

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	2	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	0.750	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	50.0		

Adoptable Manhole Type

Max Width (mm)	Diameter (mm)	Max Width (mm)	Diameter (mm)
374	1200	749	1500
499	1350	900	1800

>900 Link+900 mm

Max Depth (m)	Diameter (mm)	Max Depth (m)	Diameter (mm)
1.500	1050	99.999	1200

Nodes

Name	T of E (mins)	Add Inflow (l/s)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
HW12	5.00	14.8	22.820	1200	530802.759	120552.307	0.820
53			23.820	1200	530797.990	120547.122	2.020
54			22.200	1200	530861.763	120502.925	2.000
HW13			20.400		530879.064	120491.044	0.850

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	HW12	53	7.045	0.600	22.000	21.800	0.200	35.2	300	5.04	50.0
1.001	53	54	77.591	0.600	21.800	20.200	1.600	48.5	300	5.62	50.0
1.002	54	HW13	20.988	0.600	20.200	19.550	0.650	32.3	300	5.74	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	2.657	187.8	14.8	0.520	1.720	0.000	14.8	57	1.605
1.001	2.263	160.0	14.8	1.720	1.700	0.000	14.8	61	1.431
1.002	2.776	196.2	14.8	1.700	0.550	0.000	14.8	55	1.657

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	7.045	35.2	300	Circular_Default Sewer Type	22.820	22.000	0.520	23.820	21.800	1.720
1.001	77.591	48.5	300	Circular_Default Sewer Type	23.820	21.800	1.720	22.200	20.200	1.700
1.002	20.988	32.3	300	Circular_Default Sewer Type	22.200	20.200	1.700	20.400	19.550	0.550

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	HW12	1200	Manhole	Adoptable	53	1200	Manhole	Adoptable
1.001	53	1200	Manhole	Adoptable	54	1200	Manhole	Adoptable
1.002	54	1200	Manhole	Adoptable	HW13		Junction	

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Detailed	Starting Level (m)	
Rainfall Events	Singular	Skip Steady State	✓	Check Discharge Rate(s)	✓
Summer CV	0.750	Drain Down Time (mins)	240	Check Discharge Volume	✓
Winter CV	0.840	Additional Storage (m ³ /ha)	20.0	100 year 360 minute (m ³)	

Storm Durations

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

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0	200	0	0	0

Pre-development Discharge Rate

Site Makeup	Greenfield	SPR	0.10	Betterment (%)	0
Greenfield Method	IH124	Region	1	QBar	
Positively Drained Area (ha)		Growth Factor 1 year	0.85	Q 1 year (l/s)	
SAAR (mm)		Growth Factor 30 year	1.95	Q 30 year (l/s)	
Soil Index	1	Growth Factor 100 year	2.48	Q 100 year (l/s)	

Pre-development Discharge Volume

Site Makeup	Greenfield	SPR	0.10	Storm Duration (mins)	360
Greenfield Method	FSR/FEH	CWI		Betterment (%)	0
Positively Drained Area (ha)		Return Period (years)	100	PR	
Soil Index	1	Climate Change (%)	0	Runoff Volume (m ³)	

Results for 2 year Critical Storm Duration. Lowest mass balance: 95.31%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute summer	HW12	1	22.061	0.061	14.8	0.0688	0.0000	OK
15 minute summer	53	2	21.864	0.064	14.9	0.0728	0.0000	OK
15 minute summer	54	2	20.255	0.055	15.4	0.0625	0.0000	OK
15 minute summer	HW13	2	19.604	0.054	14.1	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute summer	HW12	1.000	53	14.9	1.404	0.079	0.0747	
15 minute summer	53	1.001	54	15.4	1.739	0.096	0.7742	
15 minute summer	54	1.002	HW13	14.1	1.608	0.072	0.1837	214.3

Results for 200 year Critical Storm Duration. Lowest mass balance: 95.31%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute summer	HW12	1	22.061	0.061	14.8	0.0688	0.0000	OK
15 minute summer	53	2	21.864	0.064	14.9	0.0728	0.0000	OK
15 minute summer	54	2	20.255	0.055	15.4	0.0625	0.0000	OK
15 minute summer	HW13	2	19.604	0.054	14.1	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute summer	HW12	1.000	53	14.9	1.404	0.079	0.0747	
15 minute summer	53	1.001	54	15.4	1.739	0.096	0.7742	
15 minute summer	54	1.002	HW13	14.1	1.608	0.072	0.1837	214.3