



Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	30	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	1.000	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S2	0.815	5.00	23.913	1350	527863.857	119440.536	1.620
S8			22.931	1350	527839.392	119364.369	1.589
S6	1.126	5.00	21.520	1500	527784.343	119192.993	1.920
S3	0.573	5.00	22.133	1500	527811.867	119278.681	3.133
S4			18.200	1800	527745.440	119303.382	1.659
S10	0.286	5.00	18.200	1800	527701.595	119297.636	1.700
S12			18.200	1800	527695.596	119294.329	1.768
S11			16.800	450	527680.877	119294.404	0.700

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	S2	S8	80.000	0.600	22.293	21.417	0.876	91.3	525	5.57	50.0
1.001	S8	S3	90.000	0.600	21.342	20.011	1.331	67.6	600	6.07	50.0
2.000	S6	S3	90.000	0.600	19.600	19.075	0.525	171.4	675	5.75	50.0
1.002	S3	S4	70.872	0.600	19.000	17.300	1.700	41.7	750	6.35	50.0
1.004	S10	S12	6.850	0.600	16.500	16.432	0.068	100.0	225	5.09	50.0
1.005	S12	S11	14.720	0.600	16.432	16.100	0.332	44.3	225	5.21	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	2.344	507.5	147.3	1.095	0.989	0.815	0.0	193	2.044
1.001	2.964	838.0	147.3	0.989	1.522	0.815	0.0	169	2.259
2.000	1.998	715.2	203.5	1.245	2.383	1.126	0.0	245	1.732
1.002	4.341	1917.7	454.3	2.383	0.150	2.514	0.0	246	3.587
1.004	1.307	52.0	51.7	1.475	1.543	0.286	0.0	184	1.483
1.005	1.969	78.3	51.7	1.543	0.475	0.286	0.0	134	2.102

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	80.000	91.3	525	Circular	23.913	22.293	1.095	22.931	21.417	0.989
1.001	90.000	67.6	600	Circular	22.931	21.342	0.989	22.133	20.011	1.522
2.000	90.000	171.4	675	Circular	21.520	19.600	1.245	22.133	19.075	2.383
1.002	70.872	41.7	750	Circular	22.133	19.000	2.383	18.200	17.300	0.150
1.004	6.850	100.0	225	Circular	18.200	16.500	1.475	18.200	16.432	1.543
1.005	14.720	44.3	225	Circular	18.200	16.432	1.543	16.800	16.100	0.475

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	S2	1350	Manhole	Adoptable	S8	1350	Manhole	Adoptable
1.001	S8	1350	Manhole	Adoptable	S3	1500	Manhole	Adoptable
2.000	S6	1500	Manhole	Adoptable	S3	1500	Manhole	Adoptable
1.002	S3	1500	Manhole	Adoptable	S4	1800	Manhole	Adoptable
1.004	S10	1800	Manhole	Adoptable	S12	1800	Manhole	Adoptable
1.005	S12	1800	Manhole	Adoptable	S11	450	Manhole	Adoptable



Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S2	527863.857	119440.536	23.913	1.620	1350		0	1.000	22.293	525
S8	527839.392	119364.369	22.931	1.589	1350		1	1.000	21.417	525
S6	527784.343	119192.993	21.520	1.920	1500		0	1.001	21.342	600
S3	527811.867	119278.681	22.133	3.133	1500		0	2.000	19.600	675
							1	2.000	19.075	675
							2	1.001	20.011	600
S4	527745.440	119303.382	18.200	1.659	1800		0	1.002	19.000	750
							1	1.002	17.300	750
S10	527701.595	119297.636	18.200	1.700	1800		0	1.004	16.500	225
S12	527695.596	119294.329	18.200	1.768	1800		1	1.004	16.432	225
							0	1.005	16.432	225
S11	527680.877	119294.404	16.800	0.700	450		1	1.005	16.100	225

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)	240	Check Discharge Volume	x
Winter CV	1.000	Additional Storage (m³/ha)	0.0		

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 %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
30	0	0	0	100	45	0	0

Node S12 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	16.432	Product Number	CTL-SHE-0162-1450-1700-1450
Design Depth (m)	1.700	Min Outlet Diameter (m)	0.225
Design Flow (l/s)	14.5	Min Node Diameter (mm)	1500

	BP Civils 2 West Barn Norton Lane Chichester PO20 3AF	File: D2334 - Model Pitch Rev 3.pfd Network: LF June 2025	Page 3 Naldretts Farm Pitch Drainage		
Node S10 Flow through Pond Storage Structure					
Base Inf Coefficient (m/hr)	0.00000	Porosity 1.00	Main Channel Length (m) 41.000		
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m) 16.500	Main Channel Slope (1:X) 1000.0		
Safety Factor	2.0	Time to half empty (mins)	Main Channel n 0.025		
Inlets					
S4					
Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	1732.0	0.0	1.700	2863.0	0.0
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Results for 30 year Critical Storm Duration. Lowest mass balance: 99.85%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S2	10	22.642	0.349	375.7	0.5000	0.0000	OK
15 minute summer	S8	11	21.631	0.288	368.9	0.4128	0.0000	OK
15 minute summer	S6	10	20.042	0.442	519.0	0.7803	0.0000	OK
15 minute summer	S3	11	19.451	0.451	1139.1	0.7966	0.0000	OK
600 minute winter	S4	585	17.210	0.669	109.2	1.7025	0.0000	OK
600 minute winter	S10	585	17.210	0.710	68.3	1.8069	0.0000	SURCHARGED
600 minute winter	S12	585	17.201	0.769	14.6	1.9581	0.0000	SURCHARGED
120 minute summer	S11	82	16.165	0.065	14.5	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S2	1.000	S8	368.9	2.547	0.727	11.6778	
15 minute summer	S8	1.001	S3	373.3	2.882	0.445	11.6590	
15 minute summer	S6	2.000	S3	512.9	2.182	0.717	21.1881	
15 minute summer	S3	1.002	S4	1146.7	4.422	0.598	18.3750	
600 minute winter	S4	Flow through Pond	S10	55.9	0.031	0.001	1352.5865	
600 minute winter	S10	1.004	S12	14.6	0.459	0.281	0.2724	
600 minute winter	S12	1.005	S11	14.5	1.466	0.185	0.1454	595.0



Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.27%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S2	10	23.691	1.398	683.7	1.9999	0.0000	FLOOD RISK
15 minute summer	S8	10	21.776	0.434	680.2	0.6208	0.0000	OK
15 minute summer	S6	11	21.469	1.869	944.5	3.3033	0.0000	FLOOD RISK
15 minute summer	S3	11	20.478	1.478	2062.6	2.6114	0.0000	SURCHARGED
1440 minute winter	S4	1410	17.860	1.319	101.8	3.3558	0.0000	OK
1440 minute winter	S10	1410	17.860	1.360	63.9	3.4602	0.0000	SURCHARGED
1440 minute winter	S12	1410	17.852	1.420	14.6	3.6148	0.0000	SURCHARGED
30 minute winter	S11	21	16.165	0.065	14.5	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S2	1.000	S8	680.2	3.149	1.340	17.1078	
15 minute summer	S8	1.001	S3	672.8	3.244	0.803	19.9434	
15 minute summer	S6	2.000	S3	915.8	2.566	1.281	32.1280	
15 minute summer	S3	1.002	S4	2077.2	4.853	1.083	31.1768	
1440 minute winter	S4	Flow through Pond	S10	52.3	0.030	0.001	2915.8892	
1440 minute winter	S10	1.004	S12	14.6	0.367	0.281	0.2724	
1440 minute winter	S12	1.005	S11	14.5	1.466	0.185	0.1454	1154.7