



BDW Southern Counties

New Place Farm

Pulborough,

West Sussex.

Phase 2 Planning Drainage Technical Note.

890815-R2(1)

May 2026



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RSK GENERAL NOTES

Project No.: 890815-R2(1)
Site: New Place Farm, Pulborough, West Sussex.
Title: Drainage Technical Note
Client: BDW Southern Counties
Date: May 2026
Office: Hemel Hempstead
Status: Draft

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Date:	19.05.26	Date:	19.05.26
Project manager	Andrew Muthusami		
Date:	19.05.26		

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Where any data supplied by the client or from other sources have been used, it has been assumed that the information is correct. No responsibility can be accepted by RSK for inaccuracies in the data supplied by any other party. The conclusions and recommendations in this report are based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.

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Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK LDE Ltd.

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1 INTRODUCTION

RSK has been instructed by Barratt Redrow (Southern Counties) to produce civils design services in support of a Reserved Matters Application at the site known as Land at New Place Farm (Western Parcel).

As part of this Reserved Matters Application, all remaining matters (appearance, landscaping, layout and scale) are sought for determination.

This application follows the Outline Planning Permission approved on the 07 July 2023 under reference DC/21/2321 (and varied under DC/24/1204), which established the principle of development and the means of access. All other matters were reserved, under the following description:

"Outline planning permission (with all matters reserved except for means of access from Glebelands) for the demolition of existing structures and the redevelopment of the site with a residential development scheme of up to 170 dwellings, a countryside park, associated earthworks and infrastructure."

Whilst up to 170 dwellings were approved under the Outline Planning Permission, Barratt Redrow split Reserved Matters, with a concurrent application (DC/24/1676) seeking permission on the eastern parcel for 160 dwellings. This application seeks to approve the remaining 10 dwellings on the western parcel and integrate and repurpose the heritage asset and its surrounds into a new and active landscape.

This Reserved Matters Application on the Western Parcel seeks to deliver an exemplary scheme. As part of this submission, the proposals incorporate the following key measures:

- Provision of 10 new homes, offering a balanced mix of 3, 4 and 5 bedroom homes;
- New landscape area, open space and footpaths to allow seating and enjoyment and respect the heritage asset;
- Orchard trees and planting;
- Sensitive use of materials which reflect the heritage asset; and
- Measures to encourage urban wildlife within plots and gardens;

The description of development is as follows:

"Reserved Matters application pursuant to Outline Planning Consent DC/21/2321, as varied by application DC/24/1204. The Reserved Matters comprise details of 10 no dwellings, associated internal access roads, parking, open space and landscaping. Details of appearance, landscaping, layout and scale to be considered."

The purpose of this report is to demonstrate the proposed Drainage for Phase 2 of New Place Farm, Pulborough has been incorporated within the Phase 1 Drainage proposals for the development that has been submitted for planning.

The Drainage Strategy has been developed in accordance with the Flood Risk Assessment (FRA) *"RPS Flood Risk Assessment HLEF 79185 - Issue 2. dated*

September 2021” and RSK Flood Risk Assessment 681387-R1(1)-FRA dated July 2025. The flood modelling work is incorporated within this FRA and therefore this Drainage Strategy should be read in conjunction with this report.

2 SITE LOCATION AND PROPOSALS

2.1 Site Location Pulborough

The subject site lies just east of the town of Pulborough, West Sussex, RH20 2GN, and covers an area of approximately 16.29Ha. The Site currently comprises of a mixture of hardstanding structures and areas of soft landscaping used to cultivate plants for New Place Nursery. The Phase II area for this Reserved Matters Application is 2.45Ha.

The surrounding areas to the site are: -

North – Woodland which separates the northern boundary from the railway line.

East – Soft landscaping Nursery grounds

South – Existing residential development

West – Existing residential development

A site-specific topographic survey has been carried out by NJC Surveys Limited. The survey shows the existing site levels vary from approximately 59.87m above ordnance datum (mAOD) in the northeast corner, down to 27.13mAOD in the southwest corner.

The development proposals for the site are 168 residential dwellings with access, green spaces and associated amenities. Phase 2 Heritage Area with 10 dwellings.

2.1.1 Phase II Application – 10 Units

The Phase II Application is the subject of this Reserved Matters Application for 10 units. The site layout proposals are as per the Geoff Perry Associates drawing 1234_02_Planning Layout Rev E. It is proposed that this portion of the site will discharge into Detention Basin 2 of the overall development. The catchment size has been included within the Phase 1 drainage calculations and updated to capture the full extent of impermeable areas. All residential areas (houses) have an additional 10% Urban creep factor added to the catchment sizes.

3 PROPOSED SITE DRAINAGE STRATEGY

3.1 Foul Water Drainage Strategy

3.1.1 Phase 1 Foul Water Drainage Proposals

The sitewide foul water drainage strategy was developed in accordance with the agreed Outline Planning Permission foul drainage strategy where connection to the existing manhole MH7001 in Glebelands was proposed.

As part of the design development and to reduce depths of the proposed foul drainage network, connection into an alternative existing foul water sewer was considered. There are 3 existing Southern Water manholes near the site that would be feasible points of connection which are as follows:

- MH7001 - A 150mm diameter foul sewer that begins its run to the west of the houses on Drovers Lane. This sewer flows south where it then inflows into a 150mm diameter sewer on Glebelands. This connection via a S106 is proposed and being utilised for a portion of the development at the site entrance.
- MH5103 - A 150mm diameter foul sewer that flows east to west along Glebelands to the south of the site. This sewer then turns to flow southward, away from the site, at the western end of Glebelands.
- MH5004 - A small network of foul sewer that serve the houses to the south of the site, which collate and flow into the 150mm diameter foul sewer on Glebelands.

Following a review of the levels and the proposed site layout, a connection into MH5103 was deemed as the most feasible additional point of connection. Due to this manhole being located within third party land, a sewer requisition and discussion with Southern Water is required under a S98 Agreement. This is currently under progress with Southern Water who will be constructing the pipe link into the site through the third-party land.

All adoptable foul drainage for the scheme will be subject to a S104 Agreement by the appointed NAV which for this development is AWIN (Advanced Water Infrastructure Networks).

3.1.2 Phase 2 Foul Water Drainage Proposals

As detailed within the Phase 1 drainage strategy, a point of connection spur has been detailed to the southeastern corner of Phase 2. Unfortunately, due to the topography of the site, it was not possible to connect the entirety of Phase 2 into the spine road drainage at manhole F30A. 2 of the units within this phase will connect into F30A with the remaining 8 units draining to the southeastern corner and connecting into F31 via F46.

3.2 Surface Water Drainage Strategy

3.2.1 Phase 1 Surface Water Drainage Proposals

The phase 1 proposals encompass all the proposed SuDS features for the development such as Permeable Paving, Detention Basins, Swales, Ponds/Wetlands & Geo-Cellular Storage Tanks so surface water runoff is subjected to appropriate stages of treatment before discharging from the site. These SuDS features will be subject to maintenance by the appointed management company or AWIN (depending on limits of adoption). The system is a positively drained network that discharges to existing ditches that bound the site to the south and connect to the wider local ditch network.

A package pump station is required for the development at the site entrance due to the topography, poor infiltration rates and lack of adoptable surface water sewers. This has been discussed, evidenced and submitted to the LLFA for approval under the updated Phase 1 planning submission.

The outline planning permission consent set the proposed discharge rates for the development which was originally set at 22.6 l/s. This was slightly altered to not exceed a final agreed discharge rate of 22.97 l/s during the development of the Phase 1 drainage proposals.

There are 4 detention basins for the development split across the 3 networks (Western, Central & Eastern). As per the outline planning consent these rates have been maintained and are split into 3 Hydrobrake (Vortex Flow Control Device) Manhole Outfalls that are located immediately downstream of the detention basins as follows:

- S69 – Western Network – 5.2 l/s
- S38 – Central Network – 8.5 l/s
- S10 – Eastern Network – 8.8 l/s

The hydraulic calculations have been undertaken with the following parameters:

- FEH22 rainfall data
- Runoff coefficient (Cv) of 1
- Additional Storage (MADD factor) of 0m³/ha
- 30yr + 40%cc & 100yr +45%cc

As noted above all adoptable surface water drainage for the scheme will be subject to a S104 Agreement by the appointed NAV for the scheme AWIN.

3.2.2 Phase 2 Surface Water Drainage Proposals

The Phase 2 area connects into the drainage provided within Phase 1. The drainage modelling includes the catchment area for Phase 2 and has been updated to include the proposed drainage routing for the phase. As all the proposed SuDS features are located within the Phase 1 extents, Phase 2 benefits from the various stages of treatment within the wider surface water network before discharging from the site. The Phase 2 area is

connected into the western network and discharges the site via Detention Basin 2 and manhole S69.

4 CONCLUSION

A pre-application with the WSCC Flood Risk Management Team (LLFA) was undertaken for the Phase 1 sitewide surface water drainage proposals on 21st April 2026 with subsequent pre-application correspondence received from the LLFA on 24th April 2026. This was followed up with a letter response on 5th May 2026 (890815/L06/AM) responding to the points raised within the meeting and correspondence as part of the Phase 1 updated planning package submission. The current proposals reflect the discussions within this pre-app process and may be subject to further comments from the LLFA.

The surface water drainage strategy demonstrates that there will be no flooding for all storm events up to and including 1 in 100yr + 45% climate change storm event within the sitewide drainage network. The package pump has been modelled accurately with regards to pump information provided by PDAS who are Barratt Redrow's appointed pump designer/manufacturer.

As noted within this document, the drainage strategy has been designed in accordance with the sitewide Outline Planning Strategy and FRA submitted for Phase 1 planning. On the basis that this is the remaining 10 units for the outline consented scheme that connect into the Phase 1 proposals, the information provided within this document and subject to approval of the Phase 1 planning submission, permission for the Phase 2 proposals should be granted subject to any conditions proposed by the LLFA or planning authority.

APPENDIX A – RSK GROUP SERVICE CONSTRAINTS

1. This report and the drainage design carried out in connection with the report (together the "Services") were compiled and carried out by RSK LDE Ltd (RSK) for Barratt Redrow Southern Counties (the "client") in accordance with the terms of a contract between RSK and the "client" dated 2024. The Services were performed by RSK with the skill and care ordinarily exercised by a reasonable civil engineer at the time the Services were performed. Further, and in particular, the Services were performed by RSK taking into account the limits of the scope of works required by the client, the time scale involved and the resources, including financial and manpower resources, agreed between RSK and the client.

2. Other than that expressly contained in paragraph 1 above, RSK provides no other representation or warranty whether express or implied, in relation to the Services.

3. Unless otherwise agreed in writing, the Services were performed by RSK exclusively for the purposes of the client. RSK is not aware of any interest of or reliance by any party other than the client in or on the Services. Unless expressly provided in writing, RSK does not authorise, consent or condone any party other than the client relying upon the Services. Should this report or any part of this report, or otherwise details of the Services or any part of the Services be made known to any such party, and such party relies thereon that party does so wholly at its own and sole risk and RSK disclaims any liability to such parties. Any such party would be well advised to seek independent advice from a competent environmental consultant and/or lawyer.

4. It is RSK's understanding that this report is to be used for the purpose described in the introduction to the report. That purpose was a significant factor in determining the scope and level of the Services. Should the purpose for which the report is used, or the proposed use of the site change, this report may no longer be valid and any further use of or reliance upon the report in those circumstances by the client without RSK's review and advice shall be at the client's sole and own risk. Should RSK be requested to review the report after the date of this report, RSK shall be entitled to additional payment at the then existing rates or such other terms as agreed between RSK and the client.

5. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of RSK. In the absence of such written advice of RSK, reliance on the report in the future shall be at the client's own and sole risk. Should RSK be requested to review the report in the future, RSK shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between RSK and the client.

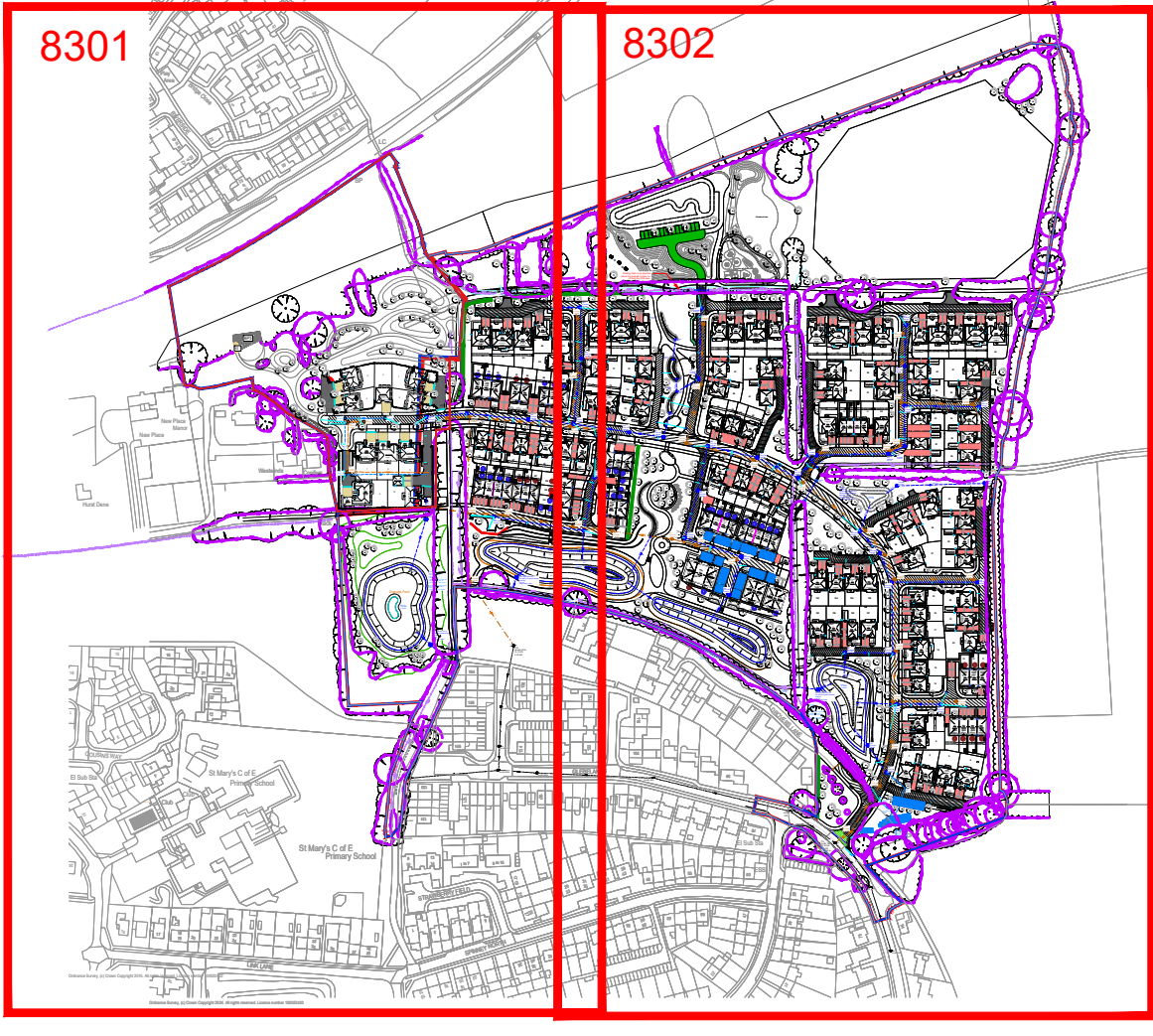
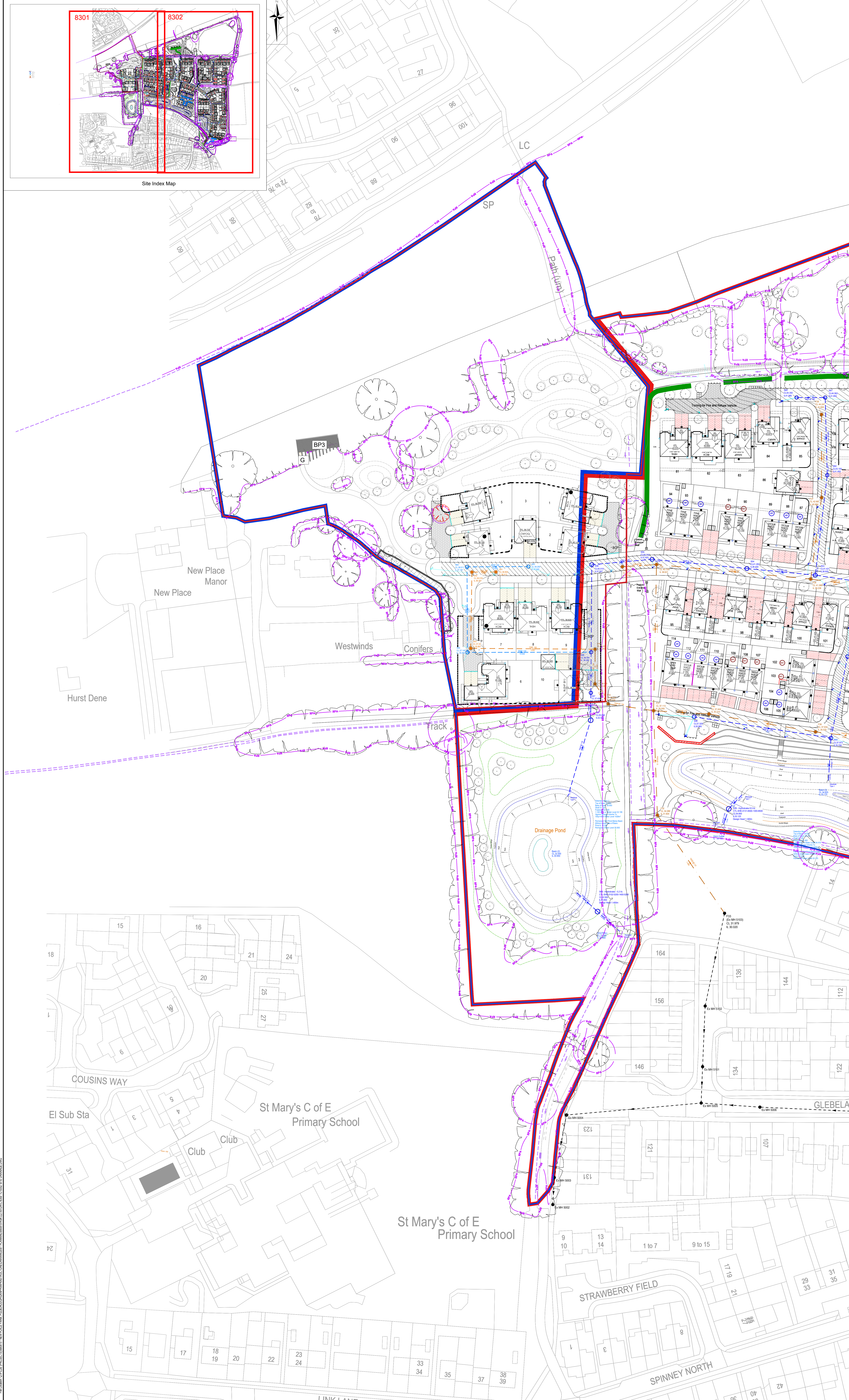
6. The observations and conclusions described in this report are based solely upon the Services, which were provided pursuant to the agreement between the client and RSK. RSK has not performed any observations, investigations, studies or testing not specifically set out or required by the contract between the client and RSK. RSK is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the Services. For the avoidance of doubt, unless otherwise expressly referred to in the introduction to this report, RSK did not seek to evaluate the presence on or off the site of asbestos, electromagnetic fields, lead paint, heavy metals, radon gas or other radioactive or hazardous materials.

7. The Services are based upon RSK's observations of existing physical conditions at the site gained from a walk-over survey of the site together with RSK's interpretation of information including documentation, obtained from third parties and from the client on the history and usage of the site. The Services are also based on information and/or analysis provided by independent testing and information services or laboratories upon which RSK was reasonably entitled to rely. The Services clearly are limited by the accuracy of the information, including documentation, reviewed by RSK and the observations possible at the time of the walk-over survey. Further RSK was not authorised and did not attempt to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties, including laboratories and information services, during the performance of the Services. RSK is not liable for any inaccurate information or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to RSK and including the doing of any independent investigation of the information provided to RSK save as otherwise provided in the terms of the contract between the client and RSK.

8. The phase II or intrusive environmental site investigation aspects of the Services is a limited sampling of the site at pre-determined borehole and soil vapour locations based on the operational configuration of the site. The conclusions given in this report are based on information gathered at the specific test locations and can only be extrapolated to an undefined limited area around those locations. The extent of the limited area depends on the soil and groundwater conditions, together with the position of any current structures and underground facilities and natural and other activities on site. In addition, chemical analysis was carried out for a limited number of parameters [as stipulated in the contract between the client and RSK] [based on an understanding of the available operational and historical information.] and it should not be inferred that other chemical species are not present.

9. Any site drawing(s) provided in this report is (are) not meant to be an accurate base plan but is (are) used to present the general relative locations of features on, and surrounding, the site. Features (boreholes, trial pits etc) annotated on site plans are not drawn to scale but are centred over the appropriate location. Such features should not be used for setting out and should be considered indicative only.

APPENDIX B – SITEWIDE PLANNING DRAINAGE STRATEGY & CALCULATIONS



Site Index Map

CIVIL / STRUCTURAL DESIGN RISK MANAGEMENT

Abnormal or unusual residual risks associated with the design outcomes shown on this drawing are:-

RSK LDE LTD has followed its Design Risk Management process for Hazard Elimination and Risk reduction in developing the designs shown on this drawing. Abnormal or unusual residual risks may be shown above where it is considered that such risk may not normally be expected by competent persons engaged on work of this nature or type.

Notes:

- This drawing is to be read in conjunction with all relevant Architects and Engineers drawings and specifications.
- Layout based on the Geoff Perry Associates Drawing Layout Rev C08 dated 30.04.2008.
- Topo Survey information taken from NJC Surveys Drawing S1572, dated March 2019
- All levels quoted are in metres A.O.D.
- For Levels Layout see Drawing No's. 890815-RSK-ZX-XX-DR-C-8200 series Site Site Levels.
- All drainage to be installed to Southern Water adoptable standards, DCG compliant.
- All road gullies shall be located away from proposed entrances to houses.
- For tree protection areas and trees to be removed refer to the Arboriculturalists drawings and/or report.

Strategic Drainage Key (1:500 1:100)

- Existing Surface Water Sewer
- Proposed Adoptable Surface Water Sewer
- Adoptable Surface Water Manhole
- Surface Water Gully & Connection
- Proposed Private Surface Water Sewer
- Private Surface Water Ø600mm PPIC
- Road Gully
- Permeable Block Paving
- Below Ground Storage Tank
- Existing Foul Water Sewer
- Proposed Adoptable Foul Water Sewer
- Adoptable Foul Water Manhole
- Foul Water Gully
- Planning Application Boundary
- Existing ditch
- Existing Ditch Removed / Stopped
- Heras Fencing - RPA
- Headwall
- Existing Swales

P10	22.05.2026	Issued for Planning	YP	AM	-
P09	19.05.2026	Updated to Phase 2 Drainage and issued for Planning approval.	YP	AM	RD
P08	06.05.2026	Updated to Client Comments. Issued for Planning approval.	YP	AM	RD
P07	01.05.2026	Updated to suit new site layout & issued for Planning approval.	YP	AM	RD
P06	04.07.25	Updated to suit new Redrow House Type layout	MA	GXA	RD
P05	30.06.25	Updated to suit new site layout	SH	GXA	RD
P04	13.12.2024	Issued for PLANNING RESUBMISSION	SH	GXA	RD
P03	25.10.2024	Issued for PLANNING SUBMISSION	SH	GXA	RD
P02	21.10.2024	Preliminary issue following SDW comments from workshop.	GXA	GXA	RD
P01	27.09.2024	Preliminary issue	GXA	GXA	RD
Rev.	Date	Amendment	Drawn	Chkd.	Appd.

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Client: **BARRATT DAVID WILSON (SOUTHERN COUNTIES)**

Project Title: **NEW PLACE FARM PULBOROUGH WEST SUSSEX**

Status: **PLANNING**

Drawing Title: **SITE DRAINAGE WEST**

Drawn	Date	Checked	Date	Approved	Date
GXA	08.24	GXA	08.24	RD	08.24
Scale	1:500	Orig Size	A0	Dimensions	mm

Project No.	890815	Drawing File	890815-RSK-ZX-XX-DR-C-8200-1-500 Site Drainage.dwg
Drawing No.	890815	Rev.	P10
Project	890815	Rev.	P10

Rev.	890815	Rev.	P10
Project	890815	Rev.	P10

0 5 10 15 20 25m

Fluores: P1015 PROJECT: BARRATT DAVID WILSON: SOUTHERN COUNTIES: NEW PLACE FARM: PULBOROUGH WEST SUSSEX: DRAWING: 890815-RSK-ZX-XX-DR-C-8200-1-500 SITE DRAINAGE.dwg

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	2	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	1.000	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Node Type	Diameter (mm)	Sump (m)	Easting (m)	Northing (m)	Depth (m)	Invert Level (m)	Notes
✓ 1	0.063	5.00	45.200	Manhole	1350		505876.700	119266.258	1.600	43.600	Auto-design is off
✓ 2	0.029	5.00	43.000	Manhole	1350		505821.069	119264.749	1.425	41.575	Auto-design is off
✓ 3	0.054	5.00	42.500	Manhole	1350		505805.117	119255.066	1.575	40.925	Auto-design is off
✓ 4	0.069	5.00	42.116	Manhole	1350		505797.314	119235.979	1.761	40.355	Auto-design is off
✓ 5	0.092	5.00	41.915	Manhole	1350		505810.127	119222.001	3.065	38.850	Auto-design is off
✓ 18	0.180	5.00	43.359	Manhole	1200		505872.052	119203.496	2.059	41.300	Auto-design is off
✓ 6	0.084	5.00	41.608	Manhole	1350		505817.769	119203.687	3.050	38.558	Auto-design is off
✓ 7	0.157	5.00	40.924	Manhole	1500		505818.407	119158.680	3.548	37.376	Auto-design is off
✓ 8	0.036	5.00	39.749	Manhole	1500		505788.050	119158.876	2.457	37.292	Auto-design is off
✓ 19	0.094	5.00	43.371	Manhole	1200		505848.682	119126.066	3.521	39.850	Auto-design is off
✓ 20	0.091	5.00	40.808	Manhole	1200		505820.858	119126.268	1.918	38.890	Auto-design is off
✓ S21A	0.089	5.00	38.900	Manhole	1350		505825.968	119073.198	1.250	37.650	Auto-design is off
✓ 21	0.022	5.00	38.750	Manhole	1350		505814.349	119082.961	1.335	37.415	Auto-design is off
✓ 22	0.045	5.00	39.050	Manhole	1350		505802.627	119100.011	2.170	36.880	Auto-design is off
✓ 9			38.900	Junction			505787.269	119134.693	2.300	36.600	Auto-design is off
✓ 10			38.900	Manhole	1500		505771.182	119135.431	2.325	36.575	Auto-design is off
✓ 11			38.000	Manhole	1350		505755.172	119137.227	1.475	36.525	Auto-design is off
✓ 12			38.000	Manhole	1350		505706.851	119158.641	2.600	35.400	Auto-design is off
✓ 13			38.000	Manhole	1350		505652.774	119182.702	3.800	34.200	Auto-design is off
✓ 23	0.239	5.00	48.030	Manhole	1200		505826.732	119366.800	2.033	45.997	Auto-design is off
✓ 23A	0.044	5.00	46.802	Manhole	1350		505826.020	119340.732	1.242	45.560	Auto-design is off
✓ 39	0.050	5.00	47.146	Manhole	1350		505873.175	119314.789	1.236	45.910	Auto-design is off
✓ 24	0.099	5.00	45.690	Manhole	1350		505825.771	119315.520	1.645	44.045	Auto-design is off
✓ 25	0.060	5.00	44.703	Manhole	1350		505825.876	119289.897	1.668	43.035	Auto-design is off
✓ 26	0.009	5.00	44.372	Manhole	1350		505815.640	119285.043	1.662	42.710	Auto-design is off
✓ 40	0.098	5.00	43.573	Manhole	1350		505766.949	119294.755	1.547	42.026	Auto-design is off
✓ 27	0.058	5.00	42.900	Manhole	1350		505770.097	119284.138	1.600	41.300	Auto-design is off
✓ 28	0.017	5.00	41.725	Manhole	1500		505758.450	119269.622	1.735	39.990	Auto-design is off
✓ 29	0.096	5.00	41.470	Manhole	1500		505732.361	119282.612	1.805	39.665	Auto-design is off
✓ 30	0.085	5.00	41.447	Manhole	1500		505701.064	119289.967	2.743	38.704	Auto-design is off
✓ 31	0.080	5.00	39.786	Manhole	1500		505694.943	119261.756	1.946	37.840	Auto-design is off
✓ 32	0.033	5.00	38.056	Manhole	1500		505686.523	119231.583	2.021	36.035	Auto-design is off
✓ 33	0.117	5.00	37.985	Manhole	1500		505722.523	119219.641	2.635	35.350	Auto-design is off
✓ 34	0.108	5.00	37.496	Manhole	1500		505714.503	119195.826	3.047	34.449	Auto-design is off
✓ 35			35.750	Junction			505701.184	119177.307	1.551	34.199	Auto-design is off
✓ 36			35.900	Manhole	1350		505649.836	119203.540	2.001	33.899	Auto-design is off
✓ 41	0.020	5.00	39.680	Manhole	1350		505629.262	119270.104	1.294	38.386	Auto-design is off
✓ 46	0.103	5.00	37.320	Manhole	1350		505565.423	119245.029	1.335	35.985	Auto-design is off
✓ 43	0.127	5.00	37.960	Manhole	1350		505622.338	119236.173	2.185	35.775	Auto-design is off
✓ 37			34.825	Junction			505603.426	119215.067	1.675	33.150	Auto-design is off
✓ 38			34.850	Manhole	1800		505579.833	119206.768	1.725	33.125	Auto-design is off
✓ 14			34.500	Manhole	1350		505577.244	119198.521	1.400	33.100	Auto-design is off
✓ 15			34.500	Manhole	1350		505539.193	119202.220	2.700	31.800	Auto-design is off
✓ 47	0.161	5.00	45.877	Manhole	1350		505696.886	119377.294	1.681	44.196	Auto-design is off
✓ 48	0.067	5.00	43.377	Manhole	1350		505695.476	119332.481	1.494	41.883	Auto-design is off
✓ 59	0.000	5.00	44.000	Manhole	1350		505678.714	119344.069	1.000	43.000	Auto-design is off
✓ 49	0.000	5.00	42.575	Manhole	1350		505681.209	119324.220	1.154	41.421	Auto-design is off
✓ 50	0.069	5.00	41.980	Manhole	1350		505677.172	119311.701	0.880	41.100	Auto-design is off
✓ 51	0.066	5.00	41.714	Manhole	1350		505673.250	119296.566	2.135	39.579	Auto-design is off

Nodes

	Name	Area (ha)	T of E (mins)	Cover Level (m)	Node Type	Diameter (mm)	Sump (m)	Easting (m)	Northing (m)	Depth (m)	Invert Level (m)	Notes
✓	52	0.078	5.00	41.765	Manhole	1350		505651.217	119300.207	2.663	39.102	Auto-design is off
✓	60	0.124	5.00	44.350	Manhole	1200		505608.042	119377.908	2.365	41.985	Auto-design is off
✓	61	0.081	5.00	44.561	Manhole	1200		505619.933	119377.895	2.711	41.850	Auto-design is off
✓	62	0.095	5.00	43.150	Manhole	1350		505620.801	119345.634	1.700	41.450	Auto-design is off
✓	53	0.067	5.00	41.415	Manhole	1500		505615.816	119303.977	2.810	38.605	Auto-design is off
✓	54	0.179	5.00	41.296	Manhole	1500		505587.396	119307.130	2.846	38.450	Auto-design is off
✓	55	0.066	5.00	40.731	Manhole	1500		505547.922	119310.592	2.806	37.925	Auto-design is off
✓	56	0.074	5.00	40.015	Manhole	1500		505522.806	119308.342	2.508	37.507	Auto-design is off
✓	63	0.101	5.00	39.250	Manhole	1350		505496.418	119307.555	1.750	37.500	Auto-design is off
✓	64	0.102	5.00	38.511	Manhole	1350		505470.889	119307.432	1.330	37.181	Auto-design is off
✓	65	0.034	5.00	37.140	Manhole	1350		505471.059	119271.832	1.679	35.461	Auto-design is off
✓	66	0.011	5.00	38.280	Manhole	1500		505522.453	119271.816	3.920	34.360	Auto-design is off
✓	67	0.034	5.00	37.430	Manhole	1500		505522.431	119255.010	4.054	33.376	Auto-design is off
✓	57	0.045	5.00	35.890	Manhole	1800		505522.350	119243.609	3.305	32.585	Auto-design is off
✓	58			32.500	Junction			505503.949	119186.952	1.550	30.950	Auto-design is off
✓	69			32.500	Manhole	1800		505525.233	119163.940	1.650	30.850	Auto-design is off
✓	16			32.000	Manhole	1350		505535.198	119155.009	1.200	30.800	Auto-design is off
✓	17			32.000	Manhole	1350		505528.135	119137.438	1.300	30.700	
✓	GP1	0.054	5.00	37.825	Manhole	1350		505810.846	119063.747	1.425	36.400	
✓	GP2	0.010	5.00	38.500	Manhole	1200		505818.213	119057.825	2.220	36.280	
✓	GP3	0.048	5.00	35.775	Manhole	1350		505797.302	119044.766	0.950	34.825	
✓	GPP	0.000		36.475	Manhole	1350	1.045	505809.409	119044.589	2.800	33.675	

Links (Input)

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)
1.000	1	2	55.651	0.600	43.600	41.575	2.025	27.5	225	5.37
1.001	2	3	18.661	0.600	41.575	41.000	0.575	32.5	225	5.51
1.002	3	4	20.620	0.600	40.925	40.355	0.570	36.2	300	5.64
1.003	4	5	18.962	0.600	40.355	38.929	1.426	13.3	300	5.71
1.004	5	6	19.844	0.600	38.850	38.633	0.217	91.4	375	5.88
2.000	18	6	54.283	0.600	41.300	38.708	2.592	20.9	300	5.26
1.005	6	7	45.012	0.600	38.558	37.451	1.107	40.7	450	6.12
1.006	7	8	30.358	0.600	37.376	37.292	0.084	361.4	525	6.55
1.007	8	9	24.196	0.600	37.292	36.700	0.592	40.9	525	6.67
3.000	19	20	27.825	0.600	39.850	38.965	0.885	31.4	225	5.20
3.001	20	9	34.629	0.600	38.890	37.000	1.890	18.3	300	5.35
4.000	S21A	21	15.176	0.600	37.650	37.565	0.085	178.5	225	5.26
4.001	21	22	20.691	0.600	37.415	36.955	0.460	45.0	375	5.39
4.002	22	9	37.930	0.600	36.880	36.700	0.180	210.7	450	5.84
1.008	9	10	16.104	0.600	36.600	36.575	0.025	644.2	600	6.95
1.009	10	11	16.110	0.600	36.575	36.525	0.050	322.2	600	7.15
1.010	11	12	52.853	0.600	36.525	35.400	1.125	47.0	450	7.44
1.011	12	13	59.188	0.600	35.400	34.200	1.200	49.3	450	7.78
1.012	13	14	77.169	0.600	34.200	33.100	1.100	70.2	450	8.31
5.000	23	23A	26.078	0.600	45.997	45.560	0.437	59.7	300	5.21
5.001	23A	24	25.213	0.600	45.560	44.120	1.440	17.5	300	5.32
6.000	39	24	47.410	0.600	45.910	44.120	1.790	26.5	300	5.26
5.002	24	25	25.623	0.600	44.045	43.110	0.935	27.4	375	5.45
5.003	25	26	11.329	0.600	43.035	42.710	0.325	34.9	450	5.50
5.004	26	27	45.552	0.600	42.710	41.300	1.410	32.3	450	5.71
7.000	40	27	11.074	0.600	42.026	41.525	0.501	22.1	225	5.07
5.005	27	28	18.611	0.600	41.300	40.067	1.233	15.1	450	5.77
5.006	28	29	29.144	0.600	39.990	39.665	0.325	89.7	525	5.98
5.007	29	30	32.150	0.600	39.665	38.704	0.961	33.5	525	6.12
5.008	30	31	28.867	0.600	38.704	37.840	0.864	33.4	525	6.24
5.009	31	32	31.326	0.600	37.840	36.110	1.730	18.1	525	6.34

Links (Input)

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)
5.010	32	33	37.929	0.600	36.035	35.350	0.685	55.4	600	6.53
5.011	33	34	25.128	0.600	35.350	34.449	0.901	27.9	600	6.62
5.012	34	35	22.811	0.600	34.449	34.199	0.250	91.2	600	6.77
5.013	35	36	57.661	0.600	34.199	33.899	0.300	192.2	600	7.32
5.014	36	37	47.820	0.600	33.899	33.150	0.749	63.8	600	7.58
8.000	41	43	34.630	0.600	38.386	35.858	2.528	13.7	225	5.16
9.000	46	43	57.600	0.600	35.985	35.775	0.210	274.3	300	6.02
8.001	43	37	28.339	0.600	35.775	33.433	2.342	12.1	375	6.11
5.015	37	38	26.046	0.600	33.150	33.125	0.025	1041.8	675	8.12
5.016	38	14	8.644	0.600	33.125	33.100	0.025	345.8	600	8.23
1.013	14	15	38.230	0.600	33.100	31.800	1.300	29.4	450	8.48
1.014	15	16	47.380	0.600	31.800	30.800	1.000	47.4	450	8.75
10.000	47	48	44.835	0.600	44.196	41.883	2.313	19.4	300	5.21
10.001	48	49	16.486	0.600	41.883	41.500	0.383	43.0	300	5.32
11.000	59	49	20.005	0.600	43.000	41.496	1.504	13.3	300	5.08
10.002	49	50	13.154	0.600	41.421	41.100	0.321	41.0	375	5.40
10.003	50	51	16.739	0.600	41.100	39.657	1.443	11.6	450	5.45
10.004	51	52	22.258	0.600	39.579	39.102	0.477	46.7	525	5.56
10.005	52	53	35.548	0.600	39.102	38.605	0.497	71.5	525	5.78
12.000	60	61	11.891	0.600	41.985	41.850	0.135	88.1	300	5.12
12.001	61	62	32.273	0.600	41.850	41.525	0.325	99.3	300	5.46
12.002	62	53	41.954	0.600	41.450	38.755	2.695	15.6	375	5.61
10.006	53	54	28.613	0.600	38.605	38.450	0.155	184.6	525	6.07
10.007	54	55	39.603	0.600	38.450	38.000	0.450	88.0	525	6.35
10.008	55	56	25.217	0.600	37.925	37.507	0.418	60.3	600	6.48
10.009	56	66	36.527	0.600	37.507	34.360	3.147	11.6	600	6.57
13.000	63	64	25.530	0.600	37.500	37.181	0.319	80.0	300	5.24
13.001	64	65	35.601	0.600	37.181	35.461	1.720	20.7	300	5.41
13.002	65	66	51.394	0.600	35.461	34.659	0.802	64.1	300	5.85
10.010	66	67	16.806	0.600	34.360	33.377	0.983	17.1	600	6.62
10.011	67	57	11.402	0.600	33.376	32.735	0.641	17.8	600	6.65
10.012	57	58	59.570	0.600	32.585	30.950	1.635	36.4	750	6.86
10.013	58	69	31.346	0.600	30.950	30.850	0.100	313.5	750	7.19
10.014	69	16	13.381	0.600	30.850	30.800	0.050	267.6	750	7.32
1.015	16	17	18.937	0.600	30.800	30.700	0.100	189.4	750	8.90
14.000	GP1	GP2	9.452	0.600	36.400	36.280	0.120	78.8	225	5.11
14.001	GP2	GPP	14.235	0.600	36.280	34.720	1.560	9.1	225	5.16
15.000	GP3	GPP	14.497	0.600	34.825	34.720	0.105	138.1	225	5.22

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	55.651	27.5	225	Circular_Default Sewer Type	45.200	43.600	1.375	43.000	41.575	1.200
1.001	18.661	32.5	225	Circular_Default Sewer Type	43.000	41.575	1.200	42.500	41.000	1.275
1.002	20.620	36.2	300	Circular_Default Sewer Type	42.500	40.925	1.275	42.116	40.355	1.461
1.003	18.962	13.3	300	Circular_Default Sewer Type	42.116	40.355	1.461	41.915	38.929	2.686
1.004	19.844	91.4	375	Circular_Default Sewer Type	41.915	38.850	2.690	41.608	38.633	2.600
2.000	54.283	20.9	300	Circular_Default Sewer Type	43.359	41.300	1.759	41.608	38.708	2.600

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Sump (m)	Node Type	MH Type
1.000	1	1350	Manhole	Adoptable	2	1350		Manhole	Adoptable
1.001	2	1350	Manhole	Adoptable	3	1350		Manhole	Adoptable
1.002	3	1350	Manhole	Adoptable	4	1350		Manhole	Adoptable
1.003	4	1350	Manhole	Adoptable	5	1350		Manhole	Adoptable
1.004	5	1350	Manhole	Adoptable	6	1350		Manhole	Adoptable
2.000	18	1200	Manhole	Adoptable	6	1350		Manhole	Adoptable

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.005	45.012	40.7	450	Circular_Default Sewer Type	41.608	38.558	2.600	40.924	37.451	3.023
1.006	30.358	361.4	525	Circular_Default Sewer Type	40.924	37.376	3.023	39.749	37.292	1.932
1.007	24.196	40.9	525	Circular_Default Sewer Type	39.749	37.292	1.932	38.900	36.700	1.675
3.000	27.825	31.4	225	Circular_Default Sewer Type	43.371	39.850	3.296	40.808	38.965	1.618
3.001	34.629	18.3	300	Circular_Default Sewer Type	40.808	38.890	1.618	38.900	37.000	1.600
4.000	15.176	178.5	225	Circular_Default Sewer Type	38.900	37.650	1.025	38.750	37.565	0.960
4.001	20.691	45.0	375	Circular_Default Sewer Type	38.750	37.415	0.960	39.050	36.955	1.720
4.002	37.930	210.7	450	Circular_Default Sewer Type	39.050	36.880	1.720	38.900	36.700	1.750
1.008	16.104	644.2	600	Circular_Default Sewer Type	38.900	36.600	1.700	38.900	36.575	1.725
1.009	16.110	322.2	600	Circular_Default Sewer Type	38.900	36.575	1.725	38.000	36.525	0.875
1.010	52.853	47.0	450	Circular_Default Sewer Type	38.000	36.525	1.025	38.000	35.400	2.150
1.011	59.188	49.3	450	Circular_Default Sewer Type	38.000	35.400	2.150	38.000	34.200	3.350
1.012	77.169	70.2	450	Circular_Default Sewer Type	38.000	34.200	3.350	34.500	33.100	0.950
5.000	26.078	59.7	300	Circular_Default Sewer Type	48.030	45.997	1.733	46.802	45.560	0.942
5.001	25.213	17.5	300	Circular_Default Sewer Type	46.802	45.560	0.942	45.690	44.120	1.270
6.000	47.410	26.5	300	Circular_Default Sewer Type	47.146	45.910	0.936	45.690	44.120	1.270
5.002	25.623	27.4	375	Circular_Default Sewer Type	45.690	44.045	1.270	44.703	43.110	1.218
5.003	11.329	34.9	450	Circular_Default Sewer Type	44.703	43.035	1.218	44.372	42.710	1.212
5.004	45.552	32.3	450	Circular_Default Sewer Type	44.372	42.710	1.212	42.900	41.300	1.150
7.000	11.074	22.1	225	Circular_Default Sewer Type	43.573	42.026	1.322	42.900	41.525	1.150
5.005	18.611	15.1	450	Circular_Default Sewer Type	42.900	41.300	1.150	41.725	40.067	1.208
5.006	29.144	89.7	525	Circular_Default Sewer Type	41.725	39.990	1.210	41.470	39.665	1.280
5.007	32.150	33.5	525	Circular_Default Sewer Type	41.470	39.665	1.280	41.447	38.704	2.218
5.008	28.867	33.4	525	Circular_Default Sewer Type	41.447	38.704	2.218	39.786	37.840	1.421
5.009	31.326	18.1	525	Circular_Default Sewer Type	39.786	37.840	1.421	38.056	36.110	1.421
5.010	37.929	55.4	600	Circular_Default Sewer Type	38.056	36.035	1.421	37.985	35.350	2.035
5.011	25.128	27.9	600	Circular_Default Sewer Type	37.985	35.350	2.035	37.496	34.449	2.447
5.012	22.811	91.2	600	Circular_Default Sewer Type	37.496	34.449	2.447	35.750	34.199	0.951

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Sump (m)	Node Type	MH Type
1.005	6	1350	Manhole	Adoptable	7	1500		Manhole	Adoptable
1.006	7	1500	Manhole	Adoptable	8	1500		Manhole	Adoptable
1.007	8	1500	Manhole	Adoptable	9			Junction	
3.000	19	1200	Manhole	Adoptable	20	1200		Manhole	Adoptable
3.001	20	1200	Manhole	Adoptable	9			Junction	
4.000	S21A	1350	Manhole	Adoptable	21	1350		Manhole	Adoptable
4.001	21	1350	Manhole	Adoptable	22	1350		Manhole	Adoptable
4.002	22	1350	Manhole	Adoptable	9			Junction	
1.008	9		Junction		10	1500		Manhole	Adoptable
1.009	10	1500	Manhole	Adoptable	11	1350		Manhole	Adoptable
1.010	11	1350	Manhole	Adoptable	12	1350		Manhole	Adoptable
1.011	12	1350	Manhole	Adoptable	13	1350		Manhole	Adoptable
1.012	13	1350	Manhole	Adoptable	14	1350		Manhole	Adoptable
5.000	23	1200	Manhole	Adoptable	23A	1350		Manhole	Adoptable
5.001	23A	1350	Manhole	Adoptable	24	1350		Manhole	Adoptable
6.000	39	1350	Manhole	Adoptable	24	1350		Manhole	Adoptable
5.002	24	1350	Manhole	Adoptable	25	1350		Manhole	Adoptable
5.003	25	1350	Manhole	Adoptable	26	1350		Manhole	Adoptable
5.004	26	1350	Manhole	Adoptable	27	1350		Manhole	Adoptable
7.000	40	1350	Manhole	Adoptable	27	1350		Manhole	Adoptable
5.005	27	1350	Manhole	Adoptable	28	1500		Manhole	Adoptable
5.006	28	1500	Manhole	Adoptable	29	1500		Manhole	Adoptable
5.007	29	1500	Manhole	Adoptable	30	1500		Manhole	Adoptable
5.008	30	1500	Manhole	Adoptable	31	1500		Manhole	Adoptable
5.009	31	1500	Manhole	Adoptable	32	1500		Manhole	Adoptable
5.010	32	1500	Manhole	Adoptable	33	1500		Manhole	Adoptable
5.011	33	1500	Manhole	Adoptable	34	1500		Manhole	Adoptable
5.012	34	1500	Manhole	Adoptable	35			Junction	

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
5.013	57.661	192.2	600	Circular_Default Sewer Type	35.750	34.199	0.951	35.900	33.899	1.401
5.014	47.820	63.8	600	Circular_Default Sewer Type	35.900	33.899	1.401	34.825	33.150	1.075
8.000	34.630	13.7	225	Circular_Default Sewer Type	39.680	38.386	1.069	37.960	35.858	1.877
9.000	57.600	274.3	300	Circular_Default Sewer Type	37.320	35.985	1.035	37.960	35.775	1.885
8.001	28.339	12.1	375	Circular_Default Sewer Type	37.960	35.775	1.810	34.825	33.433	1.017
5.015	26.046	1041.8	675	Circular_Default Sewer Type	34.825	33.150	1.000	34.850	33.125	1.050
5.016	8.644	345.8	600	Circular_Default Sewer Type	34.850	33.125	1.125	34.500	33.100	0.800
1.013	38.230	29.4	450	Circular_Default Sewer Type	34.500	33.100	0.950	34.500	31.800	2.250
1.014	47.380	47.4	450	Circular_Default Sewer Type	34.500	31.800	2.250	32.000	30.800	0.750
10.000	44.835	19.4	300	Circular_Default Sewer Type	45.877	44.196	1.381	43.377	41.883	1.194
10.001	16.486	43.0	300	Circular_Default Sewer Type	43.377	41.883	1.194	42.575	41.500	0.775
11.000	20.005	13.3	300	Circular_Default Sewer Type	44.000	43.000	0.700	42.575	41.496	0.779
10.002	13.154	41.0	375	Circular_Default Sewer Type	42.575	41.421	0.779	41.980	41.100	0.505
10.003	16.739	11.6	450	Circular_Default Sewer Type	41.980	41.100	0.430	41.714	39.657	1.607
10.004	22.258	46.7	525	Circular_Default Sewer Type	41.714	39.579	1.610	41.765	39.102	2.138
10.005	35.548	71.5	525	Circular_Default Sewer Type	41.765	39.102	2.138	41.415	38.605	2.285
12.000	11.891	88.1	300	Circular_Default Sewer Type	44.350	41.985	2.065	44.561	41.850	2.411
12.001	32.273	99.3	300	Circular_Default Sewer Type	44.561	41.850	2.411	43.150	41.525	1.325
12.002	41.954	15.6	375	Circular_Default Sewer Type	43.150	41.450	1.325	41.415	38.755	2.285
10.006	28.613	184.6	525	Circular_Default Sewer Type	41.415	38.605	2.285	41.296	38.450	2.321
10.007	39.603	88.0	525	Circular_Default Sewer Type	41.296	38.450	2.321	40.731	38.000	2.206
10.008	25.217	60.3	600	Circular_Default Sewer Type	40.731	37.925	2.206	40.015	37.507	1.908
10.009	36.527	11.6	600	Circular_Default Sewer Type	40.015	37.507	1.908	38.280	34.360	3.320
13.000	25.530	80.0	300	Circular_Default Sewer Type	39.250	37.500	1.450	38.511	37.181	1.030
13.001	35.601	20.7	300	Circular_Default Sewer Type	38.511	37.181	1.030	37.140	35.461	1.379
13.002	51.394	64.1	300	Circular_Default Sewer Type	37.140	35.461	1.379	38.280	34.659	3.321
10.010	16.806	17.1	600	Circular_Default Sewer Type	38.280	34.360	3.320	37.430	33.377	3.453
10.011	11.402	17.8	600	Circular_Default Sewer Type	37.430	33.376	3.454	35.890	32.735	2.555

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Sump (m)	Node Type	MH Type
5.013	35		Junction		36	1350		Manhole	Adoptable
5.014	36	1350	Manhole	Adoptable	37			Junction	
8.000	41	1350	Manhole	Adoptable	43	1350		Manhole	Adoptable
9.000	46	1350	Manhole	Adoptable	43	1350		Manhole	Adoptable
8.001	43	1350	Manhole	Adoptable	37			Junction	
5.015	37		Junction		38	1800		Manhole	Adoptable
5.016	38	1800	Manhole	Adoptable	14	1350		Manhole	Adoptable
1.013	14	1350	Manhole	Adoptable	15	1350		Manhole	Adoptable
1.014	15	1350	Manhole	Adoptable	16	1350		Manhole	Adoptable
10.000	47	1350	Manhole	Adoptable	48	1350		Manhole	Adoptable
10.001	48	1350	Manhole	Adoptable	49	1350		Manhole	Adoptable
11.000	59	1350	Manhole	Adoptable	49	1350		Manhole	Adoptable
10.002	49	1350	Manhole	Adoptable	50	1350		Manhole	Adoptable
10.003	50	1350	Manhole	Adoptable	51	1350		Manhole	Adoptable
10.004	51	1350	Manhole	Adoptable	52	1350		Manhole	Adoptable
10.005	52	1350	Manhole	Adoptable	53	1500		Manhole	Adoptable
12.000	60	1200	Manhole	Adoptable	61	1200		Manhole	Adoptable
12.001	61	1200	Manhole	Adoptable	62	1350		Manhole	Adoptable
12.002	62	1350	Manhole	Adoptable	53	1500		Manhole	Adoptable
10.006	53	1500	Manhole	Adoptable	54	1500		Manhole	Adoptable
10.007	54	1500	Manhole	Adoptable	55	1500		Manhole	Adoptable
10.008	55	1500	Manhole	Adoptable	56	1500		Manhole	Adoptable
10.009	56	1500	Manhole	Adoptable	66	1500		Manhole	Adoptable
13.000	63	1350	Manhole	Adoptable	64	1350		Manhole	Adoptable
13.001	64	1350	Manhole	Adoptable	65	1350		Manhole	Adoptable
13.002	65	1350	Manhole	Adoptable	66	1500		Manhole	Adoptable
10.010	66	1500	Manhole	Adoptable	67	1500		Manhole	Adoptable
10.011	67	1500	Manhole	Adoptable	57	1800		Manhole	Adoptable

**Pipeline Schedule**

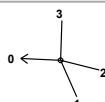
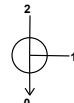
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
10.012	59.570	36.4	750	Circular_Default Sewer Type	35.890	32.585	2.555	32.500	30.950	0.800
10.013	31.346	313.5	750	Circular_Default Sewer Type	32.500	30.950	0.800	32.500	30.850	0.900
10.014	13.381	267.6	750	Circular_Default Sewer Type	32.500	30.850	0.900	32.000	30.800	0.450
1.015	18.937	189.4	750	Circular_Default Sewer Type	32.000	30.800	0.450	32.000	30.700	0.550
14.000	9.452	78.8	225	Circular_Default Sewer Type	37.825	36.400	1.200	38.500	36.280	1.995
14.001	14.235	9.1	225	Circular_Default Sewer Type	38.500	36.280	1.995	36.475	34.720	1.530
15.000	14.497	138.1	225	Circular_Default Sewer Type	35.775	34.825	0.725	36.475	34.720	1.530

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Sump (m)	Node Type	MH Type
10.012	57	1800	Manhole	Adoptable	58			Junction	
10.013	58		Junction		69	1800		Manhole	Adoptable
10.014	69	1800	Manhole	Adoptable	16	1350		Manhole	Adoptable
1.015	16	1350	Manhole	Adoptable	17	1350		Manhole	Adoptable
14.000	GP1	1350	Manhole	Adoptable	GP2	1200		Manhole	Adoptable
14.001	GP2	1200	Manhole	Adoptable	GPP	1350	1.045	Manhole	Adoptable
15.000	GP3	1350	Manhole	Adoptable	GPP	1350	1.045	Manhole	Adoptable

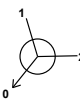
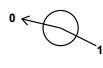
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Sump (m)	Node Type	Connections	Link	IL (m)	Dia (mm)	
1	505876.700	119266.258	45.200	1.600	1350		Manhole		0	1.000	43.600	225
2	505821.069	119264.749	43.000	1.425	1350		Manhole		1	1.000	41.575	225
3	505805.117	119255.066	42.500	1.575	1350		Manhole		0	1.001	41.575	225
									1	1.001	41.000	225
4	505797.314	119235.979	42.116	1.761	1350		Manhole		0	1.002	40.925	300
									1	1.002	40.355	300
5	505810.127	119222.001	41.915	3.065	1350		Manhole		0	1.003	40.355	300
									1	1.003	38.929	300
18	505872.052	119203.496	43.359	2.059	1200		Manhole		0	1.004	38.850	375
									0	2.000	41.300	300
6	505817.769	119203.687	41.608	3.050	1350		Manhole		1	2.000	38.708	300
									2	1.004	38.633	375
7	505818.407	119158.680	40.924	3.548	1500		Manhole		0	1.005	38.558	450
									1	1.005	37.451	450
8	505788.050	119158.876	39.749	2.457	1500		Manhole		0	1.006	37.376	525
									1	1.006	37.292	525
									0	1.007	37.292	525

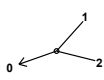
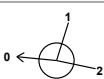
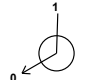
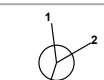
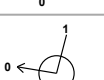
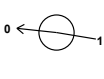
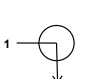
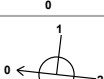
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Sump (m)	Node Type	Connections	Link	IL (m)	Dia (mm)	
19	505848.682	119126.066	43.371	3.521	1200		Manhole		0	3.000	39.850	225
20	505820.858	119126.268	40.808	1.918	1200		Manhole		1	3.000	38.965	225
								0	3.001	38.890	300	
S21A	505825.968	119073.198	38.900	1.250	1350		Manhole		0	4.000	37.650	225
21	505814.349	119082.961	38.750	1.335	1350		Manhole		1	4.000	37.565	225
								0	4.001	37.415	375	
22	505802.627	119100.011	39.050	2.170	1350		Manhole		1	4.001	36.955	375
								0	4.002	36.880	450	
9	505787.269	119134.693	38.900	2.300			Junction		1	4.002	36.700	450
								2	3.001	37.000	300	
								3	1.007	36.700	525	
								0	1.008	36.600	600	
10	505771.182	119135.431	38.900	2.325	1500		Manhole		1	1.008	36.575	600
								0	1.009	36.575	600	
11	505755.172	119137.227	38.000	1.475	1350		Manhole		1	1.009	36.525	600
								0	1.010	36.525	450	
12	505706.851	119158.641	38.000	2.600	1350		Manhole		1	1.010	35.400	450
								0	1.011	35.400	450	
13	505652.774	119182.702	38.000	3.800	1350		Manhole		1	1.011	34.200	450
								0	1.012	34.200	450	
23	505826.732	119366.800	48.030	2.033	1200		Manhole		0	5.000	45.997	300
23A	505826.020	119340.732	46.802	1.242	1350		Manhole		1	5.000	45.560	300
								0	5.001	45.560	300	
39	505873.175	119314.789	47.146	1.236	1350		Manhole		0	6.000	45.910	300
24	505825.771	119315.520	45.690	1.645	1350		Manhole		1	6.000	44.120	300
								2	5.001	44.120	300	
								0	5.002	44.045	375	
25	505825.876	119289.897	44.703	1.668	1350		Manhole		1	5.002	43.110	375
								0	5.003	43.035	450	

**Manhole Schedule**

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Sump (m)	Node Type	Connections	Link	IL (m)	Dia (mm)	
26	505815.640	119285.043	44.372	1.662	1350		Manhole		1	5.003	42.710	450
									0	5.004	42.710	450
40	505766.949	119294.755	43.573	1.547	1350		Manhole		0	7.000	42.026	225
27	505770.097	119284.138	42.900	1.600	1350		Manhole		1	7.000	41.525	225
									2	5.004	41.300	450
									0	5.005	41.300	450
28	505758.450	119269.622	41.725	1.735	1500		Manhole		1	5.005	40.067	450
									0	5.006	39.990	525
29	505732.361	119282.612	41.470	1.805	1500		Manhole		1	5.006	39.665	525
									0	5.007	39.665	525
30	505701.064	119289.967	41.447	2.743	1500		Manhole		1	5.007	38.704	525
									0	5.008	38.704	525
31	505694.943	119261.756	39.786	1.946	1500		Manhole		1	5.008	37.840	525
									0	5.009	37.840	525
32	505686.523	119231.583	38.056	2.021	1500		Manhole		1	5.009	36.110	525
									0	5.010	36.035	600
33	505722.523	119219.641	37.985	2.635	1500		Manhole		1	5.010	35.350	600
									0	5.011	35.350	600
34	505714.503	119195.826	37.496	3.047	1500		Manhole		1	5.011	34.449	600
									0	5.012	34.449	600
35	505701.184	119177.307	35.750	1.551			Junction		1	5.012	34.199	600
									0	5.013	34.199	600
36	505649.836	119203.540	35.900	2.001	1350		Manhole		1	5.013	33.899	600
									0	5.014	33.899	600
41	505629.262	119270.104	39.680	1.294	1350		Manhole		0	8.000	38.386	225
46	505565.423	119245.029	37.320	1.335	1350		Manhole		0	9.000	35.985	300
43	505622.338	119236.173	37.960	2.185	1350		Manhole		1	9.000	35.775	300
									2	8.000	35.858	225
									0	8.001	35.775	375

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Sump (m)	Node Type	Connections	Link	IL (m)	Dia (mm)
37	505603.426	119215.067	34.825	1.675			Junction		1 8.001 33.433 375 2 5.014 33.150 600		
								0 5.015 33.150 675			
38	505579.833	119206.768	34.850	1.725	1800		Manhole		1 5.015 33.125 675		
								0 5.016 33.125 600			
14	505577.244	119198.521	34.500	1.400	1350		Manhole		1 5.016 33.100 600 2 1.012 33.100 450		
								0 1.013 33.100 450			
15	505539.193	119202.220	34.500	2.700	1350		Manhole		1 1.013 31.800 450		
								0 1.014 31.800 450			
47	505696.886	119377.294	45.877	1.681	1350		Manhole		0 10.000 44.196 300		
48	505695.476	119332.481	43.377	1.494	1350		Manhole		1 10.000 41.883 300		
								0 10.001 41.883 300			
59	505678.714	119344.069	44.000	1.000	1350		Manhole		0 11.000 43.000 300		
49	505681.209	119324.220	42.575	1.154	1350		Manhole		1 11.000 41.496 300 2 10.001 41.500 300		
								0 10.002 41.421 375			
50	505677.172	119311.701	41.980	0.880	1350		Manhole		1 10.002 41.100 375		
								0 10.003 41.100 450			
51	505673.250	119296.566	41.714	2.135	1350		Manhole		1 10.003 39.657 450		
								0 10.004 39.579 525			
52	505651.217	119300.207	41.765	2.663	1350		Manhole		1 10.004 39.102 525		
								0 10.005 39.102 525			
60	505608.042	119377.908	44.350	2.365	1200		Manhole		0 12.000 41.985 300		
								1 12.000 41.850 300			
61	505619.933	119377.895	44.561	2.711	1200		Manhole		0 12.001 41.850 300		
62	505620.801	119345.634	43.150	1.700	1350		Manhole		1 12.001 41.525 300		
								0 12.002 41.450 375			
53	505615.816	119303.977	41.415	2.810	1500		Manhole		1 12.002 38.755 375 2 10.005 38.605 525		
								0 10.006 38.605 525			

**Manhole Schedule**

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Sump (m)	Node Type	Connections	Link	IL (m)	Dia (mm)	
54	505587.396	119307.130	41.296	2.846	1500		Manhole	0 ← → 1	1	10.006	38.450	525
									0	10.007	38.450	525
55	505547.922	119310.592	40.731	2.806	1500		Manhole	0 ← → 1	1	10.007	38.000	525
									0	10.008	37.925	600
56	505522.806	119308.342	40.015	2.508	1500		Manhole	0 1 → ↓	1	10.008	37.507	600
									0	10.009	37.507	600
63	505496.418	119307.555	39.250	1.750	1350		Manhole	0 ←				
									0	13.000	37.500	300
64	505470.889	119307.432	38.511	1.330	1350		Manhole	0 1 → ↓	1	13.000	37.181	300
									0	13.001	37.181	300
65	505471.059	119271.832	37.140	1.679	1350		Manhole	1 ↓ → 0	1	13.001	35.461	300
									0	13.002	35.461	300
66	505522.453	119271.816	38.280	3.920	1500		Manhole	2 1 ← ↓	1	13.002	34.659	300
									2	10.009	34.360	600
									0	10.010	34.360	600
67	505522.431	119255.010	37.430	4.054	1500		Manhole	1 ↓	1	10.010	33.377	600
									0	10.011	33.376	600
57	505522.350	119243.609	35.890	3.305	1800		Manhole	1 ↓	1	10.011	32.735	600
									0	10.012	32.585	750
58	505503.949	119186.952	32.500	1.550			Junction	1 ↓	1	10.012	30.950	750
									0	10.013	30.950	750
69	505525.233	119163.940	32.500	1.650	1800		Manhole	1 ↓	1	10.013	30.850	750
									0	10.014	30.850	750
16	505535.198	119155.009	32.000	1.200	1350		Manhole	1 2 ↓	1	10.014	30.800	750
									2	1.014	30.800	450
									0	1.015	30.800	750
17	505528.135	119137.438	32.000	1.300	1350		Manhole	1	1	1.015	30.700	750
GP1	505810.846	119063.747	37.825	1.425	1350		Manhole	↓				
									0	14.000	36.400	225
GP2	505818.213	119057.825	38.500	2.220	1200		Manhole	1 ↓	1	14.000	36.280	225
									0	14.001	36.280	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Sump (m)	Node Type	Connections	Link	IL (m)	Dia (mm)	
GP3	505797.302	119044.766	35.775	0.950	1350		Manhole		0	15.000	34.825	225
GPP	505809.409	119044.589	36.475	2.800	1350	1.045	Manhole		1 2	15.000 14.001	34.720 34.720	225 225

Simulation Settings

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

Storm Durations

15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0	100	0	0	0
30	0	0	0	100	45	0	0
30	40	0	0				

Node 10 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	36.575	Product Number	CTL-SHE-0124-8800-1940-8800
Design Depth (m)	1.940	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	8.8	Min Node Diameter (mm)	1500

Node 38 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	33.125	Product Number	CTL-SHE-0131-8500-1300-8500
Design Depth (m)	1.300	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	8.5	Min Node Diameter (mm)	1500

Node 69 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	30.850	Product Number	CTL-SHE-0102-5200-1348-5200
Design Depth (m)	1.348	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	5.2	Min Node Diameter (mm)	1200

Node GPP Offline Pump Control

Flap Valve	x	Invert Level (m)	33.675	Design Flow (l/s)	12.5	Switch off depth (m)	0.399
Loop to Node	S21A	Design Depth (m)	0.900	Switch on depth (m)	0.400		

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.400	13.460	0.500	13.600

Node 3 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	40.925
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	0

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	55.0	0.0	2.000	160.0	0.0

Node 9 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	36.600
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	1200

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	287.0	0.0	1.900	1059.3	778.1	2.300	1738.7	1461.3
1.500	786.2	505.1	2.250	1245.1	967.7			

Node 58 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	30.950
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	966.5	0.0	0.750	1420.1	0.0	1.150	1717.2	298.5	1.550	1907.6	495.8

Node 35 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	34.199
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	0

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	296.0	0.0	1.550	1031.0	0.0

Node 37 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	33.150
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	197.6	197.6	0.950	1379.7	1387.4	1.675	2058.2	2075.7
0.025	686.0	686.0	1.275	1796.2	1806.4			

Node 21 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	37.415	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.400
Safety Factor	2.0	Width (m)	6.000	Inf Depth (m)	
Porosity	0.30	Length (m)	20.000		

Node GPP Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	34.720
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	0

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	113.0	113.0	0.800	113.0	143.1	0.801	0.0	143.1

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.78%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	43.654	0.054	12.6	0.0766	0.0000	OK
15 minute summer	2	11	41.645	0.070	18.2	0.1003	0.0000	OK
15 minute summer	3	12	41.000	0.075	28.5	4.3814	0.0000	OK
15 minute summer	4	12	40.426	0.071	34.5	0.1012	0.0000	OK
15 minute summer	5	11	38.985	0.135	51.6	0.1927	0.0000	OK
15 minute summer	18	10	41.378	0.078	35.8	0.0884	0.0000	OK
15 minute summer	6	11	38.692	0.134	101.7	0.1924	0.0000	OK
15 minute summer	7	11	37.631	0.255	131.6	0.4499	0.0000	OK
15 minute summer	8	11	37.448	0.156	138.6	0.2754	0.0000	OK
15 minute summer	19	10	39.920	0.070	18.7	0.0790	0.0000	OK
15 minute summer	20	10	38.966	0.076	36.6	0.0862	0.0000	OK
15 minute summer	S21A	10	37.815	0.165	31.3	0.2360	0.0000	OK
15 minute summer	21	11	37.506	0.091	35.4	0.8752	0.0000	OK
360 minute summer	22	288	37.190	0.310	14.7	0.4441	0.0000	OK
360 minute summer	9	288	37.190	0.590	65.0	227.3969	0.0000	OK
360 minute summer	10	288	37.190	0.615	9.2	1.0872	0.0000	SURCHARGED
180 minute winter	11	124	36.567	0.042	8.6	0.0601	0.0000	OK
120 minute summer	12	108	35.442	0.042	8.6	0.0604	0.0000	OK
120 minute summer	13	114	34.246	0.046	8.6	0.0656	0.0000	OK
15 minute summer	23	10	46.125	0.128	47.6	0.1446	0.0000	OK
15 minute summer	23A	10	45.657	0.097	56.1	0.1390	0.0000	OK
15 minute summer	39	10	45.953	0.043	10.0	0.0621	0.0000	OK
15 minute summer	24	10	44.171	0.126	85.2	0.1807	0.0000	OK
15 minute summer	25	10	43.179	0.144	96.4	0.2065	0.0000	OK
15 minute summer	26	10	42.839	0.129	98.0	0.1841	0.0000	OK
15 minute summer	40	10	42.094	0.068	19.5	0.0969	0.0000	OK
15 minute summer	27	11	41.428	0.128	128.3	0.1838	0.0000	OK
15 minute summer	28	11	40.185	0.195	131.8	0.3453	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.000	2	12.4	1.409	0.125	0.4926	
15 minute summer	2	1.001	3	17.9	1.754	0.196	0.1909	
15 minute summer	3	1.002	4	23.5	1.811	0.127	0.2721	
15 minute summer	4	1.003	5	34.6	2.824	0.113	0.2324	
15 minute summer	5	1.004	6	51.0	1.514	0.244	0.6691	
15 minute summer	18	2.000	6	35.3	2.459	0.145	0.7802	
15 minute summer	6	1.005	7	101.6	2.069	0.200	2.2212	
15 minute summer	7	1.006	8	131.8	1.687	0.519	2.3887	
15 minute summer	8	1.007	9	138.4	2.665	0.182	1.2573	
15 minute summer	19	3.000	20	18.5	1.803	0.199	0.2855	
15 minute summer	20	3.001	9	36.3	2.607	0.139	0.4819	
15 minute summer	S21A	4.000	21	31.0	1.055	0.801	0.4460	
15 minute summer	21	4.001	22	35.2	1.785	0.118	0.4082	
360 minute summer	22	4.002	9	13.6	0.582	0.061	5.2162	
360 minute summer	9	1.008	10	9.2	0.183	0.034	4.5281	
360 minute summer	10	Hydro-Brake®	11	8.6				
180 minute winter	11	1.010	12	8.6	1.154	0.018	0.3922	
120 minute summer	12	1.011	13	8.6	1.079	0.019	0.4699	
120 minute summer	13	1.012	14	8.6	0.994	0.022	0.7121	
15 minute summer	23	5.000	23A	47.3	1.965	0.329	0.6301	
15 minute summer	23A	5.001	24	55.6	2.921	0.209	0.4802	
15 minute summer	39	6.000	24	9.9	1.471	0.046	0.3376	
15 minute summer	24	5.002	25	84.4	2.717	0.220	0.7978	
15 minute summer	25	5.003	26	96.2	2.374	0.175	0.4597	
15 minute summer	26	5.004	27	98.2	2.634	0.172	1.6983	
15 minute summer	40	7.000	27	19.4	2.019	0.174	0.1062	
15 minute summer	27	5.005	28	128.6	3.650	0.154	0.6557	
15 minute summer	28	5.006	29	132.5	2.103	0.259	1.8401	

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.78%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	29	11	39.820	0.155	150.8	0.2737	0.0000	OK
15 minute summer	30	11	38.875	0.171	167.7	0.3017	0.0000	OK
15 minute summer	31	11	37.990	0.150	183.4	0.2644	0.0000	OK
15 minute summer	32	11	36.232	0.197	189.9	0.3473	0.0000	OK
15 minute summer	33	11	35.516	0.166	212.2	0.2926	0.0000	OK
15 minute summer	34	11	34.690	0.241	232.3	0.4252	0.0000	OK
30 minute summer	35	22	34.395	0.195	209.5	66.9283	0.0000	OK
30 minute summer	36	23	34.056	0.157	111.8	0.2244	0.0000	OK
15 minute summer	41	10	38.412	0.026	4.0	0.0372	0.0000	OK
15 minute summer	46	10	36.102	0.117	20.5	0.1680	0.0000	OK
15 minute summer	43	10	35.849	0.074	49.2	0.1060	0.0000	OK
480 minute summer	37	400	33.531	0.381	59.3	303.1007	0.0000	OK
480 minute summer	38	400	33.531	0.406	8.9	1.0340	0.0000	OK
720 minute summer	14	585	33.152	0.052	17.0	0.0740	0.0000	OK
720 minute summer	15	585	31.858	0.058	17.0	0.0828	0.0000	OK
15 minute summer	47	10	44.267	0.071	32.1	0.1021	0.0000	OK
15 minute summer	48	10	41.996	0.113	45.2	0.1614	0.0000	OK
15 minute summer	59	1	43.000	0.000	0.0	0.0000	0.0000	OK
15 minute summer	49	10	41.527	0.106	44.5	0.1510	0.0000	OK
15 minute summer	50	10	41.179	0.079	58.1	0.1127	0.0000	OK
15 minute summer	51	10	39.694	0.115	70.9	0.1639	0.0000	OK
15 minute summer	52	11	39.237	0.135	86.1	0.1931	0.0000	OK
15 minute summer	60	10	42.087	0.102	24.7	0.1152	0.0000	OK
15 minute summer	61	10	41.980	0.129	40.7	0.1465	0.0000	OK
15 minute summer	62	10	41.535	0.085	58.8	0.1216	0.0000	OK
15 minute summer	53	11	38.867	0.262	157.2	0.4623	0.0000	OK
15 minute summer	54	11	38.686	0.236	192.6	0.4168	0.0000	OK
15 minute summer	55	11	38.148	0.223	205.3	0.3944	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	29	5.007	30	151.4	2.659	0.180	1.8320	
15 minute summer	30	5.008	31	168.2	3.021	0.200	1.6088	
15 minute summer	31	5.009	32	183.5	3.799	0.161	1.5137	
15 minute summer	32	5.010	33	189.9	2.653	0.205	2.7197	
15 minute summer	33	5.011	34	211.8	2.524	0.162	2.1206	
15 minute summer	34	5.012	35	231.8	3.532	0.322	1.7745	
30 minute summer	35	5.013	36	111.8	1.623	0.226	3.9808	
30 minute summer	36	5.014	37	112.8	2.936	0.131	2.0671	
15 minute summer	41	8.000	43	3.9	1.554	0.028	0.0874	
15 minute summer	46	9.000	43	20.1	1.044	0.300	1.1244	
15 minute summer	43	8.001	37	48.6	3.207	0.084	0.4296	
480 minute summer	37	5.015	38	8.9	0.169	0.031	5.6280	
480 minute summer	38	Hydro-Brake®	14	8.5				
720 minute summer	14	1.013	15	17.0	1.554	0.028	0.4191	
720 minute summer	15	1.014	16	17.0	1.073	0.036	0.7604	
15 minute summer	47	10.000	48	31.9	1.739	0.126	0.8296	
15 minute summer	48	10.001	49	44.5	1.946	0.262	0.3779	
15 minute summer	59	11.000	49	0.0	0.000	0.000	0.0374	
15 minute summer	49	10.002	50	44.5	2.125	0.142	0.2772	
15 minute summer	50	10.003	51	57.9	3.252	0.061	0.2979	
15 minute summer	51	10.004	52	70.8	1.812	0.100	0.8713	
15 minute summer	52	10.005	53	86.2	1.158	0.150	2.6887	
15 minute summer	60	12.000	61	24.5	0.980	0.207	0.2982	
15 minute summer	61	12.001	62	40.0	1.429	0.358	0.9073	
15 minute summer	62	12.002	53	58.6	2.904	0.115	0.9665	
15 minute summer	53	10.006	54	158.6	1.575	0.445	2.8820	
15 minute summer	54	10.007	55	192.7	2.162	0.373	3.5308	
15 minute summer	55	10.008	56	205.2	2.962	0.231	1.7715	

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.78%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	56	11	37.638	0.131	219.3	0.2306	0.0000	OK
15 minute summer	63	10	37.584	0.084	20.1	0.1198	0.0000	OK
15 minute summer	64	10	37.262	0.081	40.2	0.1163	0.0000	OK
15 minute summer	65	11	35.583	0.122	46.7	0.1742	0.0000	OK
15 minute summer	66	11	34.536	0.176	267.3	0.3115	0.0000	OK
15 minute summer	67	11	33.574	0.198	273.3	0.3497	0.0000	OK
15 minute summer	57	11	32.801	0.216	281.4	0.5502	0.0000	OK
480 minute winter	58	472	31.282	0.332	49.6	354.5627	0.0000	OK
480 minute winter	69	464	31.298	0.448	23.5	1.1390	0.0000	OK
600 minute summer	16	555	30.884	0.084	22.2	0.1195	0.0000	OK
600 minute summer	17	555	30.780	0.080	22.2	0.0000	0.0000	OK
15 minute summer	GP1	10	36.472	0.072	10.8	0.1029	0.0000	OK
15 minute summer	GP2	10	36.322	0.042	12.7	0.0480	0.0000	OK
15 minute summer	GP3	10	34.899	0.074	9.6	0.1056	0.0000	OK
15 minute summer	GPP	13	34.731	0.011	22.1	1.2163	0.0000	OK
Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	56	10.009	66	218.9	3.857	0.108	2.0837	
15 minute summer	63	13.000	64	19.9	1.267	0.160	0.4013	
15 minute summer	64	13.001	65	39.9	1.941	0.163	0.7472	
15 minute summer	65	13.002	66	46.3	1.762	0.333	1.3503	
15 minute summer	66	10.010	67	266.8	3.576	0.160	1.2552	
15 minute summer	67	10.011	57	272.8	3.839	0.167	0.8117	
15 minute summer	57	10.012	58	281.5	5.471	0.137	3.5293	
480 minute winter	58	10.013	69	23.5	0.277	0.034	7.2424	
480 minute winter	69	Hydro-Brake®	16	5.2				
600 minute summer	16	1.015	17	22.2	0.864	0.025	0.4880	1416.2
15 minute summer	GP1	14.000	GP2	10.7	1.354	0.183	0.0760	
15 minute summer	GP2	14.001	GPP	12.6	2.502	0.073	0.0719	
15 minute summer	GP3	15.000	GPP	9.4	0.863	0.214	0.1583	
15 minute summer	GPP	Pump	S21A	13.6				8.7

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	43.689	0.089	33.8	0.1280	0.0000	OK
15 minute summer	2	10	41.700	0.125	49.1	0.1793	0.0000	OK
15 minute summer	3	12	41.064	0.139	77.2	8.3242	0.0000	OK
15 minute summer	4	11	40.474	0.119	103.8	0.1705	0.0000	OK
15 minute summer	5	11	39.114	0.264	150.6	0.3781	0.0000	OK
15 minute summer	18	10	41.434	0.134	96.5	0.1517	0.0000	OK
15 minute summer	6	11	38.801	0.243	286.4	0.3479	0.0000	OK
15 minute summer	7	11	37.858	0.482	367.1	0.8515	0.0000	OK
480 minute winter	8	472	37.811	0.519	45.3	0.9171	0.0000	OK
15 minute summer	19	10	39.974	0.124	50.4	0.1400	0.0000	OK
15 minute summer	20	10	39.020	0.130	98.8	0.1471	0.0000	OK
15 minute summer	S21A	10	38.031	0.381	61.3	0.5450	0.0000	SURCHARGED
480 minute winter	21	472	37.811	0.396	13.3	11.2333	0.0000	SURCHARGED
480 minute winter	22	472	37.811	0.931	16.0	1.3323	0.0000	SURCHARGED
480 minute winter	9	472	37.811	1.211	71.9	591.6234	0.0000	SURCHARGED
480 minute winter	10	472	37.811	1.236	9.1	2.1841	0.0000	SURCHARGED
30 minute winter	11	20	36.567	0.042	8.6	0.0601	0.0000	OK
15 minute summer	12	152	35.442	0.042	8.6	0.0604	0.0000	OK
15 minute winter	13	12	34.246	0.046	8.6	0.0659	0.0000	OK
15 minute summer	23	10	46.246	0.249	128.2	0.2820	0.0000	OK
15 minute summer	23A	10	45.735	0.175	150.9	0.2511	0.0000	OK
15 minute summer	39	10	45.980	0.070	26.8	0.1008	0.0000	OK
15 minute summer	24	10	44.277	0.232	229.4	0.3321	0.0000	OK
15 minute summer	25	10	43.304	0.269	259.6	0.3846	0.0000	OK
15 minute summer	26	10	42.936	0.226	263.9	0.3238	0.0000	OK
15 minute summer	40	10	42.148	0.122	52.5	0.1748	0.0000	OK
15 minute summer	27	10	41.520	0.220	346.2	0.3155	0.0000	OK
15 minute summer	28	11	40.348	0.358	354.7	0.6334	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.000	2	33.5	1.793	0.336	1.0405	
15 minute summer	2	1.001	3	48.2	2.241	0.526	0.4027	
15 minute summer	3	1.002	4	69.8	2.440	0.377	0.5923	
15 minute summer	4	1.003	5	103.5	3.209	0.338	0.6798	
15 minute summer	5	1.004	6	150.0	1.946	0.717	1.5280	
15 minute summer	18	2.000	6	95.5	3.210	0.391	1.6148	
15 minute summer	6	1.005	7	286.7	2.349	0.564	5.3594	
15 minute summer	7	1.006	8	369.1	2.200	1.455	4.9412	
480 minute winter	8	1.007	9	45.3	1.199	0.060	5.2215	
15 minute summer	19	3.000	20	50.0	2.318	0.537	0.6001	
15 minute summer	20	3.001	9	98.2	3.416	0.376	1.0287	
15 minute summer	S21A	4.000	21	60.7	1.528	1.565	0.5857	
480 minute winter	21	4.001	22	13.3	1.216	0.044	2.2822	
480 minute winter	22	4.002	9	15.6	0.504	0.070	6.0098	
480 minute winter	9	1.008	10	9.1	0.190	0.034	4.5361	
480 minute winter	10	Hydro-Brake®	11	8.6				
30 minute winter	11	1.010	12	8.6	1.155	0.018	0.3922	
15 minute summer	12	1.011	13	8.6	1.240	0.019	0.4699	
15 minute winter	13	1.012	14	8.6	1.073	0.022	0.7127	
15 minute summer	23	5.000	23A	127.3	2.390	0.883	1.3741	
15 minute summer	23A	5.001	24	149.7	3.708	0.561	1.0179	
15 minute summer	39	6.000	24	26.6	1.411	0.123	1.1834	
15 minute summer	24	5.002	25	227.4	3.425	0.593	1.7051	
15 minute summer	25	5.003	26	259.1	2.905	0.472	1.0115	
15 minute summer	26	5.004	27	264.0	3.373	0.463	3.5761	
15 minute summer	40	7.000	27	52.3	2.562	0.471	0.2261	
15 minute summer	27	5.005	28	346.0	3.812	0.414	1.6871	
15 minute summer	28	5.006	29	356.3	2.602	0.696	3.9822	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	29	11	39.943	0.278	405.6	0.4917	0.0000	OK
15 minute summer	30	11	39.015	0.311	450.4	0.5503	0.0000	OK
15 minute summer	31	11	38.100	0.260	493.0	0.4590	0.0000	OK
15 minute summer	32	11	36.389	0.354	511.3	0.6252	0.0000	OK
15 minute summer	33	11	35.661	0.311	572.5	0.5488	0.0000	OK
15 minute summer	34	11	34.879	0.430	628.4	0.7590	0.0000	OK
30 minute summer	35	22	34.585	0.386	574.2	149.5383	0.0000	OK
30 minute summer	36	22	34.186	0.287	374.5	0.4104	0.0000	OK
15 minute summer	41	10	38.428	0.042	10.7	0.0603	0.0000	OK
15 minute summer	46	10	36.194	0.209	55.2	0.2987	0.0000	OK
15 minute summer	43	10	35.899	0.124	133.0	0.1781	0.0000	OK
480 minute winter	37	488	33.951	0.801	85.0	769.0762	0.0000	SURCHARGED
480 minute winter	38	488	33.951	0.826	9.3	2.1019	0.0000	SURCHARGED
180 minute summer	14	1024	33.152	0.052	17.0	0.0740	0.0000	OK
180 minute summer	15	1024	31.858	0.058	17.0	0.0828	0.0000	OK
15 minute summer	47	10	44.315	0.119	86.3	0.1708	0.0000	OK
15 minute summer	48	10	42.098	0.215	121.9	0.3070	0.0000	OK
15 minute summer	59	1	43.000	0.000	0.0	0.0000	0.0000	OK
15 minute summer	49	10	41.608	0.187	120.2	0.2680	0.0000	OK
15 minute summer	50	10	41.234	0.134	156.6	0.1924	0.0000	OK
15 minute summer	51	10	39.781	0.202	191.5	0.2886	0.0000	OK
15 minute summer	52	11	39.335	0.233	232.6	0.3330	0.0000	OK
15 minute summer	60	10	42.183	0.198	66.5	0.2234	0.0000	OK
15 minute summer	61	10	42.111	0.261	109.6	0.2952	0.0000	OK
15 minute summer	62	10	41.591	0.141	158.1	0.2023	0.0000	OK
15 minute summer	53	11	39.257	0.652	424.3	1.1515	0.0000	SURCHARGED
15 minute summer	54	11	38.949	0.499	513.4	0.8824	0.0000	OK
15 minute summer	55	11	38.331	0.406	546.0	0.7173	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	29	5.007	30	406.8	3.259	0.484	4.0123	
15 minute summer	30	5.008	31	451.9	3.766	0.538	3.4626	
15 minute summer	31	5.009	32	494.3	4.435	0.432	3.4918	
15 minute summer	32	5.010	33	512.6	3.211	0.553	6.0697	
15 minute summer	33	5.011	34	573.0	3.142	0.438	4.5616	
15 minute summer	34	5.012	35	626.9	4.039	0.870	4.2415	
30 minute summer	35	5.013	36	374.5	2.304	0.756	9.3555	
30 minute summer	36	5.014	37	376.7	3.554	0.437	6.3887	
15 minute summer	41	8.000	43	10.6	2.082	0.075	0.1757	
15 minute summer	46	9.000	43	54.3	1.366	0.814	2.3024	
15 minute summer	43	8.001	37	131.9	4.229	0.228	0.8841	
480 minute winter	37	5.015	38	9.3	0.155	0.032	9.2979	
480 minute winter	38	Hydro-Brake®	14	8.5				
180 minute summer	14	1.013	15	17.0	1.555	0.029	0.4191	
180 minute summer	15	1.014	16	17.0	1.074	0.036	0.7598	
15 minute summer	47	10.000	48	85.9	2.144	0.339	1.7941	
15 minute summer	48	10.001	49	120.2	2.424	0.708	0.8182	
15 minute summer	59	11.000	49	0.0	0.000	0.000	0.2406	
15 minute summer	49	10.002	50	119.6	2.664	0.382	0.5950	
15 minute summer	50	10.003	51	156.2	4.194	0.164	0.6281	
15 minute summer	51	10.004	52	190.7	2.305	0.268	1.8659	
15 minute summer	52	10.005	53	230.8	1.367	0.402	5.4807	
15 minute summer	60	12.000	61	66.2	1.161	0.559	0.6794	
15 minute summer	61	12.001	62	107.5	1.743	0.965	1.9919	
15 minute summer	62	12.002	53	157.6	2.887	0.309	3.1106	
15 minute summer	53	10.006	54	421.6	1.952	1.184	6.1255	
15 minute summer	54	10.007	55	512.2	2.621	0.991	7.7765	
15 minute summer	55	10.008	56	545.8	3.693	0.615	3.7261	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	56	11	37.725	0.218	583.7	0.3858	0.0000	OK
15 minute summer	63	10	37.647	0.147	54.1	0.2097	0.0000	OK
15 minute summer	64	10	37.319	0.138	108.5	0.1975	0.0000	OK
15 minute summer	65	11	35.696	0.235	126.2	0.3360	0.0000	OK
15 minute summer	66	11	34.688	0.328	713.7	0.5790	0.0000	OK
15 minute summer	67	11	33.756	0.380	730.7	0.6711	0.0000	OK
15 minute summer	57	11	32.934	0.349	753.2	0.8875	0.0000	OK
720 minute winter	58	720	31.671	0.721	75.5	853.3622	0.0000	OK
600 minute winter	69	585	31.673	0.823	27.4	2.0952	0.0000	SURCHARGED
60 minute summer	16	563	30.884	0.084	22.2	0.1195	0.0000	OK
60 minute summer	17	563	30.780	0.080	22.2	0.0000	0.0000	OK
15 minute summer	GP1	10	36.525	0.125	29.0	0.1788	0.0000	OK
15 minute summer	GP2	10	36.352	0.072	34.2	0.0809	0.0000	OK
15 minute summer	GP3	10	34.957	0.132	25.8	0.1887	0.0000	OK
30 minute summer	GPP	24	34.859	0.139	55.2	15.1452	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	56	10.009	66	583.4	4.685	0.288	4.5659	
15 minute summer	63	13.000	64	53.8	1.634	0.432	0.8400	
15 minute summer	64	13.001	65	107.9	2.415	0.440	1.6048	
15 minute summer	65	13.002	66	124.7	2.184	0.897	2.9330	
15 minute summer	66	10.010	67	713.3	4.135	0.427	2.8976	
15 minute summer	67	10.011	57	730.2	4.653	0.446	1.7864	
15 minute summer	57	10.012	58	756.1	6.390	0.368	8.0664	
720 minute winter	58	10.013	69	27.2	0.188	0.039	13.7076	
600 minute winter	69	Hydro-Brake®	16	5.2				
60 minute summer	16	1.015	17	22.2	0.864	0.025	0.4880	1492.2
15 minute summer	GP1	14.000	GP2	28.8	1.760	0.492	0.1581	
15 minute summer	GP2	14.001	GPP	34.1	3.278	0.197	0.2048	
15 minute summer	GP3	15.000	GPP	25.5	1.107	0.577	0.3334	
30 minute summer	GPP	Pump	S21A	13.6				33.8

Results for 30 year +40% CC Critical Storm Duration. Lowest mass balance: 99.89%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	43.708	0.108	47.4	0.1547	0.0000	OK
15 minute summer	2	10	41.734	0.159	68.8	0.2277	0.0000	OK
15 minute summer	3	12	41.097	0.172	108.1	10.5029	0.0000	OK
15 minute summer	4	11	40.500	0.145	147.2	0.2075	0.0000	OK
15 minute summer	5	11	39.252	0.402	212.9	0.5759	0.0000	SURCHARGED
15 minute summer	18	10	41.458	0.158	135.2	0.1784	0.0000	OK
15 minute summer	6	11	38.923	0.365	401.7	0.5219	0.0000	OK
480 minute winter	7	472	38.214	0.838	60.6	1.4800	0.0000	SURCHARGED
480 minute winter	8	472	38.214	0.922	62.0	1.6285	0.0000	SURCHARGED
15 minute summer	19	10	40.006	0.156	70.6	0.1769	0.0000	OK
15 minute summer	20	10	39.049	0.159	138.3	0.1797	0.0000	OK
15 minute summer	S21A	10	38.242	0.592	80.4	0.8469	0.0000	SURCHARGED
480 minute winter	21	472	38.214	0.799	18.5	11.9708	0.0000	SURCHARGED
480 minute winter	22	472	38.214	1.334	20.7	1.9084	0.0000	SURCHARGED
480 minute winter	9	472	38.214	1.614	93.4	898.6343	0.0000	SURCHARGED
480 minute winter	10	472	38.214	1.639	9.1	2.8954	0.0000	SURCHARGED
30 minute summer	11	18	36.567	0.042	8.6	0.0601	0.0000	OK
15 minute summer	12	378	35.442	0.042	8.6	0.0604	0.0000	OK
15 minute winter	13	11	34.246	0.046	8.6	0.0659	0.0000	OK
15 minute summer	23	10	46.681	0.684	179.5	0.7736	0.0000	SURCHARGED
15 minute summer	23A	10	45.779	0.219	209.4	0.3140	0.0000	OK
15 minute summer	39	10	45.994	0.084	37.6	0.1196	0.0000	OK
15 minute summer	24	10	44.347	0.302	319.9	0.4318	0.0000	OK
15 minute summer	25	10	43.379	0.344	361.2	0.4926	0.0000	OK
15 minute summer	26	11	42.991	0.281	368.2	0.4028	0.0000	OK
15 minute summer	40	10	42.181	0.155	73.6	0.2221	0.0000	OK
15 minute summer	27	11	41.578	0.278	482.4	0.3975	0.0000	OK
15 minute summer	28	11	40.469	0.479	496.6	0.8467	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.000	2	47.0	1.920	0.472	1.3597	
15 minute summer	2	1.001	3	67.5	2.395	0.737	0.5273	
15 minute summer	3	1.002	4	98.5	2.647	0.531	0.7772	
15 minute summer	4	1.003	5	146.9	3.215	0.479	0.9874	
15 minute summer	5	1.004	6	211.5	2.014	1.011	2.1176	
15 minute summer	18	2.000	6	134.8	3.401	0.553	2.4545	
15 minute summer	6	1.005	7	398.4	2.555	0.784	6.6635	
480 minute winter	7	1.006	8	59.0	1.311	0.232	6.5583	
480 minute winter	8	1.007	9	60.7	1.295	0.080	5.2271	
15 minute summer	19	3.000	20	70.0	2.480	0.752	0.7846	
15 minute summer	20	3.001	9	137.4	3.712	0.527	1.5056	
15 minute summer	S21A	4.000	21	79.6	2.001	2.052	0.5975	
480 minute winter	21	4.001	22	17.2	1.179	0.057	2.2822	
480 minute winter	22	4.002	9	20.2	0.544	0.091	6.0098	
480 minute winter	9	1.008	10	9.1	0.205	0.034	4.5361	
480 minute winter	10	Hydro-Brake®	11	8.6				
30 minute summer	11	1.010	12	8.6	1.156	0.018	0.3922	
15 minute summer	12	1.011	13	8.6	1.224	0.019	0.4702	
15 minute winter	13	1.012	14	8.6	1.071	0.022	0.7131	
15 minute summer	23	5.000	23A	176.3	2.608	1.223	1.6382	
15 minute summer	23A	5.001	24	208.2	3.753	0.780	1.4164	
15 minute summer	39	6.000	24	37.3	1.412	0.172	1.7341	
15 minute summer	24	5.002	25	317.2	3.566	0.827	2.3027	
15 minute summer	25	5.003	26	361.7	3.075	0.659	1.3279	
15 minute summer	26	5.004	27	370.1	3.576	0.649	4.7146	
15 minute summer	40	7.000	27	73.3	2.735	0.659	0.2963	
15 minute summer	27	5.005	28	484.4	3.859	0.580	2.3467	
15 minute summer	28	5.006	29	498.8	2.738	0.974	5.2773	

Results for 30 year +40% CC Critical Storm Duration. Lowest mass balance: 99.89%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	29	11	40.020	0.355	567.6	0.6273	0.0000	OK
15 minute summer	30	11	39.106	0.402	630.0	0.7103	0.0000	OK
15 minute summer	31	11	38.162	0.322	688.4	0.5686	0.0000	OK
15 minute summer	32	11	36.487	0.452	712.2	0.7992	0.0000	OK
15 minute summer	33	11	35.759	0.409	798.5	0.7220	0.0000	OK
15 minute summer	34	12	35.068	0.619	877.8	1.0934	0.0000	SURCHARGED
30 minute summer	35	22	34.687	0.488	802.4	201.0672	0.0000	OK
30 minute summer	36	22	34.247	0.348	521.5	0.4976	0.0000	OK
15 minute summer	41	10	38.435	0.049	15.0	0.0704	0.0000	OK
15 minute summer	46	10	36.259	0.274	77.3	0.3914	0.0000	OK
15 minute summer	43	10	35.925	0.150	185.7	0.2140	0.0000	OK
720 minute winter	37	720	34.226	1.076	85.7	1150.4110	0.0000	SURCHARGED
720 minute winter	38	720	34.226	1.101	9.1	2.8019	0.0000	SURCHARGED
60 minute winter	14	1015	33.152	0.052	17.0	0.0740	0.0000	OK
60 minute winter	15	1015	31.858	0.058	17.0	0.0828	0.0000	OK
15 minute summer	47	10	44.340	0.144	120.9	0.2064	0.0000	OK
15 minute summer	48	11	42.280	0.397	170.8	0.5684	0.0000	SURCHARGED
15 minute summer	59	1	43.000	0.000	0.0	0.0000	0.0000	OK
15 minute summer	49	11	41.655	0.234	165.6	0.3342	0.0000	OK
15 minute winter	50	10	41.255	0.155	203.7	0.2224	0.0000	OK
15 minute summer	51	11	40.372	0.793	262.1	1.1347	0.0000	SURCHARGED
15 minute summer	52	11	40.284	1.182	309.9	1.6916	0.0000	SURCHARGED
15 minute summer	60	10	42.651	0.666	93.1	0.7532	0.0000	SURCHARGED
15 minute summer	61	10	42.523	0.673	152.2	0.7610	0.0000	SURCHARGED
15 minute summer	62	11	41.630	0.180	221.9	0.2571	0.0000	OK
15 minute summer	53	11	40.093	1.488	566.6	2.6300	0.0000	SURCHARGED
15 minute summer	54	11	39.534	1.084	687.5	1.9154	0.0000	SURCHARGED
15 minute summer	55	11	38.436	0.511	732.3	0.9021	0.0000	OK
Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	29	5.007	30	569.0	3.414	0.677	5.3498	
15 minute summer	30	5.008	31	630.9	3.980	0.750	4.5630	
15 minute summer	31	5.009	32	688.5	4.530	0.602	4.7745	
15 minute summer	32	5.010	33	714.5	3.334	0.771	8.1993	
15 minute summer	33	5.011	34	800.3	3.207	0.612	6.0849	
15 minute summer	34	5.012	35	869.5	4.184	1.206	5.6550	
30 minute summer	35	5.013	36	521.5	2.488	1.052	11.9623	
30 minute summer	36	5.014	37	523.0	3.654	0.606	8.6345	
15 minute summer	41	8.000	43	14.9	2.072	0.105	0.2805	
15 minute summer	46	9.000	43	75.8	1.462	1.135	2.9515	
15 minute summer	43	8.001	37	184.2	4.620	0.319	1.1300	
720 minute winter	37	5.015	38	9.1	0.155	0.032	9.2979	
720 minute winter	38	Hydro-Brake®	14	8.5				
60 minute winter	14	1.013	15	17.0	1.555	0.029	0.4191	
60 minute winter	15	1.014	16	17.0	1.074	0.036	0.7598	
15 minute summer	47	10.000	48	120.4	2.233	0.475	2.3295	
15 minute summer	48	10.001	49	165.6	2.464	0.975	1.0692	
15 minute summer	59	11.000	49	0.0	0.000	0.000	0.3778	
15 minute summer	49	10.002	50	166.3	2.978	0.531	0.7346	
15 minute winter	50	10.003	51	203.0	4.305	0.213	1.6635	
15 minute summer	51	10.004	52	253.9	2.238	0.357	4.8085	
15 minute summer	52	10.005	53	306.8	1.420	0.535	7.6795	
15 minute summer	60	12.000	61	91.3	1.297	0.771	0.8374	
15 minute summer	61	12.001	62	150.6	2.139	1.351	2.2430	
15 minute summer	62	12.002	53	220.0	2.850	0.432	3.4076	
15 minute summer	53	10.006	54	562.1	2.602	1.579	6.1813	
15 minute summer	54	10.007	55	684.9	3.171	1.325	8.4690	
15 minute summer	55	10.008	56	728.9	3.875	0.821	4.6906	

Results for 30 year +40% CC Critical Storm Duration. Lowest mass balance: 99.89%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	56	11	37.766	0.259	782.0	0.4579	0.0000	OK
15 minute summer	63	10	37.682	0.182	75.8	0.2601	0.0000	OK
15 minute summer	64	11	37.365	0.184	152.0	0.2633	0.0000	OK
15 minute summer	65	11	36.282	0.821	173.3	1.1748	0.0000	SURCHARGED
15 minute summer	66	11	34.770	0.410	954.8	0.7247	0.0000	OK
15 minute summer	67	12	33.851	0.475	965.6	0.8387	0.0000	OK
15 minute summer	57	11	32.983	0.398	994.9	1.0129	0.0000	OK
960 minute winter	58	945	31.955	1.005	83.0	1281.2490	0.0000	SURCHARGED
960 minute winter	69	930	31.963	1.113	28.0	2.8335	0.0000	SURCHARGED
1440 minute summer	16	660	30.884	0.084	22.2	0.1195	0.0000	OK
1440 minute summer	17	660	30.780	0.080	22.2	0.0000	0.0000	OK
15 minute summer	GP1	10	36.555	0.155	40.6	0.2215	0.0000	OK
15 minute summer	GP2	10	36.363	0.083	47.8	0.0939	0.0000	OK
15 minute summer	GP3	10	34.992	0.167	36.1	0.2393	0.0000	OK
30 minute summer	GPP	26	34.950	0.230	76.8	25.0766	0.0000	OK
Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	56	10.009	66	777.2	4.828	0.383	5.8765	
15 minute summer	63	13.000	64	75.3	1.728	0.606	1.1276	
15 minute summer	64	13.001	65	147.8	2.567	0.602	2.0599	
15 minute summer	65	13.002	66	169.7	2.410	1.220	3.5825	
15 minute summer	66	10.010	67	943.9	4.265	0.565	3.7243	
15 minute summer	67	10.011	57	968.3	4.865	0.591	2.2463	
15 minute summer	57	10.012	58	1002.9	6.654	0.489	10.6749	
960 minute winter	58	10.013	69	28.0	0.203	0.040	13.7960	
960 minute winter	69	Hydro-Brake®	16	5.2				
1440 minute summer	16	1.015	17	22.2	0.864	0.025	0.4879	3183.4
15 minute summer	GP1	14.000	GP2	40.3	1.910	0.688	0.2005	
15 minute summer	GP2	14.001	GPP	48.1	3.497	0.278	0.3179	
15 minute summer	GP3	15.000	GPP	35.6	1.187	0.806	0.4350	
30 minute summer	GPP	Pump	S21A	13.6				47.7

Results for 100 year Critical Storm Duration. Lowest mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	43.702	0.102	42.5	0.1453	0.0000	OK
15 minute summer	2	10	41.722	0.147	61.7	0.2097	0.0000	OK
15 minute summer	3	12	41.085	0.160	97.0	9.7182	0.0000	OK
15 minute summer	4	11	40.491	0.136	131.7	0.1947	0.0000	OK
15 minute summer	5	11	39.173	0.323	190.6	0.4624	0.0000	OK
15 minute summer	18	10	41.454	0.154	121.3	0.1741	0.0000	OK
15 minute summer	6	11	38.873	0.315	360.7	0.4501	0.0000	OK
15 minute summer	7	11	38.071	0.695	462.9	1.2285	0.0000	SURCHARGED
480 minute winter	8	472	38.055	0.763	55.6	1.3481	0.0000	SURCHARGED
15 minute summer	19	10	39.994	0.144	63.3	0.1632	0.0000	OK
15 minute summer	20	10	39.039	0.149	124.1	0.1682	0.0000	OK
15 minute summer	S21A	10	38.166	0.516	73.5	0.7377	0.0000	SURCHARGED
480 minute winter	21	472	38.055	0.640	16.3	11.7437	0.0000	SURCHARGED
480 minute winter	22	472	38.055	1.175	19.6	1.6813	0.0000	SURCHARGED
480 minute winter	9	472	38.055	1.455	85.7	769.8071	0.0000	SURCHARGED
480 minute winter	10	472	38.055	1.480	9.1	2.6150	0.0000	SURCHARGED
15 minute summer	11	12	36.567	0.042	8.6	0.0601	0.0000	OK
15 minute summer	12	294	35.442	0.042	8.6	0.0604	0.0000	OK
15 minute summer	13	12	34.246	0.046	8.6	0.0659	0.0000	OK
15 minute summer	23	10	46.509	0.512	161.0	0.5790	0.0000	SURCHARGED
15 minute summer	23A	10	45.763	0.203	187.8	0.2898	0.0000	OK
15 minute summer	39	10	45.989	0.079	33.7	0.1132	0.0000	OK
15 minute summer	24	10	44.320	0.275	287.0	0.3932	0.0000	OK
15 minute summer	25	10	43.351	0.316	324.5	0.4521	0.0000	OK
15 minute summer	26	11	42.971	0.261	330.3	0.3742	0.0000	OK
15 minute summer	40	10	42.169	0.143	66.0	0.2047	0.0000	OK
15 minute summer	27	11	41.556	0.256	432.8	0.3667	0.0000	OK
15 minute summer	28	11	40.418	0.428	445.2	0.7555	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.000	2	42.1	1.880	0.423	1.2455	
15 minute summer	2	1.001	3	60.6	2.349	0.661	0.4826	
15 minute summer	3	1.002	4	88.1	2.582	0.476	0.7124	
15 minute summer	4	1.003	5	131.4	3.233	0.429	0.8764	
15 minute summer	5	1.004	6	190.0	2.021	0.908	1.8568	
15 minute summer	18	2.000	6	121.1	3.347	0.496	1.9999	
15 minute summer	6	1.005	7	361.8	2.409	0.712	6.2291	
15 minute summer	7	1.006	8	464.0	2.342	1.829	5.4343	
480 minute winter	8	1.007	9	54.7	1.252	0.072	5.2271	
15 minute summer	19	3.000	20	62.8	2.432	0.674	0.7181	
15 minute summer	20	3.001	9	123.3	3.617	0.473	1.3841	
15 minute summer	S21A	4.000	21	72.8	1.832	1.878	0.5953	
480 minute winter	21	4.001	22	16.3	1.216	0.054	2.2822	
480 minute winter	22	4.002	9	19.1	0.527	0.086	6.0098	
480 minute winter	9	1.008	10	9.1	0.195	0.034	4.5361	
480 minute winter	10	Hydro-Brake®	11	8.6				
15 minute summer	11	1.010	12	8.6	1.208	0.018	0.3922	
15 minute summer	12	1.011	13	8.6	1.212	0.019	0.4705	
15 minute summer	13	1.012	14	8.6	1.068	0.022	0.7130	
15 minute summer	23	5.000	23A	158.1	2.392	1.097	1.5780	
15 minute summer	23A	5.001	24	186.8	3.734	0.700	1.2661	
15 minute summer	39	6.000	24	33.4	1.470	0.154	1.5323	
15 minute summer	24	5.002	25	284.4	3.537	0.742	2.0670	
15 minute summer	25	5.003	26	324.4	3.023	0.591	1.2135	
15 minute summer	26	5.004	27	332.0	3.518	0.582	4.2983	
15 minute summer	40	7.000	27	65.7	2.683	0.592	0.2712	
15 minute summer	27	5.005	28	434.3	3.839	0.520	2.1003	
15 minute summer	28	5.006	29	446.9	2.698	0.873	4.7992	

Results for 100 year Critical Storm Duration. Lowest mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	29	11	39.991	0.326	508.8	0.5765	0.0000	OK
15 minute summer	30	11	39.073	0.369	566.4	0.6519	0.0000	OK
15 minute summer	31	11	38.141	0.301	621.2	0.5316	0.0000	OK
15 minute summer	32	11	36.452	0.417	643.9	0.7370	0.0000	OK
15 minute summer	33	11	35.718	0.368	716.1	0.6508	0.0000	OK
15 minute summer	34	11	34.961	0.512	781.6	0.9044	0.0000	OK
30 minute summer	35	21	34.653	0.454	723.0	183.1852	0.0000	OK
30 minute summer	36	22	34.228	0.329	475.3	0.4702	0.0000	OK
15 minute summer	41	10	38.433	0.047	13.5	0.0668	0.0000	OK
15 minute summer	46	10	36.232	0.247	69.4	0.3533	0.0000	OK
15 minute summer	43	10	35.916	0.141	167.2	0.2017	0.0000	OK
600 minute winter	37	600	34.118	0.968	87.2	991.9377	0.0000	SURCHARGED
600 minute winter	38	600	34.118	0.993	9.2	2.5280	0.0000	SURCHARGED
60 minute winter	14	874	33.152	0.052	17.0	0.0740	0.0000	OK
60 minute winter	15	875	31.858	0.058	17.0	0.0828	0.0000	OK
15 minute summer	47	10	44.332	0.136	108.5	0.1940	0.0000	OK
15 minute summer	48	10	42.148	0.265	153.2	0.3798	0.0000	OK
15 minute summer	59	1	43.000	0.000	0.0	0.0000	0.0000	OK
15 minute summer	49	11	41.640	0.219	150.5	0.3128	0.0000	OK
15 minute summer	50	10	41.249	0.149	196.1	0.2129	0.0000	OK
15 minute summer	51	11	39.949	0.370	240.5	0.5290	0.0000	OK
15 minute summer	52	11	39.886	0.784	295.7	1.1218	0.0000	SURCHARGED
15 minute summer	60	10	42.460	0.475	83.5	0.5367	0.0000	SURCHARGED
15 minute summer	61	10	42.356	0.506	135.9	0.5726	0.0000	SURCHARGED
15 minute summer	62	10	41.610	0.160	197.5	0.2284	0.0000	OK
15 minute summer	53	11	39.746	1.141	498.9	2.0167	0.0000	SURCHARGED
15 minute summer	54	11	39.312	0.862	611.4	1.5231	0.0000	SURCHARGED
15 minute summer	55	11	38.385	0.460	652.7	0.8121	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	29	5.007	30	511.7	3.373	0.609	4.8730	
15 minute summer	30	5.008	31	569.7	3.919	0.678	4.1871	
15 minute summer	31	5.009	32	622.7	4.507	0.545	4.3373	
15 minute summer	32	5.010	33	640.7	3.304	0.692	7.4056	
15 minute summer	33	5.011	34	712.0	3.230	0.545	5.4961	
15 minute summer	34	5.012	35	778.2	4.161	1.079	5.1151	
30 minute summer	35	5.013	36	475.3	2.443	0.959	11.1463	
30 minute summer	36	5.014	37	477.5	3.637	0.554	7.8575	
15 minute summer	41	8.000	43	13.4	2.032	0.095	0.2426	
15 minute summer	46	9.000	43	68.1	1.433	1.021	2.7227	
15 minute summer	43	8.001	37	165.7	4.495	0.287	1.0449	
600 minute winter	37	5.015	38	9.2	0.153	0.032	9.2979	
600 minute winter	38	Hydro-Brake®	14	8.5				
60 minute winter	14	1.013	15	17.0	1.555	0.029	0.4191	
60 minute winter	15	1.014	16	17.0	1.073	0.036	0.7600	
15 minute summer	47	10.000	48	108.0	2.210	0.426	2.1708	
15 minute summer	48	10.001	49	150.5	2.493	0.886	0.9922	
15 minute summer	59	11.000	49	0.0	0.000	0.000	0.3330	
15 minute summer	49	10.002	50	150.1	2.930	0.479	0.7013	
15 minute summer	50	10.003	51	196.0	4.121	0.206	1.2472	
15 minute summer	51	10.004	52	243.1	2.327	0.342	4.2126	
15 minute summer	52	10.005	53	281.9	1.369	0.491	7.6795	
15 minute summer	60	12.000	61	81.3	1.185	0.687	0.8374	
15 minute summer	61	12.001	62	134.4	1.910	1.206	2.2249	
15 minute summer	62	12.002	53	196.6	2.910	0.386	3.2505	
15 minute summer	53	10.006	54	502.8	2.328	1.412	6.1813	
15 minute summer	54	10.007	55	610.2	2.825	1.180	8.4428	
15 minute summer	55	10.008	56	652.2	3.812	0.735	4.2631	

Results for 100 year Critical Storm Duration. Lowest mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	56	11	37.749	0.242	699.9	0.4279	0.0000	OK
15 minute summer	63	10	37.669	0.169	68.0	0.2422	0.0000	OK
15 minute summer	64	10	37.339	0.158	136.3	0.2257	0.0000	OK
15 minute summer	65	11	36.019	0.558	158.5	0.7985	0.0000	SURCHARGED
15 minute summer	66	11	34.743	0.383	867.4	0.6760	0.0000	OK
15 minute summer	67	11	33.820	0.444	892.1	0.7852	0.0000	OK
15 minute summer	57	11	32.970	0.385	913.9	0.9789	0.0000	OK
960 minute winter	58	945	31.841	0.891	76.7	1102.0070	0.0000	SURCHARGED
720 minute winter	69	690	31.841	0.991	27.1	2.5224	0.0000	SURCHARGED
30 minute summer	16	544	30.884	0.084	22.2	0.1195	0.0000	OK
30 minute summer	17	547	30.780	0.080	22.2	0.0000	0.0000	OK
15 minute summer	GP1	10	36.544	0.144	36.4	0.2059	0.0000	OK
15 minute summer	GP2	10	36.361	0.081	42.9	0.0916	0.0000	OK
15 minute summer	GP3	10	34.979	0.154	32.4	0.2205	0.0000	OK
30 minute winter	GPP	26	34.921	0.201	56.0	21.9378	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	56	10.009	66	708.1	4.780	0.349	5.4074	
15 minute summer	63	13.000	64	67.6	1.722	0.544	1.0018	
15 minute summer	64	13.001	65	135.6	2.515	0.553	1.9216	
15 minute summer	65	13.002	66	152.2	2.258	1.095	3.5739	
15 minute summer	66	10.010	67	870.1	4.223	0.521	3.4695	
15 minute summer	67	10.011	57	884.9	4.793	0.540	2.1005	
15 minute summer	57	10.012	58	898.5	6.592	0.438	9.7863	
960 minute winter	58	10.013	69	25.2	0.207	0.036	13.7960	
720 minute winter	69	Hydro-Brake®	16	5.2				
30 minute summer	16	1.015	17	22.2	0.864	0.025	0.4879	1478.1
15 minute summer	GP1	14.000	GP2	36.2	1.863	0.617	0.1873	
15 minute summer	GP2	14.001	GPP	43.0	3.412	0.248	0.2725	
15 minute summer	GP3	15.000	GPP	32.0	1.163	0.724	0.3987	
30 minute winter	GPP	Pump	S21A	13.6				43.2

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.84%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	43.727	0.127	61.5	0.1811	0.0000	OK
15 minute summer	2	11	41.789	0.214	89.5	0.3058	0.0000	OK
15 minute summer	3	12	41.152	0.227	139.3	14.1626	0.0000	OK
15 minute summer	4	11	40.889	0.534	183.6	0.7643	0.0000	SURCHARGED
15 minute summer	5	11	40.290	1.440	258.7	2.0610	0.0000	SURCHARGED
15 minute summer	18	11	41.503	0.203	175.8	0.2293	0.0000	OK
15 minute summer	6	11	39.833	1.275	499.2	1.8238	0.0000	SURCHARGED
600 minute winter	7	585	38.530	1.154	64.1	2.0398	0.0000	SURCHARGED
600 minute winter	8	600	38.530	1.238	66.0	2.1882	0.0000	SURCHARGED
15 minute summer	19	10	40.054	0.204	91.8	0.2302	0.0000	OK
15 minute summer	20	10	39.078	0.188	179.3	0.2129	0.0000	OK
600 minute winter	S21A	585	38.531	0.881	17.7	1.2601	0.0000	SURCHARGED
600 minute winter	21	585	38.530	1.115	19.4	12.4240	0.0000	FLOOD RISK
600 minute winter	22	600	38.530	1.650	23.2	2.3616	0.0000	SURCHARGED
600 minute winter	9	600	38.530	1.930	105.0	1206.5520	0.0000	SURCHARGED
600 minute winter	10	600	38.530	1.955	9.0	3.4553	0.0000	SURCHARGED
600 minute winter	11	600	36.568	0.043	8.8	0.0610	0.0000	OK
600 minute winter	12	600	35.443	0.043	8.8	0.0613	0.0000	OK
600 minute winter	13	600	34.247	0.047	8.8	0.0667	0.0000	OK
15 minute summer	23	11	47.998	2.001	233.6	2.2635	0.0000	FLOOD RISK
15 minute summer	23A	11	46.651	1.091	263.8	1.5614	0.0000	FLOOD RISK
15 minute summer	39	10	46.006	0.096	48.9	0.1371	0.0000	OK
15 minute summer	24	11	44.831	0.786	401.7	1.1250	0.0000	SURCHARGED
15 minute summer	25	11	43.503	0.468	451.8	0.6701	0.0000	SURCHARGED
15 minute summer	26	11	43.035	0.325	459.5	0.4654	0.0000	OK
15 minute summer	40	10	42.225	0.199	95.7	0.2844	0.0000	OK
15 minute summer	27	11	41.700	0.400	604.9	0.5723	0.0000	OK
15 minute summer	28	11	40.807	0.817	620.2	1.4443	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.000	2	61.1	1.997	0.614	1.7098	
15 minute summer	2	1.001	3	87.6	2.462	0.956	0.6716	
15 minute summer	3	1.002	4	131.0	2.722	0.707	1.3157	
15 minute summer	4	1.003	5	186.9	3.230	0.610	1.3353	
15 minute summer	5	1.004	6	265.0	2.403	1.266	2.1887	
15 minute summer	18	2.000	6	171.8	3.384	0.704	3.2864	
15 minute summer	6	1.005	7	495.8	3.129	0.976	7.1319	
600 minute winter	7	1.006	8	62.8	1.231	0.247	6.5583	
600 minute winter	8	1.007	9	65.7	1.319	0.086	5.2271	
15 minute summer	19	3.000	20	90.4	2.544	0.971	0.9915	
15 minute summer	20	3.001	9	178.3	3.931	0.684	1.8772	
600 minute winter	S21A	4.000	21	17.5	0.914	0.451	0.6036	
600 minute winter	21	4.001	22	19.2	1.099	0.064	2.2822	
600 minute winter	22	4.002	9	23.0	0.555	0.104	6.0098	
600 minute winter	9	1.008	10	9.0	0.191	0.033	4.5361	
600 minute winter	10	Hydro-Brake®	11	8.8				
600 minute winter	11	1.010	12	8.8	1.165	0.019	0.4013	
600 minute winter	12	1.011	13	8.8	1.089	0.019	0.4807	
600 minute winter	13	1.012	14	8.8	0.967	0.023	0.7237	
15 minute summer	23	5.000	23A	222.8	3.165	1.546	1.8364	
15 minute summer	23A	5.001	24	262.3	3.725	0.983	1.7755	
15 minute summer	39	6.000	24	48.5	1.445	0.224	2.1280	
15 minute summer	24	5.002	25	395.7	3.657	1.032	2.8261	
15 minute summer	25	5.003	26	451.1	3.171	0.822	1.5925	
15 minute summer	26	5.004	27	458.9	3.703	0.805	6.1848	
15 minute summer	40	7.000	27	95.1	2.810	0.856	0.3788	
15 minute summer	27	5.005	28	604.3	3.941	0.723	2.8596	
15 minute summer	28	5.006	29	619.8	2.873	1.210	6.2667	

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.84%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	29	12	40.174	0.509	709.4	0.8986	0.0000	OK
15 minute summer	30	11	39.356	0.652	775.3	1.1529	0.0000	SURCHARGED
15 minute summer	31	11	38.246	0.406	840.9	0.7170	0.0000	OK
15 minute summer	32	12	36.956	0.921	857.4	1.6273	0.0000	SURCHARGED
15 minute summer	33	12	36.140	0.790	952.0	1.3951	0.0000	SURCHARGED
15 minute summer	34	12	35.381	0.932	1050.1	1.6460	0.0000	SURCHARGED
30 minute summer	35	22	34.809	0.610	1000.9	268.6583	0.0000	SURCHARGED
720 minute winter	36	720	34.417	0.518	90.4	0.7416	0.0000	OK
15 minute summer	41	10	38.442	0.056	19.6	0.0805	0.0000	OK
15 minute summer	46	11	36.523	0.538	100.6	0.7694	0.0000	SURCHARGED
15 minute summer	43	10	35.947	0.172	237.8	0.2468	0.0000	OK
720 minute winter	37	705	34.418	1.268	109.3	1469.5370	0.0000	SURCHARGED
720 minute winter	38	705	34.418	1.293	9.1	3.2900	0.0000	SURCHARGED
720 minute winter	14	705	33.152	0.052	17.2	0.0744	0.0000	OK
720 minute winter	15	705	31.858	0.058	17.2	0.0833	0.0000	OK
15 minute summer	47	10	44.369	0.173	157.4	0.2471	0.0000	OK
15 minute summer	48	12	42.734	0.851	221.4	1.2183	0.0000	SURCHARGED
15 minute summer	59	1	43.000	0.000	0.0	0.0000	0.0000	OK
15 minute summer	49	12	42.020	0.599	214.4	0.8568	0.0000	SURCHARGED
15 minute summer	50	12	41.792	0.692	279.1	0.9905	0.0000	FLOOD RISK
15 minute summer	51	11	41.616	2.037	323.9	2.9153	0.0000	FLOOD RISK
15 minute summer	52	11	41.487	2.385	377.2	3.4135	0.0000	FLOOD RISK
15 minute summer	60	11	43.365	1.380	121.2	1.5606	0.0000	SURCHARGED
15 minute summer	61	11	43.178	1.328	197.4	1.5015	0.0000	SURCHARGED
15 minute summer	62	11	42.098	0.648	287.8	0.9276	0.0000	SURCHARGED
15 minute summer	53	11	41.185	2.580	694.6	4.5589	0.0000	FLOOD RISK
15 minute summer	54	11	40.348	1.898	853.0	3.3542	0.0000	SURCHARGED
15 minute summer	55	11	38.724	0.799	914.1	1.4125	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	29	5.007	30	695.9	3.485	0.828	6.9130	
15 minute summer	30	5.008	31	766.3	4.134	0.911	5.7035	
15 minute summer	31	5.009	32	825.2	4.531	0.722	6.1893	
15 minute summer	32	5.010	33	857.1	3.352	0.925	10.6837	
15 minute summer	33	5.011	34	949.3	3.371	0.726	7.0780	
15 minute summer	34	5.012	35	1047.5	4.155	1.453	6.2961	
30 minute summer	35	5.013	36	602.6	2.514	1.216	13.5801	
720 minute winter	36	5.014	37	90.4	1.271	0.105	12.9212	
15 minute summer	41	8.000	43	19.5	2.007	0.138	0.3885	
15 minute summer	46	9.000	43	97.4	1.561	1.459	3.2350	
15 minute summer	43	8.001	37	235.8	4.926	0.408	1.4712	
720 minute winter	37	5.015	38	9.1	0.156	0.032	9.2979	
720 minute winter	38	Hydro-Brake®	14	8.5				
720 minute winter	14	1.013	15	17.2	1.560	0.029	0.4224	
720 minute winter	15	1.014	16	17.2	1.079	0.037	0.7641	
15 minute summer	47	10.000	48	155.9	2.474	0.615	2.5195	
15 minute summer	48	10.001	49	214.4	3.045	1.263	1.1609	
15 minute summer	59	11.000	49	0.0	0.000	0.000	0.7044	
15 minute summer	49	10.002	50	211.7	2.963	0.676	1.4508	
15 minute summer	50	10.003	51	270.5	4.044	0.284	2.6522	
15 minute summer	51	10.004	52	338.5	2.340	0.476	4.8085	
15 minute summer	52	10.005	53	394.5	1.826	0.688	7.6795	
15 minute summer	60	12.000	61	118.3	1.680	0.999	0.8374	
15 minute summer	61	12.001	62	195.0	2.769	1.748	2.2726	
15 minute summer	62	12.002	53	274.8	2.919	0.540	4.6274	
15 minute summer	53	10.006	54	701.2	3.246	1.969	6.1813	
15 minute summer	54	10.007	55	852.5	3.946	1.649	8.5555	
15 minute summer	55	10.008	56	908.8	3.938	1.024	5.2691	

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.84%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	56	11	37.799	0.292	977.8	0.5164	0.0000	OK
15 minute summer	63	11	38.333	0.833	98.7	1.1921	0.0000	SURCHARGED
15 minute summer	64	11	38.118	0.937	185.9	1.3407	0.0000	SURCHARGED
15 minute summer	65	12	37.011	1.550	211.8	2.2176	0.0000	FLOOD RISK
15 minute summer	66	12	35.022	0.662	1196.2	1.1692	0.0000	SURCHARGED
15 minute summer	67	11	34.085	0.709	1207.8	1.2523	0.0000	SURCHARGED
15 minute summer	57	11	33.048	0.463	1253.2	1.1787	0.0000	OK
960 minute winter	58	960	32.200	1.250	101.5	1695.8350	0.0000	SURCHARGED
960 minute winter	69	945	32.203	1.353	27.5	3.4430	0.0000	FLOOD RISK
720 minute winter	16	720	30.884	0.084	22.3	0.1198	0.0000	OK
720 minute winter	17	720	30.780	0.080	22.3	0.0000	0.0000	OK
15 minute summer	GP1	10	36.588	0.188	52.8	0.2691	0.0000	OK
15 minute summer	GP2	9	36.377	0.097	62.2	0.1095	0.0000	OK
60 minute summer	GP3	46	35.084	0.259	33.0	0.3706	0.0000	SURCHARGED
60 minute summer	GPP	46	35.082	0.362	76.8	39.4107	0.0000	OK
Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	56	10.009	66	977.4	4.835	0.482	7.5380	
15 minute summer	63	13.000	64	91.1	1.725	0.733	1.7978	
15 minute summer	64	13.001	65	180.1	2.649	0.734	2.5070	
15 minute summer	65	13.002	66	208.5	2.962	1.500	3.6191	
15 minute summer	66	10.010	67	1181.6	4.296	0.707	4.7339	
15 minute summer	67	10.011	57	1211.2	4.916	0.740	2.6557	
15 minute summer	57	10.012	58	1260.0	6.711	0.614	13.9446	
960 minute winter	58	10.013	69	27.5	0.188	0.039	13.7960	
960 minute winter	69	Hydro-Brake®	16	5.2				
720 minute winter	16	1.015	17	22.3	0.865	0.025	0.4896	2591.4
15 minute summer	GP1	14.000	GP2	52.4	2.011	0.894	0.2412	
15 minute summer	GP2	14.001	GPP	62.5	3.730	0.361	0.3775	
60 minute summer	GP3	15.000	GPP	32.8	1.147	0.743	0.5766	
60 minute summer	GPP	Pump	S21A	13.6				80.5

APPENDIX C – PHASE 2 DRAINAGE LAYOUT
