

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	2	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	1.000
CV	1.000	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)	Invert Level (m)
PLOT 1 SOAKAWAY								
PS1	0.004	5.00	50.025	250	511.809	527.928	0.362	49.663
PS2-Silt Trap	0.002	5.00	50.025	450	511.897	516.538	0.504	49.521
PS3			50.076		511.966	508.958	0.900	49.176
PLOT 2 SOAKAWAY								
PS4	0.004	5.00	50.025	250	525.482	528.071	0.363	49.662
PS5	0.002	5.00	50.025	250	525.517	517.003	0.502	49.523
PS6-Silt Trap			50.025	450	522.957	514.773	0.544	49.481
PS7			50.054		522.721	508.629	0.900	49.154
PARKING AREAS	0.010	5.00	50.000				0.800	49.200
ACCESS AREAS	0.014	5.00	50.000				0.800	49.200

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	PS1	PS2-Silt Trap	11.390	0.600	49.663	49.521	0.142	80.2	100	5.22	50.0
1.001	PS2-Silt Trap	PS3	7.580	0.600	49.521	49.176	0.345	22.0	100	5.30	50.0
2.000	PS4	PS5	11.069	0.600	49.662	49.523	0.139	79.6	100	5.21	50.0
2.001	PS5	PS6-Silt Trap	3.395	0.600	49.523	49.481	0.042	80.8	100	5.28	50.0
2.002	PS6-Silt Trap	PS7	6.148	0.600	49.481	49.154	0.327	18.8	100	5.34	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	0.860	6.8	0.7	0.262	0.404	0.004	0.0	22	0.560
1.001	1.654	13.0	1.1	0.404	0.800	0.006	0.0	20	1.011
2.000	0.863	6.8	0.7	0.263	0.402	0.004	0.0	22	0.562
2.001	0.856	6.7	1.1	0.402	0.444	0.006	0.0	27	0.624
2.002	1.789	14.1	1.1	0.444	0.800	0.006	0.0	19	1.068

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	11.390	80.2	100	Circular	50.025	49.663	0.262	50.025	49.521	0.404
1.001	7.580	22.0	100	Circular	50.025	49.521	0.404	50.076	49.176	0.800
2.000	11.069	79.6	100	Circular	50.025	49.662	0.263	50.025	49.523	0.402
2.001	3.395	80.8	100	Circular	50.025	49.523	0.402	50.025	49.481	0.444
2.002	6.148	18.8	100	Circular	50.025	49.481	0.444	50.054	49.154	0.800

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	PS1	250	Manhole	Adoptable	PS2-Silt Trap	450	Manhole	Adoptable
1.001	PS2-Silt Trap	450	Manhole	Adoptable	PS3		Junction	
2.000	PS4	250	Manhole	Adoptable	PS5	250	Manhole	Adoptable
2.001	PS5	250	Manhole	Adoptable	PS6-Silt Trap	450	Manhole	Adoptable
2.002	PS6-Silt Trap	450	Manhole	Adoptable	PS7		Junction	

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
PLOT 1 SOAKAWAY										
PS1	511.809	527.928	50.025	0.362	250		0	1.000	49.663	100
PS2-Silt Trap	511.897	516.538	50.025	0.504	450		1	1.000	49.521	100
							0	1.001	49.521	100
PS3	511.966	508.958	50.076	0.900			1	1.001	49.176	100
PLOT 2 SOAKAWAY										
PS4	525.482	528.071	50.025	0.363	250		0	2.000	49.662	100
PS5	525.517	517.003	50.025	0.502	250		1	2.000	49.523	100
							0	2.001	49.523	100
PS6-Silt Trap	522.957	514.773	50.025	0.544	450		1	2.001	49.481	100
							0	2.002	49.481	100

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
PS7	522.721	508.629	50.054	0.900		1 ↓	1	2.002	49.154 100
PARKING AREAS			50.000	0.800		°			
ACCESS AREAS			50.000	0.800		°			

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Normal	Starting Level (m)	
Rainfall Events	Singular	Skip Steady State	x	Check Discharge Rate(s)	x
Summer CV	1.000	Drain Down Time (mins)	1441	Check Discharge Volume	x
Winter CV	1.000	Additional Storage (m³/ha)	0.0		

Storm Durations

15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0
30	0	0	0
30	35	0	0
100	0	0	0
100	40	0	0

Node PS3 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.03351	Invert Level (m)	49.176	Depth (m)	0.400
Side Inf Coefficient (m/hr)	0.03351	Time to half empty (mins)	537	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	2.000	Number Required	1
Porosity	0.95	Pit Length (m)	6.000		

Node PS7 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.03351	Invert Level (m)	49.154	Depth (m)	0.400
Side Inf Coefficient (m/hr)	0.03351	Time to half empty (mins)	537	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	2.000	Number Required	1
Porosity	0.95	Pit Length (m)	6.000		

Node PARKING AREAS Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.03351	Invert Level (m)	49.200	Slope (1:X)	500.0
Side Inf Coefficient (m/hr)	0.03351	Time to half empty (mins)	257	Depth (m)	
Safety Factor	2.0	Width (m)	10.000	Inf Depth (m)	
Porosity	0.30	Length (m)	70.000		



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Node ACCESS AREAS Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.03351	Invert Level (m)	49.200	Slope (1:X)	500.0
Side Inf Coefficient (m/hr)	0.03351	Time to half empty (mins)	248	Depth (m)	
Safety Factor	2.0	Width (m)	10.000	Inf Depth (m)	
Porosity	0.30	Length (m)	14.000		

Results for 2 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
PLOT 1 SOAKAWAY								
15 minute summer	PS1	10	49.685	0.022	0.7	0.0011	0.0000	OK
15 minute summer	PS2-Silt Trap	10	49.541	0.020	1.0	0.0031	0.0000	OK
360 minute summer	PS3	240	49.248	0.072	0.3	0.8155	0.0000	OK
PLOT 2 SOAKAWAY								
15 minute summer	PS4	10	49.683	0.021	0.7	0.0010	0.0000	OK
15 minute summer	PS5	11	49.550	0.027	1.0	0.0013	0.0000	OK
15 minute summer	PS6-Silt Trap	10	49.500	0.019	0.9	0.0030	0.0000	OK
360 minute summer	PS7	240	49.226	0.072	0.3	0.8176	0.0000	OK
15 minute summer	PARKING AREAS	14	49.224	0.024	1.7	0.4262	0.0000	OK
120 minute summer	ACCESS AREAS	76	49.236	0.036	1.2	0.9395	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute summer	PS1	1.000	PS2-Silt Trap	0.7	0.570	0.098	0.0134
15 minute summer	PS2-Silt Trap	1.001	PS3	1.0	1.289	0.074	0.0096
360 minute summer	PS3	Infiltration		0.1			
15 minute summer	PS4	2.000	PS5	0.7	0.458	0.099	0.0163
15 minute summer	PS5	2.001	PS6-Silt Trap	0.9	0.707	0.141	0.0047
15 minute summer	PS6-Silt Trap	2.002	PS7	1.0	1.383	0.070	0.0076
360 minute summer	PS7	Infiltration		0.1			
15 minute summer	PARKING AREAS	Infiltration		0.6			
120 minute summer	ACCESS AREAS	Infiltration		0.5			

Results for 30 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
PLOT 1 SOAKAWAY								
15 minute summer	PS1	10	49.700	0.037	1.8	0.0018	0.0000	OK
15 minute summer	PS2-Silt Trap	11	49.552	0.031	2.7	0.0049	0.0000	OK
240 minute winter	PS3	232	49.364	0.188	0.5	2.1456	0.0000	OK
PLOT 2 SOAKAWAY								
15 minute summer	PS4	11	49.697	0.035	1.8	0.0017	0.0000	OK
15 minute summer	PS5	11	49.571	0.048	2.7	0.0024	0.0000	OK
15 minute summer	PS6-Silt Trap	11	49.511	0.030	2.7	0.0047	0.0000	OK
240 minute winter	PS7	232	49.343	0.189	0.5	2.1516	0.0000	OK
30 minute summer	PARKING AREAS	24	49.245	0.045	4.1	1.5261	0.0000	OK
120 minute summer	ACCESS AREAS	82	49.283	0.083	2.8	2.8879	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute summer	PS1	1.000	PS2-Silt Trap	1.8	0.769	0.267	0.0267
15 minute summer	PS2-Silt Trap	1.001	PS3	2.7	1.353	0.208	0.0311
240 minute winter	PS3	Infiltration		0.1			
15 minute summer	PS4	2.000	PS5	1.8	0.584	0.266	0.0342
15 minute summer	PS5	2.001	PS6-Silt Trap	2.7	0.958	0.401	0.0096
15 minute summer	PS6-Silt Trap	2.002	PS7	2.7	1.447	0.192	0.0250
240 minute winter	PS7	Infiltration		0.1			
30 minute summer	PARKING AREAS	Infiltration		1.1			
120 minute summer	ACCESS AREAS	Infiltration		0.7			

Results for 30 year +35% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
PLOT 1 SOAKAWAY								
15 minute summer	PS1	10	49.707	0.044	2.5	0.0022	0.0000	OK
15 minute summer	PS2-Silt Trap	10	49.557	0.036	3.7	0.0058	0.0000	OK
180 minute winter	PS3	180	49.437	0.261	0.9	2.9772	0.0000	OK
PLOT 2 SOAKAWAY								
15 minute summer	PS4	10	49.704	0.042	2.5	0.0021	0.0000	OK
15 minute summer	PS5	10	49.580	0.057	3.7	0.0028	0.0000	OK
15 minute summer	PS6-Silt Trap	10	49.516	0.035	3.7	0.0056	0.0000	OK
180 minute winter	PS7	180	49.416	0.262	0.9	2.9854	0.0000	OK
30 minute summer	PARKING AREAS	24	49.254	0.054	5.5	2.1591	0.0000	OK
120 minute summer	ACCESS AREAS	88	49.317	0.117	3.8	4.3169	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute summer	PS1	1.000	PS2-Silt Trap	2.5	0.840	0.367	0.0337
15 minute summer	PS2-Silt Trap	1.001	PS3	3.7	1.370	0.283	0.0379
180 minute winter	PS3	Infiltration		0.1			
15 minute summer	PS4	2.000	PS5	2.5	0.638	0.366	0.0431
15 minute summer	PS5	2.001	PS6-Silt Trap	3.7	1.037	0.545	0.0120
15 minute summer	PS6-Silt Trap	2.002	PS7	3.7	1.498	0.260	0.0300
180 minute winter	PS7	Infiltration		0.1			
30 minute summer	PARKING AREAS	Infiltration		1.3			
120 minute summer	ACCESS AREAS	Infiltration		0.7			

Results for 100 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
PLOT 1 SOAKAWAY								
15 minute summer	PS1	10	49.705	0.042	2.3	0.0021	0.0000	OK
15 minute summer	PS2-Silt Trap	10	49.556	0.035	3.5	0.0056	0.0000	OK
240 minute summer	PS3	244	49.417	0.241	0.9	2.7528	0.0000	OK
PLOT 2 SOAKAWAY								
15 minute summer	PS4	10	49.702	0.040	2.3	0.0020	0.0000	OK
15 minute summer	PS5	10	49.578	0.055	3.5	0.0027	0.0000	OK
15 minute summer	PS6-Silt Trap	10	49.515	0.034	3.4	0.0054	0.0000	OK
240 minute summer	PS7	244	49.396	0.242	0.9	2.7607	0.0000	OK
30 minute summer	PARKING AREAS	24	49.252	0.052	5.2	2.0134	0.0000	OK
120 minute summer	ACCESS AREAS	86	49.308	0.108	3.5	3.9326	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute summer	PS1	1.000	PS2-Silt Trap	2.3	0.816	0.338	0.0319
15 minute summer	PS2-Silt Trap	1.001	PS3	3.5	1.359	0.266	0.0361
240 minute summer	PS3	Infiltration		0.1			
15 minute summer	PS4	2.000	PS5	2.3	0.619	0.337	0.0408
15 minute summer	PS5	2.001	PS6-Silt Trap	3.4	1.020	0.512	0.0115
15 minute summer	PS6-Silt Trap	2.002	PS7	3.4	1.479	0.244	0.0291
240 minute summer	PS7	Infiltration		0.1			
30 minute summer	PARKING AREAS	Infiltration		1.2			
120 minute summer	ACCESS AREAS	Infiltration		0.7			

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
PLOT 1 SOAKAWAY								
15 minute summer	PS1	10	49.715	0.052	3.3	0.0025	0.0000	OK
15 minute summer	PS2-Silt Trap	10	49.563	0.042	4.9	0.0067	0.0000	OK
240 minute winter	PS3	236	49.537	0.361	0.9	4.1194	0.0000	OK
PLOT 2 SOAKAWAY								
15 minute summer	PS4	10	49.712	0.050	3.3	0.0024	0.0000	OK
15 minute summer	PS5	10	49.591	0.068	4.9	0.0033	0.0000	OK
15 minute summer	PS6-Silt Trap	10	49.522	0.041	4.8	0.0064	0.0000	OK
240 minute winter	PS7	236	49.515	0.361	0.9	4.1123	0.0000	OK
30 minute summer	PARKING AREAS	25	49.263	0.063	7.2	2.9685	0.0000	OK
120 minute summer	ACCESS AREAS	96	49.360	0.160	4.9	6.1365	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute summer	PS1	1.000	PS2-Silt Trap	3.3	0.899	0.483	0.0414
15 minute summer	PS2-Silt Trap	1.001	PS3	4.8	1.449	0.373	0.0415
240 minute winter	PS3	Infiltration		0.1			
15 minute summer	PS4	2.000	PS5	3.3	0.679	0.481	0.0530
15 minute summer	PS5	2.001	PS6-Silt Trap	4.8	1.110	0.718	0.0147
15 minute summer	PS6-Silt Trap	2.002	PS7	4.8	1.576	0.343	0.0331
240 minute winter	PS7	Infiltration		0.1			
30 minute summer	PARKING AREAS	Infiltration		1.5			
120 minute summer	ACCESS AREAS	Infiltration		0.7			