

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	100	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	1.000
CV	0.750	Preferred Cover Depth (m)	0.250
Time of Entry (mins)	8.00	Include Intermediate Ground	x
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	x
Maximum Rainfall (mm/hr)	250.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
SILT TRAP_1	0.163		123.200		113.667	132.924	0.100
MUGA_SILT	0.164	30.00	124.000		171.288	89.415	0.100
CAR PARK		8.00	122.500	1200	173.741	108.859	0.600
SILT TRAP_2	0.063		122.400		195.453	111.646	0.700
2		8.00	122.300	1200	199.689	114.661	0.600
3			121.500	600	225.178	118.799	0.500
To Off-site			121.500		228.558	125.630	0.600

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	MUGA	CAR PARK	18.290	0.600	123.400	121.950	1.450	12.6	150	30.00	64.8
1.001	CAR PARK	SILT TRAP_2	10.771	0.600	121.900	121.700	0.200	53.9	225	8.10	64.8
1.002	2	3	38.045	0.600	121.700	121.000	0.700	54.4	225	8.36	64.8
1.003	3	To Off-site	7.737	0.600	121.000	120.900	0.100	77.4	225	8.44	64.8

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					0.400				
1.001	1.786	71.0	0.0	0.375	0.475	0.000	0.0	0	0.000
1.002	1.778	70.7	0.0	0.375	0.275	0.000	0.0	0	0.000
1.003	1.488	59.2	0.0	0.275	0.375	0.000	0.0	0	0.000

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	18.290	12.6	150			123.400		122.500	121.950	0.400
1.001	10.771	53.9	225	Circular	122.500	121.900	0.375	122.400	121.700	0.475
1.002	38.045	54.4	225	Circular	122.300	121.700	0.375	121.500	121.000	0.275
1.003	7.737	77.4	225	Circular	121.500	121.000	0.275	121.500	120.900	0.375

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000					CAR PARK	1200	Manhole	HCD Manhole
1.001	CAR PARK	1200	Manhole	HCD Manhole	SILT TRAP_2		Junction	
1.002	2	1200	Manhole	HCD Manhole	3	600	Manhole	HCD Manhole
1.003	3	600	Manhole	HCD Manhole	To Off-site		Junction	

Pre-development Discharge Rate

Site Makeup	Greenfield	Growth Factor 30 year	1.95
Greenfield Method	IH124	Growth Factor 100 year	2.48
Positively Drained Area (ha)	0.482	Betterment (%)	0
SAAR (mm)	637	QBar	2.1
Soil Index	4	Q 2 year (l/s)	
SPR	0.47	Q 30 year (l/s)	
Region	4	Q 100 year (l/s)	
Growth Factor 2 year	0.89		

Node SILT TRAP_1 Offline Weir Control

Flap Valve	x	Invert Level (m)	123.100	Discharge Coefficient	0.590
Loop to Node	SILT TRAP_2	Width (m)	0.600		

Node MUGA_SILT Offline Weir Control

Flap Valve	x	Invert Level (m)	123.900	Discharge Coefficient	0.590
Loop to Node	CAR PARK	Width (m)	0.600		

Node SILT TRAP_2 Offline Weir Control

Flap Valve	x	Invert Level (m)	122.300	Discharge Coefficient	0.590
Loop to Node	2	Width (m)	0.600		

Node MUGA_SILT Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00360	Safety Factor	2.0	Invert Level (m)	123.000
Side Inf Coefficient (m/hr)	0.00360	Porosity	1.00	Time to half empty (mins)	12065

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	61.0	61.0	1.000	150.0	150.0

Node SILT TRAP_1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00360	Safety Factor	2.0	Invert Level (m)	122.200
Side Inf Coefficient (m/hr)	0.00360	Porosity	1.00	Time to half empty (mins)	10906

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	61.0	61.0	1.000	150.0	180.0

Node SILT TRAP_2 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00360	Safety Factor	2.0	Invert Level (m)	121.400
Side Inf Coefficient (m/hr)	0.00360	Porosity	1.00	Time to half empty (mins)	12065

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	61.0	61.0	1.000	150.0	150.0

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
10080 minute winter	SILT TRAP_1	9600	122.903	-0.197	0.4	64.9145	0.0000	OK
10080 minute winter	MUGA_SILT	9600	123.727	-0.173	0.4	67.8092	0.0000	OK
15 minute summer	CAR PARK	1	121.900	0.000	0.0	0.0000	0.0000	OK
2880 minute winter	SILT TRAP_2	2760	121.660	-0.040	0.3	18.8646	0.0000	OK
15 minute summer	2	1	121.700	0.000	0.0	0.0000	0.0000	OK
15 minute summer	3	1	121.000	0.000	0.0	0.0000	0.0000	OK
15 minute summer	To Off-site	1	120.900	0.000	0.0	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
10080 minute winter	SILT TRAP_1	Infiltration		0.1				
15 minute summer	SILT TRAP_1	Weir	SILT TRAP_2	0.0				0.0
10080 minute winter	MUGA_SILT	Infiltration		0.1				
15 minute summer	MUGA_SILT	Weir	CAR PARK	0.0				0.0
15 minute summer	CAR PARK	1.001	SILT TRAP_2	0.0	0.000	0.000	0.0000	
2880 minute winter	SILT TRAP_2	Infiltration		0.0				
15 minute summer	SILT TRAP_2	Weir	2	0.0				0.0
15 minute summer	2	1.002	3	0.0	0.000	0.000	0.0000	
15 minute summer	3	1.003	To Off-site	0.0	0.000	0.000	0.0000	0.0

Results for 5 year Critical Storm Duration. Lowest mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
10080 minute winter	SILT TRAP_1	9720	123.047	-0.053	0.5	83.5806	0.0000	OK
10080 minute winter	MUGA_SILT	9780	123.876	-0.024	0.5	87.5641	0.0000	OK
15 minute summer	CAR PARK	1	121.900	0.000	0.0	0.0000	0.0000	OK
4320 minute winter	SILT TRAP_2	4080	121.754	0.054	0.3	27.2532	0.0000	OK
15 minute summer	2	1	121.700	0.000	0.0	0.0000	0.0000	OK
15 minute summer	3	1	121.000	0.000	0.0	0.0000	0.0000	OK
15 minute summer	To Off-site	1	120.900	0.000	0.0	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
10080 minute winter	SILT TRAP_1	Infiltration		0.1				
15 minute summer	SILT TRAP_1	Weir	SILT TRAP_2	0.0				0.0
10080 minute winter	MUGA_SILT	Infiltration		0.1				
15 minute summer	MUGA_SILT	Weir	CAR PARK	0.0				0.0
15 minute summer	CAR PARK	1.001	SILT TRAP_2	0.0	0.000	0.000	0.0000	
4320 minute winter	SILT TRAP_2	Infiltration		0.0				
15 minute summer	SILT TRAP_2	Weir	2	0.0				0.0
15 minute summer	2	1.002	3	0.0	0.000	0.000	0.0000	
15 minute summer	3	1.003	To Off-site	0.0	0.000	0.000	0.0000	0.0

Results for 10 year Critical Storm Duration. Lowest mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
10080 minute winter	SILT TRAP_1	7380	123.102	0.002	0.5	91.2836	0.0000	OK
10080 minute winter	MUGA_SILT	7320	123.902	0.002	0.5	91.3773	0.0000	OK
10080 minute winter	CAR PARK	7440	121.907	0.007	0.1	0.0083	0.0000	OK
10080 minute winter	SILT TRAP_2	7620	121.839	0.139	0.2	35.5954	0.0000	OK
15 minute summer	2	1	121.700	0.000	0.0	0.0000	0.0000	OK
15 minute summer	3	1	121.000	0.000	0.0	0.0000	0.0000	OK
15 minute summer	To Off-site	1	120.900	0.000	0.0	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
10080 minute winter	SILT TRAP_1	Infiltration		0.1				
10080 minute winter	SILT TRAP_1	Weir	SILT TRAP_2	0.1				3.0
10080 minute winter	MUGA_SILT	Infiltration		0.1				
10080 minute winter	MUGA_SILT	Weir	CAR PARK	0.1				8.5
10080 minute winter	CAR PARK	1.001	SILT TRAP_2	0.1	0.022	0.002	0.1393	
10080 minute winter	SILT TRAP_2	Infiltration		0.0				
15 minute summer	SILT TRAP_2	Weir	2	0.0				0.0
15 minute summer	2	1.002	3	0.0	0.000	0.000	0.0000	
15 minute summer	3	1.003	To Off-site	0.0	0.000	0.000	0.0000	0.0

Results for 15 year Critical Storm Duration. Lowest mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
10080 minute winter	SILT TRAP_1	6780	123.103	0.003	0.6	91.5455	0.0000	OK
10080 minute winter	MUGA_SILT	6360	123.904	0.004	0.6	91.6946	0.0000	OK
10080 minute winter	CAR PARK	7800	121.952	0.052	0.3	0.0586	0.0000	OK
10080 minute winter	SILT TRAP_2	7800	121.952	0.252	0.4	47.6676	0.0000	OK
15 minute summer	2	1	121.700	0.000	0.0	0.0000	0.0000	OK
15 minute summer	3	1	121.000	0.000	0.0	0.0000	0.0000	OK
15 minute summer	To Off-site	1	120.900	0.000	0.0	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
10080 minute winter	SILT TRAP_1	Infiltration		0.1				
10080 minute winter	SILT TRAP_1	Weir	SILT TRAP_2	0.2				12.5
10080 minute winter	MUGA_SILT	Infiltration		0.1				
10080 minute winter	MUGA_SILT	Weir	CAR PARK	0.3				18.3
10080 minute winter	CAR PARK	1.001	SILT TRAP_2	0.3	0.050	0.004	0.2513	
10080 minute winter	SILT TRAP_2	Infiltration		0.1				
15 minute summer	SILT TRAP_2	Weir	2	0.0				0.0
15 minute summer	2	1.002	3	0.0	0.000	0.000	0.0000	
15 minute summer	3	1.003	To Off-site	0.0	0.000	0.000	0.0000	0.0

Results for 20 year Critical Storm Duration. Lowest mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
10080 minute winter	SILT TRAP_1	6420	123.104	0.004	0.6	91.7140	0.0000	OK
10080 minute winter	MUGA_SILT	6420	123.904	0.004	0.6	91.7367	0.0000	OK
10080 minute winter	CAR PARK	7860	121.998	0.098	0.3	0.1108	0.0000	OK
10080 minute winter	SILT TRAP_2	7860	121.998	0.298	0.5	52.9303	0.0000	OK
15 minute summer	2	1	121.700	0.000	0.0	0.0000	0.0000	OK
15 minute summer	3	1	121.000	0.000	0.0	0.0000	0.0000	OK
15 minute summer	To Off-site	1	120.900	0.000	0.0	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
10080 minute winter	SILT TRAP_1	Infiltration		0.1				
10080 minute winter	SILT TRAP_1	Weir	SILT TRAP_2	0.3				17.6
10080 minute winter	MUGA_SILT	Infiltration		0.1				
10080 minute winter	MUGA_SILT	Weir	CAR PARK	0.3				22.8
10080 minute winter	CAR PARK	1.001	SILT TRAP_2	0.3	0.051	0.005	0.3035	
10080 minute winter	SILT TRAP_2	Infiltration		0.1				
15 minute summer	SILT TRAP_2	Weir	2	0.0				0.0
15 minute summer	2	1.002	3	0.0	0.000	0.000	0.0000	
15 minute summer	3	1.003	To Off-site	0.0	0.000	0.000	0.0000	0.0

Results for 25 year Critical Storm Duration. Lowest mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
10080 minute winter	SILT TRAP_1	6420	123.104	0.004	0.6	91.7143	0.0000	OK
10080 minute winter	MUGA_SILT	6060	123.905	0.005	0.6	91.8014	0.0000	OK
10080 minute winter	CAR PARK	7920	122.041	0.141	0.4	0.1593	0.0000	OK
10080 minute winter	SILT TRAP_2	7920	122.041	0.341	0.6	57.9806	0.0000	OK
15 minute summer	2	1	121.700	0.000	0.0	0.0000	0.0000	OK
15 minute summer	3	1	121.000	0.000	0.0	0.0000	0.0000	OK
15 minute summer	To Off-site	1	120.900	0.000	0.0	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
10080 minute winter	SILT TRAP_1	Infiltration		0.1				
10080 minute winter	SILT TRAP_1	Weir	SILT TRAP_2	0.3				21.0
10080 minute winter	MUGA_SILT	Infiltration		0.1				
10080 minute winter	MUGA_SILT	Weir	CAR PARK	0.4				26.1
10080 minute winter	CAR PARK	1.001	SILT TRAP_2	0.4	0.065	0.005	0.3550	
10080 minute winter	SILT TRAP_2	Infiltration		0.1				
15 minute summer	SILT TRAP_2	Weir	2	0.0				0.0
15 minute summer	2	1.002	3	0.0	0.000	0.000	0.0000	
15 minute summer	3	1.003	To Off-site	0.0	0.000	0.000	0.0000	0.0

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
10080 minute winter	SILT TRAP_1	6120	123.105	0.005	0.6	91.8609	0.0000	OK
10080 minute winter	MUGA_SILT	6120	123.905	0.005	0.7	91.8866	0.0000	OK
10080 minute winter	CAR PARK	7980	122.072	0.172	0.4	0.1943	0.0000	OK
10080 minute winter	SILT TRAP_2	7980	122.072	0.372	0.6	61.7315	0.0000	OK
15 minute summer	2	1	121.700	0.000	0.0	0.0000	0.0000	OK
15 minute summer	3	1	121.000	0.000	0.0	0.0000	0.0000	OK
15 minute summer	To Off-site	1	120.900	0.000	0.0	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
10080 minute winter	SILT TRAP_1	Infiltration		0.1				
10080 minute winter	SILT TRAP_1	Weir	SILT TRAP_2	0.4				24.5
10080 minute winter	MUGA_SILT	Infiltration		0.1				
10080 minute winter	MUGA_SILT	Weir	CAR PARK	0.4				29.9
10080 minute winter	CAR PARK	1.001	SILT TRAP_2	0.4	0.067	0.006	0.3894	
10080 minute winter	SILT TRAP_2	Infiltration		0.1				
15 minute summer	SILT TRAP_2	Weir	2	0.0				0.0
15 minute summer	2	1.002	3	0.0	0.000	0.000	0.0000	
15 minute summer	3	1.003	To Off-site	0.0	0.000	0.000	0.0000	0.0

Results for 50 year Critical Storm Duration. Lowest mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
10080 minute winter	SILT TRAP_1	5880	123.106	0.006	0.7	92.0052	0.0000	OK
5760 minute winter	MUGA_SILT	3600	123.906	0.006	1.0	92.0613	0.0000	OK
10080 minute winter	CAR PARK	8160	122.211	0.311	0.5	0.3517	0.0000	FLOOD RISK
10080 minute winter	SILT TRAP_2	8160	122.211	0.511	0.7	79.6557	0.0000	OK
15 minute summer	2	1	121.700	0.000	0.0	0.0000	0.0000	OK
15 minute summer	3	1	121.000	0.000	0.0	0.0000	0.0000	OK
15 minute summer	To Off-site	1	120.900	0.000	0.0	0.0000	0.0000	OK
Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
10080 minute winter	SILT TRAP_1	Infiltration		0.1				
10080 minute winter	SILT TRAP_1	Weir	SILT TRAP_2	0.5				34.9
5760 minute winter	MUGA_SILT	Infiltration		0.1				
5760 minute winter	MUGA_SILT	Weir	CAR PARK	0.6				28.3
5760 minute winter	CAR PARK	1.001	SILT TRAP_2	0.6	0.049	0.008	0.4283	
10080 minute winter	SILT TRAP_2	Infiltration		0.1				
15 minute summer	SILT TRAP_2	Weir	2	0.0				0.0
15 minute summer	2	1.002	3	0.0	0.000	0.000	0.0000	
15 minute summer	3	1.003	To Off-site	0.0	0.000	0.000	0.0000	0.0

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	SILT TRAP_1	570	123.110	0.010	6.9	92.6341	0.0000	OK
600 minute winter	MUGA_SILT	570	123.910	0.010	6.9	92.6529	0.0000	OK
10080 minute winter	CAR PARK	7380	122.303	0.403	0.6	0.4555	0.0000	FLOOD RISK
10080 minute winter	SILT TRAP_2	7380	122.303	0.603	0.9	92.4218	0.0000	OK
10080 minute winter	2	7380	121.708	0.008	0.2	0.0092	0.0000	OK
10080 minute winter	3	7380	121.009	0.009	0.2	0.0025	0.0000	OK
10080 minute winter	To Off-site	7380	120.909	0.009	0.2	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute winter	SILT TRAP_1	Infiltration		0.1				
600 minute winter	SILT TRAP_1	Weir	SILT TRAP_2	1.0				5.6
600 minute winter	MUGA_SILT	Infiltration		0.1				
600 minute winter	MUGA_SILT	Weir	CAR PARK	1.1				6.1
600 minute winter	CAR PARK	1.001	SILT TRAP_2	1.1	0.068	0.015	0.2084	
10080 minute winter	SILT TRAP_2	Infiltration		0.1				
10080 minute winter	SILT TRAP_2	Weir	2	0.2				11.7
10080 minute winter	2	1.002	3	0.2	0.344	0.002	0.0178	
10080 minute winter	3	1.003	To Off-site	0.2	0.326	0.003	0.0038	11.7