

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	1	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	1.000	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
201	0.039	5.00	74.400		394610.140	180888.178	0.430
202			74.400	500	394609.439	180890.552	0.470
203			74.400		394610.828	180892.190	0.500

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	201	202	2.475	0.600	73.970	73.930	0.040	61.9	100	5.04	33.5
1.001	202	203	2.148	0.600	73.930	73.900	0.030	71.6	100	5.08	33.4

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	0.980	7.7	4.7	0.330	0.370	0.039	0.0	57	1.030
1.001	0.911	7.2	4.7	0.370	0.400	0.039	0.0	59	0.971

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Normal	Starting Level (m)
Rainfall Events	Singular	Skip Steady State	✓	Check Discharge Rate(s) x
Summer CV	1.000	Drain Down Time (mins)	240	Check Discharge Volume x
Winter CV	1.000	Additional Storage (m³/ha)	0.0	

Storm Durations

15	30	60	120	180	240	360	480	600	720	960	1440
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Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
30	0	0	0
100	45	0	0

Node 202 Online Orifice Control

Flap Valve	x	Invert Level (m)	73.930	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.023		

Node 201 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	73.970	Slope (1:X)	400.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.300
Safety Factor	2.0	Width (m)	6.000	Inf Depth (m)	
Porosity	0.30	Length (m)	65.000		

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.20%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute summer	201	232	74.058	0.088	1.5	2.7692	0.0000	OK
360 minute summer	202	232	74.058	0.128	1.4	0.0250	0.0000	SURCHARGED
360 minute summer	203	232	73.915	0.015	0.4	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)
360 minute summer	201	1.000	202	1.4	0.309	0.180	0.0187	
360 minute summer	202	1.001	203	0.4	0.473	0.052	0.0017	7.1

Results for 30 year Critical Storm Duration. Lowest mass balance: 98.85%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute summer	201	200	74.147	0.177	4.4	11.1495	0.0000	FLOOD RISK
240 minute summer	202	200	74.146	0.216	1.3	0.0424	0.0000	FLOOD RISK
240 minute summer	203	200	73.918	0.018	0.5	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)
240 minute summer	201	1.000	202	1.3	0.304	0.171	0.0194	
240 minute summer	202	1.001	203	0.5	0.513	0.069	0.0021	12.0

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 98.92%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	201	480	74.269	0.299	2.9	25.4963	0.0000	FLOOD RISK
600 minute winter	202	480	74.269	0.339	1.1	0.0664	0.0000	FLOOD RISK
600 minute winter	203	480	73.920	0.020	0.6	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)
600 minute winter	201	1.000	202	1.1	0.218	0.137	0.0194	
600 minute winter	202	1.001	203	0.6	0.549	0.087	0.0024	25.0