MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Junctions Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)	Invert Level (m)	Chamber Shape	Diameter (m)
UU MH1102	Manhole	384173.433	397160.683	37.140	2.800	34.340	Circular	1.800
EX MH 13	Manhole	384190.357	397169.159	37.190	2.540	34.650	Circular	1.200
EX MH 15	Manhole	384197.215	397172.856	37.000	2.280	34.720	Rectangular	
S02	Manhole	384285.762	397165.360	37.170	1.470	35.700	Circular	1.200
S03	Manhole	384252.493	397147.386	37.100	1.600	35.500	Circular	1.200
S04	Manhole	384238.055	397139.633	37.150	1.850	35.300	Circular	1.200
S08	Manhole	384233.473	397194.101	37.150	2.075	35.075	Circular	1.200
S13 - FLOW CONTROL	Manhole	384204.195	397176.765	37.000	2.200	34.800	Circular	1.500
S05	Manhole	384228.997	397157.011	37.150	2.000	35.150	Circular	1.200
S09	Manhole	384215.352	397184.776	37.140	2.165	34.975	Circular	1.200
S06	Manhole	384222.489	397169.251	37.150	2.150	35.000	Circular	1.200
S12 - GRIT SEPARATOR	Manhole	384209.346	397179.463	37.150	2.300	34.850	Circular	1.500
S01	Manhole	384280.804	397174.092	37.200	1.425	35.775	Circular	0.600
S07	Manhole	384255.676	397203.782	37.200	1.900	35.300	Circular	1.200
RWP1	Manhole	384228.407	397172.908	37.220	0.620	36.600	Circular	0.150
RWP4	Manhole	384269.495	397178.223	37.220	0.770	36.450	Circular	0.200
RWP3	Manhole	384262.120	397190.788	37.220	0.620	36.600	Circular	0.150
RWP2	Manhole	384235.461	397160.076	37.220	0.770	36.450	Circular	0.150
S10	Manhole	384218.882	397176.404	37.144	2.224	34.920	Circular	1.200
S11	Manhole	384211.671	397164.226	37.190	0.990	36.200	Circular	0.600

Name	Diameter (m)	Width (m)	Lock
UU MH1102			None
EX MH 13			None
EX MH 15	1.400	1.000	None
S02			None
S03			None
S04			None
S08			None
S13 - FLOW CONTROL			None
S05			None
S09			None
S06			None
S12 - GRIT SEPARATOR			None
S01			None
S07			None
RWP1			None
RWP4			None
RWP3			None
RWP2			None
S10			None
S11			None

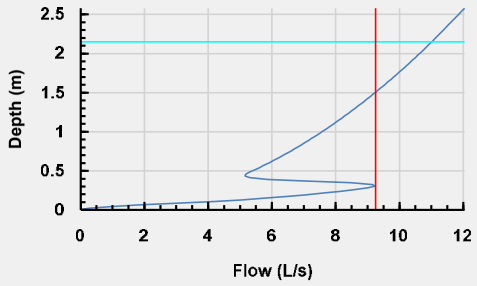
MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Junctions Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

Inlets

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
UU MH1102	Inlet (1)	C1.001 (EX)	(None)	No Restriction
EX MH 13	Inlet	C1.000 (EX)	(None)	No Restriction
EX MH 15	Inlet	S1.009	(None)	No Restriction
S02	Inlet	S1.000	(None)	No Restriction
	Inlet (2)	Catchment Area (6)	(None)	No Restriction
S03	Inlet	S1.001 PP1	(None)	No Restriction
S04	Inlet	S1.002 Catchment Area (10) Catchment Area (21) Catchment Area (13)	(None)	No Restriction
	Inlet (2)	Catchment Area (9)	(None)	No Restriction
S08	Inlet	S2.000	(None)	No Restriction
	Inlet (2)	Catchment Area (16)	(None)	No Restriction
S13 - FLOW CONTROL	Inlet	S1.008 Catchment Area (23) Catchment Area (25)	(None)	No Restriction
S05	Inlet	RWP2 PP2	(None)	No Restriction
	Inlet (3)	S1.003	(None)	No Restriction
S09	Inlet	S2.001	(None)	No Restriction
	Inlet (2)	Catchment Area (17) Catchment Area (18)	(None)	No Restriction
S06	Inlet	RWP1	(None)	No Restriction
	Inlet (1)	S1.004	(None)	No Restriction
	Inlet (2)	PP3	(None)	No Restriction
S12 - GRIT SEPARATOR	Inlet (1)	Pipe	(None)	No Restriction
S01	Inlet	RWP4 Catchment Area (5)	(None)	No Restriction
	Inlet (2)	Catchment Area (4)	(None)	No Restriction
S07	Inlet	RWP3	(None)	No Restriction
	Inlet (1)	Catchment Area (15)	(None)	No Restriction
RWP1	Inlet	ROOF AREA 1	(None)	No Restriction
RWP4	Inlet	ROOF AREA 4	(None)	No Restriction
RWP3	Inlet	ROOF AREA 3	(None)	No Restriction
RWP2	Inlet	ROOF AREA 2	(None)	No Restriction
S10	Inlet	S2.002 S1.005	(None)	No Restriction
S11	Inlet	PP4	(None)	No Restriction

MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Junctions Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
EX MH 13	Outlet	C1.001 (EX)	Free Discharge
EX MH 15	Outlet	C1.000 (EX)	Free Discharge
S02	Outlet	S1.001	Free Discharge
S03	Outlet	S1.002	Free Discharge
S04	Outlet	S1.003	Free Discharge
S08	Outlet	S2.001	Free Discharge
S13 - FLOW CONTROL	Outlet	S1.009	Hydro-Brake®
	Invert Level (m)	34.800	
	Design Depth (m)	2.150	
	Design Flow (L/s)	11.0	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☐	
	Unit Reference	CHE-0126-1100-2150-1100	
			
S05	Outlet	S1.004	Free Discharge
S09	Outlet	S2.002	Free Discharge
S06	Outlet	S1.005	Free Discharge
S12 - GRIT SEPARATOR	Outlet	S1.008	Free Discharge
S01	Outlet	S1.000	Free Discharge
S07	Outlet	S2.000	Free Discharge
RWP1	Outlet	RWP1	Free Discharge
RWP4	Outlet	RWP4	Free Discharge
RWP3	Outlet	RWP3	Free Discharge
RWP2	Outlet	RWP2	Free Discharge
S10	Outlet	S1.006	Free Discharge
S11	Outlet	S3.000	Free Discharge



PP3

Type : Porous Paving

Dimensions

Exceedance Level (m)	37.140
Depth (m)	0.320
Base Level (m)	36.820
Paving Layer Depth (mm)	90
Membrane Percolation (m/hr)	2.0
Porosity (%)	30
Length (m)	16.863
Long. Slope (1:X)	150.00
Width (m)	4.384
Total Volume (m³)	5.305

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Inlets

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (12)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (22)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (19)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	PP3
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	250.0



PP2

Type : Porous Paving

Dimensions

Exceedance Level (m)	37.080
Depth (m)	0.320
Base Level (m)	36.760
Paving Layer Depth (mm)	90
Membrane Percolation (m/hr)	2.0
Porosity (%)	30
Length (m)	9.151
Long. Slope (1:X)	150.00
Width (m)	6.654
Total Volume (m³)	4.314

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Inlets

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (20)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (14)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (3)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (11)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	PP2
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	250.0



PP4

Type : Porous Paving

Dimensions

Exceedance Level (m)	37.140
Depth (m)	0.320
Base Level (m)	36.820
Paving Layer Depth (mm)	90
Membrane Percolation (m/hr)	2.0
Porosity (%)	30
Length (m)	9.182
Long. Slope (1:X)	150.00
Width (m)	3.950
Total Volume (m³)	2.616

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (24)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	PP4
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	250.0



PP1

Type : Porous Paving

Dimensions

Exceedance Level (m)	37.100
Depth (m)	0.390
Base Level (m)	36.710
Paving Layer Depth (mm)	90
Membrane Percolation (m/hr)	2.0
Porosity (%)	30
Length (m)	31.115
Long. Slope (1:X)	150.00
Width (m)	3.960
Total Volume (m³)	11.459

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (8)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (7)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	PP1
Outlet Type	Under Drain

Advanced

Conductivity (m/hr)	250.0



TANK-A

Type : Cellular Storage

Dimensions

Exceedance Level (m)	37.140
Depth (m)	1.200
Base Level (m)	34.900
Number of Crates Long	10
Number of Crates Wide	27
Number of Crates High	3
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m^3)	154.940

Inlets

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	S3.000
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	S1.006
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe
Outlet Type	Free Discharge

MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Connections Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

Name	Length (m)	Connection Type	Slope (1:X)	Manning's n	Colebrook-White Roughness (mm)	Diameter / Base Width (mm)	Upstream Cover Level (m)	Upstream Invert Level (m)
C1.000 (EX)	7.791	Pipe	111.299		0.6	300	37.000	34.720
C1.001 (EX)	18.928	Pipe	61.059		0.6	300	37.190	34.650
S2.000	24.221	Pipe	107.650		0.6	300	37.200	35.300
S1.009	8.001	Pipe	100.007		0.6	300	37.000	34.800
S1.001	37.814	Pipe	189.068		0.6	225	37.170	35.700
S1.002	16.388	Pipe	81.941		0.6	300	37.100	35.500
S2.001	20.380	Pipe	203.802		0.6	300	37.150	35.075
PP1	2.614	Pipe	14.524		0.6	150	37.307	36.710
S1.008	5.814	Pipe	116.287		0.6	300	37.150	34.850
S1.005	8.011	Pipe	100.136		0.6	300	37.150	35.000
Pipe	4.935	Pipe	98.707		0.6	300	37.140	34.900
PP3	2.189	Pipe	12.159		0.6	150	37.252	36.830
PP2	1.927	Pipe	17.519		0.6	150	37.141	36.760
S1.003	19.597	Pipe	130.648		0.6	300	37.150	35.300
S2.002	9.086	Pipe	165.200		0.6	300	37.140	34.975
RWP4	12.039	Pipe	17.836		0.6	225	37.220	36.450
RWP1	6.958	Pipe	69.576		0.6	150	37.220	36.600
PP4	3.964	Pipe	33.033		0.6	150	37.201	36.820
S1.000	10.041	Pipe	133.880		0.6	225	37.200	35.775
RWP3	14.504	Pipe	96.694		0.6	150	37.220	36.600
RWP2	7.154	Pipe	71.541		0.6	225	37.220	36.450
S3.000	2.531	Pipe	10.123		0.6	150	37.190	36.200
S1.006	5.755	Pipe	287.748		0.6	300	37.144	34.920
S1.004	13.862	Pipe	92.416		0.6	300	37.150	35.150

Name	Downstream Cover Level (m)	Downstream Invert Level (m)	Part Family	Lock	Flow Restriction (L/s)	Velocity (m/s)	Culvert Type	Culvert Entrance
C1.000 (EX)	37.190	34.650		None			(None)	(None)
C1.001 (EX)	37.140	34.340		All			(None)	(None)
S2.000	37.150	35.075		None			(None)	(None)
S1.009	37.000	34.720		None	11.1		(None)	(None)
S1.001	37.100	35.500		None			(None)	(None)
S1.002	37.150	35.300		None			(None)	(None)
S2.001	37.140	34.975		None			(None)	(None)
PP1	37.100	36.530		Levels	0.0		(None)	(None)
S1.008	37.000	34.800		Levels			(None)	(None)
S1.005	37.144	34.920		None			(None)	(None)
Pipe	37.150	34.850		None			(None)	(None)
PP3	37.150	36.650		All	0.0		(None)	(None)
PP2	37.150	36.650		All	0.0		(None)	(None)
S1.003	37.150	35.150		None			(None)	(None)
S2.002	37.144	34.920		None			(None)	(None)
RWP4	37.200	35.775		All			(None)	(None)
RWP1	37.150	36.500		Levels			(None)	(None)
PP4	37.190	36.700		Levels	0.0		(None)	(None)
S1.000	37.170	35.700		None			(None)	(None)
RWP3	37.200	36.450		Levels			(None)	(None)
RWP2	37.150	36.350		Levels			(None)	(None)
S3.000	37.140	35.950		Levels			(None)	(None)
S1.006	37.140	34.900		None			(None)	(None)
S1.004	37.150	35.000		None			(None)	(None)

MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Connections Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

Name	Wall Thickness (mm)	Material	Trench Width (mm)	Bedding Material	Surrounding Material
C1.000 (EX)	0		0		
C1.001 (EX)	0		0		
S2.000	0		0		
S1.009	0		0		
S1.001	0		0		
S1.002	0		0		
S2.001	0		0		
PP1	0		0		
S1.008	0		0		
S1.005	0		0		
Pipe	0		0		
PP3	0		0		
PP2	0		0		
S1.003	0		0		
S2.002	0		0		
RWP4	0		0		
RWP1	0		0		
PP4	0		0		
S1.000	0		0		
RWP3	0		0		
RWP2	0		0		
S3.000	0		0		
S1.006	0		0		
S1.004	0		0		

MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Inflow Summary Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area (4)	S01		Time of Concentration	0.014	100	0	100	0.014
Catchment Area (5)	S01		Time of Concentration	0.033	100	0	100	0.033
Catchment Area (6)	S02		Time of Concentration	0.015	100	0	100	0.015
Catchment Area (7)	PP1		Time of Concentration	0.021	100	0	100	0.021
Catchment Area (8)	PP1		Time of Concentration	0.027	100	0	100	0.027
Catchment Area (9)	S04		Time of Concentration	0.038	100	0	100	0.038
Catchment Area (10)	S04		Time of Concentration	0.005	100	0	100	0.005
Catchment Area (11)	PP2		Time of Concentration	0.006	100	0	100	0.006
Catchment Area (12)	PP3		Time of Concentration	0.008	100	0	100	0.008
Catchment Area (13)	S04		Time of Concentration	0.005	100	0	100	0.005
Catchment Area (14)	PP2		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (15)	S07		Time of Concentration	0.022	100	0	100	0.022
Catchment Area (16)	S08		Time of Concentration	0.018	100	0	100	0.018
Catchment Area (17)	S09		Time of Concentration	0.017	100	0	100	0.017
Catchment Area (18)	S09		Time of Concentration	0.015	100	0	100	0.015
Catchment Area (19)	PP3		Time of Concentration	0.006	100	0	100	0.006
Catchment Area (20)	PP2		Time of Concentration	0.005	100	0	100	0.005
Catchment Area (21)	S04		Time of Concentration	0.006	100	0	100	0.006
Catchment Area (22)	PP3		Time of Concentration	0.008	100	0	100	0.008
Catchment Area (23)	S13 - FLOW CONTROL		Time of Concentration	0.007	100	0	100	0.007
Catchment Area (24)	PP4		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (25)	S13 - FLOW CONTROL		Time of Concentration	0.014	100	0	100	0.014
ROOF AREA 1	RWP1		Time of Concentration	0.036	100	0	100	0.036
ROOF AREA 2	RWP2		Time of Concentration	0.054	100	0	100	0.054
ROOF AREA 3	RWP3		Time of Concentration	0.036	100	0	100	0.036
ROOF AREA 4	RWP4		Time of Concentration	0.054	100	0	100	0.054
TOTAL		**0.0**		**0.479**				**0.479**

MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Network Design Criteria Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

Flow Options

Peak Flow Calculation	(UK) Modified Rational Method
Min. Time of Entry (mins)	5
Max. Travel Time (mins)	30

Pipe Options

Lock Slope Options	None
Design Options	Minimise Excavation
Design Level	Level Soffits
Min. Cover Depth (m)	1.200
Min. Slope (1:X)	500.00
Max. Slope (1:X)	40.00
Min. Velocity (m/s)	1.0
Max. Velocity (m/s)	3.0
Use Flow Restriction	☐
Reduce Channel Depths	☐

Pipe Size Library

Default

Add. Increment (mm)	75
Max. Diameter (mm)	0

Diameter (mm)	Min. Slope (1:X)	Max. Slope (1:X)
100	0.00	0.00
150	0.00	0.00

MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Network Design Criteria Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

Manhole Options

Apply Offset	☐

Manhole Size Library

Default

Diameter / Width

Connection (mm)	Diameter / Length (m)	Width (m)
0	1.200	0.000
375	1.350	0.000
500	1.500	0.000
750	1.800	0.000

Additional Sizing

Connection (mm)	900
Diameter / Length (m)	0.900
Width (m)	0.000

Depth

Depth (m)	Diameter / Length (m)	Width (m)
0.000	1.050	0.000
1.500	1.200	0.000

Access

Depth (m)	Ladder Protrusion (mm)
0.000	130
3.000	230

Benching Requirements

Landing Width (mm)	500
Benching Width (mm)	225

MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Outfall Details Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

Outfalls

Outfall	Outfall Type	Gated	Fixed Surcharged Level (m)	Level Curve
UU MH1102	Free Discharge			

MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Title: Rainfall Analysis Criteria	Buro Happold:		

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m^3)
ROOF AREA 3	FEH: 2 years: +0 %: 15 mins: Winter	0.04	5.6	2.565
ROOF AREA 1	FEH: 2 years: +0 %: 15 mins: Winter	0.04	5.6	2.568
ROOF AREA 4	FEH: 2 years: +0 %: 15 mins: Winter	0.05	8.2	3.793
ROOF AREA 2	FEH: 2 years: +0 %: 15 mins: Winter	0.05	8.2	3.787
Catchment Area (4)	FEH: 2 years: +0 %: 15 mins: Winter	0.01	2.1	0.991
Catchment Area (5)	FEH: 2 years: +0 %: 15 mins: Winter	0.03	5.1	2.332
Catchment Area (6)	FEH: 2 years: +0 %: 15 mins: Winter	0.02	2.3	1.081
Catchment Area (7)	FEH: 2 years: +0 %: 15 mins: Winter	0.02	3.3	1.509
Catchment Area (8)	FEH: 2 years: +0 %: 15 mins: Winter	0.03	4.2	1.919
Catchment Area (9)	FEH: 2 years: +0 %: 15 mins: Winter	0.04	5.7	2.655
Catchment Area (10)	FEH: 2 years: +0 %: 15 mins: Winter	0.00	0.7	0.344
Catchment Area (11)	FEH: 2 years: +0 %: 15 mins: Winter	0.01	1.0	0.443
Catchment Area (12)	FEH: 2 years: +0 %: 15 mins: Winter	0.01	1.2	0.545
Catchment Area (19)	FEH: 2 years: +0 %: 15 mins: Winter	0.01	0.9	0.425
Catchment Area (20)	FEH: 2 years: +0 %: 15 mins: Winter	0.01	0.8	0.356
Catchment Area (21)	FEH: 2 years: +0 %: 15 mins: Winter	0.01	0.9	0.425
Catchment Area (13)	FEH: 2 years: +0 %: 15 mins: Winter	0.01	0.8	0.362
Catchment Area (14)	FEH: 2 years: +0 %: 15 mins: Winter	0.00	0.7	0.320
Catchment Area (22)	FEH: 2 years: +0 %: 15 mins: Winter	0.01	1.1	0.530
Catchment Area (15)	FEH: 2 years: +0 %: 15 mins: Winter	0.02	3.4	1.572

Catchment Area (17)	FEH: 2 years: +0 %: 15 mins: Winter	0.02	2.6	1.209
Catchment Area (18)	FEH: 2 years: +0 %: 15 mins: Winter	0.02	2.4	1.090
Catchment Area (23)	FEH: 2 years: +0 %: 15 mins: Winter	0.01	1.1	0.527
Catchment Area (16)	FEH: 2 years: +0 %: 15 mins: Winter	0.02	2.7	1.263
Catchment Area (24)	FEH: 2 years: +0 %: 15 mins: Winter	0.00	0.6	0.257
Catchment Area (25)	FEH: 2 years: +0 %: 15 mins: Winter	0.01	2.1	0.979

MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Inflows Summary Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

FEH: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m^3)
ROOF AREA 3	FEH: 30 years: +0 %: 15 mins: Winter	0.04	12.1	5.610
ROOF AREA 1	FEH: 30 years: +0 %: 15 mins: Winter	0.04	12.2	5.616
ROOF AREA 4	FEH: 30 years: +0 %: 15 mins: Winter	0.05	18.0	8.288
ROOF AREA 2	FEH: 30 years: +0 %: 15 mins: Winter	0.05	17.9	8.282
Catchment Area (4)	FEH: 30 years: +0 %: 15 mins: Winter	0.01	4.7	2.172
Catchment Area (5)	FEH: 30 years: +0 %: 15 mins: Winter	0.03	11.0	5.101
Catchment Area (6)	FEH: 30 years: +0 %: 15 mins: Winter	0.02	5.1	2.360
Catchment Area (7)	FEH: 30 years: +0 %: 15 mins: Winter	0.02	7.2	3.307
Catchment Area (8)	FEH: 30 years: +0 %: 15 mins: Winter	0.03	9.1	4.196
Catchment Area (9)	FEH: 30 years: +0 %: 15 mins: Winter	0.04	12.6	5.805
Catchment Area (10)	FEH: 30 years: +0 %: 15 mins: Winter	0.00	1.6	0.752
Catchment Area (11)	FEH: 30 years: +0 %: 15 mins: Winter	0.01	2.1	0.970
Catchment Area (12)	FEH: 30 years: +0 %: 15 mins: Winter	0.01	2.6	1.195
Catchment Area (19)	FEH: 30 years: +0 %: 15 mins: Winter	0.01	2.0	0.926
Catchment Area (20)	FEH: 30 years: +0 %: 15 mins: Winter	0.01	1.7	0.773

Catchment Area (21)	FEH: 30 years: +0 %: 15 mins: Winter	0.01	2.0	0.929
Catchment Area (13)	FEH: 30 years: +0 %: 15 mins: Winter	0.01	1.7	0.800
Catchment Area (14)	FEH: 30 years: +0 %: 15 mins: Winter	0.00	1.5	0.689
Catchment Area (22)	FEH: 30 years: +0 %: 15 mins: Winter	0.01	2.5	1.159
Catchment Area (15)	FEH: 30 years: +0 %: 15 mins: Winter	0.02	7.4	3.438
Catchment Area (17)	FEH: 30 years: +0 %: 15 mins: Winter	0.02	5.7	2.636
Catchment Area (18)	FEH: 30 years: +0 %: 15 mins: Winter	0.02	5.2	2.381
Catchment Area (23)	FEH: 30 years: +0 %: 15 mins: Winter	0.01	2.5	1.150
Catchment Area (16)	FEH: 30 years: +0 %: 15 mins: Winter	0.02	6.0	2.759
Catchment Area (24)	FEH: 30 years: +0 %: 15 mins: Winter	0.00	1.2	0.560
Catchment Area (25)	FEH: 30 years: +0 %: 15 mins: Winter	0.01	4.6	2.142

MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Inflows Summary Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

FEH: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m^3)
ROOF AREA 3	FEH: 100 years: +45 %: 15 mins: Winter	0.04	22.4	10.329
ROOF AREA 1	FEH: 100 years: +45 %: 15 mins: Winter	0.04	22.4	10.359
ROOF AREA 4	FEH: 100 years: +45 %: 15 mins: Winter	0.05	33.1	15.279
ROOF AREA 2	FEH: 100 years: +45 %: 15 mins: Winter	0.05	33.1	15.261
Catchment Area (4)	FEH: 100 years: +45 %: 15 mins: Winter	0.01	8.7	3.994
Catchment Area (5)	FEH: 100 years: +45 %: 15 mins: Winter	0.03	20.4	9.403
Catchment Area (6)	FEH: 100 years: +45 %: 15 mins: Winter	0.02	9.4	4.351
Catchment Area (7)	FEH: 100 years: +45 %: 15 mins: Winter	0.02	13.2	6.095
Catchment Area (8)	FEH: 100 years: +45 %: 15 mins: Winter	0.03	16.8	7.737
Catchment Area (9)	FEH: 100 years: +45 %: 15 mins: Winter	0.04	23.2	10.703
Catchment Area (10)	FEH: 100 years: +45 %: 15 mins: Winter	0.00	3.0	1.384
Catchment Area (11)	FEH: 100 years: +45 %: 15 mins: Winter	0.01	3.9	1.783
Catchment Area (12)	FEH: 100 years: +45 %: 15 mins: Winter	0.01	4.8	2.193
Catchment Area (19)	FEH: 100 years: +45 %: 15 mins: Winter	0.01	3.7	1.711
Catchment Area (20)	FEH: 100 years: +45 %: 15 mins: Winter	0.01	3.1	1.432

Catchment Area (21)	FEH: 100 years: +45 %: 15 mins: Winter	0.01	3.7	1.714
Catchment Area (13)	FEH: 100 years: +45 %: 15 mins: Winter	0.01	3.2	1.471
Catchment Area (14)	FEH: 100 years: +45 %: 15 mins: Winter	0.00	2.8	1.279
Catchment Area (22)	FEH: 100 years: +45 %: 15 mins: Winter	0.01	4.6	2.136
Catchment Area (15)	FEH: 100 years: +45 %: 15 mins: Winter	0.02	13.7	6.335
Catchment Area (17)	FEH: 100 years: +45 %: 15 mins: Winter	0.02	10.5	4.860
Catchment Area (18)	FEH: 100 years: +45 %: 15 mins: Winter	0.02	9.5	4.387
Catchment Area (23)	FEH: 100 years: +45 %: 15 mins: Winter	0.01	4.6	2.124
Catchment Area (16)	FEH: 100 years: +45 %: 15 mins: Winter	0.02	11.0	5.085
Catchment Area (24)	FEH: 100 years: +45 %: 15 mins: Winter	0.00	2.2	1.031
Catchment Area (25)	FEH: 100 years: +45 %: 15 mins: Winter	0.01	8.5	3.943

MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
UU MH1102	FEH: 2 years: +0 %: 120 mins: Winter	37.140	34.340	34.391	0.051	9.1	0.000	0.000	9.1	70.815	OK
EX MH 13	FEH: 2 years: +0 %: 120 mins: Winter	37.190	34.650	34.703	0.053	9.1	0.060	0.000	9.1	70.815	OK
EX MH 15	FEH: 2 years: +0 %: 120 mins: Winter	37.000	34.720	34.783	0.063	9.1	0.088	0.000	9.1	70.843	OK
S02	FEH: 2 years: +0 %: 15 mins: Winter	37.170	35.700	35.809	0.109	17.3	0.123	0.000	16.2	8.202	OK
S03	FEH: 2 years: +0 %: 15 mins: Winter	37.100	35.500	35.574	0.074	16.2	0.084	0.000	15.3	11.021	OK
S04	FEH: 2 years: +0 %: 15 mins: Winter	37.150	35.300	35.405	0.105	23.5	0.119	0.000	22.4	14.756	OK
S08	FEH: 2 years: +0 %: 120 mins: Winter	37.150	35.075	35.161	0.086	4.0	0.098	0.000	4.0	11.656	OK
S13 - FLOW CONTROL	FEH: 2 years: +0 %: 120 mins: Winter	37.000	34.800	35.159	0.359	9.2	0.634	0.000	9.1	70.888	Surcharged
S05	FEH: 2 years: +0 %: 15 mins: Winter	37.150	35.150	35.266	0.116	30.9	0.131	0.000	29.5	19.441	OK
S09	FEH: 2 years: +0 %: 120 mins: Winter	37.140	34.975	35.161	0.186	5.7	0.210	0.000	5.2	16.582	OK
S06	FEH: 2 years: +0 %: 120 mins: Winter	37.150	35.000	35.162	0.162	17.7	0.183	0.000	17.6	52.364	OK
S12 - GRIT SEPARATOR	FEH: 2 years: +0 %: 120 mins: Winter	37.150	34.850	35.159	0.309	8.8	0.547	0.000	8.8	67.727	Surcharged
S01	FEH: 2 years: +0 %: 15 mins: Winter	37.200	35.775	35.875	0.100	15.3	0.028	0.000	14.9	7.115	OK
S07	FEH: 2 years: +0 %: 15 mins: Winter	37.200	35.300	35.357	0.057	8.8	0.065	0.000	8.5	4.136	OK
RWP1	FEH: 2 years: +0 %: 15 mins: Winter	37.220	36.600	36.656	0.056	5.6	0.001	0.000	5.5	2.568	OK
RWP4	FEH: 2 years: +0 %: 15 mins: Winter	37.220	36.450	36.489	0.039	8.2	0.001	0.000	8.1	3.795	OK
RWP3	FEH: 2 years: +0 %: 15 mins: Winter	37.220	36.600	36.659	0.059	5.6	0.001	0.000	5.4	2.564	OK
RWP2	FEH: 2 years: +0 %: 15 mins: Winter	37.220	36.450	36.509	0.059	8.2	0.001	0.000	8.1	3.787	OK
S10	FEH: 2 years: +0 %: 120 mins: Winter	37.144	34.920	35.161	0.241	22.8	0.273	0.000	22.3	68.930	OK
S11	FEH: 2 years: +0 %: 15 mins: Winter	37.190	36.200	36.208	0.008	0.3	0.002	0.000	0.3	0.196	OK

MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

FEH: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
UU MH1102	FEH: 30 years: +0 %: 960 mins: Summer	37.140	34.340	34.391	0.051	9.2	0.000	0.000	9.2	225.052	OK
EX MH 13	FEH: 30 years: +0 %: 960 mins: Summer	37.190	34.650	34.703	0.053	9.2	0.060	0.000	9.2	225.052	OK
EX MH 15	FEH: 30 years: +0 %: 960 mins: Summer	37.000	34.720	34.783	0.063	9.2	0.089	0.000	9.2	225.054	OK
S02	FEH: 30 years: +0 %: 15 mins: Winter	37.170	35.700	35.882	0.182	37.8	0.206	0.000	35.5	17.926	OK
S03	FEH: 30 years: +0 %: 15 mins: Winter	37.100	35.500	35.625	0.125	39.0	0.141	0.000	36.8	24.749	OK
S04	FEH: 30 years: +0 %: 120 mins: Winter	37.150	35.300	35.618	0.318	22.8	0.359	0.000	22.8	66.848	Surcharged
S08	FEH: 30 years: +0 %: 120 mins: Winter	37.150	35.075	35.617	0.542	8.0	0.613	0.000	6.1	21.603	Surcharged
S13 - FLOW CONTROL	FEH: 30 years: +0 %: 120 mins: Winter	37.000	34.800	35.615	0.815	9.2	1.441	0.000	8.8	80.296	Surcharged
S05	FEH: 30 years: +0 %: 120 mins: Winter	37.150	35.150	35.617	0.467	30.1	0.529	0.000	28.7	87.145	Surcharged
S09	FEH: 30 years: +0 %: 120 mins: Winter	37.140	34.975	35.617	0.642	9.5	0.726	0.000	8.7	30.043	Surcharged
S06	FEH: 30 years: +0 %: 120 mins: Winter	37.150	35.000	35.617	0.617	34.5	0.698	0.000	33.7	103.529	Surcharged
S12 - GRIT SEPARATOR	FEH: 30 years: +0 %: 120 mins: Winter	37.150	34.850	35.616	0.766	7.8	1.353	0.000	7.2	74.933	Surcharged
S01	FEH: 30 years: +0 %: 15 mins: Winter	37.200	35.775	35.949	0.174	33.6	0.049	0.000	32.7	15.559	OK
S07	FEH: 30 years: +0 %: 120 mins: Winter	37.200	35.300	35.617	0.317	6.1	0.358	0.000	6.2	17.870	Surcharged
RWP1	FEH: 30 years: +0 %: 15 mins: Winter	37.220	36.600	36.689	0.089	12.2	0.002	0.000	12.0	5.615	OK
RWP4	FEH: 30 years: +0 %: 15 mins: Winter	37.220	36.450	36.507	0.057	18.0	0.002	0.000	17.9	8.291	OK
RWP3	FEH: 30 years: +0 %: 15 mins: Winter	37.220	36.600	36.695	0.095	12.1	0.002	0.000	11.8	5.609	OK
RWP2	FEH: 30 years: +0 %: 15 mins: Winter	37.220	36.450	36.542	0.092	17.9	0.002	0.000	17.7	8.282	OK
S10	FEH: 30 years: +0 %: 120 mins: Winter	37.144	34.920	35.617	0.697	42.4	0.788	0.000	42.0	132.204	Surcharged
S11	FEH: 30 years: +0 %: 15 mins: Winter	37.190	36.200	36.213	0.013	0.8	0.004	0.000	0.8	0.491	OK

MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

FEH: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
UU MH1102	FEH: 100 years: +45 %: 180 mins: Winter	37.140	34.340	34.396	0.056	11.0	0.000	0.000	11.0	173.572	OK
EX MH 13	FEH: 100 years: +45 %: 180 mins: Winter	37.190	34.650	34.708	0.058	11.0	0.065	0.000	11.0	173.572	OK
EX MH 15	FEH: 100 years: +45 %: 180 mins: Winter	37.000	34.720	34.789	0.069	11.0	0.097	0.000	11.0	173.718	OK
S02	FEH: 100 years: +45 %: 180 mins: Winter	37.170	35.700	37.010	1.310	16.6	1.481	0.000	16.6	72.179	Flood Risk
S03	FEH: 100 years: +45 %: 180 mins: Winter	37.100	35.500	37.007	1.507	23.1	1.704	0.000	21.3	101.332	Flood Risk
S04	FEH: 100 years: +45 %: 180 mins: Winter	37.150	35.300	37.006	1.706	28.5	1.929	0.000	27.5	131.210	Flood Risk
S08	FEH: 100 years: +45 %: 180 mins: Winter	37.150	35.075	37.004	1.929	10.5	2.182	0.000	10.0	43.895	Flood Risk
S13 - FLOW CONTROL	FEH: 100 years: +45 %: 180 mins: Winter	37.000	34.800	37.001	2.201	13.4	4.471	0.583	11.0	173.930	Flood
S05	FEH: 100 years: +45 %: 180 mins: Winter	37.150	35.150	37.005	1.855	37.4	2.098	0.000	37.0	183.203	Flood Risk
S09	FEH: 100 years: +45 %: 180 mins: Winter	37.140	34.975	37.004	2.029	14.7	2.295	0.000	14.2	62.148	Flood Risk
S06	FEH: 100 years: +45 %: 180 mins: Winter	37.150	35.000	37.005	2.005	45.2	2.267	0.000	44.8	209.730	Flood Risk
S12 - GRIT SEPARATOR	FEH: 100 years: +45 %: 180 mins: Winter	37.150	34.850	37.002	2.152	15.3	3.802	0.000	11.8	162.576	Flood Risk
S01	FEH: 100 years: +45 %: 180 mins: Winter	37.200	35.775	37.010	1.235	14.4	0.350	0.000	14.4	62.665	Flood Risk
S07	FEH: 100 years: +45 %: 180 mins: Winter	37.200	35.300	37.004	1.704	8.4	1.928	0.000	7.9	35.212	Flood Risk
RWP1	FEH: 100 years: +45 %: 180 mins: Winter	37.220	36.600	37.005	0.405	5.2	0.007	0.000	5.2	22.626	Flood Risk
RWP4	FEH: 100 years: +45 %: 180 mins: Winter	37.220	36.450	37.011	0.561	7.7	0.017	0.000	7.7	33.329	Flood Risk
RWP3	FEH: 100 years: +45 %: 180 mins: Winter	37.220	36.600	37.005	0.405	5.2	0.007	0.000	5.2	22.527	Flood Risk
RWP2	FEH: 100 years: +45 %: 180 mins: Winter	37.220	36.450	37.005	0.555	7.7	0.010	0.000	7.7	33.312	Flood Risk
S10	FEH: 100 years: +45 %: 180 mins: Winter	37.144	34.920	37.004	2.084	58.9	2.357	0.000	58.5	268.888	Flood Risk
S11	FEH: 100 years: +45 %: 180 mins: Winter	37.190	36.200	37.003	0.803	2.5	0.227	0.000	1.4	6.057	Flood Risk

MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
TANK-A	FEH: 2 years: +0 %: 120 mins: Winter	35.160	35.160	0.260	0.260	22.5	33.374	0.000	0.000	8.8	67.757	78.460	OK
PP3	FEH: 2 years: +0 %: 30 mins: Winter	36.971	36.868	0.039	0.048	2.1	0.928	0.000	0.000	1.8	1.801	82.508	OK
PP2	FEH: 2 years: +0 %: 30 mins: Winter	36.854	36.796	0.033	0.036	1.6	0.635	0.000	0.000	1.3	1.375	85.279	OK
PP4	FEH: 2 years: +0 %: 30 mins: Winter	36.898	36.835	0.017	0.015	0.4	0.167	0.000	0.000	0.3	0.312	93.635	OK
PP1	FEH: 2 years: +0 %: 30 mins: Winter	36.977	36.788	0.060	0.078	4.8	2.308	0.000	0.000	4.2	4.226	79.860	OK

MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

FEH: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
TANK-A	FEH: 30 years: +0 %: 120 mins: Winter	35.616	35.616	0.716	0.716	42.3	91.836	0.000	0.000	7.8	76.218	40.728	OK
PP3	FEH: 30 years: +0 %: 30 mins: Winter	36.991	36.904	0.059	0.084	4.7	1.490	0.000	0.000	4.5	4.176	71.908	OK
PP2	FEH: 30 years: +0 %: 30 mins: Winter	36.871	36.826	0.050	0.066	3.5	1.063	0.000	0.000	3.3	3.133	75.371	OK
PP4	FEH: 30 years: +0 %: 30 mins: Winter	36.905	36.846	0.024	0.026	0.8	0.274	0.000	0.000	0.7	0.712	89.522	OK
PP1	FEH: 30 years: +0 %: 30 mins: Winter	37.014	36.845	0.097	0.135	10.8	3.906	0.000	0.000	9.8	9.670	65.914	OK

MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

FEH: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
TANK-A	FEH: 100 years: +45 %: 240 mins: Winter	37.003	37.003	2.103	2.103	47.6	154.804	0.000	0.000	12.6	214.111	0.088	OK
PP3	FEH: 100 years: +45 %: 180 mins: Winter	37.005	37.004	0.073	0.184	3.0	2.854	0.000	0.000	3.0	14.010	46.197	OK
PP2	FEH: 100 years: +45 %: 180 mins: Winter	37.293	37.293	0.472	0.533	5.6	14.929	11.083	0.000	8.9	20.578	-246.019	Flood
PP4	FEH: 100 years: +45 %: 180 mins: Winter	37.003	37.003	0.122	0.183	1.3	1.657	0.000	0.000	1.8	4.768	36.656	OK
PP1	FEH: 100 years: +45 %: 15 mins: Winter	37.151	36.897	0.234	0.187	29.9	7.405	0.000	0.000	15.7	13.039	35.380	OK

MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Connections Summary Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
C1.000 (EX)	FEH: 2 years: +0 %: 120 mins: Winter	Pipe	EX MH 15	EX MH 13	37.000	34.783	0.058	70.843	1.0	0.09	9.1	OK
C1.001 (EX)	FEH: 2 years: +0 %: 120 mins: Winter	Pipe	EX MH 13	UU MH1102	37.190	34.703	0.052	70.815	1.1	0.06	9.1	OK
S2.000	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S07	S08	37.200	35.357	0.065	4.136	0.7	0.08	8.5	OK
S1.009	FEH: 2 years: +0 %: 120 mins: Winter	Pipe	S13 - FLOW CONTROL	EX MH 15	37.000	35.159	0.063	70.872	0.9	0.08	9.1	Surcharged
S1.001	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S02	S03	37.170	35.809	0.092	8.202	1.1	0.43	16.2	OK
S1.002	FEH: 2 years: +0 %: 30 mins: Winter	Pipe	S03	S04	37.100	35.574	0.086	14.847	0.9	0.12	15.3	OK
S2.001	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S08	S09	37.150	35.148	0.102	5.402	0.5	0.14	10.5	OK
PP1	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	PP1	S03	37.307	36.772	0.035	2.900	1.6	0.11	5.1	OK
S1.008	FEH: 2 years: +0 %: 120 mins: Winter	Pipe	S12 - GRIT SEPARATOR	S13 - FLOW CONTROL	37.150	35.159	0.300	67.727	0.2	0.09	8.8	Surcharged
S1.005	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S06	S10	37.150	35.142	0.159	23.043	0.9	0.3	33.8	OK
Pipe	FEH: 2 years: +0 %: 120 mins: Winter	Pipe	TANK-A	S12 - GRIT SEPARATOR	37.140	35.160	0.285	67.757	0.5	0.08	8.8	OK
PP3	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	PP3	S06	37.252	36.860	0.021	1.230	1.4	0.04	2.1	OK
PP2	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	PP2	S05	37.141	36.794	0.020	0.951	1.1	0.03	1.4	OK
S1.003	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S04	S05	37.150	35.405	0.111	14.756	0.9	0.23	22.4	OK
S2.002	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	S09	S10	37.140	35.102	0.150	6.609	0.4	0.17	14.6	OK
RWP4	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	RWP4	S01	37.220	36.489	0.070	3.795	0.8	0.07	8.1	OK
RWP1	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	RWP1	S06	37.220	36.656	0.054	2.568	1.0	0.26	5.5	OK
PP4	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	PP4	S11	37.201	36.835	0.011	0.200	0.5	0.01	0.3	OK

MMU Library Transformation Project:			Date: 19/03/2026		
			Designed by: NC	Checked by:	Approved By:
Report Details: Type: Connections Summary Storm Phase: Surface Network - 13.5m x 10m x			Buro Happold:		

S1.000	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S01	S02	37.200	35.875	0.105	7.115	0.8	0.33	14.9	OK
RWP3	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	RWP3	S07	37.220	36.659	0.057	2.564	0.9	0.3	5.4	OK
RWP2	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	RWP2	S05	37.220	36.509	0.057	3.787	1.0	0.13	8.1	OK
S3.000	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S11	TANK-A	37.190	36.208	0.008	0.196	0.8	0.01	0.3	OK
S1.006	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	S10	TANK-A	37.144	35.092	0.151	26.691	1.9	0.71	46.2	OK
S1.004	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	S05	S06	37.150	35.266	0.129	19.441	1.0	0.26	29.5	OK

MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Connections Summary Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

FEH: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m^3)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
C1.000 (EX)	FEH: 30 years: +0 %: 960 mins: Summer	Pipe	EX MH 15	EX MH 13	37.000	34.783	0.058	225.054	1.0	0.09	9.2	OK
C1.001 (EX)	FEH: 30 years: +0 %: 960 mins: Summer	Pipe	EX MH 13	UU MH1102	37.190	34.703	0.052	225.052	1.1	0.06	9.2	OK
S2.000	FEH: 30 years: +0 %: 15 mins: Winter	Pipe	S07	S08	37.200	35.384	0.146	8.993	0.7	0.18	18.8	OK
S1.009	FEH: 30 years: +0 %: 240 mins: Summer	Pipe	S13 - FLOW CONTROL	EX MH 15	37.000	35.493	0.063	153.238	0.9	0.08	9.2	Surcharged
S1.001	FEH: 30 years: +0 %: 15 mins: Winter	Pipe	S02	S03	37.170	35.882	0.153	17.926	1.2	0.94	35.5	OK
S1.002	FEH: 30 years: +0 %: 15 mins: Winter	Pipe	S03	S04	37.100	35.625	0.151	24.749	1.1	0.3	36.8	OK
S2.001	FEH: 30 years: +0 %: 15 mins: Winter	Pipe	S08	S09	37.150	35.334	0.300	10.063	0.5	0.27	21.3	OK
PP1	FEH: 30 years: +0 %: 15 mins: Winter	Pipe	PP1	S03	37.307	36.812	0.055	6.920	2.0	0.24	11.4	OK
S1.008	FEH: 30 years: +0 %: 240 mins: Summer	Pipe	S12 - GRIT SEPARATOR	S13 - FLOW CONTROL	37.150	35.493	0.300	146.468	0.2	0.09	9.1	Surcharged
S1.005	FEH: 30 years: +0 %: 15 mins: Winter	Pipe	S06	S10	37.150	35.335	0.300	49.940	1.2	0.74	82.2	Surcharged
Pipe	FEH: 30 years: +0 %: 480 mins: Winter	Pipe	TANK-A	S12 - GRIT SEPARATOR	37.140	35.466	0.300	198.756	0.5	0.08	9.0	Surcharged
PP3	FEH: 30 years: +0 %: 15 mins: Winter	Pipe	PP3	S06	37.252	36.885	0.032	2.989	1.7	0.09	4.7	OK
PP2	FEH: 30 years: +0 %: 15 mins: Winter	Pipe	PP2	S05	37.141	36.814	0.030	2.241	1.3	0.08	3.3	OK
S1.003	FEH: 30 years: +0 %: 15 mins: Winter	Pipe	S04	S05	37.150	35.478	0.192	32.949	1.1	0.53	51.9	OK

MMU Library Transformation Project:			Date: 19/03/2026		
			Designed by: NC	Checked by:	Approved By:
Report Details: Type: Connections Summary Storm Phase: Surface Network - 13.5m x 10m x			Buro Happold:		

S2.002	FEH: 30 years: +0 %: 15 mins: Winter	Pipe	S09	S10	37.140	35.335	0.300	13.555	0.6	0.4	34.4	Surcharged
RWP4	FEH: 30 years: +0 %: 15 mins: Winter	Pipe	RWP4	S01	37.220	36.507	0.116	8.291	0.9	0.14	17.9	OK
RWP1	FEH: 30 years: +0 %: 15 mins: Winter	Pipe	RWP1	S06	37.220	36.689	0.085	5.615	1.2	0.56	12.0	OK
PP4	FEH: 30 years: +0 %: 15 mins: Winter	Pipe	PP4	S11	37.201	36.844	0.016	0.496	0.7	0.02	0.8	OK
S1.000	FEH: 30 years: +0 %: 15 mins: Winter	Pipe	S01	S02	37.200	35.949	0.178	15.559	1.0	0.73	32.7	OK
RWP3	FEH: 30 years: +0 %: 15 mins: Winter	Pipe	RWP3	S07	37.220	36.695	0.091	5.609	1.0	0.65	11.8	OK
RWP2	FEH: 30 years: +0 %: 15 mins: Winter	Pipe	RWP2	S05	37.220	36.542	0.087	8.282	1.2	0.29	17.7	OK
S3.000	FEH: 30 years: +0 %: 15 mins: Winter	Pipe	S11	TANK-A	37.190	36.213	0.013	0.491	1.1	0.01	0.8	OK
S1.006	FEH: 30 years: +0 %: 15 mins: Summer	Pipe	S10	TANK-A	37.144	35.284	0.300	55.720	2.3	1.73	113.0	Surcharged
S1.004	FEH: 30 years: +0 %: 15 mins: Winter	Pipe	S05	S06	37.150	35.355	0.261	42.522	1.1	0.59	68.2	OK

MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Connections Summary Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

FEH: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m^3)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
C1.000 (EX)	FEH: 100 years: +45 %: 180 mins: Winter	Pipe	EX MH 15	EX MH 13	37.000	34.789	0.064	173.718	1.0	0.1	11.0	OK
C1.001 (EX)	FEH: 100 years: +45 %: 180 mins: Winter	Pipe	EX MH 13	UU MH1102	37.190	34.708	0.057	173.572	1.2	0.08	11.0	OK
S2.000	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	S07	S08	37.200	35.734	0.300	15.459	0.8	0.22	24.0	Surcharged
S1.009	FEH: 100 years: +45 %: 180 mins: Winter	Pipe	S13 - FLOW CONTROL	EX MH 15	37.000	37.001	0.069	173.866	0.9	0.1	11.0	Flood
S1.001	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	S02	S03	37.170	36.467	0.225	32.633	1.3	1.32	49.9	Surcharged
S1.002	FEH: 100 years: +45 %: 30 mins: Winter	Pipe	S03	S04	37.100	36.282	0.300	58.725	0.9	0.45	55.5	Surcharged
S2.001	FEH: 100 years: +45 %: 30 mins: Winter	Pipe	S08	S09	37.150	36.013	0.300	24.716	0.5	0.37	28.4	Surcharged
PP1	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	PP1	S03	37.307	36.910	0.066	13.017	2.1	0.33	15.7	Surcharged
S1.008	FEH: 100 years: +45 %: 180 mins: Winter	Pipe	S12 - GRIT SEPARATOR	S13 - FLOW CONTROL	37.150	37.002	0.300	162.576	0.2	0.11	11.8	Flood Risk
S1.005	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	S06	S10	37.150	35.825	0.300	89.798	1.9	1.21	134.4	Surcharged
Pipe	FEH: 100 years: +45 %: 120 mins: Winter	Pipe	TANK-A	S12 - GRIT SEPARATOR	37.140	37.002	0.300	111.803	0.5	0.14	15.5	Surcharged
PP3	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	PP3	S06	37.252	36.923	0.045	5.694	1.9	0.17	8.5	OK
PP2	FEH: 100 years: +45 %: 180 mins: Winter	Pipe	PP2	S05	37.141	37.262	0.150	12.551	1.2	0.21	8.9	Flood
S1.003	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	S04	S05	37.150	36.039	0.300	57.876	1.1	0.81	78.9	Surcharged

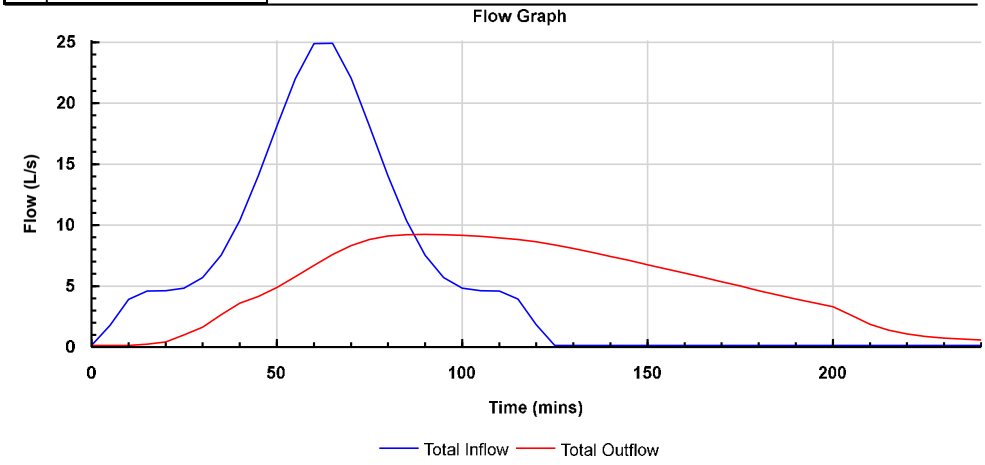
S2.002	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	S09	S10	37.140	35.734	0.300	25.187	0.6	0.49	42.7	Surcharged
RWP4	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	RWP4	S01	37.220	36.526	0.225	13.644	0.8	0.25	31.4	OK
RWP1	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	RWP1	S06	37.220	36.762	0.141	10.358	1.2	0.99	21.2	Surcharged
PP4	FEH: 100 years: +45 %: 30 mins: Winter	Pipe	PP4	S11	37.201	36.856	0.022	1.344	0.9	0.05	1.4	OK
S1.000	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	S01	S02	37.200	36.425	0.225	25.591	1.3	1.12	50.1	Surcharged
RWP3	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	RWP3	S07	37.220	36.823	0.150	10.327	1.2	1.16	20.9	Surcharged
RWP2	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	RWP2	S05	37.220	36.584	0.125	15.262	1.4	0.53	32.7	OK
S3.000	FEH: 100 years: +45 %: 60 mins: Winter	Pipe	S11	TANK-A	37.190	36.940	0.150	2.137	1.2	0.03	1.5	Flood Risk
S1.006	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	S10	TANK-A	37.144	35.734	0.300	113.134	2.4	2.65	172.8	Surcharged
S1.004	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	S05	S06	37.150	35.930	0.300	75.438	1.6	0.96	111.1	Surcharged

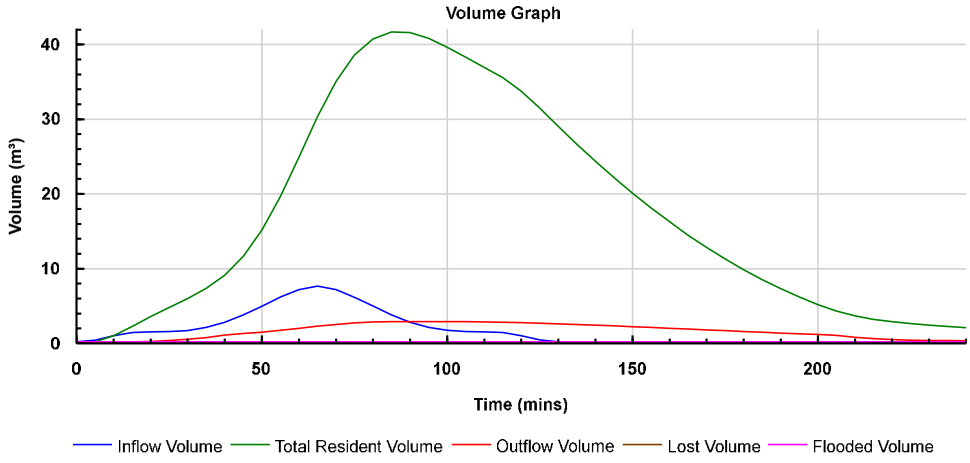
Surface Network - 13.5m x 10m x 1.2m DP
FEH: 2 years: Increase Rainfall (%): +0: 120 mins: Winter

Tables

Name	Max. Inflow (L/s)	Total Inflow Volume (m³)	Max. Outflow (L/s)	Total Outflow Volume (m³)
UU MH1102			9.1	70.815
TOTAL	24.9	72.936	9.1	70.815

Graphs





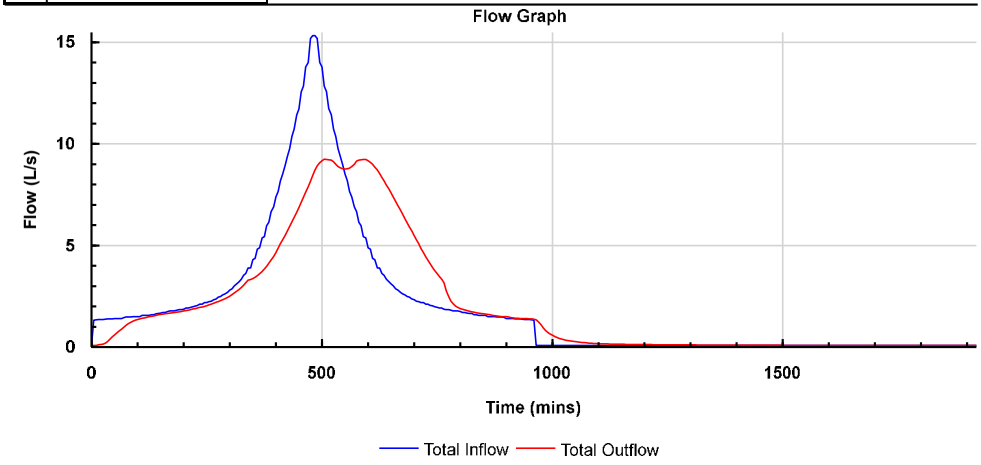
MMU Library Transformation Project:	Date: 19/03/2026		
	Designed by: NC	Checked by:	Approved By:
Report Details: Type: Phase Management Storm Phase: Surface Network - 13.5m x 10m x	Buro Happold:		

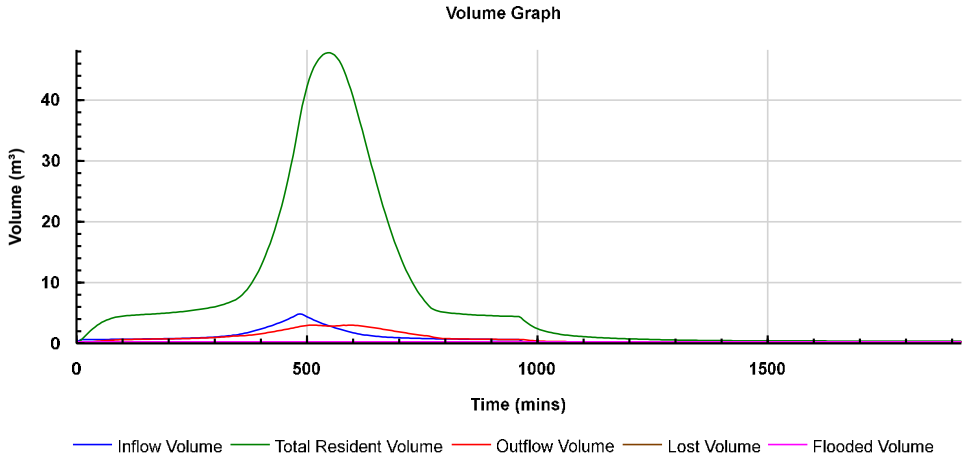
Surface Network - 13.5m x 10m x 1.2m DP
FEH: 30 years: Increase Rainfall (%): +0: 960 mins: Summer

Tables

Name	Max. Inflow (L/s)	Total Inflow Volume (m³)	Max. Outflow (L/s)	Total Outflow Volume (m³)
UU MH1102			9.2	225.052
TOTAL	15.3	225.041	9.2	225.052

Graphs





Surface Network - 13.5m x 10m x 1.2m DP
FEH: 100 years: Increase Rainfall (%): +45: 180 mins: Winter

Tables

Name	Max. Inflow (L/s)	Total Inflow Volume (m³)	Max. Outflow (L/s)	Total Outflow Volume (m³)
UU MH1102			11.0	173.572
TOTAL	68.7	297.445	11.0	173.572

Graphs

