

Project Name:	Mayfield – Poulton	Job Number:	1076-36
Review Date:	29/06/2026	Reviewed By:	Chris Kendrick
Document No:	1076-36 Mayfield Poulton – Surface Water Drainage file note	Revision No:	P01

Surface Water Drainage File Note

1.0 Introduction

This file note has been prepared to support Manchester City Council planning application reference 145635/FO/2026 for the Mayfield Phase 1A office development known as the Poulton. In particular, this note is in response to the Lead Local flood Authority comments received from the planning office on 10th June 2026.

The surface water drainage strategy remains in line with the wider Mayfield planning application reference 132255/JO/2021 and the wider drainage strategy prepared by Buro Happold submitted under the 2021 application. This included an assessment of the wider catchment areas and how this contributed to the Mayfield Park drainage system and outfalls to the River Medlock, which was installed over 2021-22. (the park opened in September 2022).

As part of the Mayfield Park works and to facilitate future development of the Poulton building, an attenuation tank was installed under part of the Mayfield Park completed footpath. The tank has a capacity of 67m³ and the outfall chamber includes a flow control device to restrict flows to 7.5l/s.

The discharge rates from Phase 1A of the development were pre-determined under the previous application and completed works at Mayfield Park and the Poulton Drainage design is dictated by those agreed discharge rates.

It should be noted that the Republic building which is current being built (application ref: 137349/JO/2023) includes surface and foul water drainage, which also serves part of the external areas of the Poulton. The surface water drainage for the Republic building is largely complete and includes a below ground cellular attenuation tank and will eventually include raingardens and permeable paving all contributing to the total attenuation volume.

The overall footprint of the Phase 1A area, which includes the Republic, MSCP and Poulton buildings as well as the associated public realm, remains consistent between this application and previous applications. Therefore, the overall catchment area and discharge rates remain unchanged and are largely in line with the Wider development application 132255/JO/2021.

2.0 LLFA Comments and Responses

The Manchester City Council LLFA comments are set out below along with designer's response to each of the points raised.

2.1a LLFA Comment:

The application proposes no alterations to Condition 10 (Surface Water Drainage Strategy) or 11 (Drainage Verification).

Condition 10 and 11 were discharged under CDN/20/0691 & CDN/22/0627, and it is understood that the drainage network for Plot O has already been built-out.

2.1b CIVIC response:

This is partially correct. The drainage system to the North of the Poulton was installed under the Mayfield Park works, including attenuation tank completed in 2022. The majority of the Poulton Roof drains to this tank. The drainage between the Republic and Poulton has recently been completed and whilst the Republic is still under construction the below ground drainage has largely been installed. The surface water system is a shared network to serve the Poulton, the Republic and MSCP as well as the public realm space. The surface water discharges to the outfalls to the River Medlock, outfalls, catchments and discharge rates all in line with the Mayfield Masterplan drainage strategy (application 132255/JO/2021).

2.2a LLFA Comment:

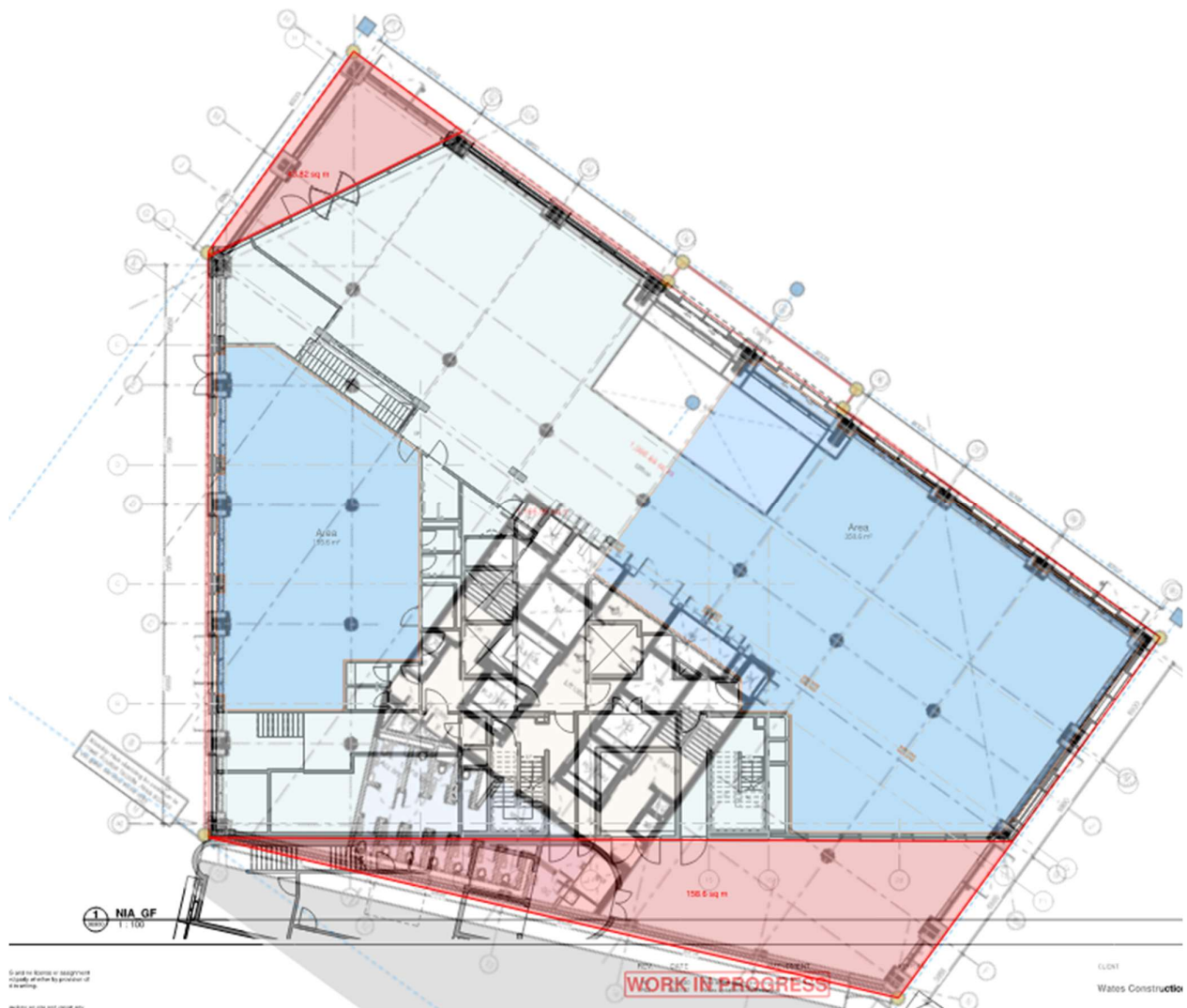
However, the application now proposes an increase to 11 storeys, change in footprint, entrance alterations, and basement rationalisation. This includes an increase in footprint from 12,081m² to 14,170m².

2.2b CIVIC Response:

The areas noted are a factor of 10 out. The actual Poulton footprint has increased from the order of c. 1200m² to c. 1400m². The increase in building footprint (c. 200m²) is partly due to an increase on the southern boundary and interface with the proposed MSCP. In contrast the MSCP footprint has reduced (mainly stair case block) and the extent of external paving has reduced, which offsets the increase in the Poulton roof area. The external areas surrounding the Poulton are predominantly hardstanding and positively drained so were always taken into account within the catchment assessment and accounted for within the surface water drainage strategy and calculations.

See below overlay comparison of the building footprints. The northern wedge hatched red is approximately 44m² extra roof but a reduction in drained public realm and all contributes to the same part of the surface water network.

The wedge to the south east of 158m² is additional Poulton footprint but replaces an area that was formally drained hardstanding and so no increase in surface water run-off.



2.3a LLFA Comment:

We would recommend the LPA seek confirmation that the proposed amendments (to massing and footprint) do not compromise the drainage system (i.e. due to increased surface water contributing area, through foundation loading, easements, levels, other aspects of design etc).

This should be sought before determining the application to ensure viability: we recommend this assurance is sought in writing and supported by:

- A detailed drainage layout which uses the proposed masterplan;
- Updated hydraulic calculations, to support any proposed increases in surface water contributing area.

Important Informative: These comments consider Plot O / The Poulton only. Any amended submissions for other plots are not approved by this assessment. Where drainage is networked with influence across other plots, is essential that the new proposal does not compromise other

2.3b CIVIC Response:

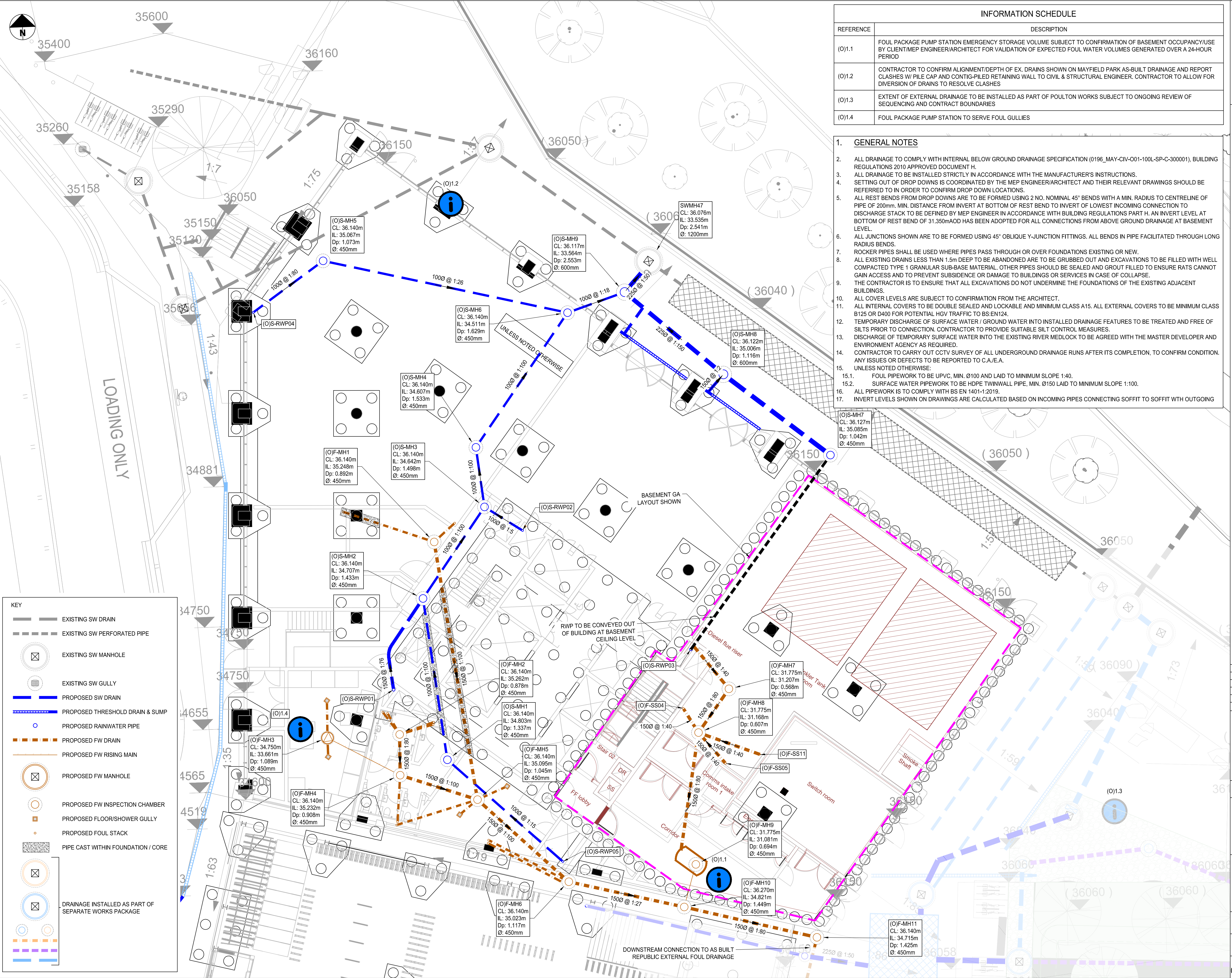
A detailed drainage layout was included with the application (Appended to this file note). In addition the hydraulic calculations are appended which included the contributing roof area from the Poulton into the existing 67m³ attenuation tank and flow control.

3.0 Summary

The overall Phase 1A boundary remains the same and there is no increase in surface water contributing area. The outfalls to the River Medlock are installed and therefore pose an existing restriction on the flow rates achievable from the development.

Therefore, the Phase 1A sitewide drainage network is not impacted by the redistribution of contributing areas attributed to the Poulton and so no impact overall within Phase 1A resulting in no increase in surface water run-off.

FILE LOCATION PATH: P:\PROJECTS\HOT11076-27 MAYFIELD, MANCHESTER - PLOT M004 BIM\CIVIL\DRAWINGS\0198_MAY-CIV-001-ZZZZ-DR-C-300001_Poulton Proposed Internal Below Ground Drainage GADWG



INFORMATION SCHEDULE	
REFERENCE	DESCRIPTION
(O)1.1	FOUL PACKAGE PUMP STATION EMERGENCY STORAGE VOLUME SUBJECT TO CONFIRMATION OF BASEMENT OCCUPANCY/USE BY CLIENT/MEP ENGINEER/ARCHITECT FOR VALIDATION OF EXPECTED FOUL WATER VOLUMES GENERATED OVER A 24-HOUR PERIOD
(O)1.2	CONTRACTOR TO CONFIRM ALIGNMENT/DEPTH OF EX. DRAINS SHOWN ON MAYFIELD PARK AS-BUILT DRAINAGE AND REPORT CLASHES W/ PILE CAP AND CONTIG-PILED RETAINING WALL TO CIVIL & STRUCTURAL ENGINEER. CONTRACTOR TO ALLOW FOR DIVERSION OF DRAINS TO RESOLVE CLASHES
(O)1.3	EXTENT OF EXTERNAL DRAINAGE TO BE INSTALLED AS PART OF POULTON WORKS SUBJECT TO ONGOING REVIEW OF SEQUENCING AND CONTRACT BOUNDARIES
(O)1.4	FOUL PACKAGE PUMP STATION TO SERVE FOUL GULLIES

1. **GENERAL NOTES**
- ALL DRAINAGE TO COMPLY WITH INTERNAL BELOW GROUND DRAINAGE SPECIFICATION (0196_MAY-CIV-001-100L-SP-C-300001), BUILDING REGULATIONS 2010 APPROVED DOCUMENT H.
 - ALL DRAINAGE TO BE INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
 - SETTING OUT OF DROP DOWNS IS COORDINATED BY THE MEP ENGINEER/ARCHITECT AND THEIR RELEVANT DRAWINGS SHOULD BE REFERRED TO IN ORDER TO CONFIRM DROP DOWN LOCATIONS.
 - ALL REST BENDS FROM DROP DOWNS ARE TO BE FORMED USING 2 NO. NOMINAL 45° BENDS WITH A MIN. RADIUS TO CENTRELINE OF PIPE OF 200mm. MIN. DISTANCE FROM INVERT AT BOTTOM OF REST BEND TO INVERT OF LOWEST INCOMING CONNECTION TO DISCHARGE STACK TO BE DEFINED BY MEP ENGINEER IN ACCORDANCE WITH BUILDING REGULATIONS PART H. AN INVERT LEVEL AT BOTTOM OF REST BEND OF 31.350m AOD HAS BEEN ADOPTED FOR ALL CONNECTIONS FROM ABOVE GROUND DRAINAGE AT BASEMENT LEVEL.
 - ALL JUNCTIONS SHOWN ARE TO BE FORMED USING 45° OBLIQUE Y-JUNCTION FITTINGS. ALL BENDS IN PIPE FACILITATED THROUGH LONG RADIUS BENDS.
 - ROCKER PIPES SHALL BE USED WHERE PIPES PASS THROUGH OR OVER FOUNDATIONS EXISTING OR NEW.
 - ALL EXISTING DRAINS LESS THAN 1.5m DEEP TO BE ABANDONED ARE TO BE GRUBBED OUT AND EXCAVATIONS TO BE FILLED WITH WELL COMPACTED TYPE 1 GRANULAR SUB-BASE MATERIAL. OTHER PIPES SHOULD BE SEALED AND GROUT FILLED TO ENSURE RATS CANNOT GAIN ACCESS AND TO PREVENT SUBSIDENCE OR DAMAGE TO BUILDINGS OR SERVICES IN CASE OF COLLAPSE.
 - THE CONTRACTOR IS TO ENSURE THAT ALL EXCAVATIONS DO NOT UNDERMINE THE FOUNDATIONS OF THE EXISTING ADJACENT BUILDINGS.
 - ALL COVER LEVELS ARE SUBJECT TO CONFIRMATION FROM THE ARCHITECT.
 - ALL INTERNAL COVERS TO BE DOUBLE SEALED AND LOCKABLE AND MINIMUM CLASS A15. ALL EXTERNAL COVERS TO BE MINIMUM CLASS B125 OR D400 FOR POTENTIAL HGV TRAFFIC TO BS EN124.
 - TEMPORARY DISCHARGE OF SURFACE WATER / GROUND WATER INTO INSTALLED DRAINAGE FEATURES TO BE TREATED AND FREE OF SILTS PRIOR TO CONNECTION. CONTRACTOR TO PROVIDE SUITABLE SILT CONTROL MEASURES.
 - DISCHARGE OF TEMPORARY SURFACE WATER INTO THE EXISTING RIVER MEDLOCK TO BE AGREED WITH THE MASTER DEVELOPER AND ENVIRONMENT AGENCY AS REQUIRED.
 - CONTRACTOR TO CARRY OUT CCTV SURVEY OF ALL UNDERGROUND DRAINAGE RUNS AFTER ITS COMPLETION, TO CONFIRM CONDITION. ANY ISSUES OR DEFECTS TO BE REPORTED TO C.A./E.A.
 - UNLESS NOTED OTHERWISE:
 - FOUL PIPEWORK TO BE UPVC, MIN. Ø100 AND LAID TO MINIMUM SLOPE 1:40.
 - SURFACE WATER PIPEWORK TO BE HDPE TWINWALL PIPE, MIN. Ø150 LAID TO MINIMUM SLOPE 1:100.
 - ALL PIPEWORK IS TO COMPLY WITH BS EN 1401-1:2019.
 - INVERT LEVELS SHOWN ON DRAWINGS ARE CALCULATED BASED ON INCOMING PIPES CONNECTING SOFFIT TO SOFFIT WITH OUTGOING

- STANDARD NOTES
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
 - THIS DRAWING SHOULD NOT BE SCALED.
 - ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
 - ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.
- © CIVIC ENGINEERS LIMITED

- NOTES
1. THIS DRAWING IS BASED ON THE FOLLOWING INFORMATION:
- OS BASE PROVIDED BY BUROHAPPOLD, RECEIVED 10.05.2021.
 - SITE-WIDE LANDSCAPE PLAN (0198_MAY-SEW-SW1-ZZ-DR-L-001100, REV. P04) BY STUDIO EGRET WEST, RECEIVED 27.08.2024.
 - POULTON BASEMENT LEVEL 1 GA (0196_MAY-BA-001-99-DR-A-20-099B, REV. P05) BY BENNETTS ASSOCIATES, RECEIVED 01.05.2025.
 - POULTON BASEMENT PUBLIC HEALTH LAYOUT (0196_MAY-HRL-001-099B-DR-PH-503001, REV. T02) BY HOARE LEA, RECEIVED 29.04.2025.
 - POULTON FOUNDATION GA (0198_MAY-CIV-001-098B-DR-S-500002, REV. P04), BY CIVIC ENGINEERS.
2. DRAWING TO BE READ IN CONJUNCTION WITH:
- CHAMBER SCHEDULE (0198_MAY-CIV-001-XXXX-DR-C-350001)
 - DRAINAGE DETAILS (0198_MAY-CIV-001-XXXX-DR-C-310001) AND
 - BELOW GROUND DRAINAGE SPECIFICATION (0198_MAY-CIV-001-XXXX-SP-C-300001)

10.04.26	P05	BASEMENT DRAINAGE ADDED / PUMP ADDED	CD	CK
31.03.26	P04	P1A STAGE 3 REDESIGN	ZIH	CK
08.07.25	P03	STAGE 4A UPDATES	CD	CK
02.05.25	P02	STAGE 4A REVISIT ISSUE	HCM	CK
26.01.24	P01	STAGE 4A ISSUE	HCM	CK
DATE	REV	DESCRIPTION	DRAWN	CHKD

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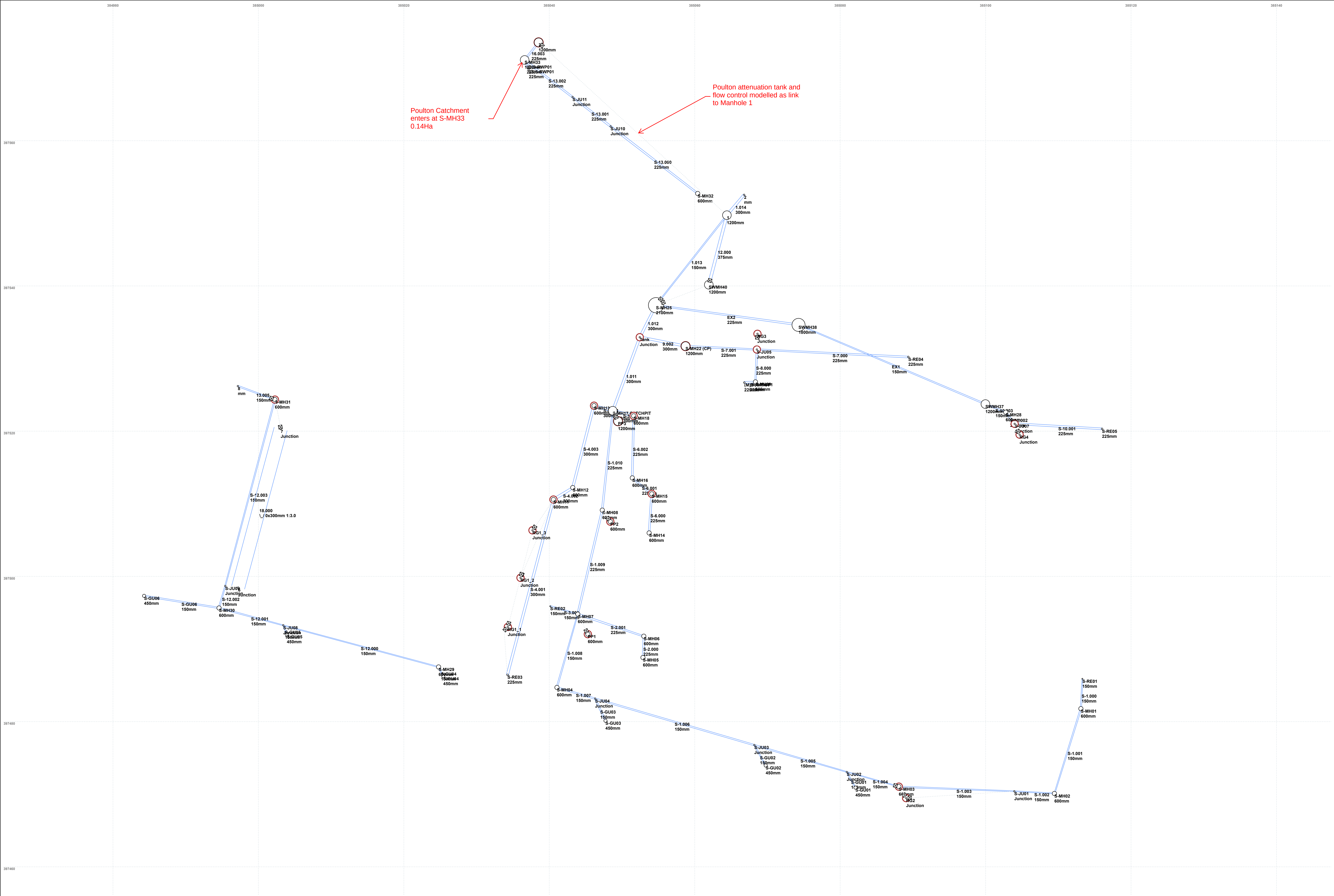
PROJECT

MAYFIELD PLOT O
THE POULTON
MANCHESTER

TITLE

PROPOSED INTERNAL BELOW GROUND
DRAINAGE
GENERAL ARRANGEMENT

DRAWING STATUS		STATUS CODE	
INFORMATION		-	
CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN
1076-36	1:100	JAN 24	HCM
DRAWING No.	REV		
0198_MAY-CIV-001-ZZZZ-DR-C-300001	P05		



Rainfall Methodology	FSR	M5-60 (mm)	17.000	Maximum Time of Concentration (mins)	30.00	Minimum Backdrop Height (m)	0.200
Return Period (years)	30	Ratio-R	0.400	Maximum Rainfall (mm/hr)	50.0	Preferred Cover Depth (m)	1.200
Additional Flow (%)	0	CV	1.000	Minimum Velocity (m/s)	1.00	Include Intermediate Ground	✓
FSR Region	England and Wales	Time of Entry (mins)	5.00	Connection Type	Level Soffits	Enforce best practice design rules	x

Name	Area (ha)	T of E (mins)	Cover Level (m)	Node Type	Manhole Type	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S-RE01		5.00	39.485	Manhole	CE - Channel Drain Sump	150	385113.303	397485.892	1.361
S-MH01			39.549	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385113.102	397481.783	1.466
S-MH02			39.542	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385109.461	397470.098	1.582
S-JU01			38.068	Junction			385103.945	397470.407	0.163
S-MH03			39.163	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385088.070	397471.042	1.417
S-GU01		5.00	37.842	Manhole	CE - Road Gulley with 150 Surround	450	385082.106	397470.909	0.385
S-JU02			37.631	Junction			385080.911	397473.062	0.163
S-GU02		5.00	38.325	Manhole	CE - Road Gulley with 150 Surround	450	385069.761	397473.951	1.355
S-JU03			37.091	Junction			385068.192	397476.776	0.163
S-GU03		5.00	37.541	Manhole	CE - Road Gulley with 150 Surround	450	385047.727	397480.117	1.355
S-JU04			36.160	Junction			385046.306	397483.168	0.163
S-MH04	0.044	5.00	37.251	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385041.052	397484.703	1.478
S-MH05	0.044	5.00	37.084	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385052.879	397488.824	1.577
S-MH06			37.047	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385052.996	397491.762	1.550
S-RE02		5.00	37.053	Manhole	CE - Channel Drain Sump	150	385040.131	397495.883	1.540
S-MH07			37.058	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385043.922	397494.801	1.659
S-MH08			36.575	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385047.290	397509.121	1.597
S-RE03	0.174	5.00	37.130	Manhole	CE - Channel Drain Sump	225	385034.244	397486.454	2.289
S-MH11			36.100	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385040.574	397510.583	1.490
S-MH12	0.009	5.00	36.100	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385043.226	397512.228	1.507
S-MH13			36.100	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385046.152	397523.513	1.573
S-MH17 CATCHPIT			36.079	Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround	1200	385048.725	397522.813	1.570
S-RE04		5.00	36.130	Manhole	CE - Channel Drain Sump	225	385089.374	397530.223	1.444
(M)S-RWP01		5.00	36.065	Manhole	CE - Channel Drain Sump	225	385066.819	397526.693	0.840
S-MH20			36.061	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385068.349	397526.785	0.846
S-JU05	0.042	5.00	36.030	Junction			385068.546	397531.244	1.487
S-MH22 (CP)			36.029	Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround	1200	385058.739	397531.709	1.598
Tank			36.060	Junction			385052.441	397532.939	2.179
S-RE05		5.00	36.099	Manhole	CE - Channel Drain Sump	225	385116.015	397520.318	1.366
S-JU07			36.099	Junction			385103.995	397521.012	1.487
S-MH28			36.082	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385102.767	397522.607	1.490
SWMH37	0.106	5.00	36.043	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	1200	385099.973	397523.731	1.592
SWMH38			36.073	Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround	1800	385074.275	397534.635	1.895
S-MH25			36.089	Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround	2100	385054.679	397537.348	2.233
SWMH40		5.00	36.045	Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround	1200	385061.935	397540.166	3.659
1			36.080	Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround	1200	385064.424	397549.746	4.080
2			36.080	Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround		385066.790	397552.553	4.095
S-GU04		5.00	36.972	Manhole	CE - Road Gulley with 150 Surround	450	385025.425	397486.247	0.440
S-MH29			36.655						

Name	Area (ha)	T of E (mins)	Cover Level (m)	Node Type	Manhole Type	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S-MH32		5.00	36.100	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385060.407	397552.733	0.963
S-JU10			35.290	Junction			385048.433	397561.985	0.244
S-JU11			35.250	Junction			385043.202	397566.027	0.244
(O)S-RWP01		5.00	35.347	Manhole	CE - Channel Drain Sump	225	385037.203	397569.823	0.382
S-MH33	0.140	5.00	36.138	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	1200	385036.609	397571.121	1.182
3	0.027		36.138	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	1200	385038.532	397573.542	2.609
S-MH14	0.055	5.00	36.136	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385053.731	397505.980	1.136
S-MH15			36.108	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385054.090	397511.362	1.458
S-MH16			36.170	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385051.417	397513.561	1.543
S-MH18			36.063	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385051.601	397522.106	1.540
PP2	0.017		36.575	Manhole		600	385048.392	397507.541	0.465
PP3	0.007		36.079	Manhole		1200	385049.454	397521.374	0.459
RG1_1			37.100	Junction			385034.301	397493.038	0.250
RG1_2			36.900	Junction			385036.042	397499.804	0.250
RG1_3			36.700	Junction			385037.689	397506.345	0.250
RG2	0.040		39.150	Junction			385089.071	397469.464	0.200
RG3	0.084		36.010	Junction			385068.626	397533.408	0.300
RG4	0.028		36.100	Junction			385104.673	397519.528	0.200
PP1	0.022		37.058	Manhole		600	385045.301	397492.043	0.418
6	0.023	5.00	35.547	Junction			384997.207	397498.462	0.300
7			34.860	Junction			385003.069	397520.323	0.300
8			34.810	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround		384997.173	397526.207	0.914

Name	Area (ha)	T of E (mins)	Cover Level (m)	Node Type	Manhole Type	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S-MH32		5.00	36.100	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385060.407	397552.733	0.963
S-JU10			35.290	Junction			385048.433	397561.985	0.244
S-JU11			35.250	Junction			385043.202	397566.027	0.244
(O)S-RWP01		5.00	35.347	Manhole	CE - Channel Drain Sump	225	385037.203	397569.823	0.382
S-MH33	0.140	5.00	36.138	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	1200	385036.609	397571.121	1.182
3	0.027		36.138	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	1200	385038.532	397573.542	2.609
S-MH14	0.055	5.00	36.136	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385053.731	397505.980	1.136
S-MH15			36.108	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385054.090	397511.362	1.458
S-MH16			36.170	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385051.417	397513.561	1.543
S-MH18			36.063	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	600	385051.601	397522.106	1.540
PP2	0.017		36.575	Manhole		600	385048.392	397507.541	0.465
PP3	0.007		36.079	Manhole		1200	385049.454	397521.374	0.459
RG1_1			37.100	Junction			385034.301	397493.038	0.250
RG1_2			36.900	Junction			385036.042	397499.804	0.250
RG1_3			36.700	Junction			385037.689	397506.345	0.250
RG2	0.040		39.150	Junction			385089.071	397469.464	0.200
RG3	0.084		36.010	Junction			385068.626	397533.408	0.300
RG4	0.028		36.100	Junction			385104.673	397519.528	0.200
PP1	0.022		37.058	Manhole		600	385045.301	397492.043	0.418
6	0.023	5.00	35.547	Junction			384997.207	397498.462	0.300
7			34.860	Junction			385003.069	397520.323	0.300
8			34.810	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround		384997.173	397526.207	0.914

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
S-1.000	S-RE01	S-MH01	4.114	0.600	38.124	38.083	0.041	100.3	150	5.07	50.0
S-1.001	S-MH01	S-MH02	12.239	0.600	38.083	37.960	0.123	99.5	150	5.27	50.0
S-1.002	S-MH02	S-JU01	5.525	0.600	37.960	37.905	0.055	100.5	150	5.36	50.0
S-1.003	S-JU01	S-MH03	15.888	0.600	37.905	37.746	0.159	99.9	150	5.63	50.0
S-1.004	S-MH03	S-JU02	7.439	0.600	37.746	37.468	0.278	26.8	150	5.69	50.0
S-GU01	S-GU01	S-JU02	2.463	0.600	37.457	37.468	-0.011	-223.9	150	5.04	50.0
S-1.005	S-JU02	S-JU03	13.250	0.600	37.468	36.928	0.540	24.5	150	5.80	50.0
S-GU02	S-GU02	S-JU03	3.232	0.600	36.970	36.928	0.042	77.0	150	5.05	50.0
S-1.006	S-JU03	S-JU04	22.801	0.600	36.928	35.997	0.931	24.5	150	5.98	50.0
S-GU03	S-GU03	S-JU04	3.366	0.600	36.186	35.997	0.189	17.8	150	5.02	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
S-1.000	1.003	17.7	0.0	1.211	1.316	0.000	0.0
S-1.001	1.007	17.8	0.0	1.316	1.432	0.000	0.0
S-1.002	1.002	17.7	0.0	1.432	0.013	0.000	0.0
S-1.003	1.005	17.8	0.0	0.013	1.267	0.000	0.0
S-1.004	1.954	34.5	0.0	1.267	0.013	0.000	0.0
S-GU01	1.000	17.7	0.0	0.235	0.013	0.000	0.0
S-1.005	2.041	36.1	0.0	0.013	0.013	0.000	0.0
S-GU02	1.147	20.3	0.0	1.205	0.013	0.000	0.0
S-1.006	2.043	36.1	0.0	0.013	0.013	0.000	0.0
S-GU03	2.398	42.4	0.0	1.205	0.013	0.000	0.0

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
S-1.007	S-JU04	S-MH04	5.474	0.600	35.997	35.773	0.224	24.4	150	6.03	50.0
S-1.008	S-MH04	S-MH07	10.497	0.600	35.773	35.474	0.299	35.1	150	6.13	50.0
S-2.000	S-MH05	S-MH06	2.941	0.600	35.507	35.497	0.010	294.1	225	5.06	50.0
S-2.001	S-MH06	S-MH07	9.569	0.600	35.497	35.399	0.098	97.6	225	5.19	50.0
S-3.000	S-RE02	S-MH07	3.942	0.600	35.513	35.474	0.039	101.1	150	5.07	50.0
S-1.009	S-MH07	S-MH08	14.711	0.600	35.399	34.978	0.421	34.9	225	6.24	50.0
S-1.010	S-MH08	S-MH17 CATCHPIT	13.767	0.600	34.978	34.584	0.394	34.9	225	6.35	50.0
S-4.001	S-RE03	S-MH11	24.945	0.600	34.841	34.610	0.231	108.0	300	5.27	50.0
S-4.002	S-MH11	S-MH12	3.121	0.600	34.610	34.593	0.017	183.6	300	5.32	50.0
S-4.003	S-MH12	S-MH13	11.657	0.600	34.593	34.527	0.066	176.6	300	5.48	50.0
S-4.004	S-MH13	S-MH17 CATCHPIT	2.666	0.600	34.527	34.509	0.018	148.1	300	5.52	50.0
1.011	S-MH17 CATCHPIT	Tank	10.786	0.600	34.509	33.881	0.628	17.2	300	6.39	50.0
S-7.000	S-RE04	S-JU05	20.853	0.600	34.686	34.569	0.117	178.2	225	5.36	50.0
(M)S-RWP1	(M)S-RWP01	S-MH20	1.533	0.600	35.225	35.216	0.009	170.3	225	5.03	50.0
S-8.000	S-MH20	S-JU05	4.464	0.600	35.215	34.543	0.672	6.6	225	5.04	50.0
S-7.001	S-JU05	S-MH22 (CP)	9.818	0.600	34.569	34.506	0.063	155.8	225	5.51	50.0
9.002	S-MH22 (CP)	Tank	6.417	0.600	34.431	34.134	0.297	21.6	300	5.54	50.0
1.012	Tank	S-MH25	4.944	0.600	33.881	33.856	0.025	200.0	300	6.47	50.0
S-10.001	S-RE05	S-JU07	12.040	0.600	34.733	34.612	0.121	99.5	225	5.15	50.0
S-10.002	S-JU07	S-MH28	2.013	0.600	34.612	34.592	0.020	100.7	225	5.18	50.0
S-10.003	S-MH28	SWMH37	3.012	0.600	34.592	34.451	0.141	21.4	150	5.20	50.0
EX1	SWMH37	SWMH38	27.916	0.600	34.509	34.253	0.256	109.0	150	5.69	50.0
EX2	SWMH38	S-MH25	19.783	0.600	34.178	34.100	0.078	253.6	225	6.09	50.0
1.013	S-MH25	1	15.769	0.600	34.100	32.000	2.100	7.5	150	6.54	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
S-1.007	2.045	36.1	0.0	0.013	1.328	0.000	0.0
S-1.008	1.704	30.1	8.0	1.328	1.434	0.044	0.0
S-2.000	0.757	30.1	8.0	1.352	1.325	0.044	0.0
S-2.001	1.323	52.6	8.0	1.325	1.434	0.044	0.0
S-3.000	0.999	17.7	0.0	1.390	1.434	0.000	0.0
S-1.009	2.220	88.3	16.0	1.434	1.372	0.088	0.0
S-1.010	2.220	88.3	16.0	1.372	1.270	0.088	0.0
S-4.001	1.512	106.9	31.5	1.989	1.190	0.174	0.0
S-4.002	1.157	81.8	31.5	1.190	1.207	0.174	0.0
S-4.003	1.180	83.4	33.2	1.207	1.273	0.184	0.0
S-4.004	1.289	91.1	33.2	1.273	1.270	0.184	0.0
1.011	3.811	269.4	59.1	1.270	1.879	0.327	0.0
S-7.000	0.976	38.8	0.0	1.219	1.236	0.000	0.0
(M)S-RWP1	0.999	39.7	0.0	0.615	0.620	0.000	0.0
S-8.000	5.109	203.1	0.0	0.621	1.262	0.000	0.0
S-7.001	1.045	41.5	7.6	1.236	1.298	0.042	0.0
9.002	3.397	240.1	7.6	1.298	1.626	0.042	0.0
1.012	1.108	78.3	66.7	1.879	1.933	0.369	0.0
S-10.001	1.310	52.1	0.0	1.141	1.262	0.000	0.0
S-10.002	1.303	51.8	0.0	1.262	1.265	0.000	0.0
S-10.003	2.188	38.7	0.0	1.340	1.442	0.000	0.0
EX1	0.962	17.0	19.2	1.384	1.670	0.106	0.0
EX2	0.816	32.5	19.2	1.670	1.764	0.106	0.0
1.013	3.700	65.4	85.9	1.839	3.930	0.475	0.0

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
12.000	SWMH40	1	9.898	0.600	32.386	32.000	0.386	25.6	375	5.05	50.0
1.014	1	2	3.671	0.600	32.000	31.985	0.015	242.0	300	6.60	50.0
S-GU04	S-GU04	S-MH29	1.432	0.600	36.532	34.505	2.027	0.7	150	5.00	50.0
S-12.000	S-MH29	S-JU08	22.125	0.600	34.560	34.339	0.221	100.1	150	5.37	50.0
S-GU05	S-GU05	S-JU08	1.355	0.600	35.694	34.306	1.388	1.0	150	5.00	50.0
S-12.001	S-JU08	S-MH30	9.142	0.600	34.339	34.247	0.092	99.4	150	5.52	50.0
S-GU06	S-GU06	S-MH30	10.436	0.600	35.057	34.247	0.810	12.9	150	5.06	50.0
S-12.002	S-MH30	S-JU09	3.150	0.600	34.247	34.216	0.031	101.6	150	5.57	50.0
S-12.003	S-JU09	S-MH31	26.562	0.600	34.216	33.950	0.266	99.9	150	6.01	50.0
S-13.000	S-MH32	S-JU10	15.132	0.600	35.137	35.046	0.091	166.3	225	5.25	50.0
S-13.001	S-JU10	S-JU11	6.611	0.600	35.046	35.006	0.040	165.3	225	5.36	50.0
S-13.002	S-JU11	S-MH33	8.331	0.600	35.006	34.956	0.050	166.6	225	5.50	50.0
(O)S-RWP01	(O)S-RWP01	S-MH33	1.428	0.600	34.965	34.956	0.009	158.7	225	5.02	50.0
16.003	S-MH33	3	3.092	0.600	34.956	33.529	1.427	2.2	225	5.50	50.0
S-6.000	S-MH14	S-MH15	5.394	0.600	35.000	34.650	0.350	15.4	225	5.03	50.0
S-6.001	S-MH15	S-MH16	3.461	0.600	34.650	34.627	0.023	150.5	225	5.08	50.0
S-6.002	S-MH16	S-MH18	8.547	0.600	34.627	34.598	0.029	294.7	225	5.27	50.0
S-1.011	S-MH18	S-MH17 CATCHPIT	2.961	0.600	34.523	34.509	0.014	211.5	300	5.32	50.0
18.000	6	7	22.633	0.150	35.247	34.560	0.687	32.9		5.38	50.0
13.005	S-MH31	8	5.428	0.600	33.950	33.896	0.054	100.0	150	6.10	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
12.000	3.590	396.5	0.0	3.284	3.705	0.000	0.0
1.014	1.006	71.1	85.9	3.780	3.795	0.475	0.0
S-GU04	12.092	213.7	0.0	0.290	2.000	0.000	0.0
S-12.000	1.004	17.7	0.0	1.945	1.702	0.000	0.0
S-GU05	10.285	181.7	0.0	0.347	1.735	0.000	0.0
S-12.001	1.008	17.8	0.0	1.702	1.183	0.000	0.0
S-GU06	2.821	49.9	0.0	0.316	1.183	0.000	0.0
S-12.002	0.996	17.6	7.9	1.183	1.181	0.044	0.0
S-12.003	1.005	17.8	7.9	1.181	0.710	0.044	0.0
S-13.000	1.011	40.2	0.0	0.738	0.019	0.000	0.0
S-13.001	1.014	40.3	0.0	0.019	0.019	0.000	0.0
S-13.002	1.010	40.2	0.0	0.019	0.957	0.000	0.0
(O)S-RWP01	1.035	41.2	0.0	0.157	0.957	0.000	0.0
16.003	8.956	356.1	25.2	0.957	2.384	0.140	0.0
S-6.000	3.350	133.2	10.0	0.911	1.233	0.055	0.0
S-6.001	1.063	42.3	10.0	1.233	1.318	0.055	0.0
S-6.002	0.756	30.1	10.0	1.318	1.240	0.055	0.0
S-1.011	1.077	76.1	10.0	1.240	1.270	0.055	0.0
18.000	1.000		4.2	0.000	0.000	0.023	0.0
13.005	1.005	17.8	7.9	0.710	0.764	0.044	0.0

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)
S-1.000	4.114	100.3	150	CE - Perforated PVC Pipe	39.485	38.124	1.211	39.549	38.083	1.316
S-1.001	12.239	99.5	150	PVC Pipe SI	39.549	38.083	1.316	39.542	37.960	1.432
S-1.002	5.525	100.5	150	PVC Pipe SI	39.542	37.960	1.432	38.068	37.905	0.013
S-1.003	15.888	99.9	150	CE - Perforated PVC Pipe	38.068	37.905	0.013	39.163	37.746	1.267
S-1.004	7.439	26.8	150	PVC Pipe SI	39.163	37.746	1.267	37.631	37.468	0.013
S-GU01	2.463	-223.9	150	PVC Pipe SI	37.842	37.457	0.235	37.631	37.468	0.013
S-1.005	13.250	24.5	150	PVC Pipe SI	37.631	37.468	0.013	37.091	36.928	0.013
S-GU02	3.232	77.0	150	PVC Pipe SI	38.325	36.970	1.205	37.091	36.928	0.013
S-1.006	22.801	24.5	150	PVC Pipe SI	37.091	36.928	0.013	36.160	35.997	0.013
S-GU03	3.366	17.8	150	PVC Pipe SI	37.541	36.186	1.205	36.160	35.997	0.013
S-1.007	5.474	24.4	150	PVC Pipe SI	36.160	35.997	0.013	37.251	35.773	1.328
S-1.008	10.497	35.1	150	CE - Perforated PVC Pipe	37.251	35.773	1.328	37.058	35.474	1.434
S-2.000	2.941	294.1	225	PVC Pipe SI	37.084	35.507	1.352	37.047	35.497	1.325
S-2.001	9.569	97.6	225	CE - Perforated PVC Pipe	37.047	35.497	1.325	37.058	35.399	1.434
S-3.000	3.942	101.1	150	CE - Perforated PVC Pipe	37.053	35.513	1.390	37.058	35.474	1.434
S-1.009	14.711	34.9	225	CE - Perforated PVC Pipe	37.058	35.399	1.434	36.575	34.978	1.372
S-1.010	13.767	34.9	225	CE - Perforated PVC Pipe	36.575	34.978	1.372	36.079	34.584	1.270
S-4.001	24.945	108.0	300	CE - Perforated PVC Pipe	37.130	34.841	1.989	36.100	34.610	1.190
S-4.002	3.121	183.6	300	PVC Pipe SI	36.100	34.610	1.190	36.100	34.593	1.207
S-4.003	11.657	176.6	300	CE - Perforated PVC Pipe	36.100	34.593	1.207	36.100	34.527	1.273
S-4.004	2.666	148.1	300	PVC Pipe SI	36.100	34.527	1.273	36.079	34.509	1.270
1.011	10.786	17.2	300	PVC Pipe SI	36.079	34.509	1.270	36.060	33.881	1.879
S-7.000	20.853	178.2	225	CE - Perforated PVC Pipe	36.130	34.686	1.219	36.030	34.569	1.236
(M)S-RWP1	1.533	170.3	225	PVC Pipe SI	36.065	35.225	0.615	36.061	35.216	0.620
S-8.000	4.464	6.6	225	PVC Pipe SI	36.061	35.215	0.621	36.030	34.543	1.262

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Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
S-7.001	S-JU05		Junction		S-MH22 (CP)	1200	Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround
9.002	S-MH22 (CP)	1200	Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround	Tank		Junction	
1.012	Tank		Junction		S-MH25	2100	Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround
S-10.001	S-RE05	225	Manhole	CE - Channel Drain Sump	S-JU07		Junction	
S-10.002	S-JU07		Junction		S-MH28	600	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround
S-10.003	S-MH28	600	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	SWMH37	1200	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround
EX1	SWMH37	1200	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	SWMH38	1800	Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround
EX2	SWMH38	1800	Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround	S-MH25	2100	Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround
1.013	S-MH25	2100	Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround	1	1200	Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround
12.000	SWMH40	1200	Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround	1	1200	Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround
1.014	1	1200	Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround	2		Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround
S-GU04	S-GU04	450	Manhole	CE - Road Gully with 150 Surround	S-MH29	600	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround
S-12.000	S-MH29	600	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	S-JU08		Junction	
S-GU05	S-GU05	450	Manhole	CE - Road Gully with 150 Surround	S-JU08		Junction	
S-12.001	S-JU08		Junction		S-MH30	600	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround
S-GU06	S-GU06	450	Manhole	CE - Road Gully with 150 Surround	S-MH30	600	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround
S-12.002	S-MH30	600	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	S-JU09		Junction	
S-12.003	S-JU09		Junction		S-MH31	600	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround
S-13.000	S-MH32	600	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	S-JU10		Junction	
S-13.001	S-JU10		Junction		S-JU11		Junction	
S-13.002	S-JU11		Junction		S-MH33	1200	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround
(O)S-RWP01	(O)S-RWP01	225	Manhole	CE - Channel Drain Sump	S-MH33	1200	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround
16.003	S-MH33	1200	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	3	1200	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround
S-6.000	S-MH14	600	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	S-MH15	600	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround

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)
S-6.001	3.461	150.5	225	PVC Pipe SI	36.108	34.650	1.233	36.170	34.627	1.318
S-6.002	8.547	294.7	225	CE - Perforated PVC Pipe	36.170	34.627	1.318	36.063	34.598	1.240
S-1.011	2.961	211.5	300	PVC Pipe SI	36.063	34.523	1.240	36.079	34.509	1.270
18.000	22.633	32.9		Swale	35.547	35.247	0.000	34.860	34.560	0.000
13.005	5.428	100.0	150	CE - Perforated PVC Pipe	34.810	33.950	0.710	34.810	33.896	0.764

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
S-6.001	S-MH15	600	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	S-MH16	600	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround
S-6.002	S-MH16	600	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	S-MH18	600	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround
S-1.011	S-MH18	600	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	S-MH17 CATCHPIT	1200	Manhole	CE - Circular MH Rect. Frame Generic with 150 Surround
18.000	6		Junction		7		Junction	
13.005	S-MH31	600	Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround	8		Manhole	CE - Circular Inspection Chamber Generic with Circular Frame and 150 surround

Simulation Settings

Rainfall Methodology	FSR	Ratio-R	0.400	Skip Steady State	x	Check Discharge Rate(s)	✓	Check Discharge Volume	x
Rainfall Events	Singular	Summer CV	1.000	Drain Down Time (mins)	1440	1 year (l/s)	3.8		
FSR Region	England and Wales	Winter CV	1.000	Additional Storage (m³/ha)	0.0	30 year (l/s)	7.4		
M5-60 (mm)	17.000	Analysis Speed	Normal	Starting Level (m)		100 year (l/s)	9.0		

Storm Durations

15	30	60	120	180	240	360	480	600	720	960	1440
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Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
30	0	0	0	100	30	0	0	100	40	0	0

Pre-development Discharge Rate

Site Makeup	Greenfield	SAAR (mm)	879	Region	10	Growth Factor 100 year	2.08	Q 1 year (l/s)	3.8
Greenfield Method	IH124	Soil Index	4	Growth Factor 1 year	0.87	Betterment (%)	0	Q 30 year (l/s)	7.4
Positively Drained Area (ha)	0.687	SPR	0.47	Growth Factor 30 year	1.70	QBar	4.3	Q 100 year (l/s)	9.0

Node S-MH03 Online Orifice Control

Flap Valve	x	Downstream Link	S-1.004	Replaces Downstream Link	✓	Invert Level (m)	37.746	Diameter (m)	0.030	Discharge Coefficient	0.600
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Node S-MH25 Online Hydro-Brake® Control

Flap Valve	x	Invert Level (m)	34.100	Objective	(HE) Minimise upstream storage	Min Outlet Diameter (m)	0.100
Downstream Link	1.013	Design Depth (m)	1.890	Sump Available	✓	Min Node Diameter (mm)	1200
Replaces Downstream Link	✓	Design Flow (l/s)	4.3	Product Number	CTL-SHE-0086-4300-1890-4300		

Node S-MH25 Offline Orifice Control

Flap Valve	x	Loop to Node	SWMH40	Invert Level (m)	35.284	Diameter (m)	0.300	Discharge Coefficient	0.600
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Node SWMH40 Online Orifice Control

Flap Valve	x	Invert Level (m)	32.386	Design Flow (l/s)	58.0	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Depth (m)	3.650	Diameter (m)	0.121		

Causeway

Civic Engineers Ltd

File: 1076-36 - SW Drainage - all Phase 1A.pfd
Network: 1076-27 - Proposed SW
Chris Kendrick
29/06/2026

Page 37
Mayfield Phase 1a
Proposed SW Drainage
Permanent Model Results

Depth
(m)

Area
(m²)

Inf Area
(m²)

0.00019.80.0

Depth
(m)

Area
(m²)

Inf Area
(m²)

0.25030.10.0

Node S-MH11 Link Surround Storage Structure

Base Inf Coefficient (m/hr)

0.00000

Safety Factor

2.0

Invert Level (m)

34.610

Link

S-4.001

Diameter (mm)

3730

Side Inf Coefficient (m/hr)

0.00000

Porosity

1.00

Time to half empty (mins)

836

Surround Shape

Drainage Layer

Node PP3 Carpark Storage Structure

Base Inf Coefficient (m/hr)

0.00000

Safety Factor

2.0

Invert Level (m)

35.620

Width (m)

4.250

Slope (1:X)

29.0

Inf Depth (m)

Side Inf Coefficient (m/hr)

0.00000

Porosity

0.30

Time to half empty (mins)

16

Length (m)

14.400

Depth (m)

0.300

Node RG2 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)

0.00000

Side Inf Coefficient (m/hr)

0.00000

Safety Factor

2.0

Porosity

1.00

Invert Level (m)

38.950

Time to half empty (mins)

Depth
(m)

Area
(m²)

Inf Area
(m²)

0.00035.70.0

Depth
(m)

Area
(m²)

Inf Area
(m²)

0.20058.60.0

Node S-MH03 Link Surround Storage Structure

Base Inf Coefficient (m/hr)

0.00000

Safety Factor

2.0

Invert Level (m)

37.746

Link

S-1.003

Diameter (mm)

1690

Side Inf Coefficient (m/hr)

0.00000

Porosity

0.30

Time to half empty (mins)

220

Surround Shape

Drainage Layer

Node RG4 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)

0.00000

Side Inf Coefficient (m/hr)

0.00000

Safety Factor

2.0

Porosity

1.00

Invert Level (m)

35.900

Time to half empty (mins)

Depth
(m)

Area
(m²)

Inf Area
(m²)

0.00043.30.0

Depth
(m)

Area
(m²)

Inf Area
(m²)

0.20066.40.0

Node S-MH15 Link Surround Storage Structure

Base Inf Coefficient (m/hr)

0.00000

Safety Factor

2.0

Invert Level (m)

34.650

Link

S-6.000

Diameter (mm)

675

Side Inf Coefficient (m/hr)

0.00000

Porosity

0.30

Time to half empty (mins)

528

Surround Shape

Filter Drain

Node S-MH18 Link Surround Storage Structure

Base Inf Coefficient (m/hr)

0.00000

Safety Factor

2.0

Invert Level (m)

34.598

Link

S-6.002

Diameter (mm)

675

Side Inf Coefficient (m/hr)

0.00000

Porosity

0.30

Time to half empty (mins)

776

Surround Shape

Filter Drain

Node S-MH31 Link Surround Storage Structure

Base Inf Coefficient (m/hr)

0.00000

Safety Factor

2.0

Invert Level (m)

33.950

Link

S-12.003

Diameter (mm)

1970

Side Inf Coefficient (m/hr)

0.00000

Porosity

0.30

Time to half empty (mins)

56

Surround Shape

Drainage Layer

Node PP1 Carpark Storage Structure

Base Inf Coefficient (m/hr)

0.00000

Safety Factor

2.0

Invert Level (m)

36.640

Width (m)

12.000

Slope (1:X)

20.0

Inf Depth (m)

Side Inf Coefficient (m/hr)

0.00000

Porosity

0.30

Time to half empty (mins)

18

Length (m)

11.500

Depth (m)

0.300

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Node RG3 Depth/Area Storage Structure

Base Inf Coefficient (m/hr) 0.00000 | Side Inf Coefficient (m/hr) 0.00000 | Safety Factor 2.0 | Porosity 1.00 | Invert Level (m) 35.710 | Time to half empty (mins)

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	71.1	0.0	0.300	126.0	0.0

Node 3 Depth/Area Storage Structure

Base Inf Coefficient (m/hr) 0.00000 | Side Inf Coefficient (m/hr) 0.00000 | Safety Factor 2.0 | Porosity 1.00 | Invert Level (m) 33.529 | Time to half empty (mins) 67

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	55.8	0.0	1.200	55.8	0.0	1.201	0.0	0.0

Node S-JU07 Link Surround Storage Structure

Base Inf Coefficient (m/hr) 0.00000 | Safety Factor 2.0 | Invert Level (m) 34.612 | Link S-10.001 | Diameter (mm) 2865
Side Inf Coefficient (m/hr) 0.00000 | Porosity 0.30 | Time to half empty (mins) 776 | Surround Shape Drainage Layer

Node S-MH13 Link Surround Storage Structure

Base Inf Coefficient (m/hr) 0.00000 | Safety Factor 2.0 | Invert Level (m) 34.527 | Link S-4.003 | Diameter (mm) 675
Side Inf Coefficient (m/hr) 0.00000 | Porosity 0.30 | Time to half empty (mins) 676 | Surround Shape Filter Drain

Node S-JU05 Link Surround Storage Structure

Base Inf Coefficient (m/hr) 0.00000 | Safety Factor 2.0 | Invert Level (m) 34.569 | Link S-7.000 | Diameter (mm) 8600
Side Inf Coefficient (m/hr) 0.00000 | Porosity 0.30 | Time to half empty (mins) 872 | Surround Shape Drainage Layer

Node S-MH22 (CP) Link Surround Storage Structure

Base Inf Coefficient (m/hr) 0.00000 | Safety Factor 2.0 | Invert Level (m) 34.506 | Link S-7.001 | Diameter (mm) 8600
Side Inf Coefficient (m/hr) 0.00000 | Porosity 0.30 | Time to half empty (mins) 896 | Surround Shape Drainage Layer

<div>Causeway</div>	Civic Engineers Ltd	File: 1076-36 - SW Drainage - all Phase 1A.pfd Network: 1076-27 - Proposed SW Chris Kendrick 29/06/2026	Page 39 Mayfield Phase 1a Proposed SW Drainage Permanent Model Results																																																																																																																																																																																																																																										
Results for 30 year Critical Storm Duration. Lowest mass balance: 99.72%																																																																																																																																																																																																																																													
<table><tr><th>Node Event</th><th>US Node</th><th>Peak (mins)</th><th>Level (m)</th><th>Depth (m)</th><th>Inflow (l/s)</th><th>Node Vol (m³)</th><th>Flood (m³)</th><th>Status</th></tr><tr><td>180 minute summer</td><td>S-RE01</td><td>136</td><td>38.173</td><td>0.049</td><td>0.1</td><td>0.0009</td><td>0.0000</td><td>OK</td></tr><tr><td>180 minute summer</td><td>S-MH01</td><td>136</td><td>38.173</td><td>0.090</td><td>0.3</td><td>0.0254</td><td>0.0000</td><td>OK</td></tr><tr><td>180 minute summer</td><td>S-MH02</td><td>136</td><td>38.173</td><td>0.213</td><td>0.5</td><td>0.0602</td><td>0.0000</td><td>SURCHARGED</td></tr><tr><td>60 minute summer</td><td>S-JU01</td><td>50</td><td>38.068</td><td>0.163</td><td>3.4</td><td>0.0000</td><td>0.0000</td><td>FLOOD RISK</td></tr><tr><td>180 minute summer</td><td>S-MH03</td><td>136</td><td>38.173</td><td>0.427</td><td>3.1</td><td>2.6599</td><td>0.0000</td><td>SURCHARGED</td></tr><tr><td>180 minute summer</td><td>S-GU01</td><td>136</td><td>37.487</td><td>0.030</td><td>0.0</td><td>0.0047</td><td>0.0000</td><td>OK</td></tr><tr><td>180 minute summer</td><td>S-JU02</td><td>136</td><td>37.487</td><td>0.019</td><td>1.2</td><td>0.0000</td><td>0.0000</td><td>OK</td></tr><tr><td>15 minute summer</td><td>S-GU02</td><td>1</td><td>36.970</td><td>0.000</td><td>0.0</td><td>0.0000</td><td>0.0000</td><td>OK</td></tr><tr><td>180 minute summer</td><td>S-JU03</td><td>136</td><td>36.947</td><td>0.019</td><td>1.2</td><td>0.0000</td><td>0.0000</td><td>OK</td></tr><tr><td>15 minute summer</td><td>S-GU03</td><td>1</td><td>36.186</td><td>0.000</td><td>0.0</td><td>0.0000</td><td>0.0000</td><td>OK</td></tr><tr><td>180 minute summer</td><td>S-JU04</td><td>136</td><td>36.016</td><td>0.019</td><td>1.2</td><td>0.0000</td><td>0.0000</td><td>OK</td></tr><tr><td>15 minute summer</td><td>S-MH04</td><td>10</td><td>35.858</td><td>0.085</td><td>16.3</td><td>0.0241</td><td>0.0000</td><td>OK</td></tr><tr><td>15 minute summer</td><td>S-MH05</td><td>10</td><td>35.622</td><td>0.115</td><td>16.3</td><td>0.0325</td><td>0.0000</td><td>OK</td></tr><tr><td>15 minute summer</td><td>S-MH06</td><td>10</td><td>35.592</td><td>0.095</td><td>16.2</td><td>0.0268</td><td>0.0000</td><td>OK</td></tr><tr><td>15 minute summer</td><td>S-RE02</td><td>1</td><td>35.513</td><td>0.000</td><td>0.0</td><td>0.0000</td><td>0.0000</td><td>OK</td></tr><tr><td>15 minute summer</td><td>S-MH07</td><td>10</td><td>35.505</td><td>0.106</td><td>36.0</td><td>0.0300</td><td>0.0000</td><td>OK</td></tr><tr><td>360 minute winter</td><td>S-MH08</td><td>264</td><td>35.355</td><td>0.377</td><td>6.8</td><td>0.1066</td><td>0.0000</td><td>SURCHARGED</td></tr><tr><td>360 minute winter</td><td>S-RE03</td><td>264</td><td>35.354</td><td>0.513</td><td>8.5</td><td>0.0205</td><td>0.0000</td><td>SURCHARGED</td></tr><tr><td>360 minute winter</td><td>S-MH11</td><td>264</td><td>35.354</td><td>0.744</td><td>11.3</td><td>46.6470</td><td>0.0000</td><td>SURCHARGED</td></tr><tr><td>360 minute winter</td><td>S-MH12</td><td>264</td><td>35.354</td><td>0.761</td><td>19.3</td><td>0.2154</td><td>0.0000</td><td>SURCHARGED</td></tr><tr><td>360 minute winter</td><td>S-MH13</td><td>264</td><td>35.354</td><td>0.827</td><td>20.0</td><td>1.8604</td><td>0.0000</td><td>SURCHARGED</td></tr><tr><td>360 minute winter</td><td>S-MH17 CATCHPIT</td><td>264</td><td>35.354</td><td>0.845</td><td>21.9</td><td>0.9556</td><td>0.0000</td><td>SURCHARGED</td></tr><tr><td>360 minute winter</td><td>S-RE04</td><td>264</td><td>35.354</td><td>0.668</td><td>0.3</td><td>0.0267</td><td>0.0000</td><td>SURCHARGED</td></tr><tr><td>360 minute winter</td><td>(M)S-RWP01</td><td>264</td><td>35.354</td><td>0.129</td><td>0.1</td><td>0.0051</td><td>0.0000</td><td>OK</td></tr><tr><td>360 minute winter</td><td>S-MH20</td><td>264</td><td>35.354</td><td>0.139</td><td>0.2</td><td>0.0393</td><td>0.0000</td><td>OK</td></tr></table>				Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status	180 minute summer	S-RE01	136	38.173	0.049	0.1	0.0009	0.0000	OK	180 minute summer	S-MH01	136	38.173	0.090	0.3	0.0254	0.0000	OK	180 minute summer	S-MH02	136	38.173	0.213	0.5	0.0602	0.0000	SURCHARGED	60 minute summer	S-JU01	50	38.068	0.163	3.4	0.0000	0.0000	FLOOD RISK	180 minute summer	S-MH03	136	38.173	0.427	3.1	2.6599	0.0000	SURCHARGED	180 minute summer	S-GU01	136	37.487	0.030	0.0	0.0047	0.0000	OK	180 minute summer	S-JU02	136	37.487	0.019	1.2	0.0000	0.0000	OK	15 minute summer	S-GU02	1	36.970	0.000	0.0	0.0000	0.0000	OK	180 minute summer	S-JU03	136	36.947	0.019	1.2	0.0000	0.0000	OK	15 minute summer	S-GU03	1	36.186	0.000	0.0	0.0000	0.0000	OK	180 minute summer	S-JU04	136	36.016	0.019	1.2	0.0000	0.0000	OK	15 minute 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Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status																																																																																																																																																																																																																																					
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<table><tr><th>Link Event (Upstream Depth)</th><th>US Node</th><th>Link</th><th>DS Node</th><th>Outflow (l/s)</th><th>Velocity (m/s)</th><th>Flow/Cap</th><th>Link Vol (m³)</th><th>Discharge Vol (m³)</th></tr><tr><td>180 minute summer</td><td>S-RE01</td><td>S-1.000</td><td>S-MH01</td><td>-0.1</td><td>-0.029</td><td>-0.006</td><td>0.0328</td><td></td></tr><tr><td>180 minute summer</td><td>S-MH01</td><td>S-1.001</td><td>S-MH02</td><td>-0.3</td><td>-0.025</td><td>-0.017</td><td>0.1750</td><td></td></tr><tr><td>180 minute summer</td><td>S-MH02</td><td>S-1.002</td><td>S-JU01</td><td>-0.5</td><td>-0.065</td><td>-0.027</td><td>0.0973</td><td></td></tr><tr><td>60 minute summer</td><td>S-JU01</td><td>S-1.003</td><td>S-MH03</td><td>3.4</td><td>0.279</td><td>0.189</td><td>0.2797</td><td></td></tr><tr><td>180 minute summer</td><td>S-MH03</td><td>Orifice</td><td>S-JU02</td><td>1.2</td><td></td><td></td><td></td><td></td></tr><tr><td>180 minute summer</td><td>S-GU01</td><td>S-GU01</td><td>S-JU02</td><td>0.0</td><td>-0.122</td><td>-0.002</td><td>0.0046</td><td></td></tr><tr><td>180 minute summer</td><td>S-JU02</td><td>S-1.005</td><td>S-JU03</td><td>1.2</td><td>0.945</td><td>0.033</td><td>0.0169</td><td></td></tr><tr><td>15 minute summer</td><td>S-GU02</td><td>S-GU02</td><td>S-JU03</td><td>0.0</td><td>0.000</td><td>0.000</td><td>0.0015</td><td></td></tr><tr><td>180 minute summer</td><td>S-JU03</td><td>S-1.006</td><td>S-JU04</td><td>1.2</td><td>0.946</td><td>0.033</td><td>0.0291</td><td></td></tr><tr><td>15 minute summer</td><td>S-GU03</td><td>S-GU03</td><td>S-JU04</td><td>0.0</td><td>0.000</td><td>0.000</td><td>0.0016</td><td></td></tr><tr><td>180 minute summer</td><td>S-JU04</td><td>S-1.007</td><td>S-MH04</td><td>1.2</td><td>0.836</td><td>0.033</td><td>0.0149</td><td></td></tr><tr><td>15 minute summer</td><td>S-MH04</td><td>S-1.008</td><td>S-MH07</td><td>16.2</td><td>1.650</td><td>0.537</td><td>0.1030</td><td></td></tr><tr><td>15 minute summer</td><td>S-MH05</td><td>S-2.000</td><td>S-MH06</td><td>16.2</td><td>0.898</td><td>0.539</td><td>0.0532</td><td></td></tr><tr><td>15 minute summer</td><td>S-MH06</td><td>S-2.001</td><td>S-MH07</td><td>16.1</td><td>0.943</td><td>0.307</td><td>0.1637</td><td></td></tr><tr><td>15 minute summer</td><td>S-RE02</td><td>S-3.000</td><td>S-MH07</td><td>0.0</td><td>0.000</td><td>0.000</td><td>0.0052</td><td></td></tr><tr><td>15 minute summer</td><td>S-MH07</td><td>S-1.009</td><td>S-MH08</td><td>35.8</td><td>1.875</td><td>0.405</td><td>0.2807</td><td></td></tr><tr><td>360 minute winter</td><td>S-MH08</td><td>S-1.010</td><td>S-MH17 CATCHPIT</td><td>6.8</td><td>1.112</td><td>0.077</td><td>0.5475</td><td></td></tr><tr><td>360 minute winter</td><td>S-RE03</td><td>S-4.001</td><td>S-MH11</td><td>8.4</td><td>0.691</td><td>0.079</td><td>1.7566</td><td></td></tr><tr><td>360 minute winter</td><td>S-MH11</td><td>S-4.002</td><td>S-MH12</td><td>19.3</td><td>0.596</td><td>0.236</td><td>0.2198</td><td></td></tr><tr><td>360 minute winter</td><td>S-MH12</td><td>S-4.003</td><td>S-MH13</td><td>20.0</td><td>0.606</td><td>0.239</td><td>0.8209</td><td></td></tr><tr><td>360 minute winter</td><td>S-MH13</td><td>S-4.004</td><td>S-MH17 CATCHPIT</td><td>16.4</td><td>0.706</td><td>0.180</td><td>0.1877</td><td></td></tr><tr><td>360 minute winter</td><td>S-MH17 CATCHPIT</td><td>1.011</td><td>Tank</td><td>23.6</td><td>1.595</td><td>0.088</td><td>0.7595</td><td></td></tr><tr><td>360 minute winter</td><td>S-RE04</td><td>S-7.000</td><td>S-JU05</td><td>-0.3</td><td>-0.018</td><td>-0.009</td><td>0.8293</td><td></td></tr><tr><td>360 minute winter</td><td>(M)S-RWP01</td><td>(M)S-RWP1</td><td>S-MH20</td><td>-0.1</td><td>0.031</td><td>-0.003</td><td>0.0375</td><td></td></tr><tr><td>360 minute winter</td><td>S-MH20</td><td>S-8.000</td><td>S-JU05</td><td>-0.2</td><td>-0.008</td><td>-0.001</td><td>0.1461</td><td></td></tr></table>				Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)	180 minute summer	S-RE01	S-1.000	S-MH01	-0.1	-0.029	-0.006	0.0328		180 minute summer	S-MH01	S-1.001	S-MH02	-0.3	-0.025	-0.017	0.1750		180 minute summer	S-MH02	S-1.002	S-JU01	-0.5	-0.065	-0.027	0.0973		60 minute summer	S-JU01	S-1.003	S-MH03	3.4	0.279	0.189	0.2797		180 minute summer	S-MH03	Orifice	S-JU02	1.2					180 minute summer	S-GU01	S-GU01	S-JU02	0.0	-0.122	-0.002	0.0046		180 minute summer	S-JU02	S-1.005	S-JU03	1.2	0.945	0.033	0.0169		15 minute summer	S-GU02	S-GU02	S-JU03	0.0	0.000	0.000	0.0015		180 minute summer	S-JU03	S-1.006	S-JU04	1.2	0.946	0.033	0.0291		15 minute summer	S-GU03	S-GU03	S-JU04	0.0	0.000	0.000	0.0016		180 minute summer	S-JU04	S-1.007	S-MH04	1.2	0.836	0.033	0.0149		15 minute summer	S-MH04	S-1.008	S-MH07	16.2	1.650	0.537	0.1030		15 minute summer	S-MH05	S-2.000	S-MH06	16.2	0.898	0.539	0.0532		15 minute summer	S-MH06	S-2.001	S-MH07	16.1	0.943	0.307	0.1637		15 minute summer	S-RE02	S-3.000	S-MH07	0.0	0.000	0.000	0.0052		15 minute summer	S-MH07	S-1.009	S-MH08	35.8	1.875	0.405	0.2807		360 minute winter	S-MH08	S-1.010	S-MH17 CATCHPIT	6.8	1.112	0.077	0.5475		360 minute winter	S-RE03	S-4.001	S-MH11	8.4	0.691	0.079	1.7566		360 minute winter	S-MH11	S-4.002	S-MH12	19.3	0.596	0.236	0.2198		360 minute winter	S-MH12	S-4.003	S-MH13	20.0	0.606	0.239	0.8209		360 minute winter	S-MH13	S-4.004	S-MH17 CATCHPIT	16.4	0.706	0.180	0.1877		360 minute winter	S-MH17 CATCHPIT	1.011	Tank	23.6	1.595	0.088	0.7595		360 minute winter	S-RE04	S-7.000	S-JU05	-0.3	-0.018	-0.009	0.8293		360 minute winter	(M)S-RWP01	(M)S-RWP1	S-MH20	-0.1	0.031	-0.003	0.0375		360 minute winter	S-MH20	S-8.000	S-JU05	-0.2	-0.008	-0.001	0.1461	
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Network: 1076-27 - Proposed SW
Chris Kendrick
29/06/2026

Page 40
Mayfield Phase 1a
Proposed SW Drainage
Permanent Model Results

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.72%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	S-JU05	264	35.354	0.811	7.0	31.1266	0.0000	SURCHARGED
360 minute winter	S-MH22 (CP)	264	35.353	0.922	14.6	17.2169	0.0000	SURCHARGED
360 minute winter	Tank	264	35.353	1.472	23.6	45.6190	0.0000	SURCHARGED
360 minute winter	S-RE05	264	35.358	0.625	0.2	0.0250	0.0000	SURCHARGED
360 minute winter	S-JU07	264	35.359	0.747	1.5	5.6167	0.0000	SURCHARGED
360 minute winter	S-MH28	264	35.359	0.767	1.3	0.2169	0.0000	SURCHARGED
360 minute winter	SWMH37	264	35.359	0.908	5.2	1.0264	0.0000	SURCHARGED
360 minute winter	SWMH38	264	35.353	1.175	5.8	2.9910	0.0000	SURCHARGED
360 minute winter	S-MH25	264	35.353	1.497	11.5	5.1849	0.0000	SURCHARGED
360 minute winter	SWMH40	264	32.515	0.129	8.0	0.1459	0.0000	OK
240 minute winter	1	188	32.113	0.113	17.5	0.1278	0.0000	OK
240 minute winter	2	188	32.085	0.100	17.6	0.0000	0.0000	OK
15 minute summer	S-GU04	1	36.532	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S-MH29	1	34.505	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S-GU05	1	35.694	0.000	0.0	0.0000	0.0000	OK
30 minute summer	S-JU08	26	34.406	0.100	1.1	0.0000	0.0000	OK
15 minute summer	S-GU06	1	35.057	0.000	0.0	0.0000	0.0000	OK
30 minute summer	S-MH30	26	34.405	0.158	14.4	0.0447	0.0000	SURCHARGED
30 minute summer	S-JU09	26	34.404	0.188	13.6	0.0000	0.0000	SURCHARGED
30 minute summer	S-MH31	26	34.399	0.449	13.5	4.5477	0.0000	SURCHARGED
15 minute summer	S-MH32	1	35.137	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S-JU10	1	35.046	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S-JU11	10	35.012	0.006	0.1	0.0000	0.0000	OK
15 minute summer	(O)S-RWP01	10	35.012	0.047	0.2	0.0019	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)
360 minute winter	S-JU05	S-7.001	S-MH22 (CP)	-3.8	0.507	-0.092	0.3905	
360 minute winter	S-MH22 (CP)	9.002	Tank	-14.6	0.713	-0.061	0.4519	
360 minute winter	Tank	1.012	S-MH25	9.3	0.132	0.118	0.3482	
360 minute winter	S-RE05	S-10.001	S-JU07	-0.2	-0.016	-0.005	0.4788	
360 minute winter	S-JU07	S-10.002	S-MH28	-1.0	0.385	-0.020	0.0801	
360 minute winter	S-MH28	S-10.003	SWMH37	-1.2	-0.067	-0.030	0.0530	
360 minute winter	SWMH37	EX1	SWMH38	4.0	0.581	0.236	0.4915	
360 minute winter	SWMH38	EX2	S-MH25	-5.8	0.381	-0.177	0.7868	
360 minute winter	S-MH25	Hydro-Brake®	1	3.6				
360 minute winter	S-MH25	Orifice	SWMH40	8.0				37.2
360 minute winter	SWMH40	12.000	1	8.0	0.553	0.020	0.1539	
240 minute winter	1	1.014	2	17.6	0.782	0.247	0.0824	307.7
15 minute summer	S-GU04	S-GU04	S-MH29	0.0	0.000	0.000	0.0000	
15 minute summer	S-MH29	S-12.000	S-JU08	0.0	0.000	0.000	0.0647	
15 minute summer	S-GU05	S-GU05	S-JU08	0.0	0.000	0.000	0.0073	
30 minute summer	S-JU08	S-12.001	S-MH30	-1.1	-0.115	-0.061	0.1151	
15 minute summer	S-GU06	S-GU06	S-MH30	0.0	0.000	0.000	0.0911	
30 minute summer	S-MH30	S-12.002	S-JU09	13.6	1.065	0.770	0.0555	
30 minute summer	S-JU09	S-12.003	S-MH31	12.8	0.776	0.719	0.4676	
30 minute summer	S-MH31	Orifice	8	5.7				14.0
15 minute summer	S-MH32	S-13.000	S-JU10	0.0	0.000	0.000	0.0000	
15 minute summer	S-JU10	S-13.001	S-JU11	0.0	0.000	0.000	0.0009	
15 minute summer	S-JU11	S-13.002	S-MH33	-0.1	-0.044	-0.003	0.0333	
15 minute summer	(O)S-RWP01	(O)S-RWP01	S-MH33	0.2	-0.176	0.006	0.0098	

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Network: 1076-27 - Proposed SW

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Page 41

Mayfield Phase 1a

Proposed SW Drainage

Permanent Model Results

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.72%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S-MH33	10	35.012	0.056	51.6	0.0634	0.0000	OK
60 minute summer	3	46	34.004	0.475	40.9	27.0425	0.0000	OK
360 minute winter	S-MH14	264	35.354	0.354	2.7	0.1002	0.0000	SURCHARGED
360 minute winter	S-MH15	264	35.354	0.704	5.1	0.7126	0.0000	SURCHARGED
360 minute winter	S-MH16	264	35.354	0.727	9.0	0.2057	0.0000	SURCHARGED
360 minute winter	S-MH18	264	35.354	0.831	6.1	1.4162	0.0000	SURCHARGED
15 minute summer	PP2	13	36.400	0.290	6.1	1.1775	0.0000	OK
15 minute summer	PP3	11	35.671	0.051	2.6	0.0910	0.0000	OK
15 minute summer	RG1_1	1	36.850	0.000	0.0	0.0000	0.0000	OK
15 minute summer	RG1_2	1	36.650	0.000	0.0	0.0000	0.0000	OK
15 minute summer	RG1_3	1	36.450	0.000	0.0	0.0000	0.0000	OK
60 minute summer	RG2	39	39.097	0.147	9.8	6.4790	0.0000	OK
60 minute summer	RG3	38	35.857	0.147	20.8	12.4437	0.0000	OK
120 minute summer	RG4	80	36.019	0.119	4.5	5.9723	0.0000	OK
15 minute summer	PP1	13	36.900	0.260	8.2	1.3626	0.0000	OK
15 minute summer	6	9	35.380	0.133	8.6	0.0000	0.0000	OK
30 minute summer	7	22	34.827	0.267	7.3	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S-MH33	16.003	3	51.5	4.283	0.145	0.0730	
60 minute summer	3	Hydro-Brake®	1	7.5				43.4
360 minute winter	S-MH14	S-6.000	S-MH15	3.2	0.700	0.024	0.2145	
360 minute winter	S-MH15	S-6.001	S-MH16	-5.1	0.448	-0.121	0.1376	
360 minute winter	S-MH16	S-6.002	S-MH18	-9.0	0.423	-0.300	0.3399	
360 minute winter	S-MH18	S-1.011	S-MH17 CATCHPIT	3.9	0.311	0.052	0.2085	
15 minute summer	PP2	Orifice	S-MH08	2.7				2.7
15 minute summer	PP3	Orifice	S-MH17 CATCHPIT	2.5				1.1
15 minute summer	RG1_1	Orifice	S-RE03	0.0				0.0
15 minute summer	RG1_1	Weir	RG1_2	0.0				0.0
15 minute summer	RG1_2	Orifice	S-MH11	0.0				0.0
15 minute summer	RG1_2	Weir	RG1_3	0.0				0.0
15 minute summer	RG1_3	Orifice	S-MH11	0.0				0.0
15 minute summer	RG1_3	Weir	S-MH11	0.0				0.0
60 minute summer	RG2	Orifice	S-MH03	0.7				6.4
60 minute summer	RG2	Orifice	S-JU01	3.4				4.0
60 minute summer	RG3	Orifice	S-JU05	10.1				11.2
60 minute summer	RG3	Orifice	S-JU05	1.2				10.8
60 minute summer	RG3	Orifice	S-JU05	0.0				0.0
120 minute summer	RG4	Orifice	S-JU07	0.5				7.3
120 minute summer	RG4	Orifice	S-JU07	0.9				1.6
15 minute summer	PP1	Orifice	S-MH07	4.2				3.5
15 minute summer	6	18.000	7	9.0	0.177	1.000	2.6039	
30 minute summer	7	Orifice	S-MH31	0.7				2.6

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Results for 30 year Critical Storm Duration. Lowest mass balance: 99.72%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	8	1	33.896	0.000	5.4	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	7	Orifice	S-MH31	3.8				2.3

Results for 100 year +30% CC Critical Storm Duration. Lowest mass balance: 99.72%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	S-RE01	136	38.866	0.742	0.7	0.0134	0.0000	SURCHARGED
180 minute summer	S-MH01	136	38.866	0.783	1.3	0.2216	0.0000	SURCHARGED
180 minute summer	S-MH02	136	38.866	0.906	1.9	0.2564	0.0000	SURCHARGED
15 minute summer	S-JU01	18	38.068	0.163	7.0	0.0000	0.0000	FLOOD RISK
180 minute summer	S-MH03	136	38.865	1.119	4.5	5.8796	0.0000	FLOOD RISK
180 minute summer	S-GU01	136	37.492	0.035	0.0	0.0055	0.0000	OK
180 minute summer	S-JU02	136	37.492	0.024	2.0	0.0000	0.0000	OK
15 minute summer	S-GU02	1	36.970	0.000	0.0	0.0000	0.0000	OK
180 minute summer	S-JU03	136	36.952	0.024	2.0	0.0000	0.0000	OK
15 minute summer	S-GU03	1	36.186	0.000	0.0	0.0000	0.0000	OK
180 minute summer	S-JU04	136	36.021	0.024	2.0	0.0000	0.0000	OK
15 minute summer	S-MH04	10	35.902	0.129	27.5	0.0366	0.0000	OK
180 minute summer	S-MH05	116	35.764	0.257	8.9	0.0726	0.0000	SURCHARGED
180 minute summer	S-MH06	116	35.763	0.266	8.9	0.0754	0.0000	SURCHARGED
180 minute summer	S-RE02	116	35.763	0.250	1.1	0.0045	0.0000	SURCHARGED
180 minute summer	S-MH07	116	35.763	0.364	22.6	0.1029	0.0000	SURCHARGED
180 minute summer	S-MH08	116	35.754	0.776	25.1	0.2196	0.0000	SURCHARGED
180 minute summer	S-RE03	116	35.751	0.910	35.1	0.0364	0.0000	SURCHARGED
180 minute summer	S-MH11	116	35.748	1.138	48.9	63.5613	0.0000	SURCHARGED
180 minute summer	S-MH12	116	35.746	1.153	18.2	0.3264	0.0000	SURCHARGED
180 minute summer	S-MH13	116	35.743	1.216	18.4	2.8903	0.0000	SURCHARGED
180 minute summer	S-MH17 CATCHPIT	116	35.742	1.233	36.8	1.3944	0.0000	SURCHARGED
180 minute summer	S-RE04	116	35.735	1.049	0.9	0.0419	0.0000	SURCHARGED
180 minute summer	(M)S-RWP01	116	35.738	0.513	1.2	0.0205	0.0000	SURCHARGED
180 minute summer	S-MH20	116	35.738	0.523	3.0	0.1481	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)
180 minute summer	S-RE01	S-1.000	S-MH01	-0.7	-0.131	-0.037	0.0724	
180 minute summer	S-MH01	S-1.001	S-MH02	-1.3	-0.080	-0.071	0.2155	
180 minute summer	S-MH02	S-1.002	S-JU01	-1.9	-0.106	-0.105	0.0973	
15 minute summer	S-JU01	S-1.003	S-MH03	6.9	0.512	0.389	0.2797	
180 minute summer	S-MH03	Orifice	S-JU02	2.0				
180 minute summer	S-GU01	S-GU01	S-JU02	0.0	-0.136	-0.002	0.0060	
180 minute summer	S-JU02	S-1.005	S-JU03	2.0	1.096	0.055	0.0239	
15 minute summer	S-GU02	S-GU02	S-JU03	0.0	0.000	0.000	0.0021	
180 minute summer	S-JU03	S-1.006	S-JU04	2.0	1.097	0.055	0.0410	
15 minute summer	S-GU03	S-GU03	S-JU04	0.0	0.000	0.000	0.0022	
180 minute summer	S-JU04	S-1.007	S-MH04	2.0	0.964	0.055	0.0226	
15 minute summer	S-MH04	S-1.008	S-MH07	27.1	1.796	0.901	0.1584	
180 minute summer	S-MH05	S-2.000	S-MH06	8.9	0.780	0.296	0.1170	
180 minute summer	S-MH06	S-2.001	S-MH07	8.9	0.820	0.169	0.3806	
180 minute summer	S-RE02	S-3.000	S-MH07	-1.1	-0.069	-0.060	0.0694	
180 minute summer	S-MH07	S-1.009	S-MH08	22.6	1.655	0.256	0.5851	
180 minute summer	S-MH08	S-1.010	S-MH17 CATCHPIT	23.7	1.211	0.268	0.5475	
180 minute summer	S-RE03	S-4.001	S-MH11	34.3	0.797	0.321	1.7566	
180 minute summer	S-MH11	S-4.002	S-MH12	17.8	0.674	0.217	0.2198	
180 minute summer	S-MH12	S-4.003	S-MH13	18.4	0.663	0.221	0.8209	
180 minute summer	S-MH13	S-4.004	S-MH17 CATCHPIT	19.2	0.783	0.210	0.1877	
180 minute summer	S-MH17 CATCHPIT	1.011	Tank	36.7	2.273	0.136	0.7595	
180 minute summer	S-RE04	S-7.000	S-JU05	-0.9	-0.025	-0.022	0.8293	
180 minute summer	(M)S-RWP01	(M)S-RWP1	S-MH20	1.3	-0.117	0.033	0.0610	
180 minute summer	S-MH20	S-8.000	S-JU05	-3.0	-0.097	-0.015	0.1775	

Results for 100 year +30% CC Critical Storm Duration. Lowest mass balance: 99.72%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	S-JU05	116	35.738	1.195	31.5	37.4497	0.0000	FLOOD RISK
180 minute summer	S-MH22 (CP)	116	35.731	1.299	21.7	19.0864	0.0000	FLOOD RISK
180 minute summer	Tank	116	35.729	1.848	48.2	45.6190	0.0000	SURCHARGED
60 minute summer	S-RE05	36	36.047	1.314	3.1	0.0526	0.0000	FLOOD RISK
60 minute summer	S-JU07	38	36.045	1.433	19.6	7.1100	0.0000	FLOOD RISK
60 minute summer	S-MH28	38	36.045	1.453	20.9	0.4112	0.0000	FLOOD RISK
60 minute summer	SWMH37	36	36.043	1.592	44.5	1.8006	0.3914	FLOOD
180 minute summer	SWMH38	116	35.729	1.551	19.1	3.9462	0.0000	SURCHARGED
180 minute summer	S-MH25	116	35.715	1.859	65.8	6.4398	0.0000	SURCHARGED
180 minute summer	SWMH40	116	35.632	3.246	61.2	3.6713	0.0000	SURCHARGED
180 minute summer	1	116	32.241	0.241	64.7	0.2723	0.0000	OK
180 minute summer	2	116	32.184	0.199	64.7	0.0000	0.0000	OK
15 minute summer	S-GU04	1	36.532	0.000	0.0	0.0000	0.0000	OK
60 minute summer	S-MH29	43	34.832	0.327	3.3	0.0924	0.0000	SURCHARGED
15 minute summer	S-GU05	1	35.694	0.000	0.0	0.0000	0.0000	OK
60 minute summer	S-JU08	43	34.831	0.525	4.6	0.0000	0.0000	SURCHARGED
15 minute summer	S-GU06	1	35.057	0.000	0.0	0.0000	0.0000	OK
60 minute summer	S-MH30	43	34.831	0.584	18.3	0.1653	0.0000	SURCHARGED
60 minute summer	S-JU09	43	34.828	0.612	13.5	0.0000	0.0000	SURCHARGED
60 minute summer	S-MH31	43	34.810	0.860	19.4	9.2425	0.0184	FLOOD
15 minute summer	S-MH32	1	35.137	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S-JU10	1	35.046	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S-JU11	11	35.038	0.032	0.6	0.0000	0.0000	OK
15 minute summer	(O)S-RWP01	11	35.038	0.073	0.4	0.0029	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)
180 minute summer	S-JU05	S-7.001	S-MH22 (CP)	15.8	0.529	0.381	0.3905	
180 minute summer	S-MH22 (CP)	9.002	Tank	-21.7	0.854	-0.091	0.4519	
180 minute summer	Tank	1.012	S-MH25	47.9	0.680	0.612	0.3482	
60 minute summer	S-RE05	S-10.001	S-JU07	-3.1	-0.151	-0.060	0.4788	
60 minute summer	S-JU07	S-10.002	S-MH28	-18.7	-0.470	-0.361	0.0801	
60 minute summer	S-MH28	S-10.003	SWMH37	-20.9	-1.185	-0.539	0.0530	
60 minute summer	SWMH37	EX1	SWMH38	27.5	1.562	1.619	0.4915	
180 minute summer	SWMH38	EX2	S-MH25	17.9	0.483	0.552	0.7868	
180 minute summer	S-MH25	Hydro-Brake®	1	4.0				
180 minute summer	S-MH25	Orifice	SWMH40	61.2				176.7
180 minute summer	SWMH40	12.000	1	54.2	1.126	0.137	0.4821	
180 minute summer	1	1.014	2	64.7	1.171	0.910	0.2020	494.8
15 minute summer	S-GU04	S-GU04	S-MH29	0.0	0.000	0.000	0.0126	
60 minute summer	S-MH29	S-12.000	S-JU08	-3.3	-0.239	-0.187	0.3895	
15 minute summer	S-GU05	S-GU05	S-JU08	0.0	0.000	0.000	0.0119	
60 minute summer	S-JU08	S-12.001	S-MH30	-4.6	-0.294	-0.259	0.1609	
15 minute summer	S-GU06	S-GU06	S-MH30	0.0	0.000	0.000	0.0919	
60 minute summer	S-MH30	S-12.002	S-JU09	13.5	1.033	0.767	0.0555	
60 minute summer	S-JU09	S-12.003	S-MH31	12.5	0.712	0.705	0.4676	
60 minute summer	S-MH31	Orifice	8	8.0				29.5
15 minute summer	S-MH32	S-13.000	S-JU10	0.0	0.000	0.000	0.0000	
15 minute summer	S-JU10	S-13.001	S-JU11	0.0	0.000	0.000	0.0114	
15 minute summer	S-JU11	S-13.002	S-MH33	-0.6	-0.126	-0.015	0.0692	
15 minute summer	(O)S-RWP01	(O)S-RWP01	S-MH33	-0.4	-0.201	-0.010	0.0174	

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File: 1076-36 - SW Drainage - all Phase 1A.pfd
Network: 1076-27 - Proposed SW
Chris Kendrick
29/06/2026

Page 45
Mayfield Phase 1a
Proposed SW Drainage
Permanent Model Results

Results for 100 year +30% CC Critical Storm Duration. Lowest mass balance: 99.72%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S-MH33	11	35.038	0.082	86.5	0.0933	0.0000	OK
60 minute winter	3	59	34.485	0.956	50.5	54.4432	0.0000	OK
180 minute summer	S-MH14	116	35.744	0.744	11.1	0.2106	0.0000	SURCHARGED
180 minute summer	S-MH15	116	35.743	1.093	10.3	1.2479	0.0000	SURCHARGED
180 minute summer	S-MH16	116	35.743	1.116	9.2	0.3158	0.0000	SURCHARGED
180 minute summer	S-MH18	116	35.742	1.219	8.4	2.1978	0.0000	SURCHARGED
30 minute summer	PP2	22	36.545	0.435	9.3	2.5648	0.0000	OK
180 minute summer	PP3	116	35.742	0.122	1.4	0.3152	0.0000	OK
15 minute summer	RG1_1	1	36.850	0.000	0.0	0.0000	0.0000	OK
15 minute summer	RG1_2	1	36.650	0.000	0.0	0.0000	0.0000	OK
15 minute summer	RG1_3	1	36.450	0.000	0.0	0.0000	0.0000	OK
60 minute summer	RG2	37	39.142	0.192	16.7	8.9817	0.0000	OK
30 minute summer	RG3	21	35.899	0.189	47.2	16.7370	0.0000	OK
60 minute summer	RG4	40	36.061	0.161	11.9	8.4599	0.0000	OK
30 minute summer	PP1	22	37.029	0.389	12.3	2.9726	0.0000	OK
15 minute summer	6	11	35.399	0.152	14.4	0.0000	0.0000	OK
30 minute summer	7	19	34.860	0.300	12.4	0.0000	0.5729	FLOOD

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	S-MH33	16.003	3	86.0	4.631	0.241	0.0818	
60 minute winter	3	Hydro-Brake®	1	7.5				74.0
180 minute summer	S-MH14	S-6.000	S-MH15	10.3	0.793	0.077	0.2145	
180 minute summer	S-MH15	S-6.001	S-MH16	9.2	0.477	0.217	0.1376	
180 minute summer	S-MH16	S-6.002	S-MH18	8.4	0.471	0.279	0.3399	
180 minute summer	S-MH18	S-1.011	S-MH17 CATCHPIT	8.0	0.330	0.105	0.2085	
30 minute summer	PP2	Orifice	S-MH08	3.3				5.8
180 minute summer	PP3	Orifice	S-MH17 CATCHPIT	1.4				4.1
15 minute summer	RG1_1	Orifice	S-RE03	0.0				0.0
15 minute summer	RG1_1	Weir	RG1_2	0.0				0.0
15 minute summer	RG1_2	Orifice	S-MH11	0.0				0.0
15 minute summer	RG1_2	Weir	RG1_3	0.0				0.0
15 minute summer	RG1_3	Orifice	S-MH11	0.0				0.0
15 minute summer	RG1_3	Weir	S-MH11	0.0				0.0
60 minute summer	RG2	Orifice	S-MH03	0.8				6.9
60 minute summer	RG2	Orifice	S-JU01	9.3				10.8
30 minute summer	RG3	Orifice	S-JU05	23.1				18.2
30 minute summer	RG3	Orifice	S-JU05	1.4				10.3
30 minute summer	RG3	Orifice	S-JU05	3.5				1.2
60 minute summer	RG4	Orifice	S-JU07	0.6				6.9
60 minute summer	RG4	Orifice	S-JU07	4.9				5.7
30 minute summer	PP1	Orifice	S-MH07	5.3				7.8
15 minute summer	6	18.000	7	13.9	0.186	1.000	3.7120	
30 minute summer	7	Orifice	S-MH31	0.8				2.5

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Results for 100 year +30% CC Critical Storm Duration. Lowest mass balance: 99.72%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	8	1	33.896	0.000	7.3	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	7	Orifice	S-MH31	7.0				5.2

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.72%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	S-RE01	132	39.053	0.929	0.8	0.0167	0.0000	SURCHARGED
180 minute summer	S-MH01	132	39.053	0.970	1.8	0.2746	0.0000	SURCHARGED
180 minute summer	S-MH02	132	39.053	1.093	2.4	0.3094	0.0000	SURCHARGED
15 minute summer	S-JU01	17	38.068	0.163	8.2	0.0000	0.0000	FLOOD RISK
180 minute summer	S-MH03	132	39.051	1.305	5.0	5.9324	0.0000	FLOOD RISK
180 minute summer	S-GU01	132	37.493	0.036	0.0	0.0057	0.0000	OK
180 minute summer	S-JU02	132	37.493	0.025	2.1	0.0000	0.0000	OK
15 minute summer	S-GU02	1	36.970	0.000	0.0	0.0000	0.0000	OK
180 minute summer	S-JU03	132	36.953	0.025	2.1	0.0000	0.0000	OK
15 minute summer	S-GU03	1	36.186	0.000	0.0	0.0000	0.0000	OK
180 minute summer	S-JU04	132	36.022	0.025	2.1	0.0000	0.0000	OK
15 minute summer	S-MH04	11	35.957	0.184	29.6	0.0521	0.0000	SURCHARGED
180 minute summer	S-MH05	112	35.940	0.433	9.6	0.1226	0.0000	SURCHARGED
180 minute summer	S-MH06	112	35.940	0.443	9.6	0.1253	0.0000	SURCHARGED
180 minute summer	S-RE02	112	35.939	0.426	1.1	0.0077	0.0000	SURCHARGED
180 minute summer	S-MH07	112	35.939	0.540	24.3	0.1528	0.0000	SURCHARGED
180 minute summer	S-MH08	112	35.925	0.947	26.8	0.2680	0.0000	SURCHARGED
180 minute summer	S-RE03	112	35.922	1.081	37.9	0.0432	0.0000	SURCHARGED
180 minute summer	S-MH11	112	35.915	1.305	52.9	63.6498	0.0000	FLOOD RISK
180 minute summer	S-MH12	112	35.913	1.320	22.0	0.3736	0.0000	FLOOD RISK
180 minute summer	S-MH13	112	35.909	1.382	21.8	3.3265	0.0000	FLOOD RISK
180 minute summer	S-MH17 CATCHPIT	112	35.906	1.397	43.1	1.5804	0.0000	FLOOD RISK
180 minute summer	S-RE04	116	35.891	1.205	1.1	0.0482	0.0000	FLOOD RISK
180 minute summer	(M)S-RWP01	116	35.891	0.666	0.9	0.0267	0.0000	FLOOD RISK
180 minute summer	S-MH20	116	35.891	0.676	2.2	0.1914	0.0000	FLOOD RISK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
180 minute summer	S-RE01	S-1.000	S-MH01	-0.8	-0.076	-0.047	0.0724	
180 minute summer	S-MH01	S-1.001	S-MH02	-1.8	-0.107	-0.099	0.2155	
180 minute summer	S-MH02	S-1.002	S-JU01	-2.4	-0.138	-0.137	0.0973	
15 minute summer	S-JU01	S-1.003	S-MH03	7.5	0.530	0.420	0.2797	
180 minute summer	S-MH03	Orifice	S-JU02	2.1				
180 minute summer	S-GU01	S-GU01	S-JU02	0.0	-0.132	-0.002	0.0063	
180 minute summer	S-JU02	S-1.005	S-JU03	2.1	1.121	0.059	0.0252	
15 minute summer	S-GU02	S-GU02	S-JU03	0.0	0.000	0.000	0.0022	
180 minute summer	S-JU03	S-1.006	S-JU04	2.1	1.122	0.059	0.0434	
15 minute summer	S-GU03	S-GU03	S-JU04	0.0	0.000	0.000	0.0023	
180 minute summer	S-JU04	S-1.007	S-MH04	2.1	0.978	0.059	0.0530	
15 minute summer	S-MH04	S-1.008	S-MH07	28.3	1.822	0.941	0.1688	
180 minute summer	S-MH05	S-2.000	S-MH06	9.6	0.794	0.319	0.1170	
180 minute summer	S-MH06	S-2.001	S-MH07	9.6	0.838	0.182	0.3806	
180 minute summer	S-RE02	S-3.000	S-MH07	-1.1	-0.096	-0.063	0.0694	
180 minute summer	S-MH07	S-1.009	S-MH08	24.2	1.687	0.275	0.5851	
180 minute summer	S-MH08	S-1.010	S-MH17 CATCHPIT	25.5	1.194	0.289	0.5475	
180 minute summer	S-RE03	S-4.001	S-MH11	37.1	0.790	0.347	1.7566	
180 minute summer	S-MH11	S-4.002	S-MH12	20.9	0.660	0.256	0.2198	
180 minute summer	S-MH12	S-4.003	S-MH13	21.8	0.661	0.261	0.8209	
180 minute summer	S-MH13	S-4.004	S-MH17 CATCHPIT	21.1	0.780	0.232	0.1877	
180 minute summer	S-MH17 CATCHPIT	1.011	Tank	41.6	2.300	0.154	0.7595	
180 minute summer	S-RE04	S-7.000	S-JU05	-1.1	-0.058	-0.028	0.8293	
180 minute summer	(M)S-RWP01	(M)S-RWP1	S-MH20	-0.9	-0.031	-0.023	0.0610	
180 minute summer	S-MH20	S-8.000	S-JU05	-2.2	-0.059	-0.011	0.1775	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.72%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	S-JU05	116	35.891	1.348	30.8	37.4497	0.0000	FLOOD RISK
180 minute summer	S-MH22 (CP)	112	35.888	1.457	18.9	19.2648	0.0000	FLOOD RISK
180 minute summer	Tank	112	35.888	2.007	48.2	45.6190	0.0000	FLOOD RISK
30 minute winter	S-RE05	21	36.056	1.323	5.9	0.0529	0.0000	FLOOD RISK
30 minute winter	S-JU07	21	36.050	1.438	24.5	7.1100	0.0000	FLOOD RISK
30 minute summer	S-MH28	20	36.050	1.458	35.3	0.4125	0.0000	FLOOD RISK
60 minute summer	SWMH37	35	36.043	1.592	47.9	1.8006	2.7328	FLOOD ← Minor Flooding contained within public realm
180 minute summer	SWMH38	112	35.886	1.708	21.4	4.3474	0.0000	FLOOD RISK
180 minute summer	S-MH25	112	35.872	2.016	61.4	6.9843	0.0000	FLOOD RISK
180 minute summer	SWMH40	112	35.785	3.399	55.7	3.8441	0.0000	FLOOD RISK
120 minute summer	1	82	32.245	0.245	66.5	0.2770	0.0000	OK
120 minute summer	2	82	32.186	0.201	66.5	0.0000	0.0000	OK
15 minute summer	S-GU04	1	36.532	0.000	0.0	0.0000	0.0000	OK
60 minute summer	S-MH29	40	34.880	0.375	3.4	0.1062	0.0000	SURCHARGED
15 minute summer	S-GU05	1	35.694	0.000	0.0	0.0000	0.0000	OK
60 minute summer	S-JU08	40	34.880	0.574	5.1	0.0000	0.0000	SURCHARGED
15 minute summer	S-GU06	1	35.057	0.000	0.0	0.0000	0.0000	OK
60 minute summer	S-MH30	40	34.880	0.633	19.7	0.1792	0.0000	SURCHARGED
60 minute summer	S-JU09	40	34.871	0.655	14.1	0.0000	0.0000	SURCHARGED
60 minute summer	S-MH31	39	34.810	0.860	20.2	9.2425	1.3681	FLOOD ← Minor Flooding contained within public realm
15 minute summer	S-MH32	1	35.137	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S-JU10	1	35.046	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S-JU11	11	35.044	0.038	0.7	0.0000	0.0000	OK
15 minute summer	(O)S-RWP01	11	35.045	0.080	0.4	0.0032	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)
180 minute summer	S-JU05	S-7.001	S-MH22 (CP)	18.8	0.540	0.453	0.3905	
180 minute summer	S-MH22 (CP)	9.002	Tank	-18.9	0.870	-0.079	0.4519	
180 minute summer	Tank	1.012	S-MH25	48.0	0.682	0.613	0.3482	
30 minute winter	S-RE05	S-10.001	S-JU07	-5.9	-0.236	-0.113	0.4788	
30 minute winter	S-JU07	S-10.002	S-MH28	-24.1	-0.605	-0.464	0.0801	
30 minute summer	S-MH28	S-10.003	SWMH37	-35.3	-2.005	-0.913	0.0530	
60 minute summer	SWMH37	EX1	SWMH38	27.7	1.573	1.629	0.4915	
180 minute summer	SWMH38	EX2	S-MH25	19.9	0.500	0.613	0.7868	
180 minute summer	S-MH25	Hydro-Brake®	1	4.2				
180 minute summer	S-MH25	Orifice	SWMH40	55.7				204.2
180 minute summer	SWMH40	12.000	1	55.5	1.132	0.140	0.4906	
120 minute summer	1	1.014	2	66.5	1.184	0.935	0.2052	476.8
15 minute summer	S-GU04	S-GU04	S-MH29	0.0	0.000	0.000	0.0126	
60 minute summer	S-MH29	S-12.000	S-JU08	-3.4	-0.259	-0.192	0.3895	
15 minute summer	S-GU05	S-GU05	S-JU08	0.0	0.000	0.000	0.0119	
60 minute summer	S-JU08	S-12.001	S-MH30	-5.1	-0.312	-0.284	0.1609	
15 minute summer	S-GU06	S-GU06	S-MH30	0.0	0.000	0.000	0.0919	
60 minute summer	S-MH30	S-12.002	S-JU09	14.1	1.021	0.799	0.0555	
60 minute summer	S-JU09	S-12.003	S-MH31	12.9	0.734	0.728	0.4676	
60 minute summer	S-MH31	Orifice	8	8.0				30.3
15 minute summer	S-MH32	S-13.000	S-JU10	0.0	0.000	0.000	0.0000	
15 minute summer	S-JU10	S-13.001	S-JU11	0.0	0.000	0.000	0.0147	
15 minute summer	S-JU11	S-13.002	S-MH33	-0.7	-0.131	-0.017	0.0789	
15 minute summer	(O)S-RWP01	(O)S-RWP01	S-MH33	0.4	-0.197	0.011	0.0193	

Peak discharge from the overall Phase 1A site

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.72%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S-MH33	11	35.045	0.089	93.2	0.1002	0.0000	OK
60 minute winter	3	59	34.575	1.046	54.2	59.5369	0.0000	OK
180 minute summer	S-MH14	112	35.910	0.910	12.0	0.2575	0.0000	FLOOD RISK
180 minute summer	S-MH15	112	35.909	1.259	11.3	1.4753	0.0000	FLOOD RISK
180 minute summer	S-MH16	112	35.908	1.281	10.2	0.3625	0.0000	FLOOD RISK
180 minute summer	S-MH18	112	35.907	1.384	9.4	2.5290	0.0000	FLOOD RISK
30 minute summer	PP2	22	36.570	0.460	10.0	2.8539	0.0000	OK
180 minute summer	PP3	112	35.907	0.287	2.8	1.2619	0.0000	OK
15 minute summer	RG1_1	1	36.850	0.000	0.0	0.0000	0.0000	OK
15 minute summer	RG1_2	1	36.650	0.000	0.0	0.0000	0.0000	OK
15 minute summer	RG1_3	1	36.450	0.000	0.0	0.0000	0.0000	OK
60 minute summer	RG2	37	39.149	0.199	18.0	9.3984	0.0000	OK
30 minute summer	RG3	21	35.906	0.196	50.8	17.4500	0.0000	OK
60 minute summer	RG4	40	36.069	0.169	12.8	8.9605	0.0000	OK
30 minute summer	PP1	22	37.052	0.412	13.3	3.3382	0.0000	OK
15 minute summer	6	11	35.403	0.156	15.5	0.0000	0.0000	OK
30 minute summer	7	19	34.860	0.300	13.4	0.0000	0.7388	FLOOD

Minor Flooding contained within public realm west of MSCP

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	S-MH33	16.003	3	92.6	4.655	0.260	0.0839	
60 minute winter	3	Hydro-Brake®	1	7.5				79.7
180 minute summer	S-MH14	S-6.000	S-MH15	11.3	0.779	0.084	0.2145	
180 minute summer	S-MH15	S-6.001	S-MH16	10.2	0.489	0.241	0.1376	
180 minute summer	S-MH16	S-6.002	S-MH18	9.4	0.470	0.313	0.3399	
180 minute summer	S-MH18	S-1.011	S-MH17 CATCHPIT	7.8	0.332	0.103	0.2085	
30 minute summer	PP2	Orifice	S-MH08	3.4				6.3
180 minute summer	PP3	Orifice	S-MH17 CATCHPIT	2.1				4.5
15 minute summer	RG1_1	Orifice	S-RE03	0.0				0.0
15 minute summer	RG1_1	Weir	RG1_2	0.0				0.0
15 minute summer	RG1_2	Orifice	S-MH11	0.0				0.0
15 minute summer	RG1_2	Weir	RG1_3	0.0				0.0
15 minute summer	RG1_3	Orifice	S-MH11	0.0				0.0
15 minute summer	RG1_3	Weir	S-MH11	0.0				0.0
60 minute summer	RG2	Orifice	S-MH03	0.9				7.0
60 minute summer	RG2	Orifice	S-JU01	10.4				12.1
30 minute summer	RG3	Orifice	S-JU05	25.5				20.1
30 minute summer	RG3	Orifice	S-JU05	1.4				10.4
30 minute summer	RG3	Orifice	S-JU05	4.4				1.6
60 minute summer	RG4	Orifice	S-JU07	0.6				6.9
60 minute summer	RG4	Orifice	S-JU07	5.5				6.7
30 minute summer	PP1	Orifice	S-MH07	5.4				8.4
15 minute summer	6	18.000	7	14.9	0.190	1.000	3.8337	
30 minute summer	7	Orifice	S-MH31	0.8				2.4

Discharge rate from the Poulton = 7.5l/s controlled via Hydrobrake

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.72%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	8	1	33.896	0.000	7.6	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	7	Orifice	S-MH31	7.0				5.6