

**Roundstone Lane Development
Angmering****Surface Water As-Built Survey Review****Cala Homes (South Homes Counties) Ltd**AMc/21:0352/5356:Rev A
22nd July 2021

MJA Consulting have been requested by Cala Homes (South Homes Counties) Ltd to undertake a review and provide a statement on the results of the As-Built survey of the surface water sewer network.

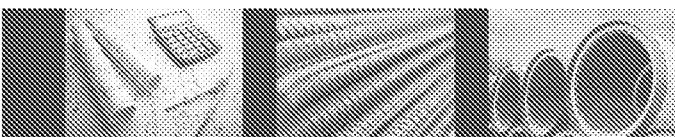
This statement follows the survey undertaken by Cadmap Ltd, dated April 2021 and the revised as built survey undertaken by Cole & Cole Surveying, July 2021.

Surface Water System 1:

Storm Run	Comments
S1 – S9	• Levels within suitable tolerance below 150mm +/- difference from design. • Manhole S4a missing
S17 – S3	• Levels within suitable tolerance below 150mm +/- difference from design.
S16 – S9	• Levels within suitable tolerance below 150mm +/- difference from design.
No levels provided for attenuation tanks or downstream soakaways	

Surface Water System 2:

Storm Run	Comments
S52 – S54	• Levels outside of suitable tolerance and above 150mm +/- difference from original designs.
S56 – S54	• Levels outside of suitable tolerance and above 150mm +/- difference from original designs.
	• Micro Drainage Model rebuilt and re-run with revised as built levels. • No levels provided for attenuation tanks or downstream soakaways.



Surface Water System 3 & 4: (Now amalgamated into 3 network)

Storm Run	Comments
S20 – S48	- Along run a number of manholes are within a suitable tolerance below 150mm +/- difference from design. However, a number are outside this and above 150mm +/-. - S22 – S23. Flat gradient
S34 – S24	- Levels within suitable tolerance below 150mm +/- difference from design. - S34 - S33 Flat gradient
S26 – S25	Level S26 outside of suitable tolerance and above 150mm +/- difference from original designs.
S45 – S47 S51 – S47 S47 – S48	Levels outside of suitable tolerance and above 150mm +/- difference from original designs. Levels to be checked and reviewed
S48 – S41	Levels within suitable tolerance below 150mm +/- difference from design.
S35 – S41	Levels outside of suitable tolerance and above 150mm +/- difference from original designs. Levels to be checked and reviewed
S41 – S44	- Levels within suitable tolerance below 150mm +/- difference from design. - S42 – S43 Flat gradient
S57 – S58 S59 – S58 S58 – S61	Levels outside of suitable tolerance and above 150mm +/- difference from original designs.
S69 – S61	Levels within suitable tolerance below 150mm +/- difference from design.
S61 – S63	Levels outside of suitable tolerance and above 150mm +/- difference from original designs.
S76 – S63	Levels outside of suitable tolerance and above 150mm +/- difference from original designs.
S63 – S66	Levels outside of suitable tolerance and above 150mm +/- difference from original designs.
S66 – S44	Levels outside of suitable tolerance and above 150mm +/- difference from original designs.
	- Micro Drainage Model rebuilt and re-run with revised as built levels. - No levels provided for attenuation tanks or downstream soakaways.

Conclusion:

As noted above the as-built survey is showing a number of errors when compared to the original designs. Several of the manholes have been constructed at different levels to the original designs; this then creates slacker or steeper gradients to designed storm sewers.

During the 2020/21 winter period significant rainfall was experienced, no known flooding was reported which would indicate that the storm network operated correctly.

System 1:

- Will perform to specification
- As-built details of the attenuation tank and soakaways will need to be verified to confirm this.
- Manhole 4a is missing.

Systems 2 & 3 (Including previously 4):

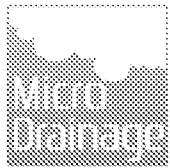
- All manholes resurveyed and as-built verified.
- A significant number of manholes outside of suitable tolerance.
- As-built details of the attenuation tank and soakaways will need to be verified to confirm this.
- Micro Drainage hydraulic models for systems 2 & 3 have been reconstructed based on as-built survey information.
- No flooding was found in the rerunning of the as-built surface water hydraulic models for all storm events within the 1 yr, 30 yr, 100 yr + 30% CC and the 200 year events.

Therefore, from the network modelling we can confirm that the constructed surface water system as-built operates correctly and does not flood during the designed storm events.

Alistair McShane
Director
FOR MJA CONSULTING



**MICRO DRAINAGE MODEL RESULTS
SYSTEMS 2 & 3**

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Monarch House Barton Lane OX14 3NB	Phase 2 Roundstone Lane Angmering	
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Innovyze	Network 2020.1	

STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Storm Run 2

Pipe Sizes STANDARD Manhole Sizes STANDARD

FSR Rainfall Model - England and Wales

Return Period (years)	1	PIMP (%)	95
M5-60 (mm)	20.000	Add Flow / Climate Change (%)	0
Ratio R	0.350	Minimum Backdrop Height (m)	0.000
Maximum Rainfall (mm/hr)	0	Maximum Backdrop Height (m)	0.000
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

Time Area Diagram for Storm Run 2

Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.092	4-8	0.018

Total Area Contributing (ha) = 0.110

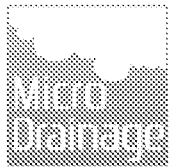
Total Pipe Volume (m³) = 4.598

Network Design Table for Storm Run 2

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
S5.000	32.207	0.370	87.0	0.014	5.00	0.0	0.600	o	225	Pipe/Conduit	
S5.001	19.577	0.270	72.5	0.010	0.00	0.0	0.600	o	225	Pipe/Conduit	
S6.000	23.848	0.310	76.9	0.024	5.00	0.0	0.600	o	225	Pipe/Conduit	
S6.001	28.398	0.200	142.0	0.024	0.00	0.0	0.600	o	225	Pipe/Conduit	
S5.002	11.603	0.580	20.0	0.033	0.00	0.0	0.600	o	225	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)
S5.000	0.00	5.38	10.980	0.014	0.0	0.0	0.0	1.40	55.8	0.0
S5.001	0.00	5.60	9.710	0.024	0.0	0.0	0.0	1.54	61.1	0.0
S6.000	0.00	5.27	3.950	0.024	0.0	0.0	0.0	1.49	59.3	0.0
S6.001	0.00	5.70	9.640	0.048	0.0	0.0	0.0	1.10	43.5	0.0
S5.002	0.00	5.76	9.440	0.105	0.0	0.0	0.0	2.94	116.9	0.0

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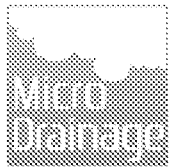
PIPELINE SCHEDULES for Storm Run 2

Upstream Manhole

PN	Hyd	Diam	MH	C.Level	I.Level	D.Depth	MH	MH DIAM., L*W
	Sect	(mm)	Name	(m)	(m)	(m)	Connection	(mm)
S5.000	o	225	S4	11.250	10.080	0.945	Open Manhole	1200
S5.001	o	225	S5	11.390	9.710	1.455	Open Manhole	1200
S6.000	o	225	S6	11.750	9.950	1.575	Open Manhole	1200
S6.001	o	225	S7	11.630	9.640	1.765	Open Manhole	1200
S5.002	o	225	S6	11.480	9.440	1.815	Open Manhole	1200

Downstream Manhole

PN	Length	Slope	MH	C.Level	I.Level	D.Depth	MH	MH DIAM., L*W
	(m)	(1:X)	Name	(m)	(m)	(m)	Connection	(mm)
S5.000	32.207	87.0	S5	11.390	9.710	1.455	Open Manhole	1200
S5.001	19.577	72.5	S6	11.480	9.440	1.815	Open Manhole	1200
S6.000	23.848	76.9	S7	11.630	9.640	1.765	Open Manhole	1200
S6.001	28.398	142.0	S6	11.480	9.440	1.815	Open Manhole	1200
S5.002	11.603	20.0	SSoakaway	11.450	8.860	2.365	Open Manhole	0

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Area Summary for Storm Run 2

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
5.000	-	-	95	0.015	0.014	0.014
5.001	-	-	95	0.010	0.010	0.010
6.000	-	-	95	0.025	0.024	0.024
6.001	-	-	95	0.025	0.024	0.024
5.002	-	-	95	0.035	0.033	0.033
				Total	Total	Total
				0.110	0.105	0.105

Free Flowing Outfall Details for Storm Run 2

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
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S5.002	SSoakaway	11.450	8.860	0.000	0	0
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Time Area Diagram at Pipe Number S5.000 for Storm Run 2

Total Area (ha) 0.025

Time (mins) Area			Time (mins) Area		
From:	To:	(ha)	From:	To:	(ha)
0	4	0.015	4	8	0.010

Time Area Diagram at Pipe Number S5.001 for Storm Run 2

Total Area (ha) 0.007

Time (mins) Area		
From:	To:	(ha)
0	4	0.007

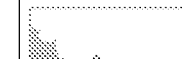
Time Area Diagram at Pipe Number S6.000 for Storm Run 2

Total Area (ha) 0.031

Time (mins) Area			Time (mins) Area		
From:	To:	(ha)	From:	To:	(ha)
0	4	0.020	4	8	0.011

Time Area Diagram at Pipe Number S6.001 for Storm Run 2

Total Area (ha) 0.033

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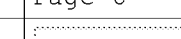
Time Area Diagram at Pipe Number S6.001 for Storm Run 2

Time (mins) Area			Time (mins) Area		
From:	To:	(ha)	From:	To:	(ha)
0	4	0.020	4	8	0.013

Time Area Diagram at Pipe Number S5.002 for Storm Run 2

Total Area (ha) 0.050

Time (mins) Area			Time (mins) Area			Time (mins) Area		
From:	To:	(ha)	From:	To:	(ha)	From:	To:	(ha)
0	4	0.025	4	8	0.015	8	12	0.010

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Monarch House	Phase 2	
Barton Lane	Roundstone Lane	
OX14 3NB	Angmering	
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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Storm Run 2

Simulation Criteria

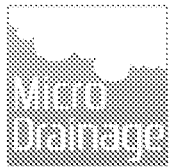
Number of Input Hydrographs	0	Number of Storage Structures	0
Number of Online Controls	0	Number of Time/Area Diagrams	5
Number of Offline Controls	0	Number of Real Time Controls	0

Rainfall Model	FSR	Ratio R	0.350
Region	England and Wales	Cv (Summer)	0.750
M5-60 (mm)	20.000	Cv (Winter)	0.840

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440
Return Period(s) (years)	1, 30, 100, 200
Climate Change (%)	0, 0, 30, 0

PN	US/MH		Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water
	Name	Storm							Level (m)
S5.000	S4	15 Winter	30	+0%					10.132
S5.001	S5	15 Winter	30	+0%					9.769
S6.000	S6	15 Winter	30	+0%					10.008
S6.001	S7	15 Winter	30	+0%					9.740
S5.002	S6	15 Winter	30	+0%					9.533

PN	US/MH Name	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Half Drain	Pipe	Status	Level Exceeded
		Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)		
S5.000	S4	-0.173	0.000	0.12			6.3	OK	
S5.001	S5	-0.166	0.000	0.15			8.4	OK	
S6.000	S6	-0.167	0.000	0.15			8.0	OK	
S6.001	S7	-0.125	0.000	0.41			16.4	OK	
S5.002	S6	-0.132	0.000	0.36			35.5	OK	

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm Run 2

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 Storage Structures 0
Number of Online Controls 0 Number of Time/Area Diagrams 5
Number of Offline Controls 0 Number of Real Time Controls 0

Synthetic Rainfall Details

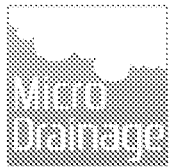
Rainfall Model FSR Ratio R 0.350
Region England and Wales Cv (Summer) 0.750
M5-60 (mm) 20.000 Cv (Winter) 0.840

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
Return Period(s) (years) 1, 30, 100, 200
Climate Change (%) 0, 0, 30, 0

					Water	
PN	US/MH Name	Storm	Return Period	Climate Change	First (X) First (Y) First (Z) Overflow Act.	Level (m)
S5.000	S4	15 Winter	100	+30%		10.149
S5.001	S5	15 Winter	100	+30%		9.788
S6.000	S6	15 Winter	100	+30%		10.026
S6.001	S7	15 Winter	100	+30%		9.778
S5.002	S6	15 Winter	100	+30%		9.566

		Surcharged		Flooded		Half Drain		Pipe	
PN	US/MH Name	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	Status	Level Exceeded
S5.000	S4	-0.156	0.000	0.20			10.7	OK	
S5.001	S5	-0.147	0.000	0.26			14.1	OK	
S6.000	S6	-0.149	0.000	0.25			13.5	OK	
S6.001	S7	-0.087	0.000	0.68			27.6	OK	
S5.002	S6	-0.099	0.000	0.60			59.7	OK	

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200 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm Run 2

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 Storage Structures 0
 Number of Online Controls 0 Number of Time/Area Diagrams 5
 Number of Offline Controls 0 Number of Real Time Controls 0

Synthetic Rainfall Details

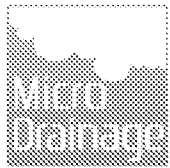
Rainfall Model FSR Ratio R 0.350
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 20.000 Cv (Winter) 0.840

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
 Return Period(s) (years) 1, 30, 100, 200
 Climate Change (%) 0, 0, 30, 0

	US/MH		Return	Climate	First (X)	First (Y)	First (Z)	Overflow	Water
PN	Name	Storm	Period	Change	Surcharge	Flood	Overflow	Act.	Level
S5.000	S4	15 Winter	200	+0%					10.145
S5.001	S5	15 Winter	200	+0%					9.784
S6.000	S6	15 Winter	200	+0%					10.022
S6.001	S7	15 Winter	200	+0%					9.768
S5.002	S6	15 Winter	200	+0%					9.557

	US/MH	Depth	Volume	Flow /	Half Drain	Pipe		Level
PN	Name	(m)	(m³)	Cap.	Time	Flow	Status	Exceeded
				(l/s)	(mins)	(l/s)		
S5.000	S4	-0.160	0.000	0.18		9.5	OK	
S5.001	S5	-0.151	0.000	0.23		12.6	OK	
S6.000	S6	-0.153	0.000	0.22		12.1	OK	
S6.001	S7	-0.097	0.000	0.61		24.7	OK	
S5.002	S6	-0.108	0.000	0.54		53.3	OK	

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Innovyze	Network 2020.1	

STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Storm Run 3

Pipe Sizes STANDARD Manhole Sizes STANDARD

FSR Rainfall Model - England and Wales

Return Period (years)	1	PIMP (%)	95
M5-60 (mm)	20.000	Add Flow / Climate Change (%)	0
Ratio R	0.350	Minimum Backdrop Height (m)	0.000
Maximum Rainfall (mm/hr)	50	Maximum Backdrop Height (m)	0.000
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

Time Area Diagram for Storm Run 3

Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.401	4-8	0.614	8-12	0.099	12-16	0.001

Total Area Contributing (ha) = 1.116

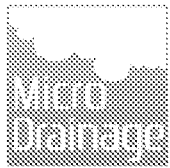
Total Pipe Volume (m³) = 117.103

Network Design Table for Storm Run 3

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
S10.000	20.146	0.150	134.3	0.014	2.50	0.0	0.600	o	225	Pipe/Conduit	
S10.001	26.374	0.160	164.8	0.014	0.00	0.0	0.600	o	225	Pipe/Conduit	
S10.002	58.993	0.050	1179.9	0.019	0.00	0.0	0.600	o	225	Pipe/Conduit	
S10.003	34.249	0.480	71.4	0.024	0.00	0.0	0.600	o	225	Pipe/Conduit	
S11.000	21.670	0.040	541.8	0.017	2.50	0.0	0.600	o	225	Pipe/Conduit	
S11.001	30.086	0.260	115.7	0.015	0.00	0.0	0.600	o	225	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)
S10.000	50.00	2.80	9.740	0.014	0.0	0.0	0.0	1.13	44.8	1.9
S10.001	50.00	3.23	9.590	0.029	0.0	0.0	0.0	1.02	40.4	3.9
S10.002	47.73	5.87	9.430	0.048	0.0	0.0	0.0	0.37	14.8	6.1
S10.003	46.44	6.24	9.380	0.071	0.0	0.0	0.0	1.55	61.6	9.0
S11.000	50.00	3.15	9.670	0.017	0.0	0.0	0.0	0.55	22.1	2.3
S11.001	50.00	3.56	9.630	0.032	0.0	0.0	0.0	1.21	48.3	4.4

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Network Design Table for Storm Run 3

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
S11.002	8.337	0.070	119.1	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
S11.003	35.342	0.210	168.3	0.019	0.00	0.0	0.600	o	225	Pipe/Conduit	
S11.004	13.876	0.130	106.7	0.014	0.00	0.0	0.600	o	225	Pipe/Conduit	
S11.005	8.386	0.060	139.8	0.024	0.00	0.0	0.600	o	225	Pipe/Conduit	
S10.004	26.221	0.195	134.5	0.019	0.00	0.0	0.600	o	300	Pipe/Conduit	
S12.000	17.040	0.370	46.1	0.016	2.50	0.0	0.600	o	225	Pipe/Conduit	
S10.005	12.498	0.145	86.2	0.019	0.00	0.0	0.600	o	300	Pipe/Conduit	
S10.006	44.394	0.115	386.0	0.014	0.00	0.0	0.600	o	375	Pipe/Conduit	
S10.007	59.942	0.190	315.5	0.033	0.00	0.0	0.600	o	450	Pipe/Conduit	
S10.008	12.645	0.290	43.6	0.024	0.00	0.0	0.600	o	450	Pipe/Conduit	
S13.000	13.189	0.110	119.9	0.016	2.50	0.0	0.600	o	225	Pipe/Conduit	
S13.001	8.944	0.080	111.8	0.013	0.00	0.0	0.600	o	225	Pipe/Conduit	
S14.000	8.556	0.140	61.1	0.017	2.50	0.0	0.600	o	225	Pipe/Conduit	
S13.002	23.860	1.125	21.2	0.014	0.00	0.0	0.600	o	225	Pipe/Conduit	
S10.009	13.752	0.060	229.2	0.010	0.00	0.0	0.600	o	450	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)
S11.002	50.00	3.68	9.370	0.032	0.0	0.0	0.0	1.20	47.6	4.4
S11.003	50.00	4.27	9.300	0.051	0.0	0.0	0.0	1.00	40.0	6.9
S11.004	50.00	4.45	9.090	0.066	0.0	0.0	0.0	1.27	50.3	8.9
S11.005	50.00	4.58	8.960	0.089	0.0	0.0	0.0	1.10	43.9	12.1
S10.004	45.37	6.56	8.825	0.180	0.0	0.0	0.0	1.35	95.7	22.1
S12.000	50.00	2.65	9.150	0.016	0.0	0.0	0.0	1.93	76.8	2.2
S10.005	44.98	6.68	8.630	0.215	0.0	0.0	0.0	1.69	119.8	26.2
S10.006	42.59	7.49	8.410	0.229	0.0	0.0	0.0	0.92	101.2	26.4
S10.007	40.31	8.37	8.220	0.262	0.0	0.0	0.0	1.14	181.2	28.6
S10.008	40.15	8.44	8.030	0.286	0.0	0.0	0.0	3.09	490.7	31.1
S13.000	50.00	2.68	9.280	0.016	0.0	0.0	0.0	1.19	47.4	2.2
S13.001	50.00	2.80	9.170	0.029	0.0	0.0	0.0	1.24	49.1	4.0
S14.000	50.00	2.59	9.230	0.017	0.0	0.0	0.0	1.68	66.6	2.3
S13.002	50.00	2.94	9.090	0.061	0.0	0.0	0.0	2.85	113.5	8.2
S10.009	39.74	8.61	7.740	0.356	0.0	0.0	0.0	1.34	212.9	38.3

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Network Design Table for Storm Run 3

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
S10.010	38.739	0.150	258.3	0.014	0.00	0.0	0.600	o	450	Pipe/Conduit	
S10.011	12.504	0.079	158.3	0.019	0.00	0.0	0.600	o	450	Pipe/Conduit	
S15.000	26.453	0.220	120.2	0.020	2.50	0.0	0.600	o	225	Pipe/Conduit	
S15.001	8.919	0.080	111.5	0.014	0.00	0.0	0.600	o	225	Pipe/Conduit	
S15.002	38.263	0.560	68.3	0.015	0.00	0.0	0.600	o	225	Pipe/Conduit	
S15.003	30.284	0.270	112.2	0.019	0.00	0.0	0.600	o	225	Pipe/Conduit	
S15.004	27.744	0.160	173.4	0.024	0.00	0.0	0.600	o	225	Pipe/Conduit	
S15.005	12.906	0.770	16.8	0.010	0.00	0.0	0.600	o	225	Pipe/Conduit	
S10.012	15.562	0.040	389.1	0.007	0.00	0.0	0.600	o	525	Pipe/Conduit	
S10.013	42.455	0.050	849.1	0.019	0.00	0.0	0.600	o	525	Pipe/Conduit	
S10.014	18.706	0.050	374.1	0.024	0.00	0.0	0.600	o	525	Pipe/Conduit	
S10.015	4.530	0.675	6.7	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit	
S16.000	16.771	0.020	838.6	0.029	2.50	0.0	0.600	o	225	Pipe/Conduit	
S16.001	8.371	0.050	167.4	0.011	0.00	0.0	0.600	o	225	Pipe/Conduit	
S16.002	14.893	0.095	156.8	0.010	0.00	0.0	0.600	o	225	Pipe/Conduit	
S17.000	54.283	0.270	201.0	0.043	2.50	0.0	0.600	o	225	Pipe/Conduit	
S18.000	29.176	0.160	182.4	0.028	2.50	0.0	0.600	o	225	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)
S10.010	38.57	9.12	7.680	0.371	0.0	0.0	0.0	1.26	200.5	38.7
S10.011	38.29	9.25	7.530	0.390	0.0	0.0	0.0	1.61	256.6	40.4
S15.000	50.00	2.87	9.700	0.020	0.0	0.0	0.0	1.19	47.4	2.7
S15.001	50.00	2.99	9.480	0.034	0.0	0.0	0.0	1.24	49.2	4.6
S15.002	50.00	3.39	9.400	0.049	0.0	0.0	0.0	1.58	63.0	6.7
S15.003	50.00	3.80	8.840	0.068	0.0	0.0	0.0	1.23	49.1	9.3
S15.004	50.00	4.27	8.570	0.092	0.0	0.0	0.0	0.99	39.4	12.5
S15.005	50.00	4.34	8.410	0.102	0.0	0.0	0.0	3.21	127.7	13.8
S10.012	37.80	9.48	7.340	0.498	0.0	0.0	0.0	1.13	244.5	51.0
S10.013	36.02	10.41	7.300	0.517	0.0	0.0	0.0	0.76	164.7	51.0
S10.014	35.55	10.68	7.250	0.541	0.0	0.0	0.0	1.15	249.4	52.0
S10.015	35.54	10.69	7.200	0.541	0.0	0.0	0.0	8.68	1879.9	52.0
S16.000	50.00	3.13	10.300	0.029	0.0	0.0	0.0	0.44	17.6	3.9
S16.001	50.00	3.27	10.280	0.040	0.0	0.0	0.0	1.01	40.1	5.4
S16.002	50.00	3.51	10.230	0.049	0.0	0.0	0.0	1.04	41.4	6.7
S17.000	50.00	3.49	10.990	0.043	0.0	0.0	0.0	0.92	36.5	5.8
S18.000	50.00	3.00	10.820	0.028	0.0	0.0	0.0	0.96	38.4	3.7

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Network Design Table for Storm Run 3

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
S17.001	24.859	0.140	177.6	0.013	0.00	0.0	0.600	o	225	Pipe/Conduit	
S17.002	20.599	0.385	53.5	0.043	0.00	0.0	0.600	o	225	Pipe/Conduit	
S16.003	38.870	0.470	82.7	0.024	0.00	0.0	0.600	o	300	Pipe/Conduit	
S16.004	44.771	0.195	229.6	0.029	0.00	0.0	0.600	o	375	Pipe/Conduit	
S19.000	25.214	0.540	46.7	0.019	2.50	0.0	0.600	o	225	Pipe/Conduit	
S19.001	7.761	0.220	35.3	0.019	0.00	0.0	0.600	o	225	Pipe/Conduit	
S16.005	8.135	0.160	50.8	0.033	0.00	0.0	0.600	o	375	Pipe/Conduit	
S16.006	29.000	0.110	263.6	0.033	0.00	0.0	0.600	o	375	Pipe/Conduit	
S16.007	34.156	0.255	133.9	0.019	0.00	0.0	0.600	o	375	Pipe/Conduit	
S20.000	31.374	0.460	68.2	0.033	2.50	0.0	0.600	o	225	Pipe/Conduit	
S21.000	20.387	0.280	72.8	0.029	2.50	0.0	0.600	o	225	Pipe/Conduit	
S20.001	42.743	0.370	115.5	0.019	0.00	0.0	0.600	o	225	Pipe/Conduit	
S20.002	21.886	0.430	50.9	0.048	0.00	0.0	0.600	o	225	Pipe/Conduit	
S16.008	21.251	0.130	163.5	0.029	0.00	0.0	0.600	o	450	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)
S17.001	50.00	3.91	10.660	0.084	0.0	0.0	0.0	0.98	38.9	11.3
S17.002	50.00	4.10	10.520	0.126	0.0	0.0	0.0	1.79	71.3	17.1
S16.003	50.00	4.47	10.060	0.200	0.0	0.0	0.0	1.73	122.3	27.0
S16.004	50.00	5.10	9.515	0.228	0.0	0.0	0.0	1.19	131.6	30.9
S19.000	50.00	2.72	10.250	0.019	0.0	0.0	0.0	1.92	76.3	2.6
S19.001	50.00	2.78	9.690	0.038	0.0	0.0	0.0	2.21	87.9	5.1
S16.005	50.00	5.15	9.320	0.299	0.0	0.0	0.0	2.55	281.2	40.5
S16.006	48.78	5.59	9.160	0.333	0.0	0.0	0.0	1.11	122.7	43.9
S16.007	47.44	5.95	9.050	0.352	0.0	0.0	0.0	1.56	172.7	45.2
S20.000	50.00	2.83	10.280	0.033	0.0	0.0	0.0	1.59	63.1	4.5
S21.000	50.00	2.72	10.100	0.029	0.0	0.0	0.0	1.53	61.0	3.9
S20.001	50.00	3.42	9.820	0.081	0.0	0.0	0.0	1.22	48.3	10.9
S20.002	50.00	3.61	9.450	0.128	0.0	0.0	0.0	1.84	73.1	17.4
S16.008	46.66	6.18	8.720	0.508	0.0	0.0	0.0	1.59	252.5	64.2

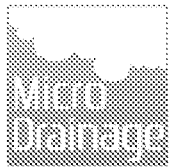
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Monarch House Barton Lane OX14 3NB	Phase 2 Roundstone Lane Angmering	
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Network Design Table for Storm Run 3

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
S16.009	24.092	1.240	19.4	0.011	0.00	0.0	0.600	o	450	Pipe/Conduit	
S16.010	13.530	0.150	90.2	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
S16.011	10.729	0.600	17.9	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
S10.016	26.865	0.064	419.8	0.000	0.00	0.0	0.600	o	750	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)
S16.009	46.36	6.26	8.590	0.520	0.0	0.0	0.0	4.63	736.2	65.2
S16.010	46.01	6.37	7.350	0.520	0.0	0.0	0.0	2.14	340.6	65.2
S16.011	45.88	6.41	7.200	0.520	0.0	0.0	0.0	4.83	767.5	65.2
S10.016	34.99	11.02	6.300	1.060	0.0	0.0	0.0	1.36	600.6	100.5

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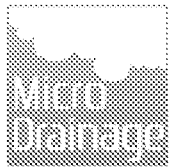
PIPELINE SCHEDULES for Storm Run 3

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)
S10.000	o	225	S1	11.190	9.740	1.225	Open Manhole	1200
S10.001	o	225	S2	10.970	9.590	1.155	Open Manhole	1200
S10.002	o	225	S3	10.780	9.430	1.125	Open Manhole	1200
S10.003	o	225	S4	11.310	9.380	1.705	Open Manhole	1200
S11.000	o	225	S5	11.310	9.670	1.415	Open Manhole	1200
S11.001	o	225	S6	11.260	9.630	1.405	Open Manhole	1200
S11.002	o	225	S7	10.950	9.370	1.355	Open Manhole	1200
S11.003	o	225	S8	10.950	9.300	1.425	Open Manhole	1200
S11.004	o	225	S9	11.190	9.090	1.875	Open Manhole	1200
S11.005	o	225	S10	11.220	8.960	2.035	Open Manhole	1200
S10.004	o	300	S5	11.050	8.825	1.925	Open Manhole	1200
S12.000	o	225	S12	11.290	9.150	1.915	Open Manhole	1200
S10.005	o	300	S6	11.130	8.630	2.200	Open Manhole	1200
S10.006	o	375	S7	11.010	8.410	2.225	Open Manhole	1350
S10.007	o	450	S8	11.150	8.220	2.480	Open Manhole	1350
S10.008	o	450	S9	11.360	8.030	2.880	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)
S10.000	20.146	134.3	S2	10.970	9.590	1.155	Open Manhole	1200
S10.001	26.374	164.8	S3	10.780	9.430	1.125	Open Manhole	1200
S10.002	58.993	1179.9	S4	11.310	9.380	1.705	Open Manhole	1200
S10.003	34.249	71.4	S5	11.050	8.900	1.925	Open Manhole	1200
S11.000	21.670	541.8	S6	11.260	9.630	1.405	Open Manhole	1200
S11.001	30.086	115.7	S7	10.950	9.370	1.355	Open Manhole	1200
S11.002	8.337	119.1	S8	10.950	9.300	1.425	Open Manhole	1200
S11.003	35.342	168.3	S9	11.190	9.090	1.875	Open Manhole	1200
S11.004	13.876	106.7	S10	11.220	8.960	2.035	Open Manhole	1200
S11.005	8.386	139.8	S5	11.050	8.900	1.925	Open Manhole	1200
S10.004	26.221	134.5	S6	11.130	8.630	2.200	Open Manhole	1200
S12.000	17.040	46.1	S6	11.130	8.780	2.125	Open Manhole	1200
S10.005	12.498	86.2	S7	11.010	8.485	2.225	Open Manhole	1350
S10.006	44.394	386.0	S8	11.150	8.295	2.480	Open Manhole	1350
S10.007	59.942	315.5	S9	11.360	8.030	2.880	Open Manhole	1350
S10.008	12.645	43.6	S17	11.840	7.740	3.650	Open Manhole	1350

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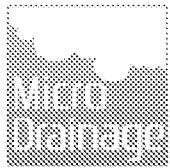
PIPELINE SCHEDULES for Storm Run 3

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)
S13.000	o	225	S17	12.131	9.280	2.626	Open Manhole	1200
S13.001	o	225	S18	12.020	9.170	2.625	Open Manhole	1200
S14.000	o	225	S19	11.910	9.230	2.455	Open Manhole	1200
S13.002	o	225	S19	11.920	9.090	2.605	Open Manhole	1200
S10.009	o	450	S17	11.840	7.740	3.650	Open Manhole	1350
S10.010	o	450	S18	11.710	7.680	3.580	Open Manhole	1350
S10.011	o	450	S18	11.900	7.530	3.920	Open Manhole	1350
S15.000	o	225	S24	11.550	9.700	1.425	Open Manhole	1200
S15.001	o	225	S25	11.550	9.480	1.845	Open Manhole	1200
S15.002	o	225	S26	11.670	9.400	2.045	Open Manhole	1200
S15.003	o	225	S27	11.600	8.840	2.535	Open Manhole	1200
S15.004	o	225	S28	11.490	8.570	2.695	Open Manhole	1200
S15.005	o	225	S29	11.690	8.410	3.055	Open Manhole	1200
S10.012	o	525	S20	11.690	7.340	3.825	Open Manhole	1500
S10.013	o	525	S21	11.620	7.300	3.795	Open Manhole	1500
S10.014	o	525	S18	11.550	7.250	3.775	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)
S13.000	13.189	119.9	S18	12.020	9.170	2.625	Open Manhole	1200
S13.001	8.944	111.8	S19	11.920	9.090	2.605	Open Manhole	1200
S14.000	8.556	61.1	S19	11.920	9.090	2.605	Open Manhole	1200
S13.002	23.860	21.2	S17	11.840	7.965	3.650	Open Manhole	1350
S10.009	13.752	229.2	S18	11.710	7.680	3.580	Open Manhole	1350
S10.010	38.739	258.3	S18	11.900	7.530	3.920	Open Manhole	1350
S10.011	12.504	158.3	S20	11.690	7.451	3.789	Open Manhole	1500
S15.000	26.453	120.2	S25	11.550	9.480	1.845	Open Manhole	1200
S15.001	8.919	111.5	S26	11.670	9.400	2.045	Open Manhole	1200
S15.002	38.263	68.3	S27	11.600	8.840	2.535	Open Manhole	1200
S15.003	30.284	112.2	S28	11.490	8.570	2.695	Open Manhole	1200
S15.004	27.744	173.4	S29	11.690	8.410	3.055	Open Manhole	1200
S15.005	12.906	16.8	S20	11.690	7.640	3.825	Open Manhole	1500
S10.012	15.562	389.1	S21	11.620	7.300	3.795	Open Manhole	1500
S10.013	42.455	849.1	S18	11.550	7.250	3.775	Open Manhole	1500
S10.014	18.706	374.1	S33	11.597	7.200	3.872	Open Manhole	1500

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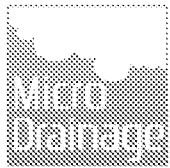
PIPELINE SCHEDULES for Storm Run 3

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)
S10.015	o	525	S33	11.597	7.200	3.872	Open Manhole	1500
S16.000	o	225	S1	11.900	10.300	1.375	Open Manhole	1200
S16.001	o	225	S2	11.750	10.280	1.245	Open Manhole	1200
S16.002	o	225	S3	11.740	10.230	1.285	Open Manhole	1200
S17.000	o	225	S4	11.850	10.980	0.695	Open Manhole	1200
S18.000	o	225	S5	11.870	10.820	0.825	Open Manhole	1200
S17.001	o	225	S5	11.960	10.660	1.075	Open Manhole	1200
S17.002	o	225	S5	12.080	10.520	1.335	Open Manhole	1200
S16.003	o	300	S4	11.920	10.060	1.560	Open Manhole	1200
S16.004	o	375	S5	11.960	9.515	2.070	Open Manhole	1350
S19.000	o	225	S7	12.220	10.230	1.765	Open Manhole	1200
S19.001	o	225	S11	12.090	9.690	2.175	Open Manhole	1200
S16.005	o	375	S6	12.100	9.320	2.405	Open Manhole	1350
S16.006	o	375	S7	12.110	9.160	2.575	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)
S10.015	4.530	6.7	S34	11.910	6.525	4.860	Open Manhole	1800
S16.000	16.771	838.6	S2	11.750	10.280	1.245	Open Manhole	1200
S16.001	8.371	167.4	S3	11.740	10.230	1.285	Open Manhole	1200
S16.002	14.893	156.8	S4	11.920	10.135	1.560	Open Manhole	1200
S17.000	54.283	201.0	S5	11.960	10.660	1.075	Open Manhole	1200
S18.000	29.176	182.4	S5	11.960	10.660	1.075	Open Manhole	1200
S17.001	24.859	177.6	S5	12.080	10.520	1.335	Open Manhole	1200
S17.002	20.599	53.5	S4	11.920	10.135	1.560	Open Manhole	1200
S16.003	38.870	82.7	S5	11.960	9.590	2.070	Open Manhole	1350
S16.004	44.771	229.6	S6	12.100	9.320	2.405	Open Manhole	1350
S19.000	25.214	46.7	S11	12.090	9.690	2.175	Open Manhole	1200
S19.001	7.761	35.3	S6	12.100	9.470	2.405	Open Manhole	1350
S16.005	8.135	50.8	S7	12.110	9.160	2.575	Open Manhole	1350
S16.006	29.000	263.6	S9	11.890	9.050	2.465	Open Manhole	1350

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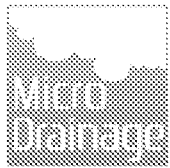
PIPELINE SCHEDULES for Storm Run 3

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)
S16.007	o	375	S9	11.890	9.050	2.465	Open Manhole	1350
S20.000	o	225	S12	12.120	10.280	1.615	Open Manhole	1200
S21.000	o	225	S13	11.700	10.100	1.375	Open Manhole	1200
S20.001	o	225	S13	11.820	9.820	1.775	Open Manhole	1200
S20.002	o	225	S14	11.900	9.450	2.225	Open Manhole	1200
S16.008	o	450	S10	11.940	8.720	2.770	Open Manhole	1350
S16.009	o	450	S11	11.820	8.590	2.780	Open Manhole	1350
S16.010	o	450	S21	11.750	7.350	3.950	Open Manhole	1350
S16.011	o	450	S22	11.870	7.200	4.220	Open Manhole	1350
S10.016	o	750	S34	11.910	6.300	4.860	Open Manhole	1800

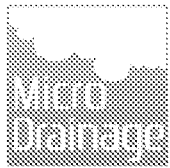
Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S16.007	34.156	133.9	S10	11.940	8.795	2.770	Open Manhole	1350
S20.000	31.374	68.2	S13	11.820	9.820	1.775	Open Manhole	1200
S21.000	20.387	72.8	S13	11.820	9.820	1.775	Open Manhole	1200
S20.001	42.743	115.5	S14	11.900	9.450	2.225	Open Manhole	1200
S20.002	21.886	50.9	S10	11.940	9.020	2.695	Open Manhole	1350
S16.008	21.251	163.5	S11	11.820	8.590	2.780	Open Manhole	1350
S16.009	24.092	19.4	S21	11.750	7.350	3.950	Open Manhole	1350
S16.010	13.530	90.2	S22	11.870	7.200	4.220	Open Manhole	1350
S16.011	10.729	17.9	S34	11.910	6.600	4.860	Open Manhole	1800
S10.016	26.865	419.8	SSoakaway	12.820	6.236	5.834	Open Manhole	0

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Area Summary for Storm Run 3

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
10.000	-	-	95	0.015	0.014	0.014
10.001	-	-	95	0.015	0.014	0.014
10.002	-	-	95	0.026	0.019	0.019
10.003	-	-	95	0.025	0.024	0.024
11.000	-	-	95	0.018	0.017	0.017
11.001	-	-	95	0.016	0.015	0.015
11.002	-	-	95	0.000	0.000	0.000
11.003	-	-	95	0.020	0.019	0.019
11.004	-	-	95	0.015	0.014	0.014
11.005	-	-	95	0.025	0.024	0.024
10.004	-	-	95	0.020	0.019	0.019
12.000	-	-	95	0.017	0.016	0.016
10.005	-	-	95	0.020	0.019	0.019
10.006	-	-	95	0.015	0.014	0.014
10.007	-	-	95	0.035	0.033	0.033
10.008	-	-	95	0.025	0.024	0.024
13.000	-	-	95	0.017	0.016	0.016
13.001	-	-	95	0.014	0.013	0.013
14.000	-	-	95	0.018	0.017	0.017
13.002	-	-	95	0.015	0.014	0.014
10.009	-	-	95	0.010	0.010	0.010
10.010	-	-	95	0.015	0.014	0.014
10.011	-	-	95	0.020	0.019	0.019
15.000	-	-	95	0.021	0.020	0.020
15.001	-	-	95	0.015	0.014	0.014
15.002	-	-	95	0.016	0.015	0.015
15.003	-	-	95	0.020	0.019	0.019
15.004	-	-	95	0.025	0.024	0.024
15.005	-	-	95	0.010	0.010	0.010
10.012	-	-	95	0.007	0.007	0.007
10.013	-	-	95	0.020	0.019	0.019
10.014	-	-	95	0.025	0.024	0.024
10.015	-	-	95	0.000	0.000	0.000
16.000	-	-	95	0.030	0.029	0.029
16.001	-	-	95	0.012	0.011	0.011
16.002	-	-	95	0.010	0.010	0.010
17.000	-	-	95	0.045	0.043	0.043
18.000	-	-	95	0.029	0.028	0.028
17.001	-	-	95	0.014	0.013	0.013
17.002	-	-	95	0.045	0.043	0.043
16.003	-	-	95	0.025	0.024	0.024
16.004	-	-	95	0.030	0.029	0.029
19.000	-	-	95	0.020	0.019	0.019
19.001	-	-	95	0.020	0.019	0.019
16.005	-	-	95	0.035	0.033	0.033
16.006	-	-	95	0.035	0.033	0.033
16.007	-	-	95	0.020	0.019	0.019
20.000	-	-	95	0.035	0.033	0.033
21.000	-	-	95	0.030	0.029	0.029
20.001	-	-	95	0.020	0.019	0.019
20.002	-	-	95	0.050	0.048	0.048

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Area Summary for Storm Run 3

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
16.008	-	-	95	0.030	0.029	0.029
16.009	-	-	95	0.012	0.011	0.011
16.010	-	-	95	0.000	0.000	0.000
16.011	-	-	95	0.000	0.000	0.000
10.016	-	-	95	0.000	0.000	0.000
				Total	Total	Total
				1.116	1.060	1.060

Free Flowing Outfall Details for Storm Run 3

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D, L (mm)	W (mm)
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S10.016	SSoakaway	12.820	6.236	0.000	0	0
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Time Area Diagram at Pipe Number S10.000 for Storm Run 3

Total Area (ha) 0.015

Time (mins)	Area (ha)	Time (mins)	Area (ha)
From:	To:	From:	To:
0	4	4	8
	0.010		0.005

Time Area Diagram at Pipe Number S10.001 for Storm Run 3

Total Area (ha) 0.020

Time (mins)	Area (ha)	Time (mins)	Area (ha)
From:	To:	From:	To:
0	4	4	8
	0.010		0.010

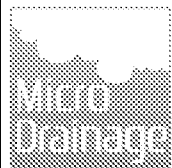
Time Area Diagram at Pipe Number S10.002 for Storm Run 3

Total Area (ha) 0.035

Time (mins)	Area (ha)	Time (mins)	Area (ha)
From:	To:	From:	To:
0	4	4	8
	0.020		0.015

Time Area Diagram at Pipe Number S10.003 for Storm Run 3

Total Area (ha) 0.075

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Time Area Diagram at Pipe Number S10.003 for Storm Run 3

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.030	4 8 0.020	8 12 0.020	12 16 0.005				

Time Area Diagram at Pipe Number S11.001 for Storm Run 3

Total Area (ha) 0.020

Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.010	4 8 0.010		

Time Area Diagram at Pipe Number S11.002 for Storm Run 3

Total Area (ha) 0.033

Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.020	4 8 0.013		

Time Area Diagram at Pipe Number S11.003 for Storm Run 3

Total Area (ha) 0.023

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.010	4 8 0.010	8 12 0.003			

Time Area Diagram at Pipe Number S11.004 for Storm Run 3

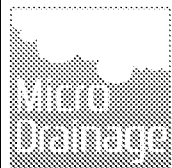
Total Area (ha) 0.037

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.020	4 8 0.010	8 12 0.007			

Time Area Diagram at Pipe Number S11.005 for Storm Run 3

Total Area (ha) 0.055

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.020	4 8 0.020	8 12 0.015			

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Time Area Diagram at Pipe Number S10.004 for Storm Run 3

Total Area (ha) 0.040

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.020	4 8 0.010	8 12 0.010			

Time Area Diagram at Pipe Number S12.000 for Storm Run 3

Total Area (ha) 0.030

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.010	4 8 0.010	8 12 0.010			

Time Area Diagram at Pipe Number S10.005 for Storm Run 3

Total Area (ha) 0.038

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.015	4 8 0.010	8 12 0.008	12 16 0.005				

Time Area Diagram at Pipe Number S10.006 for Storm Run 3

Total Area (ha) 0.016

Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.010	4 8 0.006		

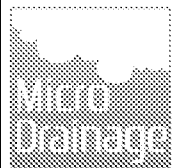
Time Area Diagram at Pipe Number S10.007 for Storm Run 3

Total Area (ha) 0.090

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.030	8 12 0.020	16 20 0.005			
4 8 0.025	12 16 0.010				

Time Area Diagram at Pipe Number S10.008 for Storm Run 3

Total Area (ha) 0.075

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Time Area Diagram at Pipe Number S10.008 for Storm Run 3

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.030	4 8 0.020	8 12 0.015	12 16 0.010				

Time Area Diagram at Pipe Number S13.000 for Storm Run 3

Total Area (ha) 0.020

Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.010	4 8 0.010		

Time Area Diagram at Pipe Number S14.000 for Storm Run 3

Total Area (ha) 0.040

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.020	4 8 0.010	8 12 0.010			

Time Area Diagram at Pipe Number S13.002 for Storm Run 3

Total Area (ha) 0.040

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.020	4 8 0.010	8 12 0.010			

Time Area Diagram at Pipe Number S10.010 for Storm Run 3

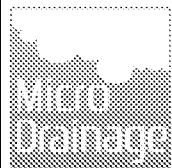
Total Area (ha) 0.020

Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.010	4 8 0.010		

Time Area Diagram at Pipe Number S10.011 for Storm Run 3

Total Area (ha) 0.055

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.020	4 8 0.020	8 12 0.010	12 16 0.005				

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Time Area Diagram at Pipe Number S15.000 for Storm Run 3

Total Area (ha) 0.050

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.020	4 8 0.015	8 12 0.015			

Time Area Diagram at Pipe Number S15.003 for Storm Run 3

Total Area (ha) 0.030

Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.020	4 8 0.010		

Time Area Diagram at Pipe Number S15.004 for Storm Run 3

Total Area (ha) 0.024

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.010	4 8 0.010	8 12 0.004			

Time Area Diagram at Pipe Number S15.005 for Storm Run 3

Total Area (ha) 0.015

Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.010	4 8 0.005		

Time Area Diagram at Pipe Number S10.013 for Storm Run 3

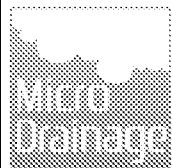
Total Area (ha) 0.015

Time (mins)	Area
From: To: (ha)	From: To: (ha)
0 4 0.015	

Time Area Diagram at Pipe Number S10.014 for Storm Run 3

Total Area (ha) 0.045

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.020	4 8 0.015	8 12 0.010			

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Time Area Diagram at Pipe Number S16.000 for Storm Run 3

Total Area (ha) 0.045

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.020	4 8 0.015	8 12 0.010			

Time Area Diagram at Pipe Number S16.001 for Storm Run 3

Total Area (ha) 0.014

Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.007	4 8 0.007		

Time Area Diagram at Pipe Number S16.002 for Storm Run 3

Total Area (ha) 0.014

Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.007	4 8 0.007		

Time Area Diagram at Pipe Number S17.000 for Storm Run 3

Total Area (ha) 0.044

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.020	4 8 0.014	8 12 0.010			

Time Area Diagram at Pipe Number S18.000 for Storm Run 3

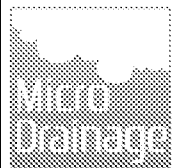
Total Area (ha) 0.020

Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.010	4 8 0.010		

Time Area Diagram at Pipe Number S17.002 for Storm Run 3

Total Area (ha) 0.075

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.025	4 8 0.020	8 12 0.020	12 16 0.010				

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Time Area Diagram at Pipe Number S16.003 for Storm Run 3

Total Area (ha) 0.030

Time (mins) Area			Time (mins) Area		
From:	To:	(ha)	From:	To:	(ha)
0	4	0.020	4	8	0.010

Time Area Diagram at Pipe Number S16.004 for Storm Run 3

Total Area (ha) 0.038

Time (mins) Area			Time (mins) Area			Time (mins) Area		
From:	To:	(ha)	From:	To:	(ha)	From:	To:	(ha)
0	4	0.015	4	8	0.013	8	12	0.010

Time Area Diagram at Pipe Number S19.000 for Storm Run 3

Total Area (ha) 0.027

Time (mins) Area			Time (mins) Area			Time (mins) Area		
From:	To:	(ha)	From:	To:	(ha)	From:	To:	(ha)
0	4	0.010	4	8	0.010	8	12	0.007

Time Area Diagram at Pipe Number S19.001 for Storm Run 3

Total Area (ha) 0.030

Time (mins) Area			Time (mins) Area			Time (mins) Area		
From:	To:	(ha)	From:	To:	(ha)	From:	To:	(ha)
0	4	0.015	4	8	0.010	8	12	0.005

Time Area Diagram at Pipe Number S16.005 for Storm Run 3

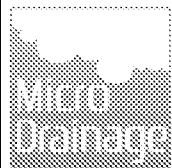
Total Area (ha) 0.053

Time (mins) Area			Time (mins) Area			Time (mins) Area			Time (mins) Area		
From:	To:	(ha)	From:	To:	(ha)	From:	To:	(ha)	From:	To:	(ha)
0	4	0.020	4	8	0.015	8	12	0.010	12	16	0.008

Time Area Diagram at Pipe Number S16.006 for Storm Run 3

Total Area (ha) 0.040

Time (mins) Area			Time (mins) Area			Time (mins) Area		
From:	To:	(ha)	From:	To:	(ha)	From:	To:	(ha)
0	4	0.020	4	8	0.010	8	12	0.010

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Time Area Diagram at Pipe Number S16.007 for Storm Run 3

Total Area (ha) 0.025

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.010	4 8 0.010	8 12 0.005			

Time Area Diagram at Pipe Number S20.000 for Storm Run 3

Total Area (ha) 0.045

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.020	4 8 0.010	8 12 0.010	12 16 0.005				

Time Area Diagram at Pipe Number S21.000 for Storm Run 3

Total Area (ha) 0.045

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.020	4 8 0.015	8 12 0.010			

Time Area Diagram at Pipe Number S20.001 for Storm Run 3

Total Area (ha) 0.025

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.010	4 8 0.010	8 12 0.005			

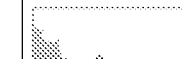
Time Area Diagram at Pipe Number S20.002 for Storm Run 3

Total Area (ha) 0.085

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)	From: To: (ha)
0 4 0.025	8 12 0.020	16 20 0.010			
4 8 0.020	12 16 0.010				

Time Area Diagram at Pipe Number S16.008 for Storm Run 3

Total Area (ha) 0.045

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Time Area Diagram at Pipe Number S16.008 for Storm Run 3

Time (mins) Area			Time (mins) Area			Time (mins) Area		
From:	To:	(ha)	From:	To:	(ha)	From:	To:	(ha)
0	4	0.020	4	8	0.015	8	12	0.010

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Storm Run 3

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m ³ /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 Storage Structures	0
Number of Online Controls	0	Number of Time/Area Diagrams	44
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

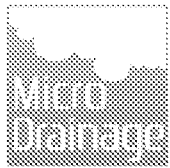
Rainfall Model	FSR	Ratio R	0.350
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.000 Cv (Winter)	0.840	

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
Return Period(s) (years)	1, 30, 100, 200
Climate Change (%)	0, 0, 30, 0

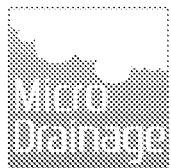
PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S10.000	S1	15 Winter	1	+0%					9.769
S10.001	S2	15 Winter	1	+0%					9.637
S10.002	S3	15 Winter	1	+0%	100/15 Summer				9.536
S10.003	S4	15 Winter	1	+0%	100/15 Winter				9.449
S11.000	S5	15 Summer	1	+0%					9.732
S11.001	S6	15 Summer	1	+0%					9.678
S11.002	S7	15 Winter	1	+0%	100/15 Summer				9.440
S11.003	S8	15 Winter	1	+0%	100/15 Summer				9.378
S11.004	S9	15 Winter	1	+0%	100/15 Summer				9.174
S11.005	S10	15 Winter	1	+0%	30/15 Summer				9.073
S10.004	S5	15 Winter	1	+0%	100/15 Summer				8.952
S12.000	S12	30 Winter	1	+0%					9.177
S10.005	S6	15 Winter	1	+0%	100/15 Summer				8.759
S10.006	S7	15 Winter	1	+0%	100/15 Summer				8.577
S10.007	S8	15 Winter	1	+0%					8.375
S10.008	S9	15 Winter	1	+0%	100/30 Winter				8.148
S13.000	S17	15 Winter	1	+0%					9.312
S13.001	S18	15 Winter	1	+0%					9.215
S14.000	S19	15 Winter	1	+0%					9.267
S13.002	S19	15 Winter	1	+0%					9.137

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
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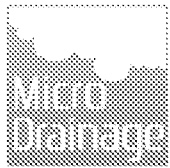
PN	US/MH Name	Surcharged Flooded		Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
		Depth (m)	Volume (m³)						
S10.000	S1	-0.196	0.000	0.04			1.6	OK	
S10.001	S2	-0.178	0.000	0.10			3.6	OK	
S10.002	S3	-0.119	0.000	0.43			6.7	OK	
S10.003	S4	-0.156	0.000	0.20			11.9	OK	
S11.000	S5	-0.163	0.000	0.16			2.9	OK	
S11.001	S6	-0.177	0.000	0.10			4.5	OK	
S11.002	S7	-0.155	0.000	0.21			7.8	OK	
S11.003	S8	-0.147	0.000	0.26			9.7	OK	
S11.004	S9	-0.141	0.000	0.29			12.9	OK	
S11.005	S10	-0.112	0.000	0.50			17.3	OK	
S10.004	S5	-0.173	0.000	0.37			31.8	OK	
S12.000	S12	-0.198	0.000	0.03			2.4	OK	
S10.005	S6	-0.171	0.000	0.38			36.6	OK	
S10.006	S7	-0.208	0.000	0.40			37.4	OK	
S10.007	S8	-0.295	0.000	0.25			42.5	OK	
S10.008	S9	-0.332	0.000	0.15			46.9	OK	
S13.000	S17	-0.193	0.000	0.05			2.0	OK	
S13.001	S18	-0.180	0.000	0.09			3.4	OK	
S14.000	S19	-0.188	0.000	0.06			3.4	OK	
S13.002	S19	-0.178	0.000	0.10			10.1	OK	

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Storm Run 3

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S10.009	S17	30 Winter	1	+0%	100/15 Summer				7.922
S10.010	S18	15 Winter	1	+0%	100/15 Summer				7.854
S10.011	S18	30 Winter	1	+0%	100/15 Summer				7.715
S15.000	S24	30 Winter	1	+0%					9.745
S15.001	S25	15 Winter	1	+0%					9.535
S15.002	S26	15 Winter	1	+0%					9.451
S15.003	S27	15 Winter	1	+0%	100/15 Summer				8.911
S15.004	S28	15 Winter	1	+0%	100/15 Summer				8.658
S15.005	S29	15 Winter	1	+0%					8.462
S10.012	S20	30 Winter	1	+0%	30/15 Winter				7.608
S10.013	S21	30 Winter	1	+0%	100/15 Summer				7.571
S10.014	S18	30 Winter	1	+0%	100/15 Winter				7.474
S10.015	S33	30 Winter	1	+0%					7.318
S16.000	S1	15 Winter	1	+0%					10.394
S16.001	S2	15 Winter	1	+0%					10.340
S16.002	S3	15 Winter	1	+0%					10.294
S17.000	S4	15 Winter	1	+0%					10.978
S18.000	S5	15 Winter	1	+0%					10.854
S17.001	S5	15 Winter	1	+0%					10.726
S17.002	S5	15 Winter	1	+0%					10.585
S16.003	S4	15 Winter	1	+0%					10.147
S16.004	S5	15 Winter	1	+0%					9.628
S19.000	S7	15 Winter	1	+0%					10.256
S19.001	S11	15 Winter	1	+0%					9.730
S16.005	S6	15 Winter	1	+0%	100/30 Winter				9.434
S16.006	S7	15 Winter	1	+0%	100/15 Summer				9.306
S16.007	S9	15 Winter	1	+0%					9.173
S20.000	S12	15 Winter	1	+0%					10.315
S21.000	S13	15 Winter	1	+0%					10.138
S20.001	S13	15 Winter	1	+0%					9.888
S20.002	S14	30 Winter	1	+0%					9.520
S16.008	S10	30 Winter	1	+0%					8.876
S16.009	S11	30 Winter	1	+0%					8.680
S16.010	S21	30 Winter	1	+0%					7.502
S16.011	S22	30 Winter	1	+0%					7.305
S10.016	S34	30 Winter	1	+0%					6.566

PN	US/MH Name	Surcharged		Flooded		Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
		Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)				
S10.009	S17	-0.268	0.000	0.35			55.3	OK	
S10.010	S18	-0.276	0.000	0.32			56.3	OK	
S10.011	S18	-0.265	0.000	0.36			60.1	OK	
S15.000	S24	-0.180	0.000	0.09			3.9	OK	
S15.001	S25	-0.170	0.000	0.13			5.3	OK	
S15.002	S26	-0.174	0.000	0.12			6.9	OK	

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Storm Run 3

PN	US/MH Name	Surcharged Flooded		Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
		Depth (m)	Volume (m³)						
S15.003	S27	-0.154	0.000	0.22			9.9	OK	
S15.004	S28	-0.137	0.000	0.33			11.9	OK	
S15.005	S29	-0.173	0.000	0.12			13.3	OK	
S10.012	S20	-0.257	0.000	0.44			70.9	OK	
S10.013	S21	-0.254	0.000	0.49			70.6	OK	
S10.014	S18	-0.301	0.000	0.38			72.9	OK	
S10.015	S33	-0.407	0.000	0.12			72.9	OK	
S16.000	S1	-0.131	0.000	0.36			3.7	OK	
S16.001	S2	-0.165	0.000	0.16			5.1	OK	
S16.002	S3	-0.161	0.000	0.18			6.5	OK	
S17.000	S4	-0.177	0.000	0.10			3.6	OK	
S18.000	S5	-0.191	0.000	0.06			2.0	OK	
S17.001	S5	-0.159	0.000	0.19			6.8	OK	
S17.002	S5	-0.160	0.000	0.18			11.8	OK	
S16.003	S4	-0.213	0.000	0.18			20.9	OK	
S16.004	S5	-0.262	0.000	0.20			23.7	OK	
S19.000	S7	-0.199	0.000	0.03			2.2	OK	
S19.001	S11	-0.185	0.000	0.07			4.8	OK	
S16.005	S6	-0.261	0.000	0.20			31.8	OK	
S16.006	S7	-0.229	0.000	0.32			34.6	OK	
S16.007	S9	-0.252	0.000	0.24			36.4	OK	
S20.000	S12	-0.190	0.000	0.06			3.4	OK	
S21.000	S13	-0.187	0.000	0.07			3.7	OK	
S20.001	S13	-0.157	0.000	0.20			9.1	OK	
S20.002	S14	-0.155	0.000	0.22			14.4	OK	
S16.008	S10	-0.294	0.000	0.26			53.4	OK	
S16.009	S11	-0.360	0.000	0.09			54.2	OK	
S16.010	S21	-0.298	0.000	0.25			54.3	OK	
S16.011	S22	-0.345	0.000	0.12			54.3	OK	
S10.016	S34	-0.484	0.000	0.27			124.2	OK	

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Storm Run 3

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 Storage Structures 0
Number of Online Controls 0 Number of Time/Area Diagrams 44
Number of Offline Controls 0 Number of Real Time Controls 0

Synthetic Rainfall Details

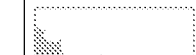
Rainfall Model FSR Ratio R 0.350
Region England and Wales Cv (Summer) 0.750
M5-60 (mm) 20.000 Cv (Winter) 0.840

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
Return Period(s) (years) 1, 30, 100, 200
Climate Change (%) 0, 0, 30, 0

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S10.000	S1	15 Winter	30	+0%					9.787
S10.001	S2	15 Winter	30	+0%					9.673
S10.002	S3	15 Winter	30	+0%	100/15 Summer				9.649
S10.003	S4	30 Winter	30	+0%	100/15 Winter				9.491
S11.000	S5	15 Summer	30	+0%					9.772
S11.001	S6	15 Summer	30	+0%					9.707
S11.002	S7	15 Winter	30	+0%	100/15 Summer				9.486
S11.003	S8	15 Winter	30	+0%	100/15 Summer				9.431
S11.004	S9	15 Winter	30	+0%	100/15 Summer				9.265
S11.005	S10	15 Winter	30	+0%	30/15 Summer				9.201
S10.004	S5	15 Winter	30	+0%	100/15 Summer				9.045
S12.000	S12	30 Winter	30	+0%					9.194
S10.005	S6	15 Winter	30	+0%	100/15 Summer				8.856
S10.006	S7	15 Winter	30	+0%	100/15 Summer				8.706
S10.007	S8	15 Winter	30	+0%					8.477
S10.008	S9	30 Winter	30	+0%	100/30 Winter				8.220
S13.000	S17	15 Winter	30	+0%					9.331
S13.001	S18	15 Winter	30	+0%					9.244
S14.000	S19	15 Winter	30	+0%					9.289
S13.002	S19	15 Winter	30	+0%					9.166

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Storm Run 3

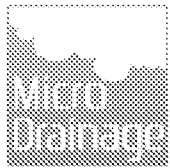
PN	US/MH Name	Surcharged Flooded		Flow / Overflow Cap. (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
		Depth (m)	Volume (m³)					
S10.000	S1	-0.178	0.000	0.10		3.9	OK	
S10.001	S2	-0.142	0.000	0.23		8.6	OK	
S10.002	S3	-0.006	0.000	0.99		15.5	OK	
S10.003	S4	-0.114	0.000	0.49		28.4	OK	
S11.000	S5	-0.123	0.000	0.39		7.2	OK	
S11.001	S6	-0.148	0.000	0.25		11.2	OK	
S11.002	S7	-0.109	0.000	0.52		19.2	OK	
S11.003	S8	-0.094	0.000	0.63		23.7	OK	
S11.004	S9	-0.050	0.000	0.70		30.6	OK	
S11.005	S10	-0.016	0.000	1.26		41.4	SURCHARGED	
S10.004	S5	-0.080	0.000	0.89		76.1	OK	
S12.000	S12	-0.181	0.000	0.08		5.8	OK	
S10.005	S6	-0.074	0.000	0.92		87.8	OK	
S10.006	S7	-0.079	0.000	0.97		89.8	OK	
S10.007	S8	-0.193	0.000	0.61		102.4	OK	
S10.008	S9	-0.260	0.000	0.37		113.7	OK	
S13.000	S17	-0.174	0.000	0.12		4.9	OK	
S13.001	S18	-0.151	0.000	0.23		9.1	OK	
S14.000	S19	-0.166	0.000	0.16		8.2	OK	
S13.002	S19	-0.149	0.000	0.25		25.6	OK	

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Storm Run 3

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S10.009	S17	30 Winter	30	+0%	100/15 Summer				8.054
S10.010	S18	30 Winter	30	+0%	100/15 Summer				8.001
S10.011	S18	30 Winter	30	+0%	100/15 Summer				7.913
S15.000	S24	30 Winter	30	+0%					9.771
S15.001	S25	15 Winter	30	+0%					9.572
S15.002	S26	15 Winter	30	+0%					9.487
S15.003	S27	15 Winter	30	+0%	100/15 Summer				8.963
S15.004	S28	15 Winter	30	+0%	100/15 Summer				8.730
S15.005	S29	15 Winter	30	+0%					8.496
S10.012	S20	30 Winter	30	+0%	30/15 Winter				7.867
S10.013	S21	15 Winter	30	+0%	100/15 Summer				7.825
S10.014	S18	30 Winter	30	+0%	100/15 Winter				7.641
S10.015	S33	30 Winter	30	+0%					7.387
S16.000	S1	15 Winter	30	+0%					10.465
S16.001	S2	15 Winter	30	+0%					10.378
S16.002	S3	15 Winter	30	+0%					10.334
S17.000	S4	15 Winter	30	+0%					11.007
S18.000	S5	15 Winter	30	+0%					10.875
S17.001	S5	15 Winter	30	+0%					10.769
S17.002	S5	15 Winter	30	+0%					10.625
S16.003	S4	15 Winter	30	+0%					10.203
S16.004	S5	15 Winter	30	+0%					9.701
S19.000	S7	15 Winter	30	+0%					10.271
S19.001	S11	15 Winter	30	+0%					9.754
S16.005	S6	15 Winter	30	+0%	100/30 Winter				9.508
S16.006	S7	15 Winter	30	+0%	100/15 Summer				9.414
S16.007	S9	15 Winter	30	+0%					9.256
S20.000	S12	15 Winter	30	+0%					10.336
S21.000	S13	15 Winter	30	+0%					10.161
S20.001	S13	15 Winter	30	+0%					9.931
S20.002	S14	30 Winter	30	+0%					9.566
S16.008	S10	30 Winter	30	+0%					8.985
S16.009	S11	30 Winter	30	+0%					8.732
S16.010	S21	30 Winter	30	+0%					7.605
S16.011	S22	30 Winter	30	+0%					7.370
S10.016	S34	30 Winter	30	+0%					6.743

PN	US/MH Name	Surcharged Flooded		Flow / Overflow		Half Drain	Pipe	Status	Level Exceeded
		Depth (m)	Volume (m³)	Cap.	(l/s)	Time (mins)	Flow (l/s)		
S10.009	S17	-0.136	0.000	0.83			132.4	OK	
S10.010	S18	-0.129	0.000	0.76			135.3	OK	
S10.011	S18	-0.067	0.000	0.85			144.1	OK	
S15.000	S24	-0.154	0.000	0.22			9.5	OK	
S15.001	S25	-0.133	0.000	0.34			13.6	OK	
S15.002	S26	-0.138	0.000	0.31			18.5	OK	

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Storm Run 3

PN	US/MH Name	Surcharged		Flooded		Half Drain		Pipe	Status	Level Exceeded
		Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	Flow (l/s)		
S15.003	S27	-0.102	0.000	0.57			26.2		OK	
S15.004	S28	-0.065	0.000	0.85			30.9		OK	
S15.005	S29	-0.139	0.000	0.31			34.5		OK	
S10.012	S20	-0.002	0.000	1.05			169.3	SURCHARGED		
S10.013	S21	-0.000	0.000	1.10			158.8		OK	
S10.014	S18	-0.134	0.000	0.90			173.5		OK	
S10.015	S33	-0.338	0.000	0.28			173.8		OK	
S16.000	S1	-0.060	0.000	0.89			9.1		OK	
S16.001	S2	-0.127	0.000	0.40			12.6		OK	
S16.002	S3	-0.121	0.000	0.44			16.0		OK	
S17.000	S4	-0.148	0.000	0.25			8.7		OK	
S18.000	S5	-0.170	0.000	0.14			4.9		OK	
S17.001	S5	-0.116	0.000	0.47			16.8		OK	
S17.002	S5	-0.120	0.000	0.45			29.0		OK	
S16.003	S4	-0.157	0.000	0.46			51.6		OK	
S16.004	S5	-0.189	0.000	0.49			58.7		OK	
S19.000	S7	-0.184	0.000	0.08			5.4		OK	
S19.001	S11	-0.161	0.000	0.18			11.7		OK	
S16.005	S6	-0.187	0.000	0.50			78.8		OK	
S16.006	S7	-0.121	0.000	0.79			85.5		OK	
S16.007	S9	-0.169	0.000	0.58			90.2		OK	
S20.000	S12	-0.169	0.000	0.14			8.2		OK	
S21.000	S13	-0.164	0.000	0.17			9.2		OK	
S20.001	S13	-0.114	0.000	0.49			22.3		OK	
S20.002	S14	-0.109	0.000	0.53			35.3		OK	
S16.008	S10	-0.185	0.000	0.65			132.0		OK	
S16.009	S11	-0.308	0.000	0.22			133.4		OK	
S16.010	S21	-0.195	0.000	0.61			133.4		OK	
S16.011	S22	-0.280	0.000	0.31			133.6		OK	
S10.016	S34	-0.307	0.000	0.65			297.2		OK	

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Monarch House

Barton Lane

OX14 3NB

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Phase 2

Roundstone Lane

Angmering

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm Run 3

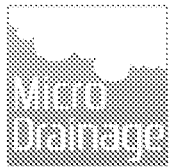
Simulation Criteria			
Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m³/ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coefficient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		
Number of Input Hydrographs	0	Number of Storage Structures	0
Number of Online Controls	0	Number of Time/Area Diagrams	44
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details			
Rainfall Model	FSR	Ratio R	0.350
Region	England and Wales	Cv (Summer)	0.750
M5-60 (mm)	20.000	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
Return Period(s) (years)	1, 30, 100, 200
Climate Change (%)	0, 0, 30, 0

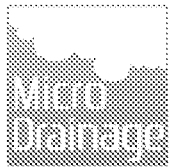
PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S10.000	S1	15 Winter	100	+30%					9.817
S10.001	S2	15 Winter	100	+30%					9.809
S10.002	S3	15 Winter	100	+30%	100/15 Summer				9.784
S10.003	S4	30 Winter	100	+30%	100/15 Winter				9.683
S11.000	S5	15 Summer	100	+30%					9.811
S11.001	S6	15 Winter	100	+30%					9.798
S11.002	S7	15 Winter	100	+30%	100/15 Summer				9.776
S11.003	S8	15 Winter	100	+30%	100/15 Summer				9.755
S11.004	S9	30 Winter	100	+30%	100/15 Summer				9.656
S11.005	S10	30 Winter	100	+30%	30/15 Summer				9.568
S10.004	S5	30 Winter	100	+30%	100/15 Summer				9.427
S12.000	S12	30 Winter	100	+30%					9.206
S10.005	S5	30 Winter	100	+30%	100/15 Summer				9.129
S10.006	S7	30 Winter	100	+30%	100/15 Summer				8.873
S10.007	S8	30 Winter	100	+30%					8.659
S10.008	S9	30 Winter	100	+30%	100/30 Winter				8.509
S13.000	S17	15 Winter	100	+30%					9.348
S13.001	S18	15 Winter	100	+30%					9.268
S14.000	S19	15 Winter	100	+30%					9.308
S13.002	S19	15 Winter	100	+30%					9.191

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm Run 3

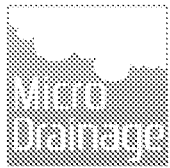
PN	US/MH Name	Surcharged Flooded		Flow / Overflow Cap. (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
		Depth (m)	Volume (m³)					
S10.000	S1	-0.148	0.000	0.16		6.6	OK	
S10.001	S2	-0.006	0.000	0.36		13.5	OK	
S10.002	S3	0.128	0.000	1.63		23.4	SURCHARGED	
S10.003	S4	0.078	0.000	0.73		42.3	SURCHARGED	
S11.000	S5	-0.084	0.000	0.66		12.2	OK	
S11.001	S6	-0.057	0.000	0.41		18.4	OK	
S11.002	S7	0.181	0.000	0.74		27.6	SURCHARGED	
S11.003	S8	0.230	0.000	0.86		32.5	SURCHARGED	
S11.004	S9	0.341	0.000	0.84		36.9	SURCHARGED	
S11.005	S10	0.383	0.000	1.57		54.3	SURCHARGED	
S10.004	S5	0.302	0.000	1.24		106.1	SURCHARGED	
S12.000	S12	-0.169	0.000	0.14		9.8	OK	
S10.005	S6	0.198	0.000	1.32		125.7	SURCHARGED	
S10.006	S7	0.093	0.000	1.39		129.1	SURCHARGED	
S10.007	S8	-0.011	0.000	0.88		147.8	OK	
S10.008	S9	0.029	0.000	0.56		169.1	SURCHARGED	
S13.000	S17	-0.157	0.000	0.20		8.3	OK	
S13.001	S18	-0.127	0.000	0.39		15.4	OK	
S14.000	S19	-0.147	0.000	0.26		13.8	OK	
S13.002	S19	-0.124	0.000	0.41		43.1	OK	

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm Run 3

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S10.009	S17	30 Winter	100	+30%	100/15 Summer				8.449
S10.010	S18	30 Winter	100	+30%	100/15 Summer				8.237
S10.011	S18	30 Winter	100	+30%	100/15 Summer				8.165
S15.000	S24	30 Winter	100	+30%					9.795
S15.001	S25	15 Winter	100	+30%					9.605
S15.002	S26	15 Winter	100	+30%					9.517
S15.003	S27	15 Winter	100	+30%	100/15 Summer				9.118
S15.004	S28	15 Winter	100	+30%	100/15 Summer				8.912
S15.005	S29	15 Winter	100	+30%					8.522
S10.012	S20	30 Winter	100	+30%	30/15 Winter				8.033
S10.013	S21	30 Winter	100	+30%	100/15 Summer				7.961
S10.014	S18	30 Winter	100	+30%	100/15 Winter				7.813
S10.015	S33	30 Winter	100	+30%					7.433
S16.000	S1	30 Winter	100	+30%					10.525
S16.001	S2	15 Winter	100	+30%					10.416
S16.002	S3	15 Winter	100	+30%					10.375
S17.000	S4	15 Winter	100	+30%					11.033
S18.000	S5	15 Winter	100	+30%					10.893
S17.001	S5	15 Winter	100	+30%					10.812
S17.002	S5	30 Winter	100	+30%					10.667
S16.003	S4	15 Winter	100	+30%					10.259
S16.004	S5	30 Winter	100	+30%					9.813
S19.000	S7	15 Winter	100	+30%					10.283
S19.001	S11	15 Winter	100	+30%					9.774
S16.005	S6	30 Winter	100	+30%	100/30 Winter				9.695
S16.006	S7	30 Winter	100	+30%	100/15 Summer				9.589
S16.007	S9	30 Winter	100	+30%					9.395
S20.000	S12	15 Winter	100	+30%					10.354
S21.000	S13	15 Winter	100	+30%					10.181
S20.001	S13	15 Winter	100	+30%					9.976
S20.002	S14	30 Winter	100	+30%					9.616
S16.008	S10	30 Winter	100	+30%					9.170
S16.009	S11	30 Winter	100	+30%					8.774
S16.010	S21	30 Winter	100	+30%					7.705
S16.011	S22	30 Winter	100	+30%					7.422
S10.016	S34	30 Winter	100	+30%					7.050

PN	US/MH Name	Surcharged		Flooded		Half Drain		Pipe	Status	Level Exceeded
		Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)			
S10.009	S17	0.259	0.000	1.19			190.1		SURCHARGED	
S10.010	S18	0.207	0.000	1.09			193.2		SURCHARGED	
S10.011	S18	0.195	0.000	1.21			204.9		SURCHARGED	
S15.000	S24	-0.130	0.000	0.37			16.2		OK	
S15.001	S25	-0.100	0.000	0.58			23.0		OK	
S15.002	S26	-0.108	0.000	0.52			31.1		OK	

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm Run 3

PN	US/MH Name	Surcharged		Flooded		Half Drain		Pipe	Status	Level Exceeded
		Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	Flow (l/s)		
S15.003	S27	0.053	0.000	0.89			41.0		SURCHARGED	
S15.004	S28	0.117	0.000	1.33			48.8		SURCHARGED	
S15.005	S29	-0.113	0.000	0.49			54.0		OK	
S10.012	S20	0.170	0.000	1.52			246.6		SURCHARGED	
S10.013	S21	0.136	0.000	1.71			247.4		SURCHARGED	
S10.014	S18	0.038	0.000	1.35			258.5		SURCHARGED	
S10.015	S33	-0.292	0.000	0.41			258.5		OK	
S16.006	S1	0.000	0.000	1.15			11.8		OK	
S16.001	S2	-0.089	0.000	0.67			21.2		OK	
S16.002	S3	-0.080	0.000	0.74			27.0		OK	
S17.000	S4	-0.122	0.000	0.42			14.7		OK	
S18.000	S5	-0.152	0.000	0.23			8.2		OK	
S17.001	S5	-0.073	0.000	0.79			28.2		OK	
S17.002	S5	-0.078	0.000	0.75			48.8		OK	
S16.003	S4	-0.101	0.000	0.76			86.5		OK	
S16.004	S5	-0.077	0.000	0.79			95.1		OK	
S19.000	S7	-0.172	0.000	0.13			9.1		OK	
S19.001	S11	-0.141	0.000	0.30			19.6		OK	
S16.005	S6	0.000	0.000	0.81			127.1		SURCHARGED	
S16.006	S7	0.054	0.000	1.28			128.7		SURCHARGED	
S16.007	S9	-0.030	0.000	0.93			144.4		OK	
S20.000	S12	-0.151	0.000	0.23			13.9		OK	
S21.000	S13	-0.144	0.000	0.28			15.5		OK	
S20.001	S13	-0.069	0.000	0.82			37.6		OK	
S20.002	S14	-0.059	0.000	0.90			60.0		OK	
S16.008	S10	0.000	0.000	1.04			212.1		OK	
S16.009	S11	-0.266	0.000	0.35			214.1		OK	
S16.010	S21	-0.095	0.000	0.98			214.0		OK	
S16.011	S22	-0.228	0.000	0.49			213.4		OK	
S10.016	S34	0.000	0.000	1.03			458.9		OK	

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200 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm Run 3

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 Storage Structures 0
Number of Online Controls 0 Number of Time/Area Diagrams 44
Number of Offline Controls 0 Number of Real Time Controls 0

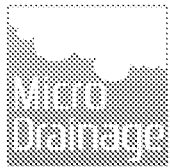
Synthetic Rainfall Details

Rainfall Model FSR Ratio R 0.350
Region England and Wales Cv (Summer) 0.750
M5-60 (mm) 20.000 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0 DVD Status OFF
Analysis Timestep Fine Inertia Status OFF
DTS Status ON

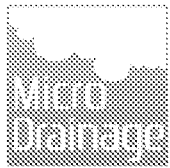
Profile(s) Summer and Winter
Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440
Return Period(s) (years) 1, 30, 100, 200
Climate Change (%) 0, 0, 30, 0

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S10.000	S1	15 Winter	200	+0%					9.798
S10.001	S2	15 Winter	200	+0%					9.764
S10.002	S3	15 Winter	200	+0%	100/15 Summer				9.736
S10.003	S4	30 Winter	200	+0%	100/15 Winter				9.554
S11.000	S5	15 Summer	200	+0%					9.801
S11.001	S6	15 Summer	200	+0%					9.727
S11.002	S7	15 Winter	200	+0%	100/15 Summer				9.655
S11.003	S8	15 Winter	200	+0%	100/15 Summer				9.634
S11.004	S9	15 Winter	200	+0%	100/15 Summer				9.538
S10.005	S10	30 Winter	200	+0%	30/15 Summer				9.456
S10.004	S5	30 Winter	200	+0%	100/15 Summer				9.330
S12.000	S12	30 Winter	200	+0%					9.203
S10.005	S5	30 Winter	200	+0%	100/15 Summer				9.063
S10.006	S7	30 Winter	200	+0%	100/15 Summer				8.849
S10.007	S8	30 Winter	200	+0%					8.540
S10.008	S9	30 Winter	200	+0%	100/30 Winter				8.396
S13.000	S17	15 Winter	200	+0%					9.344
S13.001	S18	15 Winter	200	+0%					9.262
S14.000	S19	15 Winter	200	+0%					9.304
S13.002	S19	15 Winter	200	+0%					9.185

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200 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm Run 3

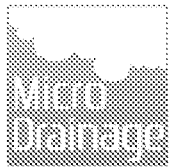
PN	US/MH Name	Surcharged Flooded		Flow / Overflow Cap. (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
		Depth (m)	Volume (m³)					
S10.000	S1	-0.167	0.000	0.15		5.9	OK	
S10.001	S2	-0.051	0.000	0.32		12.1	OK	
S10.002	S3	-0.081	0.000	1.50		23.3	SURCHARGED	
S10.003	S4	-0.051	0.000	0.70		40.8	OK	
S11.000	S5	-0.094	0.000	0.59		10.9	OK	
S11.001	S6	-0.128	0.000	0.37		16.9	OK	
S11.002	S7	0.060	0.000	0.74		27.4	SURCHARGED	
S11.003	S8	0.109	0.000	0.84		31.7	SURCHARGED	
S11.004	S9	0.223	0.000	0.85		37.5	SURCHARGED	
S11.005	S10	0.271	0.000	1.45		50.0	SURCHARGED	
S10.004	S5	0.205	0.000	1.16		99.3	SURCHARGED	
S12.000	S12	-0.172	0.000	0.13		8.8	OK	
S10.005	S6	0.139	0.000	1.23		117.4	SURCHARGED	
S10.006	S7	0.066	0.000	1.30		120.6	SURCHARGED	
S10.007	S8	-0.130	0.000	0.85		141.4	OK	
S10.008	S9	-0.084	0.000	0.52		158.7	OK	
S13.000	S17	-0.161	0.000	0.18		7.4	OK	
S13.001	S18	-0.133	0.000	0.34		13.8	OK	
S14.000	S19	-0.151	0.000	0.23		12.4	OK	
S13.002	S19	-0.130	0.000	0.37		38.5	OK	

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200 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm Run 3

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S10.009	S17	30 Winter	200	+0%	100/15 Summer				8.341
S10.010	S18	30 Winter	200	+0%	100/15 Summer				8.240
S10.011	S18	30 Winter	200	+0%	100/15 Summer				8.086
S15.000	S24	30 Winter	200	+0%					9.789
S15.001	S25	15 Winter	200	+0%					9.596
S15.002	S26	15 Winter	200	+0%					9.510
S15.003	S27	15 Winter	200	+0%	100/15 Summer				9.039
S15.004	S28	15 Winter	200	+0%	100/15 Summer				8.863
S15.005	S29	15 Winter	200	+0%					8.516
S10.012	S20	30 Winter	200	+0%	30/15 Winter				7.971
S10.013	S21	30 Winter	200	+0%	100/15 Summer				7.967
S10.014	S18	30 Winter	200	+0%	100/15 Winter				7.778
S10.015	S33	30 Winter	200	+0%					7.424
S16.000	S1	30 Summer	200	+0%					10.525
S16.001	S2	15 Winter	200	+0%					10.406
S16.002	S3	15 Winter	200	+0%					10.364
S17.000	S4	15 Winter	200	+0%					11.027
S18.000	S5	15 Winter	200	+0%					10.889
S17.001	S5	15 Winter	200	+0%					10.801
S17.002	S5	30 Winter	200	+0%					10.656
S16.003	S4	15 Winter	200	+0%					10.244
S16.004	S5	15 Winter	200	+0%					9.755
S19.000	S7	30 Winter	200	+0%					10.281
S19.001	S11	15 Winter	200	+0%					9.769
S16.005	S6	30 Winter	200	+0%	100/30 Winter				9.642
S16.006	S7	30 Winter	200	+0%	100/15 Summer				9.555
S16.007	S9	30 Winter	200	+0%					9.317
S20.000	S12	15 Winter	200	+0%					10.350
S21.000	S13	15 Winter	200	+0%					10.176
S20.001	S13	15 Winter	200	+0%					9.964
S20.002	S14	30 Winter	200	+0%					9.604
S16.008	S10	30 Winter	200	+0%					9.069
S16.009	S11	30 Winter	200	+0%					8.765
S16.010	S21	30 Winter	200	+0%					7.684
S16.011	S22	30 Winter	200	+0%					7.411
S10.016	S34	30 Winter	200	+0%					6.883

PN	US/MH Name	Surcharged		Flooded		Half Drain		Pipe	Status	Level Exceeded
		Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)			
S10.009	S17	0.151	0.000	1.12			179.5		SURCHARGED	
S10.010	S18	0.110	0.000	1.02			182.0		SURCHARGED	
S10.011	S18	0.106	0.000	1.14			193.5		SURCHARGED	
S15.000	S24	-0.136	0.000	0.33			14.5		OK	
S15.001	S25	-0.109	0.000	0.52			20.5		OK	
S15.002	S26	-0.115	0.000	0.46			27.7		OK	

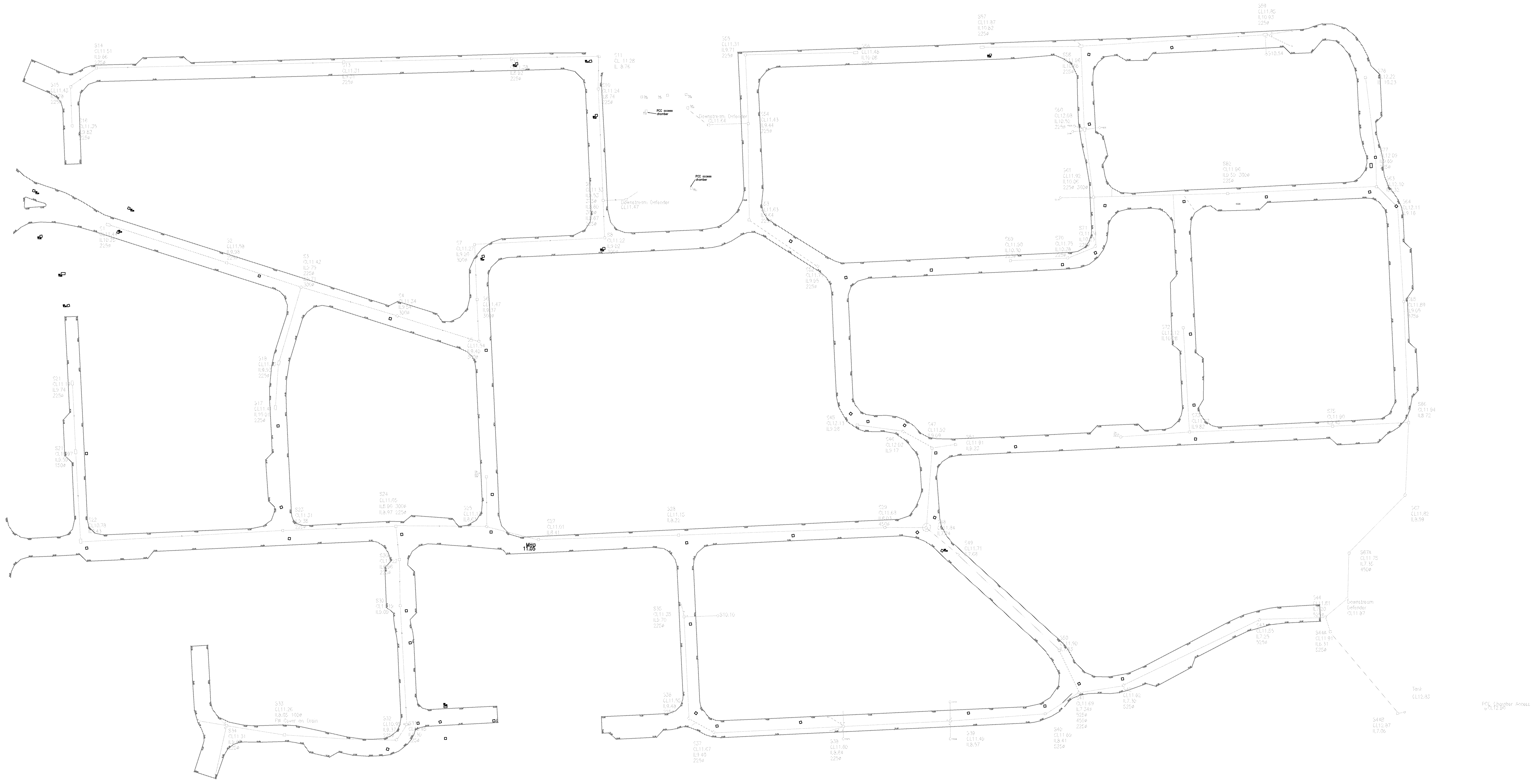
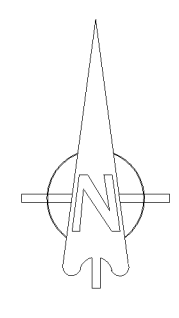
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200 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm Run 3

PN	US/MH Name	Surcharged		Flooded		Half Drain		Pipe	Status	Level Exceeded
		Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	Flow (l/s)		
S15.003	S27	-0.026	0.000	0.82			37.8		OK	
S15.004	S28	0.000	0.000	1.22			44.4		SURCHARGED	
S15.005	S29	-0.119	0.000	0.45			49.2		OK	
S10.012	S20	0.106	0.000	1.42			229.5		SURCHARGED	
S10.013	S21	0.092	0.000	1.60			230.5		SURCHARGED	
S10.014	S18	0.000	0.000	1.25			240.9		SURCHARGED	
S10.015	S33	-0.301	0.000	0.38			240.9		OK	
S16.006	S1	0.000	0.000	1.11			11.4		OK	
S16.001	S2	-0.099	0.000	0.60			19.0		OK	
S16.002	S3	-0.091	0.000	0.66			24.1		OK	
S17.000	S4	-0.128	0.000	0.37			13.2		OK	
S18.000	S5	-0.156	0.000	0.21			7.3		OK	
S17.001	S5	-0.084	0.000	0.70			25.2		OK	
S17.002	S5	-0.089	0.000	0.68			43.8		OK	
S16.003	S4	-0.116	0.000	0.68			77.2		OK	
S16.004	S5	-0.135	0.000	0.73			87.8		OK	
S19.000	S7	-0.174	0.000	0.12			8.1		OK	
S19.001	S11	-0.146	0.000	0.27			17.5		OK	
S16.005	S6	-0.053	0.000	0.73			114.8		OK	
S16.006	S7	0.020	0.000	1.10			125.2		SURCHARGED	
S16.007	S9	-0.108	0.000	0.85			131.4		OK	
S20.000	S12	-0.155	0.000	0.21			12.4		OK	
S21.000	S13	-0.149	0.000	0.25			13.8		OK	
S20.001	S13	-0.081	0.000	0.73			33.6		OK	
S20.002	S14	-0.071	0.000	0.81			53.9		OK	
S16.008	S10	-0.101	0.000	0.96			194.8		OK	
S16.009	S11	-0.275	0.000	0.32			196.5		OK	
S16.010	S21	-0.116	0.000	0.90			196.3		OK	
S16.011	S22	-0.239	0.000	0.45			196.6		OK	
S10.016	S34	-0.167	0.000	0.96			436.1		OK	



AS-BUILT SURVEY
SURFACE WATER NETWORK



As Built Surface Water Survey based on information provided by CADMAP Survey,
Blaze Construction and Cole & Cole.

REV. No.	DATE	DESCRIPTION	INITIALS
Client	CALA HOMES MJA CONSULTING CIVIL & STRUCTURAL ENGINEERS Ipsum Court, The Quadrant, Aberdeen Science Park, Quon. 0244 915 Tel: 01235 555173 Fax: 01235 523228 		
Project	Roundstone Lane Angmering		
Title	As Built Survey Surface Water System	Scale: 1:500 @A0 Checked	Date: Jul'21 Drawn: CH
		Drawing No. 5356:950	Rev.