4	360	24.206	0.544	5.3	0.0000	0.0000	OK
360 minute winter	SW5	360	24.207	0.555	2.8	0.1570	0.0000	SURCHARGED
360 minute winter	SW6	360	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
360 minute winter	SW1	1.000	SW2	2.7	0.815	0.107	0.0193	
360 minute winter	SW2	1.001	SW4	5.3	1.177	0.060	0.0326	
360 minute winter	SW3	2.000	SW2	2.6	0.710	0.135	0.0156	
360 minute winter	SW4	Flow through Pond	SW5	2.8	0.009	0.000	41.7429	
360 minute winter	SW5	1.002	SW6	0.3	0.330	0.021	0.0464	8.2



Results for 100 year +45% CC 480 minute summer. 720 minute analysis at 8 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute summer	SW1	248	24.299	0.037	3.3	0.0000	0.0000	OK
480 minute summer	SW2	496	24.223	0.073	6.5	0.0208	0.0000	OK
480 minute summer	SW3	248	24.243	0.043	3.2	0.0000	0.0000	OK
480 minute summer	SW4	488	24.224	0.561	6.5	0.0000	0.0000	OK
480 minute summer	SW5	488	24.224	0.572	3.4	0.1619	0.0000	SURCHARGED
480 minute summer	SW6	488	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute summer	SW1	1.000	SW2	3.3	0.858	0.131	0.0249	
480 minute summer	SW2	1.001	SW4	6.5	1.244	0.073	0.0393	
480 minute summer	SW3	2.000	SW2	3.2	0.751	0.167	0.0219	
480 minute summer	SW4	Flow through Pond	SW5	3.4	0.013	0.000	43.0724	
480 minute summer	SW5	1.002	SW6	0.3	0.332	0.021	0.0469	9.8

**Results for 100 year +45% CC 480 minute winter. 720 minute analysis at 8 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	SW1	248	24.292	0.030	2.2	0.0000	0.0000	OK
480 minute winter	SW2	464	24.237	0.087	4.3	0.0246	0.0000	OK
480 minute winter	SW3	248	24.235	0.035	2.1	0.0000	0.0000	OK
480 minute winter	SW4	472	24.228	0.565	4.7	0.0000	0.0000	OK
480 minute winter	SW5	472	24.229	0.577	2.8	0.1632	0.0000	SURCHARGED
480 minute winter	SW6	480	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute winter	SW1	1.000	SW2	2.2	0.772	0.087	0.0312	
480 minute winter	SW2	1.001	SW4	4.7	1.113	0.053	0.0435	
480 minute winter	SW3	2.000	SW2	2.1	0.670	0.109	0.0261	
480 minute winter	SW4	Flow through Pond	SW5	2.8	0.009	0.000	43.3997	
480 minute winter	SW5	1.002	SW6	0.3	0.332	0.021	0.0470	9.8



Results for 100 year +45% CC 600 minute summer. 840 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute summer	SW1	315	24.295	0.033	2.7	0.0000	0.0000	OK
600 minute summer	SW2	600	24.245	0.095	5.3	0.0269	0.0000	OK
600 minute summer	SW3	315	24.239	0.039	2.6	0.0000	0.0000	OK
600 minute summer	SW4	600	24.239	0.576	5.3	0.0000	0.0000	OK
600 minute summer	SW5	600	24.239	0.587	2.8	0.1661	0.0000	SURCHARGED
600 minute summer	SW6	600	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute summer	SW1	1.000	SW2	2.7	0.815	0.107	0.0341	
600 minute summer	SW2	1.001	SW4	5.3	1.177	0.060	0.0483	
600 minute summer	SW3	2.000	SW2	2.6	0.710	0.135	0.0323	
600 minute summer	SW4	Flow through Pond	SW5	2.8	0.007	0.000	44.1987	
600 minute summer	SW5	1.002	SW6	0.3	0.333	0.021	0.0473	11.3

**Results for 100 year +45% CC 600 minute winter. 840 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	SW1	315	24.289	0.027	1.8	0.0000	0.0000	OK
600 minute winter	SW2	585	24.241	0.091	4.0	0.0257	0.0000	OK
600 minute winter	SW3	600	24.237	0.037	1.8	0.0000	0.0000	OK
600 minute winter	SW4	600	24.236	0.574	3.7	0.0000	0.0000	OK
600 minute winter	SW5	600	24.237	0.585	2.3	0.1655	0.0000	SURCHARGED
600 minute winter	SW6	600	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute winter	SW1	1.000	SW2	1.8	0.723	0.071	0.0324	
600 minute winter	SW2	1.001	SW4	3.7	1.058	0.042	0.0467	
600 minute winter	SW3	2.000	SW2	1.8	0.649	0.094	0.0305	
600 minute winter	SW4	Flow through Pond	SW5	2.3	0.008	0.000	44.0181	
600 minute winter	SW5	1.002	SW6	0.3	0.333	0.021	0.0473	11.3



Results for 100 year +45% CC 720 minute summer. 960 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute summer	SW1	375	24.293	0.031	2.4	0.0000	0.0000	OK
720 minute summer	SW2	675	24.252	0.102	4.7	0.0288	0.0000	OK
720 minute summer	SW3	735	24.250	0.050	2.3	0.0000	0.0000	OK
720 minute summer	SW4	720	24.249	0.586	5.4	0.0000	0.0000	OK
720 minute summer	SW5	720	24.249	0.597	3.8	0.1691	0.0000	SURCHARGED
720 minute summer	SW6	720	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute summer	SW1	1.000	SW2	2.4	0.790	0.095	0.0368	
720 minute summer	SW2	1.001	SW4	5.4	1.139	0.061	0.0515	
720 minute summer	SW3	2.000	SW2	2.3	0.687	0.120	0.0366	
720 minute summer	SW4	Flow through Pond	SW5	3.8	0.007	0.000	44.9908	
720 minute summer	SW5	1.002	SW6	0.3	0.334	0.022	0.0476	12.8

**Results for 100 year +45% CC 720 minute winter. 960 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	SW1	375	24.288	0.026	1.6	0.0000	0.0000	OK
720 minute winter	SW2	720	24.257	0.107	4.4	0.0304	0.0000	OK
720 minute winter	SW3	705	24.255	0.055	1.5	0.0000	0.0000	OK
720 minute winter	SW4	705	24.254	0.592	4.5	0.0000	0.0000	OK
720 minute winter	SW5	705	24.255	0.603	2.5	0.1706	0.0000	SURCHARGED
720 minute winter	SW6	720	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute winter	SW1	1.000	SW2	1.6	0.707	0.063	0.0385	
720 minute winter	SW2	1.001	SW4	4.5	1.015	0.050	0.0548	
720 minute winter	SW3	2.000	SW2	1.5	0.617	0.078	0.0409	
720 minute winter	SW4	Flow through Pond	SW5	2.5	0.008	0.000	45.4118	
720 minute winter	SW5	1.002	SW6	0.3	0.335	0.022	0.0478	13.0



Results for 100 year +45% CC 960 minute summer. 1200 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute summer	SW1	495	24.291	0.029	2.0	0.0000	0.0000	OK
960 minute summer	SW2	945	24.268	0.118	4.9	0.0333	0.0000	OK
960 minute summer	SW3	960	24.266	0.066	1.9	0.0000	0.0000	OK
960 minute summer	SW4	960	24.265	0.603	4.2	0.0000	0.0000	OK
960 minute summer	SW5	960	24.266	0.614	2.4	0.1737	0.0000	SURCHARGED
960 minute summer	SW6	960	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
960 minute summer	SW1	1.000	SW2	2.0	0.752	0.079	0.0427	
960 minute summer	SW2	1.001	SW4	4.2	1.082	0.047	0.0593	
960 minute summer	SW3	2.000	SW2	1.9	0.652	0.099	0.0469	
960 minute summer	SW4	Flow through Pond	SW5	2.4	0.007	0.000	46.2345	
960 minute summer	SW5	1.002	SW6	0.3	0.336	0.022	0.0481	16.1

**Results for 100 year +45% CC 960 minute winter. 1200 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	SW1	480	24.285	0.023	1.3	0.0000	0.0000	OK
960 minute winter	SW2	885	24.259	0.109	4.4	0.0308	0.0000	OK
960 minute winter	SW3	930	24.258	0.058	1.2	0.0000	0.0000	OK
960 minute winter	SW4	930	24.256	0.594	4.7	0.0000	0.0000	OK
960 minute winter	SW5	930	24.257	0.605	2.5	0.1712	0.0000	SURCHARGED
960 minute winter	SW6	930	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
960 minute winter	SW1	1.000	SW2	1.3	0.669	0.052	0.0395	
960 minute winter	SW2	1.001	SW4	4.7	0.954	0.053	0.0553	
960 minute winter	SW3	2.000	SW2	1.2	0.580	0.062	0.0425	
960 minute winter	SW4	Flow through Pond	SW5	2.5	0.005	0.000	45.5615	
960 minute winter	SW5	1.002	SW6	0.3	0.335	0.022	0.0479	15.9

**Results for 100 year +45% CC 1440 minute summer. 1680 minute analysis at 30 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute summer	SW1	750	24.286	0.024	1.4	0.0000	0.0000	OK
1440 minute summer	SW2	1260	24.269	0.119	3.0	0.0337	0.0000	OK
1440 minute summer	SW3	1230	24.268	0.068	1.4	0.0000	0.0000	OK
1440 minute summer	SW4	1230	24.268	0.606	5.4	0.0000	0.0000	OK
1440 minute summer	SW5	1230	24.269	0.617	2.6	0.1745	0.0000	SURCHARGED
1440 minute summer	SW6	1230	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
1440 minute summer	SW1	1.000	SW2	1.4	0.674	0.056	0.0431	
1440 minute summer	SW2	1.001	SW4	5.4	0.985	0.060	0.0604	
1440 minute summer	SW3	2.000	SW2	1.4	0.605	0.073	0.0486	
1440 minute summer	SW4	Flow through Pond	SW5	2.6	0.003	0.000	46.4500	
1440 minute summer	SW5	1.002	SW6	0.3	0.336	0.022	0.0482	21.8

**Results for 100 year +45% CC 1440 minute winter. 1680 minute analysis at 30 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
1440 minute winter	SW1	1350	24.291	0.029	1.0	0.0000	0.0000	OK
1440 minute winter	SW2	1350	24.288	0.138	4.6	0.0389	0.0000	OK
1440 minute winter	SW3	1350	24.288	0.088	0.9	0.0000	0.0000	OK
1440 minute winter	SW4	1350	24.286	0.624	2.8	0.0000	0.0000	OK
1440 minute winter	SW5	1350	24.287	0.635	1.7	0.1797	0.0000	SURCHARGED
1440 minute winter	SW6	1350	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
1440 minute winter	SW1	1.000	SW2	1.0	0.622	0.040	0.0539	
1440 minute winter	SW2	1.001	SW4	2.8	0.882	0.032	0.0681	
1440 minute winter	SW3	2.000	SW2	1.4	0.536	0.074	0.0591	
1440 minute winter	SW4	Flow through Pond	SW5	1.7	0.001	0.000	47.8336	
1440 minute winter	SW5	1.002	SW6	0.3	0.337	0.022	0.0487	22.4



Results for 100 year +45% CC 2160 minute summer. 2400 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
2160 minute summer	SW1	1620	24.300	0.038	1.0	0.0000	0.0000	OK
2160 minute summer	SW2	1620	24.295	0.145	2.8	0.0409	0.0000	OK
2160 minute summer	SW3	1620	24.296	0.096	1.0	0.0000	0.0000	OK
2160 minute summer	SW4	1620	24.293	0.631	5.6	0.0000	0.0000	OK
2160 minute summer	SW5	1620	24.294	0.642	3.9	0.1816	0.0000	SURCHARGED
2160 minute summer	SW6	1620	23.326	0.016	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
2160 minute summer	SW1	1.000	SW2	1.0	0.610	0.040	0.0584	
2160 minute summer	SW2	1.001	SW4	5.6	0.895	0.063	0.0708	
2160 minute summer	SW3	2.000	SW2	1.0	0.551	0.052	0.0625	
2160 minute summer	SW4	Flow through Pond	SW5	3.9	0.001	0.000	48.2601	
2160 minute summer	SW5	1.002	SW6	0.3	0.338	0.022	0.0489	31.0

**Results for 100 year +45% CC 2160 minute winter. 2400 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
2160 minute winter	SW1	1080	24.279	0.017	0.7	0.0000	0.0000	OK
2160 minute winter	SW2	1680	24.277	0.127	1.4	0.0359	0.0000	OK
2160 minute winter	SW3	1680	24.277	0.077	0.7	0.0000	0.0000	OK
2160 minute winter	SW4	1680	24.276	0.614	2.0	0.0000	0.0000	OK
2160 minute winter	SW5	1680	24.277	0.625	1.3	0.1768	0.0000	SURCHARGED
2160 minute winter	SW6	1680	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
2160 minute winter	SW1	1.000	SW2	0.7	0.565	0.028	0.0472	
2160 minute winter	SW2	1.001	SW4	2.0	0.810	0.022	0.0638	
2160 minute winter	SW3	2.000	SW2	0.7	0.498	0.036	0.0534	
2160 minute winter	SW4	Flow through Pond	SW5	1.3	0.003	0.000	47.0612	
2160 minute winter	SW5	1.002	SW6	0.3	0.337	0.022	0.0484	30.7



Results for 100 year +45% CC 2880 minute summer. 3120 minute analysis at 60 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
2880 minute summer	SW1	2040	24.293	0.031	0.9	0.0000	0.0000	OK
2880 minute summer	SW2	2040	24.292	0.142	2.0	0.0403	0.0000	OK
2880 minute summer	SW3	2040	24.293	0.093	0.8	0.0000	0.0000	OK
2880 minute summer	SW4	2040	24.292	0.629	2.2	0.0000	0.0000	OK
2880 minute summer	SW5	2040	24.292	0.640	1.4	0.1812	0.0000	SURCHARGED
2880 minute summer	SW6	2040	23.326	0.016	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
2880 minute summer	SW1	1.000	SW2	1.1	0.605	0.043	0.0556	
2880 minute summer	SW2	1.001	SW4	2.2	0.855	0.025	0.0700	
2880 minute summer	SW3	2.000	SW2	0.8	0.510	0.042	0.0612	
2880 minute summer	SW4	Flow through Pond	SW5	1.4	0.001	0.000	48.1603	
2880 minute summer	SW5	1.002	SW6	0.3	0.338	0.022	0.0488	40.3

**Results for 100 year +45% CC 2880 minute winter. 3120 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
2880 minute winter	SW1	2220	24.284	0.022	0.6	0.0000	0.0000	OK
2880 minute winter	SW2	2220	24.282	0.132	4.7	0.0374	0.0000	OK
2880 minute winter	SW3	2220	24.282	0.082	0.6	0.0000	0.0000	OK
2880 minute winter	SW4	2160	24.282	0.620	2.8	0.0000	0.0000	OK
2880 minute winter	SW5	2160	24.283	0.631	1.4	0.1785	0.0000	SURCHARGED
2880 minute winter	SW6	2160	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
2880 minute winter	SW1	1.000	SW2	0.7	0.548	0.026	0.0504	
2880 minute winter	SW2	1.001	SW4	-3.1	0.773	-0.035	0.0661	
2880 minute winter	SW3	2.000	SW2	1.1	0.477	0.060	0.0562	
2880 minute winter	SW4	Flow through Pond	SW5	-1.4	0.003	0.000	47.5236	
2880 minute winter	SW5	1.002	SW6	0.3	0.337	0.022	0.0486	40.4

**Results for 100 year +45% CC 4320 minute summer. 4560 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
4320 minute summer	SW1	2820	24.305	0.043	0.8	0.0000	0.0000	OK
4320 minute summer	SW2	2880	24.300	0.150	3.5	0.0424	0.0000	OK
4320 minute summer	SW3	2820	24.300	0.100	0.7	0.0000	0.0000	OK
4320 minute summer	SW4	2880	24.300	0.637	4.7	0.0000	0.0000	OK
4320 minute summer	SW5	2880	24.300	0.648	3.1	0.1835	0.0000	SURCHARGED
4320 minute summer	SW6	2880	23.326	0.016	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
4320 minute summer	SW1	1.000	SW2	1.2	0.565	0.046	0.0605	
4320 minute summer	SW2	1.001	SW4	4.7	0.792	0.052	0.0728	
4320 minute summer	SW3	2.000	SW2	0.6	0.486	0.031	0.0643	
4320 minute summer	SW4	Flow through Pond	SW5	3.1	0.001	0.000	48.6346	
4320 minute summer	SW5	1.002	SW6	0.3	0.338	0.022	0.0490	59.8

**Results for 100 year +45% CC 4320 minute winter. 4560 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
4320 minute winter	SW1	1920	24.275	0.013	0.4	0.0000	0.0000	OK
4320 minute winter	SW2	3120	24.265	0.115	3.3	0.0324	0.0000	OK
4320 minute winter	SW3	3060	24.265	0.065	0.4	0.0000	0.0000	OK
4320 minute winter	SW4	3060	24.265	0.603	1.8	0.0000	0.0000	OK
4320 minute winter	SW5	3060	24.266	0.614	1.2	0.1736	0.0000	SURCHARGED
4320 minute winter	SW6	3060	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
4320 minute winter	SW1	1.000	SW2	0.4	0.488	0.016	0.0413	
4320 minute winter	SW2	1.001	SW4	-2.3	0.684	-0.026	0.0586	
4320 minute winter	SW3	2.000	SW2	0.7	0.429	0.034	0.0462	
4320 minute winter	SW4	Flow through Pond	SW5	-1.3	0.003	0.000	46.2190	
4320 minute winter	SW5	1.002	SW6	0.3	0.336	0.022	0.0481	58.0

**Results for 100 year +45% CC 5760 minute summer. 6000 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
5760 minute summer	SW1	2940	24.278	0.016	0.6	0.0000	0.0000	OK
5760 minute summer	SW2	3720	24.275	0.125	3.4	0.0355	0.0000	OK
5760 minute summer	SW3	3660	24.277	0.077	0.5	0.0000	0.0000	OK
5760 minute summer	SW4	3660	24.276	0.613	1.5	0.0000	0.0000	OK
5760 minute summer	SW5	3660	24.276	0.624	0.9	0.1767	0.0000	SURCHARGED
5760 minute summer	SW6	3660	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
5760 minute summer	SW1	1.000	SW2	0.6	0.543	0.024	0.0464	
5760 minute summer	SW2	1.001	SW4	-2.4	0.752	-0.027	0.0634	
5760 minute summer	SW3	2.000	SW2	0.9	0.461	0.048	0.0529	
5760 minute summer	SW4	Flow through Pond	SW5	-1.1	0.001	0.000	47.0316	
5760 minute summer	SW5	1.002	SW6	0.3	0.337	0.022	0.0484	73.6

**Results for 100 year +45% CC 5760 minute winter. 6000 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
5760 minute winter	SW1	2880	24.275	0.013	0.4	0.0000	0.0000	OK
5760 minute winter	SW2	3960	24.239	0.089	2.1	0.0252	0.0000	OK
5760 minute winter	SW3	3960	24.239	0.039	0.3	0.0000	0.0000	OK
5760 minute winter	SW4	3900	24.237	0.575	2.4	0.0000	0.0000	OK
5760 minute winter	SW5	3900	24.238	0.586	1.5	0.1658	0.0000	SURCHARGED
5760 minute winter	SW6	3900	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
5760 minute winter	SW1	1.000	SW2	0.4	0.488	0.016	0.0312	
5760 minute winter	SW2	1.001	SW4	2.4	0.658	0.026	0.0465	
5760 minute winter	SW3	2.000	SW2	1.0	0.396	0.051	0.0309	
5760 minute winter	SW4	Flow through Pond	SW5	1.5	0.003	0.000	44.1172	
5760 minute winter	SW5	1.002	SW6	0.3	0.333	0.021	0.0473	74.7

**Results for 100 year +45% CC 7200 minute summer. 7440 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
7200 minute summer	SW1	3660	24.277	0.015	0.5	0.0000	0.0000	OK
7200 minute summer	SW2	4500	24.250	0.100	3.1	0.0284	0.0000	OK
7200 minute summer	SW3	4440	24.252	0.052	0.5	0.0000	0.0000	OK
7200 minute summer	SW4	4500	24.251	0.588	2.7	0.0000	0.0000	OK
7200 minute summer	SW5	4500	24.251	0.599	1.7	0.1696	0.0000	SURCHARGED
7200 minute summer	SW6	4500	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
7200 minute summer	SW1	1.000	SW2	0.5	0.499	0.020	0.0362	
7200 minute summer	SW2	1.001	SW4	2.7	0.731	0.030	0.0523	
7200 minute summer	SW3	2.000	SW2	0.5	0.452	0.026	0.0377	
7200 minute summer	SW4	Flow through Pond	SW5	1.7	0.001	0.000	45.1332	
7200 minute summer	SW5	1.002	SW6	0.3	0.334	0.022	0.0477	81.8

**Results for 100 year +45% CC 7200 minute winter. 7440 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
7200 minute winter	SW1	3180	24.274	0.012	0.3	0.0000	0.0000	OK
7200 minute winter	SW2	4740	24.227	0.077	2.0	0.0219	0.0000	OK
7200 minute winter	SW3	4740	24.224	0.024	0.4	0.0000	0.0000	OK
7200 minute winter	SW4	4740	24.222	0.560	2.8	0.0000	0.0000	OK
7200 minute winter	SW5	4740	24.223	0.571	1.7	0.1615	0.0000	SURCHARGED
7200 minute winter	SW6	4740	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
7200 minute winter	SW1	1.000	SW2	0.3	0.457	0.012	0.0269	
7200 minute winter	SW2	1.001	SW4	2.8	0.628	0.032	0.0403	
7200 minute winter	SW3	2.000	SW2	-0.3	0.396	-0.018	0.0234	
7200 minute winter	SW4	Flow through Pond	SW5	1.7	0.001	0.000	42.9695	
7200 minute winter	SW5	1.002	SW6	0.3	0.332	0.021	0.0469	89.0

**Results for 100 year +45% CC 8640 minute summer. 8880 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
8640 minute summer	SW1	4260	24.275	0.013	0.4	0.0000	0.0000	OK
8640 minute summer	SW2	5220	24.231	0.081	1.7	0.0229	0.0000	OK
8640 minute summer	SW3	5340	24.230	0.030	0.4	0.0000	0.0000	OK
8640 minute summer	SW4	5280	24.229	0.566	2.5	0.0000	0.0000	OK
8640 minute summer	SW5	5280	24.229	0.577	1.4	0.1634	0.0000	SURCHARGED
8640 minute summer	SW6	5280	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
8640 minute summer	SW1	1.000	SW2	0.4	0.470	0.016	0.0284	
8640 minute summer	SW2	1.001	SW4	2.5	0.684	0.028	0.0425	
8640 minute summer	SW3	2.000	SW2	0.5	0.427	0.025	0.0260	
8640 minute summer	SW4	Flow through Pond	SW5	1.4	0.001	0.000	43.4547	
8640 minute summer	SW5	1.002	SW6	0.3	0.332	0.021	0.0471	88.5

**Results for 100 year +45% CC 8640 minute winter. 8880 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
8640 minute winter	SW1	4080	24.274	0.012	0.3	0.0000	0.0000	OK
8640 minute winter	SW2	5520	24.167	0.017	0.6	0.0047	0.0000	OK
8640 minute winter	SW3	4260	24.213	0.013	0.3	0.0000	0.0000	OK
8640 minute winter	SW4	5520	24.166	0.503	0.9	0.0000	0.0000	OK
8640 minute winter	SW5	5520	24.166	0.514	0.6	0.1455	0.0000	SURCHARGED
8640 minute winter	SW6	5520	23.325	0.015	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
8640 minute winter	SW1	1.000	SW2	0.3	0.457	0.012	0.0042	
8640 minute winter	SW2	1.001	SW4	0.9	0.628	0.010	0.0149	
8640 minute winter	SW3	2.000	SW2	0.3	0.390	0.016	0.0033	
8640 minute winter	SW4	Flow through Pond	SW5	0.6	0.001	0.000	38.6500	
8640 minute winter	SW5	1.002	SW6	0.3	0.327	0.020	0.0451	87.4

**Results for 100 year +45% CC 10080 minute summer. 10320 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
10080 minute summer	SW1	5040	24.275	0.013	0.4	0.0000	0.0000	OK
10080 minute summer	SW2	6120	24.206	0.056	1.5	0.0159	0.0000	OK
10080 minute summer	SW3	5100	24.215	0.015	0.4	0.0000	0.0000	OK
10080 minute summer	SW4	6120	24.202	0.540	2.4	0.0000	0.0000	OK
10080 minute summer	SW5	6120	24.203	0.551	1.4	0.1559	0.0000	SURCHARGED
10080 minute summer	SW6	6120	23.325	0.015	0.3	0.0000	0.0000	OK

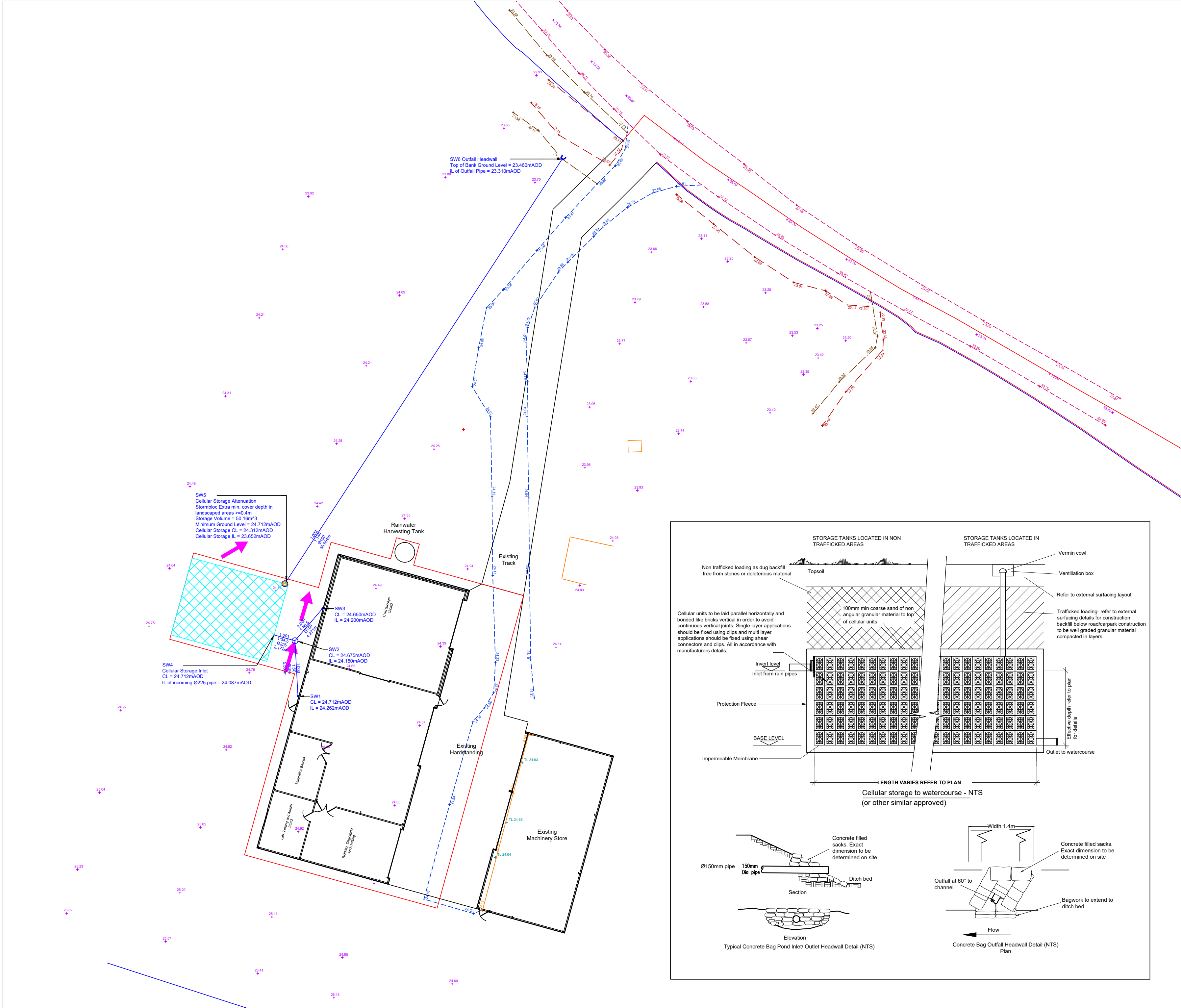
Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
10080 minute summer	SW1	1.000	SW2	0.4	0.488	0.016	0.0176	
10080 minute summer	SW2	1.001	SW4	2.4	0.684	0.027	0.0308	
10080 minute summer	SW3	2.000	SW2	0.4	0.423	0.021	0.0136	
10080 minute summer	SW4	Flow through Pond	SW5	1.4	0.001	0.000	41.4578	
10080 minute summer	SW5	1.002	SW6	0.3	0.330	0.021	0.0463	92.4

**Results for 100 year +45% CC 10080 minute winter. 10320 minute analysis at 60 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
10080 minute winter	SW1	6300	24.272	0.010	0.2	0.0000	0.0000	OK
10080 minute winter	SW2	3960	24.161	0.011	0.4	0.0032	0.0000	OK
10080 minute winter	SW3	6120	24.211	0.011	0.2	0.0000	0.0000	OK
10080 minute winter	SW4	6300	24.117	0.455	0.4	0.0000	0.0000	OK
10080 minute winter	SW5	6300	24.118	0.466	0.3	0.1318	0.0000	SURCHARGED
10080 minute winter	SW6	6300	23.324	0.014	0.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
10080 minute winter	SW1	1.000	SW2	0.2	0.422	0.008	0.0030	
10080 minute winter	SW2	1.001	SW4	0.4	0.558	0.005	0.0041	
10080 minute winter	SW3	2.000	SW2	0.2	0.348	0.010	0.0025	
10080 minute winter	SW4	Flow through Pond	SW5	0.3	0.001	0.000	34.9802	
10080 minute winter	SW5	1.002	SW6	0.3	0.322	0.019	0.0436	91.8

Appendix F



- Notes:**
1. Discharge of surface water via a cellular storage attenuation. Preliminary calculations indicate that sufficient storage required to attenuate runoff arising from the roof area of the agricultural building, during the critical 1 in 100 year + 45% Climate Change event, can be provided within cellular storage of dimensions 80m² x 0.66m deep x 0.95 (voids).
 3. Overflows from the Rainwater Harvesting Tank to be directed into the cellular storage attenuation.
 4. Concrete surrounds to be used on shallow pipework where necessary.
 5. Ground levels to be raised outside of the 1:100 year + 35% CC design flood event extent to provide sufficient cover.
 6. All levels in metres above Ordnance Datum.

- Legend**
- Proposed Cellular Storage Attenuation
 - Proposed Surface Water Pipework
 - Proposed Surface Water Downpipe
 - Proposed Surface Water Manhole
 - Proposed Orifice Plate
 - Proposed Headwall
 - Design Exceedance Route



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Job Reference: 92601-NFP-BcnsFrm_cond	Date: 13/06/25
Drawing Number: 92601-01	Revision: v1

Designed by: EW	Drawn by: EW	Checked by: AR
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Scale: 1:250@A2	Disclaimer: The drawings provided are for planning purposes only.
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