Existing Network Details for Existing

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)
E1.000	5.965	0.050	119.3	0.036	5.00	0.0	0.600	o	225
E1.001	14.954	0.190	78.7	0.000	0.00	0.0	0.600	o	300
E1.002	35.573	0.130	273.6	0.126	0.00	0.0	0.600	o	300
E1.003	25.582	0.030	852.7	0.137	0.00	0.0	0.600	o	300
E1.004	27.484	0.024	1145.2	0.124	0.00	0.0	0.600	o	375
E1.005	44.814	0.046	974.2	0.157	0.00	0.0	0.600	o	375
E1.006	22.657	0.140	161.8	0.095	0.00	0.0	0.600	o	450
E1.007	13.394	0.070	191.3	0.031	0.00	0.0	0.600	o	450
E1.008	40.307	0.110	366.4	0.058	0.00	0.0	0.600	o	450
E1.009	58.164	0.090	646.3	0.082	0.00	0.0	0.600	o	450
E1.010	5.590	0.110	50.8	0.019	0.00	0.0	0.600	o	525
E2.000	29.453	0.030	981.8	0.081	5.00	0.0	0.600	o	225
E2.001	20.584	0.390	52.8	0.083	0.00	0.0	0.600	o	300
E3.000	19.866	0.200	99.3	0.110	5.00	0.0	0.600	o	225
E3.001	22.831	0.100	228.3	0.058	0.00	0.0	0.600	o	300
E3.002	22.210	0.130	170.8	0.062	0.00	0.0	0.600	o	300
E3.003	27.782	0.120	231.5	0.106	0.00	0.0	0.600	o	400
E3.004	7.201	0.130	55.4	0.080	0.00	0.0	0.600	o	400
E2.002	10.644	0.180	59.1	0.000	0.00	0.0	0.600	o	400

Network Results Table

PN	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Vel (m/s)	Cap (l/s)
E1.000	8.490	0.036	0.0	1.20	47.6
E1.001	8.440	0.036	0.0	1.77	125.4
E1.002	8.250	0.161	0.0	0.95	66.8
E1.003	8.120	0.298	0.0	0.53	37.5
E1.004	8.090	0.422	0.0	0.53	58.2
E1.005	8.066	0.579	0.0	0.57	63.2
E1.006	8.020	0.674	0.0	1.60	253.7
E1.007	7.880	0.705	0.0	1.47	233.2
E1.008	7.810	0.764	0.0	1.06	168.0
E1.009	7.700	0.845	0.0	0.79	126.0
E1.010	7.610	0.864	0.0	3.15	681.4
E2.000	8.150	0.081	0.0	0.41	16.3
E2.001	8.120	0.164	0.0	2.17	153.3
E3.000	8.360	0.110	0.0	1.31	52.2
E3.001	8.160	0.168	0.0	1.04	73.3
E3.002	8.060	0.230	0.0	1.20	84.8
E3.003	7.930	0.336	0.0	1.24	155.3
E3.004	7.810	0.415	0.0	2.54	319.2
E2.002	7.680	0.580	0.0	2.46	308.9

Existing Network Details for Existing

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)
E1.011	6.314	0.100	63.1	0.000	0.00	0.0	0.600	o	150
E1.012	4.433	0.044	100.8	0.000	0.00	0.0	0.600	o	150

Network Results Table

PN	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Vel (m/s)	Cap (l/s)
E1.011	5.530	1.444	0.0	1.27	22.4
E1.012	7.983	1.444	0.0	1.00	17.7

Simulation Criteria for Existing

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m³/ha Storage	2.000
Hot Start (mins)	0	Inlet Coeffiecient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1

Number of Input Hydrographs	0	Number of Storage Structures	1
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Summer
Return Period (years)	30	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	20.400	Storm Duration (mins)	30
Ratio R	0.428		

Online Controls for Existing

Pump Manhole: E15, DS/PN: E1.011, Volume (m³): 6.3

Invert Level (m) 5.730

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	24.0000	1.200	24.0000	3.000	24.0000	7.000	24.0000
0.200	24.0000	1.400	24.0000	3.500	24.0000	7.500	24.0000
0.300	24.0000	1.600	24.0000	4.000	24.0000	8.000	24.0000
0.400	24.0000	1.800	24.0000	4.500	24.0000	8.500	24.0000
0.500	24.0000	2.000	24.0000	5.000	24.0000	9.000	24.0000
0.600	24.0000	2.200	24.0000	5.500	24.0000	9.500	24.0000
0.800	24.0000	2.400	24.0000	6.000	24.0000		
1.000	24.0000	2.600	24.0000	6.500	24.0000		

Storage Structures for Existing

Tank or Pond Manhole: E15, DS/PN: E1.011

Invert Level (m) 5.530

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	84.0	2.000	84.0	2.601	0.0
1.000	84.0	2.600	84.0		

1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Existing

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m³/ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Number of Input Hydrographs	0	Number of Storage Structures	1
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.431
Region	England and Wales	Cv (Summer)	0.750
M5-60 (mm)	20.700	Cv (Winter)	0.840

Margin for Flood Risk Warning (mm)	300.0
Analysis Timestep	2.5 Second Increment (Extended)
DTS Status	OFF
DVD Status	ON
Inertia Status	ON

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	1, 30
Climate Change (%)	0, 0

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
E1.000	E1	15 Winter	1	+0%	30/15 Summer	30/15 Winter			8.552
E1.001	E2	15 Winter	1	+0%	30/15 Summer				8.498
E1.002	E3	15 Winter	1	+0%	30/15 Summer				8.492
E1.003	E4	15 Winter	1	+0%	1/15 Summer				8.465
E1.004	E5	15 Winter	1	+0%	30/15 Summer				8.433
E1.005	E6	15 Winter	1	+0%	30/15 Summer				8.358
E1.006	E7	15 Winter	1	+0%	30/15 Summer				8.184
E1.007	E8	15 Winter	1	+0%	30/15 Summer				8.071
E1.008	E9	15 Winter	1	+0%	30/15 Summer				8.030
E1.009	E10	15 Winter	1	+0%	30/15 Summer				7.950
E1.010	E11	30 Winter	1	+0%	30/30 Winter				7.793
E2.000	E15	15 Winter	1	+0%	30/15 Summer				8.331
E2.001	E16	15 Winter	1	+0%	30/60 Winter				8.201
E3.000	E15	15 Winter	1	+0%	30/60 Winter				8.451
E3.001	E16	15 Winter	1	+0%	30/60 Winter				8.285
E3.002	E17	15 Winter	1	+0%	30/60 Winter				8.194
E3.003	E18	15 Winter	1	+0%	30/60 Winter				8.085

1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Existing

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
E1.000	E1	-0.163	0.000	0.17		5.3	OK	1
E1.001	E2	-0.242	0.000	0.05		5.2	OK	
E1.002	E3	-0.058	0.000	0.28		16.9	OK	
E1.003	E4	0.045	0.000	1.09		28.3	SURCHARGED	
E1.004	E5	-0.032	0.000	0.97		39.3	OK	
E1.005	E6	-0.083	0.000	0.94		52.3	OK	
E1.006	E7	-0.286	0.000	0.28		59.5	OK	
E1.007	E8	-0.259	0.000	0.36		61.5	OK	
E1.008	E9	-0.230	0.000	0.43		64.4	OK	
E1.009	E10	-0.200	0.000	0.58		66.8	OK	
E1.010	E11	-0.342	0.000	0.27		67.5	OK	
E2.000	E15	-0.044	0.000	0.97		11.5	OK	
E2.001	E16	-0.219	0.000	0.16		21.7	OK	
E3.000	E15	-0.134	0.000	0.34		15.9	OK	
E3.001	E16	-0.175	0.000	0.36		23.3	OK	
E3.002	E17	-0.166	0.000	0.40		30.3	OK	
E3.003	E18	-0.245	0.000	0.32		42.8	OK	

1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Existing

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
E3.004	E19	15 Winter	1	+0%	30/60 Summer				7.966
E2.002	E15	15 Winter	1	+0%	30/30 Winter				7.852
E1.011	E15	60 Winter	1	+0%	1/15 Summer				6.714
E1.012	E16	60 Summer	1	+0%	1/15 Summer				8.284

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
E3.004	E19	-0.244	0.000	0.32		51.6	OK	
E2.002	E15	-0.228	0.000	0.39		72.8	OK	
E1.011	E15	1.034	0.000	1.27		24.0	SURCHARGED	
E1.012	E16	0.151	0.000	1.88		24.7	SURCHARGED	

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Existing

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m³/ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Number of Input Hydrographs	0	Number of Storage Structures	1
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.431
Region	England and Wales	Cv (Summer)	0.750
M5-60 (mm)	20.700	Cv (Winter)	0.840

Margin for Flood Risk Warning (mm)	300.0
Analysis Timestep	2.5 Second Increment (Extended)
DTS Status	OFF
DVD Status	ON
Inertia Status	ON

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	1, 30
Climate Change (%)	0, 0

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
E1.000	E1	15 Winter	30	+0%	30/15 Summer	30/15 Winter		
E1.001	E2	15 Winter	30	+0%	30/15 Summer			
E1.002	E3	15 Winter	30	+0%	30/15 Summer			
E1.003	E4	15 Winter	30	+0%	1/15 Summer			
E1.004	E5	15 Winter	30	+0%	30/15 Summer			
E1.005	E6	15 Winter	30	+0%	30/15 Summer			
E1.006	E7	120 Winter	30	+0%	30/15 Summer			
E1.007	E8	120 Winter	30	+0%	30/15 Summer			
E1.008	E9	120 Winter	30	+0%	30/15 Summer			
E1.009	E10	120 Winter	30	+0%	30/15 Summer			
E1.010	E11	120 Winter	30	+0%	30/30 Winter			
E2.000	E15	120 Winter	30	+0%	30/15 Summer			
E2.001	E16	120 Winter	30	+0%	30/60 Winter			
E3.000	E15	120 Winter	30	+0%	30/60 Winter			
E3.001	E16	120 Winter	30	+0%	30/60 Winter			
E3.002	E17	120 Winter	30	+0%	30/60 Winter			
E3.003	E18	120 Winter	30	+0%	30/60 Winter			

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Existing

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
E1.000	E1	9.180	0.465	0.017	0.31		9.6	FLOOD	1
E1.001	E2	9.175	0.435	0.000	0.11		11.9	FLOOD RISK	
E1.002	E3	9.169	0.619	0.000	0.66		41.0	FLOOD RISK	
E1.003	E4	9.093	0.673	0.000	3.01		78.4	FLOOD RISK	
E1.004	E5	8.965	0.500	0.000	2.73		110.7	FLOOD RISK	
E1.005	E6	8.872	0.431	0.000	2.59		144.4	FLOOD RISK	
E1.006	E7	8.853	0.383	0.000	0.34		71.7	SURCHARGED	
E1.007	E8	8.849	0.519	0.000	0.44		74.5	SURCHARGED	
E1.008	E9	8.845	0.585	0.000	0.54		80.1	SURCHARGED	
E1.009	E10	8.839	0.689	0.000	0.76		87.6	SURCHARGED	
E1.010	E11	8.831	0.696	0.000	0.35		89.2	SURCHARGED	
E2.000	E15	8.839	0.464	0.000	0.76		9.0	SURCHARGED	
E2.001	E16	8.835	0.415	0.000	0.14		18.2	SURCHARGED	
E3.000	E15	8.849	0.264	0.000	0.26		12.2	SURCHARGED	
E3.001	E16	8.845	0.385	0.000	0.29		18.7	SURCHARGED	
E3.002	E17	8.842	0.482	0.000	0.34		25.5	SURCHARGED	
E3.003	E18	8.838	0.508	0.000	0.28		37.2	SURCHARGED	

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Existing

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
E3.004	E19	120 Winter	30	+0%	30/60 Summer				8.834
E2.002	E15	120 Winter	30	+0%	30/30 Winter				8.833
E1.011	E15	120 Winter	30	+0%	1/15 Summer				8.829
E1.012	E16	15 Winter	30	+0%	1/15 Summer				8.284

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
E3.004	E19	0.624	0.000	0.29		46.0	SURCHARGED	
E2.002	E15	0.753	0.000	0.34		64.2	SURCHARGED	
E1.011	E15	3.149	0.000	1.27		24.0	SURCHARGED	
E1.012	E16	0.151	0.000	1.90		24.9	SURCHARGED	