

AECOM		Page 1
Midpoint Alencon Link Basingstoke, RG21 7PP	Manchester College Higher Education Entrance	
Date 28/01/2022 File Stage 4 model - MC 2022 Rev...	Designed by MC Checked by	
Innovyze	Network 2020.1	

Existing Network Details for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type
S1.000	17.604	0.927	19.0	0.476	5.00	0.0	0.600	o	300	Pipe/Conduit
S1.001	27.103	0.082	330.5	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit
S2.000	9.314	0.093	100.2	0.015	5.00	0.0	0.600	o	150	Pipe/Conduit
S3.000	15.935	0.363	44.0	0.018	5.00	0.0	0.600	o	150	Pipe/Conduit
S2.001	7.580	0.045	168.4	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit
S4.000	4.457	0.462	9.6	0.021	5.00	0.0	0.600	o	150	Pipe/Conduit
S2.002	11.159	0.066	169.1	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit
S5.000	11.303	0.583	19.4	0.049	5.00	0.0	0.600	o	150	Pipe/Conduit
S2.003	18.700	0.101	185.1	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit
S6.000	12.247	0.827	14.8	0.016	5.00	0.0	0.600	o	150	Pipe/Conduit
S2.004	7.686	0.046	167.0	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit
S7.000	5.142	1.025	5.0	0.020	5.00	0.0	0.600	o	150	Pipe/Conduit
S2.005	13.289	0.079	168.2	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit

Network Results Table

PN	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Vel (m/s)	Cap (l/s)
S1.000	29.400	0.476	0.0	3.62	256.1
S1.001	26.800	0.476	0.0	1.23	265.5
S2.000	28.116	0.015	0.0	1.00	17.7
S3.000	28.630	0.018	0.0	1.52	26.9
S2.001	27.948	0.033	0.0	1.00	39.9
S4.000	28.440	0.021	0.0	3.26	57.7
S2.002	27.903	0.054	0.0	1.00	39.9
S5.000	28.495	0.049	0.0	2.30	40.6
S2.003	27.837	0.103	0.0	0.96	38.1
S6.000	28.628	0.016	0.0	2.63	46.5
S2.004	27.726	0.119	0.0	1.01	40.1
S7.000	28.780	0.020	0.0	4.53	80.1
S2.005	27.680	0.139	0.0	1.01	40.0

AECOM		Page 2
Midpoint Alencon Link Basingstoke, RG21 7PP	Manchester College Higher Education Entrance	
Date 28/01/2022	Designed by MC	
File Stage 4 model - MC 2022 Rev...	Checked by	
Innovyze	Network 2020.1	

Existing Network Details for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type
S8.000	9.181	0.092	99.8	0.017	5.00	0.0	0.600	o	150	Pipe/Conduit
S2.006	7.552	0.041	185.1	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit
S9.000	5.716	0.049	116.7	0.024	5.00	0.0	0.600	o	150	Pipe/Conduit
S10.000	10.596	0.623	17.0	0.056	5.00	0.0	0.600	o	150	Pipe/Conduit
S11.000	7.851	0.773	10.2	0.048	5.00	0.0	0.600	o	150	Pipe/Conduit
S10.001	10.142	0.102	99.5	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit
S2.007	3.972	0.542	7.3	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit
S1.002	30.915	0.093	332.4	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit
S1.003	30.211	0.092	328.4	0.013	0.00	0.0	0.600	o	525	Pipe/Conduit
S1.004	41.615	0.085	489.6	0.010	0.00	0.0	0.600	o	525	Pipe/Conduit
S12.000	5.489	2.187	2.5	0.028	5.00	0.0	0.600	o	150	Pipe/Conduit
S1.005	27.334	0.057	479.6	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit
S13.000	4.600	0.028	164.3	0.049	5.00	0.0	0.600	o	150	Pipe/Conduit
S14.000	11.956	0.305	39.2	0.014	5.00	0.0	0.600	o	100	Pipe/Conduit

Network Results Table

PN	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Vel (m/s)	Cap (l/s)
S8.000	28.888	0.017	0.0	1.01	17.8
S2.006	27.601	0.156	0.0	0.96	38.1
S9.000	29.050	0.024	0.0	0.93	16.4
S10.000	28.953	0.056	0.0	2.45	43.4
S11.000	29.103	0.048	0.0	3.18	56.2
S10.001	28.330	0.104	0.0	1.01	17.8
S2.007	27.560	0.284	0.0	4.86	193.4
S1.002	26.718	0.760	0.0	1.22	264.7
S1.003	26.625	0.773	0.0	1.23	266.4
S1.004	26.533	0.783	0.0	1.01	217.7
S12.000	29.010	0.028	0.0	6.41	113.3
S1.005	26.448	0.811	0.0	1.02	220.0
S13.000	29.010	0.049	0.0	0.78	13.8
S14.000	34.117	0.014	0.0	1.24	9.7

AECOM		Page 3
Midpoint Alencon Link Basingstoke, RG21 7PP	Manchester College Higher Education Entrance	
Date 28/01/2022 File Stage 4 model - MC 2022 Rev...	Designed by MC Checked by	
Innovyze	Network 2020.1	

Existing Network Details for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type
S15.000	9.547	0.533	17.9	0.002	5.00	0.0	0.600	o	100	Pipe/Conduit
S14.001	6.400	0.091	70.0	0.001	0.00	0.0	0.600	o	100	Pipe/Conduit
S14.002	9.462	0.166	57.0	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit
S14.003	14.548	0.737	19.7	0.003	5.00	0.0	0.600	U	-4	Pipe/Conduit
S14.004	13.121	0.675	19.4	0.003	0.00	0.0	0.600	U	-4	Pipe/Conduit
S14.005	13.154	0.700	18.8	0.002	0.00	0.0	0.600	U	-4	Pipe/Conduit
S14.006	13.106	0.770	17.0	0.002	0.00	0.0	0.600	U	-4	Pipe/Conduit
S14.007	13.301	0.789	16.9	0.002	0.00	0.0	0.600	U	-4	Pipe/Conduit
S14.008	5.966	1.128	5.3	0.002	5.00	0.0	0.600	o	150	Pipe/Conduit
S16.000	5.906	0.856	6.9	0.009	5.00	0.0	0.600	o	150	Pipe/Conduit
S14.009	16.605	0.118	140.7	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit
S14.010	4.108	0.016	256.8	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit
S1.006	5.598	1.241	4.5	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit
S1.007	15.931	0.046	350.0	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit

Network Results Table

PN	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Vel (m/s)	Cap (l/s)
S15.000	34.350	0.002	0.0	1.83	14.4
S14.001	33.817	0.017	0.0	0.92	7.2
S14.002	33.726	0.017	0.0	1.02	8.0
S14.003	33.540	0.020	0.0	2.44	61.9
S14.004	32.803	0.023	0.0	2.46	62.4
S14.005	32.128	0.025	0.0	2.51	63.5
S14.006	31.428	0.027	0.0	2.63	66.7
S14.007	30.658	0.029	0.0	2.65	67.1
S14.008	29.272	0.031	0.0	4.41	78.0
S16.000	29.000	0.009	0.0	3.86	68.2
S14.009	28.069	0.040	0.0	1.10	43.7
S14.010	27.951	0.040	0.0	0.81	32.3
S1.006	26.391	0.900	0.0	6.20	246.7
S1.007	23.353	0.900	0.0	1.30	366.4

AECOM		Page 4
Midpoint Alencon Link Basingstoke, RG21 7PP	Manchester College Higher Education Entrance	
Date 28/01/2022	Designed by MC	
File Stage 4 model - MC 2022 Rev...	Checked by	
Innovyze	Network 2020.1	

PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S1.000	o	300	RWP	30.000	29.400	0.300	Open Manhole	1200
S1.001	o	525	S1	29.840	26.800	2.515	Open Manhole	1800
S2.000	o	150	G1	28.996	28.116	0.730	Open Manhole	450
S3.000	o	150	G5	29.280	28.630	0.500	Open Manhole	450
S2.001	o	225	S2	29.210	27.948	1.037	Open Manhole	1200
S4.000	o	150	G3	29.090	28.440	0.500	Open Manhole	450
S2.002	o	225	J1	29.270	27.903	1.142	Junction	
S5.000	o	150	G4	29.145	28.495	0.500	Open Manhole	450
S2.003	o	225	J2	29.380	27.837	1.318	Junction	
S6.000	o	150	G6	29.278	28.628	0.500	Open Manhole	450
S2.004	o	225	J4	29.550	27.726	1.599	Junction	
S7.000	o	150	G7	29.430	28.780	0.500	Open Manhole	450
S2.005	o	225	J5	29.605	27.680	1.700	Junction	

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S1.000	17.604	19.0	S1	29.840	28.473	1.067	Open Manhole	1800
S1.001	27.103	330.5	S6	29.643	26.718	2.400	Open Manhole	1500
S2.000	9.314	100.2	S2	29.210	28.023	1.037	Open Manhole	1200
S3.000	15.935	44.0	S2	29.210	28.268	0.793	Open Manhole	1200
S2.001	7.580	168.4	J1	29.270	27.903	1.142	Junction	
S4.000	4.457	9.6	J1	29.270	27.978	1.142	Junction	
S2.002	11.159	169.1	J2	29.380	27.837	1.318	Junction	
S5.000	11.303	19.4	J2	29.380	27.912	1.318	Junction	
S2.003	18.700	185.1	J4	29.550	27.736	1.589	Junction	
S6.000	12.247	14.8	J4	29.550	27.801	1.599	Junction	
S2.004	7.686	167.0	J5	29.605	27.680	1.700	Junction	
S7.000	5.142	5.0	J5	29.605	27.755	1.700	Junction	
S2.005	13.289	168.2	S2	29.743	27.601	1.917	Open Manhole	1200

AECOM		Page 5
Midpoint Alencon Link Basingstoke, RG21 7PP	Manchester College Higher Education Entrance	
Date 28/01/2022 File Stage 4 model - MC 2022 Rev...	Designed by MC Checked by	
Innovyze	Network 2020.1	

PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S8.000	o	150	G8	29.538	28.888	0.500	Open Manhole	450
S2.006	o	225	S2	29.743	27.601	1.917	Open Manhole	1200
S9.000	o	150	G9	29.660	29.050	0.460	Open Manhole	450
S10.000	o	150	G10	29.603	28.953	0.500	Open Manhole	450
S11.000	o	150	G11	29.753	29.103	0.500	Open Manhole	450
S10.001	o	150	S5	29.680	28.330	1.200	Open Manhole	1200
S2.007	o	225	S4	29.662	27.560	1.877	Open Manhole	1200
S1.002	o	525	S6	29.643	26.718	2.400	Open Manhole	1500
S1.003	o	525	J6(AT1)	29.352	26.625	2.202	Open Manhole	600
S1.004	o	525	S7	29.266	26.533	2.208	Open Manhole	1500
S12.000	o	150	G14	29.890	29.010	0.730	Open Manhole	450
S1.005	o	525	J9	29.945	26.448	2.972	Junction	
S13.000	o	150	G15	29.890	29.010	0.730	Open Manhole	450

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S8.000	9.181	99.8	S2	29.743	28.796	0.797	Open Manhole	1200
S2.006	7.552	185.1	S4	29.662	27.560	1.877	Open Manhole	1200
S9.000	5.716	116.7	S4	29.662	29.001	0.511	Open Manhole	1200
S10.000	10.596	17.0	S5	29.680	28.330	1.200	Open Manhole	1200
S11.000	7.851	10.2	S5	29.680	28.330	1.200	Open Manhole	1200
S10.001	10.142	99.5	S4	29.662	28.228	1.284	Open Manhole	1200
S2.007	3.972	7.3	S6	29.643	27.018	2.400	Open Manhole	1500
S1.002	30.915	332.4	J6(AT1)	29.352	26.625	2.202	Open Manhole	600
S1.003	30.211	328.4	S7	29.266	26.533	2.208	Open Manhole	1500
S1.004	41.615	489.6	J9	29.945	26.448	2.972	Junction	
S12.000	5.489	2.5	J9	29.945	26.823	2.972	Junction	
S1.005	27.334	479.6	S8(FC)	29.936	26.391	3.020	Open Manhole	2100
S13.000	4.600	164.3	S8(FC)	29.936	28.982	0.804	Open Manhole	2100

AECOM		Page 6
Midpoint Alencon Link Basingstoke, RG21 7PP	Manchester College Higher Education Entrance	
Date 28/01/2022	Designed by MC	
File Stage 4 model - MC 2022 Rev...	Checked by	
Innovyze	Network 2020.1	

PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S14.000	o	100	HEE-CH2	34.352	34.117	0.135	Open Manhole	300
S15.000	o	100	HEE-CH1	35.050	34.350	0.600	Open Manhole	300
S14.001	o	100	HEE-S1	34.417	33.817	0.500	Open Manhole	450
S14.002	o	100	HEE-S2	34.400	33.726	0.574	Open Manhole	450
S14.003	U	-4	PH1-CH1	33.820	33.540	0.095	Open Manhole	150
S14.004	U	-4	PH1-CH2	33.083	32.803	0.095	Open Manhole	150
S14.005	U	-4	PH1-CH3	32.408	32.128	0.095	Open Manhole	150
S14.006	U	-4	PH1-CH4	31.708	31.428	0.095	Open Manhole	150
S14.007	U	-4	PH1-CH5	30.938	30.658	0.095	Open Manhole	150
S14.008	o	150	G16	30.152	29.272	0.730	Open Manhole	300
S16.000	o	150	G17	29.880	29.000	0.730	Open Manhole	300
S14.009	o	225	S9	29.937	28.069	1.643	Open Manhole	1050
S14.010	o	225	S10	29.975	27.951	1.799	Open Manhole	1050
S1.006	o	225	S8 (FC)	29.936	26.391	3.320	Open Manhole	2100
S1.007	o	600	UU-C2	29.937	23.353	5.984	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S14.000	11.956	39.2	HEE-S1	34.417	33.812	0.505	Open Manhole	450
S15.000	9.547	17.9	HEE-S1	34.417	33.817	0.500	Open Manhole	450
S14.001	6.400	70.0	HEE-S2	34.400	33.726	0.574	Open Manhole	450
S14.002	9.462	57.0	PH1-CH1	33.820	33.560	0.160	Open Manhole	150
S14.003	14.548	19.7	PH1-CH2	33.083	32.803	0.095	Open Manhole	150
S14.004	13.121	19.4	PH1-CH3	32.408	32.128	0.095	Open Manhole	150
S14.005	13.154	18.8	PH1-CH4	31.708	31.428	0.095	Open Manhole	150
S14.006	13.106	17.0	PH1-CH5	30.938	30.658	0.095	Open Manhole	150
S14.007	13.301	16.9	G16	30.152	29.869	0.098	Open Manhole	300
S14.008	5.966	5.3	S9	29.937	28.144	1.643	Open Manhole	1050
S16.000	5.906	6.9	S9	29.937	28.144	1.643	Open Manhole	1050
S14.009	16.605	140.7	S10	29.975	27.951	1.799	Open Manhole	1050
S14.010	4.108	256.8	S8 (FC)	29.936	27.935	1.776	Open Manhole	2100
S1.006	5.598	4.5	UU-C2	29.937	25.150	4.562	Open Manhole	1500
S1.007	15.931	350.0	UU Outfall	29.600	23.307	5.693	Open Manhole	0

AECOM		Page 7
Midpoint Alencon Link Basingstoke, RG21 7PP	Manchester College Higher Education Entrance	
Date 28/01/2022	Designed by MC	
File Stage 4 model - MC 2022 Rev...	Checked by	
Innovyze	Network 2020.1	

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

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 Coefficient 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 Offline Controls 0 Number of Time/Area Diagrams 0
 Number of Online Controls 2 Number of Storage Structures 1 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.100 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.357 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
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 40, 40, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S1.000	RWP	15 Winter	1	+40%	100/15 Summer				29.526
S1.001	S1	15 Winter	1	+40%	30/15 Summer				27.052
S2.000	G1	15 Winter	1	+40%	30/15 Summer				28.156
S3.000	G5	15 Winter	1	+40%					28.665
S2.001	S2	15 Winter	1	+40%	30/15 Summer				28.014
S4.000	G3	15 Winter	1	+40%	100/15 Summer				28.469
S2.002	J1	15 Winter	1	+40%					27.980
S5.000	G4	15 Winter	1	+40%	100/15 Summer				28.543
S2.003	J2	15 Winter	1	+40%					27.944
S6.000	G6	15 Winter	1	+40%					28.653
S2.004	J4	15 Winter	1	+40%	30/15 Summer				27.859
S7.000	G7	15 Winter	1	+40%					28.802
S2.005	J5	15 Winter	1	+40%					27.805
S8.000	G8	15 Winter	1	+40%					28.931
S2.006	S2	15 Winter	1	+40%	30/15 Summer				27.763
S9.000	G9	15 Winter	1	+40%					29.106
S10.000	G10	15 Winter	1	+40%	30/15 Summer				29.003
S11.000	G11	15 Winter	1	+40%	100/15 Summer				29.144
S10.001	S5	15 Winter	1	+40%	1/15 Summer				28.502
S2.007	S4	15 Winter	1	+40%	30/15 Winter				27.666
S1.002	S6	15 Winter	1	+40%	30/15 Summer				27.000
S1.003	J6(AT1)	120 Winter	1	+40%	30/15 Winter				26.959
S1.004	S7	120 Winter	1	+40%	30/15 Summer				26.951
S12.000	G14	15 Winter	1	+40%					29.032
S1.005	J9	120 Winter	1	+40%					26.721
S13.000	G15	15 Winter	1	+40%	30/15 Summer				29.110
S14.000	HEE-CH2	15 Winter	1	+40%					34.152

AECOM		Page 8
Midpoint Alencon Link Basingstoke, RG21 7PP	Manchester College Higher Education Entrance	
Date 28/01/2022 File Stage 4 model - MC 2022 Rev...	Designed by MC Checked by	
Innovyze	Network 2020.1	

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

PN	US/MH	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Half Drain	Pipe	Status	Level
	Name	Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)		Exceeded
S1.000	RWP	-0.174	0.000	0.36			79.5		OK
S1.001	S1	-0.273	0.000	0.36			79.5		OK
S2.000	G1	-0.110	0.000	0.16			2.5		OK
S3.000	G5	-0.115	0.000	0.12			3.0		OK
S2.001	S2	-0.159	0.000	0.18			5.5		OK
S4.000	G3	-0.121	0.000	0.08			3.6		OK
S2.002	J1	-0.148	0.000	0.25			9.1		OK*
S5.000	G4	-0.102	0.000	0.23			8.3		OK
S2.003	J2	-0.118	0.000	0.45			17.3		OK*
S6.000	G6	-0.125	0.000	0.06			2.7		OK
S2.004	J4	-0.092	0.000	0.65			19.8		OK*
S7.000	G7	-0.128	0.000	0.05			3.4		OK
S2.005	J5	-0.100	0.000	0.58			22.8		OK*
S8.000	G8	-0.107	0.000	0.18			2.9		OK
S2.006	S2	-0.063	0.000	0.86			25.6		OK
S9.000	G9	-0.094	0.000	0.30			4.0		OK
S10.000	G10	-0.100	0.000	0.24			9.5		OK
S11.000	G11	-0.109	0.000	0.17			8.1		OK
S10.001	S5	0.022	0.000	1.11			17.6	SURCHARGED	
S2.007	S4	-0.119	0.000	0.44			46.1		OK
S1.002	S6	-0.243	0.000	0.56			123.6		OK
S1.003	J6 (AT1)	-0.191	0.000	0.05		85	12.2		OK
S1.004	S7	-0.107	0.000	0.06			11.4		OK
S12.000	G14	-0.128	0.000	0.05			4.7		OK
S1.005	J9	-0.252	0.000	0.06			12.4		OK*
S13.000	G15	-0.050	0.000	0.76			8.2		OK
S14.000	HEE-CH2	-0.065	0.000	0.26			2.4	FLOOD RISK	

AECOM		Page 9
Midpoint Alencon Link Basingstoke, RG21 7PP	Manchester College Higher Education Entrance	
Date 28/01/2022	Designed by MC	
File Stage 4 model - MC 2022 Rev...	Checked by	
Innovyze	Network 2020.1	

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

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S15.000	HEE-CH1	15 Winter	1	+40%					34.361
S14.001	HEE-S1	15 Winter	1	+40%	30/15 Summer				33.864
S14.002	HEE-S2	15 Winter	1	+40%	100/15 Summer				33.769
S14.003	PH1-CH1	15 Winter	1	+40%					33.568
S14.004	PH1-CH2	15 Winter	1	+40%					32.832
S14.005	PH1-CH3	15 Winter	1	+40%					32.158
S14.006	PH1-CH4	15 Winter	1	+40%					31.458
S14.007	PH1-CH5	15 Winter	1	+40%					30.689
S14.008	G16	15 Winter	1	+40%					29.299
S16.000	G17	15 Winter	1	+40%					29.016
S14.009	S9	15 Winter	1	+40%					28.130
S14.010	S10	15 Winter	1	+40%	100/60 Winter				28.028
S1.006	S8 (FC)	120 Winter	1	+40%	1/15 Winter				26.715
S1.007	UU-C2	120 Winter	1	+40%					23.443

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m ³)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
S15.000	HEE-CH1	-0.089	0.000	0.03			0.3	OK	
S14.001	HEE-S1	-0.053	0.000	0.43			2.8	OK	
S14.002	HEE-S2	-0.057	0.000	0.38			2.8	OK	
S14.003	PH1-CH1	-0.157	0.000	0.06			3.3	FLOOD RISK	
S14.004	PH1-CH2	-0.156	0.000	0.07			3.8	FLOOD RISK	
S14.005	PH1-CH3	-0.155	0.000	0.07			4.1	FLOOD RISK	
S14.006	PH1-CH4	-0.155	0.000	0.07			4.3	FLOOD RISK	
S14.007	PH1-CH5	-0.154	0.000	0.08			4.6	FLOOD RISK	
S14.008	G16	-0.123	0.000	0.08			4.9	OK	
S16.000	G17	-0.134	0.000	0.03			1.5	OK	
S14.009	S9	-0.164	0.000	0.16			6.3	OK	
S14.010	S10	-0.148	0.000	0.25			6.3	OK	
S1.006	S8 (FC)	0.099	0.000	0.09			13.6	SURCHARGED	
S1.007	UU-C2	-0.510	0.000	0.05			13.6	OK	

AECOM		Page 10
Midpoint Alencon Link Basingstoke, RG21 7PP	Manchester College Higher Education Entrance	
Date 28/01/2022	Designed by MC	
File Stage 4 model - MC 2022 Rev...	Checked by	
Innovyze	Network 2020.1	

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

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 Coefficient 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 Offline Controls 0 Number of Time/Area Diagrams 0
 Number of Online Controls 2 Number of Storage Structures 1 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.100 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.357 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
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 40, 40, 40

WARNING: Half Drain Time has not been calculated as the structure is too full.

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S1.000	RWP	15 Winter	30	+40%	100/15 Summer				29.624
S1.001	S1	180 Winter	30	+40%	30/15 Summer				27.739
S2.000	G1	15 Winter	30	+40%	30/15 Summer				28.355
S3.000	G5	15 Winter	30	+40%					28.686
S2.001	S2	15 Winter	30	+40%	30/15 Summer				28.337
S4.000	G3	15 Winter	30	+40%	100/15 Summer				28.486
S2.002	J1	15 Summer	30	+40%					28.128
S5.000	G4	15 Winter	30	+40%	100/15 Summer				28.575
S2.003	J2	15 Summer	30	+40%					28.062
S6.000	G6	15 Winter	30	+40%					28.668
S2.004	J4	15 Summer	30	+40%	30/15 Summer				27.961
S7.000	G7	15 Winter	30	+40%					28.816
S2.005	J5	15 Summer	30	+40%					27.905
S8.000	G8	15 Winter	30	+40%					28.959
S2.006	S2	15 Winter	30	+40%	30/15 Summer				27.974
S9.000	G9	15 Winter	30	+40%					29.146
S10.000	G10	15 Winter	30	+40%	30/15 Summer				29.206
S11.000	G11	15 Winter	30	+40%	100/15 Summer				29.170
S10.001	S5	15 Winter	30	+40%	1/15 Summer				29.014
S2.007	S4	15 Winter	30	+40%	30/15 Winter				27.821
S1.002	S6	180 Winter	30	+40%	30/15 Summer				27.737
S1.003	J6(AT1)	180 Winter	30	+40%	30/15 Winter				27.733
S1.004	S7	180 Winter	30	+40%	30/15 Summer				27.788
S12.000	G14	15 Winter	30	+40%					29.045

AECOM		Page 11
Midpoint Alencon Link Basingstoke, RG21 7PP	Manchester College Higher Education Entrance	
Date 28/01/2022	Designed by MC	
File Stage 4 model - MC 2022 Rev...	Checked by	
Innovyze	Network 2020.1	

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

PN	US/MH Name	Surcharged Flooded			Half Drain Pipe		Status	Level Exceeded
		Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)		
S1.000	RWP	-0.076	0.000	0.89		194.7	OK	
S1.001	S1	0.414	0.000	0.23		50.2	SURCHARGED	
S2.000	G1	0.089	0.000	0.36		5.7	SURCHARGED	
S3.000	G5	-0.094	0.000	0.30		7.5	OK	
S2.001	S2	0.164	0.000	0.39		11.6	SURCHARGED	
S4.000	G3	-0.104	0.000	0.20		8.7	OK	
S2.002	J1	0.000	0.000	0.51		18.3	SURCHARGED*	
S5.000	G4	-0.070	0.000	0.55		20.3	OK	
S2.003	J2	0.000	0.000	0.92		35.2	SURCHARGED*	
S6.000	G6	-0.110	0.000	0.16		6.6	OK	
S2.004	J4	0.010	0.000	1.36		41.0	SURCHARGED*	
S7.000	G7	-0.114	0.000	0.13		8.3	OK	
S2.005	J5	0.000	0.000	1.21		47.8	SURCHARGED*	
S8.000	G8	-0.079	0.000	0.45		7.0	OK	
S2.006	S2	0.148	0.000	1.84		54.9	SURCHARGED	
S9.000	G9	-0.054	0.000	0.73		9.9	OK	
S10.000	G10	0.103	0.000	0.54		21.1	SURCHARGED	
S11.000	G11	-0.083	0.000	0.41		19.9	OK	
S10.001	S5	0.534	0.000	2.48		39.4	SURCHARGED	
S2.007	S4	0.036	0.000	0.99		103.1	SURCHARGED	
S1.002	S6	0.494	0.000	0.36		80.1	SURCHARGED	
S1.003	J6 (AT1)	0.583	0.000	0.09		20.1	SURCHARGED	
S1.004	S7	0.730	0.000	0.06		11.9	SURCHARGED	
S12.000	G14	-0.115	0.000	0.13		11.6	OK	

AECOM		Page 12
Midpoint Alencon Link Basingstoke, RG21 7PP	Manchester College Higher Education Entrance	
Date 28/01/2022	Designed by MC	
File Stage 4 model - MC 2022 Rev...	Checked by	
Innovyze	Network 2020.1	

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

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S1.005	J9	60 Winter	30	+40%					26.973
S13.000	G15	15 Winter	30	+40%	30/15 Summer				29.233
S14.000	HEE-CH2	15 Winter	30	+40%					34.175
S15.000	HEE-CH1	15 Winter	30	+40%					34.366
S14.001	HEE-S1	15 Winter	30	+40%	30/15 Summer				33.932
S14.002	HEE-S2	15 Winter	30	+40%	100/15 Summer				33.803
S14.003	PH1-CH1	15 Winter	30	+40%					33.586
S14.004	PH1-CH2	15 Winter	30	+40%					32.853
S14.005	PH1-CH3	15 Winter	30	+40%					32.180
S14.006	PH1-CH4	15 Winter	30	+40%					31.481
S14.007	PH1-CH5	15 Winter	30	+40%					30.714
S14.008	G16	15 Winter	30	+40%					29.317
S16.000	G17	15 Winter	30	+40%					29.025
S14.009	S9	15 Winter	30	+40%					28.170
S14.010	S10	15 Winter	30	+40%	100/60 Winter				28.082
S1.006	S8(FC)	60 Winter	30	+40%	1/15 Winter				27.394
S1.007	UU-C2	480 Winter	30	+40%					23.447

PN	US/MH Name	Depth (m)	Surcharged Volume (m³)	Flooded Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
S1.005	J9	0.000	0.000	0.06			13.8	SURCHARGED*	
S13.000	G15	0.073	0.000	1.85			20.1	SURCHARGED	
S14.000	HEE-CH2	-0.042	0.000	0.63			5.8	FLOOD RISK	
S15.000	HEE-CH1	-0.084	0.000	0.06			0.8	OK	
S14.001	HEE-S1	0.015	0.000	1.08			7.0	SURCHARGED	
S14.002	HEE-S2	-0.023	0.000	0.95			7.1	OK	
S14.003	PH1-CH1	-0.139	0.000	0.15			8.3	FLOOD RISK	
S14.004	PH1-CH2	-0.135	0.000	0.17			9.4	FLOOD RISK	
S14.005	PH1-CH3	-0.133	0.000	0.18			10.2	FLOOD RISK	
S14.006	PH1-CH4	-0.132	0.000	0.18			10.9	FLOOD RISK	
S14.007	PH1-CH5	-0.129	0.000	0.19			11.7	FLOOD RISK	
S14.008	G16	-0.105	0.000	0.19			12.5	OK	
S16.000	G17	-0.125	0.000	0.07			3.7	OK	
S14.009	S9	-0.124	0.000	0.41			16.1	OK	
S14.010	S10	-0.094	0.000	0.63			15.9	OK	
S1.006	S8(FC)	0.778	0.000	0.09			14.9	SURCHARGED	
S1.007	UU-C2	-0.506	0.000	0.06			14.9	OK	

AECOM		Page 14
Midpoint Alencon Link Basingstoke, RG21 7PP	Manchester College Higher Education Entrance	
Date 28/01/2022	Designed by MC	
File Stage 4 model - MC 2022 Rev...	Checked by	
Innovyze	Network 2020.1	

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

PN	US/MH Name	Surcharged Flooded		Flow / Overflow Cap. (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
		Depth (m)	Volume (m³)					
S1.000	RWP	0.122	0.000	1.06		232.1	FLOOD RISK	
S1.001	S1	1.305	0.000	0.30		65.0	SURCHARGED	
S2.000	G1	0.446	0.000	0.41		6.4	FLOOD RISK	
S3.000	G5	-0.055	0.000	0.39		9.6	OK	
S2.001	S2	0.519	0.000	0.46		13.6	SURCHARGED	
S4.000	G3	0.104	0.000	0.26		11.0	SURCHARGED	
S2.002	J1	0.000	0.000	0.61		22.1	SURCHARGED*	
S5.000	G4	0.143	0.000	0.66		24.2	SURCHARGED	
S2.003	J2	0.000	0.000	1.04		39.5	SURCHARGED*	
S6.000	G6	-0.104	0.000	0.20		8.6	OK	
S2.004	J4	0.010	0.000	1.51		45.7	SURCHARGED*	
S7.000	G7	-0.109	0.000	0.17		10.7	OK	
S2.005	J5	0.000	0.000	1.34		53.2	SURCHARGED*	
S8.000	G8	-0.067	0.000	0.58		9.1	OK	
S2.006	S2	0.806	0.000	0.72		21.7	SURCHARGED	
S9.000	G9	-0.034	0.000	0.94		12.8	OK	
S10.000	G10	0.442	0.000	0.65		25.4	FLOOD RISK	
S11.000	G11	0.178	0.000	0.46		22.2	SURCHARGED	
S10.001	S5	0.786	0.000	2.96		47.0	SURCHARGED	
S2.007	S4	0.845	0.000	0.38		39.4	SURCHARGED	
S1.002	S6	1.385	0.000	0.46		103.2	SURCHARGED	
S1.003	J6 (AT1)	1.474	0.000	0.09		20.3	SURCHARGED	
S1.004	S7	1.563	0.000	0.06		12.0	SURCHARGED	

AECOM		Page 15
Midpoint Alencon Link Basingstoke, RG21 7PP	Manchester College Higher Education Entrance	
Date 28/01/2022	Designed by MC	
File Stage 4 model - MC 2022 Rev...	Checked by	
Innovyze	Network 2020.1	

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

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S12.000	G14	15 Winter	100	+40%					29.050
S1.005	J9	15 Summer	100	+40%					26.973
S13.000	G15	15 Winter	100	+40%	30/15 Summer				29.305
S14.000	HEE-CH2	15 Winter	100	+40%					34.209
S15.000	HEE-CH1	15 Winter	100	+40%					34.369
S14.001	HEE-S1	15 Winter	100	+40%	30/15 Summer				34.028
S14.002	HEE-S2	15 Winter	100	+40%	100/15 Summer				33.871
S14.003	PH1-CH1	15 Winter	100	+40%					33.592
S14.004	PH1-CH2	15 Winter	100	+40%					32.860
S14.005	PH1-CH3	15 Winter	100	+40%					32.187
S14.006	PH1-CH4	15 Winter	100	+40%					31.488
S14.007	PH1-CH5	15 Winter	100	+40%					30.721
S14.008	G16	15 Winter	100	+40%					29.322
S16.000	G17	15 Winter	100	+40%					29.029
S14.009	S9	60 Winter	100	+40%					28.227
S14.010	S10	60 Winter	100	+40%	100/60 Winter				28.214
S1.006	S8(FC)	60 Winter	100	+40%	1/15 Winter				28.209
S1.007	UU-C2	960 Winter	100	+40%					23.447

PN	US/MH Name	Surcharged Flooded			Half Drain		Pipe Flow (l/s)	Status	Level Exceeded
		Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)			
S12.000	G14	-0.110	0.000	0.16			15.0	OK	
S1.005	J9	0.000	0.000	0.06			13.6	SURCHARGED*	
S13.000	G15	0.145	0.000	2.38			25.8	SURCHARGED	
S14.000	HEE-CH2	-0.008	0.000	0.78			7.1	FLOOD RISK	
S15.000	HEE-CH1	-0.081	0.000	0.08			1.1	OK	
S14.001	HEE-S1	0.111	0.000	1.31			8.5	SURCHARGED	
S14.002	HEE-S2	0.045	0.000	1.14			8.5	SURCHARGED	
S14.003	PH1-CH1	-0.133	0.000	0.18			10.0	FLOOD RISK	
S14.004	PH1-CH2	-0.128	0.000	0.20			11.4	FLOOD RISK	
S14.005	PH1-CH3	-0.126	0.000	0.22			12.4	FLOOD RISK	
S14.006	PH1-CH4	-0.125	0.000	0.22			13.5	FLOOD RISK	
S14.007	PH1-CH5	-0.122	0.000	0.24			14.5	FLOOD RISK	
S14.008	G16	-0.100	0.000	0.24			15.5	OK	
S16.000	G17	-0.121	0.000	0.09			4.8	OK	
S14.009	S9	-0.067	0.000	0.30			11.6	OK	
S14.010	S10	0.038	0.000	0.47			11.7	SURCHARGED	
S1.006	S8(FC)	1.593	0.000	0.09			14.8	SURCHARGED	
S1.007	UU-C2	-0.506	0.000	0.06			14.9	OK	