

Simulation Settings

Rainfall Methodology	FEH-22	Winter CV	1.000	Drain Down Time (mins)	1440	Check Discharge Rate(s)	x
Rainfall Events	Singular	Analysis Speed	Detailed	Additional Storage (m³/ha)	0.0	Check Discharge Volume	x
Summer CV	1.000	Skip Steady State	✓	Starting Level (m)			

Storm Durations

60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440 | 2160 | 2880 | 4320 | 5760 | 7200 | 8640 | 10080

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0	100	40	0	0
30	0	0	0				

Node S4-18 Control Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	41.469	Product Number	CTL-SHE-0108-5700-1325-5700
Design Depth (m)	1.325	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	5.7	Min Node Diameter (mm)	1200

Node S4-18 Control Online Weir Control

Flap Valve	x	Invert Level (m)	42.550	Discharge Coefficient	0.590
Replaces Downstream Link	x	Width (m)	0.050		

Node Basin 4 - HW2 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Main Channel Length (m)	34.865
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	41.487	Main Channel Slope (1:X)	500.0
Safety Factor	2.0	Time to half empty (mins)	896	Main Channel n	0.035

Inlets

Basin 4 - HW1



Abley Letchford Partnership
3 Tealgate
Charnham Park
Hungerford RG17 0YT

File: HD068 - Drainage Design G -V2.pfd
Network: SW4
Jonathan Shuttleworth
31/07/2025

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Hyde End Road
Northern Network

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	208.0	208.0	0.501	924.0	995.8	0.713	1172.1	1270.1	1.113	1464.3	1595.7	1.513	1771.9	1939.6
0.500	472.0	499.8	0.513	1021.6	1102.9	0.913	1318.3	1432.9	1.313	1661.4	1814.1			

Results for 1 year Critical Storm Duration. Lowest mass balance: 98.75%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S4-3	33	42.181	0.053	4.9	0.0762	0.0000	OK
60 minute summer	S4-4	34	42.116	0.065	7.6	0.0933	0.0000	OK
60 minute summer	S4-5	33	42.080	0.086	12.5	0.1227	0.0000	OK
60 minute summer	S4-6	34	42.042	0.094	12.4	0.1351	0.0000	OK
60 minute summer	S4-7	33	42.466	0.033	2.3	0.0467	0.0000	OK
60 minute summer	S4-8	33	42.371	0.050	4.1	0.0722	0.0000	OK
60 minute summer	S4-9	34	42.309	0.049	4.1	0.0706	0.0000	OK
60 minute summer	S4-10	34	42.027	0.103	16.4	0.1469	0.0000	OK
60 minute summer	S4-11	34	42.000	0.123	23.5	0.1764	0.0000	OK
60 minute summer	S4-12	34	41.958	0.119	23.4	0.1700	0.0000	OK
60 minute summer	S4-13	34	41.863	0.126	27.2	0.2233	0.0000	OK
60 minute summer	S4-14	1	42.019	0.000	0.0	0.0000	0.0000	OK
360 minute summer	S4-15	248	41.824	0.175	13.5	0.3091	0.0000	OK
360 minute summer	S4-16	248	41.824	0.205	15.1	0.5214	0.0000	OK
360 minute summer	Basin 4 - HW1	248	41.824	0.267	20.1	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)
60 minute summer	S4-3	1.000	S4-4	4.9	0.400	0.031	0.3839	
60 minute summer	S4-4	1.001	S4-5	7.5	0.428	0.047	0.4058	
60 minute summer	S4-5	1.002	S4-6	12.4	0.556	0.074	0.3816	
60 minute summer	S4-6	1.003	S4-10	12.4	0.484	0.077	0.2447	
60 minute summer	S4-7	2.000	S4-8	2.3	0.458	0.046	0.0613	
60 minute summer	S4-8	2.001	S4-9	4.1	0.629	0.103	0.0674	
60 minute summer	S4-9	2.002	S4-10	4.1	0.642	0.102	0.1189	
60 minute summer	S4-10	1.004	S4-11	16.4	0.529	0.102	0.5877	
60 minute summer	S4-11	1.005	S4-12	23.4	0.681	0.146	0.5267	
60 minute summer	S4-12	1.006	S4-13	23.3	0.767	0.144	0.3265	
60 minute summer	S4-13	1.007	S4-15	27.2	0.661	0.125	1.7825	
60 minute summer	S4-14	3.000	S4-15	0.0	0.000	0.000	0.0000	
360 minute summer	S4-15	1.008	S4-16	13.1	0.484	0.060	1.0199	
360 minute summer	S4-16	1.009	Basin 4 - HW1	14.7	0.605	0.067	0.7575	
360 minute summer	Basin 4 - HW1	Flow through Pond	Basin 4 - HW2	9.3	0.024	0.000	87.0261	

Results for 1 year Critical Storm Duration. Lowest mass balance: 98.75%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute summer	Basin 4 - HW2	248	41.824	0.337	17.1	0.0000	0.0000	OK
360 minute summer	S4-18 Control	248	41.824	0.355	5.8	1.6050	0.0000	OK
360 minute summer	S4-Outlet	256	41.272	0.052	5.6	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)
360 minute summer	Basin 4 - HW2	4.000	S4-18 Control	5.8	0.252	0.052	0.6170	
360 minute summer	S4-18 Control	4.001	S4-Outlet	5.6	0.608	0.043	0.5230	161.9

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.23%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S4-3	34	42.276	0.148	26.1	0.2113	0.0000	OK
60 minute summer	S4-4	34	42.266	0.215	39.1	0.3084	0.0000	OK
60 minute summer	S4-5	34	42.257	0.263	63.3	0.3770	0.0000	OK
60 minute summer	S4-6	34	42.241	0.293	62.2	0.4193	0.0000	OK
60 minute summer	S4-7	33	42.508	0.075	12.1	0.1070	0.0000	OK
60 minute summer	S4-8	33	42.450	0.129	21.4	0.1850	0.0000	OK
60 minute summer	S4-9	33	42.383	0.123	21.4	0.1766	0.0000	OK
60 minute summer	S4-10	34	42.229	0.305	82.8	0.4369	0.0000	OK
360 minute winter	S4-11	352	42.221	0.344	23.5	0.4924	0.0000	OK
360 minute winter	S4-12	352	42.221	0.382	23.0	0.5468	0.0000	OK
360 minute winter	S4-13	352	42.221	0.484	26.9	0.8554	0.0000	OK
360 minute winter	S4-14	352	42.221	0.202	0.2	0.2893	0.0000	OK
360 minute winter	S4-15	352	42.221	0.572	25.9	1.0110	0.0000	SURCHARGED
360 minute winter	S4-16	352	42.221	0.602	28.7	1.5324	0.0000	SURCHARGED
360 minute winter	Basin 4 - HW1	352	42.221	0.664	39.1	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)
60 minute summer	S4-3	1.000	S4-4	24.8	0.541	0.155	1.8761	
60 minute summer	S4-4	1.001	S4-5	37.3	0.508	0.234	1.9800	
60 minute summer	S4-5	1.002	S4-6	62.2	0.652	0.371	1.7400	
60 minute summer	S4-6	1.003	S4-10	61.8	0.553	0.383	1.0681	
60 minute summer	S4-7	2.000	S4-8	12.1	0.695	0.241	0.2112	
60 minute summer	S4-8	2.001	S4-9	21.4	0.934	0.537	0.2371	
60 minute summer	S4-9	2.002	S4-10	21.3	0.993	0.535	0.4037	
60 minute summer	S4-10	1.004	S4-11	82.4	0.692	0.514	2.2457	
360 minute winter	S4-11	1.005	S4-12	23.0	0.639	0.144	2.1008	
360 minute winter	S4-12	1.006	S4-13	22.6	0.717	0.140	1.5841	
360 minute winter	S4-13	1.007	S4-15	25.9	0.499	0.119	9.1767	
360 minute winter	S4-14	3.000	S4-15	-0.2	-0.018	-0.004	0.4302	
360 minute winter	S4-15	1.008	S4-16	24.7	0.436	0.113	3.1288	
360 minute winter	S4-16	1.009	Basin 4 - HW1	28.2	0.541	0.129	1.9752	
360 minute winter	Basin 4 - HW1	Flow through Pond	Basin 4 - HW2	19.1	0.038	0.001	383.2229	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.23%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	Basin 4 - HW2	352	42.221	0.734	35.0	0.0000	0.0000	SURCHARGED
360 minute winter	S4-18 Control	352	42.221	0.752	6.1	3.4024	0.0000	SURCHARGED
2160 minute summer	S4-Outlet	2100	41.272	0.052	5.7	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)
360 minute winter	Basin 4 - HW2	4.000	S4-18 Control	6.1	0.284	0.055	0.6409	
360 minute winter	S4-18 Control	4.001	S4-Outlet	5.7	0.610	0.043	0.5272	506.2

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 98.40%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S4-3	34	42.794	0.666	47.8	0.9524	0.0000	SURCHARGED
60 minute summer	S4-4	34	42.785	0.734	70.9	1.0508	0.0000	SURCHARGED
60 minute summer	S4-5	34	42.770	0.776	116.8	1.1098	0.0000	SURCHARGED
60 minute summer	S4-6	34	42.734	0.786	115.6	1.1252	0.0000	SURCHARGED
60 minute summer	S4-7	35	42.909	0.476	22.1	0.6810	0.0000	SURCHARGED
60 minute summer	S4-8	35	42.885	0.564	36.6	0.8064	0.0000	SURCHARGED
60 minute summer	S4-9	35	42.814	0.554	35.4	0.7933	0.0000	SURCHARGED
60 minute summer	S4-10	34	42.709	0.785	148.4	1.1231	0.0000	SURCHARGED
60 minute summer	S4-11	34	42.647	0.770	216.4	1.1012	0.0000	SURCHARGED
60 minute summer	S4-12	34	42.530	0.691	215.6	0.9892	0.0000	SURCHARGED
480 minute winter	S4-13	472	42.515	0.778	35.4	1.3743	0.0000	SURCHARGED
480 minute winter	S4-14	472	42.515	0.496	0.2	0.7095	0.0000	SURCHARGED
480 minute winter	S4-15	472	42.515	0.866	35.1	1.5298	0.0000	SURCHARGED
480 minute winter	S4-16	472	42.515	0.896	40.4	2.2798	0.0000	SURCHARGED
480 minute winter	Basin 4 - HW1	472	42.515	0.958	55.2	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)
60 minute summer	S4-3	1.000	S4-4	45.2	0.540	0.283	4.9477	
60 minute summer	S4-4	1.001	S4-5	69.7	0.504	0.437	3.6618	
60 minute summer	S4-5	1.002	S4-6	115.6	0.730	0.690	2.6809	
60 minute summer	S4-6	1.003	S4-10	114.7	0.724	0.712	1.5123	
60 minute summer	S4-7	2.000	S4-8	20.5	0.741	0.408	0.4785	
60 minute summer	S4-8	2.001	S4-9	35.4	1.009	0.889	0.4110	
60 minute summer	S4-9	2.002	S4-10	36.4	1.030	0.913	0.7486	
60 minute summer	S4-10	1.004	S4-11	147.6	0.932	0.920	2.9875	
60 minute summer	S4-11	1.005	S4-12	215.6	1.361	1.349	2.4335	
60 minute summer	S4-12	1.006	S4-13	215.0	1.357	1.335	1.7026	
480 minute winter	S4-13	1.007	S4-15	35.1	0.459	0.161	9.3454	
480 minute winter	S4-14	3.000	S4-15	-0.2	-0.047	-0.006	0.4422	
480 minute winter	S4-15	1.008	S4-16	34.9	0.444	0.159	3.1288	
480 minute winter	S4-16	1.009	Basin 4 - HW1	40.2	0.565	0.183	1.9752	
480 minute winter	Basin 4 - HW1	Flow through Pond	Basin 4 - HW2	20.0	0.040	0.001	756.0189	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 98.40%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	Basin 4 - HW2	472	42.515	1.028	41.8	0.0000	0.0000	SURCHARGED
480 minute winter	S4-18 Control	472	42.515	1.046	6.1	4.7308	0.0000	SURCHARGED
7200 minute winter	S4-Outlet	5160	41.272	0.052	5.7	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)
480 minute winter	Basin 4 - HW2	4.000	S4-18 Control	6.1	0.289	0.055	0.6409	
480 minute winter	S4-18 Control	4.001	S4-Outlet	5.7	0.610	0.043	0.5272	553.8

Simulation Settings

Rainfall Methodology	FEH-22	Winter CV	1.000	Drain Down Time (mins)	1440	Check Discharge Rate(s)	x
Rainfall Events	Singular	Analysis Speed	Detailed	Additional Storage (m ³ /ha)	0.0	Check Discharge Volume	x
Summer CV	1.000	Skip Steady State	✓	Starting Level (m)			

Storm Durations

60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440 | 2160 | 2880 | 4320 | 5760 | 7200 | 8640 | 10080

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

Node S2-Outfall Surcharged Outfall

Overrides Design Area	x	Depression Storage Area (m ²)	0	Evapo-transpiration (mm/day)	0
Overrides Design Additional Inflow	x	Depression Storage Depth (mm)	0		
Applies to All storms					

Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)
0	1.100	225	1.100	450	1.100	675	1.100	900	1.100	1125	1.100	1350	1.100	1575	1.100	1800	1.100
15	1.100	240	1.100	465	1.100	690	1.100	915	1.100	1140	1.100	1365	1.100	1590	1.100	1815	1.100
30	1.100	255	1.100	480	1.100	705	1.100	930	1.100	1155	1.100	1380	1.100	1605	1.100	1830	1.100
45	1.100	270	1.100	495	1.100	720	1.100	945	1.100	1170	1.100	1395	1.100	1620	1.100	1845	1.100
60	1.100	285	1.100	510	1.100	735	1.100	960	1.100	1185	1.100	1410	1.100	1635	1.100	1860	1.100
75	1.100	300	1.100	525	1.100	750	1.100	975	1.100	1200	1.100	1425	1.100	1650	1.100	1875	1.100
90	1.100	315	1.100	540	1.100	765	1.100	990	1.100	1215	1.100	1440	1.100	1665	1.100	1890	1.100
105	1.100	330	1.100	555	1.100	780	1.100	1005	1.100	1230	1.100	1455	1.100	1680	1.100	1905	1.100
120	1.100	345	1.100	570	1.100	795	1.100	1020	1.100	1245	1.100	1470	1.100	1695	1.100	1920	1.100
135	1.100	360	1.100	585	1.100	810	1.100	1035	1.100	1260	1.100	1485	1.100	1710	1.100	1935	1.100
150	1.100	375	1.100	600	1.100	825	1.100	1050	1.100	1275	1.100	1500	1.100	1725	1.100	1950	1.100
165	1.100	390	1.100	615	1.100	840	1.100	1065	1.100	1290	1.100	1515	1.100	1740	1.100	1965	1.100
180	1.100	405	1.100	630	1.100	855	1.100	1080	1.100	1305	1.100	1530	1.100	1755	1.100	1980	1.100
195	1.100	420	1.100	645	1.100	870	1.100	1095	1.100	1320	1.100	1545	1.100	1770	1.100	1995	1.100
210	1.100	435	1.100	660	1.100	885	1.100	1110	1.100	1335	1.100	1560	1.100	1785	1.100	2010	1.100

Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)
2025	1.100	2535	1.100	3045	1.100	3555	1.100	4065	1.100	4575	1.100	5085	1.100	5595	1.100
2040	1.100	2550	1.100	3060	1.100	3570	1.100	4080	1.100	4590	1.100	5100	1.100	5610	1.100
2055	1.100	2565	1.100	3075	1.100	3585	1.100	4095	1.100	4605	1.100	5115	1.100	5625	1.100
2070	1.100	2580	1.100	3090	1.100	3600	1.100	4110	1.100	4620	1.100	5130	1.100	5640	1.100
2085	1.100	2595	1.100	3105	1.100	3615	1.100	4125	1.100	4635	1.100	5145	1.100	5655	1.100
2100	1.100	2610	1.100	3120	1.100	3630	1.100	4140	1.100	4650	1.100	5160	1.100	5670	1.100
2115	1.100	2625	1.100	3135	1.100	3645	1.100	4155	1.100	4665	1.100	5175	1.100	5685	1.100
2130	1.100	2640	1.100	3150	1.100	3660	1.100	4170	1.100	4680	1.100	5190	1.100	5700	1.100
2145	1.100	2655	1.100	3165	1.100	3675	1.100	4185	1.100	4695	1.100	5205	1.100	5715	1.100
2160	1.100	2670	1.100	3180	1.100	3690	1.100	4200	1.100	4710	1.100	5220	1.100	5730	1.100
2175	1.100	2685	1.100	3195	1.100	3705	1.100	4215	1.100	4725	1.100	5235	1.100	5745	1.100
2190	1.100	2700	1.100	3210	1.100	3720	1.100	4230	1.100	4740	1.100	5250	1.100	5760	1.100
2205	1.100	2715	1.100	3225	1.100	3735	1.100	4245	1.100	4755	1.100	5265	1.100	5775	1.100
2220	1.100	2730	1.100	3240	1.100	3750	1.100	4260	1.100	4770	1.100	5280	1.100	5790	1.100
2235	1.100	2745	1.100	3255	1.100	3765	1.100	4275	1.100	4785	1.100	5295	1.100	5805	1.100
2250	1.100	2760	1.100	3270	1.100	3780	1.100	4290	1.100	4800	1.100	5310	1.100	5820	1.100
2265	1.100	2775	1.100	3285	1.100	3795	1.100	4305	1.100	4815	1.100	5325	1.100	5835	1.100
2280	1.100	2790	1.100	3300	1.100	3810	1.100	4320	1.100	4830	1.100	5340	1.100	5850	1.100
2295	1.100	2805	1.100	3315	1.100	3825	1.100	4335	1.100	4845	1.100	5355	1.100	5865	1.100
2310	1.100	2820	1.100	3330	1.100	3840	1.100	4350	1.100	4860	1.100	5370	1.100	5880	1.100
2325	1.100	2835	1.100	3345	1.100	3855	1.100	4365	1.100	4875	1.100	5385	1.100	5895	1.100
2340	1.100	2850	1.100	3360	1.100	3870	1.100	4380	1.100	4890	1.100	5400	1.100	5910	1.100
2355	1.100	2865	1.100	3375	1.100	3885	1.100	4395	1.100	4905	1.100	5415	1.100	5925	1.100
2370	1.100	2880	1.100	3390	1.100	3900	1.100	4410	1.100	4920	1.100	5430	1.100	5940	1.100
2385	1.100	2895	1.100	3405	1.100	3915	1.100	4425	1.100	4935	1.100	5445	1.100	5955	1.100
2400	1.100	2910	1.100	3420	1.100	3930	1.100	4440	1.100	4950	1.100	5460	1.100	5970	1.100
2415	1.100	2925	1.100	3435	1.100	3945	1.100	4455	1.100	4965	1.100	5475	1.100	5985	1.100
2430	1.100	2940	1.100	3450	1.100	3960	1.100	4470	1.100	4980	1.100	5490	1.100	6000	1.100
2445	1.100	2955	1.100	3465	1.100	3975	1.100	4485	1.100	4995	1.100	5505	1.100	6015	1.100
2460	1.100	2970	1.100	3480	1.100	3990	1.100	4500	1.100	5010	1.100	5520	1.100	6030	1.100
2475	1.100	2985	1.100	3495	1.100	4005	1.100	4515	1.100	5025	1.100	5535	1.100	6045	1.100
2490	1.100	3000	1.100	3510	1.100	4020	1.100	4530	1.100	5040	1.100	5550	1.100	6060	1.100
2505	1.100	3015	1.100	3525	1.100	4035	1.100	4545	1.100	5055	1.100	5565	1.100	6075	1.100
2520	1.100	3030	1.100	3540	1.100	4050	1.100	4560	1.100	5070	1.100	5580	1.100	6090	1.100

Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)
6615	1.100	7005	1.100	7395	1.100	7785	1.100	8175	1.100	8565	1.100	8955	1.100	9345	1.100
6630	1.100	7020	1.100	7410	1.100	7800	1.100	8190	1.100	8580	1.100	8970	1.100	9360	1.100
6645	1.100	7035	1.100	7425	1.100	7815	1.100	8205	1.100	8595	1.100	8985	1.100	9375	1.100
6660	1.100	7050	1.100	7440	1.100	7830	1.100	8220	1.100	8610	1.100	9000	1.100	9390	1.100
6675	1.100	7065	1.100	7455	1.100	7845	1.100	8235	1.100	8625	1.100	9015	1.100	9405	1.100
6690	1.100	7080	1.100	7470	1.100	7860	1.100	8250	1.100	8640	1.100	9030	1.100	9420	1.100
6705	1.100	7095	1.100	7485	1.100	7875	1.100	8265	1.100	8655	1.100	9045	1.100	9435	1.100
6720	1.100	7110	1.100	7500	1.100	7890	1.100	8280	1.100	8670	1.100	9060	1.100	9450	1.100
6735	1.100	7125	1.100	7515	1.100	7905	1.100	8295	1.100	8685	1.100	9075	1.100	9465	1.100
6750	1.100	7140	1.100	7530	1.100	7920	1.100	8310	1.100	8700	1.100	9090	1.100	9480	1.100
6765	1.100	7155	1.100	7545	1.100	7935	1.100	8325	1.100	8715	1.100	9105	1.100	9495	1.100
6780	1.100	7170	1.100	7560	1.100	7950	1.100	8340	1.100	8730	1.100	9120	1.100	9510	1.100
6795	1.100	7185	1.100	7575	1.100	7965	1.100	8355	1.100	8745	1.100	9135	1.100	9525	1.100
6810	1.100	7200	1.100	7590	1.100	7980	1.100	8370	1.100	8760	1.100	9150	1.100	9540	1.100
6825	1.100	7215	1.100	7605	1.100	7995	1.100	8385	1.100	8775	1.100	9165	1.100	9555	1.100
6840	1.100	7230	1.100	7620	1.100	8010	1.100	8400	1.100	8790	1.100	9180	1.100	9570	1.100
6855	1.100	7245	1.100	7635	1.100	8025	1.100	8415	1.100	8805	1.100	9195	1.100	9585	1.100
6870	1.100	7260	1.100	7650	1.100	8040	1.100	8430	1.100	8820	1.100	9210	1.100	9600	1.100
6885	1.100	7275	1.100	7665	1.100	8055	1.100	8445	1.100	8835	1.100	9225	1.100	9615	1.100
6900	1.100	7290	1.100	7680	1.100	8070	1.100	8460	1.100	8850	1.100	9240	1.100	9630	1.100
6915	1.100	7305	1.100	7695	1.100	8085	1.100	8475	1.100	8865	1.100	9255	1.100	9645	1.100
6930	1.100	7320	1.100	7710	1.100	8100	1.100	8490	1.100	8880	1.100	9270	1.100	9660	1.100
6945	1.100	7335	1.100	7725	1.100	8115	1.100	8505	1.100	8895	1.100	9285	1.100	9675	1.100
6960	1.100	7350	1.100	7740	1.100	8130	1.100	8520	1.100	8910	1.100	9300	1.100	9690	1.100
6975	1.100	7365	1.100	7755	1.100	8145	1.100	8535	1.100	8925	1.100	9315	1.100	9705	1.100
6990	1.100	7380	1.100	7770	1.100	8160	1.100	8550	1.100	8940	1.100	9330	1.100	9720	1.100

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.81%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S2-1	34	44.062	1.245	6.7	1.7820	0.0000	SURCHARGED
60 minute summer	S2-2	34	44.062	1.382	123.0	1.9773	0.0000	SURCHARGED
60 minute summer	S2-3	35	43.164	0.556	3.4	0.7952	0.0000	SURCHARGED
60 minute summer	S2-4	35	43.162	0.608	9.8	0.8701	0.0000	SURCHARGED
60 minute summer	S2-5	35	43.158	0.784	68.2	0.8864	0.0000	SURCHARGED
60 minute summer	S2-6	35	42.979	0.659	59.4	0.7454	0.0000	SURCHARGED
60 minute summer	S2-7	35	42.730	0.570	58.9	0.8153	0.0000	SURCHARGED
60 minute summer	S2-8	35	42.649	0.502	29.9	0.7187	0.0000	SURCHARGED
60 minute summer	S2-9	35	42.615	0.674	133.5	0.9644	0.0000	SURCHARGED
480 minute summer	S2-10	416	42.551	0.722	30.6	1.0333	0.0000	SURCHARGED
480 minute summer	S2-11	416	42.551	0.789	33.9	2.0080	0.0000	SURCHARGED
480 minute summer	Basin 2 - HW1	416	42.551	0.921	33.6	0.0000	0.0000	OK
60 minute summer	S2-12	35	44.154	1.473	22.3	2.1074	0.0000	SURCHARGED
60 minute summer	S2-13	35	44.146	1.615	26.4	2.3107	0.0000	SURCHARGED
60 minute summer	S2-14	35	44.142	1.670	33.0	2.3898	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)
60 minute summer	S2-1	12.000	S2-2	-6.7	-0.168	-0.168	0.4154	
60 minute summer	S2-2	12.001	S3-2	115.6	1.641	1.626	1.2116	
60 minute summer	S2-3	8.000	S2-4	4.0	-0.289	0.100	0.3616	
60 minute summer	S2-4	8.001	S2-5	10.7	0.315	0.268	1.2129	
60 minute summer	S2-5	8.002	S2-6	59.4	1.495	1.494	0.3644	
60 minute summer	S2-6	8.003	S2-7	58.9	1.481	1.477	0.5708	
60 minute summer	S2-7	8.004	S2-9	59.3	0.894	0.804	2.2865	
60 minute summer	S2-8	9.000	S2-9	27.8	0.927	0.698	0.3759	
60 minute summer	S2-9	8.005	S2-10	131.7	1.195	1.192	4.0008	
480 minute summer	S2-10	8.006	S2-11	30.5	0.455	0.275	2.3875	
480 minute summer	S2-11	8.007	Basin 2 - HW1	33.6	0.618	0.302	1.8371	
480 minute summer	Basin 2 - HW1	Flow through Pond	Basin 2 - HW4	103.4	0.076	0.004	1161.7981	
60 minute summer	S2-12	1.002	S2-13	-20.0	0.635	-0.502	1.0086	
60 minute summer	S2-13	1.003	S2-14	-26.4	-0.664	-0.661	0.3946	
60 minute summer	S2-14	1.004	S2-15	-33.0	-0.831	-0.830	0.2899	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.81%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S2-15	35	44.140	1.711	78.9	2.4480	0.0000	FLOOD RISK
60 minute summer	S2-16	35	44.198	1.368	49.8	1.9571	0.0000	FLOOD RISK
60 minute summer	S2-17	35	44.055	1.391	75.0	1.9900	0.0000	FLOOD RISK
60 minute summer	S2-18	35	43.929	1.714	131.1	2.4527	1.0027	FLOOD
60 minute summer	S2-19	35	43.812	1.678	122.1	2.4017	0.0000	FLOOD RISK
60 minute summer	S2-20	35	43.746	1.647	151.6	2.3570	0.0000	FLOOD RISK
60 minute summer	S2-21	35	43.607	1.559	152.3	2.2311	0.0000	FLOOD RISK
60 minute summer	S2-22	35	43.600	1.105	14.4	1.5811	0.0000	FLOOD RISK
60 minute summer	S2-23	35	43.597	1.194	45.5	1.7092	0.0000	SURCHARGED
60 minute summer	S2-24	35	43.478	1.476	208.5	2.1115	0.0000	SURCHARGED
60 minute summer	S2-25	35	42.814	1.088	259.0	2.7689	0.0000	SURCHARGED
60 minute summer	Basin 2 - HW2	35	42.712	1.082	361.6	0.0000	0.0000	OK
60 minute summer	S2-S26	40	43.648	1.067	160.5	57.0274	0.0000	FLOOD RISK
60 minute summer	S2-27	59	42.953	0.713	71.3	56.7961	0.0000	SURCHARGED
60 minute summer	S2-28	38	42.797	0.831	169.0	31.9135	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)
60 minute summer	S2-15	1.005	S2-18	60.3	1.517	1.516	0.4320	
60 minute summer	S2-16	2.000	S2-17	43.9	1.104	1.101	0.6117	
60 minute summer	S2-17	2.001	S2-18	71.4	1.250	0.515	1.7005	
60 minute summer	S2-18	1.006	S2-19	122.1	1.107	1.103	2.8839	
60 minute summer	S2-19	1.007	S2-20	124.5	1.129	1.123	1.2448	
60 minute summer	S2-20	1.008	S2-21	152.3	1.381	1.376	1.8181	
60 minute summer	S2-21	1.009	S2-24	154.7	1.402	1.386	1.6139	
60 minute summer	S2-22	3.000	S2-23	-14.4	-0.369	-0.361	0.6178	
60 minute summer	S2-23	3.001	S2-24	39.9	1.296	0.592	0.5959	
60 minute summer	S2-24	1.010	S2-25	209.2	1.897	1.676	5.6474	
60 minute summer	S2-25	1.011	Basin 2 - HW2	260.2	1.643	1.612	1.6329	
60 minute summer	Basin 2 - HW2	Flow through Pond	Basin 2 - HW4	302.6	0.153	0.011	864.1031	
60 minute summer	S2-S26	11.000	S2-27	57.7	1.450	1.448	2.2978	
60 minute summer	S2-27	11.001	S2-28	48.7	1.226	1.224	1.3396	
60 minute summer	S2-28	11.002	S2-29	101.8	1.446	1.438	3.0930	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.81%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute summer	S2-29	408	42.552	0.766	61.2	22.4686	0.0000	SURCHARGED
480 minute summer	Basin 2 - HW3	408	42.552	0.922	55.0	0.0000	0.0000	OK
480 minute summer	Basin 2 - HW4	416	42.550	1.020	103.4	0.0000	0.0000	SURCHARGED
480 minute summer	S2-31 Control	416	42.548	1.028	28.3	4.6524	0.0000	SURCHARGED
60 minute summer	S2-Outfall	1	42.000	1.100	27.9	0.0000	0.0000	OK
60 minute summer	S1-1	34	45.917	0.723	52.6	1.0346	0.0000	SURCHARGED
60 minute summer	S1-2	34	45.733	0.698	71.6	0.9984	0.0000	SURCHARGED
60 minute summer	S1-4	33	45.123	0.529	159.9	0.7575	0.0000	SURCHARGED
60 minute summer	S1-6	34	45.253	0.645	87.2	0.9231	0.0000	SURCHARGED
60 minute summer	S1-9	34	45.537	0.991	101.2	2.5220	0.0000	SURCHARGED
60 minute summer	S1-10	36	45.227	0.808	100.4	1.7828	0.0000	SURCHARGED
60 minute summer	S1-11	36	45.155	0.835	95.8	2.1241	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)
480 minute summer	S2-29	11.003	Basin 2 - HW3	55.0	0.781	0.770	0.6091	
480 minute summer	Basin 2 - HW3	Flow through Pond	Basin 2 - HW4	103.4	0.076	0.004	1161.7981	
480 minute summer	Basin 2 - HW4	18.000	S2-31 Control	28.3	0.344	0.253	0.3503	
480 minute summer	S2-31 Control	18.001	S2-Outfall	27.9	0.253	0.129	5.8157	1637.4
60 minute summer	S1-1	6.000	S1-2	51.1	1.284	1.278	0.5619	
60 minute summer	S1-2	6.001	S1-3	71.6	1.017	0.775	2.3376	
60 minute summer	S1-4	6.003	S1-22	159.4	1.445	1.436	1.8780	
60 minute summer	S1-6	5.000	S1-13	86.0	1.570	0.766	2.2914	
60 minute summer	S1-9	4.001	S1-10	100.4	1.426	1.417	2.1795	
60 minute summer	S1-10	4.002	S1-11	95.8	1.361	1.352	0.4118	
60 minute summer	S1-11	4.003	S1-13A	94.9	0.998	0.852	3.0981	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.81%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S1-13	36	45.061	0.935	200.8	2.3807	0.0000	SURCHARGED
60 minute summer	S1-13A	36	45.089	0.857	101.6	11.1476	0.0000	SURCHARGED
60 minute summer	S1-14	37	44.905	1.305	265.6	10.6743	0.0000	FLOOD RISK
60 minute summer	S1-15	38	44.617	1.129	253.8	24.0207	0.0000	SURCHARGED
60 minute summer	Basin 1 - HW3	36	44.525	1.448	398.0	0.0000	0.0000	OK
2160 minute winter	S1-17	2160	44.457	0.742	4.8	1.0621	0.0000	SURCHARGED
2160 minute winter	S1-17B	2160	44.457	0.207	0.3	0.2967	0.0000	OK
60 minute summer	Swale 6 - HW1	34	44.946	0.043	9.4	1.7460	0.0000	OK
2160 minute winter	S1-20	2160	44.458	0.862	5.5	2.1947	0.0000	SURCHARGED
2160 minute winter	S1-21	2160	44.457	1.008	5.4	2.5662	0.0000	SURCHARGED
2160 minute winter	Basin 1 - HW1	2160	44.459	1.382	5.3	0.0000	0.0000	OK
60 minute summer	S1-22	33	44.958	0.417	159.4	0.5972	0.0000	SURCHARGED
60 minute summer	S1-23	33	45.316	0.566	10.7	0.8096	0.0000	SURCHARGED
60 minute summer	S1-25	33	45.309	0.698	110.8	0.9993	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)
60 minute summer	S1-13	4.005	S1-14	199.3	1.403	0.496	5.4059	
60 minute summer	S1-13A	4.004	S1-13	103.8	1.177	0.734	0.6806	
60 minute summer	S1-14	4.006	S1-15	236.2	1.649	1.472	7.1147	
60 minute summer	S1-15	4.007	Basin 1 - HW3	251.9	1.590	0.472	1.9755	
60 minute summer	Basin 1 - HW3	Flow through Pond	Basin 1 - HW2	481.8	0.257	0.011	1239.3379	
2160 minute winter	S1-17	14.001	S1-20	4.7	0.533	0.065	0.7571	
2160 minute winter	S1-17B	15.000_1	S1-17	0.4	0.010	0.005	0.6231	
60 minute summer	Swale 6 - HW1	16.000	S1-20	8.6	2.187	0.152	0.0098	
2160 minute winter	S1-20	14.002	S1-21	5.4	0.566	0.047	4.8337	
2160 minute winter	S1-21	14.003	Basin 1 - HW1	5.3	0.607	0.020	1.7279	
2160 minute winter	Basin 1 - HW1	Flow through Pond	Basin 1 - HW2	32.7	0.044	0.001	1916.2317	
60 minute summer	S1-22	6.004	S1-27	159.4	1.480	1.432	1.5574	
60 minute summer	S1-23	15.000	S1-25	12.1	0.506	0.303	0.4270	
60 minute summer	S1-25	17.001	S1-25A	110.5	1.570	1.554	3.1995	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.81%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	S1-26	1440	44.458	0.991	23.9	2.5221	0.0000	SURCHARGED
60 minute summer	S1-27	34	44.711	0.293	255.6	0.4198	0.0000	OK
2160 minute winter	S1-28	2160	44.458	0.921	9.9	1.3186	0.0000	SURCHARGED
2160 minute winter	Basin 1 - HW4	2160	44.463	1.386	19.5	0.0000	0.0000	OK
2160 minute winter	Basin 1 - HW2	2160	44.457	1.556	32.7	0.0000	0.0000	SURCHARGED
2160 minute winter	S1-32 Control	2160	44.457	1.631	10.9	7.3783	0.0000	SURCHARGED
60 minute summer	S1-25A	33	44.776	0.353	110.5	0.8986	0.0000	SURCHARGED
60 minute summer	S1-8	34	45.723	0.435	32.3	0.6221	0.0000	SURCHARGED
2160 minute winter	S1-17A	2160	44.457	0.144	0.7	0.2065	0.0000	OK
60 minute summer	S3-3	35	43.597	1.218	170.3	1.7433	0.0000	FLOOD RISK
60 minute summer	S3-4	35	43.600	0.891	24.8	1.2747	0.0000	SURCHARGED
60 minute summer	S3-5	35	43.552	1.193	189.1	1.7076	0.0000	SURCHARGED
60 minute summer	S3-6	35	43.496	1.153	187.7	1.6497	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)
1440 minute winter	S1-26	6.007	Basin 1 - HW4	23.8	0.628	0.109	2.5129	
60 minute summer	S1-27	6.005	S1-28	251.3	1.925	0.688	8.4681	
2160 minute winter	S1-28	6.006	S1-26	16.7	0.413	0.044	2.4872	
2160 minute winter	Basin 1 - HW4	Flow through Pond	Basin 1 - HW2	32.7	0.044	0.001	1916.2317	
2160 minute winter	Basin 1 - HW2	1.000	S1-32 Control	10.9	0.353	0.066	1.1867	
2160 minute winter	S1-32 Control	1.001	S2-12	3.1	0.592	0.078	0.1281	
60 minute summer	S1-25A	17.002	Swale 1 - HW1	110.3	1.576	1.544	0.6768	
60 minute summer	S1-8	4.000	S1-9	30.1	1.057	0.489	1.8958	
2160 minute winter	S1-17A	14.000	S1-17	0.8	0.503	0.013	1.1833	
60 minute summer	S3-3	12.003	S3-5	167.9	1.060	1.031	1.2347	
60 minute summer	S3-4	13.002	S3-5	26.9	0.949	0.570	0.6015	
60 minute summer	S3-5	12.004	S3-6	187.7	1.185	1.172	1.0213	
60 minute summer	S3-6	12.005	S3-7	186.6	1.178	1.173	2.7145	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.81%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S3-7	35	43.403	1.102	238.6	1.5775	0.0000	SURCHARGED
480 minute winter	Basin 3 - HW2	480	43.265	1.258	41.1	0.0000	0.0000	OK
60 minute summer	S3-11	35	43.644	0.849	24.7	1.2143	0.0000	SURCHARGED
60 minute summer	S3-12	35	43.702	0.777	27.9	1.1116	0.0000	SURCHARGED
60 minute summer	S3-13	35	43.685	0.585	13.5	0.8365	0.0000	SURCHARGED
60 minute summer	S3-14	35	43.683	1.158	65.5	2.9476	0.0000	FLOOD RISK
60 minute summer	Basin 3 - HW1	35	43.516	1.509	99.0	0.0000	0.0000	OK
480 minute winter	Basin 3 - HW3	480	43.262	1.351	30.2	0.0000	0.0000	SURCHARGED
480 minute winter	S3-18 Control	480	43.262	1.362	3.7	1.9483	0.0000	SURCHARGED
480 minute winter	S3-7A	480	43.262	1.041	34.4	2.6495	0.0000	SURCHARGED
60 minute summer	S3-2	34	43.802	1.268	166.5	1.8144	0.0000	SURCHARGED
60 minute summer	S1-3	33	45.563	0.758	115.8	1.0850	0.0000	SURCHARGED
60 minute summer	Swale 1 - HW1	34	44.499	0.225	154.0	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)
60 minute summer	S3-7	12.006	S3-7A	237.2	1.497	1.485	5.1239	
480 minute winter	Basin 3 - HW2	Flow through Pond	Basin 3 - HW3	30.2	0.082	0.002	559.1382	
60 minute summer	S3-11	13.001	S3-4	24.8	1.019	0.623	0.5788	
60 minute summer	S3-12	13.000	S3-11	24.7	0.979	0.620	0.8759	
60 minute summer	S3-13	19.000	S3-14	-13.5	-0.340	-0.205	1.4323	
60 minute summer	S3-14	19.001	Basin 3 - HW1	57.8	1.454	1.446	0.4342	
60 minute summer	Basin 3 - HW1	Flow through Pond	Basin 3 - HW3	198.0	0.194	0.013	405.4589	
480 minute winter	Basin 3 - HW3	10.000	S3-18 Control	3.7	0.269	0.032	0.3676	
480 minute winter	S3-18 Control	10.001	S2-11	3.6	0.346	0.028	3.7986	
480 minute winter	S3-7A	12.007	Basin 3 - HW2	34.2	0.687	0.211	1.2498	
60 minute summer	S3-2	12.002	S3-3	163.0	1.478	1.422	2.6621	
60 minute summer	S1-3	6.002	S1-4	115.8	1.644	1.635	2.3376	
60 minute summer	Swale 1 - HW1	Flow through Pond	Swale 1 - HW2	148.5	0.372	0.060	59.6829	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.81%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
2160 minute winter	Swale 1 - HW2	2160	44.458	0.387	21.5	0.0000	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)
2160 minute winter	Swale 1 - HW2	7.000	S1-26	-15.3	2.088	-0.081	0.0929	

Design Settings

Rainfall Methodology	FEH-22	Maximum Time of Concentration (mins)	30.00	Preferred Cover Depth (m)	0.950
Return Period (years)	2	Maximum Rainfall (mm/hr)	550.0	Include Intermediate Ground	✓
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00	Enforce best practice design rules	✓
CV	0.750	Connection Type	Level Soffits		
Time of Entry (mins)	5.00	Minimum Backdrop Height (m)	9.999		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S2-1		5.00	44.634	1350	473192.273	167226.386	1.817
S2-2	0.201	5.00	44.485	1350	473202.717	167226.386	1.805
S2-3		5.00	44.625	1350	473202.717	167205.638	2.017
S2-4			44.496	1350	473211.810	167205.583	1.942
S2-5	0.111	5.00	44.171	1200	473239.749	167193.360	1.797
S2-6			44.355	1200	473235.897	167185.047	2.035
S2-7			44.232	1350	473248.907	167178.990	2.072
S2-8	0.049	5.00	43.747	1350	473280.218	167166.214	1.600
S2-9	0.085	5.00	43.764	1350	473281.201	167175.614	1.823
S2-10			43.310	1350	473317.191	167171.092	1.481
S2-11			43.109	1800	473338.826	167170.404	1.347
Basin 2 - HW1			42.855		473348.677	167156.973	1.225
S2-12			44.671	1350	473171.786	167125.616	1.990
S2-13			44.472	1350	473195.048	167115.516	1.941
S2-14			44.255	1350	473204.890	167114.261	1.783
S2-15	0.129	5.00	44.189	1350	473211.896	167116.274	1.760
S2-16	0.081	5.00	44.344	1350	473225.244	167162.163	1.514
S2-17	0.051	5.00	44.164	1350	473221.432	167147.263	1.500
S2-18			43.929	1350	473220.313	167123.141	1.714
S2-19			43.916	1350	473242.569	167109.418	1.782
S2-20	0.064	5.00	43.779	1350	473253.307	167105.956	1.680
S2-21			43.682	1350	473269.786	167106.376	1.634
S2-22		5.00	43.757	1350	473280.812	167138.942	1.262
S2-23	0.074	5.00	43.924	1350	473281.150	167123.412	1.521

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S2-24	0.038	5.00	43.794	1350	473284.224	167108.749	1.792
S2-25	0.096	5.00	43.255	1800	473334.337	167119.255	1.529
Basin 2 - HW2	0.180		42.855		473344.639	167118.976	1.225
S2-S26	0.262	5.00	43.800	1800	473211.295	167067.544	1.219
S2-27	0.026	5.00	43.400	1800	473268.977	167070.823	1.160
S2-28	0.248	5.00	43.200	1800	473302.278	167075.883	1.234
S2-29	0.020	5.00	42.855	1800	473343.821	167090.145	1.069
Basin 2 - HW3			42.855		473350.441	167095.711	1.225
Basin 2 - HW4		5.00	42.855		473368.269	167153.595	1.325
S2-31 Control			43.100	2400	473371.349	167154.371	1.580
S2-Outfall			42.010		473423.768	167148.668	1.110
S1-1	0.086	5.00	46.553	1350	472976.816	167263.801	1.359
S1-2	0.034	5.00	46.637	1350	472976.733	167249.672	1.602
S1-4	0.074	5.00	45.987	1350	473043.123	167249.284	1.393
S1-6	0.142	5.00	45.815	1350	473049.596	167214.275	1.207
S1-9	0.121	5.00	46.050	1800	472978.448	167192.719	1.504
S1-10			45.663	1350	473009.310	167190.368	1.244
S1-11			45.600	1800	473014.281	167187.287	1.280
S1-13	0.097	5.00	46.010	1800	473047.865	167181.781	1.884
S1-13A	0.012	5.00	45.672	1350	473041.716	167181.262	1.440
S1-14	0.112	5.00	45.154	1800	473080.027	167170.393	1.554
S1-15	0.034	5.00	44.937	1800	473120.481	167150.903	1.449
Basin 1 - HW3	0.350		45.150		473127.900	167140.882	2.073
S1-17	0.177	5.00	45.942	1350	473031.945	167122.459	2.227
S1-17B		5.00	45.825	1350	473047.252	167117.923	1.575
Swale 6 - HW1	0.015	5.00	45.401		473026.512	167113.115	0.498
S1-20	0.017	5.00	45.403	1800	473028.820	167112.172	1.808
S1-21			45.207	1800	473070.837	167099.719	1.758

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
Basin 1 - HW1			45.201		473086.421	167101.319	2.124
S1-22			46.081	1350	473046.205	167232.538	1.540
S1-23	0.018	5.00	45.895	1350	473041.288	167276.600	1.145
S1-25	0.164	5.00	45.986	1350	473044.536	167286.834	1.375
S1-26			44.992	1800	473135.785	167234.490	1.525
S1-27	0.158	5.00	46.084	1350	473061.293	167235.340	1.666
S1-28			45.262	1350	473124.502	167236.778	1.725
Basin 1 - HW4	0.098		45.201		473138.719	167223.234	2.124
Basin 1 - HW2		5.00	45.201		473137.752	167132.592	2.300
S1-32 Control			45.200	2400	473148.498	167133.128	2.374
S1-25A			45.707	1800	473089.966	167287.487	1.284
S1-8	0.053	5.00	46.576	1350	472976.679	167240.355	1.288
S1-17A	0.031	5.00	45.680	1350	473042.030	167156.496	1.367
S3-3	0.012	5.00	43.895	1350	473242.576	167217.439	1.516
S3-4			43.957	1350	473254.575	167230.191	1.248
S3-5			43.906	1350	473250.177	167215.722	1.547
S3-6			43.942	1350	473256.033	167213.027	1.599
S3-7	0.090	5.00	43.997	1350	473272.956	167210.357	1.696
Basin 3 - HW2	0.080		43.650		473312.937	167212.490	1.643
S3-11			44.107	1350	473255.956	167244.679	1.312
S3-12	0.046	5.00	44.182	1350	473261.642	167265.956	1.257
S3-13		5.00	44.275	1350	473282.077	167266.706	1.175
S3-14	0.107	5.00	43.776	1800	473318.090	167266.700	1.251
Basin 3 - HW1	0.072		43.650		473318.221	167255.783	1.643
Basin 3 - HW3		5.00	43.650		473320.543	167202.383	1.739
S3-18 Control			43.850	1350	473323.712	167201.350	1.950
S3-7A			43.688	1800	473305.130	167213.621	1.467
S3-2	0.083	5.00	44.238	1350	473219.910	167225.734	1.704

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S1-3	0.074	5.00	46.154	1350	473009.928	167249.478	1.349
Swale 1 - HW1	0.071		45.100		473097.083	167294.615	0.826
Swale 1 - HW2	0.060	5.00	45.015		473135.751	167236.825	0.944

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	Basin 1 - HW2	S1-32 Control	10.759	0.600	42.901	42.828	0.073	147.4	375	5.12	50.9
1.001	S1-32 Control	S2-12	24.470	0.600	42.826	42.681	0.145	168.8	225	5.53	49.2
1.002	S2-12	S2-13	25.360	0.600	42.681	42.531	0.150	169.1	225	5.95	47.4
1.003	S2-13	S2-14	9.922	0.600	42.531	42.472	0.059	168.2	225	6.11	46.8
1.004	S2-14	S2-15	7.289	0.600	42.472	42.429	0.043	169.5	225	6.23	46.4
1.005	S2-15	S2-18	10.863	0.600	42.429	42.365	0.064	169.7	225	6.42	45.7
2.000	S2-16	S2-17	15.380	0.600	42.830	42.739	0.091	169.0	225	5.26	50.3
2.001	S2-17	S2-18	24.148	0.600	42.664	42.290	0.374	64.6	300	5.46	49.4
1.006	S2-18	S2-19	26.147	0.600	42.215	42.134	0.081	322.8	375	6.85	44.2
1.007	S2-19	S2-20	11.286	0.600	42.134	42.099	0.035	322.5	375	7.04	43.6

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	1.490	164.6	0.0	1.925	1.997	0.000	0.0	0	0.000
1.001	1.003	39.9	0.0	2.149	1.765	0.000	0.0	0	0.000
1.002	1.002	39.9	0.0	1.765	1.716	0.000	0.0	0	0.000
1.003	1.005	40.0	0.0	1.716	1.558	0.000	0.0	0	0.000
1.004	1.001	39.8	0.0	1.558	1.535	0.000	0.0	0	0.000
1.005	1.000	39.8	16.0	1.535	1.339	0.129	0.0	99	0.946
2.000	1.003	39.9	11.1	1.289	1.200	0.081	0.0	81	0.863
2.001	1.959	138.5	17.8	1.200	1.339	0.132	0.0	72	1.357
1.006	1.003	110.7	31.3	1.339	1.407	0.261	0.0	136	0.866
1.007	1.003	110.8	30.9	1.407	1.305	0.261	0.0	135	0.864

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)
1.008	S2-20	S2-21	16.484	0.600	42.099	42.048	0.051	323.2	375	7.31	42.9
1.009	S2-21	S2-24	14.632	0.600	42.048	42.002	0.046	318.1	375	7.55	42.2
3.000	S2-22	S2-23	15.534	0.600	42.495	42.403	0.092	168.8	225	5.26	50.3
3.001	S2-23	S2-24	14.982	0.600	42.403	42.152	0.251	59.7	225	5.41	49.7
1.010	S2-24	S2-25	51.202	0.600	42.002	41.801	0.201	254.7	375	8.31	40.1
1.011	S2-25	Basin 2 - HW2	10.306	0.600	41.726	41.700	0.026	396.4	450	8.48	39.7
4.000	S1-8	S1-9	47.669	0.600	45.288	44.621	0.667	71.5	225	5.51	49.2
4.001	S1-9	S1-10	30.951	0.600	44.546	44.419	0.127	243.7	300	6.03	47.1
4.002	S1-10	S1-11	5.848	0.600	44.419	44.395	0.024	243.7	300	6.12	46.6
4.003	S1-11	S1-13A	28.089	0.600	44.320	44.232	0.088	319.2	375	6.59	45.0
4.004	S1-13A	S1-13	6.171	0.600	44.232	44.201	0.031	199.1	375	6.67	44.9
5.000	S1-6	S1-13	32.540	0.600	44.608	44.276	0.332	98.0	300	5.34	49.9
4.005	S1-13	S1-14	34.119	0.600	44.126	43.600	0.526	64.9	450	6.89	43.6
4.006	S1-14	S1-15	44.904	0.600	43.600	43.488	0.112	400.9	450	7.64	41.9

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)
1.008	1.002	110.7	37.8	1.305	1.259	0.325	0.0	151	0.909
1.009	1.010	111.6	37.2	1.259	1.417	0.325	0.0	149	0.913
3.000	1.003	39.9	0.0	1.037	1.296	0.000	0.0	0	0.000
3.001	1.696	67.4	10.0	1.296	1.417	0.074	0.0	58	1.225
1.010	1.130	124.8	47.6	1.417	1.079	0.437	0.0	160	1.056
1.011	1.015	161.4	57.4	1.079	0.705	0.533	0.0	185	0.932
4.000	1.549	61.6	7.0	1.063	1.204	0.053	0.0	51	1.040
4.001	1.002	70.9	22.2	1.204	0.944	0.174	0.0	115	0.890
4.002	1.003	70.9	21.9	0.944	0.905	0.174	0.0	114	0.885
4.003	1.008	111.4	21.2	0.905	1.065	0.174	0.0	110	0.782
4.004	1.280	141.4	22.5	1.065	1.434	0.185	0.0	101	0.946
5.000	1.588	112.2	19.3	0.907	1.434	0.142	0.0	83	1.195
4.005	2.527	401.9	50.1	1.434	1.104	0.424	0.0	106	1.742
4.006	1.009	160.5	61.0	1.104	0.999	0.537	0.0	192	0.942

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)
4.007	S1-15	Basin 1 - HW3	12.468	0.600	43.488	43.150	0.338	36.9	450	7.70	41.8
6.000	S1-1	S1-2	14.129	0.600	45.194	45.110	0.084	168.2	225	5.23	50.4
6.001	S1-2	S1-3	33.196	0.600	45.035	44.805	0.230	144.2	300	5.66	48.6
6.002	S1-3	S1-4	33.196	0.600	44.805	44.669	0.136	244.1	300	6.21	46.4
6.003	S1-4	S1-22	17.027	0.600	44.594	44.541	0.053	321.3	375	6.49	45.5
6.004	S1-22	S1-27	15.346	0.600	44.541	44.493	0.048	319.7	375	6.75	44.6
6.005	S1-27	S1-28	63.225	0.600	44.418	43.612	0.806	78.5	450	7.21	43.2
6.006	S1-28	S1-26	11.513	0.600	43.537	43.467	0.070	164.5	525	7.32	42.8
7.000	Swale 1 - HW2	S1-26	2.335	0.600	44.071	43.767	0.304	7.7	225	5.01	51.4
6.007	S1-26	Basin 1 - HW4	11.632	0.600	43.467	43.443	0.024	484.7	525	7.51	42.3
8.000	S2-3	S2-4	9.093	0.600	42.608	42.554	0.054	168.4	225	5.15	50.8
8.001	S2-4	S2-5	30.496	0.600	42.554	42.374	0.180	169.4	225	5.66	48.6
8.002	S2-5	S2-6	9.162	0.600	42.374	42.320	0.054	169.7	225	5.81	48.0
8.003	S2-6	S2-7	14.351	0.600	42.320	42.235	0.085	168.8	225	6.05	47.0

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)
4.007	3.355	533.6	64.6	0.999	1.550	0.570	0.0	105	2.304
6.000	1.005	40.0	11.7	1.134	1.302	0.086	0.0	83	0.874
6.001	1.307	92.4	15.7	1.302	1.049	0.120	0.0	83	0.983
6.002	1.002	70.8	24.4	1.049	1.018	0.194	0.0	121	0.911
6.003	1.005	111.0	33.0	1.018	1.165	0.268	0.0	140	0.880
6.004	1.008	111.3	32.4	1.165	1.216	0.268	0.0	138	0.877
6.005	2.297	365.2	49.8	1.216	1.200	0.426	0.0	111	1.626
6.006	1.744	377.4	49.4	1.200	1.000	0.426	0.0	127	1.221
7.000	4.750	188.9	8.4	0.719	1.000	0.060	0.0	32	2.416
6.007	1.010	218.7	55.7	1.000	1.233	0.486	0.0	180	0.849
8.000	1.004	39.9	0.0	1.792	1.717	0.000	0.0	0	0.000
8.001	1.001	39.8	0.0	1.717	1.572	0.000	0.0	0	0.000
8.002	1.001	39.8	14.5	1.572	1.810	0.111	0.0	94	0.922
8.003	1.003	39.9	14.2	1.810	1.772	0.111	0.0	93	0.921

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)
8.004	S2-7	S2-9	32.470	0.600	42.160	42.016	0.144	225.5	300	6.57	45.2
9.000	S2-8	S2-9	9.451	0.600	42.147	42.091	0.056	168.8	225	5.16	50.7
8.005	S2-9	S2-10	36.273	0.600	41.941	41.829	0.112	323.9	375	7.17	43.3
8.006	S2-10	S2-11	21.646	0.600	41.829	41.762	0.067	323.1	375	7.53	42.2
10.000	Basin 3 - HW3	S3-18 Control	3.333	0.600	41.911	41.900	0.011	303.0	375	5.05	51.2
10.001	S3-18 Control	S2-11	34.440	0.600	41.900	41.762	0.138	249.6	375	5.56	49.2
8.007	S2-11	Basin 2 - HW1	16.656	0.600	41.762	41.710	0.052	320.3	375	7.81	41.4
11.000	S2-S26	S2-27	57.775	0.600	42.581	42.240	0.341	169.4	225	5.96	47.3
11.001	S2-27	S2-28	33.683	0.600	42.240	42.041	0.199	169.3	225	6.52	45.4
11.002	S2-28	S2-29	43.923	0.600	41.966	41.786	0.180	244.0	300	7.25	43.0
11.003	S2-29	Basin 2 - HW3	8.649	0.600	41.786	41.750	0.036	240.2	300	7.40	42.6
12.000	S2-1	S2-2	10.444	0.600	42.817	42.755	0.062	168.5	225	5.17	50.7
12.001	S2-2	S3-2	17.205	0.600	42.680	42.609	0.071	242.3	300	5.46	49.5
12.002	S3-2	S3-3	24.136	0.600	42.534	42.454	0.080	301.7	375	5.85	47.8

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)
8.004	1.043	73.7	13.6	1.772	1.448	0.111	0.0	87	0.801
9.000	1.003	39.9	6.7	1.375	1.448	0.049	0.0	62	0.748
8.005	1.001	110.6	28.8	1.448	1.106	0.246	0.0	130	0.846
8.006	1.002	110.7	28.1	1.106	0.972	0.246	0.0	129	0.842
10.000	1.035	114.4	0.0	1.364	1.575	0.000	0.0	0	0.000
10.001	1.142	126.1	0.0	1.575	0.972	0.000	0.0	0	0.000
8.007	1.007	111.2	27.6	0.972	0.770	0.246	0.0	127	0.841
11.000	1.001	39.8	33.6	0.994	0.935	0.262	0.0	159	1.119
11.001	1.002	39.8	35.4	0.935	0.934	0.288	0.0	166	1.128
11.002	1.002	70.8	62.4	0.934	0.769	0.535	0.0	219	1.126
11.003	1.010	71.4	64.2	0.769	0.805	0.556	0.0	224	1.138
12.000	1.004	39.9	0.0	1.592	1.505	0.000	0.0	0	0.000
12.001	1.005	71.1	26.9	1.505	1.329	0.201	0.0	128	0.938
12.002	1.038	114.6	36.8	1.329	1.066	0.284	0.0	145	0.926

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)
12.003	S3-3	S3-5	7.793	0.600	42.379	42.359	0.020	389.7	450	5.97	47.3
13.000	S3-12	S3-11	22.024	0.600	42.925	42.795	0.130	169.4	225	5.37	49.8
13.001	S3-11	S3-4	14.554	0.600	42.795	42.709	0.086	169.2	225	5.61	48.8
13.002	S3-4	S3-5	15.123	0.600	42.709	42.584	0.125	121.0	225	5.82	47.9
12.004	S3-5	S3-6	6.446	0.600	42.359	42.343	0.016	402.9	450	6.08	46.9
12.005	S3-6	S3-7	17.132	0.600	42.343	42.301	0.042	407.9	450	6.37	45.9
12.006	S3-7	S3-7A	32.339	0.600	42.301	42.221	0.080	404.2	450	6.90	44.1
12.007	S3-7A	Basin 3 - HW2	7.888	0.600	42.221	42.201	0.020	394.4	450	7.03	43.7
14.000	S1-17A	S1-17	35.500	0.600	44.313	43.790	0.523	67.9	225	5.37	49.8
15.000_1	S1-17B	S1-17	15.965	0.600	44.250	43.790	0.460	34.7	225	5.12	50.9
14.001	S1-17	S1-20	10.751	0.600	43.715	43.670	0.045	239.7	300	5.55	49.1
16.000	Swale 6 - HW1	S1-20	2.493	0.600	44.903	44.654	0.249	10.0	150	5.01	51.3
14.002	S1-20	S1-21	43.824	0.600	43.595	43.449	0.146	300.2	375	6.25	46.3
14.003	S1-21	Basin 1 - HW1	15.666	0.600	43.449	43.162	0.287	54.6	375	6.36	45.9

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)
12.003	1.024	162.8	37.9	1.066	1.097	0.296	0.0	147	0.840
13.000	1.001	39.8	6.2	1.032	1.087	0.046	0.0	59	0.728
13.001	1.002	39.8	6.0	1.087	1.023	0.046	0.0	59	0.729
13.002	1.187	47.2	5.9	1.023	1.097	0.046	0.0	53	0.812
12.004	1.006	160.1	43.4	1.097	1.149	0.342	0.0	160	0.860
12.005	1.000	159.1	42.5	1.149	1.246	0.342	0.0	158	0.850
12.006	1.005	159.8	51.6	1.246	1.017	0.432	0.0	175	0.900
12.007	1.017	161.8	51.1	1.017	0.999	0.432	0.0	174	0.906
14.000	1.589	63.2	4.2	1.142	1.927	0.031	0.0	39	0.908
15.000_1	2.228	88.6	0.0	1.350	1.927	0.000	0.0	0	0.000
14.001	1.011	71.5	27.7	1.927	1.433	0.208	0.0	129	0.948
16.000	3.202	56.6	2.1	0.348	0.599	0.015	0.0	20	1.526
14.002	1.040	114.9	30.2	1.433	1.383	0.241	0.0	131	0.881
14.003	2.457	271.3	30.0	1.383	1.664	0.241	0.0	83	1.634

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)
15.000	S1-23	S1-25	10.737	0.600	44.750	44.686	0.064	167.8	225	5.18	50.6
17.001	S1-25	S1-25A	45.435	0.600	44.611	44.423	0.188	242.0	300	5.93	47.4
17.002	S1-25A	Swale 1 - HW1	10.073	0.600	44.423	44.381	0.042	239.8	300	6.10	46.8
18.000	Basin 2 - HW4	S2-31 Control	3.176	0.600	41.530	41.520	0.010	317.6	375	5.05	51.2
18.001	S2-31 Control	S2-Outfall	52.728	0.600	41.520	40.900	0.620	85.0	375	5.50	49.3
19.000	S3-13	S3-14	36.013	0.600	43.100	42.525	0.575	62.6	225	5.36	49.9
19.001	S3-14	Basin 3 - HW1	10.918	0.600	42.525	42.460	0.065	168.0	225	5.54	49.1

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)
15.000	1.006	40.0	2.4	0.920	1.075	0.018	0.0	37	0.558
17.001	1.006	71.1	23.4	1.075	0.984	0.182	0.0	118	0.904
17.002	1.011	71.4	23.1	0.984	0.419	0.182	0.0	117	0.904
18.000	1.011	111.7	0.0	0.950	1.205	0.000	0.0	0	0.000
18.001	1.965	217.1	0.0	1.205	0.735	0.000	0.0	0	0.000
19.000	1.655	65.8	0.0	0.950	1.026	0.000	0.0	0	0.000
19.001	1.006	40.0	14.2	1.026	0.965	0.107	0.0	93	0.923

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	10.759	147.4	375	ADOPTABLE	45.201	42.901	1.925	45.200	42.828	1.997
1.001	24.470	168.8	225	ADOPTABLE	45.200	42.826	2.149	44.671	42.681	1.765
1.002	25.360	169.1	225	ADOPTABLE	44.671	42.681	1.765	44.472	42.531	1.716
1.003	9.922	168.2	225	ADOPTABLE	44.472	42.531	1.716	44.255	42.472	1.558
1.004	7.289	169.5	225	ADOPTABLE	44.255	42.472	1.558	44.189	42.429	1.535
1.005	10.863	169.7	225	ADOPTABLE	44.189	42.429	1.535	43.929	42.365	1.339
2.000	15.380	169.0	225	ADOPTABLE	44.344	42.830	1.289	44.164	42.739	1.200
2.001	24.148	64.6	300	ADOPTABLE	44.164	42.664	1.200	43.929	42.290	1.339
1.006	26.147	322.8	375	ADOPTABLE	43.929	42.215	1.339	43.916	42.134	1.407
1.007	11.286	322.5	375	ADOPTABLE	43.916	42.134	1.407	43.779	42.099	1.305
1.008	16.484	323.2	375	ADOPTABLE	43.779	42.099	1.305	43.682	42.048	1.259
1.009	14.632	318.1	375	ADOPTABLE	43.682	42.048	1.259	43.794	42.002	1.417
3.000	15.534	168.8	225	ADOPTABLE	43.757	42.495	1.037	43.924	42.403	1.296
3.001	14.982	59.7	225	ADOPTABLE	43.924	42.403	1.296	43.794	42.152	1.417
1.010	51.202	254.7	375	ADOPTABLE	43.794	42.002	1.417	43.255	41.801	1.079

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	Basin 1 - HW2		Junction		S1-32 Control	2400	Manhole	Adoptable
1.001	S1-32 Control	2400	Manhole	Adoptable	S2-12	1350	Manhole	Adoptable
1.002	S2-12	1350	Manhole	Adoptable	S2-13	1350	Manhole	Adoptable
1.003	S2-13	1350	Manhole	Adoptable	S2-14	1350	Manhole	Adoptable
1.004	S2-14	1350	Manhole	Adoptable	S2-15	1350	Manhole	Adoptable
1.005	S2-15	1350	Manhole	Adoptable	S2-18	1350	Manhole	Adoptable
2.000	S2-16	1350	Manhole	Adoptable	S2-17	1350	Manhole	Adoptable
2.001	S2-17	1350	Manhole	Adoptable	S2-18	1350	Manhole	Adoptable
1.006	S2-18	1350	Manhole	Adoptable	S2-19	1350	Manhole	Adoptable
1.007	S2-19	1350	Manhole	Adoptable	S2-20	1350	Manhole	Adoptable
1.008	S2-20	1350	Manhole	Adoptable	S2-21	1350	Manhole	Adoptable
1.009	S2-21	1350	Manhole	Adoptable	S2-24	1350	Manhole	Adoptable
3.000	S2-22	1350	Manhole	Adoptable	S2-23	1350	Manhole	Adoptable
3.001	S2-23	1350	Manhole	Adoptable	S2-24	1350	Manhole	Adoptable
1.010	S2-24	1350	Manhole	Adoptable	S2-25	1800	Manhole	Adoptable

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)
1.011	10.306	396.4	450	ADOPTABLE	43.255	41.726	1.079	42.855	41.700	0.705
4.000	47.669	71.5	225	ADOPTABLE	46.576	45.288	1.063	46.050	44.621	1.204
4.001	30.951	243.7	300	ADOPTABLE	46.050	44.546	1.204	45.663	44.419	0.944
4.002	5.848	243.7	300	ADOPTABLE	45.663	44.419	0.944	45.600	44.395	0.905
4.003	28.089	319.2	375	ADOPTABLE	45.600	44.320	0.905	45.672	44.232	1.065
4.004	6.171	199.1	375	ADOPTABLE	45.672	44.232	1.065	46.010	44.201	1.434
5.000	32.540	98.0	300	ADOPTABLE	45.815	44.608	0.907	46.010	44.276	1.434
4.005	34.119	64.9	450	ADOPTABLE	46.010	44.126	1.434	45.154	43.600	1.104
4.006	44.904	400.9	450	ADOPTABLE	45.154	43.600	1.104	44.937	43.488	0.999
4.007	12.468	36.9	450	ADOPTABLE	44.937	43.488	0.999	45.150	43.150	1.550
6.000	14.129	168.2	225	ADOPTABLE	46.553	45.194	1.134	46.637	45.110	1.302
6.001	33.196	144.2	300	ADOPTABLE	46.637	45.035	1.302	46.154	44.805	1.049
6.002	33.196	244.1	300	ADOPTABLE	46.154	44.805	1.049	45.987	44.669	1.018
6.003	17.027	321.3	375	ADOPTABLE	45.987	44.594	1.018	46.081	44.541	1.165
6.004	15.346	319.7	375	ADOPTABLE	46.081	44.541	1.165	46.084	44.493	1.216

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.011	S2-25	1800	Manhole	Adoptable	Basin 2 - HW2		Junction	
4.000	S1-8	1350	Manhole	Adoptable	S1-9	1800	Manhole	Adoptable
4.001	S1-9	1800	Manhole	Adoptable	S1-10	1350	Manhole	Adoptable
4.002	S1-10	1350	Manhole	Adoptable	S1-11	1800	Manhole	Adoptable
4.003	S1-11	1800	Manhole	Adoptable	S1-13A	1350	Manhole	Adoptable
4.004	S1-13A	1350	Manhole	Adoptable	S1-13	1800	Manhole	Adoptable
5.000	S1-6	1350	Manhole	Adoptable	S1-13	1800	Manhole	Adoptable
4.005	S1-13	1800	Manhole	Adoptable	S1-14	1800	Manhole	Adoptable
4.006	S1-14	1800	Manhole	Adoptable	S1-15	1800	Manhole	Adoptable
4.007	S1-15	1800	Manhole	Adoptable	Basin 1 - HW3		Junction	
6.000	S1-1	1350	Manhole	Adoptable	S1-2	1350	Manhole	Adoptable
6.001	S1-2	1350	Manhole	Adoptable	S1-3	1350	Manhole	Adoptable
6.002	S1-3	1350	Manhole	Adoptable	S1-4	1350	Manhole	Adoptable
6.003	S1-4	1350	Manhole	Adoptable	S1-22	1350	Manhole	Adoptable
6.004	S1-22	1350	Manhole	Adoptable	S1-27	1350	Manhole	Adoptable

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)
6.005	63.225	78.5	450	ADOPTABLE	46.084	44.418	1.216	45.262	43.612	1.200
6.006	11.513	164.5	525	ADOPTABLE	45.262	43.537	1.200	44.992	43.467	1.000
7.000	2.335	7.7	225	ADOPTABLE	45.015	44.071	0.719	44.992	43.767	1.000
6.007	11.632	484.7	525	ADOPTABLE	44.992	43.467	1.000	45.201	43.443	1.233
8.000	9.093	168.4	225	ADOPTABLE	44.625	42.608	1.792	44.496	42.554	1.717
8.001	30.496	169.4	225	ADOPTABLE	44.496	42.554	1.717	44.171	42.374	1.572
8.002	9.162	169.7	225	ADOPTABLE	44.171	42.374	1.572	44.355	42.320	1.810
8.003	14.351	168.8	225	ADOPTABLE	44.355	42.320	1.810	44.232	42.235	1.772
8.004	32.470	225.5	300	ADOPTABLE	44.232	42.160	1.772	43.764	42.016	1.448
9.000	9.451	168.8	225	ADOPTABLE	43.747	42.147	1.375	43.764	42.091	1.448
8.005	36.273	323.9	375	ADOPTABLE	43.764	41.941	1.448	43.310	41.829	1.106
8.006	21.646	323.1	375	ADOPTABLE	43.310	41.829	1.106	43.109	41.762	0.972
10.000	3.333	303.0	375	ADOPTABLE	43.650	41.911	1.364	43.850	41.900	1.575
10.001	34.440	249.6	375	ADOPTABLE	43.850	41.900	1.575	43.109	41.762	0.972
8.007	16.656	320.3	375	ADOPTABLE	43.109	41.762	0.972	42.855	41.710	0.770

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
6.005	S1-27	1350	Manhole	Adoptable	S1-28	1350	Manhole	Adoptable
6.006	S1-28	1350	Manhole	Adoptable	S1-26	1800	Manhole	Adoptable
7.000	Swale 1 - HW2		Junction		S1-26	1800	Manhole	Adoptable
6.007	S1-26	1800	Manhole	Adoptable	Basin 1 - HW4		Junction	
8.000	S2-3	1350	Manhole	Adoptable	S2-4	1350	Manhole	Adoptable
8.001	S2-4	1350	Manhole	Adoptable	S2-5	1200	Manhole	Adoptable
8.002	S2-5	1200	Manhole	Adoptable	S2-6	1200	Manhole	Adoptable
8.003	S2-6	1200	Manhole	Adoptable	S2-7	1350	Manhole	Adoptable
8.004	S2-7	1350	Manhole	Adoptable	S2-9	1350	Manhole	Adoptable
9.000	S2-8	1350	Manhole	Adoptable	S2-9	1350	Manhole	Adoptable
8.005	S2-9	1350	Manhole	Adoptable	S2-10	1350	Manhole	Adoptable
8.006	S2-10	1350	Manhole	Adoptable	S2-11	1800	Manhole	Adoptable
10.000	Basin 3 - HW3		Junction		S3-18 Control	1350	Manhole	Adoptable
10.001	S3-18 Control	1350	Manhole	Adoptable	S2-11	1800	Manhole	Adoptable
8.007	S2-11	1800	Manhole	Adoptable	Basin 2 - HW1		Junction	

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	57.775	169.4	225	RC	43.800	42.581	0.994	43.400	42.240	0.935
11.001	33.683	169.3	225	RC	43.400	42.240	0.935	43.200	42.041	0.934
11.002	43.923	244.0	300	RC	43.200	41.966	0.934	42.855	41.786	0.769
11.003	8.649	240.2	300	ADOPTABLE	42.855	41.786	0.769	42.855	41.750	0.805
12.000	10.444	168.5	225	ADOPTABLE	44.634	42.817	1.592	44.485	42.755	1.505
12.001	17.205	242.3	300	ADOPTABLE	44.485	42.680	1.505	44.238	42.609	1.329
12.002	24.136	301.7	375	ADOPTABLE	44.238	42.534	1.329	43.895	42.454	1.066
12.003	7.793	389.7	450	ADOPTABLE	43.895	42.379	1.066	43.906	42.359	1.097
13.000	22.024	169.4	225	ADOPTABLE	44.182	42.925	1.032	44.107	42.795	1.087
13.001	14.554	169.2	225	ADOPTABLE	44.107	42.795	1.087	43.957	42.709	1.023
13.002	15.123	121.0	225	ADOPTABLE	43.957	42.709	1.023	43.906	42.584	1.097
12.004	6.446	402.9	450	ADOPTABLE	43.906	42.359	1.097	43.942	42.343	1.149
12.005	17.132	407.9	450	ADOPTABLE	43.942	42.343	1.149	43.997	42.301	1.246
12.006	32.339	404.2	450	ADOPTABLE	43.997	42.301	1.246	43.688	42.221	1.017
12.007	7.888	394.4	450	ADOPTABLE	43.688	42.221	1.017	43.650	42.201	0.999

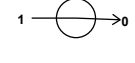
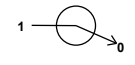
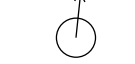
Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
11.000	S2-S26	1800	Manhole	Adoptable	S2-27	1800	Manhole	Adoptable
11.001	S2-27	1800	Manhole	Adoptable	S2-28	1800	Manhole	Adoptable
11.002	S2-28	1800	Manhole	Adoptable	S2-29	1800	Manhole	Adoptable
11.003	S2-29	1800	Manhole	Adoptable	Basin 2 - HW3		Junction	
12.000	S2-1	1350	Manhole	Adoptable	S2-2	1350	Manhole	Adoptable
12.001	S2-2	1350	Manhole	Adoptable	S3-2	1350	Manhole	Adoptable
12.002	S3-2	1350	Manhole	Adoptable	S3-3	1350	Manhole	Adoptable
12.003	S3-3	1350	Manhole	Adoptable	S3-5	1350	Manhole	Adoptable
13.000	S3-12	1350	Manhole	Adoptable	S3-11	1350	Manhole	Adoptable
13.001	S3-11	1350	Manhole	Adoptable	S3-4	1350	Manhole	Adoptable
13.002	S3-4	1350	Manhole	Adoptable	S3-5	1350	Manhole	Adoptable
12.004	S3-5	1350	Manhole	Adoptable	S3-6	1350	Manhole	Adoptable
12.005	S3-6	1350	Manhole	Adoptable	S3-7	1350	Manhole	Adoptable
12.006	S3-7	1350	Manhole	Adoptable	S3-7A	1800	Manhole	Adoptable
12.007	S3-7A	1800	Manhole	Adoptable	Basin 3 - HW2		Junction	

Pipeline Schedule

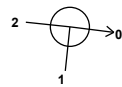
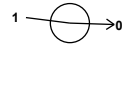
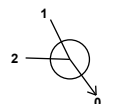
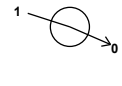
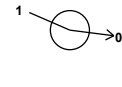
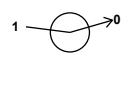
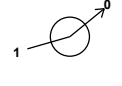
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
14.000	35.500	67.9	225	ADOPTABLE	45.680	44.313	1.142	45.942	43.790	1.927
15.000_1	15.965	34.7	225	ADOPTABLE	45.825	44.250	1.350	45.942	43.790	1.927
14.001	10.751	239.7	300	ADOPTABLE	45.942	43.715	1.927	45.403	43.670	1.433
16.000	2.493	10.0	150	ADOPTABLE	45.401	44.903	0.348	45.403	44.654	0.599
14.002	43.824	300.2	375	ADOPTABLE	45.403	43.595	1.433	45.207	43.449	1.383
14.003	15.666	54.6	375	ADOPTABLE	45.207	43.449	1.383	45.201	43.162	1.664
15.000	10.737	167.8	225	ADOPTABLE	45.895	44.750	0.920	45.986	44.686	1.075
17.001	45.435	242.0	300	ADOPTABLE	45.986	44.611	1.075	45.707	44.423	0.984
17.002	10.073	239.8	300	ADOPTABLE	45.707	44.423	0.984	45.100	44.381	0.419
18.000	3.176	317.6	375	ADOPTABLE	42.855	41.530	0.950	43.100	41.520	1.205
18.001	52.728	85.0	375	ADOPTABLE	43.100	41.520	1.205	42.010	40.900	0.735
19.000	36.013	62.6	225	ADOPTABLE	44.275	43.100	0.950	43.776	42.525	1.026
19.001	10.918	168.0	225	ADOPTABLE	43.776	42.525	1.026	43.650	42.460	0.965

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
14.000	S1-17A	1350	Manhole	Adoptable	S1-17	1350	Manhole	Adoptable
15.000_1	S1-17B	1350	Manhole	Adoptable	S1-17	1350	Manhole	Adoptable
14.001	S1-17	1350	Manhole	Adoptable	S1-20	1800	Manhole	Adoptable
16.000	Swale 6 - HW1		Junction		S1-20	1800	Manhole	Adoptable
14.002	S1-20	1800	Manhole	Adoptable	S1-21	1800	Manhole	Adoptable
14.003	S1-21	1800	Manhole	Adoptable	Basin 1 - HW1		Junction	
15.000	S1-23	1350	Manhole	Adoptable	S1-25	1350	Manhole	Adoptable
17.001	S1-25	1350	Manhole	Adoptable	S1-25A	1800	Manhole	Adoptable
17.002	S1-25A	1800	Manhole	Adoptable	Swale 1 - HW1		Junction	
18.000	Basin 2 - HW4		Junction		S2-31 Control	2400	Manhole	Adoptable
18.001	S2-31 Control	2400	Manhole	Adoptable	S2-Outfall		Junction	
19.000	S3-13	1350	Manhole	Adoptable	S3-14	1800	Manhole	Adoptable
19.001	S3-14	1800	Manhole	Adoptable	Basin 3 - HW1		Junction	

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S2-1	473192.273	167226.386	44.634	1.817	1350	 0	12.000	42.817	225
S2-2	473202.717	167226.386	44.485	1.805	1350	 1  0	12.000	42.755	225
S2-3	473202.717	167205.638	44.625	2.017	1350	 0	12.001	42.680	300
S2-4	473211.810	167205.583	44.496	1.942	1350	 1  0	8.000	42.554	225
S2-5	473239.749	167193.360	44.171	1.797	1200	 1  0	8.001	42.374	225
S2-6	473235.897	167185.047	44.355	2.035	1200	 1  0	8.002	42.374	225
S2-7	473248.907	167178.990	44.232	2.072	1350	 1  0	8.003	42.320	225
S2-8	473280.218	167166.214	43.747	1.600	1350	 1 0	8.004	42.235	225
						0	8.004	42.160	300
						0	9.000	42.147	225

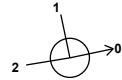
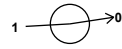
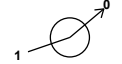
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S2-9	473281.201	167175.614	43.764	1.823	1350		1	9.000	42.091	225
							2	8.004	42.016	300
							0	8.005	41.941	375
S2-10	473317.191	167171.092	43.310	1.481	1350		1	8.005	41.829	375
							0	8.006	41.829	375
S2-11	473338.826	167170.404	43.109	1.347	1800		1	10.001	41.762	375
							2	8.006	41.762	375
							0	8.007	41.762	375
Basin 2 - HW1	473348.677	167156.973	42.855	1.225			1	8.007	41.710	375
S2-12	473171.786	167125.616	44.671	1.990	1350		1	1.001	42.681	225
							0	1.002	42.681	225
S2-13	473195.048	167115.516	44.472	1.941	1350		1	1.002	42.531	225
							0	1.003	42.531	225
S2-14	473204.890	167114.261	44.255	1.783	1350		1	1.003	42.472	225
							0	1.004	42.472	225
S2-15	473211.896	167116.274	44.189	1.760	1350		1	1.004	42.429	225
							0	1.005	42.429	225

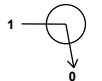
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S2-16	473225.244	167162.163	44.344	1.514	1350		0	2.000	42.830	225
S2-17	473221.432	167147.263	44.164	1.500	1350		1	2.000	42.739	225
S2-18	473220.313	167123.141	43.929	1.714	1350		1	2.001	42.290	300
							2	1.005	42.365	225
							0	1.006	42.215	375
S2-19	473242.569	167109.418	43.916	1.782	1350		1	1.006	42.134	375
							0	1.007	42.134	375
S2-20	473253.307	167105.956	43.779	1.680	1350		1	1.007	42.099	375
							0	1.008	42.099	375
S2-21	473269.786	167106.376	43.682	1.634	1350		1	1.008	42.048	375
							0	1.009	42.048	375
S2-22	473280.812	167138.942	43.757	1.262	1350		0	3.000	42.495	225
S2-23	473281.150	167123.412	43.924	1.521	1350		1	3.000	42.403	225
							0	3.001	42.403	225

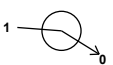
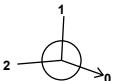
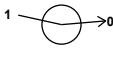
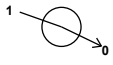
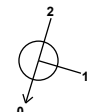
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S2-24	473284.224	167108.749	43.794	1.792	1350		1	3.001	42.152	225
							2	1.009	42.002	375
							0	1.010	42.002	375
S2-25	473334.337	167119.255	43.255	1.529	1800		1	1.010	41.801	375
							0	1.011	41.726	450
Basin 2 - HW2	473344.639	167118.976	42.855	1.225			1	1.011	41.700	450
S2-S26	473211.295	167067.544	43.800	1.219	1800		0	11.000	42.581	225
S2-27	473268.977	167070.823	43.400	1.160	1800		1	11.000	42.240	225
							0	11.001	42.240	225
S2-28	473302.278	167075.883	43.200	1.234	1800		1	11.001	42.041	225
							0	11.002	41.966	300
S2-29	473343.821	167090.145	42.855	1.069	1800		1	11.002	41.786	300
							0	11.003	41.786	300
Basin 2 - HW3	473350.441	167095.711	42.855	1.225			1	11.003	41.750	300

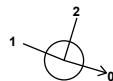
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
Basin 2 - HW4	473368.269	167153.595	42.855	1.325			0	18.000	41.530	375
S2-31 Control	473371.349	167154.371	43.100	1.580	2400		1	18.000	41.520	375
							0	18.001	41.520	375
S2-Outfall	473423.768	167148.668	42.010	1.110			1	18.001	40.900	375
S1-1	472976.816	167263.801	46.553	1.359	1350		0	6.000	45.194	225
S1-2	472976.733	167249.672	46.637	1.602	1350		1	6.000	45.110	225
							0	6.001	45.035	300
S1-4	473043.123	167249.284	45.987	1.393	1350		1	6.002	44.669	300
							0	6.003	44.594	375
S1-6	473049.596	167214.275	45.815	1.207	1350		0	5.000	44.608	300
S1-9	472978.448	167192.719	46.050	1.504	1800		1	4.000	44.621	225
							0	4.001	44.546	300

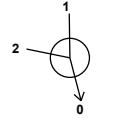
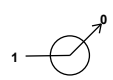
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S1-10	473009.310	167190.368	45.663	1.244	1350		1 4.001	44.419	300
S1-11	473014.281	167187.287	45.600	1.280	1800		0 1 4.002	44.419 44.395	300 300
S1-13	473047.865	167181.781	46.010	1.884	1800		1 2 4.003	44.276 44.201	300 375
S1-13A	473041.716	167181.262	45.672	1.440	1350		0 1 4.005	44.126 44.232	450 375
S1-14	473080.027	167170.393	45.154	1.554	1800		1 0 4.004	44.232 43.600	375 450
S1-15	473120.481	167150.903	44.937	1.449	1800		1 0 4.006	43.600 43.488	450 450
Basin 1 - HW3	473127.900	167140.882	45.150	2.073			1 4.007	43.488 43.150	450 450
S1-17	473031.945	167122.459	45.942	2.227	1350		1 2 0 15.000_1 14.000 14.001	43.790 43.790 43.715	225 225 300

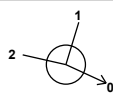
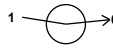
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S1-17B	473047.252	167117.923	45.825	1.575	1350				
						0	15.000_1	44.250	225
Swale 6 - HW1	473026.512	167113.115	45.401	0.498					
						0	16.000	44.903	150
S1-20	473028.820	167112.172	45.403	1.808	1800		1	16.000	44.654
						2	14.001	43.670	300
						0	14.002	43.595	375
S1-21	473070.837	167099.719	45.207	1.758	1800		1	14.002	43.449
						0	14.003	43.449	375
Basin 1 - HW1	473086.421	167101.319	45.201	2.124			1	14.003	43.162
S1-22	473046.205	167232.538	46.081	1.540	1350		1	6.003	44.541
						0	6.004	44.541	375
S1-23	473041.288	167276.600	45.895	1.145	1350				
						0	15.000	44.750	225
S1-25	473044.536	167286.834	45.986	1.375	1350		1	15.000	44.686
						0	17.001	44.611	300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S1-26	473135.785	167234.490	44.992	1.525	1800		1	7.000	43.767	225
							2	6.006	43.467	525
							0	6.007	43.467	525
S1-27	473061.293	167235.340	46.084	1.666	1350		1	6.004	44.493	375
							0	6.005	44.418	450
S1-28	473124.502	167236.778	45.262	1.725	1350		1	6.005	43.612	450
							0	6.006	43.537	525
Basin 1 - HW4	473138.719	167223.234	45.201	2.124			1	6.007	43.443	525
Basin 1 - HW2	473137.752	167132.592	45.201	2.300			0	1.000	42.901	375
S1-32 Control	473148.498	167133.128	45.200	2.374	2400		1	1.000	42.828	375
							0	1.001	42.826	225
S1-25A	473089.966	167287.487	45.707	1.284	1800		1	17.001	44.423	300
							0	17.002	44.423	300
S1-8	472976.679	167240.355	46.576	1.288	1350		0	4.000	45.288	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S1-17A	473042.030	167156.496	45.680	1.367	1350		0	14.000	44.313	225
S3-3	473242.576	167217.439	43.895	1.516	1350		1	12.002	42.454	375
							0	12.003	42.379	450
S3-4	473254.575	167230.191	43.957	1.248	1350		1	13.001	42.709	225
							0	13.002	42.709	225
S3-5	473250.177	167215.722	43.906	1.547	1350		1	13.002	42.584	225
							2	12.003	42.359	450
							0	12.004	42.359	450
S3-6	473256.033	167213.027	43.942	1.599	1350		1	12.004	42.343	450
							0	12.005	42.343	450
S3-7	473272.956	167210.357	43.997	1.696	1350		1	12.005	42.301	450
							0	12.006	42.301	450
Basin 3 - HW2	473312.937	167212.490	43.650	1.643			1	12.007	42.201	450
S3-11	473255.956	167244.679	44.107	1.312	1350		1	13.000	42.795	225
							0	13.001	42.795	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S3-12	473261.642	167265.956	44.182	1.257	1350	 0	13.000	42.925	225
S3-13	473282.077	167266.706	44.275	1.175	1350	 0	19.000	43.100	225
S3-14	473318.090	167266.700	43.776	1.251	1800	 1	19.000	42.525	225
Basin 3 - HW1	473318.221	167255.783	43.650	1.643		 0	19.001	42.525	225
Basin 3 - HW3	473320.543	167202.383	43.650	1.739		 0	10.000	41.911	375
S3-18 Control	473323.712	167201.350	43.850	1.950	1350	 1	10.000	41.900	375
S3-7A	473305.130	167213.621	43.688	1.467	1800	 0	10.001	41.900	375
S3-2	473219.910	167225.734	44.238	1.704	1350	 1	12.006	42.221	450
						 0	12.007	42.221	450
						 1	12.001	42.609	300
						 0	12.002	42.534	375

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S1-3	473009.928	167249.478	46.154	1.349	1350	1 → 0	6.001	44.805	300
Swale 1 - HW1	473097.083	167294.615	45.100	0.826		1	6.002	44.805	300
Swale 1 - HW2	473135.751	167236.825	45.015	0.944		0	7.000	44.071	225

Simulation Settings

Rainfall Methodology	FEH-22	Winter CV	1.000	Drain Down Time (mins)	1440	Check Discharge Rate(s)	x
Rainfall Events	Singular	Analysis Speed	Detailed	Additional Storage (m ³ /ha)	0.0	Check Discharge Volume	x
Summer CV	1.000	Skip Steady State	✓	Starting Level (m)			

Storm Durations

60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440 | 2160 | 2880 | 4320 | 5760 | 7200 | 8640 | 10080

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0	100	40	0	0
30	0	0	0				

Node S2-31 Control Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	41.520	Product Number	CTL-SHE-0229-2800-1040-2800
Design Depth (m)	1.040	Min Outlet Diameter (m)	0.300
Design Flow (l/s)	28.0	Min Node Diameter (mm)	1800

Node S2-31 Control Online Weir Control

Flap Valve	x	Invert Level (m)	42.550	Discharge Coefficient	0.590
Replaces Downstream Link	x	Width (m)	2.400		

Node S1-32 Control Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	42.826	Product Number	CTL-SHE-0076-3500-2075-3500
Design Depth (m)	2.075	Min Outlet Diameter (m)	0.100
Design Flow (l/s)	3.5	Min Node Diameter (mm)	1200

Node S1-32 Control Online Weir Control

Flap Valve	x	Invert Level (m)	44.650	Discharge Coefficient	0.590
Replaces Downstream Link	x	Width (m)	2.400		

Node S3-18 Control Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	41.900	Product Number	CTL-SHE-0086-3700-1337-3700
Design Depth (m)	1.337	Min Outlet Diameter (m)	0.100
Design Flow (l/s)	3.7	Min Node Diameter (mm)	1200

Node S3-18 Control Online Weir Control

Flap Valve	x	Invert Level (m)	43.300	Discharge Coefficient	0.590
Replaces Downstream Link	x	Width (m)	2.400		

Node Basin 2 - HW1 Online Orifice Control

Flap Valve	x	Invert Level (m)	41.630	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.375		

Node Basin 2 - HW2 Online Orifice Control

Flap Valve	x	Invert Level (m)	41.630	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.450		

Node Basin 2 - HW3 Online Orifice Control

Flap Valve	x	Invert Level (m)	41.630	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.300		

Node Basin 1 - HW3 Online Orifice Control

Flap Valve	x	Invert Level (m)	43.077	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.450		

Node Basin 1 - HW1 Online Orifice Control

Flap Valve	x	Invert Level (m)	43.077	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.375		

Node Basin 1 - HW4 Online Orifice Control

Flap Valve	x	Invert Level (m)	43.077	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.525		

Node Basin 3 - HW2 Online Orifice Control

Flap Valve	x	Invert Level (m)	42.007	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.450		

Node Basin 3 - HW1 Online Orifice Control

Flap Valve	x	Invert Level (m)	42.007	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.225		

Node S2-S26 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	43.050
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	25

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	41.5	41.5	0.750	165.0	167.6

Node S2-27 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	42.650
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	16

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	155.0	155.0	0.750	285.0	290.7

Node S2-28 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	42.450
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	9

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	56.0	56.0	0.750	185.0	188.0

Node S2-29 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	42.270
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	80

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	42.0	42.0	0.750	205.0	207.3

Node S1-15 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	44.487
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	5

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	136.0	136.0	0.513	340.0	341.7

Node S1-14 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	44.762
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	5

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	47.0	47.0	0.538	80.0	80.7

Node S1-13A Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	44.900
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	0

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	37.7	37.7	0.500	116.0	117.4

Node S1-10 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	45.220
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	0

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	82.3	82.3	0.477	176.1	178.0

Node Swale 6 - HW1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	44.903
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	0

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	35.4	35.4	0.497	154.1	155.2

Node S1-21 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	44.725
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	50.0	50.0	0.475	172.3	173.5

Node Swale 1 - HW2 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Main Channel Length (m)	101.600
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	44.071	Main Channel Slope (1:X)	500.0
Safety Factor	2.0	Time to half empty (mins)	0	Main Channel n	0.035

Inlets
Swale 1 - HW1

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	111.9	0.0	0.829	604.0	1415.6

Node Basin 3 - HW3 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Main Channel Length (m)	48.100
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	41.911	Main Channel Slope (1:X)	500.0
Safety Factor	2.0	Time to half empty (mins)	1376	Main Channel n	0.035

Inlets

Basin 3 - HW1 | Basin 3 - HW2

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	177.8	177.8	1.613	799.4	1101.9

Node Basin 1 - HW2 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Main Channel Length (m)	88.000
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	42.901	Main Channel Slope (1:X)	500.0
Safety Factor	2.0	Time to half empty (mins)		Main Channel n	0.035

Inlets

Basin 1 - HW4 | Basin 1 - HW1 | Basin 1 - HW3

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	508.0	508.0	0.500	1007.0	1329.3	1.100	1744.7	2539.2	1.700	2507.0	3792.6	2.300	3508.0	5436.4
0.100	517.0	527.7	0.700	1254.0	1734.0	1.300	1995.4	2951.1	1.900	2889.0	4418.5			
0.300	777.2	953.0	0.900	1497.0	2132.6	1.500	2250.0	3369.7	2.100	3191.0	4915.1			

Node Basin 2 - HW4 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Main Channel Length (m)	50.000
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	41.530	Main Channel Slope (1:X)	500.0
Safety Factor	2.0	Time to half empty (mins)	448	Main Channel n	0.035

Inlets					
Basin 2 - HW3			Basin 2 - HW2		Basin 2 - HW1
Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	849.5	0.0	1.325	1799.0	1200.0

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S2-1	1	42.817	0.000	0.0	0.0000	0.0000	OK
60 minute summer	S2-2	33	42.769	0.089	12.7	0.1275	0.0000	OK
60 minute summer	S2-3	1	42.608	0.000	0.0	0.0000	0.0000	OK
60 minute summer	S2-4	1	42.554	0.000	0.0	0.0000	0.0000	OK
60 minute summer	S2-5	33	42.442	0.068	7.1	0.0769	0.0000	OK
60 minute summer	S2-6	33	42.386	0.066	7.1	0.0751	0.0000	OK
60 minute summer	S2-7	34	42.223	0.063	7.0	0.0904	0.0000	OK
60 minute summer	S2-8	33	42.191	0.044	3.1	0.0627	0.0000	OK
60 minute summer	S2-9	33	42.036	0.095	15.3	0.1362	0.0000	OK
60 minute summer	S2-10	34	41.926	0.097	15.3	0.1387	0.0000	OK
60 minute summer	S2-11	35	41.864	0.102	18.0	0.2596	0.0000	OK
480 minute summer	Basin 2 - HW1	304	41.775	0.145	9.5	0.0000	0.0000	OK
7200 minute winter	S2-12	3660	42.720	0.039	2.6	0.0562	0.0000	OK
360 minute winter	S2-13	176	42.571	0.040	2.6	0.0574	0.0000	OK
60 minute summer	S2-14	33	42.513	0.041	2.6	0.0585	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)
60 minute summer	S2-1	12.000	S2-2	0.0	0.000	0.000	0.0053	
60 minute summer	S2-2	12.001	S3-2	12.7	0.750	0.179	0.2913	
60 minute summer	S2-3	8.000	S2-4	0.0	0.000	0.000	0.0000	
60 minute summer	S2-4	8.001	S2-5	0.0	0.000	0.000	0.1540	
60 minute summer	S2-5	8.002	S2-6	7.1	0.714	0.178	0.0910	
60 minute summer	S2-6	8.003	S2-7	7.0	0.744	0.177	0.1359	
60 minute summer	S2-7	8.004	S2-9	7.0	0.661	0.095	0.3445	
60 minute summer	S2-8	9.000	S2-9	3.1	0.587	0.078	0.0499	
60 minute summer	S2-9	8.005	S2-10	15.3	0.688	0.138	0.8059	
60 minute summer	S2-10	8.006	S2-11	15.2	0.660	0.137	0.5021	
60 minute summer	S2-11	8.007	Basin 2 - HW1	17.8	0.775	0.160	0.3836	
480 minute summer	Basin 2 - HW1	Flow through Pond	Basin 2 - HW4	29.3	0.041	0.001	178.7391	
7200 minute winter	S2-12	1.002	S2-13	2.6	0.556	0.065	0.1191	
360 minute winter	S2-13	1.003	S2-14	2.6	0.560	0.065	0.0478	
60 minute summer	S2-14	1.004	S2-15	2.6	0.542	0.066	0.0663	

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S2-15	33	42.512	0.083	10.5	0.1188	0.0000	OK
60 minute summer	S2-16	33	42.886	0.056	5.1	0.0799	0.0000	OK
60 minute summer	S2-17	33	42.715	0.051	8.3	0.0724	0.0000	OK
60 minute summer	S2-18	33	42.322	0.107	18.7	0.1527	0.0000	OK
60 minute summer	S2-19	34	42.249	0.115	18.6	0.1651	0.0000	OK
60 minute summer	S2-20	34	42.221	0.122	22.5	0.1750	0.0000	OK
60 minute summer	S2-21	34	42.171	0.123	22.5	0.1758	0.0000	OK
60 minute summer	S2-22	1	42.495	0.000	0.0	0.0000	0.0000	OK
60 minute summer	S2-23	33	42.444	0.041	4.7	0.0589	0.0000	OK
60 minute summer	S2-24	35	42.126	0.124	29.3	0.1781	0.0000	OK
60 minute summer	S2-25	35	41.865	0.139	34.3	0.3525	0.0000	OK
60 minute summer	Basin 2 - HW2	34	41.800	0.170	44.9	0.0000	0.0000	OK
60 minute summer	S2-S26	33	42.683	0.102	16.6	0.2593	0.0000	OK
60 minute summer	S2-27	34	42.348	0.108	18.2	0.2760	0.0000	OK
60 minute summer	S2-28	34	42.113	0.147	33.1	0.3754	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)
60 minute summer	S2-15	1.005	S2-18	10.4	0.817	0.261	0.1383	
60 minute summer	S2-16	2.000	S2-17	5.1	0.682	0.128	0.1150	
60 minute summer	S2-17	2.001	S2-18	8.3	1.076	0.060	0.1859	
60 minute summer	S2-18	1.006	S2-19	18.6	0.687	0.168	0.7106	
60 minute summer	S2-19	1.007	S2-20	18.6	0.622	0.168	0.3380	
60 minute summer	S2-20	1.008	S2-21	22.5	0.721	0.204	0.5152	
60 minute summer	S2-21	1.009	S2-24	22.4	0.710	0.201	0.4620	
60 minute summer	S2-22	3.000	S2-23	0.0	0.000	0.000	0.0385	
60 minute summer	S2-23	3.001	S2-24	4.7	0.966	0.070	0.0729	
60 minute summer	S2-24	1.010	S2-25	29.0	0.926	0.232	1.6030	
60 minute summer	S2-25	1.011	Basin 2 - HW2	34.4	0.884	0.213	0.4006	
60 minute summer	Basin 2 - HW2	Flow through Pond	Basin 2 - HW4	89.8	0.091	0.003	95.2582	
60 minute summer	S2-S26	11.000	S2-27	16.6	0.924	0.417	1.0434	
60 minute summer	S2-27	11.001	S2-28	17.9	0.967	0.449	0.6229	
60 minute summer	S2-28	11.002	S2-29	33.1	0.944	0.467	1.5378	

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S2-29	34	41.937	0.151	34.3	0.3847	0.0000	OK
60 minute summer	Basin 2 - HW3	34	41.815	0.185	34.2	0.0000	0.0000	OK
480 minute summer	Basin 2 - HW4	304	41.773	0.243	29.3	0.0000	0.0000	OK
480 minute summer	S2-31 Control	304	41.772	0.252	19.5	1.1419	0.0000	OK
480 minute summer	S2-Outfall	304	40.975	0.075	19.5	0.0000	0.0000	OK
60 minute summer	S1-1	33	45.252	0.058	5.4	0.0824	0.0000	OK
60 minute summer	S1-2	33	45.092	0.057	7.5	0.0819	0.0000	OK
60 minute summer	S1-4	34	44.696	0.102	16.5	0.1462	0.0000	OK
60 minute summer	S1-6	33	44.666	0.058	9.0	0.0831	0.0000	OK
60 minute summer	S1-9	33	44.627	0.081	11.0	0.2050	0.0000	OK
60 minute summer	S1-10	34	44.505	0.086	10.9	0.1225	0.0000	OK
60 minute summer	S1-11	34	44.401	0.081	10.9	0.2053	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)
60 minute summer	S2-29	11.003	Basin 2 - HW3	34.2	1.000	0.479	0.2960	
60 minute summer	Basin 2 - HW3	Flow through Pond	Basin 2 - HW4	89.8	0.091	0.003	95.2582	
480 minute summer	Basin 2 - HW4	18.000	S2-31 Control	19.5	0.252	0.175	0.2455	
480 minute summer	S2-31 Control	18.001	S2-Outfall	19.5	1.238	0.090	0.8313	662.7
60 minute summer	S1-1	6.000	S1-2	5.4	0.692	0.135	0.1102	
60 minute summer	S1-2	6.001	S1-3	7.5	0.592	0.081	0.4254	
60 minute summer	S1-4	6.003	S1-22	16.5	0.687	0.148	0.4099	
60 minute summer	S1-6	5.000	S1-13	9.0	0.954	0.080	0.3064	
60 minute summer	S1-9	4.001	S1-10	10.9	0.691	0.154	0.4904	
60 minute summer	S1-10	4.002	S1-11	10.9	0.697	0.153	0.0913	
60 minute summer	S1-11	4.003	S1-13A	10.9	0.646	0.098	0.4734	

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S1-13	34	44.203	0.077	26.0	0.1950	0.0000	OK
60 minute summer	S1-13A	34	44.309	0.077	11.6	0.1107	0.0000	OK
60 minute summer	S1-14	34	43.738	0.138	32.9	0.3524	0.0000	OK
60 minute summer	S1-15	34	43.565	0.077	34.8	0.1955	0.0000	OK
960 minute winter	Basin 1 - HW3	930	43.445	0.368	11.5	0.0000	0.0000	OK
60 minute summer	S1-17	33	43.807	0.092	13.2	0.1318	0.0000	OK
60 minute summer	S1-17B	1	44.250	0.000	0.0	0.0000	0.0000	OK
120 minute summer	Swale 6 - HW1	68	44.915	0.012	0.8	0.4470	0.0000	OK
60 minute summer	S1-20	33	43.689	0.093	14.8	0.2377	0.0000	OK
60 minute summer	S1-21	34	43.509	0.060	14.7	0.1526	0.0000	OK
960 minute winter	Basin 1 - HW1	930	43.444	0.367	2.4	0.0000	0.0000	OK
60 minute summer	S1-22	34	44.642	0.101	16.5	0.1446	0.0000	OK
60 minute summer	S1-23	34	44.776	0.026	1.1	0.0374	0.0000	OK
60 minute summer	S1-25	33	44.693	0.082	11.5	0.1177	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)
60 minute summer	S1-13	4.005	S1-14	26.1	0.899	0.065	1.0102	
60 minute summer	S1-13A	4.004	S1-13	11.5	0.744	0.081	0.0953	
60 minute summer	S1-14	4.006	S1-15	32.8	1.131	0.205	1.3309	
60 minute summer	S1-15	4.007	Basin 1 - HW3	34.7	1.534	0.065	0.3516	
960 minute winter	Basin 1 - HW3	Flow through Pond	Basin 1 - HW2	11.7	0.053	0.000	320.3912	
60 minute summer	S1-17	14.001	S1-20	13.2	0.752	0.184	0.1883	
60 minute summer	S1-17B	15.000_1	S1-17	0.0	0.000	0.000	0.0109	
120 minute summer	Swale 6 - HW1	16.000	S1-20	0.7	1.087	0.013	0.0016	
60 minute summer	S1-20	14.002	S1-21	14.7	0.913	0.128	0.7127	
60 minute summer	S1-21	14.003	Basin 1 - HW1	14.7	1.319	0.054	0.1746	
960 minute winter	Basin 1 - HW1	Flow through Pond	Basin 1 - HW2	11.7	0.053	0.000	320.3912	
60 minute summer	S1-22	6.004	S1-27	16.5	0.742	0.148	0.3415	
60 minute summer	S1-23	15.000	S1-25	1.1	0.437	0.027	0.0270	
60 minute summer	S1-25	17.001	S1-25A	11.5	0.736	0.162	0.7122	

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S1-26	35	43.611	0.144	38.9	0.3662	0.0000	OK
60 minute summer	S1-27	34	44.499	0.081	26.0	0.1166	0.0000	OK
60 minute summer	S1-28	34	43.638	0.101	25.9	0.1446	0.0000	OK
960 minute winter	Basin 1 - HW4	915	43.453	0.376	13.8	0.0000	0.0000	OK
960 minute winter	Basin 1 - HW2	930	43.444	0.543	14.1	0.0000	0.0000	SURCHARGED
960 minute winter	S1-32 Control	930	43.444	0.618	10.4	2.7978	0.0000	SURCHARGED
60 minute summer	S1-25A	34	44.506	0.083	11.5	0.2104	0.0000	OK
60 minute summer	S1-8	33	45.323	0.035	3.3	0.0506	0.0000	OK
60 minute summer	S1-17A	33	44.340	0.027	2.0	0.0393	0.0000	OK
60 minute summer	S3-3	34	42.499	0.120	18.7	0.1713	0.0000	OK
60 minute summer	S3-4	34	42.747	0.038	2.9	0.0548	0.0000	OK
60 minute summer	S3-5	34	42.484	0.125	21.4	0.1785	0.0000	OK
60 minute summer	S3-6	34	42.463	0.120	21.4	0.1712	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)
60 minute summer	S1-26	6.007	Basin 1 - HW4	38.7	0.875	0.177	0.5160	
60 minute summer	S1-27	6.005	S1-28	25.9	1.346	0.071	1.2187	
60 minute summer	S1-28	6.006	S1-26	25.9	0.691	0.069	0.4404	
960 minute winter	Basin 1 - HW4	Flow through Pond	Basin 1 - HW2	11.7	0.053	0.000	320.3912	
960 minute winter	Basin 1 - HW2	1.000	S1-32 Control	10.4	0.333	0.063	1.1867	
960 minute winter	S1-32 Control	1.001	S2-12	2.6	0.564	0.065	0.1133	
60 minute summer	S1-25A	17.002	Swale 1 - HW1	11.4	0.739	0.160	0.1554	
60 minute summer	S1-8	4.000	S1-9	3.3	0.826	0.053	0.1882	
60 minute summer	S1-17A	14.000	S1-17	2.0	0.723	0.031	0.0971	
60 minute summer	S3-3	12.003	S3-5	18.6	0.541	0.114	0.2709	
60 minute summer	S3-4	13.002	S3-5	2.9	0.652	0.061	0.0664	
60 minute summer	S3-5	12.004	S3-6	21.4	0.619	0.134	0.2240	
60 minute summer	S3-6	12.005	S3-7	21.5	0.605	0.135	0.6074	

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S3-7	34	42.429	0.128	26.9	0.1835	0.0000	OK
360 minute summer	Basin 3 - HW2	288	42.260	0.253	15.3	0.0000	0.0000	OK
60 minute summer	S3-11	33	42.837	0.042	2.9	0.0600	0.0000	OK
60 minute summer	S3-12	33	42.967	0.042	2.9	0.0594	0.0000	OK
60 minute summer	S3-13	1	43.100	0.000	0.0	0.0000	0.0000	OK
60 minute summer	S3-14	33	42.589	0.064	6.8	0.1622	0.0000	OK
360 minute summer	Basin 3 - HW1	264	42.257	0.250	5.6	0.0000	0.0000	OK
360 minute summer	Basin 3 - HW3	264	42.257	0.346	12.5	0.0000	0.0000	OK
360 minute summer	S3-18 Control	264	42.257	0.357	3.6	0.5107	0.0000	OK
60 minute summer	S3-7A	35	42.342	0.121	26.8	0.3088	0.0000	OK
60 minute summer	S3-2	33	42.637	0.103	18.0	0.1476	0.0000	OK
60 minute summer	S1-3	34	44.890	0.085	12.2	0.1216	0.0000	OK
60 minute summer	Swale 1 - HW1	36	44.342	0.068	15.8	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute summer	S3-7	12.006	S3-7A	26.8	0.750	0.168	1.1559	
360 minute summer	Basin 3 - HW2	Flow through Pond	Basin 3 - HW3	12.5	0.059	0.001	70.5651	
60 minute summer	S3-11	13.001	S3-4	2.9	0.606	0.072	0.0693	
60 minute summer	S3-12	13.000	S3-11	2.9	0.574	0.073	0.1113	
60 minute summer	S3-13	19.000	S3-14	0.0	0.000	0.000	0.1661	
60 minute summer	S3-14	19.001	Basin 3 - HW1	6.7	0.745	0.169	0.0989	
360 minute summer	Basin 3 - HW1	Flow through Pond	Basin 3 - HW3	12.5	0.059	0.001	70.5651	
360 minute summer	Basin 3 - HW3	10.000	S3-18 Control	3.6	0.186	0.031	0.3577	
360 minute summer	S3-18 Control	10.001	S2-11	3.6	0.481	0.028	0.4014	
60 minute summer	S3-7A	12.007	Basin 3 - HW2	26.7	0.826	0.165	0.2549	
60 minute summer	S3-2	12.002	S3-3	17.9	0.771	0.156	0.5618	
60 minute summer	S1-3	6.002	S1-4	12.0	0.748	0.170	0.5330	
60 minute summer	Swale 1 - HW1	Flow through Pond	Swale 1 - HW2	13.1	0.181	0.005	7.3852	

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	Swale 1 - HW2	38	44.118	0.047	15.8	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute summer	Swale 1 - HW2	7.000	S1-26	14.9	2.660	0.079	0.0131	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S2-1	33	42.928	0.111	0.9	0.1592	0.0000	OK
60 minute summer	S2-2	33	42.928	0.248	67.0	0.3550	0.0000	OK
60 minute summer	S2-3	1	42.608	0.000	0.0	0.0000	0.0000	OK
60 minute summer	S2-4	33	42.578	0.024	1.2	0.0336	0.0000	OK
60 minute summer	S2-5	33	42.574	0.200	37.2	0.2266	0.0000	OK
60 minute summer	S2-6	34	42.504	0.184	36.3	0.2084	0.0000	OK
60 minute summer	S2-7	34	42.314	0.154	36.4	0.2209	0.0000	OK
60 minute summer	S2-8	33	42.255	0.108	16.3	0.1552	0.0000	OK
60 minute summer	S2-9	33	42.194	0.253	80.5	0.3618	0.0000	OK
240 minute summer	S2-10	208	42.111	0.282	32.0	0.4037	0.0000	OK
240 minute summer	S2-11	208	42.111	0.349	35.1	0.8883	0.0000	OK
240 minute summer	Basin 2 - HW1	204	42.112	0.482	33.2	0.0000	0.0000	OK
960 minute winter	S2-12	960	42.721	0.040	2.7	0.0568	0.0000	OK
60 minute summer	S2-13	35	42.717	0.186	6.6	0.2662	0.0000	OK
60 minute summer	S2-14	35	42.713	0.241	7.4	0.3456	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)
60 minute summer	S2-1	12.000	S2-2	-0.9	-0.113	-0.023	0.2733	
60 minute summer	S2-2	12.001	S3-2	66.7	1.169	0.938	0.9943	
60 minute summer	S2-3	8.000	S2-4	0.0	0.000	0.000	0.0099	
60 minute summer	S2-4	8.001	S2-5	-1.2	-0.066	-0.029	0.6030	
60 minute summer	S2-5	8.002	S2-6	36.3	1.008	0.913	0.3305	
60 minute summer	S2-6	8.003	S2-7	36.4	1.117	0.913	0.4665	
60 minute summer	S2-7	8.004	S2-9	36.4	0.935	0.494	1.2986	
60 minute summer	S2-8	9.000	S2-9	16.3	0.911	0.407	0.1729	
60 minute summer	S2-9	8.005	S2-10	79.7	1.010	0.721	2.9048	
240 minute summer	S2-10	8.006	S2-11	31.6	0.733	0.285	2.1199	
240 minute summer	S2-11	8.007	Basin 2 - HW1	33.2	0.811	0.299	1.8090	
240 minute summer	Basin 2 - HW1	Flow through Pond	Basin 2 - HW4	113.2	0.073	0.004	551.5305	
960 minute winter	S2-12	1.002	S2-13	2.7	0.560	0.067	0.1211	
60 minute summer	S2-13	1.003	S2-14	7.4	0.549	0.184	0.3715	
60 minute summer	S2-14	1.004	S2-15	9.7	0.529	0.243	0.2899	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S2-15	35	42.711	0.282	44.3	0.4034	0.0000	SURCHARGED
60 minute summer	S2-16	33	42.976	0.146	27.1	0.2088	0.0000	OK
60 minute summer	S2-17	33	42.779	0.115	44.2	0.1651	0.0000	OK
60 minute summer	S2-18	34	42.617	0.402	88.0	0.5753	0.0000	SURCHARGED
60 minute summer	S2-19	34	42.563	0.429	82.7	0.6145	0.0000	SURCHARGED
60 minute summer	S2-20	34	42.534	0.435	99.8	0.6221	0.0000	SURCHARGED
60 minute summer	S2-21	34	42.475	0.427	100.7	0.6103	0.0000	SURCHARGED
60 minute summer	S2-22	32	42.499	0.004	0.1	0.0059	0.0000	OK
60 minute summer	S2-23	31	42.497	0.094	24.8	0.1352	0.0000	OK
60 minute summer	S2-24	34	42.420	0.418	132.9	0.5977	0.0000	SURCHARGED
60 minute summer	S2-25	33	42.162	0.436	162.4	1.1088	0.0000	OK
60 minute summer	Basin 2 - HW2	33	42.126	0.496	220.4	0.0000	0.0000	OK
60 minute summer	S2-S26	38	43.291	0.710	87.5	16.6419	0.0000	SURCHARGED
60 minute summer	S2-27	45	42.744	0.504	56.3	16.6140	0.0000	SURCHARGED
60 minute summer	S2-28	36	42.558	0.592	116.3	8.5747	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)
60 minute summer	S2-15	1.005	S2-18	43.8	1.153	1.102	0.4320	
60 minute summer	S2-16	2.000	S2-17	27.1	1.043	0.680	0.3998	
60 minute summer	S2-17	2.001	S2-18	44.2	1.265	0.319	1.1434	
60 minute summer	S2-18	1.006	S2-19	82.7	0.850	0.746	2.8839	
60 minute summer	S2-19	1.007	S2-20	84.1	0.763	0.759	1.2448	
60 minute summer	S2-20	1.008	S2-21	100.7	0.928	0.910	1.8181	
60 minute summer	S2-21	1.009	S2-24	101.5	0.935	0.910	1.6139	
60 minute summer	S2-22	3.000	S2-23	-0.1	-0.017	-0.003	0.1228	
60 minute summer	S2-23	3.001	S2-24	24.8	1.315	0.368	0.4152	
60 minute summer	S2-24	1.010	S2-25	134.4	1.249	1.077	5.6098	
60 minute summer	S2-25	1.011	Basin 2 - HW2	162.4	1.061	1.006	1.6095	
60 minute summer	Basin 2 - HW2	Flow through Pond	Basin 2 - HW4	216.1	0.127	0.008	470.2395	
60 minute summer	S2-S26	11.000	S2-27	49.1	1.234	1.232	2.2978	
60 minute summer	S2-27	11.001	S2-28	52.0	1.308	1.306	1.3396	
60 minute summer	S2-28	11.002	S2-29	91.9	1.305	1.298	3.0930	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S2-29	39	42.226	0.440	98.7	1.1194	0.0000	SURCHARGED
120 minute summer	Basin 2 - HW3	74	42.161	0.531	89.1	0.0000	0.0000	OK
240 minute summer	Basin 2 - HW4	208	42.110	0.580	113.2	0.0000	0.0000	SURCHARGED
240 minute summer	S2-31 Control	208	42.108	0.588	28.5	2.6611	0.0000	SURCHARGED
960 minute summer	S2-Outfall	555	40.990	0.090	27.9	0.0000	0.0000	OK
60 minute summer	S1-1	33	45.347	0.153	28.7	0.2183	0.0000	OK
60 minute summer	S1-2	33	45.171	0.136	39.9	0.1948	0.0000	OK
60 minute summer	S1-4	33	44.875	0.281	88.8	0.4019	0.0000	OK
60 minute summer	S1-6	33	44.750	0.142	47.5	0.2035	0.0000	OK
60 minute summer	S1-9	33	44.767	0.221	57.9	0.5632	0.0000	OK
60 minute summer	S1-10	33	44.640	0.221	57.5	0.3166	0.0000	OK
60 minute summer	S1-11	34	44.522	0.202	57.2	0.5147	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)
60 minute summer	S2-29	11.003	Basin 2 - HW3	97.8	1.389	1.370	0.6091	
120 minute summer	Basin 2 - HW3	Flow through Pond	Basin 2 - HW4	163.3	0.097	0.006	531.9557	
240 minute summer	Basin 2 - HW4	18.000	S2-31 Control	28.5	0.347	0.255	0.3503	
240 minute summer	S2-31 Control	18.001	S2-Outfall	27.9	1.372	0.129	1.0736	1274.0
60 minute summer	S1-1	6.000	S1-2	28.7	1.053	0.718	0.3849	
60 minute summer	S1-2	6.001	S1-3	39.9	0.880	0.432	1.5075	
60 minute summer	S1-4	6.003	S1-22	88.2	1.038	0.794	1.4465	
60 minute summer	S1-6	5.000	S1-13	47.5	1.496	0.423	1.0337	
60 minute summer	S1-9	4.001	S1-10	57.5	1.032	0.811	1.7243	
60 minute summer	S1-10	4.002	S1-11	57.2	1.124	0.806	0.2970	
60 minute summer	S1-11	4.003	S1-13A	57.4	0.977	0.516	1.6511	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S1-13	32	44.306	0.180	139.5	0.4578	0.0000	OK
60 minute summer	S1-13A	34	44.425	0.193	61.1	0.2756	0.0000	OK
60 minute summer	S1-14	35	44.105	0.505	176.6	1.2849	0.0000	SURCHARGED
960 minute winter	S1-15	960	44.018	0.530	15.5	1.3486	0.0000	SURCHARGED
960 minute winter	Basin 1 - HW3	960	44.022	0.945	24.5	0.0000	0.0000	OK
960 minute winter	S1-17	960	44.016	0.301	5.6	0.4314	0.0000	SURCHARGED
60 minute summer	S1-17B	1	44.250	0.000	0.0	0.0000	0.0000	OK
60 minute summer	Swale 6 - HW1	35	44.934	0.031	5.1	1.1915	0.0000	OK
960 minute winter	S1-20	945	44.017	0.422	6.5	1.0733	0.0000	SURCHARGED
960 minute winter	S1-21	960	44.016	0.567	6.5	1.4427	0.0000	SURCHARGED
960 minute winter	Basin 1 - HW1	960	44.018	0.941	6.0	0.0000	0.0000	OK
60 minute summer	S1-22	34	44.801	0.260	88.2	0.3723	0.0000	OK
60 minute summer	S1-23	33	44.836	0.086	5.8	0.1225	0.0000	OK
60 minute summer	S1-25	33	44.834	0.223	60.6	0.3191	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)
60 minute summer	S1-13	4.005	S1-14	139.1	1.399	0.346	3.7036	
60 minute summer	S1-13A	4.004	S1-13	61.2	1.162	0.433	0.3249	
60 minute summer	S1-14	4.006	S1-15	166.4	1.677	1.037	7.1147	
960 minute winter	S1-15	4.007	Basin 1 - HW3	14.9	0.993	0.028	1.9755	
960 minute winter	Basin 1 - HW3	Flow through Pond	Basin 1 - HW2	28.7	0.064	0.001	1064.7097	
960 minute winter	S1-17	14.001	S1-20	5.6	0.598	0.078	0.7569	
60 minute summer	S1-17B	15.000_1	S1-17	0.0	0.000	0.000	0.2654	
60 minute summer	Swale 6 - HW1	16.000	S1-20	4.6	1.852	0.081	0.0061	
960 minute winter	S1-20	14.002	S1-21	6.5	0.685	0.057	4.8337	
960 minute winter	S1-21	14.003	Basin 1 - HW1	6.0	0.686	0.022	1.7279	
960 minute winter	Basin 1 - HW1	Flow through Pond	Basin 1 - HW2	28.7	0.064	0.001	1064.7097	
60 minute summer	S1-22	6.004	S1-27	88.3	1.191	0.793	1.1357	
60 minute summer	S1-23	15.000	S1-25	5.9	0.502	0.148	0.2230	
60 minute summer	S1-25	17.001	S1-25A	60.4	1.108	0.850	2.4789	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	S1-26	945	44.019	0.552	19.9	1.4054	0.0000	SURCHARGED
60 minute summer	S1-27	33	44.611	0.193	140.0	0.2767	0.0000	OK
960 minute winter	S1-28	945	44.019	0.482	11.5	0.6903	0.0000	OK
960 minute winter	Basin 1 - HW4	945	44.024	0.947	22.3	0.0000	0.0000	OK
960 minute winter	Basin 1 - HW2	960	44.016	1.115	28.7	0.0000	0.0000	SURCHARGED
960 minute winter	S1-32 Control	960	44.016	1.190	10.7	5.3832	0.0000	SURCHARGED
60 minute summer	S1-25A	33	44.634	0.211	60.4	0.5370	0.0000	OK
60 minute summer	S1-8	33	45.370	0.082	17.6	0.1170	0.0000	OK
60 minute summer	S1-17A	33	44.374	0.061	10.3	0.0874	0.0000	OK
360 minute winter	S3-3	352	42.802	0.423	18.8	0.6060	0.0000	OK
360 minute winter	S3-4	368	42.803	0.094	2.9	0.1347	0.0000	OK
360 minute winter	S3-5	352	42.803	0.444	21.5	0.6357	0.0000	OK
360 minute winter	S3-6	352	42.803	0.460	21.2	0.6590	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)
960 minute winter	S1-26	6.007	Basin 1 - HW4	19.6	0.700	0.089	2.5129	
60 minute summer	S1-27	6.005	S1-28	139.5	1.942	0.382	4.8050	
960 minute winter	S1-28	6.006	S1-26	11.3	0.512	0.030	2.4393	
960 minute winter	Basin 1 - HW4	Flow through Pond	Basin 1 - HW2	28.7	0.064	0.001	1064.7097	
960 minute winter	Basin 1 - HW2	1.000	S1-32 Control	10.7	0.224	0.065	1.1867	
960 minute winter	S1-32 Control	1.001	S2-12	2.7	0.567	0.067	0.1152	
60 minute summer	S1-25A	17.002	Swale 1 - HW1	59.9	1.198	0.839	0.5045	
60 minute summer	S1-8	4.000	S1-9	17.6	1.053	0.286	0.9614	
60 minute summer	S1-17A	14.000	S1-17	10.3	0.762	0.163	0.7446	
360 minute winter	S3-3	12.003	S3-5	18.6	0.525	0.115	1.2188	
360 minute winter	S3-4	13.002	S3-5	2.9	0.653	0.061	0.4166	
360 minute winter	S3-5	12.004	S3-6	21.2	0.608	0.132	1.0201	
360 minute winter	S3-6	12.005	S3-7	20.7	0.594	0.130	2.7145	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	S3-7	352	42.803	0.502	26.4	0.7190	0.0000	SURCHARGED
360 minute winter	Basin 3 - HW2	360	42.805	0.798	29.2	0.0000	0.0000	OK
60 minute summer	S3-11	33	42.896	0.101	15.2	0.1448	0.0000	OK
60 minute summer	S3-12	33	43.025	0.100	15.2	0.1433	0.0000	OK
60 minute summer	S3-13	1	43.100	0.000	0.0	0.0000	0.0000	OK
360 minute winter	S3-14	352	42.803	0.278	6.8	0.7073	0.0000	SURCHARGED
360 minute winter	Basin 3 - HW1	360	42.804	0.796	11.4	0.0000	0.0000	OK
360 minute winter	Basin 3 - HW3	360	42.803	0.892	22.2	0.0000	0.0000	SURCHARGED
360 minute winter	S3-18 Control	360	42.803	0.903	3.7	1.2918	0.0000	SURCHARGED
360 minute winter	S3-7A	360	42.805	0.584	25.2	1.4858	0.0000	SURCHARGED
60 minute summer	S3-2	33	42.821	0.287	94.4	0.4110	0.0000	OK
60 minute summer	S1-3	33	45.042	0.237	64.8	0.3394	0.0000	OK
60 minute summer	Swale 1 - HW1	35	44.445	0.171	83.7	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)
360 minute winter	S3-7	12.006	S3-7A	25.2	0.682	0.158	5.1239	
360 minute winter	Basin 3 - HW2	Flow through Pond	Basin 3 - HW3	22.2	0.076	0.001	287.6965	
60 minute summer	S3-11	13.001	S3-4	15.2	0.947	0.382	0.2357	
60 minute summer	S3-12	13.000	S3-11	15.2	0.885	0.382	0.3785	
60 minute summer	S3-13	19.000	S3-14	0.0	0.000	0.000	0.6568	
360 minute winter	S3-14	19.001	Basin 3 - HW1	6.8	0.747	0.170	0.4342	
360 minute winter	Basin 3 - HW1	Flow through Pond	Basin 3 - HW3	22.2	0.076	0.001	287.6965	
360 minute winter	Basin 3 - HW3	10.000	S3-18 Control	3.7	0.252	0.032	0.3676	
360 minute winter	S3-18 Control	10.001	S2-11	3.6	0.485	0.028	2.7629	
360 minute winter	S3-7A	12.007	Basin 3 - HW2	24.1	0.739	0.149	1.2498	
60 minute summer	S3-2	12.002	S3-3	93.8	1.095	0.818	2.1602	
60 minute summer	S1-3	6.002	S1-4	64.2	1.156	0.907	1.8470	
60 minute summer	Swale 1 - HW1	Flow through Pond	Swale 1 - HW2	80.8	0.326	0.032	25.1650	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	Swale 1 - HW2	36	44.219	0.148	97.9	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)
60 minute summer	Swale 1 - HW2	7.000	S1-26	91.7	3.903	0.486	0.0547	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.82%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S2-1	34	44.062	1.245	6.7	1.7820	0.0000	SURCHARGED
60 minute summer	S2-2	34	44.062	1.382	123.0	1.9773	0.0000	SURCHARGED
60 minute summer	S2-3	35	43.153	0.545	3.4	0.7794	0.0000	SURCHARGED
60 minute summer	S2-4	35	43.151	0.597	9.8	0.8542	0.0000	SURCHARGED
60 minute summer	S2-5	35	43.147	0.773	68.2	0.8742	0.0000	SURCHARGED
60 minute summer	S2-6	35	42.968	0.648	59.7	0.7325	0.0000	SURCHARGED
60 minute summer	S2-7	35	42.717	0.557	59.0	0.7974	0.0000	SURCHARGED
60 minute summer	S2-8	35	42.636	0.489	29.9	0.7000	0.0000	SURCHARGED
60 minute summer	S2-9	35	42.602	0.661	133.7	0.9458	0.0000	SURCHARGED
240 minute winter	S2-10	236	42.488	0.659	36.2	0.9429	0.0000	SURCHARGED
240 minute winter	S2-11	236	42.488	0.726	37.2	1.8475	0.0000	SURCHARGED
240 minute winter	Basin 2 - HW1	240	42.490	0.860	36.6	0.0000	0.0000	OK
60 minute summer	S2-12	35	44.151	1.470	22.3	2.1029	0.0000	SURCHARGED
60 minute summer	S2-13	35	44.142	1.611	26.3	2.3060	0.0000	SURCHARGED
60 minute summer	S2-14	35	44.139	1.667	32.9	2.3855	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)
60 minute summer	S2-1	12.000	S2-2	-6.7	-0.168	-0.168	0.4154	
60 minute summer	S2-2	12.001	S3-2	115.6	1.641	1.626	1.2116	
60 minute summer	S2-3	8.000	S2-4	4.3	-0.289	0.108	0.3616	
60 minute summer	S2-4	8.001	S2-5	11.0	0.294	0.275	1.2129	
60 minute summer	S2-5	8.002	S2-6	59.7	1.501	1.501	0.3644	
60 minute summer	S2-6	8.003	S2-7	59.0	1.485	1.480	0.5708	
60 minute summer	S2-7	8.004	S2-9	59.4	0.894	0.806	2.2865	
60 minute summer	S2-8	9.000	S2-9	27.8	0.927	0.696	0.3759	
60 minute summer	S2-9	8.005	S2-10	132.4	1.200	1.197	4.0008	
240 minute winter	S2-10	8.006	S2-11	34.6	0.695	0.313	2.3875	
240 minute winter	S2-11	8.007	Basin 2 - HW1	36.6	0.781	0.329	1.8371	
240 minute winter	Basin 2 - HW1	Flow through Pond	Basin 2 - HW4	123.1	0.092	0.004	1066.1791	
60 minute summer	S2-12	1.002	S2-13	-20.0	0.635	-0.502	1.0086	
60 minute summer	S2-13	1.003	S2-14	-26.3	-0.662	-0.659	0.3946	
60 minute summer	S2-14	1.004	S2-15	-32.9	-0.828	-0.827	0.2899	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.82%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S2-15	35	44.137	1.708	78.9	2.4446	0.0000	FLOOD RISK
60 minute summer	S2-16	35	44.198	1.368	49.8	1.9572	0.0000	FLOOD RISK
60 minute summer	S2-17	35	44.055	1.391	75.1	1.9904	0.0000	FLOOD RISK
60 minute summer	S2-18	35	43.929	1.714	130.7	2.4527	0.9197	FLOOD
60 minute summer	S2-19	35	43.811	1.677	122.9	2.3991	0.0000	FLOOD RISK
60 minute summer	S2-20	35	43.743	1.644	152.3	2.3529	0.0000	FLOOD RISK
60 minute summer	S2-21	35	43.602	1.554	153.2	2.2242	0.0000	FLOOD RISK
60 minute summer	S2-22	35	43.593	1.098	14.4	1.5710	0.0000	FLOOD RISK
60 minute summer	S2-23	35	43.590	1.187	45.5	1.6980	0.0000	SURCHARGED
60 minute summer	S2-24	35	43.471	1.469	209.3	2.1022	0.0000	SURCHARGED
60 minute summer	S2-25	35	42.802	1.076	259.8	2.7393	0.0000	SURCHARGED
60 minute summer	Basin 2 - HW2	35	42.700	1.070	362.1	0.0000	0.0000	OK
60 minute summer	S2-S26	40	43.648	1.067	160.5	57.0197	0.0000	FLOOD RISK
60 minute summer	S2-27	59	42.951	0.711	71.3	56.3147	0.0000	SURCHARGED
60 minute summer	S2-28	38	42.795	0.829	169.2	31.7467	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)
60 minute summer	S2-15	1.005	S2-18	60.6	1.525	1.524	0.4320	
60 minute summer	S2-16	2.000	S2-17	43.9	1.104	1.101	0.6117	
60 minute summer	S2-17	2.001	S2-18	71.3	1.250	0.515	1.7005	
60 minute summer	S2-18	1.006	S2-19	122.9	1.115	1.110	2.8839	
60 minute summer	S2-19	1.007	S2-20	125.0	1.133	1.128	1.2448	
60 minute summer	S2-20	1.008	S2-21	153.2	1.389	1.384	1.8181	
60 minute summer	S2-21	1.009	S2-24	155.3	1.408	1.392	1.6139	
60 minute summer	S2-22	3.000	S2-23	-14.4	-0.369	-0.361	0.6178	
60 minute summer	S2-23	3.001	S2-24	39.7	1.297	0.589	0.5959	
60 minute summer	S2-24	1.010	S2-25	210.1	1.905	1.683	5.6474	
60 minute summer	S2-25	1.011	Basin 2 - HW2	261.0	1.648	1.617	1.6329	
60 minute summer	Basin 2 - HW2	Flow through Pond	Basin 2 - HW4	312.9	0.153	0.011	843.6002	
60 minute summer	S2-S26	11.000	S2-27	57.7	1.450	1.449	2.2978	
60 minute summer	S2-27	11.001	S2-28	49.3	1.239	1.237	1.3396	
60 minute summer	S2-28	11.002	S2-29	102.3	1.453	1.444	3.0930	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.82%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	S2-29	156	42.499	0.713	88.2	17.1701	0.0000	SURCHARGED
240 minute winter	Basin 2 - HW3	236	42.490	0.860	73.4	0.0000	0.0000	OK
240 minute winter	Basin 2 - HW4	240	42.487	0.957	123.1	0.0000	0.0000	SURCHARGED
240 minute winter	S2-31 Control	240	42.486	0.966	28.6	4.3685	0.0000	SURCHARGED
960 minute winter	S2-Outfall	1260	40.990	0.090	27.9	0.0000	0.0000	OK
60 minute summer	S1-1	34	45.917	0.723	52.6	1.0346	0.0000	SURCHARGED
60 minute summer	S1-2	34	45.733	0.698	71.6	0.9984	0.0000	SURCHARGED
60 minute summer	S1-4	33	45.123	0.529	159.9	0.7575	0.0000	SURCHARGED
60 minute summer	S1-6	34	45.253	0.645	87.2	0.9231	0.0000	SURCHARGED
60 minute summer	S1-9	34	45.537	0.991	101.2	2.5220	0.0000	SURCHARGED
60 minute summer	S1-10	36	45.227	0.808	100.4	1.7828	0.0000	SURCHARGED
60 minute summer	S1-11	36	45.155	0.835	95.8	2.1241	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)
180 minute summer	S2-29	11.003	Basin 2 - HW3	83.0	1.179	1.163	0.6091	
240 minute winter	Basin 2 - HW3	Flow through Pond	Basin 2 - HW4	123.1	0.092	0.004	1066.1791	
240 minute winter	Basin 2 - HW4	18.000	S2-31 Control	28.6	0.357	0.256	0.3503	
240 minute winter	S2-31 Control	18.001	S2-Outfall	27.9	1.372	0.129	1.0736	1882.1
60 minute summer	S1-1	6.000	S1-2	51.1	1.284	1.278	0.5619	
60 minute summer	S1-2	6.001	S1-3	71.6	1.017	0.775	2.3376	
60 minute summer	S1-4	6.003	S1-22	159.4	1.445	1.436	1.8780	
60 minute summer	S1-6	5.000	S1-13	86.0	1.570	0.766	2.2914	
60 minute summer	S1-9	4.001	S1-10	100.4	1.426	1.417	2.1795	
60 minute summer	S1-10	4.002	S1-11	95.8	1.361	1.352	0.4118	
60 minute summer	S1-11	4.003	S1-13A	94.9	0.998	0.852	3.0981	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.82%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S1-13	36	45.061	0.935	200.8	2.3807	0.0000	SURCHARGED
60 minute summer	S1-13A	36	45.089	0.857	101.6	11.1476	0.0000	SURCHARGED
60 minute summer	S1-14	37	44.905	1.305	265.6	10.6742	0.0000	FLOOD RISK
60 minute summer	S1-15	38	44.617	1.129	253.8	24.0206	0.0000	SURCHARGED
60 minute summer	Basin 1 - HW3	36	44.525	1.448	398.0	0.0000	0.0000	OK
2160 minute winter	S1-17	2160	44.460	0.745	4.8	1.0660	0.0000	SURCHARGED
2160 minute winter	S1-17B	2100	44.460	0.210	0.8	0.3005	0.0000	OK
60 minute summer	Swale 6 - HW1	34	44.946	0.043	9.4	1.7460	0.0000	OK
2160 minute winter	S1-20	2160	44.460	0.865	5.6	2.2012	0.0000	SURCHARGED
2160 minute winter	S1-21	2160	44.459	1.010	5.5	2.5709	0.0000	SURCHARGED
2160 minute winter	Basin 1 - HW1	2160	44.462	1.385	5.5	0.0000	0.0000	OK
60 minute summer	S1-22	33	44.958	0.417	159.4	0.5972	0.0000	SURCHARGED
60 minute summer	S1-23	33	45.316	0.566	10.7	0.8096	0.0000	SURCHARGED
60 minute summer	S1-25	33	45.309	0.698	110.8	0.9993	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)
60 minute summer	S1-13	4.005	S1-14	199.3	1.403	0.496	5.4059	
60 minute summer	S1-13A	4.004	S1-13	103.8	1.177	0.734	0.6806	
60 minute summer	S1-14	4.006	S1-15	236.2	1.649	1.472	7.1147	
60 minute summer	S1-15	4.007	Basin 1 - HW3	251.9	1.590	0.472	1.9755	
60 minute summer	Basin 1 - HW3	Flow through Pond	Basin 1 - HW2	481.8	0.257	0.011	1239.4836	
2160 minute winter	S1-17	14.001	S1-20	4.8	0.533	0.067	0.7571	
2160 minute winter	S1-17B	15.000_1	S1-17	-0.8	-0.021	-0.009	0.6256	
60 minute summer	Swale 6 - HW1	16.000	S1-20	8.6	2.187	0.152	0.0098	
2160 minute winter	S1-20	14.002	S1-21	5.5	0.566	0.048	4.8337	
2160 minute winter	S1-21	14.003	Basin 1 - HW1	5.4	0.607	0.020	1.7279	
2160 minute winter	Basin 1 - HW1	Flow through Pond	Basin 1 - HW2	33.4	0.044	0.001	1921.2992	
60 minute summer	S1-22	6.004	S1-27	159.4	1.480	1.432	1.5574	
60 minute summer	S1-23	15.000	S1-25	12.1	0.506	0.303	0.4270	
60 minute summer	S1-25	17.001	S1-25A	110.5	1.570	1.554	3.1995	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.82%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
2160 minute winter	S1-26	2160	44.460	0.993	18.4	2.5276	0.0000	SURCHARGED
60 minute summer	S1-27	34	44.711	0.293	255.6	0.4198	0.0000	OK
2160 minute winter	S1-28	2160	44.460	0.923	9.9	1.3204	0.0000	SURCHARGED
2160 minute winter	Basin 1 - HW4	2100	44.465	1.388	19.7	0.0000	0.0000	OK
2160 minute winter	Basin 1 - HW2	2160	44.459	1.558	33.4	0.0000	0.0000	SURCHARGED
2160 minute winter	S1-32 Control	2160	44.459	1.633	10.9	7.3881	0.0000	SURCHARGED
60 minute summer	S1-25A	33	44.776	0.353	110.5	0.8986	0.0000	SURCHARGED
60 minute summer	S1-8	34	45.723	0.435	32.3	0.6221	0.0000	SURCHARGED
2160 minute winter	S1-17A	2160	44.460	0.147	0.7	0.2100	0.0000	OK
60 minute summer	S3-3	35	43.597	1.218	170.3	1.7433	0.0000	FLOOD RISK
60 minute summer	S3-4	35	43.600	0.891	24.8	1.2747	0.0000	SURCHARGED
60 minute summer	S3-5	35	43.552	1.193	189.1	1.7076	0.0000	SURCHARGED
60 minute summer	S3-6	35	43.496	1.153	187.7	1.6497	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)
2160 minute winter	S1-26	6.007	Basin 1 - HW4	17.6	0.575	0.081	2.5129	
60 minute summer	S1-27	6.005	S1-28	251.3	1.925	0.688	8.4681	
2160 minute winter	S1-28	6.006	S1-26	15.9	0.413	0.042	2.4872	
2160 minute winter	Basin 1 - HW4	Flow through Pond	Basin 1 - HW2	33.4	0.044	0.001	1921.2992	
2160 minute winter	Basin 1 - HW2	1.000	S1-32 Control	10.9	0.353	0.066	1.1867	
2160 minute winter	S1-32 Control	1.001	S2-12	3.1	0.592	0.078	0.1282	
60 minute summer	S1-25A	17.002	Swale 1 - HW1	110.3	1.576	1.544	0.6768	
60 minute summer	S1-8	4.000	S1-9	30.1	1.057	0.489	1.8958	
2160 minute winter	S1-17A	14.000	S1-17	0.7	0.503	0.011	1.1926	
60 minute summer	S3-3	12.003	S3-5	167.9	1.060	1.031	1.2347	
60 minute summer	S3-4	13.002	S3-5	26.9	0.949	0.570	0.6015	
60 minute summer	S3-5	12.004	S3-6	187.7	1.185	1.172	1.0213	
60 minute summer	S3-6	12.005	S3-7	186.6	1.178	1.173	2.7145	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.82%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S3-7	35	43.403	1.102	238.6	1.5775	0.0000	SURCHARGED
480 minute winter	Basin 3 - HW2	480	43.272	1.264	41.1	0.0000	0.0000	OK
60 minute summer	S3-11	35	43.644	0.849	24.7	1.2143	0.0000	SURCHARGED
60 minute summer	S3-12	35	43.702	0.777	27.9	1.1116	0.0000	SURCHARGED
60 minute summer	S3-13	35	43.685	0.585	13.5	0.8365	0.0000	SURCHARGED
60 minute summer	S3-14	35	43.683	1.158	65.5	2.9476	0.0000	FLOOD RISK
60 minute summer	Basin 3 - HW1	35	43.516	1.509	99.0	0.0000	0.0000	OK
480 minute winter	Basin 3 - HW3	480	43.268	1.357	30.1	0.0000	0.0000	SURCHARGED
480 minute winter	S3-18 Control	480	43.268	1.368	3.7	1.9572	0.0000	SURCHARGED
600 minute winter	S3-7A	600	43.269	1.048	28.4	2.6681	0.0000	SURCHARGED
60 minute summer	S3-2	34	43.802	1.268	166.5	1.8144	0.0000	SURCHARGED
60 minute summer	S1-3	33	45.563	0.758	115.8	1.0850	0.0000	SURCHARGED
60 minute summer	Swale 1 - HW1	34	44.499	0.225	154.0	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)
60 minute summer	S3-7	12.006	S3-7A	237.2	1.497	1.485	5.1239	
480 minute winter	Basin 3 - HW2	Flow through Pond	Basin 3 - HW3	30.1	0.082	0.002	563.3181	
60 minute summer	S3-11	13.001	S3-4	24.8	1.019	0.623	0.5788	
60 minute summer	S3-12	13.000	S3-11	24.7	0.979	0.620	0.8759	
60 minute summer	S3-13	19.000	S3-14	-13.5	-0.340	-0.205	1.4323	
60 minute summer	S3-14	19.001	Basin 3 - HW1	57.8	1.454	1.446	0.4342	
60 minute summer	Basin 3 - HW1	Flow through Pond	Basin 3 - HW3	198.0	0.194	0.013	405.5642	
480 minute winter	Basin 3 - HW3	10.000	S3-18 Control	3.7	0.269	0.032	0.3676	
480 minute winter	S3-18 Control	10.001	S2-11	3.6	0.484	0.028	3.7986	
600 minute winter	S3-7A	12.007	Basin 3 - HW2	28.2	0.661	0.174	1.2498	
60 minute summer	S3-2	12.002	S3-3	163.0	1.478	1.422	2.6621	
60 minute summer	S1-3	6.002	S1-4	115.8	1.644	1.635	2.3376	
60 minute summer	Swale 1 - HW1	Flow through Pond	Swale 1 - HW2	148.5	0.372	0.060	59.6828	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.82%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
2160 minute winter	Swale 1 - HW2	2160	44.459	0.388	21.4	0.0000	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)
2160 minute winter	Swale 1 - HW2	7.000	S1-26	-15.2	2.088	-0.081	0.0929	

Calculated by:	Jonathan Shuttleworth
Site name:	HD068 - Hyde End Road
Site location:	Shinfield

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013), the SuDS Manual C753 (Ciria, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Site Details

Latitude:	51.39930° N
Longitude:	0.95092° W
Reference:	2230761681
Date:	Feb 10 2025 12:51

Runoff estimation approach

IH124

Site characteristics

Total site area (ha):	1
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Methodology

Q _{BAR} estimation method:	Calculate from SPR and SAAR
SPR estimation method:	Calculate from SOIL type

Notes

(1) Is Q_{BAR} < 2.0 l/s/ha?

When Q_{BAR} is < 2.0 l/s/ha then limiting discharge rates are set at 2.0 l/s/ha.

Soil characteristics

	Default	Edited
SOIL type:	4	4
HOST class:	N/A	N/A
SPR/SPRHOST:	0.47	0.47

(2) Are flow rates < 5.0 l/s?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements.

Hydrological characteristics

	Default	Edited
SAAR (mm):	649	649
Hydrological region:	6	6
Growth curve factor 1 year:	0.85	0.85
Growth curve factor 30 years:	2.3	2.3
Growth curve factor 100 years:	3.19	3.19
Growth curve factor 200 years:	3.74	3.74

(3) Is SPR/SPRHOST ≤ 0.3?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsite would normally be preferred for disposal of surface water runoff.

Greenfield runoff rates

Default

Edited

Q_{BAR} (l/s):	4.42	4.42
1 in 1 year (l/s):	3.76	3.76
1 in 30 years (l/s):	10.16	10.16
1 in 100 year (l/s):	14.1	14.1
1 in 200 years (l/s):	16.53	16.53

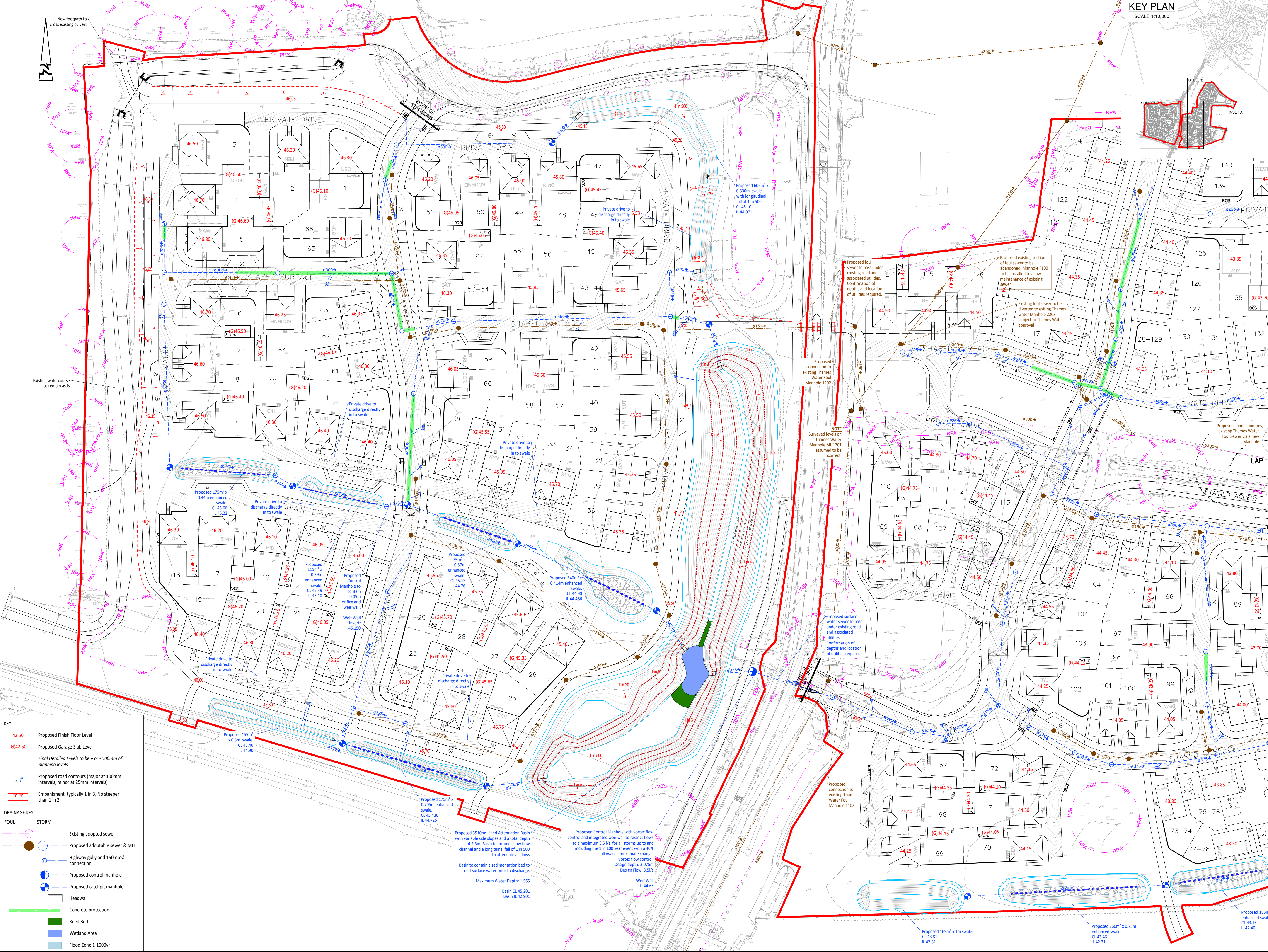
This report was produced using the greenfield runoff tool developed by HR Wallingford and available at www.uksuds.com. The use of this tool is subject to the UK SuDS terms and conditions and licence agreement , which can both be found at www.uksuds.com/terms-and-conditions.htm. The outputs from this tool are estimates of greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, CEH, Hydrosolutions or any other organisation for the use of this data in the design or operational characteristics of any drainage scheme.

KEY PLAN
SCALE 1:10,000

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 4. Tanking (TK) height shown indicates maximum level difference between finished floor level and external ground level.
 5. Retaining wall (RW) height shown indicates the maximum level difference between two ground levels either side of wall.
 6. Underbuild (UB) height shown indicates the maximum height of exposed brick 150mm below FFL.
 7. Final Detailed Levels to be + or - 500mm of planning levels.
 8. Any anomaly or contradiction between any of the above is to be reported to the Engineer.

- DRAINAGE NOTES:
1. Do not scale.
 2. Refer to all other Project Drawings and supporting notes.
 3. All adoptable drainage works to be constructed as detailed in Design and Construction Guidance or as stipulated in the Water Authorities Addendum.
 4. All public sewers are to be the subject of a Section 104 agreement of the Water Industry Act 1991.
 5. Invert levels of existing manholes and sewers are to be checked on site before construction commences and results reported to engineers.
 6. The Contractor is responsible for maintaining continuity of flow for all existing sewers within the site boundary and limit of works for the duration of the project.
 7. All drainage networks to comply with BS EN124, and be stamped with BSI Kitemark. Covers to suit loading as below:
 - Carriageways and Roads - D400
 - Driveways and Verges - C250
 - Footways and Pedestrian Areas - B125
 - Gardens/Landscaping - A15
 8. All sewer pipes up to and including 600mm diameter to be PVC-U to BS EN1401. All sewer pipes greater than 600mm diameter to be concrete pipes to BS EN1916.
 9. All drainage shall be installed and tested strictly in accordance with the Manufacturers' printed instructions, BS EN 752, BS EN 1901, Local Water Authority requirements and the Building Regulations.
 10. All bedding shall be Class S unless noted otherwise.
 11. All trenches under existing and proposed public highways are to be backfilled with thoroughly compacted Type 1 granular sub-base material.
 12. Drainage laid beneath roads and areas of vehicular access (car parking etc) with less than 1200mm of cover shall be encased in concrete bed and surround with associated movement joints. Drainage laid beneath paths, footways and pedestrian areas with less than 900mm of cover shall be similarly treated.
 13. The use of precast concrete products made with sulphate resisting cement is mandatory, unless a laboratory report proves such precautions are not necessary.
 14. All gully connections to use a minimum diameter pipe of 150mm and to be surrounded by a minimum of 150mm of grade CB/C10 concrete over its full length (which should not exceed 15m) and its connection to the carrier system.
 15. All sewers to be abandoned must be surveyed to identify any lateral connections that are still live with any found to be reported to the Engineer.
 16. All laterals to be 150mm laid at 1:100 (surface) or 1:80 (foul) unless otherwise stated.
 17. All private drains to be 100mm diameter unless otherwise stated.
 18. All foul and storm water drains which are not to be adopted as public sewers shall be in accordance with Document H of the Building regulations, together with NHBC Standards Chapter 5.3 and BS6301.
 19. Where pipes pass through footings, retaining or screen walls, intels to be provided over drains.
 20. Where inverts are less than 0.6m deep inspection chambers (min dia. 150mm) or access fittings (225 x 100mm) to be used, elsewhere proprietary plastic, brick or pcc to be used and sized in accordance with Table 11 of Document H of the Building Regulations [-0.6m to invert min DN300, >0.6m to invert min DN475].
 21. All gullies connected direct to drains to be roddable.
 22. Adequate precautions in accordance with Approved Document H and manufacturers' recommendations to be taken to protect drains (particularly plastic) at shallow depths.
 23. Trees and shrubs of a large size or heavy canopy with a moderate or high water demand must not be planted within any sewer easement.
 24. Where required 1m deep root barrier of an approved type to be installed vertically along the back edging kerb of all areas of footway/demarcation to protect from both proposed and future plantation.
 25. First foul water ICs to be 750mm below FFL, unless noted otherwise.
 26. Surface water ICs to be laid 600mm below external level, unless noted otherwise.
 27. Rodding eyes to be laid 450mm below external level, unless noted otherwise.



KEY

- 42.50 Proposed Finish Floor Level
- (G)42.50 Proposed Garage Slab Level
- Final Detailed Levels to be + or - 500mm of planning levels
- Proposed road contours (major at 100mm intervals, minor at 25mm intervals)
- Embankment, typically 1 in 3, No steeper than 1 in 2

DRAINAGE KEY

FOUL

- Existing adopted sewer
- Proposed adoptable sewer & MH
- Highway gully and 150mmØ connection
- Proposed control manhole
- Proposed catchpit manhole
- Headwall
- Concrete protection
- Reed Bed
- Wetland Area
- Flood Zone 1-100yr

STORM

- Existing adopted sewer
- Proposed adoptable sewer & MH
- Highway gully and 150mmØ connection
- Proposed control manhole
- Proposed catchpit manhole
- Headwall
- Concrete protection
- Reed Bed
- Wetland Area
- Flood Zone 1-100yr

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Client: **BLOOR HOMES**

Project: **HYDE END ROAD, SHINFIELD**

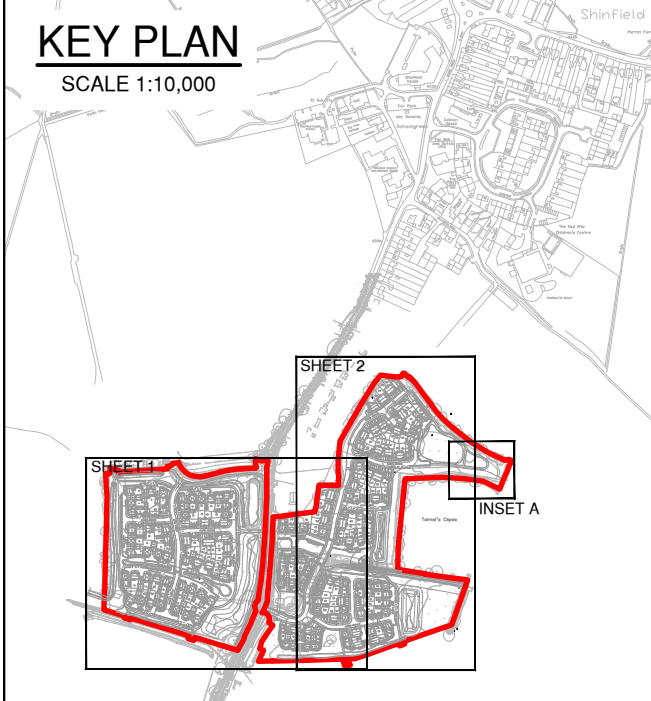
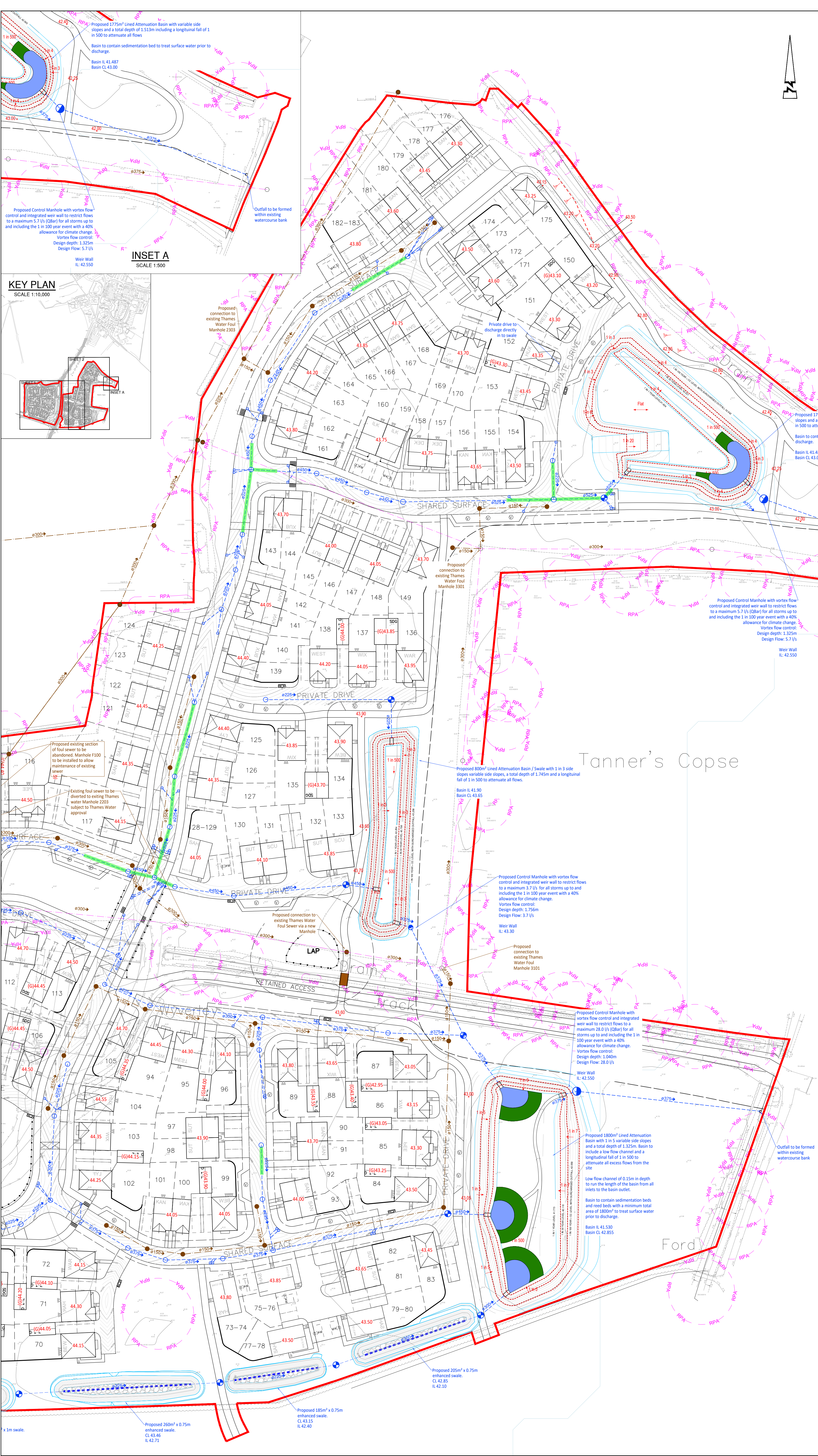
Title: **FULL APPLICATION ENGINEERING & DRAINAGE OVERVIEW SHEET 1**

Status: **Rev**

Rev	Date	Description	Drawn	Checked
A	07/25	First Issue	LC	DS

Scale: 1:500 @ A1 Date: JULY 2025 Drawn: LC Checked: DS

Drawing No: HD068-FA-045 Revision: A



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4. All public sewers are to be the subject of a Section 104 agreement of the Water Industry Act 1991.

5. Invert levels of existing manholes and sewers are to be checked on site before construction commences and results reported to engineers.

6. The Contractor is responsible for maintaining continuity of flow for all existing sewers within the site boundary and limit of works for the duration of the project.

7. All drainage ironwork to comply with BS EN124, and be stamped with BSI Kitemark. Covers to suit loading as below:
-Carriageways and Roads - D400
-Driveways and Verges - C250
-Footways and Pedestrian Areas - B125
-Gardens/Landscaping - A15

8. All sewer pipes up to and including 600mm diameter to be PVC-U to BS EN1401. All sewer pipes greater than 600mm diameter to be concrete pipes to BS EN1916.

9. All drainage shall be installed and tested strictly in accordance with the Manufacturers' printed instructions, BS EN 752, BS EN 1601, Local Water Authority requirements and the Building Regulations.

10. All bedding shall be Class S unless noted otherwise.

11. All trenches under existing and proposed public highways are to be backfilled with thoroughly compacted Type 1 granular sub-base material.

12. Drainage laid beneath roads and areas of vehicular access (car parking etc) with less than 1200mm of cover shall be encased in concrete bed and surround with associated movement joints. Drainage laid beneath paths, footways and pedestrian areas with less than 900mm of cover shall be similarly treated.

13. The use of precast concrete products made with sulphate resisting cement is mandatory, unless a laboratory report proves such precautions are not necessary.

14. All gully connections to use a minimum diameter pipe of 150mm and to be surrounded by a minimum of 150mm of grade C3/C10 concrete over its full length (which should not exceed 15m) and its connection to the carrier system.

15. All sewers to be abandoned must be surveyed to identify any lateral connections that are still live with any found to be reported to the Engineer.

16. All laterals to be 150mm laid at 1:100 (surface) or 1:80 (foul) unless otherwise stated.

17. All private drains to be 100mm diameter unless otherwise stated.

18. All foul and storm water drains which are not to be adopted as public sewers shall be in accordance with Document H of the Building Regulations, together with NHBC Standards Chapter 5.3 and BS8301.

19. Where pipes pass through footings, retaining or screen walls, lintels to be provided over drains.

20. Where inverts are less than 0.6m deep inspection chambers (min dia. 150mm) or access fittings (225 x 100mm) to be used, elsewhere proprietary plastic, brick or pcc is to be used and sized in accordance with Table 11 of Document H of the Building Regulations (<0.6m to invert min DN300, >0.6m to invert min DN475).

21. All gullies connected direct to drains to be roddable.

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23. Trees and shrubs of a large size or heavy canopy with a moderate or high water demand must not be planted within any sewer easement.

24. Where required 1m deep root barrier of an approved type to be installed vertically along the back edging kerb of all areas of footway/ demarcation to protect from both proposed and future plantation.

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KEY

42.50

Proposed Finish Floor Level

(G)42.50

Proposed Garage Slab Level

Final Detailed Levels to be + or - 500mm of planning levels

1:500

Proposed road contours (major at 100mm intervals, minor at 25mm intervals)

1:1

Embankment, typically 1 in 3, No steeper than 1 in 2.

DRAINAGE KEY

FOUL

STORM

Existing adopted sewer

Proposed adoptable sewer & MH

Highway gully and 150mmØ connection

Proposed control manhole

Proposed catchpit manhole

Headwall

Concrete protection

Reed Bed

Wetland Area

Flood Zone 1-100yr

A

07.25

First Issue

LC

DS

Rev

Date

Description

Drawn

Checked

Abley Letchford

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Client

BLOOR HOMES

Project

HYDE END ROAD, SHINFIELD

Title

FULL APPLICATION ENGINEERING & DRAINAGE OVERVIEW SHEET 2

Status

Scale

1:500 @ A1

Date

JULY 2025

Drawn

LC

Checked

DS

Drawing No

HD068-FA-046

Revision

A

KEY PLAN
SCALE 1:10,000

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 8. All sewer pipes up to and including 600mm diameter to be PVC-U to BS EN1401. All sewer pipes greater than 600mm diameter to be concrete pipes to BS EN1916.
 9. All drainage shall be installed and tested strictly in accordance with the Manufacturers' printed instructions, BS EN 752, BS EN 1601, Local Water Authority requirements and the Building Regulations.
 10. All bedding shall be Class 5 unless noted otherwise.
 11. All trenches under existing and proposed public highways are to be backfilled with thoroughly compacted Type 1 granular sub-base material.
 12. Drainage laid beneath roads and areas of vehicular access (car parking etc) with less than 1200mm of cover shall be encased in concrete bed and surround with associated movement joints. Drainage laid beneath paths, footways and pedestrian areas with less than 900mm of cover shall be similarly treated.
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 14. All gully connections to a sewer shall be a minimum diameter pipe of 150mm and to be surrounded by a minimum of 150mm of grade C8/C10 concrete over its full length (which should not exceed 15m) and its connection to the carrier system.
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Rev	Date	Description	Drawn	Checked
C	07.25	Drainage design updated to suit latest layout with swale 1 altered & MH S1-28A added	JJS	DS
B	07.25	Updated to suit latest site layout	JJS	DS
A	05.25	First Issue	JJS	DS



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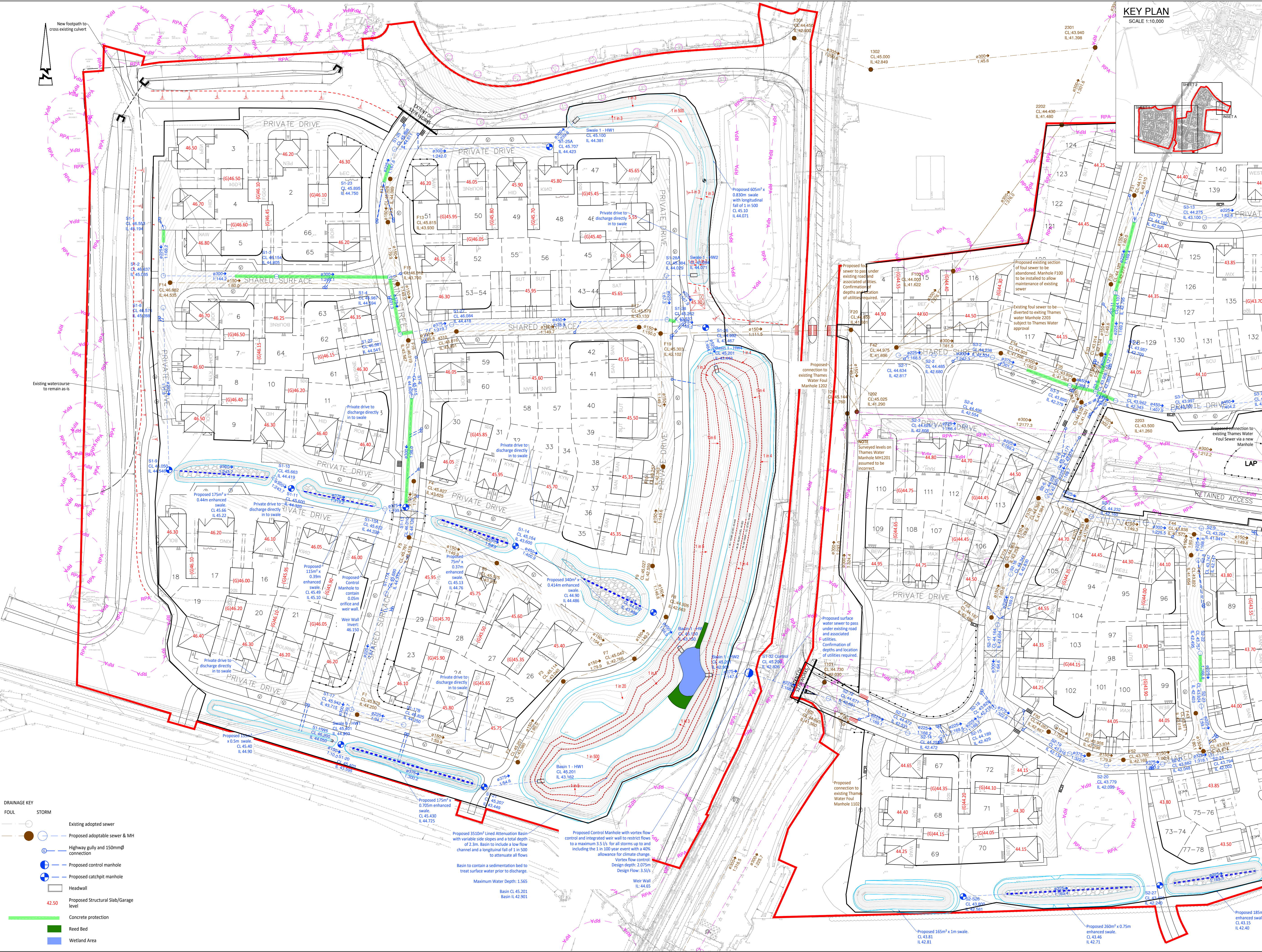
BLOOR HOMES

HYDE END ROAD, SHINFIELD

FULL APPLICATION
DRAINAGE LAYOUT
SHEET 1

Status

Scale	Date	Drawn	Checked
1:500 @ A1	MAY 2025	JJS	DS
Drawing No			Revision
HD068-EA-051			B



- DRAINAGE KEY
- FOUL
 - STORM
 - Existing adopted sewer
 - Proposed adoptable sewer & MH
 - Highway gully and 150mmØ connection
 - Proposed control manhole
 - Proposed catchpit manhole
 - Headwall
 - Proposed Structural Slab/Garage level
 - Concrete protection
 - Reed Bed
 - Wetland Area

Proposed 3510m³ Lined Attenuation Basin with variable side slopes and a total depth of 2.3m. Basin to include a low flow channel and a longitudinal fall of 1 in 500 to attenuate all flows

Basin to contain a sedimentation bed to treat surface water prior to discharge.

Maximum Water Depth: 1.565

Basin CL 45.201

Basin IL 42.901

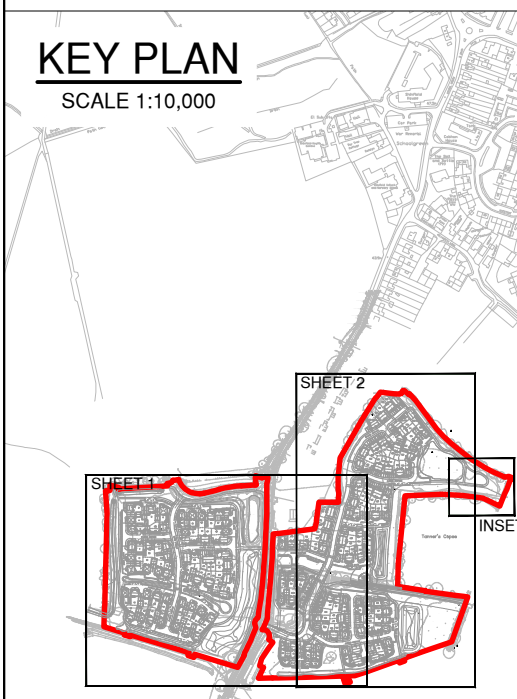
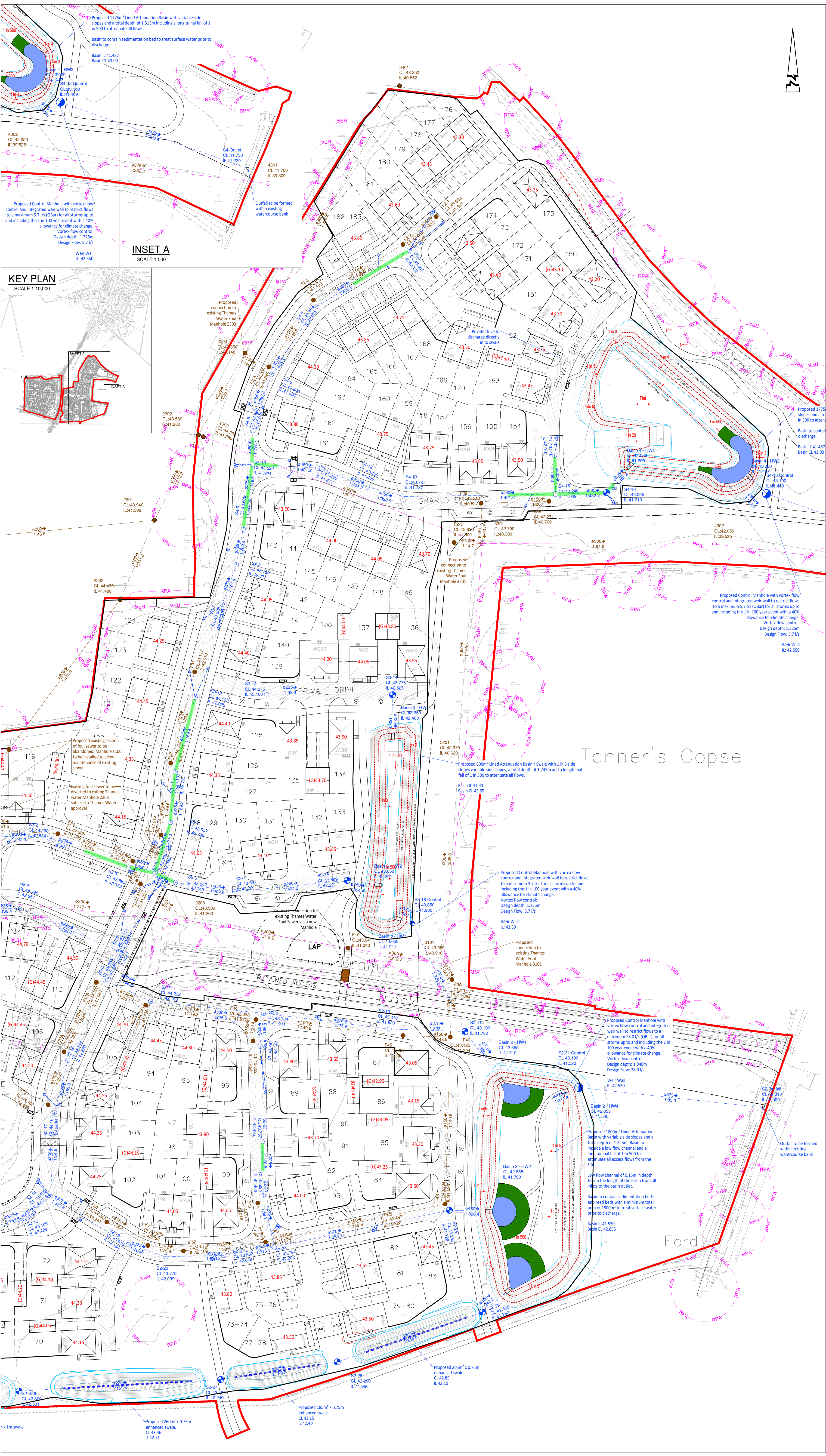
Proposed Control Manhole with vortex flow control and integrated weir wall to restrict flows to a maximum 3.5 l/s for all storms up to and including the 1 in 100 year event with a 40% allowance for climate change

Vortex flow control

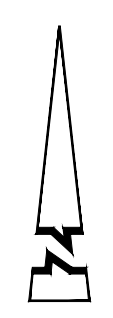
Design depth: 2.075m

Design Flow: 3.5 l/s

Weir Wall IL 44.65



INSET A
SCALE 1:500



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 - Footways and Pedestrian Areas - B125
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 8. All sewer pipes up to and including 600mm diameter to be PVC-U to BS EN1401. All sewer pipes greater than 600mm diameter to be concrete pipes to BS EN1916.
 9. All drainage shall be installed and tested strictly in accordance with the Manufacturers' printed instructions, BS EN 752, BS EN 1601, Local Water Authority requirements and the Building Regulations.
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 17. All private drains to be 100mm diameter unless otherwise stated.
 18. All foul and storm water drains which are not to be adopted as public sewers shall be in accordance with Document H of the Building Regulations, together with NHBC Standards Chapter 5.3 and BS8301.
 19. Where pipes pass through footings, retaining or screen walls, lintels to be provided over drains.
 20. Where inverts are less than 0.6m deep inspection chambers (min dia. 190mm) or access fittings (225 x 100mm) to be used, elsewhere proprietary plastic, brick or pcc is to be used and sited in accordance with Table 11 of Document H of the Building Regulations (<0.6m to invert min DN300, >0.6m to invert min DN475).
 21. All gullies connected direct to drains to be roddable.
 22. Adequate precautions in accordance with Approved Document H and manufacturer's recommendations to be taken to protect drains (particularly plastic) at shallow depths.
 23. Trees and shrubs of a large size or heavy canopy with a moderate or high water demand must not be planted within any sewer easement.
 24. Where required 1m deep root barrier of an approved type to be installed vertically along the back edging kerb of all areas of footway/ demarcation to protect from both proposed and future plantation.
 25. First foul water ICs to be 750mm below FFL, unless noted otherwise.
 26. Surface water ICs to be laid 600mm below external level, unless noted otherwise.
 27. Rodding eyes to be laid 450mm below external level, unless noted otherwise.

DRAINAGE KEY

	FOUL		STORM
	Existing adopted sewer		Proposed adoptable sewer & MH
	Highway gully and 150mm connection		Proposed control manhole
	Proposed catchpit manhole		Headwall
	Proposed Structural Slab/Garage level		Concrete protection
	Reed Bed		Wetland Area

C	07.25	Updated to suit latest site layout	LC	DS
B	07.25	Updated to suit latest site layout	JJS	DS
A	05.25	First Issue	JJS	DS

Rev.	Date	Description	Drawn	Checked
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Client

BLOOR HOMES

HYDE END ROAD, SHINFIELD

Full Application
DRAINAGE LAYOUT
SHEET 2

Status

Scale	1:500 @ A1	Date	MAY 2025	Drawn	JJS	Checked	DS
Drawing No.	HD068-FA-052	Revision					C

KEY PLAN
SCALE 1:10,000

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- DRAINAGE NOTES:
1. Do not scale.
 2. Refer to all other Project Drawings and supporting notes.
 3. All adoptable drainage works to be constructed as detailed in Design and Construction Guidance or as stipulated in the Water Authorities Addendum.
 4. All public sewers are to be the subject of a Section 104 agreement of the Water Industry Act 1991.
 5. Invert levels of existing manholes and sewers are to be checked on site before construction commences and results reported to engineers.
 6. The Contractor is responsible for maintaining continuity of flow for all existing sewers within the site boundary and limit of works for the duration of the project.
 7. All drainage ironworks to comply with BS EN124, and be stamped with BSI Kitemark. Covers to suit loading as below:
 - Carriageways and Roads - D400
 - Driveways and Verges - C250
 - Footways and Pedestrian Areas - B125
 - Gardens/Landscaping - A15
 8. All sewer pipes up to and including 600mm diameter to be PVC-U to BS EN1401. All sewer pipes greater than 600mm diameter to be concrete pipes to BS EN1916.
 9. All drainage shall be installed and tested strictly in accordance with the Manufacturers' printed instructions, BS EN 752, BS EN 1601, Local Water Authority requirements and the Building Regulations.
 10. All bedding shall be Class 5 unless noted otherwise.
 11. All trenches under existing and proposed public highways are to be backfilled with thoroughly compacted Type 1 granular sub-base material.
 12. Drainage laid beneath roads and areas of vehicular access (car parking etc) with less than 1200mm of cover shall be encased in concrete bed and surround with associated movement joints. Drainage laid beneath paths, footways and pedestrian areas with less than 900mm of cover shall be similarly treated.
 13. The use of precast concrete products made with sulphate resisting cement is mandatory, unless a laboratory report proves such precautions are not necessary.
 14. All gully connections to use a minimum diameter pipe of 150mm and to be surrounded by a minimum of 150mm of grade C8/C10 concrete over its full length (which should not exceed 15m) and its connection to the carrier system.
 15. All sewers to be abandoned must be surveyed to identify any lateral connections that are still live with any found to be reported to the Engineer.
 16. All laterals to be 150mm laid at 1:100 (surface) or 1:80 (foul) unless otherwise stated.
 17. All private drains to be 100mm diameter unless otherwise stated.
 18. All foul and storm water drains which are not to be adopted as public sewers shall be in accordance with Document H of the Building Regulations, together with NHBC Standards Chapter 5.3 and BS8301.
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 26. Surface water ICs to be laid 600mm below external level, unless noted otherwise.
 27. Rodding eyes to be laid 450mm below external level, unless noted otherwise.

- DRAINAGE KEY
- Proposed adoptable sewer & MH
 - Highway gully and 150mmØ connection
 - Headwall
 - Proposed Structural Slab/Garage level
 - Direction of exceedance flows

C	07.25	Updated to suit latest layout. Exceedance flow arrows altered to suit contours.	LC	DS
B	07.25	Updated to suit latest layout with alterations to road & level design	LC	DS
A	05.25	First Issue	CB	DS
Rev	Date	Description	Drawn	Checked



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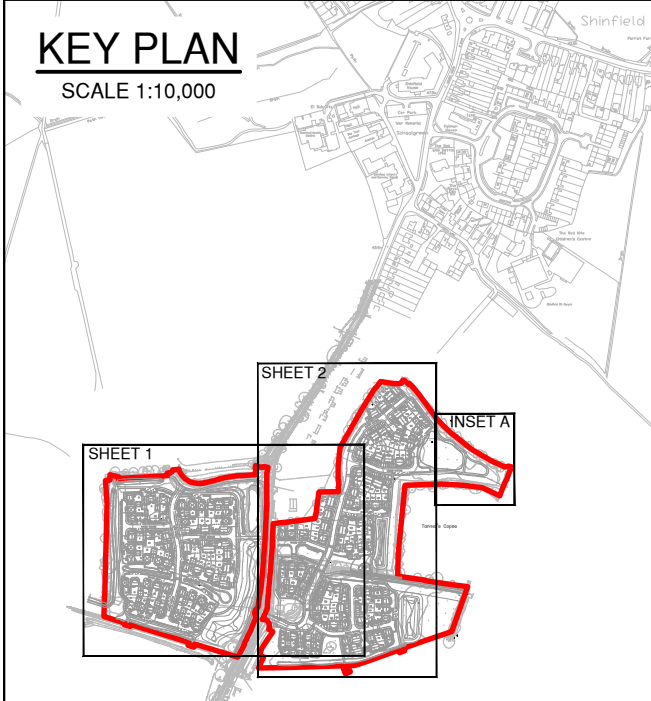
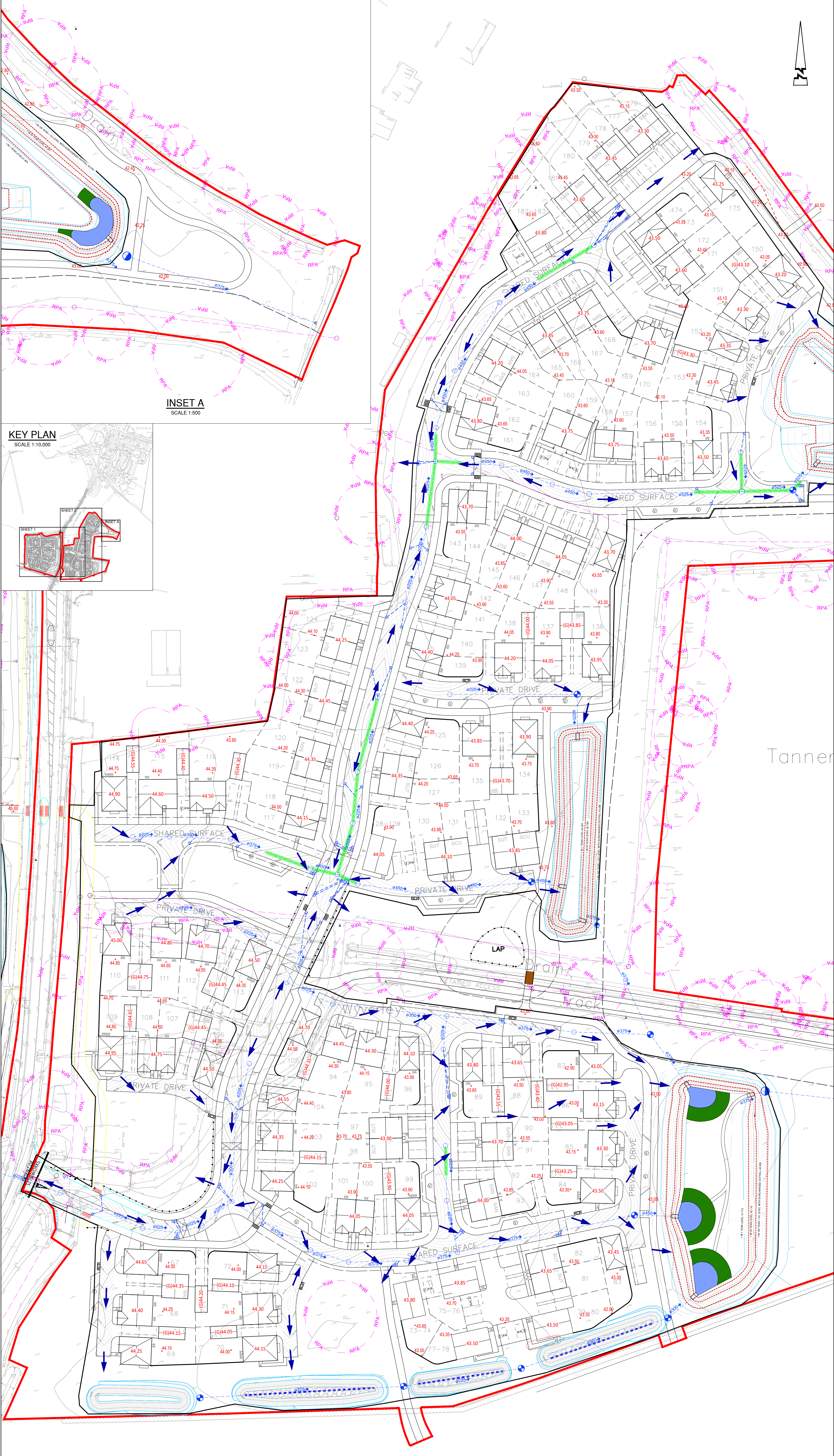
BLOOR HOMES

Project
HYDE END ROAD,
SHINFIELD

Title
FULL APPLICATION
EXCEEDANCE FLOWS
LAYOUT SHEET 1

Status

Scale	Date	Drawn	Checked
1:500 @ A1	MAY 2025	CB	DS
Drawing No			Revision
HD068-FA-053			C



INSET A
SCALE 1:500

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DRAINAGE NOTES:

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- The Contractor is responsible for maintaining continuity of flow for all existing sewers within the site boundary and limit of works for the duration of the project.
- All drainage ironworks to comply with BS EN124, and be stamped with BS Kitemark. Covers to suit loading as below:
 - Carriageways and Roads - D400
 - Driveways and Verges - C250
 - Footways and Pedestrian Areas - B125
 - Gardens/Landscaping - A15
- All sewer pipes up to and including 600mm diameter to be PVC-U to BS EN1401. All sewer pipes greater than 600mm diameter to be concrete pipes to BS EN1916.
- All drainage shall be installed and tested strictly in accordance with the Manufacturers' printed instructions, BS EN 752, BS EN 1601, Local Water Authority requirements and the Building Regulations.
- All bedding shall be Class S unless noted otherwise.
- All trenches under existing and proposed public highways are to be backfilled with thoroughly compacted Type 1 granular sub-base material.
- Drainage laid beneath roads and areas of vehicular access (car parking etc) with less than 1200mm of cover shall be encased in concrete bed and surround with associated movement joints. Drainage laid beneath paths, footways and pedestrian areas with less than 900mm of cover shall be similarly treated.
- The use of precast concrete products made with sulphate resisting cement is mandatory, unless a laboratory report proves such precautions are not necessary.
- All gully connections to use a minimum diameter pipe of 150mm and to be surrounded by a minimum of 150mm of grade C8/C10 concrete over its full length (which should not exceed 15m) and its connection to the carrier system.
- All sewers to be abandoned must be surveyed to identify any lateral connections that are still live with any found to be reported to the Engineer.
- All laterals to be 150mm laid at 1:100 (surface) or 1:80 (foul) unless otherwise stated.
- All private drains to be 100mm diameter unless otherwise stated.
- All foul and storm water drains which are not to be adopted as public sewers shall be in accordance with Document H of the Building regulations, together with NHBC Standards Chapter 5.3 and BS8301.
- Where pipes pass through footings, retaining or screen walls, lintels to be provided over drains.
- Where inverts are less than 0.6m deep inspection chambers (min dia. 190mm) or access fittings (225 x 100mm) to be used, elsewhere proprietary plastic, brick or pcc is to be used and sited in accordance with Table 11 of Document H of the Building Regulations (<0.6m to invert min DN300, >0.6m to invert min DN475).
- All gullies connected direct to drains to be roddable.
- Adequate precautions in accordance with Approved Document H and manufacturer's recommendations to be taken to protect drains (particularly plastic) at shallow depths.
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- Where required 1m deep root barrier of an approved type to be installed vertically along the back edging kerb of all areas of footway/ demarcation to protect from both proposed and future plantation.
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- Rodding eyes to be laid 450mm below external level, unless noted otherwise.

DRAINAGE KEY

- Proposed adoptable sewer & MH
- Highway gully and 150mmØ connection
- Headwall
- Proposed Structural Slab/Garage level
- 42.50
- Direction of exceedance flows

C	07.25	Updated to suit latest layout. Exceedance flow arrows altered to suit contours.	LC	DS
B	07.25	Updated to suit latest layout with alterations to road & level design	LC	DS
A	05.25	First Issue	CB	DS

Rev.	Date	Description	Drawn	Checked

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Client							
Project	BLOOR HOMES HYDE END ROAD, SHINFIELD						
Title	FULL APPLICATION EXCEEDANCE FLOWS LAYOUT SHEET 2						
Status							
Scale	1:500 @ A1	Date	MAY 2025	Drawn	CB	Checked	DS
Drawing No.	HD068-FA-054			Revision	C		

KEY PLAN
SCALE 1:10,000

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 6. The Contractor is responsible for maintaining continuity of flow for all existing sewers within the site boundary and limit of works for the duration of the project.
 7. All drainage ironworks to comply with BS EN124, and be stamped with BSI Kitemark. Covers to suit loading as below:
 - Carriageways and Roads - D400
 - Driveways and Verges - C250
 - Footways and Pedestrian Areas - B125
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 8. All sewer pipes up to and including 600mm diameter to be PVC-U to BS EN1401. All sewer pipes greater than 600mm diameter to be concrete pipes to BS EN1916.
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 27. Rodding eyes to be laid 450mm below external level, unless noted otherwise.

- DRAINAGE KEY
- Developable Area = 7.8856 ha
 - Proposed adoptable sewer & MH
 - Highway gully and 150mmØ connection
 - Drainage Catchment Area at 65% impermeable
 - Drainage Catchment Area at 100% impermeable

Rev	Date	Description	Drawn	Checked
C	07.25	Updated to suit latest site layout	LC	DS
B	07.25	Updated to suit latest layout and drainage	JUS	DS
A	05.25	First Issue	CB	DS



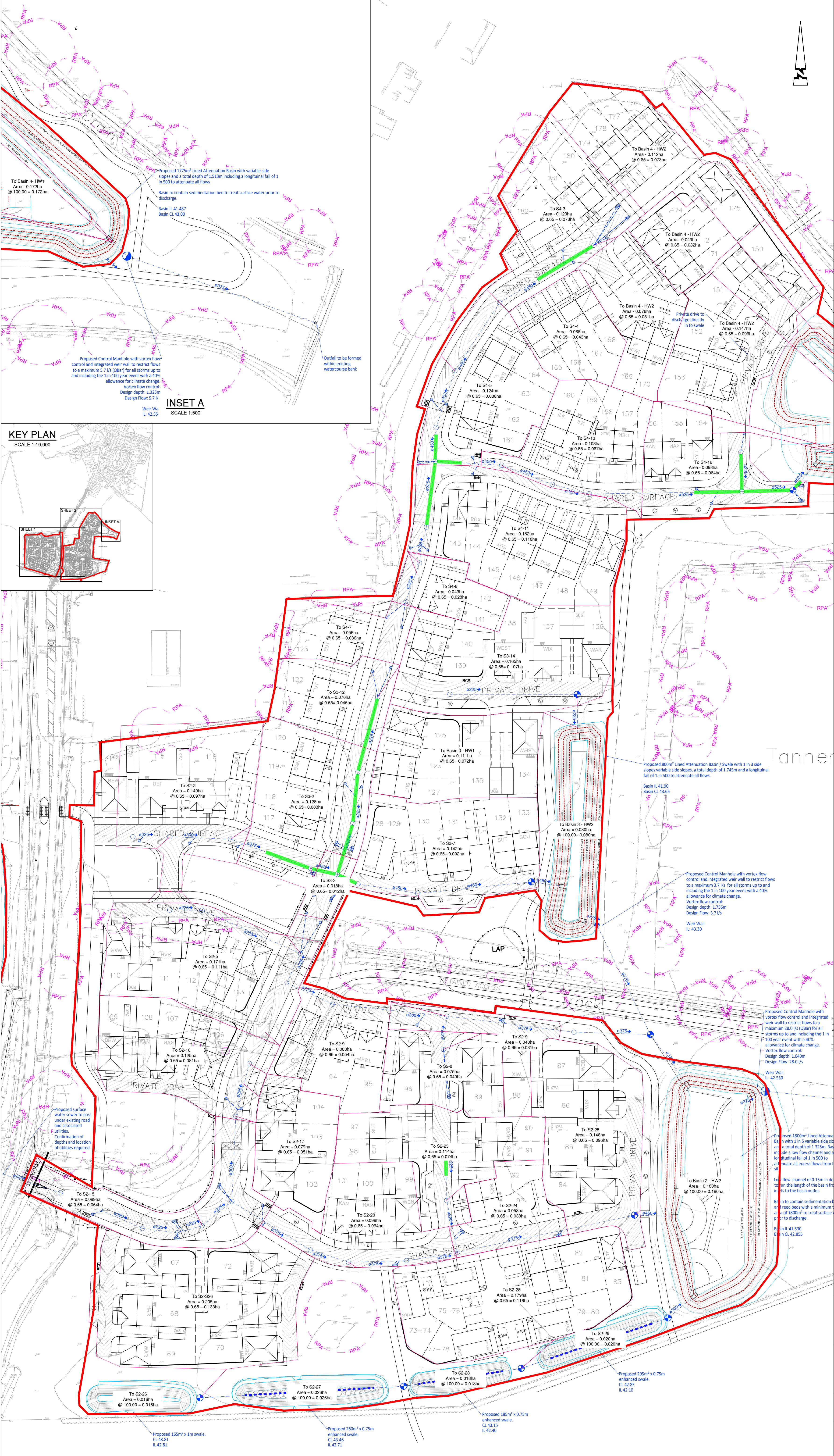
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BLOOR HOMES

HYDE END ROAD,
SHINFIELD

FULL APPLICATION
DRAINAGE CATCHMENT
AREAS LAYOUT SHEET 1

Status				
Scale	Date	Drawn	Checked	
1:500 @ A1	MAY 2025	CB	DS	
Drawing No			Revision	
HD068-FA-058			C	



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5. Invert levels of existing manholes and sewers are to be checked on site before construction commences and results reported to engineers.

6. The Contractor is responsible for maintaining continuity of flow for all existing sewers within the site boundary and limit of works for the duration of the project.

7. All drainage ironworks to comply with BS EN124, and be stamped with BS1 Kitemark. Covers to suit loading as below:

- Carriageways and Roads - D400
- Driveways and Verges - C250
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8. All sewer pipes up to and including 600mm diameter to be PVC-U to BS EN1401. All sewer pipes greater than 600mm diameter to be concrete pipes to BS EN1916.

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DRAINAGE KEY

Developable Area = 7.8856 ha

Proposed adoptable sewer & MH

Highway gully and 150mmØ connection

Drainage Catchment Area at 65% impermeable

Drainage Catchment Area at 100% impermeable

C	07.25	Updated to suit latest site layout	LC	DS	
B	07.25	Updated to suit latest layout and drainage	JJS	DS	
A	05.25	First Issue	CB	DS	
Rev.	Date	Description	Drawn	Checked	

Abley

Letchford

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Client

BLOOR HOMES

Project

HYDE END ROAD,
SHINFELD

Title

FULL APPLICATION
DRAINAGE CATCHMENT
AREAS LAYOUT SHEET 2

Status

Scale	Date	Drawn	Checked
1:500 @ A1	MAY 2025	CB	DS

Drawing No.

HD068-FA-059

Revision

C