

Design Settings

Rainfall Methodology	FEH-99	Time of Entry (mins)	6.00
Return Period (years)	2	Maximum Time of Concentration (mins)	30.00
Additional Flow (%)	0	Maximum Rainfall (mm/hr)	50.0
C (1km)	-0.025	Minimum Velocity (m/s)	1.00
D1 (1km)	0.403	Connection Type	Level Soffits
D2 (1km)	0.246	Minimum Backdrop Height (m)	0.200
D3 (1km)	0.396	Preferred Cover Depth (m)	1.200
E (1km)	0.308	Include Intermediate Ground	✓
F (1km)	2.327	Enforce best practice design rules	✓
CV	0.750		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
3A	0.027	6.00	8.665	600	496418.997	104074.826	0.612
3B			8.665	600	496411.902	104076.308	0.687
3C	0.038	6.00	8.900	600	496387.924	104085.671	0.760
3D			8.750	600	496395.995	104082.082	0.698
3	0.017	6.00	9.088	1200	496406.974	104076.971	1.308
4A	0.052	6.00	8.900	600	496399.630	104029.012	0.800
4B			8.900	600	496394.950	104030.773	0.975
4C	0.066	6.00	9.000	1200	496399.753	104031.128	1.125
4D			9.000	1200	496396.951	104032.199	1.225
4	0.036	6.00	8.898	1500	496390.413	104034.699	1.302
10A	0.047	6.00	8.850	1200	496359.724	104001.642	0.710
10B			8.850	1200	496369.086	103998.128	0.925
10C	0.027	6.00	8.775	1200	496383.753	103996.101	0.700
10D			8.775	1200	496378.755	103996.267	1.035
5	0.049	6.00	8.736	1500	496375.757	103996.367	1.311
32A	0.024	6.00	8.600	600	496397.226	103966.796	0.800
32B			8.625	600	496391.183	103965.118	1.075
32	0.011	6.00	8.612	1200	496386.661	103963.160	1.172
6			8.790	1500	496374.668	103963.579	1.574
42A	0.051	6.00	8.550	600	496339.797	103947.211	0.900
42B			8.550	600	496341.747	103952.127	1.028
42	0.027	6.00	8.577	1500	496346.134	103957.899	1.202
7A	0.027	6.00	8.400	600	496379.592	103950.704	0.825
7B			8.400	600	496376.669	103951.378	0.907
7	0.016	6.00	8.641	1800	496374.231	103953.126	1.533
8A		6.00	8.250	1500	496349.602	103926.234	1.160
8B	0.024	6.00	8.325	1200	496383.780	103920.443	0.825
8C			8.250	1200	496372.947	103922.353	0.865
8	0.034	6.00	8.250	1800	496369.402	103922.978	1.217
29_OUT			7.820		496368.786	103919.484	0.820

Links (Input)

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	3A	3B	7.249	0.600	8.053	7.978	0.075	96.7	150	6.12	45.8
1.001	3B	3	4.810	0.600	7.978	7.930	0.048	100.0	150	6.20	45.4
2.000	3C	3D	8.832	0.600	8.140	8.052	0.088	100.4	150	6.15	45.6
2.001	3D	3	12.200	0.600	8.052	7.930	0.122	100.0	150	6.35	44.8
1.002	3	4	45.400	0.600	7.780	7.596	0.184	246.7	300	7.11	41.8
3.000	4A	4B	5.000	0.600	8.100	8.000	0.100	50.0	150	6.06	46.1
3.001	4B	4	6.000	0.600	7.925	7.671	0.254	23.6	225	6.10	45.9
4.000	4C	4D	3.000	0.600	7.875	7.850	0.025	120.0	150	6.05	46.1
4.001	4D	4	7.000	0.600	7.775	7.671	0.104	67.3	225	6.13	45.7
1.003	4	5	41.039	0.600	7.596	7.425	0.171	240.0	300	7.79	39.6
5.000	10A	10B	10.000	0.600	8.140	7.925	0.215	46.5	150	6.11	45.8
5.001	10B	5	6.700	0.600	7.925	7.575	0.350	19.1	150	6.16	45.6
6.000	10C	10D	5.000	0.600	8.075	7.740	0.335	14.9	150	6.03	46.2
6.001	10D	5	3.000	0.600	7.740	7.575	0.165	18.2	150	6.05	46.1
1.004	5	6	32.806	0.600	7.425	7.291	0.134	244.8	300	8.33	38.0
7.000	32A	32B	6.272	0.600	7.800	7.625	0.175	35.8	150	6.06	46.0
7.001	32B	32	4.928	0.600	7.550	7.440	0.110	44.8	225	6.10	45.8
7.002	32	6	12.000	0.600	7.440	7.366	0.074	162.2	225	6.30	45.0
1.005	6	7	10.462	0.600	7.216	7.183	0.033	317.0	375	8.50	37.5
8.000	42A	42B	5.288	0.600	7.650	7.597	0.053	99.8	150	6.09	45.9
8.001	42B	42	7.275	0.600	7.522	7.450	0.072	101.0	225	6.18	45.5
8.002	42	7	28.500	0.600	7.375	7.258	0.117	243.6	300	6.65	43.5
9.000	7A	7B	3.000	0.600	7.575	7.493	0.082	36.6	150	6.03	46.2
9.001	7B	7	3.000	0.600	7.493	7.408	0.085	35.3	150	6.06	46.0
1.006	7	8	30.532	0.600	7.108	7.033	0.075	407.1	450	9.01	36.2
10.000	8A	8	20.088	0.600	7.090	7.033	0.057	352.4	450	6.31	44.9
11.000	8B	8C	11.000	0.600	7.500	7.385	0.115	95.7	150	6.18	45.5
11.001	8C	8	3.600	0.600	7.385	7.333	0.052	69.2	150	6.23	45.3
1.007	8	29_OUT	3.548	0.600	7.033	7.000	0.033	107.5	150	9.07	36.0

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	7.249	96.7	150	1 Network	8.665	8.053	0.462	8.665	7.978	0.537
1.001	4.810	100.0	150	1 Network	8.665	7.978	0.537	9.088	7.930	1.008
2.000	8.832	100.4	150	1 Network	8.900	8.140	0.610	8.750	8.052	0.548
2.001	12.200	100.0	150	1 Network	8.750	8.052	0.548	9.088	7.930	1.008
1.002	45.400	246.7	300	1 Network	9.088	7.780	1.008	8.898	7.596	1.002
3.000	5.000	50.0	150	1 Network	8.900	8.100	0.650	8.900	8.000	0.750
3.001	6.000	23.6	225	1 Network	8.900	7.925	0.750	8.898	7.671	1.002
4.000	3.000	120.0	150	1 Network	9.000	7.875	0.975	9.000	7.850	1.000

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	3A	600	Manhole	1 Standard	3B	600	Manhole	1 Standard
1.001	3B	600	Manhole	1 Standard	3	1200	Manhole	1 Standard
2.000	3C	600	Manhole	1 Standard	3D	600	Manhole	1 Standard
2.001	3D	600	Manhole	1 Standard	3	1200	Manhole	1 Standard
1.002	3	1200	Manhole	1 Standard	4	1500	Manhole	1 Standard
3.000	4A	600	Manhole	1 Standard	4B	600	Manhole	1 Standard
3.001	4B	600	Manhole	1 Standard	4	1500	Manhole	1 Standard
4.000	4C	1200	Manhole	1 Standard	4D	1200	Manhole	1 Standard

Pipeline Schedule

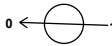
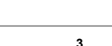
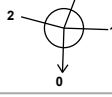
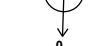
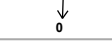
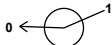
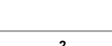
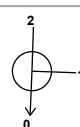
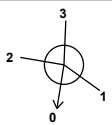
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
4.001	7.000	67.3	225	1 Network	9.000	7.775	1.000	8.898	7.671	1.002
1.003	41.039	240.0	300	1 Network	8.898	7.596	1.002	8.736	7.425	1.011
5.000	10.000	46.5	150	1 Network	8.850	8.140	0.560	8.850	7.925	0.775
5.001	6.700	19.1	150	1 Network	8.850	7.925	0.775	8.736	7.575	1.011
6.000	5.000	14.9	150	1 Network	8.775	8.075	0.550	8.775	7.740	0.885
6.001	3.000	18.2	150	1 Network	8.775	7.740	0.885	8.736	7.575	1.011
1.004	32.806	244.8	300	1 Network	8.736	7.425	1.011	8.790	7.291	1.199
7.000	6.272	35.8	150	1 Network	8.600	7.800	0.650	8.625	7.625	0.850
7.001	4.928	44.8	225	1 Network	8.625	7.550	0.850	8.612	7.440	0.947
7.002	12.000	162.2	225	1 Network	8.612	7.440	0.947	8.790	7.366	1.199
1.005	10.462	317.0	375	1 Network	8.790	7.216	1.199	8.641	7.183	1.083
8.000	5.288	99.8	150	1 Network	8.550	7.650	0.750	8.550	7.597	0.803
8.001	7.275	101.0	225	1 Network	8.550	7.522	0.803	8.577	7.450	0.902
8.002	28.500	243.6	300	1 Network	8.577	7.375	0.902	8.641	7.258	1.083
9.000	3.000	36.6	150	1 Network	8.400	7.575	0.675	8.400	7.493	0.757
9.001	3.000	35.3	150	1 Network	8.400	7.493	0.757	8.641	7.408	1.083
1.006	30.532	407.1	450	1 Network	8.641	7.108	1.083	8.250	7.033	0.767
10.000	20.088	352.4	450	1 Network	8.250	7.090	0.710	8.250	7.033	0.767
11.000	11.000	95.7	150	1 Network	8.325	7.500	0.675	8.250	7.385	0.715
11.001	3.600	69.2	150	1 Network	8.250	7.385	0.715	8.250	7.333	0.767
1.007	3.548	107.5	150	1 Network	8.250	7.033	1.067	7.820	7.000	0.670

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
4.001	4D	1200	Manhole	1 Standard	4	1500	Manhole	1 Standard
1.003	4	1500	Manhole	1 Standard	5	1500	Manhole	1 Standard
5.000	10A	1200	Manhole	1 Standard	10B	1200	Manhole	1 Standard
5.001	10B	1200	Manhole	1 Standard	5	1500	Manhole	1 Standard
6.000	10C	1200	Manhole	1 Standard	10D	1200	Manhole	1 Standard
6.001	10D	1200	Manhole	1 Standard	5	1500	Manhole	1 Standard
1.004	5	1500	Manhole	1 Standard	6	1500	Manhole	1 Standard
7.000	32A	600	Manhole	1 Standard	32B	600	Manhole	1 Standard
7.001	32B	600	Manhole	1 Standard	32	1200	Manhole	1 Standard
7.002	32	1200	Manhole	1 Standard	6	1500	Manhole	1 Standard
1.005	6	1500	Manhole	1 Standard	7	1800	Manhole	1 Standard
8.000	42A	600	Manhole	1 Standard	42B	600	Manhole	1 Standard
8.001	42B	600	Manhole	1 Standard	42	1500	Manhole	1 Standard
8.002	42	1500	Manhole	1 Standard	7	1800	Manhole	1 Standard
9.000	7A	600	Manhole	1 Standard	7B	600	Manhole	1 Standard
9.001	7B	600	Manhole	1 Standard	7	1800	Manhole	1 Standard
1.006	7	1800	Manhole	1 Standard	8	1800	Manhole	1 Standard
10.000	8A	1500	Manhole	1 Standard	8	1800	Manhole	1 Standard
11.000	8B	1200	Manhole	1 Standard	8C	1200	Manhole	1 Standard
11.001	8C	1200	Manhole	1 Standard	8	1800	Manhole	1 Standard
1.007	8	1800	Manhole	1 Standard	29_OUT		Manhole	1 Standard

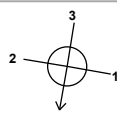
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
3A	496418.997	104074.826	8.665	0.612	600		0	1.000	8.053	150
3B	496411.902	104076.308	8.665	0.687	600		1	1.000	7.978	150
							0	1.001	7.978	150
3C	496387.924	104085.671	8.900	0.760	600		0	2.000	8.140	150
3D	496395.995	104082.082	8.750	0.698	600		1	2.000	8.052	150
							0	2.001	8.052	150
3	496406.974	104076.971	9.088	1.308	1200		1	2.001	7.930	150
							2	1.001	7.930	150
							0	1.002	7.780	300
4A	496399.630	104029.012	8.900	0.800	600		0	3.000	8.100	150
4B	496394.950	104030.773	8.900	0.975	600		1	3.000	8.000	150
							0	3.001	7.925	225
4C	496399.753	104031.128	9.000	1.125	1200		0	4.000	7.875	150
4D	496396.951	104032.199	9.000	1.225	1200		1	4.000	7.850	150
							0	4.001	7.775	225
4	496390.413	104034.699	8.898	1.302	1500		1	4.001	7.671	225
							2	3.001	7.671	225
							3	1.002	7.596	300
							0	1.003	7.596	300
10A	496359.724	104001.642	8.850	0.710	1200		0	5.000	8.140	150
10B	496369.086	103998.128	8.850	0.925	1200		1	5.000	7.925	150
							0	5.001	7.925	150
10C	496383.753	103996.101	8.775	0.700	1200		0	6.000	8.075	150

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
10D	496378.755	103996.267	8.775	1.035	1200		1	6.000	7.740	150
							0	6.001	7.740	150
5	496375.757	103996.367	8.736	1.311	1500		1	6.001	7.575	150
							2	5.001	7.575	150
							3	1.003	7.425	300
							0	1.004	7.425	300
32A	496397.226	103966.796	8.600	0.800	600					
							0	7.000	7.800	150
32B	496391.183	103965.118	8.625	1.075	600		1	7.000	7.625	150
							0	7.001	7.550	225
32	496386.661	103963.160	8.612	1.172	1200		1	7.001	7.440	225
							0	7.002	7.440	225
6	496374.668	103963.579	8.790	1.574	1500		1	7.002	7.366	225
							2	1.004	7.291	300
							0	1.005	7.216	375
42A	496339.797	103947.211	8.550	0.900	600					
							0	8.000	7.650	150
42B	496341.747	103952.127	8.550	1.028	600		1	8.000	7.597	150
							0	8.001	7.522	225
42	496346.134	103957.899	8.577	1.202	1500		1	8.001	7.450	225
							0	8.002	7.375	300
7A	496379.592	103950.704	8.400	0.825	600					
							0	9.000	7.575	150
7B	496376.669	103951.378	8.400	0.907	600		1	9.000	7.493	150
							0	9.001	7.493	150
7	496374.231	103953.126	8.641	1.533	1800		1	9.001	7.408	150
							2	8.002	7.258	300
							3	1.005	7.183	375
							0	1.006	7.108	450
8A	496349.602	103926.234	8.250	1.160	1500					
							0	10.000	7.090	450

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
8B	496383.780	103920.443	8.325	0.825	1200		0	11.000	7.500	150
8C	496372.947	103922.353	8.250	0.865	1200		1	11.000	7.385	150
							0	11.001	7.385	150
8	496369.402	103922.978	8.250	1.217	1800		1	11.001	7.333	150
							2	10.000	7.033	450
							3	1.006	7.033	450
							0	1.007	7.033	150
29_OUT	496368.786	103919.484	7.820	0.820			1	1.007	7.000	150

Simulation Settings

Rainfall Methodology	FEH-99	E (1km)	0.308	Skip Steady State	x
C (1km)	-0.025	F (1km)	2.327	Drain Down Time (mins)	240
D1 (1km)	0.403	Summer CV	0.750	Additional Storage (m³/ha)	10.0
D2 (1km)	0.246	Winter CV	0.840	Check Discharge Rate(s)	x
D3 (1km)	0.396	Analysis Speed	Normal	Check Discharge Volume	x

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 %)
100	40	10	0

Node 29_OUT Surcharged Outfall

Overrides Design Area	x	Depression Storage Area (m²)	0	Evapo-transpiration (mm/day)	0
Overrides Design Additional Inflow	x	Depression Storage Depth (mm)	0		

Applies to All storms

Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)
0	0.370	720	0.370	1440	0.370

Node 3B Online Orifice Control

Flap Valve	x	Invert Level (m)	7.978	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.050		

Node 3D Online Orifice Control

Flap Valve	x	Invert Level (m)	8.052	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.050		

Node 4B Online Orifice Control

Flap Valve	x	Invert Level (m)	7.925	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.050		

Node 4D Online Orifice Control

Flap Valve	x	Invert Level (m)	7.775	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.050		

Node 10B Online Orifice Control

Flap Valve	x	Invert Level (m)	7.925	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.050		

Node 10D Online Orifice Control

Flap Valve	x	Invert Level (m)	7.740	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.050		

Node 32B Online Orifice Control

Flap Valve	x	Invert Level (m)	7.550	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.050		

Node 42B Online Orifice Control

Flap Valve	x	Invert Level (m)	7.522	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.050		

Node 7B Online Orifice Control

Flap Valve	x	Invert Level (m)	7.493	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.050		

Node 8 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	7.033	Product Number	CTL-SHE-0103-5000-1200-5000
Design Depth (m)	1.200	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	5.0	Min Node Diameter (mm)	1200

Node 3B Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	8.053	Slope (1:X)	70.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	33	Depth (m)	0.400
Safety Factor	2.0	Width (m)	5.000	Inf Depth (m)	
Porosity	0.30	Length (m)	15.000		

Node 3B Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	8.250	Slope (1:X)	500.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	22	Depth (m)	0.420
Safety Factor	2.0	Width (m)	3.000	Inf Depth (m)	
Porosity	0.30	Length (m)	11.000		

Node 3D Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	8.140	Slope (1:X)	500.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	53	Depth (m)	0.365
Safety Factor	2.0	Width (m)	5.800	Inf Depth (m)	
Porosity	0.30	Length (m)	20.000		

Node 3D Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	8.250	Slope (1:X)	200.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	33	Depth (m)	0.390
Safety Factor	2.0	Width (m)	5.800	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node 4B Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	8.100	Slope (1:X)	48.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	75	Depth (m)	0.315
Safety Factor	2.0	Width (m)	6.000	Inf Depth (m)	
Porosity	0.30	Length (m)	12.500		

Node 4B Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	8.125	Slope (1:X)	90.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	61	Depth (m)	0.390
Safety Factor	2.0	Width (m)	6.000	Inf Depth (m)	
Porosity	0.30	Length (m)	12.500		

Node 4B Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	8.300	Slope (1:X)	250.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	33	Depth (m)	0.315
Safety Factor	2.0	Width (m)	3.000	Inf Depth (m)	
Porosity	0.30	Length (m)	13.500		

Node 4D Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	7.875	Slope (1:X)	250.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	27	Depth (m)	0.790
Safety Factor	2.0	Width (m)	4.500	Inf Depth (m)	
Porosity	0.30	Length (m)	20.000		

Node 4D Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	7.875	Slope (1:X)	150.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	27	Depth (m)	0.790
Safety Factor	2.0	Width (m)	3.000	Inf Depth (m)	
Porosity	0.30	Length (m)	11.000		

Node 4D Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	7.950	Slope (1:X)	150.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	18	Depth (m)	0.715
Safety Factor	2.0	Width (m)	6.000	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node 10B Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	7.980	Slope (1:X)	140.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	60	Depth (m)	0.490
Safety Factor	2.0	Width (m)	6.000	Inf Depth (m)	
Porosity	0.30	Length (m)	12.000		

Node 10B Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	8.140	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	38	Depth (m)	0.325
Safety Factor	2.0	Width (m)	6.000	Inf Depth (m)	
Porosity	0.30	Length (m)	12.000		

Node 10D Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	8.075	Slope (1:X)	120.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	7	Depth (m)	0.390
Safety Factor	2.0	Width (m)	3.000	Inf Depth (m)	
Porosity	0.30	Length (m)	12.000		

Node 10D Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	8.075	Slope (1:X)	200.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	10	Depth (m)	0.365
Safety Factor	2.0	Width (m)	6.500	Inf Depth (m)	
Porosity	0.30	Length (m)	9.000		

Node 32B Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	7.635	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.690
Safety Factor	2.0	Width (m)	4.300	Inf Depth (m)	
Porosity	0.30	Length (m)	8.000		

Node 32B Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	7.800	Slope (1:X)	200.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.565
Safety Factor	2.0	Width (m)	4.800	Inf Depth (m)	
Porosity	0.30	Length (m)	4.300		

Node 32B Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	7.800	Slope (1:X)	280.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.590
Safety Factor	2.0	Width (m)	3.000	Inf Depth (m)	
Porosity	0.30	Length (m)	14.000		

Node 42B Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	7.650	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.540
Safety Factor	2.0	Width (m)	9.000	Inf Depth (m)	
Porosity	0.30	Length (m)	14.000		

Node 42B Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	7.650	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.640
Safety Factor	2.0	Width (m)	5.000	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node 7B Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	7.575	Slope (1:X)	200.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.450
Safety Factor	2.0	Width (m)	5.000	Inf Depth (m)	
Porosity	0.30	Length (m)	20.000		

Node 8 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	7.120
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	95.0	0.0	1.130	248.2	0.0	1.132	248.6	0.0

Node 8 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	7.500	Slope (1:X)	200.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.580
Safety Factor	2.0	Width (m)	3.000	Inf Depth (m)	
Porosity	0.30	Length (m)	12.000		

Node 6 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	7.280
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	266.2	0.0	0.660	266.2	0.0	0.661	0.0	0.0

Other (defaults)

Entry Loss (manhole)	0.250	Entry Loss (junction)	0.000	Apply Recommended Losses	x
Exit Loss (manhole)	0.250	Exit Loss (junction)	0.000	Flood Risk (m)	0.300

Results for 100 year +40% CC +10% A Critical Storm Duration. Lowest mass balance: 99.14%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	3A	12	8.442	0.389	19.6	0.2985	0.0000	FLOOD RISK
30 minute winter	3B	28	8.411	0.433	14.7	7.2641	0.0000	FLOOD RISK
15 minute winter	3C	11	8.597	0.457	27.6	0.3806	0.0000	SURCHARGED
60 minute winter	3D	50	8.436	0.384	13.8	12.5431	0.0000	SURCHARGED
720 minute winter	3	660	8.251	0.471	4.9	0.5999	0.0000	SURCHARGED
60 minute winter	4A	43	8.900	0.800	19.2	0.7984	0.7482	FLOOD
60 minute winter	4B	43	8.900	0.975	18.9	15.1945	0.0000	FLOOD RISK
15 minute winter	4C	12	8.536	0.661	47.9	1.1746	0.0000	SURCHARGED
60 minute winter	4D	58	8.378	0.603	23.7	24.9175	0.0000	SURCHARGED
720 minute winter	4	675	8.251	0.655	13.4	1.3561	0.0000	SURCHARGED
15 minute winter	10A	12	8.729	0.589	34.1	1.0943	0.0000	FLOOD RISK
60 minute winter	10B	51	8.461	0.536	16.7	15.6964	0.0000	SURCHARGED
15 minute winter	10C	13	8.329	0.254	19.6	0.3947	0.0000	SURCHARGED
30 minute winter	10D	27	8.311	0.571	14.4	6.4116	0.0000	SURCHARGED
720 minute winter	5	675	8.251	0.826	18.9	1.7982	0.0000	SURCHARGED
720 minute winter	32A	675	8.254	0.454	1.6	0.2780	0.0000	SURCHARGED
720 minute winter	32B	675	8.254	0.704	1.7	14.3158	0.0000	SURCHARGED
720 minute winter	32	675	8.250	0.810	2.2	0.9999	0.0000	SURCHARGED
720 minute winter	6	660	8.250	1.034	20.6	168.9876	0.0000	SURCHARGED
720 minute winter	42A	660	8.261	0.611	3.3	0.5536	0.0000	FLOOD RISK
720 minute winter	42B	660	8.261	0.739	3.3	26.4203	0.0000	FLOOD RISK
720 minute winter	42	660	8.250	0.875	3.1	1.7626	0.0000	SURCHARGED
720 minute winter	7A	675	8.253	0.678	1.8	0.4362	0.0000	FLOOD RISK
720 minute winter	7B	660	8.253	0.760	3.9	12.2353	0.0000	FLOOD RISK
720 minute winter	7	660	8.250	1.142	18.0	3.0369	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	3A	1.000	3B	19.1	1.085	1.058	0.1276	
30 minute winter	3B	1.001	3	3.2	0.732	0.183	0.0213	
15 minute winter	3C	2.000	3D	27.1	1.540	1.529	0.1555	
60 minute winter	3D	2.001	3	3.0	0.740	0.172	0.0503	
720 minute winter	3	1.002	4	4.8	0.373	0.069	3.1970	
60 minute winter	4A	3.000	4B	18.9	1.075	0.751	0.0880	
60 minute winter	4B	3.001	4	5.1	1.337	0.047	0.0689	
15 minute winter	4C	4.000	4D	46.3	2.630	2.860	0.0528	
60 minute winter	4D	4.001	4	3.9	0.862	0.062	0.0865	
720 minute winter	4	1.003	5	11.7	0.566	0.164	2.8899	
15 minute winter	10A	5.000	10B	32.1	1.825	1.229	0.1760	
60 minute winter	10B	5.001	5	3.7	1.396	0.091	0.0669	
15 minute winter	10C	6.000	10D	18.8	1.069	0.406	0.0880	
30 minute winter	10D	6.001	5	3.8	1.387	0.091	0.0257	
720 minute winter	5	1.004	6	19.2	0.563	0.271	2.3102	
720 minute winter	32A	7.000	32B	1.6	0.810	0.054	0.1104	
720 minute winter	32B	7.001	32	1.6	0.413	0.021	0.1960	
720 minute winter	32	7.002	6	2.1	0.370	0.051	0.4773	
720 minute winter	6	1.005	7	15.6	0.517	0.140	1.1539	
720 minute winter	42A	8.000	42B	3.3	0.594	0.184	0.0931	
720 minute winter	42B	8.001	42	1.9	0.563	0.037	0.2893	
720 minute winter	42	8.002	7	3.0	0.370	0.042	2.0070	
720 minute winter	7A	9.000	7B	3.9	0.298	0.133	0.0528	
720 minute winter	7B	9.001	7	-1.3	0.653	-0.043	0.0528	
720 minute winter	7	1.006	8	17.3	0.204	0.109	4.8376	

Results for 100 year +40% CC +10% A Critical Storm Duration. Lowest mass balance: 99.14%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	8A	660	8.250	1.160	1.0	2.0497	0.0194	FLOOD
720 minute winter	8B	675	8.250	0.750	1.6	1.0883	0.0000	FLOOD RISK
720 minute winter	8C	660	8.250	0.865	1.5	0.9783	0.5103	FLOOD
720 minute winter	8	660	8.250	1.217	20.0	203.3748	2.9116	FLOOD
15 minute summer	29_OUT	1	7.370	0.370	4.8	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)
720 minute winter	8A	10.000	8	-1.0	-0.097	-0.006	3.1828	
720 minute winter	8B	11.000	8C	1.5	0.437	0.084	0.1937	
720 minute winter	8C	11.001	8	1.5	0.425	0.069	0.0634	
720 minute winter	8	1.007	29_OUT	5.0	0.284	0.292	0.0625	191.7