Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	5	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	18.100	Minimum Backdrop Height (m)	0.700
Ratio-R	0.356	Preferred Cover Depth (m)	0.600
CV	0.750	Include Intermediate Ground	x
Time of Entry (mins)	6.00	Enforce best practice design rules	x

1 STANDARD 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	1350

1 STANDARD Link Type

Shape	Circular	Auto Increment (mm)	75
Barrels	1	Follow Ground	x

Available Diameters (mm)

100 | 150

Nodes

Name	Area (ha)	T of E (mins)	Add Inflow (l/s)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
1	0.002	6.00		52.746	450	385347.875	399060.879	0.700
2	0.003	6.00		52.782	450	385358.376	399060.742	0.916
3	0.002	6.00		52.919	450	385348.148	399072.675	0.700
4	0.003	6.00		52.952	450	385358.648	399072.402	1.202
5	0.002	6.00		53.183	450	385351.284	399080.789	0.700
6	0.002	6.00		53.222	450	385361.580	399078.743	1.542
7	0.003	6.00		53.250	450	385353.807	399093.403	0.803
8	0.002	6.00		53.311	450	385364.171	399091.357	1.759
9	0.010	6.00		53.358	1500	385365.508	399095.749	1.852
10	0.008	6.00		53.714	450	385314.339	399107.761	0.700
11	0.012	6.00		53.471	450	385321.749	399095.455	0.702
12	0.008	6.00		53.749	450	385338.488	399122.250	0.700
13				53.622	450	385348.875	399111.995	1.397
14	0.029	6.00		53.504	1500	385356.309	399102.015	2.109
15	0.015	6.00		52.905	450	385291.281	399089.047	0.700
16				53.073	450	385314.966	399103.043	1.339
17	0.006	6.00		53.111	450	385320.118	399094.507	1.547
18	0.015	6.00		52.891	450	385294.819	399079.512	0.700
19				52.937	450	385312.813	399090.124	1.517
20	0.010	6.00		53.108	450	385281.821	399082.541	0.700
21				52.876	450	385292.604	399064.449	0.828
22	0.005	6.00		52.842	450	385302.070	399070.140	1.002

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Nodes

Name	Area (ha)	T of E (mins)	Add Inflow (l/s)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
23	0.057	6.00		52.989	1500	385319.114	399079.751	2.099
24	0.007	6.00		52.726	450	385296.085	399060.585	0.790
25	0.035	6.00		52.221	450	385309.647	399037.635	0.750
26	0.006	6.00		52.648	1200	385306.660	399067.458	0.795
27	0.007	6.00		52.497	450	385320.422	399044.114	1.264
28				52.646	450	385328.950	399049.336	1.514
29				52.667	1500	385335.245	399052.421	1.989
30	0.005	6.00		51.974	450	385361.278	399020.951	0.700
31	0.003	6.00		52.052	450	385364.426	399036.914	0.700
32	0.002	6.00		51.959	450	385355.080	399031.281	0.888
33	0.003	6.00		52.377	450	385361.534	399042.697	0.700
34	0.002	6.00		52.286	450	385351.085	399039.683	1.372
35	0.002	6.00		52.424	450	385358.371	399053.813	0.813
36	0.002	6.00		52.449	450	385347.780	399050.564	1.734
37	0.005	6.00		51.998	450	385329.453	399017.574	0.498
38				51.958	450	385339.032	399023.268	0.644
39	0.005	6.00		51.959	450	385344.906	399013.056	0.700
40				51.957	450	385342.737	399016.942	0.772
41				51.764	450	385351.322	399022.364	0.748
42	0.005	6.00		52.367	450	385331.712	399027.063	1.193
43	0.003	6.00		52.349	450	385317.001	399031.790	0.700
44	0.002	6.00		52.494	450	385325.928	399036.914	1.510
45				52.615	450	385338.269	399044.210	2.141
46				52.669	1500	385336.514	399047.147	2.218
47				51.982	1500	385307.915	399030.157	1.753
47_OUT				51.800	1500	385308.182	399023.224	1.617
Carpark 1	0.013	6.00	0.0	52.900		385325.679	399091.180	0.700
Carpark 2	0.014	6.00	0.0	52.500		385326.712	399053.911	0.700
Carpark 3	0.014	6.00	0.0	51.800		385322.627	399017.171	0.400
Carpark 4	0.009	6.00	0.0	51.800		385353.577	399019.038	0.700
Carpark 5	0.003	6.00	0.0	52.300		385337.356	399038.832	0.700
Carpark 6	0.010	6.00	0.0	52.150		385364.477	399040.048	0.700
Carpark 7	0.010	6.00	0.0	52.375		385359.675	399057.343	0.700
Carpark 8	0.010	6.00	0.0	52.900		385355.371	399075.899	0.700
Carpark 9	0.005	6.00	0.0	53.200		385353.440	399090.278	0.700

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	1	2	10.501	0.600	52.046	51.869	0.177	59.3	100	6.17	50.0
1.001	2	4	11.663	0.600	51.866	51.750	0.116	100.5	150	6.37	50.0
2.000	3	4	10.504	0.600	52.219	51.800	0.419	25.1	100	6.11	50.0
1.002	4	6	6.986	0.600	51.750	51.680	0.070	99.8	150	6.48	50.0
3.000	5	6	10.497	0.600	52.483	51.730	0.753	13.9	100	6.08	50.0
1.003	6	8	12.878	0.600	51.680	51.552	0.128	100.6	150	6.70	50.0
4.000	7	8	10.564	0.600	52.447	51.602	0.845	12.5	100	6.13	50.0
1.004	8	9	4.590	0.600	51.552	51.506	0.046	99.8	150	6.77	50.0
1.005	9	14	11.130	0.600	51.506	51.395	0.111	100.3	150	6.96	50.0
5.000	10	11	14.365	0.600	53.014	52.769	0.245	58.6	100	6.24	50.0
5.001	11	13	31.771	0.600	52.769	52.225	0.544	58.4	100	6.76	50.0

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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)
6.000	12	13	14.596	0.600	53.049	52.225	0.824	17.7	100	6.13	50.0
5.002	13	14	12.445	0.600	52.225	51.445	0.780	16.0	100	6.87	50.0
1.006	14	23	43.349	0.600	51.395	50.890	0.505	85.8	150	7.63	50.0
7.000	15	16	27.511	0.600	52.205	51.734	0.471	58.4	100	6.45	50.0
7.001	16	17	9.970	0.600	51.734	51.564	0.170	58.6	100	6.62	50.0
7.002	17	19	8.520	0.600	51.564	51.420	0.144	59.2	100	6.76	50.0
8.000	18	22	20.891	0.600	52.191	51.840	0.351	59.5	100	6.35	50.0
7.003	19	23	12.137	0.600	51.420	50.940	0.480	25.3	100	6.89	50.0
9.000	20	21	21.062	0.600	52.408	52.048	0.360	58.5	100	6.35	50.0
9.001	21	22	11.045	0.600	52.048	51.840	0.208	53.1	100	6.52	50.0
9.002	22	23	19.566	0.600	51.840	50.940	0.900	21.7	100	6.72	50.0
1.007	23	29	31.736	0.600	50.890	50.678	0.212	150.0	150	8.27	50.0
10.000	24	25	26.658	0.600	51.936	51.488	0.448	59.5	100	6.44	50.0
10.001	25	27	12.573	0.600	51.471	51.233	0.238	52.8	150	6.60	50.0
11.000	26	27	27.099	0.600	51.853	51.283	0.570	47.5	100	6.40	50.0
10.002	27	28	10.000	0.600	51.233	51.132	0.101	99.0	150	6.76	50.0
10.003	28	29	7.010	0.600	51.132	51.015	0.117	60.0	100	6.88	50.0
1.008	29	46	5.425	0.600	50.678	50.642	0.036	150.0	150	8.38	50.0
12.000	30	32	12.047	0.600	51.274	51.071	0.203	59.3	100	6.20	50.0
13.000	31	32	10.912	0.600	51.352	51.071	0.281	38.8	100	6.18	50.0
12.001	32	34	9.303	0.600	51.071	50.914	0.157	59.3	100	6.36	50.0
14.000	33	34	10.875	0.600	51.677	50.914	0.763	14.3	100	6.09	50.0
12.002	34	36	11.372	0.600	50.914	50.715	0.199	57.1	100	6.54	50.0
15.000	35	36	11.078	0.600	51.611	51.424	0.187	59.2	100	6.25	50.0
12.003	36	45	11.438	0.600	50.715	50.524	0.191	60.0	100	6.73	50.0
16.000	37	38	11.143	0.600	51.500	51.314	0.186	60.0	100	6.19	50.0
16.001	38	40	7.331	0.600	51.314	51.192	0.122	60.1	100	6.31	50.0
17.000	39	40	4.450	0.600	51.259	51.185	0.074	60.0	100	6.07	50.0
16.002	40	41	10.154	0.600	51.185	51.016	0.169	60.1	100	6.48	50.0
16.003	41	45	25.448	0.600	51.016	50.592	0.424	60.0	100	6.91	50.0
18.000	42	44	11.423	0.600	51.174	50.984	0.190	60.0	100	6.41	50.0
19.000	43	44	10.293	0.600	51.649	51.477	0.172	60.0	100	6.17	50.0
18.001	44	45	14.337	0.600	50.984	50.745	0.239	60.0	100	6.65	50.0
12.004	45	46	3.421	0.600	50.474	50.451	0.023	150.0	150	6.97	50.0
1.009	46	47	33.265	0.600	50.451	50.229	0.222	149.8	150	9.06	50.0
1.010	47	47_OUT	6.938	0.600	50.229	50.183	0.046	150.0	150	9.20	50.0
11.000_1	Carpark 1	23	13.180	0.600	52.200	51.978	0.222	59.4	100	6.22	50.0
14.000_1	Carpark 2	29	8.662	0.600	51.800	51.654	0.146	59.3	100	6.14	50.0
22.000	Carpark 3	42	13.431	0.600	51.400	51.174	0.226	59.4	100	6.22	50.0
17.000_1	Carpark 4	41	4.018	0.600	51.100	51.016	0.084	47.8	100	6.06	50.0
24.000	Carpark 5	45	5.455	0.600	51.600	51.508	0.092	59.3	100	6.09	50.0
18.000_1	Carpark 6	31	3.134	0.600	51.450	51.352	0.098	32.0	100	6.04	50.0
21.000	Carpark 7	35	3.763	0.600	51.675	51.611	0.064	58.8	100	6.06	50.0
6.000_1	Carpark 8	6	6.829	0.600	52.200	51.730	0.470	14.5	100	6.06	50.0
7.000_1	Carpark 9	7	3.146	0.600	52.500	52.447	0.053	59.4	100	6.05	50.0

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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	10.501	59.3	100	1 STANDARD	52.746	52.046	0.600	52.782	51.869	0.813
1.001	11.663	100.5	150	1 STANDARD	52.782	51.866	0.766	52.952	51.750	1.052
2.000	10.504	25.1	100	1 STANDARD	52.919	52.219	0.600	52.952	51.800	1.052
1.002	6.986	99.8	150	1 STANDARD	52.952	51.750	1.052	53.222	51.680	1.392
3.000	10.497	13.9	100	1 STANDARD	53.183	52.483	0.600	53.222	51.730	1.392
1.003	12.878	100.6	150	1 STANDARD	53.222	51.680	1.392	53.311	51.552	1.609
4.000	10.564	12.5	100	1 STANDARD	53.250	52.447	0.703	53.311	51.602	1.609
1.004	4.590	99.8	150	1 STANDARD	53.311	51.552	1.609	53.358	51.506	1.702
1.005	11.130	100.3	150	1 STANDARD	53.358	51.506	1.702	53.504	51.395	1.959
5.000	14.365	58.6	100	1 STANDARD	53.714	53.014	0.600	53.471	52.769	0.602
5.001	31.771	58.4	100	1 STANDARD	53.471	52.769	0.602	53.622	52.225	1.297
6.000	14.596	17.7	100	1 STANDARD	53.749	53.049	0.600	53.622	52.225	1.297
5.002	12.445	16.0	100	1 STANDARD	53.622	52.225	1.297	53.504	51.445	1.959
1.006	43.349	85.8	150	1 STANDARD	53.504	51.395	1.959	52.989	50.890	1.949
7.000	27.511	58.4	100	1 STANDARD	52.905	52.205	0.600	53.073	51.734	1.239
7.001	9.970	58.6	100	1 STANDARD	53.073	51.734	1.239	53.111	51.564	1.447
7.002	8.520	59.2	100	1 STANDARD	53.111	51.564	1.447	52.937	51.420	1.417
8.000	20.891	59.5	100	1 STANDARD	52.891	52.191	0.600	52.842	51.840	0.902
7.003	12.137	25.3	100	1 STANDARD	52.937	51.420	1.417	52.989	50.940	1.949
9.000	21.062	58.5	100	1 STANDARD	53.108	52.408	0.600	52.876	52.048	0.728
9.001	11.045	53.1	100	1 STANDARD	52.876	52.048	0.728	52.842	51.840	0.902
9.002	19.566	21.7	100	1 STANDARD	52.842	51.840	0.902	52.989	50.940	1.949
1.007	31.736	150.0	150	1 STANDARD	52.989	50.890	1.949	52.667	50.678	1.839
10.000	26.658	59.5	100	1 STANDARD	52.726	51.936	0.690	52.221	51.488	0.633
10.001	12.573	52.8	150	1 STANDARD	52.221	51.471	0.600	52.497	51.233	1.114

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	1	450	Manhole	1 STANDARD	2	450	Manhole	1 STANDARD
1.001	2	450	Manhole	1 STANDARD	4	450	Manhole	1 STANDARD
2.000	3	450	Manhole	1 STANDARD	4	450	Manhole	1 STANDARD
1.002	4	450	Manhole	1 STANDARD	6	450	Manhole	1 STANDARD
3.000	5	450	Manhole	1 STANDARD	6	450	Manhole	1 STANDARD
1.003	6	450	Manhole	1 STANDARD	8	450	Manhole	1 STANDARD
4.000	7	450	Manhole	1 STANDARD	8	450	Manhole	1 STANDARD
1.004	8	450	Manhole	1 STANDARD	9	1500	Manhole	1 STANDARD
1.005	9	1500	Manhole	1 STANDARD	14	1500	Manhole	1 STANDARD
5.000	10	450	Manhole	1 STANDARD	11	450	Manhole	1 STANDARD
5.001	11	450	Manhole	1 STANDARD	13	450	Manhole	1 STANDARD
6.000	12	450	Manhole	1 STANDARD	13	450	Manhole	1 STANDARD
5.002	13	450	Manhole	1 STANDARD	14	1500	Manhole	1 STANDARD
1.006	14	1500	Manhole	1 STANDARD	23	1500	Manhole	1 STANDARD
7.000	15	450	Manhole	1 STANDARD	16	450	Manhole	1 STANDARD
7.001	16	450	Manhole	1 STANDARD	17	450	Manhole	1 STANDARD
7.002	17	450	Manhole	1 STANDARD	19	450	Manhole	1 STANDARD
8.000	18	450	Manhole	1 STANDARD	22	450	Manhole	1 STANDARD
7.003	19	450	Manhole	1 STANDARD	23	1500	Manhole	1 STANDARD
9.000	20	450	Manhole	1 STANDARD	21	450	Manhole	1 STANDARD
9.001	21	450	Manhole	1 STANDARD	22	450	Manhole	1 STANDARD
9.002	22	450	Manhole	1 STANDARD	23	1500	Manhole	1 STANDARD
1.007	23	1500	Manhole	1 STANDARD	29	1500	Manhole	1 STANDARD
10.000	24	450	Manhole	1 STANDARD	25	450	Manhole	1 STANDARD
10.001	25	450	Manhole	1 STANDARD	27	450	Manhole	1 STANDARD

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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)
11.000	27.099	47.5	100	1 STANDARD	52.648	51.853	0.695	52.497	51.283	1.114
10.002	10.000	99.0	150	1 STANDARD	52.497	51.233	1.114	52.646	51.132	1.364
10.003	7.010	60.0	100	1 STANDARD	52.646	51.132	1.414	52.667	51.015	1.552
1.008	5.425	150.0	150	1 STANDARD	52.667	50.678	1.839	52.669	50.642	1.877
12.000	12.047	59.3	100	1 STANDARD	51.974	51.274	0.600	51.959	51.071	0.788
13.000	10.912	38.8	100	1 STANDARD	52.052	51.352	0.600	51.959	51.071	0.788
12.001	9.303	59.3	100	1 STANDARD	51.959	51.071	0.788	52.286	50.914	1.272
14.000	10.875	14.3	100	1 STANDARD	52.377	51.677	0.600	52.286	50.914	1.272
12.002	11.372	57.1	100	1 STANDARD	52.286	50.914	1.272	52.449	50.715	1.634
15.000	11.078	59.2	100	1 STANDARD	52.424	51.611	0.713	52.449	51.424	0.925
12.003	11.438	60.0	100	1 STANDARD	52.449	50.715	1.634	52.615	50.524	1.991
16.000	11.143	60.0	100	1 STANDARD	51.998	51.500	0.398	51.958	51.314	0.544
16.001	7.331	60.1	100	1 STANDARD	51.958	51.314	0.544	51.957	51.192	0.665
17.000	4.450	60.0	100	1 STANDARD	51.959	51.259	0.600	51.957	51.185	0.672
16.002	10.154	60.1	100	1 STANDARD	51.957	51.185	0.672	51.764	51.016	0.648
16.003	25.448	60.0	100	1 STANDARD	51.764	51.016	0.648	52.615	50.592	1.923
18.000	11.423	60.0	100	1 STANDARD	52.367	51.174	1.093	52.494	50.984	1.410
19.000	10.293	60.0	100	1 STANDARD	52.349	51.649	0.600	52.494	51.477	0.917
18.001	14.337	60.0	100	1 STANDARD	52.494	50.984	1.410	52.615	50.745	1.770
12.004	3.421	150.0	150	1 STANDARD	52.615	50.474	1.991	52.669	50.451	2.068
1.009	33.265	149.8	150	1 STANDARD	52.669	50.451	2.068	51.982	50.229	1.603
1.010	6.938	150.0	150	1 STANDARD	51.982	50.229	1.603	51.800	50.183	1.467
11.000_1	13.180	59.4	100	1 STANDARD	52.900	52.200	0.600	52.989	51.978	0.911
14.000_1	8.662	59.3	100	1 STANDARD	52.500	51.800	0.600	52.667	51.654	0.913
22.000	13.431	59.4	100	1 STANDARD	51.800	51.400	0.300	52.367	51.174	1.093

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
11.000	26	1200	Manhole	1 STANDARD	27	450	Manhole	1 STANDARD
10.002	27	450	Manhole	1 STANDARD	28	450	Manhole	1 STANDARD
10.003	28	450	Manhole	1 STANDARD	29	1500	Manhole	1 STANDARD
1.008	29	1500	Manhole	1 STANDARD	46	1500	Manhole	1 STANDARD
12.000	30	450	Manhole	1 STANDARD	32	450	Manhole	1 STANDARD
13.000	31	450	Manhole	1 STANDARD	32	450	Manhole	1 STANDARD
12.001	32	450	Manhole	1 STANDARD	34	450	Manhole	1 STANDARD
14.000	33	450	Manhole	1 STANDARD	34	450	Manhole	1 STANDARD
12.002	34	450	Manhole	1 STANDARD	36	450	Manhole	1 STANDARD
15.000	35	450	Manhole	1 STANDARD	36	450	Manhole	1 STANDARD
12.003	36	450	Manhole	1 STANDARD	45	450	Manhole	1 STANDARD
16.000	37	450	Manhole	1 STANDARD	38	450	Manhole	1 STANDARD
16.001	38	450	Manhole	1 STANDARD	40	450	Manhole	1 STANDARD
17.000	39	450	Manhole	1 STANDARD	40	450	Manhole	1 STANDARD
16.002	40	450	Manhole	1 STANDARD	41	450	Manhole	1 STANDARD
16.003	41	450	Manhole	1 STANDARD	45	450	Manhole	1 STANDARD
18.000	42	450	Manhole	1 STANDARD	44	450	Manhole	1 STANDARD
19.000	43	450	Manhole	1 STANDARD	44	450	Manhole	1 STANDARD
18.001	44	450	Manhole	1 STANDARD	45	450	Manhole	1 STANDARD
12.004	45	450	Manhole	1 STANDARD	46	1500	Manhole	1 STANDARD
1.009	46	1500	Manhole	1 STANDARD	47	1500	Manhole	1 STANDARD
1.010	47	1500	Manhole	1 STANDARD	47_OUT	1500	Manhole	1 STANDARD
11.000_1	Carpark 1		Junction		23	1500	Manhole	1 STANDARD
14.000_1	Carpark 2		Junction		29	1500	Manhole	1 STANDARD
22.000	Carpark 3		Junction		42	450	Manhole	1 STANDARD

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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)
17.000_1	4.018	47.8	100	1 STANDARD	51.800	51.100	0.600	51.764	51.016	0.648
24.000	5.455	59.3	100	1 STANDARD	52.300	51.600	0.600	52.615	51.508	1.007
18.000_1	3.134	32.0	100	1 STANDARD	52.150	51.450	0.600	52.052	51.352	0.600
21.000	3.763	58.8	100	1 STANDARD	52.375	51.675	0.600	52.424	51.611	0.713
6.000_1	6.829	14.5	100	1 STANDARD	52.900	52.200	0.600	53.222	51.730	1.392
7.000_1	3.146	59.4	100	1 STANDARD	53.200	52.500	0.600	53.250	52.447	0.703

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
17.000_1	Carpark 4		Junction		41	450	Manhole	1 STANDARD
24.000	Carpark 5		Junction		45	450	Manhole	1 STANDARD
18.000_1	Carpark 6		Junction		31	450	Manhole	1 STANDARD
21.000	Carpark 7		Junction		35	450	Manhole	1 STANDARD
6.000_1	Carpark 8		Junction		6	450	Manhole	1 STANDARD
7.000_1	Carpark 9		Junction		7	450	Manhole	1 STANDARD

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Normal
FSR Region	England and Wales	Skip Steady State	x
M5-60 (mm)	18.100	Drain Down Time (mins)	240
Ratio-R	0.356	Additional Storage (m³/ha)	20.0
Summer CV	0.750	Check Discharge Rate(s)	x
Winter CV	0.840	Check Discharge Volume	x

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 %)
1	0	0	0
2	0	0	0
30	0	0	0
100	0	0	0
100	40	0	0

Node 46 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	50.289	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 29 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	50.678
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

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Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	140.0	250.0	1.200	140.0	334.0	1.201	0.0	334.0

Node Carpark 1 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	52.200	Slope (1:X)	20.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	4	Depth (m)	0.400
Safety Factor	2.0	Width (m)	6.000	Inf Depth (m)	
Porosity	0.30	Length (m)	21.000		

Node Carpark 2 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	51.800	Slope (1:X)	20.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	0	Depth (m)	0.400
Safety Factor	2.0	Width (m)	6.000	Inf Depth (m)	
Porosity	0.30	Length (m)	24.000		

Node Carpark 3 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	51.400	Slope (1:X)	30.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	180	Depth (m)	0.400
Safety Factor	2.0	Width (m)	6.600	Inf Depth (m)	
Porosity	0.30	Length (m)	20.150		

Node Carpark 4 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	51.100	Slope (1:X)	80.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.400
Safety Factor	2.0	Width (m)	6.700	Inf Depth (m)	
Porosity	0.30	Length (m)	13.280		

Node Carpark 5 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	51.600	Slope (1:X)	34.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	0	Depth (m)	0.400
Safety Factor	2.0	Width (m)	3.300	Inf Depth (m)	
Porosity	0.30	Length (m)	9.700		

Node Carpark 6 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	51.450	Slope (1:X)	33.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	0	Depth (m)	0.400
Safety Factor	2.0	Width (m)	9.000	Inf Depth (m)	
Porosity	0.30	Length (m)	11.110		

Node Carpark 7 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	51.675	Slope (1:X)	20.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	0	Depth (m)	0.400
Safety Factor	2.0	Width (m)	9.375	Inf Depth (m)	
Porosity	0.30	Length (m)	11.090		

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Node Carpark 8 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	52.200	Slope (1:X)	26.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	11	Depth (m)	0.400
Safety Factor	2.0	Width (m)	9.000	Inf Depth (m)	
Porosity	0.30	Length (m)	10.890		

Node Carpark 9 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	52.500	Slope (1:X)	22.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	0	Depth (m)	0.400
Safety Factor	2.0	Width (m)	3.800	Inf Depth (m)	
Porosity	0.30	Length (m)	12.630		

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Results for 1 year Critical Storm Duration. Lowest mass balance: 97.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	13	52.057	0.011	0.2	0.0024	0.0000	OK
15 minute winter	2	13	51.883	0.017	0.5	0.0039	0.0000	OK
15 minute summer	3	13	52.228	0.009	0.2	0.0020	0.0000	OK
15 minute winter	4	13	51.774	0.024	1.0	0.0050	0.0000	OK
15 minute winter	5	12	52.491	0.008	0.2	0.0017	0.0000	OK
15 minute winter	6	11	51.718	0.038	2.5	0.0070	0.0000	OK
15 minute winter	7	11	52.463	0.016	0.9	0.0037	0.0000	OK
15 minute winter	8	11	51.602	0.050	3.6	0.0090	0.0000	OK
15 minute winter	9	11	51.558	0.052	4.7	0.0976	0.0000	OK
15 minute winter	10	11	53.037	0.023	0.9	0.0088	0.0000	OK
15 minute winter	11	11	52.806	0.037	2.2	0.0187	0.0000	OK
15 minute winter	12	11	53.066	0.017	0.9	0.0066	0.0000	OK
15 minute winter	13	11	52.256	0.031	3.1	0.0049	0.0000	OK
15 minute winter	14	12	51.475	0.080	10.8	0.1632	0.0000	OK
15 minute winter	15	11	52.237	0.032	1.7	0.0188	0.0000	OK
15 minute winter	16	11	51.765	0.031	1.7	0.0050	0.0000	OK
15 minute winter	17	11	51.604	0.040	2.4	0.0095	0.0000	OK
15 minute winter	18	11	52.223	0.032	1.7	0.0186	0.0000	OK
15 minute winter	19	12	51.450	0.030	2.3	0.0047	0.0000	OK
15 minute winter	20	11	52.434	0.026	1.1	0.0114	0.0000	OK
15 minute winter	21	11	52.072	0.024	1.1	0.0039	0.0000	OK
15 minute winter	22	11	51.875	0.035	3.4	0.0090	0.0000	OK
15 minute winter	23	13	51.333	0.443	24.1	1.0226	0.0000	SURCHARGED
15 minute winter	24	11	51.958	0.022	0.8	0.0072	0.0000	OK
15 minute winter	25	11	51.515	0.044	4.7	0.0486	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 winter	1	1.000	2	0.2	0.348	0.025	0.0061	
15 minute winter	2	1.001	4	0.5	0.341	0.028	0.0173	
15 minute summer	3	2.000	4	0.2	0.575	0.016	0.0037	
15 minute winter	4	1.002	6	1.0	0.393	0.056	0.0186	
15 minute winter	5	3.000	6	0.2	0.704	0.012	0.0030	
15 minute winter	6	1.003	8	2.5	0.582	0.140	0.0553	
15 minute winter	7	4.000	8	0.9	1.147	0.052	0.0083	
15 minute winter	8	1.004	9	3.6	0.677	0.200	0.0241	
15 minute winter	9	1.005	14	4.6	0.621	0.260	0.0832	
15 minute winter	10	5.000	11	0.9	0.455	0.114	0.0287	
15 minute winter	11	5.001	13	2.2	0.923	0.275	0.0752	
15 minute winter	12	6.000	13	0.9	0.687	0.062	0.0216	
15 minute winter	13	5.002	14	3.0	1.489	0.199	0.0254	
15 minute winter	14	1.006	23	10.7	0.696	0.559	0.5883	
15 minute winter	15	7.000	16	1.7	0.803	0.215	0.0583	
15 minute winter	16	7.001	17	1.7	0.667	0.212	0.0251	
15 minute winter	17	7.002	19	2.3	0.962	0.298	0.0208	
15 minute winter	18	8.000	22	1.7	0.753	0.216	0.0473	
15 minute winter	19	7.003	23	2.3	0.638	0.192	0.0593	
15 minute winter	20	9.000	21	1.1	0.720	0.139	0.0323	
15 minute winter	21	9.001	22	1.1	0.566	0.131	0.0215	
15 minute winter	22	9.002	23	3.4	0.860	0.257	0.1001	
15 minute winter	23	1.007	29	20.2	1.413	1.396	0.4776	
15 minute winter	24	10.000	25	0.8	0.542	0.101	0.0397	
15 minute winter	25	10.001	27	4.7	0.821	0.191	0.0727	

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Results for 1 year Critical Storm Duration. Lowest mass balance: 97.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	26	11	51.872	0.019	0.7	0.0243	0.0000	OK
15 minute winter	27	11	51.297	0.064	6.2	0.0173	0.0000	OK
15 minute winter	28	11	51.205	0.073	6.1	0.0115	0.0000	OK
120 minute winter	29	92	50.841	0.163	12.1	22.0165	0.0000	SURCHARGED
15 minute winter	30	11	51.293	0.019	0.6	0.0056	0.0000	OK
15 minute winter	31	11	51.378	0.026	1.4	0.0063	0.0000	OK
15 minute winter	32	11	51.108	0.037	2.2	0.0075	0.0000	OK
15 minute winter	33	12	51.687	0.010	0.3	0.0023	0.0000	OK
15 minute winter	34	12	50.954	0.040	2.7	0.0075	0.0000	OK
15 minute winter	35	11	51.639	0.028	1.3	0.0058	0.0000	OK
120 minute winter	36	88	50.838	0.123	1.6	0.0225	0.0000	SURCHARGED
15 minute winter	37	11	51.519	0.019	0.6	0.0068	0.0000	OK
15 minute winter	38	11	51.333	0.019	0.6	0.0030	0.0000	OK
15 minute winter	39	11	51.278	0.019	0.6	0.0057	0.0000	OK
15 minute winter	40	11	51.211	0.026	1.2	0.0041	0.0000	OK
15 minute winter	41	12	51.052	0.036	2.1	0.0057	0.0000	OK
15 minute winter	42	11	51.211	0.037	2.2	0.0089	0.0000	OK
15 minute winter	43	13	51.663	0.014	0.3	0.0033	0.0000	OK
15 minute winter	44	11	51.025	0.041	2.7	0.0076	0.0000	OK
120 minute winter	45	88	50.837	0.363	3.4	0.0578	0.0000	SURCHARGED
120 minute winter	46	90	50.837	0.386	5.7	0.6832	0.0000	SURCHARGED
120 minute winter	47	90	50.294	0.065	5.0	0.1146	0.0000	OK
120 minute winter	47_OUT	90	50.244	0.061	5.0	0.0000	0.0000	OK
15 minute winter	Carpark 1	11	52.230	0.030	1.5	0.0202	0.0000	OK
15 minute winter	Carpark 2	11	51.831	0.031	1.6	0.0213	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 winter	26	11.000	27	0.7	0.662	0.077	0.0277	
15 minute winter	27	10.002	28	6.1	0.792	0.344	0.0781	
15 minute winter	28	10.003	29	6.1	1.049	0.775	0.0406	
120 minute winter	29	1.008	46	4.7	0.666	0.327	0.0955	
15 minute winter	30	12.000	32	0.6	0.400	0.076	0.0218	
15 minute winter	31	13.000	32	1.4	0.671	0.143	0.0228	
15 minute winter	32	12.001	34	2.2	0.792	0.275	0.0254	
15 minute winter	33	14.000	34	0.3	0.516	0.019	0.0178	
15 minute winter	34	12.002	36	2.7	0.751	0.332	0.0592	
15 minute winter	35	15.000	36	1.3	0.730	0.164	0.0196	
120 minute winter	36	12.003	45	1.5	0.475	0.188	0.0895	
15 minute winter	37	16.000	38	0.6	0.585	0.077	0.0115	
15 minute winter	38	16.001	40	0.6	0.570	0.075	0.0076	
15 minute winter	39	17.000	40	0.6	0.469	0.077	0.0059	
15 minute winter	40	16.002	41	1.2	0.573	0.148	0.0208	
15 minute winter	41	16.003	45	2.1	0.722	0.271	0.1313	
15 minute winter	42	18.000	44	2.2	0.777	0.279	0.0321	
15 minute winter	43	19.000	44	0.3	0.478	0.038	0.0065	
15 minute winter	44	18.001	45	2.6	0.886	0.337	0.0426	
120 minute winter	45	12.004	46	3.3	0.352	0.227	0.0602	
120 minute winter	46	1.009	47	5.0	0.711	0.345	0.2335	
120 minute winter	47	1.010	47_OUT	5.0	0.715	0.345	0.0484	42.9
15 minute winter	Carpark 1	11.000_1	23	1.5	0.768	0.190	0.0257	
15 minute winter	Carpark 2	14.000_1	29	1.6	0.779	0.203	0.0178	

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Results for 1 year Critical Storm Duration. Lowest mass balance: 97.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	Carpark 3	11	51.431	0.031	1.6	0.0409	0.0000	OK
15 minute winter	Carpark 4	11	51.123	0.023	1.0	0.0489	0.0000	OK
15 minute winter	Carpark 5	12	51.614	0.014	0.3	0.0056	0.0000	OK
15 minute winter	Carpark 6	11	51.472	0.022	1.1	0.0292	0.0000	OK
15 minute winter	Carpark 7	11	51.701	0.026	1.1	0.0232	0.0000	OK
15 minute winter	Carpark 8	11	52.218	0.018	1.1	0.0179	0.0000	OK
15 minute winter	Carpark 9	11	52.520	0.020	0.6	0.0081	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 winter	Carpark 3	22.000	42	1.6	0.692	0.203	0.0310	
15 minute winter	Carpark 4	17.000_1	41	1.0	0.576	0.111	0.0076	
15 minute winter	Carpark 5	24.000	45	0.3	0.480	0.038	0.0034	
15 minute winter	Carpark 6	18.000_1	31	1.1	0.778	0.102	0.0044	
15 minute winter	Carpark 7	21.000	35	1.1	0.651	0.139	0.0064	
15 minute winter	Carpark 8	6.000_1	6	1.1	1.156	0.069	0.0065	
15 minute winter	Carpark 9	7.000_1	7	0.6	0.645	0.076	0.0029	

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Results for 2 year Critical Storm Duration. Lowest mass balance: 97.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	12	52.059	0.013	0.3	0.0029	0.0000	OK
15 minute winter	2	12	51.886	0.020	0.7	0.0046	0.0000	OK
15 minute winter	3	12	52.230	0.011	0.3	0.0024	0.0000	OK
15 minute winter	4	12	51.778	0.028	1.4	0.0059	0.0000	OK
15 minute summer	5	12	52.493	0.010	0.3	0.0021	0.0000	OK
15 minute winter	6	11	51.725	0.045	3.4	0.0083	0.0000	OK
15 minute winter	7	11	52.464	0.017	1.1	0.0041	0.0000	OK
15 minute winter	8	14	51.633	0.081	4.8	0.0148	0.0000	OK
15 minute winter	9	14	51.634	0.128	6.1	0.2407	0.0000	OK
15 minute winter	10	11	53.040	0.026	1.2	0.0102	0.0000	OK
15 minute winter	11	11	52.813	0.044	2.9	0.0219	0.0000	OK
15 minute winter	12	11	53.069	0.020	1.2	0.0076	0.0000	OK
15 minute winter	13	11	52.260	0.035	4.1	0.0056	0.0000	OK
15 minute winter	14	14	51.625	0.230	14.3	0.4705	0.0000	SURCHARGED
15 minute winter	15	11	52.242	0.037	2.2	0.0215	0.0000	OK
15 minute winter	16	11	51.770	0.036	2.2	0.0057	0.0000	OK
15 minute winter	17	11	51.611	0.047	3.1	0.0111	0.0000	OK
15 minute winter	18	11	52.227	0.036	2.2	0.0213	0.0000	OK
15 minute winter	19	13	51.498	0.078	3.1	0.0123	0.0000	OK
15 minute winter	20	11	52.437	0.029	1.4	0.0129	0.0000	OK
15 minute winter	21	11	52.076	0.028	1.4	0.0044	0.0000	OK
15 minute winter	22	11	51.879	0.039	4.3	0.0102	0.0000	OK
15 minute winter	23	13	51.479	0.589	28.9	1.3611	0.0000	SURCHARGED
15 minute winter	24	11	51.960	0.024	1.0	0.0081	0.0000	OK
15 minute winter	25	11	51.522	0.051	6.1	0.0556	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 winter	1	1.000	2	0.3	0.396	0.038	0.0080	
15 minute winter	2	1.001	4	0.7	0.377	0.040	0.0218	
15 minute winter	3	2.000	4	0.3	0.648	0.025	0.0049	
15 minute winter	4	1.002	6	1.4	0.424	0.079	0.0234	
15 minute summer	5	3.000	6	0.3	0.797	0.018	0.0040	
15 minute winter	6	1.003	8	3.4	0.627	0.191	0.0848	
15 minute winter	7	4.000	8	1.1	1.217	0.064	0.0144	
15 minute winter	8	1.004	9	4.7	0.728	0.267	0.0592	
15 minute winter	9	1.005	14	6.2	0.654	0.348	0.1873	
15 minute winter	10	5.000	11	1.2	0.492	0.152	0.0354	
15 minute winter	11	5.001	13	2.9	1.004	0.364	0.0914	
15 minute winter	12	6.000	13	1.2	0.693	0.083	0.0259	
15 minute winter	13	5.002	14	4.1	1.500	0.266	0.0639	
15 minute winter	14	1.006	23	12.2	0.769	0.637	0.7632	
15 minute winter	15	7.000	16	2.2	0.862	0.278	0.0704	
15 minute winter	16	7.001	17	2.2	0.724	0.276	0.0305	
15 minute winter	17	7.002	19	3.1	1.030	0.391	0.0404	
15 minute winter	18	8.000	22	2.2	0.811	0.280	0.0567	
15 minute winter	19	7.003	23	3.0	0.590	0.250	0.0871	
15 minute winter	20	9.000	21	1.4	0.769	0.177	0.0384	
15 minute winter	21	9.001	22	1.4	0.603	0.167	0.0256	
15 minute winter	22	9.002	23	4.3	0.830	0.327	0.1046	
15 minute winter	23	1.007	29	23.2	1.551	1.608	0.5484	
15 minute winter	24	10.000	25	1.0	0.563	0.127	0.0505	
15 minute winter	25	10.001	27	6.1	0.871	0.248	0.0889	

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Results for 2 year Critical Storm Duration. Lowest mass balance: 97.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	26	11	51.875	0.022	0.9	0.0277	0.0000	OK
15 minute winter	27	11	51.308	0.075	8.0	0.0204	0.0000	OK
15 minute winter	28	12	51.238	0.106	8.0	0.0168	0.0000	SURCHARGED
120 minute winter	29	94	50.906	0.228	15.5	30.7471	0.0000	SURCHARGED
15 minute winter	30	12	51.294	0.020	0.7	0.0061	0.0000	OK
15 minute winter	31	11	51.381	0.029	1.8	0.0071	0.0000	OK
15 minute winter	32	11	51.113	0.042	2.8	0.0086	0.0000	OK
15 minute summer	33	12	51.688	0.011	0.4	0.0027	0.0000	OK
15 minute winter	34	12	50.960	0.046	3.5	0.0087	0.0000	OK
15 minute winter	35	11	51.643	0.032	1.7	0.0067	0.0000	OK
120 minute winter	36	90	50.903	0.188	2.1	0.0342	0.0000	SURCHARGED
15 minute winter	37	10	51.521	0.021	0.7	0.0074	0.0000	OK
15 minute winter	38	11	51.335	0.021	0.7	0.0033	0.0000	OK
15 minute winter	39	10	51.279	0.020	0.7	0.0061	0.0000	OK
15 minute winter	40	12	51.214	0.029	1.4	0.0046	0.0000	OK
15 minute winter	41	12	51.056	0.040	2.7	0.0064	0.0000	OK
15 minute winter	42	11	51.215	0.041	2.7	0.0099	0.0000	OK
15 minute summer	43	12	51.665	0.016	0.4	0.0038	0.0000	OK
15 minute winter	44	11	51.031	0.047	3.4	0.0088	0.0000	OK
120 minute winter	45	92	50.902	0.428	4.6	0.0681	0.0000	SURCHARGED
120 minute winter	46	94	50.902	0.451	5.7	0.7975	0.0000	SURCHARGED
240 minute summer	47	152	50.294	0.065	5.0	0.1147	0.0000	OK
240 minute summer	47_OUT	152	50.244	0.061	5.0	0.0000	0.0000	OK
15 minute winter	Carpark 1	11	52.234	0.034	1.9	0.0238	0.0000	OK
15 minute winter	Carpark 2	11	51.835	0.035	2.0	0.0248	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 winter	26	11.000	27	0.9	0.696	0.102	0.0380	
15 minute winter	27	10.002	28	8.0	0.808	0.448	0.1079	
15 minute winter	28	10.003	29	7.7	1.065	0.980	0.0530	
120 minute winter	29	1.008	46	4.8	0.655	0.332	0.0955	
15 minute winter	30	12.000	32	0.7	0.361	0.089	0.0257	
15 minute winter	31	13.000	32	1.8	0.717	0.184	0.0274	
15 minute winter	32	12.001	34	2.8	0.837	0.353	0.0310	
15 minute summer	33	14.000	34	0.4	0.516	0.025	0.0213	
15 minute winter	34	12.002	36	3.5	0.769	0.435	0.0645	
15 minute winter	35	15.000	36	1.7	0.787	0.215	0.0238	
120 minute winter	36	12.003	45	2.0	0.475	0.251	0.0895	
15 minute winter	37	16.000	38	0.7	0.612	0.090	0.0128	
15 minute winter	38	16.001	40	0.7	0.585	0.090	0.0088	
15 minute winter	39	17.000	40	0.7	0.495	0.090	0.0066	
15 minute winter	40	16.002	41	1.4	0.596	0.179	0.0244	
15 minute winter	41	16.003	45	2.7	0.703	0.340	0.1370	
15 minute winter	42	18.000	44	2.7	0.808	0.343	0.0379	
15 minute summer	43	19.000	44	0.4	0.520	0.051	0.0079	
15 minute winter	44	18.001	45	3.4	0.939	0.436	0.0565	
120 minute winter	45	12.004	46	4.3	0.352	0.299	0.0602	
120 minute winter	46	1.009	47	5.0	0.711	0.346	0.2338	
240 minute summer	47	1.010	47_OUT	5.0	0.716	0.346	0.0485	57.7
15 minute winter	Carpark 1	11.000_1	23	1.9	0.820	0.241	0.0305	
15 minute winter	Carpark 2	14.000_1	29	2.0	0.829	0.254	0.0209	

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Results for 2 year Critical Storm Duration. Lowest mass balance: 97.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	Carpark 3	11	51.434	0.034	2.0	0.0483	0.0000	OK
15 minute winter	Carpark 4	11	51.126	0.026	1.3	0.0624	0.0000	OK
15 minute summer	Carpark 5	12	51.616	0.016	0.4	0.0069	0.0000	OK
15 minute winter	Carpark 6	11	51.475	0.025	1.4	0.0363	0.0000	OK
15 minute winter	Carpark 7	11	51.704	0.029	1.4	0.0284	0.0000	OK
15 minute winter	Carpark 8	11	52.220	0.020	1.4	0.0217	0.0000	OK
15 minute winter	Carpark 9	10	52.521	0.021	0.7	0.0090	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 winter	Carpark 3	22.000	42	2.0	0.740	0.254	0.0362	
15 minute winter	Carpark 4	17.000_1	41	1.3	0.587	0.145	0.0091	
15 minute summer	Carpark 5	24.000	45	0.4	0.523	0.051	0.0042	
15 minute winter	Carpark 6	18.000_1	31	1.4	0.828	0.130	0.0053	
15 minute winter	Carpark 7	21.000	35	1.4	0.686	0.177	0.0077	
15 minute winter	Carpark 8	6.000_1	6	1.4	1.240	0.087	0.0077	
15 minute winter	Carpark 9	7.000_1	7	0.7	0.666	0.089	0.0033	

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Results for 30 year Critical Storm Duration. Lowest mass balance: 97.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	15	52.155	0.109	1.4	0.0235	0.0000	SURCHARGED
15 minute winter	2	15	52.153	0.287	3.7	0.0646	0.0000	SURCHARGED
15 minute summer	3	11	52.233	0.014	0.5	0.0030	0.0000	OK
15 minute winter	4	15	52.152	0.402	6.6	0.0840	0.0000	SURCHARGED
15 minute summer	5	10	52.495	0.012	0.5	0.0026	0.0000	OK
15 minute winter	6	15	52.150	0.470	8.3	0.0870	0.0000	SURCHARGED
15 minute winter	7	11	52.471	0.024	2.2	0.0057	0.0000	OK
15 minute winter	8	15	52.144	0.592	7.5	0.1077	0.0000	SURCHARGED
15 minute winter	9	15	52.140	0.634	10.0	1.1884	0.0000	SURCHARGED
15 minute winter	10	11	53.050	0.036	2.2	0.0140	0.0000	OK
15 minute winter	11	11	52.833	0.064	5.5	0.0322	0.0000	OK
15 minute winter	12	11	53.075	0.026	2.2	0.0103	0.0000	OK
15 minute winter	13	13	52.286	0.061	7.7	0.0097	0.0000	OK
15 minute winter	14	15	52.128	0.733	17.6	1.4965	0.0000	SURCHARGED
15 minute winter	15	10	52.256	0.051	4.1	0.0302	0.0000	OK
15 minute winter	16	14	51.990	0.256	4.1	0.0408	0.0000	SURCHARGED
15 minute winter	17	14	51.973	0.409	5.5	0.0970	0.0000	SURCHARGED
15 minute winter	18	11	52.242	0.051	4.1	0.0302	0.0000	OK
15 minute winter	19	14	51.948	0.528	4.6	0.0839	0.0000	SURCHARGED
15 minute winter	20	11	52.449	0.041	2.7	0.0184	0.0000	OK
15 minute winter	21	14	52.107	0.059	2.7	0.0094	0.0000	OK
15 minute winter	22	14	52.098	0.258	8.2	0.0667	0.0000	SURCHARGED
15 minute winter	23	14	51.916	1.026	35.2	2.3699	0.0000	SURCHARGED
15 minute winter	24	11	51.969	0.033	1.9	0.0113	0.0000	OK
15 minute winter	25	13	51.563	0.092	11.5	0.1000	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 winter	1	1.000	2	1.2	0.435	0.154	0.0822	
15 minute winter	2	1.001	4	-2.5	0.448	-0.140	0.2053	
15 minute summer	3	2.000	4	0.5	0.755	0.041	0.0445	
15 minute winter	4	1.002	6	-4.5	0.458	-0.252	0.1230	
15 minute summer	5	3.000	6	0.5	0.927	0.031	0.0439	
15 minute winter	6	1.003	8	6.7	0.688	0.379	0.2267	
15 minute winter	7	4.000	8	2.2	1.324	0.127	0.0490	
15 minute winter	8	1.004	9	8.4	0.742	0.472	0.0808	
15 minute winter	9	1.005	14	10.4	0.675	0.584	0.1959	
15 minute winter	10	5.000	11	2.2	0.560	0.278	0.0564	
15 minute winter	11	5.001	13	5.5	1.162	0.698	0.1586	
15 minute winter	12	6.000	13	2.2	0.812	0.152	0.0479	
15 minute winter	13	5.002	14	7.3	1.480	0.479	0.0799	
15 minute winter	14	1.006	23	13.7	0.776	0.713	0.7632	
15 minute winter	15	7.000	16	4.1	1.006	0.523	0.1598	
15 minute winter	16	7.001	17	3.9	0.793	0.489	0.0780	
15 minute winter	17	7.002	19	4.6	1.063	0.586	0.0667	
15 minute winter	18	8.000	22	4.1	0.890	0.522	0.1240	
15 minute winter	19	7.003	23	5.2	0.664	0.429	0.0950	
15 minute winter	20	9.000	21	2.7	0.918	0.341	0.0727	
15 minute winter	21	9.001	22	2.7	0.652	0.324	0.0698	
15 minute winter	22	9.002	23	6.6	0.882	0.508	0.1531	
15 minute winter	23	1.007	29	31.7	1.802	2.192	0.5587	
15 minute winter	24	10.000	25	1.9	0.571	0.241	0.1104	
15 minute winter	25	10.001	27	11.2	0.943	0.458	0.1815	

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Results for 30 year Critical Storm Duration. Lowest mass balance: 97.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	26	11	51.882	0.029	1.6	0.0371	0.0000	OK
15 minute winter	27	13	51.535	0.302	14.7	0.0814	0.0000	SURCHARGED
15 minute winter	28	13	51.472	0.340	12.5	0.0540	0.0000	SURCHARGED
120 minute winter	29	120	51.216	0.538	29.0	72.5211	0.0000	SURCHARGED
15 minute winter	30	11	51.303	0.029	1.4	0.0086	0.0000	OK
15 minute winter	31	11	51.393	0.041	3.5	0.0101	0.0000	OK
15 minute winter	32	14	51.255	0.184	5.4	0.0376	0.0000	SURCHARGED
15 minute winter	33	11	51.692	0.015	0.8	0.0037	0.0000	OK
120 minute winter	34	118	51.213	0.299	2.5	0.0563	0.0000	SURCHARGED
15 minute winter	35	11	51.657	0.046	3.2	0.0096	0.0000	OK
120 minute winter	36	118	51.213	0.498	3.6	0.0907	0.0000	SURCHARGED
15 minute winter	37	11	51.529	0.029	1.4	0.0106	0.0000	OK
15 minute winter	38	11	51.343	0.029	1.4	0.0046	0.0000	OK
15 minute winter	39	11	51.289	0.030	1.4	0.0089	0.0000	OK
15 minute winter	40	11	51.226	0.041	2.8	0.0066	0.0000	OK
120 minute winter	41	120	51.214	0.198	1.9	0.0314	0.0000	SURCHARGED
15 minute winter	42	11	51.236	0.062	5.2	0.0150	0.0000	OK
15 minute winter	43	11	51.671	0.022	0.8	0.0054	0.0000	OK
120 minute winter	44	118	51.213	0.229	2.4	0.0427	0.0000	SURCHARGED
120 minute winter	45	118	51.213	0.739	7.9	0.1175	0.0000	SURCHARGED
120 minute winter	46	118	51.213	0.762	7.5	1.3471	0.0000	SURCHARGED
960 minute winter	47	690	50.294	0.065	5.0	0.1147	0.0000	OK
960 minute winter	47_OUT	690	50.244	0.061	5.0	0.0000	0.0000	OK
15 minute winter	Carpark 1	11	52.248	0.048	3.5	0.0378	0.0000	OK
15 minute winter	Carpark 2	11	51.850	0.050	3.8	0.0403	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 winter	26	11.000	27	1.6	0.647	0.181	0.1314	
15 minute winter	27	10.002	28	12.5	0.834	0.698	0.1760	
15 minute winter	28	10.003	29	12.3	1.569	1.569	0.0543	
120 minute winter	29	1.008	46	4.8	0.646	0.333	0.0955	
15 minute winter	30	12.000	32	1.4	0.411	0.178	0.0574	
15 minute winter	31	13.000	32	3.5	0.861	0.358	0.0588	
15 minute winter	32	12.001	34	5.1	0.921	0.654	0.0728	
15 minute winter	33	14.000	34	0.8	0.596	0.050	0.0466	
120 minute winter	34	12.002	36	2.3	0.566	0.291	0.0890	
15 minute winter	35	15.000	36	3.2	0.929	0.405	0.0380	
120 minute winter	36	12.003	45	3.4	0.611	0.428	0.0895	
15 minute winter	37	16.000	38	1.4	0.741	0.179	0.0211	
15 minute winter	38	16.001	40	1.4	0.659	0.179	0.0155	
15 minute winter	39	17.000	40	1.4	0.574	0.179	0.0111	
15 minute winter	40	16.002	41	2.8	0.702	0.355	0.0424	
120 minute winter	41	16.003	45	1.9	0.523	0.243	0.1991	
15 minute winter	42	18.000	44	5.2	0.947	0.662	0.0632	
15 minute winter	43	19.000	44	0.8	0.635	0.102	0.0129	
120 minute winter	44	18.001	45	2.4	0.734	0.307	0.1122	
120 minute winter	45	12.004	46	7.5	0.453	0.518	0.0602	
120 minute winter	46	1.009	47	5.0	0.711	0.346	0.2338	
960 minute winter	47	1.010	47_OUT	5.0	0.716	0.346	0.0485	162.8
15 minute winter	Carpark 1	11.000_1	23	3.5	0.964	0.445	0.0478	
15 minute winter	Carpark 2	14.000_1	29	3.8	0.979	0.483	0.0336	

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Results for 30 year Critical Storm Duration. Lowest mass balance: 97.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	Carpark 3	11	51.449	0.049	3.8	0.0814	0.0000	OK
120 minute winter	Carpark 4	120	51.214	0.114	0.9	1.0769	0.0000	SURCHARGED
15 minute winter	Carpark 5	11	51.622	0.022	0.8	0.0121	0.0000	OK
15 minute winter	Carpark 6	11	51.485	0.035	2.7	0.0681	0.0000	OK
15 minute winter	Carpark 7	11	51.717	0.042	2.7	0.0520	0.0000	OK
15 minute winter	Carpark 8	10	52.228	0.028	2.7	0.0374	0.0000	OK
15 minute winter	Carpark 9	11	52.530	0.030	1.4	0.0151	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 winter	Carpark 3	22.000	42	3.8	0.852	0.482	0.0597	
120 minute winter	Carpark 4	17.000_1	41	0.9	0.512	0.103	0.0314	
15 minute winter	Carpark 5	24.000	45	0.8	0.638	0.102	0.0068	
15 minute winter	Carpark 6	18.000_1	31	2.7	0.979	0.251	0.0086	
15 minute winter	Carpark 7	21.000	35	2.7	0.812	0.341	0.0125	
15 minute winter	Carpark 8	6.000_1	6	2.7	1.485	0.169	0.0328	
15 minute winter	Carpark 9	7.000_1	7	1.4	0.816	0.178	0.0054	

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Results for 100 year Critical Storm Duration. Lowest mass balance: 97.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	1	26	52.375	0.329	3.1	0.0710	0.0000	SURCHARGED
30 minute winter	2	25	52.373	0.507	4.3	0.1141	0.0000	SURCHARGED
30 minute winter	3	24	52.376	0.157	1.5	0.0339	0.0000	SURCHARGED
30 minute winter	4	25	52.374	0.624	5.2	0.1303	0.0000	SURCHARGED
15 minute summer	5	11	52.497	0.014	0.7	0.0031	0.0000	OK
30 minute winter	6	25	52.373	0.693	8.1	0.1283	0.0000	SURCHARGED
15 minute winter	7	11	52.475	0.028	2.9	0.0065	0.0000	OK
30 minute winter	8	25	52.369	0.817	8.0	0.1487	0.0000	SURCHARGED
30 minute winter	9	24	52.367	0.861	9.2	1.6136	0.0000	SURCHARGED
15 minute winter	10	11	53.055	0.041	2.8	0.0159	0.0000	OK
15 minute winter	11	10	52.844	0.075	7.0	0.0374	0.0000	OK
15 minute winter	12	11	53.079	0.030	2.8	0.0116	0.0000	OK
15 minute winter	13	14	52.504	0.279	9.9	0.0443	0.0000	SURCHARGED
30 minute winter	14	24	52.360	0.965	18.0	1.9711	0.0000	SURCHARGED
15 minute winter	15	15	52.299	0.094	5.3	0.0556	0.0000	OK
15 minute winter	16	15	52.256	0.522	5.3	0.0830	0.0000	SURCHARGED
15 minute winter	17	15	52.234	0.670	6.3	0.1589	0.0000	SURCHARGED
15 minute winter	18	14	52.403	0.212	5.3	0.1248	0.0000	SURCHARGED
15 minute winter	19	14	52.203	0.783	4.6	0.1245	0.0000	SURCHARGED
15 minute winter	20	10	52.455	0.047	3.5	0.0211	0.0000	OK
15 minute winter	21	15	52.360	0.312	3.6	0.0496	0.0000	SURCHARGED
15 minute winter	22	14	52.348	0.508	10.3	0.1315	0.0000	SURCHARGED
15 minute winter	23	14	52.167	1.277	38.2	2.9492	0.0000	SURCHARGED
15 minute winter	24	11	51.975	0.039	2.5	0.0130	0.0000	OK
15 minute winter	25	13	51.794	0.323	14.8	0.3529	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)
30 minute winter	1	1.000	2	-2.5	0.435	-0.315	0.0822	
30 minute winter	2	1.001	4	-3.4	0.448	-0.189	0.2053	
30 minute winter	3	2.000	4	-1.0	0.754	-0.079	0.0822	
30 minute winter	4	1.002	6	4.5	0.473	0.255	0.1230	
15 minute summer	5	3.000	6	0.7	0.923	0.043	0.0446	
30 minute winter	6	1.003	8	7.8	0.657	0.442	0.2267	
15 minute winter	7	4.000	8	2.9	1.333	0.168	0.0507	
30 minute winter	8	1.004	9	9.0	0.757	0.505	0.0808	
30 minute winter	9	1.005	14	10.5	0.650	0.595	0.1959	
15 minute winter	10	5.000	11	2.8	0.600	0.354	0.0665	
15 minute winter	11	5.001	13	7.1	1.188	0.899	0.2183	
15 minute winter	12	6.000	13	2.8	0.863	0.193	0.0708	
15 minute winter	13	5.002	14	8.5	1.484	0.557	0.0974	
30 minute winter	14	1.006	23	14.0	0.795	0.729	0.7632	
15 minute winter	15	7.000	16	5.3	1.041	0.668	0.2130	
15 minute winter	16	7.001	17	4.4	0.784	0.552	0.0780	
15 minute winter	17	7.002	19	4.6	1.040	0.579	0.0667	
15 minute winter	18	8.000	22	5.2	0.920	0.660	0.1635	
15 minute winter	19	7.003	23	5.0	0.636	0.411	0.0950	
15 minute winter	20	9.000	21	3.5	0.981	0.444	0.1201	
15 minute winter	21	9.001	22	3.3	0.661	0.398	0.0864	
15 minute winter	22	9.002	23	7.0	0.912	0.536	0.1531	
15 minute winter	23	1.007	29	33.8	1.921	2.340	0.5587	
15 minute winter	24	10.000	25	2.5	0.577	0.318	0.1417	
15 minute winter	25	10.001	27	13.0	0.985	0.530	0.2213	

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Results for 100 year Critical Storm Duration. Lowest mass balance: 97.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	26	11	51.886	0.033	2.1	0.0427	0.0000	OK
15 minute winter	27	13	51.728	0.495	17.1	0.1336	0.0000	SURCHARGED
15 minute winter	28	13	51.634	0.502	15.1	0.0798	0.0000	SURCHARGED
180 minute winter	29	176	51.414	0.736	27.4	99.1915	0.0000	SURCHARGED
15 minute winter	30	14	51.420	0.146	1.8	0.0440	0.0000	SURCHARGED
15 minute winter	31	14	51.440	0.088	4.6	0.0216	0.0000	OK
15 minute winter	32	14	51.416	0.345	6.9	0.0704	0.0000	SURCHARGED
15 minute winter	33	11	51.695	0.018	1.1	0.0044	0.0000	OK
180 minute winter	34	176	51.411	0.497	2.5	0.0935	0.0000	SURCHARGED
15 minute winter	35	11	51.665	0.054	4.2	0.0113	0.0000	OK
180 minute winter	36	176	51.411	0.696	3.5	0.1267	0.0000	SURCHARGED
15 minute winter	37	11	51.533	0.033	1.8	0.0121	0.0000	OK
180 minute winter	38	176	51.411	0.097	0.5	0.0155	0.0000	OK
180 minute winter	39	176	51.411	0.152	0.5	0.0460	0.0000	SURCHARGED
180 minute winter	40	176	51.411	0.226	1.0	0.0360	0.0000	SURCHARGED
180 minute winter	41	176	51.411	0.395	2.1	0.0628	0.0000	SURCHARGED
180 minute winter	42	176	51.412	0.237	1.9	0.0577	0.0000	SURCHARGED
15 minute winter	43	11	51.675	0.026	1.1	0.0063	0.0000	OK
180 minute winter	44	176	51.411	0.427	2.4	0.0795	0.0000	SURCHARGED
180 minute winter	45	176	51.411	0.937	7.4	0.1489	0.0000	SURCHARGED
180 minute winter	46	176	51.411	0.960	7.0	1.6965	0.0000	SURCHARGED
30 minute winter	47	225	50.294	0.065	5.0	0.1147	0.0000	OK
30 minute winter	47_OUT	225	50.244	0.061	5.0	0.0000	0.0000	OK
15 minute winter	Carpark 1	11	52.256	0.056	4.6	0.0480	0.0000	OK
15 minute winter	Carpark 2	11	51.859	0.059	4.9	0.0504	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 winter	26	11.000	27	2.1	0.618	0.238	0.1369	
15 minute winter	27	10.002	28	15.1	0.858	0.847	0.1760	
15 minute winter	28	10.003	29	14.8	1.886	1.887	0.0543	
180 minute winter	29	1.008	46	4.5	0.655	0.310	0.0955	
15 minute winter	30	12.000	32	1.7	0.419	0.222	0.0943	
15 minute winter	31	13.000	32	4.5	0.889	0.462	0.0826	
15 minute winter	32	12.001	34	5.7	0.931	0.728	0.0728	
15 minute winter	33	14.000	34	1.1	0.595	0.068	0.0476	
180 minute winter	34	12.002	36	2.1	0.524	0.268	0.0890	
15 minute winter	35	15.000	36	4.2	0.991	0.531	0.0467	
180 minute winter	36	12.003	45	3.3	0.576	0.423	0.0895	
15 minute winter	37	16.000	38	1.8	0.791	0.230	0.0254	
180 minute winter	38	16.001	40	0.5	0.552	0.064	0.0571	
180 minute winter	39	17.000	40	0.5	0.432	0.064	0.0348	
180 minute winter	40	16.002	41	1.0	0.536	0.128	0.0794	
180 minute winter	41	16.003	45	-1.8	0.523	-0.226	0.1991	
180 minute winter	42	18.000	44	1.9	0.735	0.243	0.0894	
15 minute winter	43	19.000	44	1.1	0.695	0.140	0.0163	
180 minute winter	44	18.001	45	2.3	0.671	0.288	0.1122	
180 minute winter	45	12.004	46	7.0	0.436	0.482	0.0602	
180 minute winter	46	1.009	47	5.0	0.711	0.345	0.2337	
30 minute winter	47	1.010	47_OUT	5.0	0.716	0.346	0.0485	75.1
15 minute winter	Carpark 1	11.000_1	23	4.6	1.029	0.585	0.0791	
15 minute winter	Carpark 2	14.000_1	29	4.9	1.038	0.623	0.0409	

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Results for 100 year Critical Storm Duration. Lowest mass balance: 97.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	Carpark 3	11	51.457	0.057	4.9	0.1031	0.0000	OK
180 minute winter	Carpark 4	176	51.411	0.311	2.5	6.1785	0.0000	SURCHARGED
15 minute winter	Carpark 5	11	51.626	0.026	1.1	0.0159	0.0000	OK
15 minute winter	Carpark 6	11	51.491	0.041	3.5	0.0891	0.0000	OK
15 minute winter	Carpark 7	11	51.724	0.049	3.5	0.0680	0.0000	OK
30 minute winter	Carpark 8	25	52.378	0.178	5.0	1.1231	0.0000	SURCHARGED
15 minute winter	Carpark 9	11	52.534	0.034	1.8	0.0185	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 winter	Carpark 3	22.000	42	4.9	0.893	0.621	0.0824	
180 minute winter	Carpark 4	17.000_1	41	-2.0	0.502	-0.226	0.0314	
15 minute winter	Carpark 5	24.000	45	1.1	0.698	0.140	0.0086	
15 minute winter	Carpark 6	18.000_1	31	3.5	1.035	0.324	0.0147	
15 minute winter	Carpark 7	21.000	35	3.5	0.854	0.442	0.0154	
30 minute winter	Carpark 8	6.000_1	6	3.8	1.425	0.237	0.0534	
15 minute winter	Carpark 9	7.000_1	7	1.8	0.869	0.229	0.0065	

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Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 97.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	1	25	52.669	0.623	3.6	0.1346	0.0000	FLOOD RISK
30 minute winter	2	25	52.667	0.801	5.7	0.1802	0.0000	FLOOD RISK
30 minute winter	3	25	52.665	0.446	3.2	0.0963	0.0000	FLOOD RISK
30 minute winter	4	25	52.666	0.916	7.7	0.1914	0.0000	FLOOD RISK
30 minute winter	5	25	52.665	0.182	1.5	0.0393	0.0000	SURCHARGED
30 minute winter	6	25	52.665	0.985	10.7	0.1822	0.0000	SURCHARGED
30 minute winter	7	25	52.682	0.235	3.4	0.0551	0.0000	SURCHARGED
30 minute winter	8	24	52.677	1.125	11.4	0.2047	0.0000	SURCHARGED
30 minute winter	9	24	52.681	1.175	12.1	2.2025	0.0000	SURCHARGED
15 minute winter	10	14	53.239	0.225	3.9	0.0872	0.0000	SURCHARGED
15 minute winter	11	14	53.214	0.445	9.7	0.2228	0.0000	FLOOD RISK
15 minute winter	12	11	53.085	0.036	3.9	0.0138	0.0000	OK
15 minute winter	13	14	52.893	0.668	11.6	0.1063	0.0000	SURCHARGED
30 minute winter	14	24	52.681	1.286	19.3	2.6268	0.0000	SURCHARGED
30 minute winter	15	23	52.796	0.591	6.3	0.3474	0.0000	FLOOD RISK
30 minute winter	16	24	52.699	0.965	5.5	0.1535	0.0000	SURCHARGED
30 minute winter	17	24	52.663	1.099	5.5	0.2605	0.0000	SURCHARGED
15 minute winter	18	14	52.854	0.663	7.4	0.3897	0.0000	FLOOD RISK
30 minute winter	19	24	52.605	1.185	4.5	0.1884	0.0000	SURCHARGED
30 minute winter	20	24	52.814	0.406	4.2	0.1807	0.0000	FLOOD RISK
30 minute winter	21	24	52.788	0.740	4.0	0.1176	0.0000	FLOOD RISK
30 minute winter	22	24	52.771	0.931	9.5	0.2411	0.0000	FLOOD RISK
30 minute winter	23	23	52.532	1.642	41.7	3.7933	0.0000	SURCHARGED
15 minute winter	24	13	52.200	0.264	3.5	0.0887	0.0000	SURCHARGED
15 minute winter	25	13	52.157	0.686	20.7	0.7491	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)
30 minute winter	1	1.000	2	-2.8	0.477	-0.355	0.0822	
30 minute winter	2	1.001	4	-4.5	0.453	-0.255	0.2053	
30 minute winter	3	2.000	4	-2.4	0.781	-0.201	0.0822	
30 minute winter	4	1.002	6	-5.7	0.468	-0.319	0.1230	
30 minute winter	5	3.000	6	0.8	0.907	0.049	0.0821	
30 minute winter	6	1.003	8	11.4	0.646	0.643	0.2267	
30 minute winter	7	4.000	8	3.4	1.291	0.195	0.0827	
30 minute winter	8	1.004	9	12.1	0.739	0.680	0.0808	
30 minute winter	9	1.005	14	13.1	0.747	0.741	0.1959	
15 minute winter	10	5.000	11	3.8	0.607	0.485	0.1124	
15 minute winter	11	5.001	13	8.1	1.202	1.019	0.2486	
15 minute winter	12	6.000	13	3.9	0.906	0.269	0.0753	
15 minute winter	13	5.002	14	9.5	1.532	0.623	0.0974	
30 minute winter	14	1.006	23	15.0	0.851	0.781	0.7632	
30 minute winter	15	7.000	16	5.5	1.012	0.696	0.2153	
30 minute winter	16	7.001	17	3.8	0.799	0.476	0.0780	
30 minute winter	17	7.002	19	4.5	1.047	0.567	0.0667	
15 minute winter	18	8.000	22	5.4	0.941	0.694	0.1635	
30 minute winter	19	7.003	23	4.9	0.625	0.404	0.0950	
30 minute winter	20	9.000	21	4.0	0.966	0.509	0.1648	
30 minute winter	21	9.001	22	3.0	0.637	0.360	0.0864	
30 minute winter	22	9.002	23	6.5	0.867	0.494	0.1531	
30 minute winter	23	1.007	29	36.1	2.050	2.497	0.5587	
15 minute winter	24	10.000	25	3.4	0.560	0.432	0.2086	
15 minute winter	25	10.001	27	16.5	1.011	0.672	0.2213	

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Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 97.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	26	14	52.074	0.221	3.0	0.2835	0.0000	SURCHARGED
15 minute winter	27	13	52.041	0.808	21.7	0.2183	0.0000	SURCHARGED
15 minute winter	28	14	51.904	0.772	18.7	0.1227	0.0000	SURCHARGED
240 minute winter	29	236	51.725	1.047	27.6	141.1106	0.0000	SURCHARGED
240 minute winter	30	236	51.722	0.448	0.6	0.1352	0.0000	FLOOD RISK
240 minute winter	31	236	51.722	0.370	1.4	0.0906	0.0000	SURCHARGED
240 minute winter	32	236	51.722	0.651	2.2	0.1328	0.0000	FLOOD RISK
240 minute winter	33	236	51.721	0.044	0.3	0.0109	0.0000	OK
240 minute winter	34	236	51.721	0.807	2.4	0.1518	0.0000	SURCHARGED
240 minute winter	35	232	51.721	0.110	1.3	0.0229	0.0000	SURCHARGED
240 minute winter	36	236	51.721	1.006	3.6	0.1832	0.0000	SURCHARGED
240 minute winter	37	236	51.722	0.222	0.9	0.0799	0.0000	FLOOD RISK
240 minute winter	38	236	51.722	0.408	1.2	0.0648	0.0000	FLOOD RISK
240 minute winter	39	236	51.722	0.463	0.6	0.1398	0.0000	FLOOD RISK
240 minute winter	40	236	51.722	0.537	1.5	0.0854	0.0000	FLOOD RISK
240 minute winter	41	236	51.722	0.706	3.1	0.1122	0.0000	FLOOD RISK
240 minute winter	42	236	51.722	0.548	2.2	0.1331	0.0000	SURCHARGED
240 minute winter	43	236	51.721	0.072	0.3	0.0177	0.0000	OK
240 minute winter	44	236	51.721	0.737	2.5	0.1371	0.0000	SURCHARGED
240 minute winter	45	236	51.721	1.247	6.8	0.1983	0.0000	SURCHARGED
240 minute winter	46	236	51.721	1.270	6.6	2.2444	0.0000	SURCHARGED
240 minute winter	47	236	50.294	0.065	5.0	0.1149	0.0000	OK
240 minute winter	47_OUT	236	50.244	0.061	5.0	0.0000	0.0000	OK
30 minute winter	Carpark 1	24	52.557	0.357	5.4	1.0376	0.0000	SURCHARGED
15 minute winter	Carpark 2	11	51.876	0.076	6.9	0.0725	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 winter	26	11.000	27	2.9	0.607	0.330	0.2120	
15 minute winter	27	10.002	28	18.7	1.063	1.048	0.1760	
15 minute winter	28	10.003	29	18.2	2.323	2.324	0.0548	
240 minute winter	29	1.008	46	5.6	0.642	0.386	0.0955	
240 minute winter	30	12.000	32	0.6	0.308	0.075	0.0943	
240 minute winter	31	13.000	32	1.4	0.662	0.144	0.0854	
240 minute winter	32	12.001	34	1.9	0.685	0.236	0.0728	
240 minute winter	33	14.000	34	0.3	0.206	0.019	0.0608	
240 minute winter	34	12.002	36	2.1	0.499	0.260	0.0890	
240 minute winter	35	15.000	36	1.3	0.732	0.165	0.0867	
240 minute winter	36	12.003	45	3.4	0.576	0.431	0.0895	
240 minute winter	37	16.000	38	0.6	0.585	0.077	0.0872	
240 minute winter	38	16.001	40	-1.2	0.566	-0.154	0.0574	
240 minute winter	39	17.000	40	0.6	0.455	0.077	0.0348	
240 minute winter	40	16.002	41	-1.5	0.505	-0.191	0.0794	
240 minute winter	41	16.003	45	-2.7	0.523	-0.349	0.1991	
240 minute winter	42	18.000	44	2.0	0.708	0.253	0.0894	
240 minute winter	43	19.000	44	0.3	0.478	0.038	0.0715	
240 minute winter	44	18.001	45	2.2	0.631	0.286	0.1122	
240 minute winter	45	12.004	46	6.6	0.436	0.453	0.0602	
240 minute winter	46	1.009	47	5.0	0.712	0.347	0.2344	
240 minute winter	47	1.010	47_OUT	5.0	0.716	0.347	0.0486	127.8
30 minute winter	Carpark 1	11.000_1	23	5.2	1.034	0.665	0.1031	
15 minute winter	Carpark 2	14.000_1	29	6.9	1.105	0.876	0.0540	

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Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 97.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	Carpark 3	236	51.722	0.322	1.6	2.0813	0.0000	FLOOD RISK
240 minute winter	Carpark 4	236	51.722	0.622	3.8	8.6431	0.0000	FLOOD RISK
240 minute winter	Carpark 5	236	51.721	0.121	0.3	0.2658	0.0000	SURCHARGED
240 minute winter	Carpark 6	236	51.722	0.272	1.4	3.3808	0.0000	SURCHARGED
15 minute winter	Carpark 7	11	51.737	0.062	4.9	0.1007	0.0000	OK
30 minute winter	Carpark 8	30	52.617	0.417	10.7	5.9737	0.0000	FLOOD RISK
30 minute winter	Carpark 9	25	52.684	0.184	2.1	0.3363	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)
240 minute winter	Carpark 3	22.000	42	1.6	0.692	0.202	0.1051	
240 minute winter	Carpark 4	17.000_1	41	-2.9	0.502	-0.336	0.0314	
240 minute winter	Carpark 5	24.000	45	0.3	0.480	0.038	0.0427	
240 minute winter	Carpark 6	18.000_1	31	1.1	0.778	0.102	0.0245	
15 minute winter	Carpark 7	21.000	35	4.9	0.907	0.617	0.0202	
30 minute winter	Carpark 8	6.000_1	6	8.0	1.407	0.503	0.0534	
30 minute winter	Carpark 9	7.000_1	7	2.1	0.903	0.265	0.0246	

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