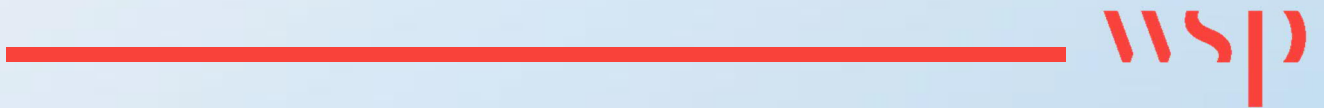


# Appendix E

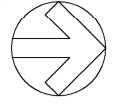
DRAINAGE STRATEGY



# Appendix E.1

FINISHED DEVELOPMENT LEVELS





PLATFORM LEVEL 5.75m AOD  
 HABITABLE DWELLINGS MINIMUM FFL +300mm  
 SLEEPING ACCOMMODATION MINIMUM FFL +600mm

**DO NOT SCALE**

- NOTES**
1. THIS GENERAL ARRANGEMENT IS NOT TO BE USED FOR CONSTRUCTION. IT IS A COMPOSITE DRAWING SHOWING THE SPATIAL RELATIONSHIP BETWEEN THE PROPOSED AND EXISTING FEATURES.
  2. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION, DRAWINGS AND STANDARD DETAILS.
  3. THE DESIGN HAS NOT BEEN DEVELOPED & AGREED THROUGH CONSULTATION WITH THE RELEVANT AUTHORITIES.
  4. IN ACCORDANCE WITH THE CIVIL REGULATIONS RESIDUAL RISKS OF SIGNIFICANCE ARE INDICATED ON THE CA DRAWING ONLY BY MEANS OF A HAZARD TRIANGLE WITH APPROPRIATE NOTE.
  5. CONFLICTING INFORMATION SHOWN ON THE ENGINEER'S DRAWINGS OR DISCREPANCIES BETWEEN THE INFORMATION GIVEN BY THE ENGINEER AND THAT PROVIDED BY OTHERS MUST BE REFERRED TO THE ENGINEER BEFORE THE WORKS COMMENCE. ALL DIMENSIONS SHALL NOT BE SCALED FROM THIS DRAWING. ALL DIMENSIONS SHOWN ARE IN METRES.
  - 6.

**UNLIT TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT AUTHORITIES. THE USER OF THIS DRAWING SHOULD BE UNDERSTOOD TO TAKE FULL RESPONSIBILITY FOR THE PRELIMINARY AND NOT FOR CONSTRUCTION. WORK PRIOR TO CONTRACTOR AND / OR ENGINEER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN. IT IS ENTIRELY AT THEIR OWN RISK.**

**DRAWING STATUS**

REV	DATE	BY	DESCRIPTION	CHK	APP
P03	11/12/2019	CLP	BANK INTERFACE UPDATED	cp	CP
P02	09/12/2019	CLP	RED LINE AMENDED	cp	CP
P01	06/12/2019	CLP	FIRST ISSUE	nc	CP

**S2 - FOR INFORMATION**

**WSP**

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 wsp.com

**BELLWAY HOMES**

**PROJECT:** CROWN QUAY LANE, SITTINGBOURNE

**TITLE:** INDICATIVE DEVELOPMENT LEVELS  
GENERAL ARRANGEMENT

SCALE @ A1	DESIGNED	APPROVED
1:500	MD	CP
PROJECT NO	ISSUED	DATE
70049200	CLP	December 19
DRAWING NO	REV	
9200-EWK-004	P03	

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# Appendix E.2

SURFACE WATER AND FOUL  
DRAINAGE STRATEGIES





# Appendix E.3

MICRODRAINAGE OUTPUTS



.	Crown Quay Lane
.	70049200
.	Issue P01
Date 17/12/2019	Designed by Joao Gil
File 70049200 Crown Quay Lane Surf...	Checked by Chris Patmore
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STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Proposed

Pipe Sizes STANDARD Manhole Sizes STANDARD

FSR Rainfall Model - England and Wales

Return Period (years)	100	PIMP (%)	100
M5-60 (mm)	19.600	Add Flow / Climate Change (%)	0
Ratio R	0.400	Minimum Backdrop Height (m)	0.000
Maximum Rainfall (mm/hr)	200	Maximum Backdrop Height (m)	0.001
Maximum Time of Concentration (mins)	30	Min Design Depth for Optimisation (m)	1.200
Foul Sewage (l/s/ha)	0.000	Min Vel for Auto Design only (m/s)	1.00
Volumetric Runoff Coeff.	0.750	Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

Network Design Table for Proposed

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	Auto Design
S1.000	36.812	0.250	147.2	0.147	4.00	0.0	0.600	o	300	Pipe/Conduit	
S1.001	29.015	0.172	168.7	0.039	0.00	0.0	0.600	o	375	Pipe/Conduit	
S1.002	21.216	0.071	298.8	0.044	0.00	0.0	0.600	o	375	Pipe/Conduit	
S1.003	5.731	0.019	301.6	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
S1.004	65.208	0.243	268.3	0.145	0.00	0.0	0.600	o	450	Pipe/Conduit	
S2.000	14.534	0.340	42.7	0.049	4.00	0.0	0.600	o	150	Pipe/Conduit	
S2.001	12.636	0.057	221.7	0.028	0.00	0.0	0.600	o	300	Pipe/Conduit	
S2.002	20.352	0.084	242.3	0.018	0.00	0.0	0.600	o	300	Pipe/Conduit	
S2.003	11.472	0.278	41.3	0.012	0.00	0.0	0.600	o	300	Pipe/Conduit	
S3.000	16.629	0.345	48.2	0.036	4.00	0.0	0.600	o	150	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S1.000	166.76	4.47	4.500	0.147	0.0	0.0	0.0	1.29	91.4	66.5
S1.001	162.42	4.82	4.175	0.186	0.0	0.0	0.0	1.39	153.8	82.0
S1.002	158.45	5.16	4.003	0.231	0.0	0.0	0.0	1.04	115.2	99.0
S1.003	157.42	5.25	3.932	0.231	0.0	0.0	0.0	1.04	114.6	99.0
S1.004	148.32	6.13	3.838	0.376	0.0	0.0	0.0	1.24	196.6	151.0
S2.000	171.00	4.16	4.875	0.049	0.0	0.0	0.0	1.54	27.3	22.8
S2.001	168.30	4.36	4.385	0.077	0.0	0.0	0.0	1.05	74.4	35.2
S2.002	163.98	4.69	4.328	0.095	0.0	0.0	0.0	1.01	71.1	42.2
S2.003	163.02	4.77	4.244	0.107	0.0	0.0	0.0	2.45	173.5	47.2
S3.000	170.53	4.19	4.550	0.036	0.0	0.0	0.0	1.45	25.7	16.7

.	Crown Quay Lane
.	70049200
.	Issue P01
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Network Design Table for Proposed

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	Auto Design
S4.000	23.262	0.155	150.1	0.019	4.00	0.0	0.600	o	150	Pipe/Conduit	🔒
S4.001	6.330	0.042	150.7	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	🔒
S4.002	16.756	0.074	226.4	0.036	0.00	0.0	0.600	o	225	Pipe/Conduit	🔒
S4.003	16.375	0.073	225.0	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	🔒
S3.001	21.482	0.067	320.6	0.064	0.00	0.0	0.600	o	375	Pipe/Conduit	🔒
S3.002	8.171	0.025	326.8	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	🔒
S2.004	35.134	0.088	400.0	0.070	0.00	0.0	0.600	o	450	Pipe/Conduit	🔒
S2.005	5.809	0.072	80.7	0.071	0.00	0.0	0.600	o	450	Pipe/Conduit	🔒
S5.000	12.557	0.075	167.4	0.031	4.00	0.0	0.600	o	225	Pipe/Conduit	🔒
S5.001	18.284	0.369	49.6	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	🔒
S2.006	30.486	0.061	499.8	0.017	0.00	0.0	0.600	o	525	Pipe/Conduit	🔒
S1.005	17.139	0.034	504.1	0.000	0.00	0.0	0.600	o	675	Pipe/Conduit	🔒
S1.006	5.931	0.012	494.3	0.017	0.00	0.0	0.600	o	675	Pipe/Conduit	🔒
S1.007	3.034	0.040	75.9	0.000	0.00	0.0	0.600	o	675	Pipe/Conduit	🔒
S6.000	13.035	0.245	53.2	0.017	4.00	0.0	0.600	o	150	Pipe/Conduit	🔒

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	E I.Area (ha)	E Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S4.000	166.77	4.47	4.550	0.019	0.0	0.0	0.0	0.82	14.5	8.5
S4.001	165.12	4.60	4.395	0.019	0.0	0.0	0.0	0.82	14.4	8.5
S4.002	161.17	4.93	4.278	0.054	0.0	0.0	0.0	0.86	34.4	23.7
S4.003	157.55	5.24	4.203	0.054	0.0	0.0	0.0	0.87	34.5	23.7
S3.001	153.70	5.60	3.980	0.155	0.0	0.0	0.0	1.01	111.2	64.5
S3.002	152.28	5.73	3.916	0.155	0.0	0.0	0.0	1.00	110.1	64.5
S2.004	146.61	6.31	3.816	0.332	0.0	0.0	0.0	1.01	160.7	131.9
S2.005	146.21	6.36	3.728	0.404	0.0	0.0	0.0	2.26	360.2	159.9
S5.000	170.30	4.21	4.325	0.031	0.0	0.0	0.0	1.01	40.1	14.3
S5.001	168.11	4.37	4.250	0.031	0.0	0.0	0.0	1.86	74.1	14.3
S2.006	141.67	6.87	3.581	0.452	0.0	0.0	0.0	1.00	215.4	173.5
S1.005	139.61	7.11	3.370	0.828	0.0	0.0	0.0	1.16	415.3	313.1
S1.006	138.92	7.20	3.336	0.845	0.0	0.0	0.0	1.17	419.4	318.1
S1.007	138.78	7.21	3.324	0.845	0.0	0.0	0.0	3.01	1077.7	318.1
S6.000	170.99	4.16	4.550	0.017	0.0	0.0	0.0	1.38	24.4	7.7



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Network Design Table for Proposed

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	Auto Design
S6.001	9.191	0.054	170.2	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	🔴
S6.002	16.414	0.171	96.0	0.014	0.00	0.0	0.600	o	150	Pipe/Conduit	🔴
S6.003	11.969	0.067	178.6	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	🔴
S6.004	11.958	0.053	225.6	0.019	0.00	0.0	0.600	o	225	Pipe/Conduit	🔴
S6.005	17.349	0.149	116.4	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	🔴
S7.000	20.412	0.136	150.1	0.008	4.00	0.0	0.600	o	150	Pipe/Conduit	🔴
S7.001	9.593	0.064	149.9	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	🔴
S7.002	12.060	0.080	150.8	0.005	0.00	0.0	0.600	o	150	Pipe/Conduit	🔴
S7.003	7.591	0.209	36.3	0.010	0.00	0.0	0.600	o	150	Pipe/Conduit	🔴
S1.008	2.922	0.006	487.0	0.000	0.00	0.0	0.600	o	675	Pipe/Conduit	🔴

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S6.001	168.30	4.36	4.305	0.017	0.0	0.0	0.0	0.77	13.6	7.7
S6.002	164.87	4.62	4.251	0.031	0.0	0.0	0.0	1.03	18.1	13.9
S6.003	162.35	4.83	4.005	0.031	0.0	0.0	0.0	0.98	38.8	13.9
S6.004	159.63	5.06	3.938	0.050	0.0	0.0	0.0	0.87	34.4	21.8
S6.005	156.93	5.30	3.885	0.050	0.0	0.0	0.0	1.21	48.1	21.8
S7.000	167.52	4.42	4.300	0.008	0.0	0.0	0.0	0.82	14.5	3.5
S7.001	165.02	4.61	4.164	0.008	0.0	0.0	0.0	0.82	14.5	3.5
S7.002	161.99	4.86	4.100	0.013	0.0	0.0	0.0	0.82	14.4	5.7
S7.003	161.09	4.93	4.020	0.023	0.0	0.0	0.0	1.68	29.6	9.9
S1.008	138.45	7.25	3.286	0.919	0.0	0.0	0.0	1.18	422.6	344.4

Crown Quay Lane  
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Manhole Schedules for Proposed

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam., L*W (mm)	PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
S11	6.000	1.500	Open Manhole	1200	S1.000	4.500	300				
S12	5.750	1.575	Open Manhole	1350	S1.001	4.175	375	S1.000	4.250	300	
S13	5.900	1.897	Open Manhole	1350	S1.002	4.003	375	S1.001	4.003	375	
S14	6.100	2.168	Open Manhole	1350	S1.003	3.932	375	S1.002	3.932	375	
S15	6.100	2.262	Open Manhole	1350	S1.004	3.838	450	S1.003	3.913	375	
S21	6.300	1.425	Open Manhole	1200	S2.000	4.875	150				
S22	5.900	1.515	Open Manhole	1200	S2.001	4.385	300	S2.000	4.535	150	
S23	5.900	1.572	Open Manhole	1200	S2.002	4.328	300	S2.001	4.328	300	
S24	6.000	1.756	Open Manhole	1200	S2.003	4.244	300	S2.002	4.244	300	
S31	5.900	1.350	Open Manhole	1200	S3.000	4.550	150				
S41	5.900	1.350	Open Manhole	1200	S4.000	4.550	150				
S42	5.750	1.355	Open Manhole	1200	S4.001	4.395	150	S4.000	4.395	150	
S43	5.750	1.472	Open Manhole	1200	S4.002	4.278	225	S4.001	4.353	150	
S44	5.900	1.697	Open Manhole	1200	S4.003	4.203	225	S4.002	4.204	225	
S32	6.000	2.020	Open Manhole	1350	S3.001	3.980	375	S3.000	4.205	150	
								S4.003	4.130	225	
S33	5.900	1.987	Open Manhole	1350	S3.002	3.916	375	S3.001	3.913	375	
S25	6.200	2.384	Open Manhole	1350	S2.004	3.816	450	S2.003	3.966	300	
								S3.002	3.891	375	
S26	6.000	2.272	Open Manhole	1350	S2.005	3.728	450	S2.004	3.728	450	
S51	5.750	1.425	Open Manhole	1200	S5.000	4.325	225				
S52	5.850	1.600	Open Manhole	1200	S5.001	4.250	225	S5.000	4.250	225	
S27	6.000	2.419	Open Manhole	1500	S2.006	3.581	525	S2.005	3.656	450	
								S5.001	3.881	225	
S16	5.750	2.380	Open Manhole	1500	S1.005	3.370	675	S1.004	3.595	450	
								S2.006	3.520	525	
S17	5.650	2.314	Open Manhole	1500	S1.006	3.336	675	S1.005	3.336	675	
S18	5.650	2.326	Open Manhole	1500	S1.007	3.324	675	S1.006	3.324	675	
S61	5.900	1.350	Open Manhole	1200	S6.000	4.550	150				
S62	5.850	1.545	Open Manhole	1200	S6.001	4.305	150	S6.000	4.305	150	
S63	5.850	1.599	Open Manhole	1200	S6.002	4.251	150	S6.001	4.251	150	
S64	5.850	1.845	Open Manhole	1200	S6.003	4.005	225	S6.002	4.080	150	
S65	5.850	1.912	Open Manhole	1200	S6.004	3.938	225	S6.003	3.938	225	
S66	5.850	1.965	Open Manhole	1200	S6.005	3.885	225	S6.004	3.885	225	
S71	5.650	1.350	Open Manhole	1200	S7.000	4.300	150				
S72	5.885	1.721	Open Manhole	1200	S7.001	4.164	150	S7.000	4.164	150	
S73	5.850	1.750	Open Manhole	1200	S7.002	4.100	150	S7.001	4.100	150	

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Date 17/12/2019  
File 70049200 Crown Quay Lane Surf...

Crown Quay Lane  
70049200  
Issue P01  
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Checked by Chris Patmore



XP Solutions

Network 2019.1

Manhole Schedules for Proposed

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam., L*W (mm)	PN	Pipe Out Invert Level (m)	Diameter (mm)	PN	Pipes In Invert Level (m)	Diameter (mm)	Backdrop (mm)
S74	5.750	1.730	Open Manhole	1200	S7.003	4.020	150	S7.002	4.020	150	
S19	5.650	2.366	Open Manhole	1500	S1.008	3.286	675	S1.007	3.284	675	
								S6.005	3.736	225	
								S7.003	3.811	150	
	5.650	2.370	Open Manhole	750		OUTFALL		S1.008	3.280	675	

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S11	591134.390	164290.029	591134.390	164290.029	Required	
S12	591169.952	164280.517	591169.952	164280.517	Required	
S13	591174.919	164251.931	591174.919	164251.931	Required	
S14	591169.225	164231.493	591169.225	164231.493	Required	
S15	591163.937	164229.284	591163.937	164229.284	Required	
S21	591045.365	164149.289	591045.365	164149.289	Required	
S22	591058.047	164156.389	591058.047	164156.389	Required	
S23	591059.372	164168.955	591059.372	164168.955	Required	
S24	591049.539	164186.774	591049.539	164186.774	Required	
S31	591041.796	164235.332	591041.796	164235.332	Required	
S41	591010.481	164230.579	591010.481	164230.579	Required	

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Checked by Chris Patmore

Network 2019.1

Manhole Schedules for Proposed

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S42	591011.642	164207.345	591011.642	164207.345	Required	
S43	591017.825	164205.989	591017.825	164205.989	Required	
S44	591032.325	164214.385	591032.325	164214.385	Required	
S32	591047.774	164219.815	591047.774	164219.815	Required	
S33	591055.817	164199.896	591055.817	164199.896	Required	
S25	591059.438	164192.571	591059.438	164192.571	Required	
S26	591089.569	164210.642	591089.569	164210.642	Required	
S51	591116.984	164200.317	591116.984	164200.317	Required	
S52	591110.504	164211.073	591110.504	164211.073	Required	
S27	591092.763	164215.494	591092.763	164215.494	Required	
S16	591100.637	164244.946	591100.637	164244.946	Required	
S17	591084.524	164250.786	591084.524	164250.786	Required	
S18	591078.775	164252.240	591078.775	164252.240	Required	
S61	591126.967	164292.045	591126.967	164292.045	Required	
S62	591114.280	164295.039	591114.280	164295.039	Required	
S63	591112.056	164286.120	591112.056	164286.120	Required	

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Crown Quay Lane  
70049200  
Issue P01



Date 17/12/2019  
File 70049200 Crown Quay Lane Surf...

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Checked by Chris Patmore

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Manhole Schedules for Proposed

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S64	591105.392	164271.119	591105.392	164271.119	Required	
S65	591101.496	164259.803	591101.496	164259.803	Required	
S66	591093.581	164250.839	591093.581	164250.839	Required	
S71	591028.352	164249.735	591028.352	164249.735	Required	
S72	591048.151	164254.701	591048.151	164254.701	Required	
S73	591057.739	164254.384	591057.739	164254.384	Required	
S74	591069.488	164251.664	591069.488	164251.664	Required	
S19	591076.590	164254.345	591076.590	164254.345	Required	
	591077.483	164257.127			No Entry	

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PIPELINE SCHEDULES for Proposed

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	S11	6.000	4.500	1.200	Open Manhole	1200
S1.001	o	375	S12	5.750	4.175	1.200	Open Manhole	1350
S1.002	o	375	S13	5.900	4.003	1.522	Open Manhole	1350
S1.003	o	375	S14	6.100	3.932	1.793	Open Manhole	1350
S1.004	o	450	S15	6.100	3.838	1.812	Open Manhole	1350
S2.000	o	150	S21	6.300	4.875	1.275	Open Manhole	1200
S2.001	o	300	S22	5.900	4.385	1.215	Open Manhole	1200
S2.002	o	300	S23	5.900	4.328	1.272	Open Manhole	1200
S2.003	o	300	S24	6.000	4.244	1.456	Open Manhole	1200
S3.000	o	150	S31	5.900	4.550	1.200	Open Manhole	1200
S4.000	o	150	S41	5.900	4.550	1.200	Open Manhole	1200
S4.001	o	150	S42	5.750	4.395	1.205	Open Manhole	1200
S4.002	o	225	S43	5.750	4.278	1.247	Open Manhole	1200
S4.003	o	225	S44	5.900	4.203	1.472	Open Manhole	1200
S3.001	o	375	S32	6.000	3.980	1.645	Open Manhole	1350
S3.002	o	375	S33	5.900	3.916	1.609	Open Manhole	1350

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	36.812	147.2	S12	5.750	4.250	1.200	Open Manhole	1350
S1.001	29.015	168.7	S13	5.900	4.003	1.522	Open Manhole	1350
S1.002	21.216	298.8	S14	6.100	3.932	1.793	Open Manhole	1350
S1.003	5.731	301.6	S15	6.100	3.913	1.812	Open Manhole	1350
S1.004	65.208	268.3	S16	5.750	3.595	1.705	Open Manhole	1500
S2.000	14.534	42.7	S22	5.900	4.535	1.215	Open Manhole	1200
S2.001	12.636	221.7	S23	5.900	4.328	1.272	Open Manhole	1200
S2.002	20.352	242.3	S24	6.000	4.244	1.456	Open Manhole	1200
S2.003	11.472	41.3	S25	6.200	3.966	1.934	Open Manhole	1350
S3.000	16.629	48.2	S32	6.000	4.205	1.645	Open Manhole	1350
S4.000	23.262	150.1	S42	5.750	4.395	1.205	Open Manhole	1200
S4.001	6.330	150.7	S43	5.750	4.353	1.247	Open Manhole	1200
S4.002	16.756	226.4	S44	5.900	4.204	1.471	Open Manhole	1200
S4.003	16.375	225.0	S32	6.000	4.130	1.645	Open Manhole	1350
S3.001	21.482	320.6	S33	5.900	3.913	1.612	Open Manhole	1350
S3.002	8.171	326.8	S25	6.200	3.891	1.934	Open Manhole	1350

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PIPELINE SCHEDULES for Proposed

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)
S2.004	o	450	S25	6.200	3.816	1.934	Open Manhole	1350
S2.005	o	450	S26	6.000	3.728	1.822	Open Manhole	1350
S5.000	o	225	S51	5.750	4.325	1.200	Open Manhole	1200
S5.001	o	225	S52	5.850	4.250	1.375	Open Manhole	1200
S2.006	o	525	S27	6.000	3.581	1.894	Open Manhole	1500
S1.005	o	675	S16	5.750	3.370	1.705	Open Manhole	1500
S1.006	o	675	S17	5.650	3.336	1.639	Open Manhole	1500
S1.007	o	675	S18	5.650	3.324	1.651	Open Manhole	1500
S6.000	o	150	S61	5.900	4.550	1.200	Open Manhole	1200
S6.001	o	150	S62	5.850	4.305	1.395	Open Manhole	1200
S6.002	o	150	S63	5.850	4.251	1.449	Open Manhole	1200
S6.003	o	225	S64	5.850	4.005	1.620	Open Manhole	1200
S6.004	o	225	S65	5.850	3.938	1.687	Open Manhole	1200
S6.005	o	225	S66	5.850	3.885	1.740	Open Manhole	1200

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)
S2.004	35.134	400.0	S26	6.000	3.728	1.822	Open Manhole	1350
S2.005	5.809	80.7	S27	6.000	3.656	1.894	Open Manhole	1500
S5.000	12.557	167.4	S52	5.850	4.250	1.375	Open Manhole	1200
S5.001	18.284	49.6	S27	6.000	3.881	1.894	Open Manhole	1500
S2.006	30.486	499.8	S16	5.750	3.520	1.705	Open Manhole	1500
S1.005	17.139	504.1	S17	5.650	3.336	1.639	Open Manhole	1500
S1.006	5.931	494.3	S18	5.650	3.324	1.651	Open Manhole	1500
S1.007	3.034	75.9	S19	5.650	3.284	1.691	Open Manhole	1500
S6.000	13.035	53.2	S62	5.850	4.305	1.395	Open Manhole	1200
S6.001	9.191	170.2	S63	5.850	4.251	1.449	Open Manhole	1200
S6.002	16.414	96.0	S64	5.850	4.080	1.620	Open Manhole	1200
S6.003	11.969	178.6	S65	5.850	3.938	1.687	Open Manhole	1200
S6.004	11.958	225.6	S66	5.850	3.885	1.740	Open Manhole	1200
S6.005	17.349	116.4	S19	5.650	3.736	1.689	Open Manhole	1500

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PIPELINE SCHEDULES for Proposed

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)
S7.000	o	150	S71	5.650	4.300	1.200	Open Manhole	1200
S7.001	o	150	S72	5.885	4.164	1.571	Open Manhole	1200
S7.002	o	150	S73	5.850	4.100	1.600	Open Manhole	1200
S7.003	o	150	S74	5.750	4.020	1.580	Open Manhole	1200
S1.008	o	675	S19	5.650	3.286	1.689	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)
S7.000	20.412	150.1	S72	5.885	4.164	1.571	Open Manhole	1200
S7.001	9.593	149.9	S73	5.850	4.100	1.600	Open Manhole	1200
S7.002	12.060	150.8	S74	5.750	4.020	1.580	Open Manhole	1200
S7.003	7.591	36.3	S19	5.650	3.811	1.689	Open Manhole	1500
S1.008	2.922	487.0		5.650	3.280	1.695	Open Manhole	750



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Area Summary for Proposed

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
1.000	User	-	100	0.085	0.085	0.085
	User	-	100	0.031	0.031	0.116
	User	-	100	0.032	0.032	0.147
1.001	User	-	100	0.025	0.025	0.025
	User	-	100	0.014	0.014	0.039
1.002	User	-	100	0.025	0.025	0.025
	User	-	100	0.019	0.019	0.044
1.003	-	-	100	0.000	0.000	0.000
1.004	User	-	100	0.089	0.089	0.089
	User	-	100	0.038	0.038	0.127
	User	-	100	0.003	0.003	0.130
	User	-	100	0.005	0.005	0.135
	User	-	100	0.010	0.010	0.145
2.000	User	-	100	0.031	0.031	0.031
	User	-	100	0.018	0.018	0.049
2.001	User	-	100	0.028	0.028	0.028
2.002	User	-	100	0.018	0.018	0.018
2.003	User	-	100	0.012	0.012	0.012
3.000	User	-	100	0.036	0.036	0.036
4.000	User	-	100	0.019	0.019	0.019
4.001	-	-	100	0.000	0.000	0.000
4.002	User	-	100	0.036	0.036	0.036
4.003	-	-	100	0.000	0.000	0.000
3.001	User	-	100	0.026	0.026	0.026
	User	-	100	0.038	0.038	0.064
3.002	-	-	100	0.000	0.000	0.000
2.004	User	-	100	0.030	0.030	0.030
	User	-	100	0.019	0.019	0.050
	User	-	100	0.021	0.021	0.070
2.005	User	-	100	0.054	0.054	0.054
	User	-	100	0.017	0.017	0.071
5.000	User	-	100	0.031	0.031	0.031
5.001	-	-	100	0.000	0.000	0.000
2.006	User	-	100	0.017	0.017	0.017
1.005	-	-	100	0.000	0.000	0.000
1.006	User	-	100	0.017	0.017	0.017
1.007	-	-	100	0.000	0.000	0.000
6.000	User	-	100	0.017	0.017	0.017
6.001	-	-	100	0.000	0.000	0.000
6.002	User	-	100	0.014	0.014	0.014
6.003	-	-	100	0.000	0.000	0.000
6.004	User	-	100	0.019	0.019	0.019
6.005	-	-	100	0.000	0.000	0.000
7.000	User	-	100	0.008	0.008	0.008
7.001	-	-	100	0.000	0.000	0.000
7.002	User	-	100	0.005	0.005	0.005
7.003	User	-	100	0.010	0.010	0.010
1.008	-	-	100	0.000	0.000	0.000
				Total	Total	Total
				0.919	0.919	0.919

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### Simulation Criteria for Proposed

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m <sup>3</sup> /ha Storage	2.000
Hot Start (mins)	0	Inlet Coefficient	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 Offline Controls 0    Number of Time/Area Diagrams 0  
 Number of Online Controls 0    Number of Storage Structures 0    Number of Real Time Controls 0

### Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Summer
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.600	Storm Duration (mins)	30
Ratio R	0.400		

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

Simulation Criteria

Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000  
 Hot Start (mins) 0 MADD Factor \* 10m<sup>3</sup>/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 0 Number of Storage Structures 0 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 19.600 Cv (Summer) 0.750  
 Region England and Wales Ratio R 0.400 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0 DVD Status OFF  
 Analysis Timestep Fine Inertia Status OFF  
 DTS 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, 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	Surcharged	Flooded
									Level (m)	Depth (m)	Volume (m <sup>3</sup> )
S1.000	S11	15 Winter	1	+40%	100/15 Summer				4.623	-0.177	0.000
S1.001	S12	15 Winter	1	+40%	100/15 Summer				4.307	-0.243	0.000
S1.002	S13	15 Winter	1	+40%	30/15 Summer				4.187	-0.191	0.000
S1.003	S14	15 Winter	1	+40%	30/15 Summer				4.133	-0.174	0.000
S1.004	S15	15 Winter	1	+40%	100/15 Summer				4.022	-0.266	0.000
S2.000	S21	15 Winter	1	+40%	100/15 Summer				4.941	-0.084	0.000
S2.001	S22	15 Winter	1	+40%					4.485	-0.200	0.000
S2.002	S23	15 Winter	1	+40%					4.436	-0.192	0.000
S2.003	S24	15 Winter	1	+40%					4.320	-0.224	0.000
S3.000	S31	15 Summer	1	+40%	100/15 Summer				4.607	-0.093	0.000
S4.000	S41	15 Winter	1	+40%	100/15 Winter				4.604	-0.096	0.000
S4.001	S42	15 Winter	1	+40%	100/15 Summer				4.453	-0.092	0.000
S4.002	S43	15 Winter	1	+40%	100/15 Summer				4.364	-0.139	0.000
S4.003	S44	15 Winter	1	+40%	100/15 Summer				4.288	-0.140	0.000
S3.001	S32	15 Winter	1	+40%	100/15 Summer				4.124	-0.231	0.000
S3.002	S33	15 Winter	1	+40%	100/15 Summer				4.070	-0.221	0.000
S2.004	S25	15 Winter	1	+40%	30/15 Winter				4.015	-0.251	0.000
S2.005	S26	15 Winter	1	+40%	100/15 Summer				3.921	-0.257	0.000
S5.000	S51	15 Summer	1	+40%					4.390	-0.160	0.000
S5.001	S52	15 Summer	1	+40%					4.297	-0.178	0.000
S2.006	S27	15 Winter	1	+40%	30/15 Winter				3.816	-0.290	0.000
S1.005	S16	15 Winter	1	+40%	30/15 Summer				3.725	-0.320	0.000

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

PN	US/MH Name	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
S1.000	S11	0.35		29.8	OK	
S1.001	S12	0.26		35.6	OK	
S1.002	S13	0.43		41.6	OK	
S1.003	S14	0.56		41.5	OK	
S1.004	S15	0.34		61.2	OK	
S2.000	S21	0.40		10.1	OK	
S2.001	S22	0.24		14.6	OK	
S2.002	S23	0.28		17.3	OK	
S2.003	S24	0.15		19.3	OK	
S3.000	S31	0.31		7.4	OK	
S4.000	S41	0.28		3.8	OK	
S4.001	S42	0.31		3.8	OK	
S4.002	S43	0.31		9.5	OK	
S4.003	S44	0.31		9.4	OK	
S3.001	S32	0.28		26.3	OK	
S3.002	S33	0.35		25.9	OK	
S2.004	S25	0.39		55.0	OK	
S2.005	S26	0.39		65.3	OK	
S5.000	S51	0.18		6.4	OK	
S5.001	S52	0.10		6.4	OK	
S2.006	S27	0.39		71.0	OK	
S1.005	S16	0.54		129.0	OK	

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

PN	US/MH		Return Period	Climate Change	First (X) Surchage	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level	Surcharged Depth	Flooded Volume
	Name	Storm							(m)	(m)	(m <sup>3</sup> )
S1.006	S17	15 Winter	1	+40%	30/15 Winter			3.669	-0.342	0.000	
S1.007	S18	15 Winter	1	+40%	100/15 Summer			3.623	-0.376	0.000	
S6.000	S61	15 Summer	1	+40%				4.589	-0.111	0.000	
S6.001	S62	15 Summer	1	+40%	100/15 Summer			4.360	-0.095	0.000	
S6.002	S63	15 Winter	1	+40%	100/15 Summer			4.312	-0.089	0.000	
S6.003	S64	15 Winter	1	+40%				4.068	-0.162	0.000	
S6.004	S65	15 Winter	1	+40%				4.022	-0.141	0.000	
S6.005	S66	15 Winter	1	+40%				3.954	-0.156	0.000	
S7.000	S71	15 Winter	1	+40%				4.334	-0.116	0.000	
S7.001	S72	15 Winter	1	+40%				4.199	-0.115	0.000	
S7.002	S73	15 Winter	1	+40%				4.143	-0.107	0.000	
S7.003	S74	15 Winter	1	+40%				4.059	-0.111	0.000	
S1.008	S19	15 Winter	1	+40%	100/15 Summer			3.617	-0.344	0.000	

PN	US/MH Name	Pipe Flow / Overflow		Pipe Flow (l/s)	Status	Level Exceeded
		Flow Cap.	(l/s)			
S1.006	S17	0.48		131.6	OK	
S1.007	S18	0.32		131.7	OK	
S6.000	S61	0.15		3.4	OK	
S6.001	S62	0.28		3.4	OK	
S6.002	S63	0.34		5.7	OK	
S6.003	S64	0.17		5.7	OK	
S6.004	S65	0.30		8.8	OK	
S6.005	S66	0.20		8.8	OK	
S7.000	S71	0.11		1.6	OK	
S7.001	S72	0.12		1.5	OK	
S7.002	S73	0.18		2.4	OK	
S7.003	S74	0.15		3.9	OK	
S1.008	S19	0.48		140.9	OK	

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

#### Simulation Criteria

Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000  
 Hot Start (mins) 0 MADD Factor \* 10m<sup>3</sup>/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 0 Number of Storage Structures 0 Number of Real Time Controls 0

#### Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 19.600 Cv (Summer) 0.750  
 Region England and Wales Ratio R 0.400 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0 DVD Status OFF  
 Analysis Timestep Fine Inertia Status OFF  
 DTS 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, 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	Surcharged	Flooded
									Level (m)	Depth (m)	Volume (m <sup>3</sup> )
S1.000	S11	15 Winter	30	+40%	100/15 Summer				4.717	-0.083	0.000
S1.001	S12	15 Winter	30	+40%	100/15 Summer				4.466	-0.084	0.000
S1.002	S13	15 Winter	30	+40%	30/15 Summer				4.393	0.015	0.000
S1.003	S14	15 Winter	30	+40%	30/15 Summer				4.309	0.002	0.000
S1.004	S15	15 Winter	30	+40%	100/15 Summer				4.243	-0.045	0.000
S2.000	S21	15 Summer	30	+40%	100/15 Summer				4.994	-0.031	0.000
S2.001	S22	15 Winter	30	+40%					4.564	-0.121	0.000
S2.002	S23	15 Winter	30	+40%					4.526	-0.102	0.000
S2.003	S24	15 Winter	30	+40%					4.376	-0.168	0.000
S3.000	S31	15 Winter	30	+40%	100/15 Summer				4.648	-0.052	0.000
S4.000	S41	15 Winter	30	+40%	100/15 Winter				4.642	-0.058	0.000
S4.001	S42	15 Winter	30	+40%	100/15 Summer				4.494	-0.051	0.000
S4.002	S43	15 Winter	30	+40%	100/15 Summer				4.443	-0.060	0.000
S4.003	S44	15 Winter	30	+40%	100/15 Summer				4.377	-0.051	0.000
S3.001	S32	15 Winter	30	+40%	100/15 Summer				4.330	-0.025	0.000
S3.002	S33	15 Winter	30	+40%	100/15 Summer				4.289	-0.002	0.000
S2.004	S25	15 Winter	30	+40%	30/15 Winter				4.266	0.000	0.000
S2.005	S26	15 Winter	30	+40%	100/15 Summer				4.163	-0.015	0.000
S5.000	S51	15 Winter	30	+40%					4.431	-0.119	0.000
S5.001	S52	15 Summer	30	+40%					4.324	-0.151	0.000
S2.006	S27	15 Winter	30	+40%	30/15 Winter				4.116	0.010	0.000
S1.005	S16	15 Winter	30	+40%	30/15 Summer				4.061	0.016	0.000

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

PN	US/MH Name	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
S1.000	S11	0.86		73.0	OK	
S1.001	S12	0.65		87.3	OK	
S1.002	S13	1.07		104.0	SURCHARGED	
S1.003	S14	1.38		103.4	SURCHARGED	
S1.004	S15	0.85		155.1	OK	
S2.000	S21	0.98		24.7	OK	
S2.001	S22	0.64		38.8	OK	
S2.002	S23	0.75		46.6	OK	
S2.003	S24	0.40		52.3	OK	
S3.000	S31	0.76		18.2	OK	
S4.000	S41	0.68		9.3	OK	
S4.001	S42	0.76		9.2	OK	
S4.002	S43	0.86		26.4	OK	
S4.003	S44	0.83		25.4	OK	
S3.001	S32	0.74		69.4	OK	
S3.002	S33	0.91		67.2	OK	
S2.004	S25	1.01		141.8	SURCHARGED	
S2.005	S26	0.98		165.5	OK	
S5.000	S51	0.45		15.6	OK	
S5.001	S52	0.24		15.6	OK	
S2.006	S27	0.98		177.7	SURCHARGED	
S1.005	S16	1.32		318.2	SURCHARGED	

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

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surchage	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m <sup>3</sup> )
S1.006	S17	15 Winter	30	+40%	30/15 Winter				4.019	0.008	0.000
S1.007	S18	15 Winter	30	+40%	100/15 Summer				3.985	-0.014	0.000
S6.000	S61	15 Winter	30	+40%					4.613	-0.087	0.000
S6.001	S62	15 Summer	30	+40%	100/15 Summer				4.398	-0.057	0.000
S6.002	S63	15 Winter	30	+40%	100/15 Summer				4.364	-0.037	0.000
S6.003	S64	15 Winter	30	+40%					4.126	-0.104	0.000
S6.004	S65	15 Winter	30	+40%					4.098	-0.065	0.000
S6.005	S66	15 Winter	30	+40%					4.008	-0.102	0.000
S7.000	S71	15 Winter	30	+40%					4.354	-0.096	0.000
S7.001	S72	15 Winter	30	+40%					4.220	-0.094	0.000
S7.002	S73	15 Winter	30	+40%					4.175	-0.075	0.000
S7.003	S74	15 Winter	30	+40%					4.090	-0.080	0.000
S1.008	S19	15 Winter	30	+40%	100/15 Summer				3.961	0.000	0.000

PN	US/MH Name	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
S1.006	S17	1.18		321.6	SURCHARGED	
S1.007	S18	0.77		316.0	OK	
S6.000	S61	0.37		8.3	OK	
S6.001	S62	0.70		8.4	OK	
S6.002	S63	0.92		15.6	OK	
S6.003	S64	0.46		15.3	OK	
S6.004	S65	0.83		24.4	OK	
S6.005	S66	0.57		24.7	OK	
S7.000	S71	0.28		3.8	OK	
S7.001	S72	0.29		3.7	OK	
S7.002	S73	0.48		6.3	OK	
S7.003	S74	0.43		11.0	OK	
S1.008	S19	1.13		329.8	OK	



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

#### Simulation Criteria

Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000  
 Hot Start (mins) 0 MADD Factor \* 10m<sup>3</sup>/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 0 Number of Storage Structures 0 Number of Real Time Controls 0

#### Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 19.600 Cv (Summer) 0.750  
 Region England and Wales Ratio R 0.400 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0 DVD Status OFF  
 Analysis Timestep Fine Inertia Status OFF  
 DTS 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, 100  
 Climate Change (%) 40, 40, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m <sup>3</sup> )
S1.000	S11	15 Winter	100	+40%	100/15	Summer			4.907	0.107	0.000
S1.001	S12	15 Winter	100	+40%	100/15	Summer			4.694	0.144	0.000
S1.002	S13	15 Winter	100	+40%	30/15	Summer			4.604	0.226	0.000
S1.003	S14	15 Winter	100	+40%	30/15	Summer			4.494	0.187	0.000
S1.004	S15	15 Winter	100	+40%	100/15	Summer			4.398	0.110	0.000
S2.000	S21	15 Winter	100	+40%	100/15	Summer			5.206	0.181	0.000
S2.001	S22	15 Winter	100	+40%					4.611	-0.074	0.000
S2.002	S23	15 Winter	100	+40%					4.576	-0.052	0.000
S2.003	S24	15 Winter	100	+40%					4.520	-0.024	0.000
S3.000	S31	15 Winter	100	+40%	100/15	Summer			4.761	0.061	0.000
S4.000	S41	15 Winter	100	+40%	100/15	Winter			4.737	0.037	0.000
S4.001	S42	15 Winter	100	+40%	100/15	Summer			4.669	0.124	0.000
S4.002	S43	15 Winter	100	+40%	100/15	Summer			4.650	0.147	0.000
S4.003	S44	15 Winter	100	+40%	100/15	Summer			4.599	0.171	0.000
S3.001	S32	15 Winter	100	+40%	100/15	Summer			4.551	0.196	0.000
S3.002	S33	15 Winter	100	+40%	100/15	Summer			4.503	0.212	0.000
S2.004	S25	15 Winter	100	+40%	30/15	Winter			4.478	0.212	0.000
S2.005	S26	15 Winter	100	+40%	100/15	Summer			4.351	0.173	0.000
S5.000	S51	15 Winter	100	+40%					4.449	-0.101	0.000
S5.001	S52	15 Summer	100	+40%					4.335	-0.140	0.000
S2.006	S27	15 Winter	100	+40%	30/15	Winter			4.212	0.106	0.000
S1.005	S16	15 Winter	100	+40%	30/15	Summer			4.125	0.080	0.000

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

PN	US/MH Name	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
S1.000	S11	1.09		91.7	SURCHARGED	
S1.001	S12	0.74		100.1	SURCHARGED	
S1.002	S13	1.24		121.0	SURCHARGED	
S1.003	S14	1.63		122.1	SURCHARGED	
S1.004	S15	1.04		189.5	SURCHARGED	
S2.000	S21	1.21		30.4	SURCHARGED	
S2.001	S22	0.79		48.1	OK	
S2.002	S23	0.93		57.7	OK	
S2.003	S24	0.45		59.0	OK	
S3.000	S31	0.94		22.5	SURCHARGED	
S4.000	S41	0.86		11.8	SURCHARGED	
S4.001	S42	0.94		11.4	SURCHARGED	
S4.002	S43	0.96		29.4	SURCHARGED	
S4.003	S44	0.93		28.5	SURCHARGED	
S3.001	S32	0.85		80.5	SURCHARGED	
S3.002	S33	1.05		78.0	SURCHARGED	
S2.004	S25	1.20		169.0	SURCHARGED	
S2.005	S26	1.22		206.2	SURCHARGED	
S5.000	S51	0.59		20.2	OK	
S5.001	S52	0.31		20.3	OK	
S2.006	S27	1.25		225.3	SURCHARGED	
S1.005	S16	1.68		404.5	SURCHARGED	