

Dixon Hurst Kemp		Page 1
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road. Hassocks Surface Water Drainage Design Simulation Rev03	
Date Nov 25	Designed by JS	
File COMBINED ATTENUATION ...	Checked by	
Elstree Computing Ltd	Network W.12.6	

STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Storm

Pipe Sizes STANDARD Manhole Sizes STANDARD

FSR Rainfall Model - England and Wales

Return Period (years)	2	Add Flow / Climate Change (%)	45
M5-60 (mm)	20.000	Minimum Backdrop Height (m)	0.000
Ratio R	0.343	Maximum Backdrop Height (m)	0.000
Maximum Rainfall (mm/hr)	50	Min Design Depth for Optimisation (m)	0.000
Foul Sewage (l/s/ha)	0.00	Min Vel for Auto Design only (m/s)	0.76
Volumetric Runoff Coeff.	1.000	Min Slope for Optimisation (1:X)	500
PIMP (%)	100		

Designed with Level Soffits

Time Area Diagram for Storm

Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.014	4-8	0.002

Total Area Contributing (ha) = 0.016

Total Pipe Volume (m³) = 0.381

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)
1.000	16.200	1.906	8.5	0.004	5.00	0.0	0.600	o	110
1.001	5.000	0.050	100.0	0.004	0.00	0.0	0.600	o	110
2.000	3.600	0.379	9.5	0.004	5.00	0.0	0.600	o	110
2.001	9.200	1.533	6.0	0.004	0.00	0.0	0.600	o	110
1.002	3.600	0.045	80.0	0.000	0.00	0.0	0.600	o	110
1.003	1.000	0.010	100.0	0.000	0.00	0.0	0.600	o	110
1.004	1.500	0.015	100.0	0.000	0.00	0.0	0.600	o	110

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)
1.000	50.00	5.10	65.400	0.004	0.0	0.0	0.3	2.84	27.0	1.0
1.001	50.00	5.20	63.494	0.008	0.0	0.0	0.6	0.82	7.8	2.1
2.000	50.00	5.02	65.400	0.004	0.0	0.0	0.3	2.69	25.5	1.0
2.001	50.00	5.07	65.000	0.008	0.0	0.0	0.6	3.38	32.2	2.1
1.002	50.00	5.26	63.444	0.016	0.0	0.0	1.3	0.92	8.7	4.2
1.003	50.00	5.28	63.250	0.016	0.0	0.0	1.3	0.82	7.8	4.2
1.004	50.00	5.31	63.100	0.016	0.0	0.0	1.3	0.82	7.8	4.2

Dixon Hurst Kemp		Page 2
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road. Hassocks Surface Water Drainage Design Simulation Rev03	
Date Nov 25	Designed by JS	
File COMBINED ATTENUATION ...	Checked by	
Elstree Computing Ltd	Network W.12.6	

Manhole Schedules for Storm

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)	Backd (mm)
RE1	66.000	0.600	Open Manhole	110	1.000	65.400	110				
S1	64.100	0.606	Open Manhole	600	1.001	63.494	110	1.000	63.494	110	
RE2	66.000	0.600	Open Manhole	110	2.000	65.400	110				
S2	65.650	0.650	Open Manhole	600	2.001	65.000	110	2.000	65.021	110	
S3	64.100	0.656	Open Manhole	600	1.002	63.444	110	1.001	63.444	110	
								2.001	63.467	110	
S4	64.000	0.750	Open Manhole	600	1.003	63.250	110	1.002	63.399	110	
RAIN GARDEN	63.700	0.600	Open Manhole	600	1.004	63.100	110	1.003	63.240	110	
Dummy	63.800	0.715	Open Manhole	600		OUTFALL		1.004	63.085	110	

Dixon Hurst Kemp	Page 3
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road. Hassocks Surface Water Drainage Design Simulation Rev03
Date Nov 25	Designed by JS
File COMBINED ATTENUATION ...	Checked by
Elstree Computing Ltd	Network W.12.6



PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
1.000	o	110	RE1	66.000	65.400	0.490	Open Manhole	110
1.001	o	110	S1	64.100	63.494	0.496	Open Manhole	600
2.000	o	110	RE2	66.000	65.400	0.490	Open Manhole	110
2.001	o	110	S2	65.650	65.000	0.540	Open Manhole	600
1.002	o	110	S3	64.100	63.444	0.546	Open Manhole	600
1.003	o	110	S4	64.000	63.250	0.640	Open Manhole	600
1.004	o	110	RAIN GARDEN	63.700	63.100	0.490	Open Manhole	600

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)
1.000	16.200	8.5	S1	64.100	63.494	0.496	Open Manhole	600
1.001	5.000	100.0	S3	64.100	63.444	0.546	Open Manhole	600
2.000	3.600	9.5	S2	65.650	65.021	0.519	Open Manhole	600
2.001	9.200	6.0	S3	64.100	63.467	0.523	Open Manhole	600
1.002	3.600	80.0	S4	64.000	63.399	0.491	Open Manhole	600
1.003	1.000	100.0	RAIN GARDEN	63.700	63.240	0.350	Open Manhole	600
1.004	1.500	100.0	Dummy	63.800	63.085	0.605	Open Manhole	600

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
---------------------	--------------	--------------	--------------	------------------	----------	--------

1.004	Dummy	63.800	63.085	63.100	600	0
-------	-------	--------	--------	--------	-----	---

Simulation Criteria for Storm

Volumetric Runoff Coeff	1.000	Foul Sewage per hectare (l/s)	0.000
Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	45.000
Hot Start (mins)	0	MADD Factor * 10m³/ha Storage	2.000
Hot Start Level (mm)	0	Run Time (mins)	60
Manhole Headloss Coeff (Global)	0.500	Output Interval (mins)	1

Number of Input Hydrographs	0	Number of Storage Structures	2
Number of Online Controls	2	Number of Time/Area Diagrams	0
Number of Offline Controls	0		

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Summer
Return Period (years)	100	Cv (Summer)	1.000
Region	England and Wales	Cv (Winter)	1.000
M5-60 (mm)	20.000	Storm Duration (mins)	30
Ratio R	0.343		

Dixon Hurst Kemp		Page 4
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road. Hassocks Surface Water Drainage Design Simulation Rev03	
Date Nov 25	Designed by JS	
File COMBINED ATTENUATION ...	Checked by	
Elstree Computing Ltd	Network W.12.6	

Online Controls for Storm

Orifice Manhole: S4, DS/PN: 1.003, Volume (m³): 0.2

Diameter (m) 0.017 Discharge Coefficient 0.600 Invert Level (m) 63.250

Depth/Flow Relationship Manhole: RAIN GARDEN, DS/PN: 1.004, Volume (m³): 0.2

Invert Level (m) 63.100

Depth (m) Flow (l/s)

0.700 0.0400

Dixon Hurst Kemp		Page 5
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road. Hassocks Surface Water Drainage Design Simulation Rev03	
Date Nov 25	Designed by JS	
File COMBINED ATTENUATION ...	Checked by	
Elstree Computing Ltd	Network W.12.6	

Storage Structures for Storm

cellular Storage Manhole: S4, DS/PN: 1.003

Invert Level (m) 63.250 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.00000

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	30.0	30.0	0.500	0.0	43.6
0.400	30.0	43.6			

Infiltration Blanket Manhole: RAIN GARDEN, DS/PN: 1.004

Infiltration Coefficient Base (m/hr) 0.04461 Diameter/Width (m) 1.2
Safety Factor 2.0 Length (m) 7.7
Porosity 0.30 Cap Volume Depth (m) 0.000
Invert Level (m) 63.100

Manhole Headloss for Storm

PN	US/MH Name	US/MH Headloss
1.000	RE1	0.500
1.001	S1	0.500
2.000	RE2	0.500
2.001	S2	0.500
1.002	S3	0.500
1.003	S4	0.500
1.004	RAIN GARDEN	0.500

Dixon Hurst Kemp		Page 6
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road. Hassocks Surface Water Drainage Design Simulation Rev03	
Date Nov 25	Designed by JS	
File COMBINED ATTENUATION ...	Checked by	
Elstree Computing Ltd	Network W.12.6	

Summary of Results for 30 minute 100 year Summer (Storm)

Margin for Flood Risk Warning (mm) 0.0 DVD Status OFF
Analysis Timestep Fine Inertia Status OFF
DTS Status ON

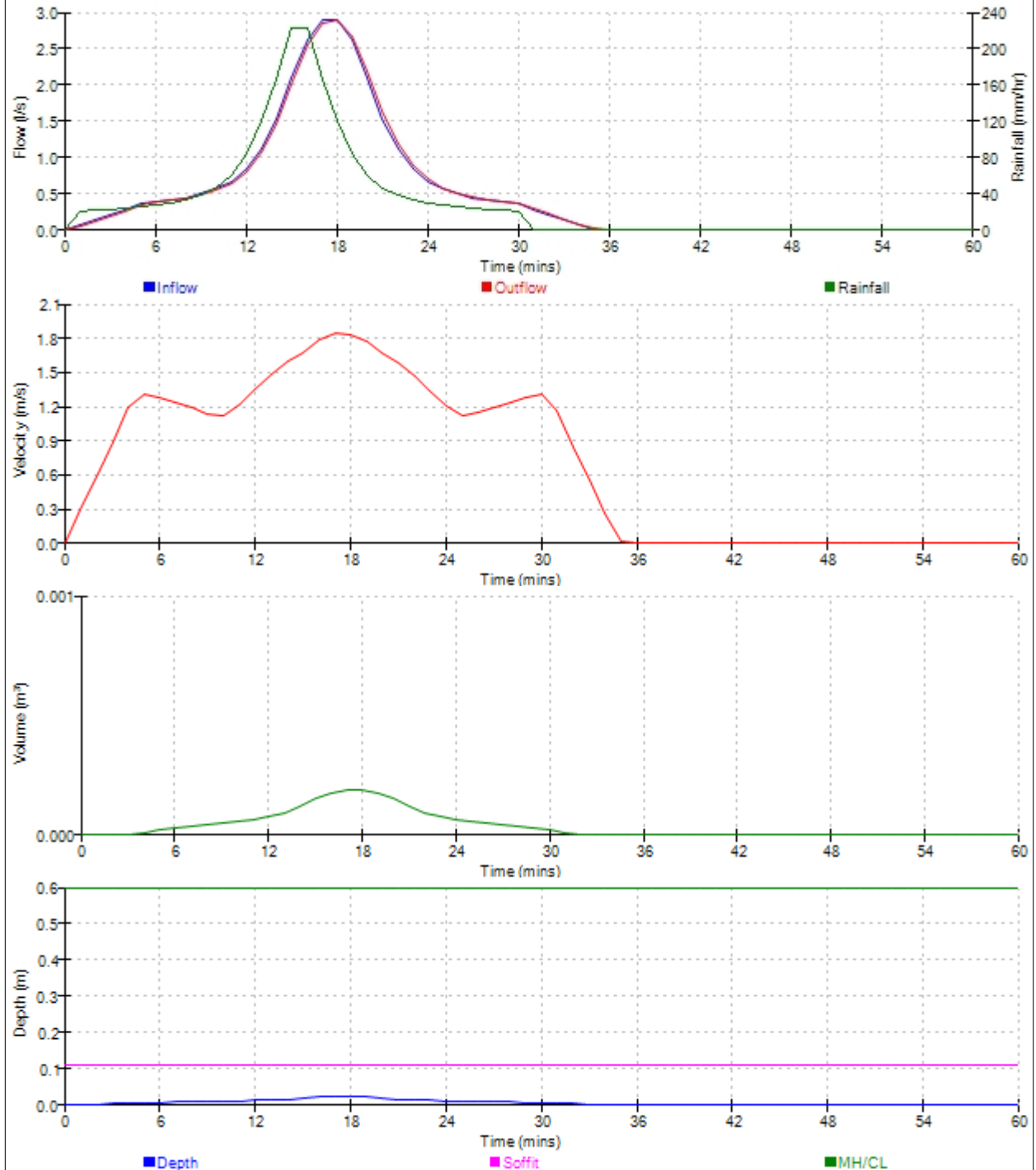
PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
1.000	RE1	65.424	-0.086	0.000	0.11	0.0	2.9	OK
1.001	S1	63.669	0.065	0.000	0.88	0.0	5.9	SURCHARGED
2.000	RE2	65.427	-0.083	0.000	0.14	0.0	2.9	OK
2.001	S2	65.034	-0.076	0.000	0.20	0.0	5.9	OK
1.002	S3	63.629	0.075	0.000	1.66	0.0	11.8	SURCHARGED
1.003	S4	63.491	0.131	0.000	0.06	0.0	0.3	SURCHARGED
1.004	RAIN GARDEN	63.284	0.074	0.000	0.00	0.0	0.0	SURCHARGED

Dixon Hurst Kemp		Page 7
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road. Hassocks Surface Water Drainage Design Simulation Rev03	
Date Nov 25	Designed by JS	
File COMBINED ATTENUATION ...	Checked by	
Elstree Computing Ltd	Network W.12.6	

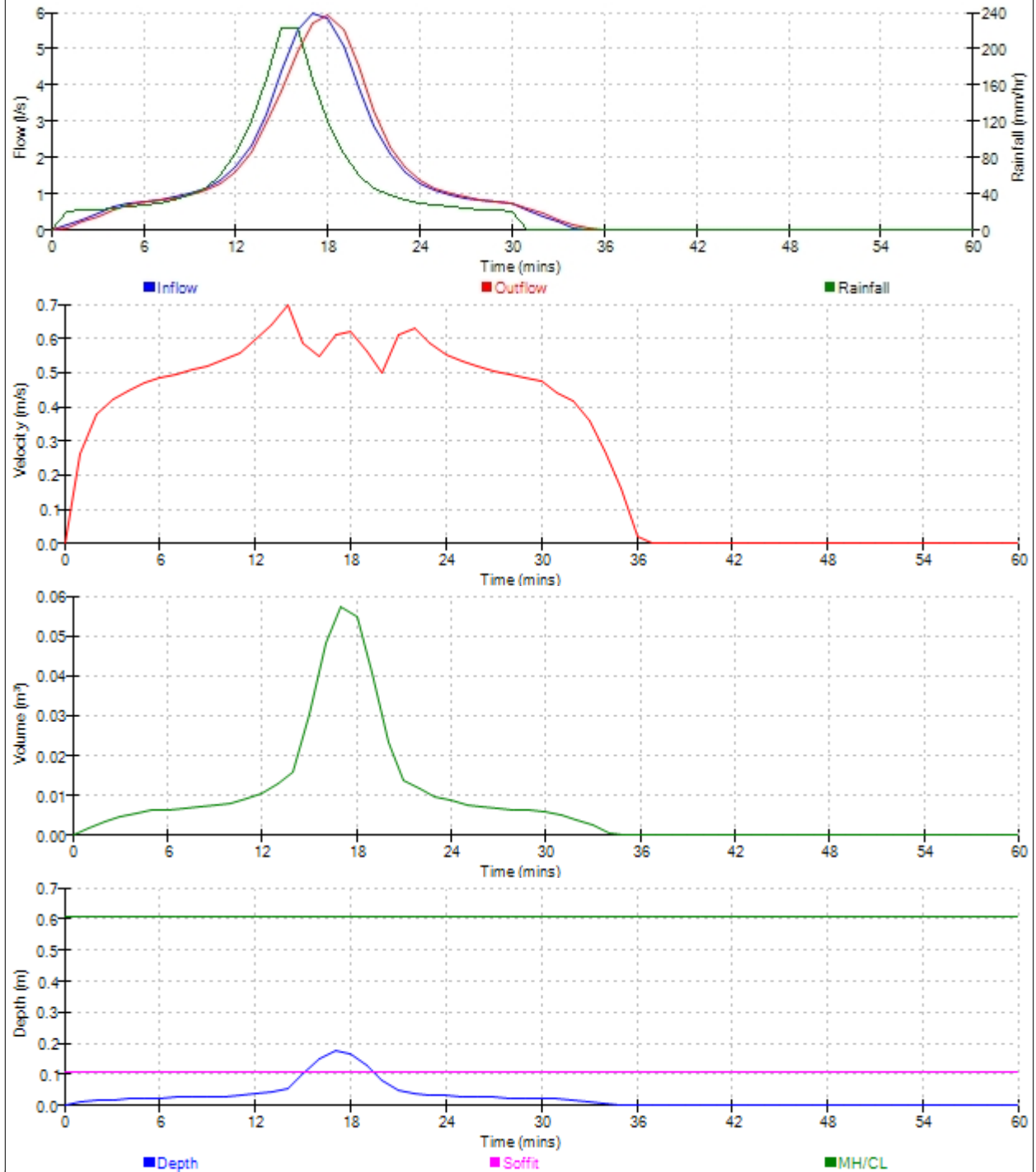
Rainfall Hyetograph for 30 minute 100 year Summer (Storm)

Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)
1	20.675	7	30.256	13	121.401	19	84.653	25	27.608
2	21.746	8	33.533	14	165.650	20	60.385	26	25.528
3	22.818	9	38.135	15	222.758	21	46.518	27	23.826
4	23.826	10	46.518	16	222.758	22	38.135	28	22.818
5	25.528	11	60.385	17	165.650	23	33.533	29	21.746
6	27.608	12	84.653	18	121.401	24	30.256	30	20.675

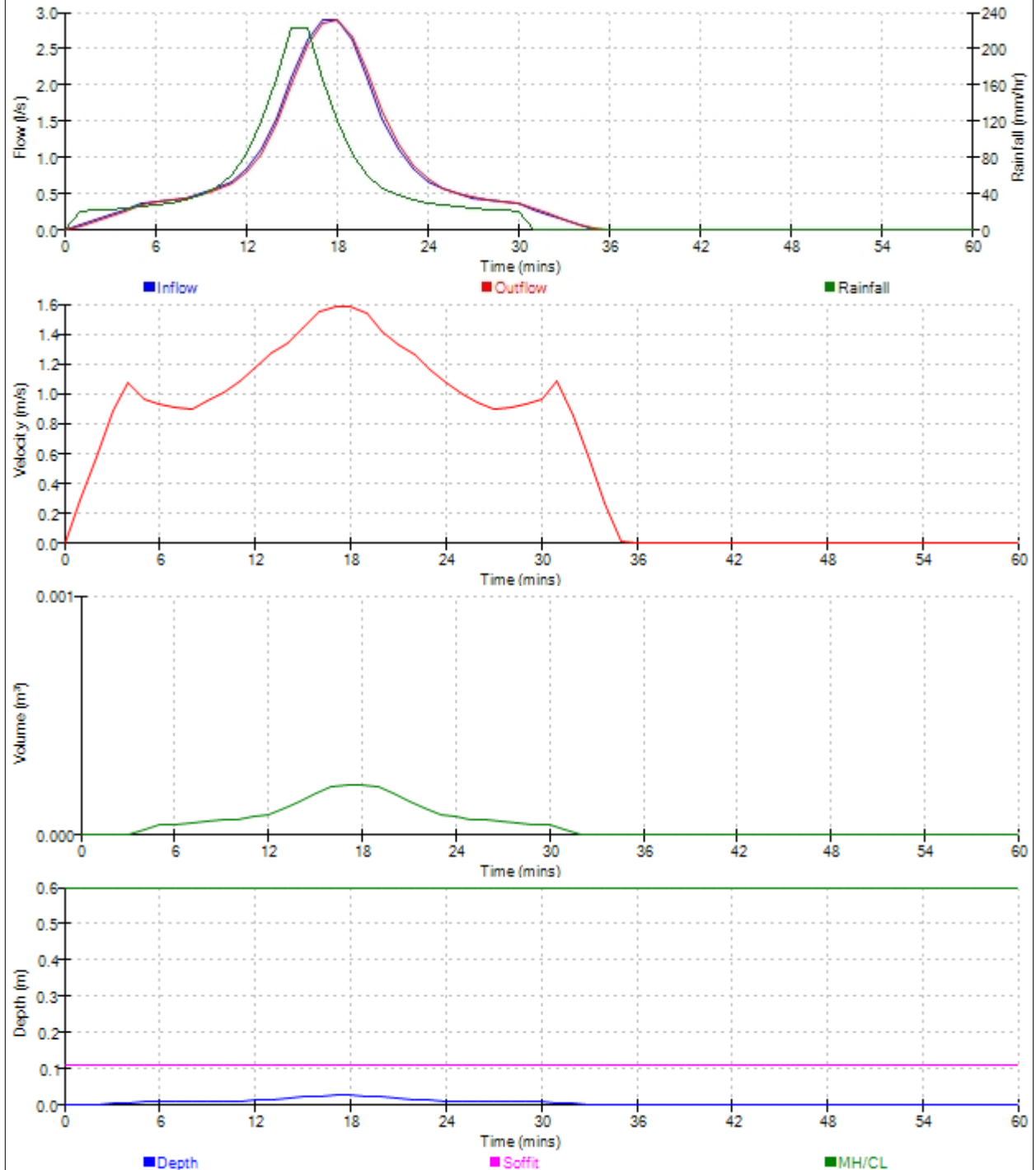
Graphs for Pipe 1.000 US/MH RE1 (Storm)
30 minute 100 year Summer
Status: OK



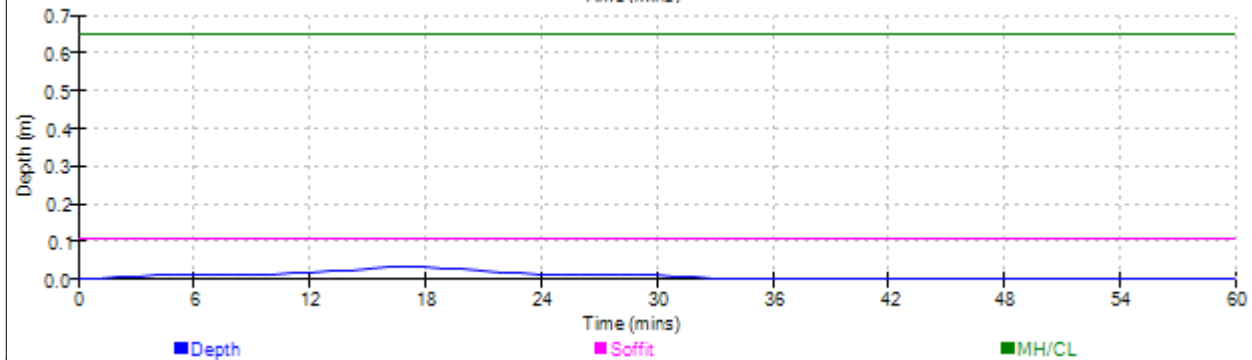
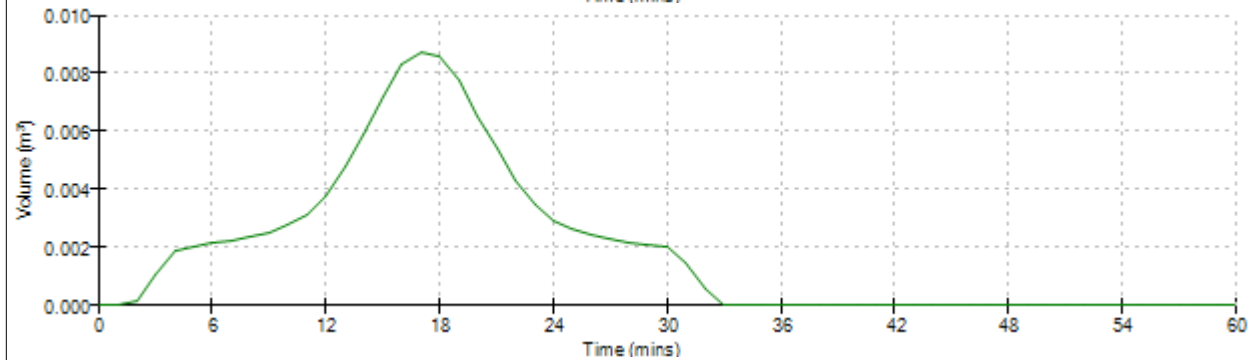
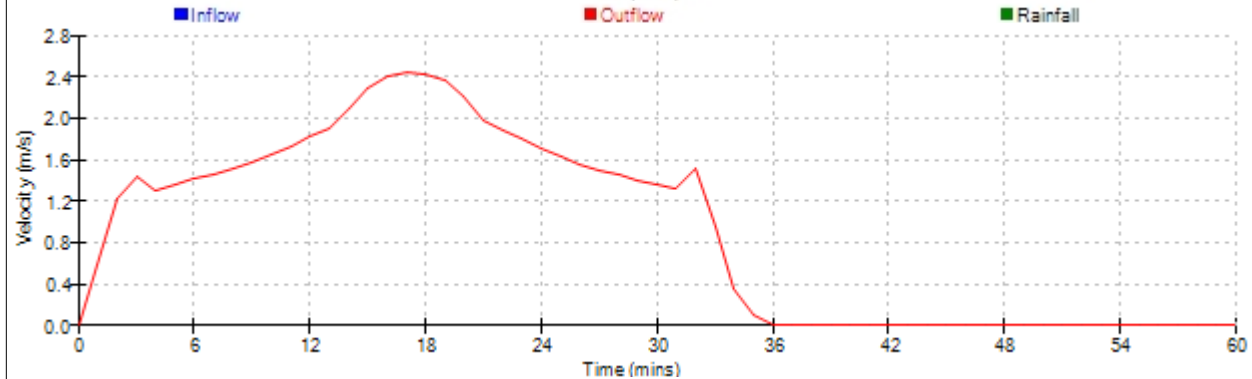
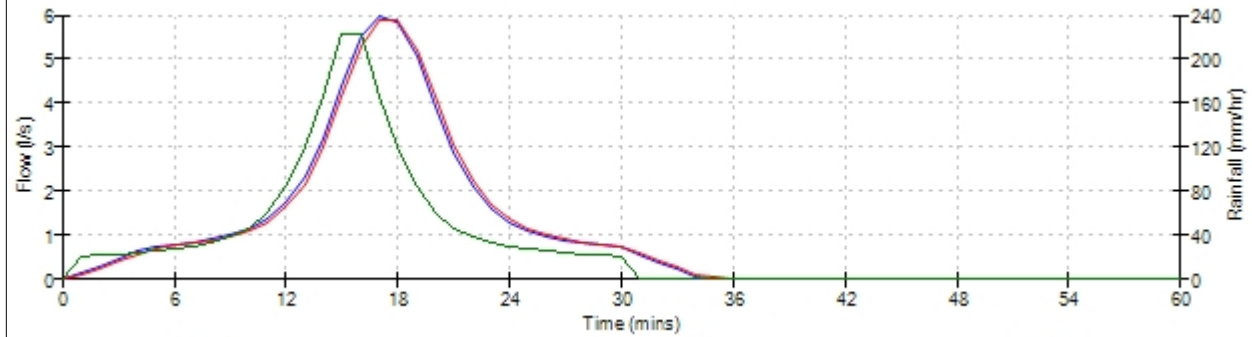
Graphs for Pipe 1.001 US/MH S1 (Storm)
30 minute 100 year Summer
Status: SURCHARGED



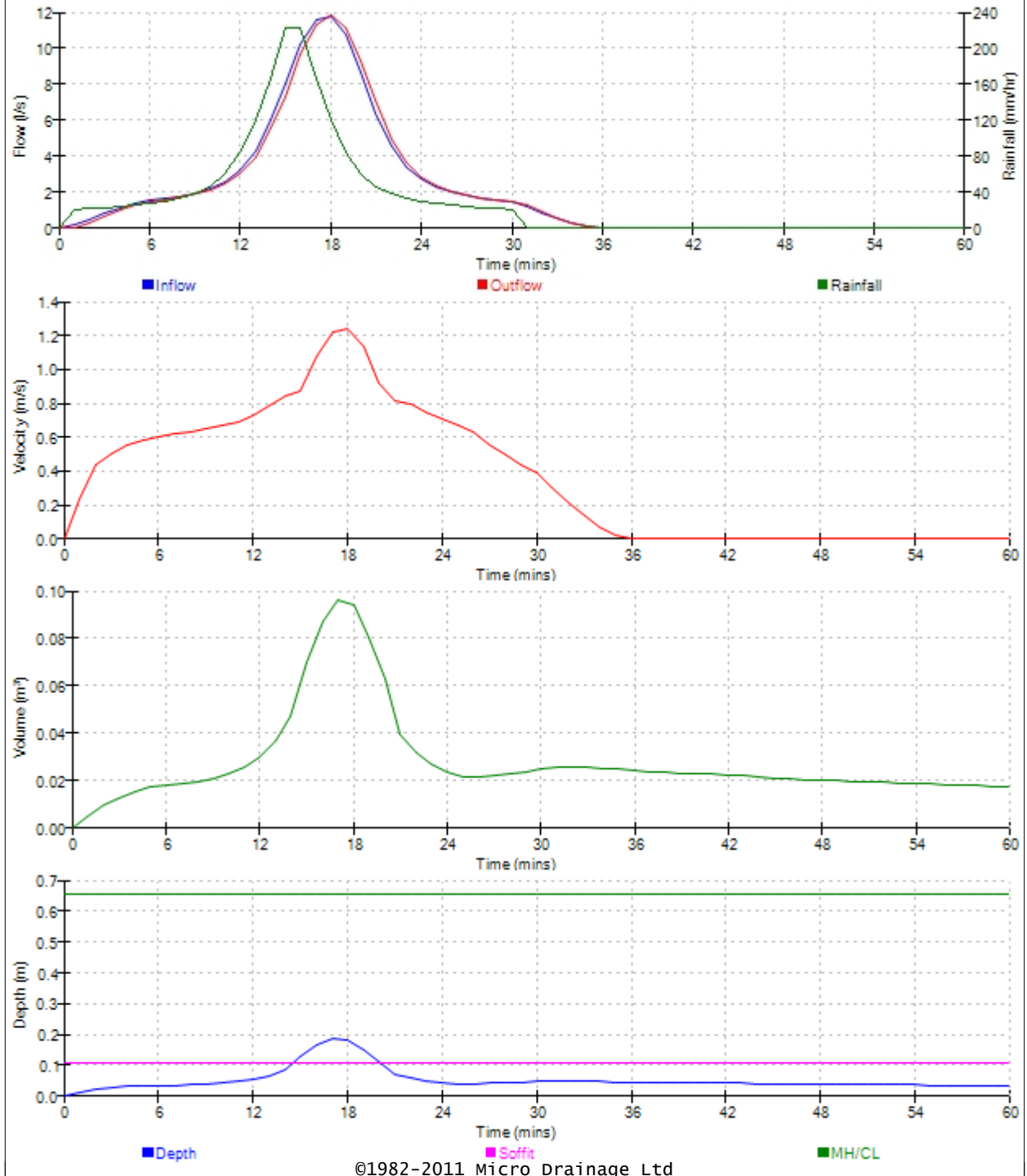
Graphs for Pipe 2.000 US/MH RE2 (Storm)
30 minute 100 year Summer
Status: OK



Graphs for Pipe 2.001 US/MH S2 (Storm)
30 minute 100 year Summer
Status: OK

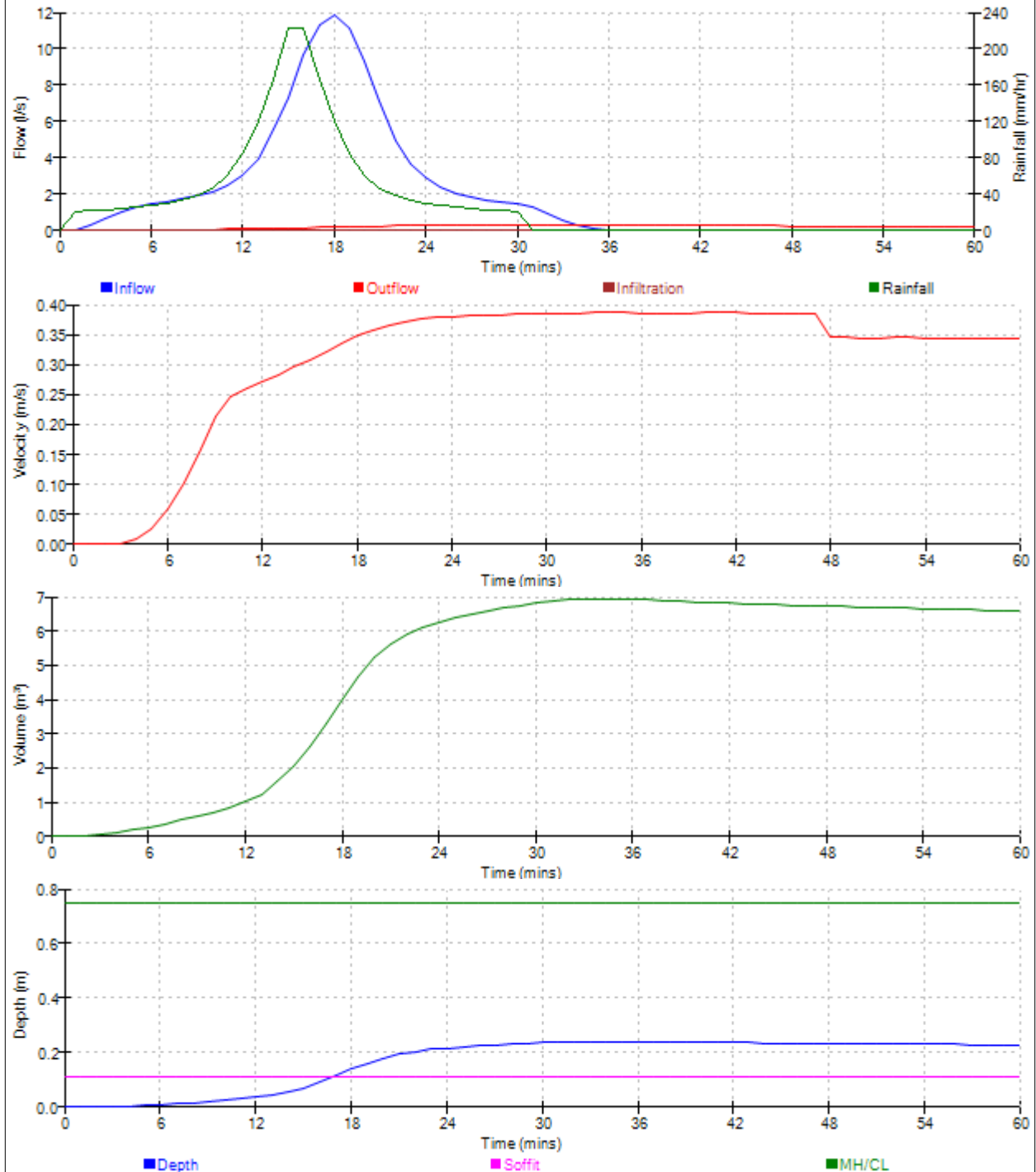


Graphs for Pipe 1.002 US/MH S3 (Storm)
 30 minute 100 year Summer
 Status: SURCHARGED

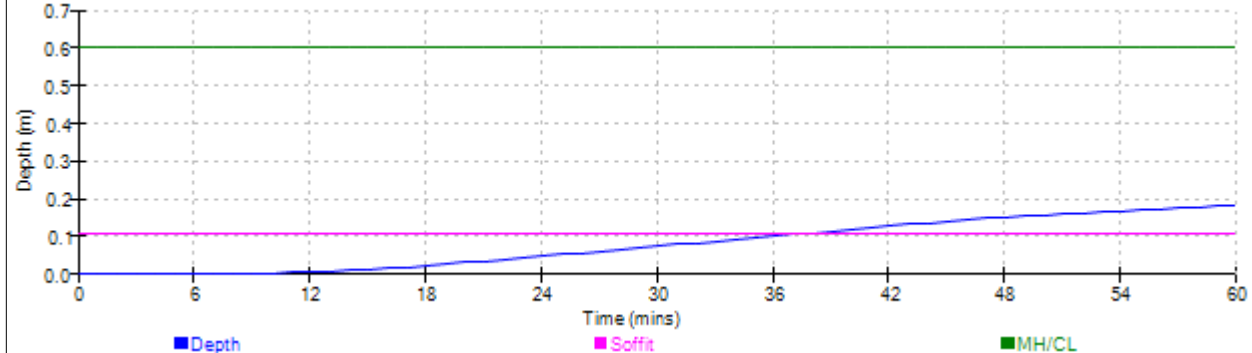
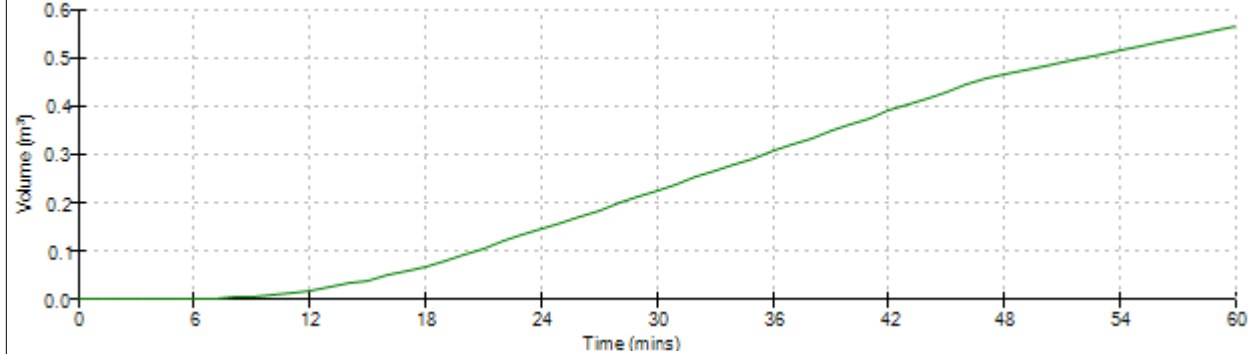
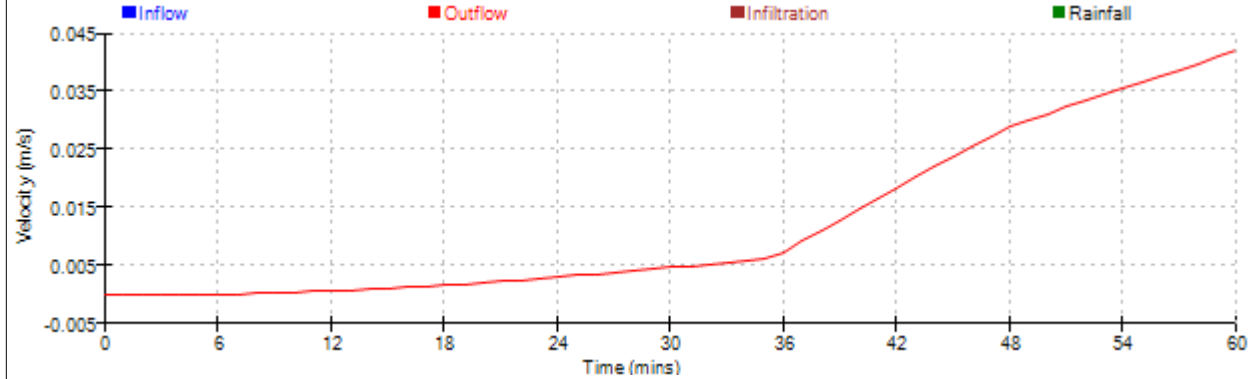
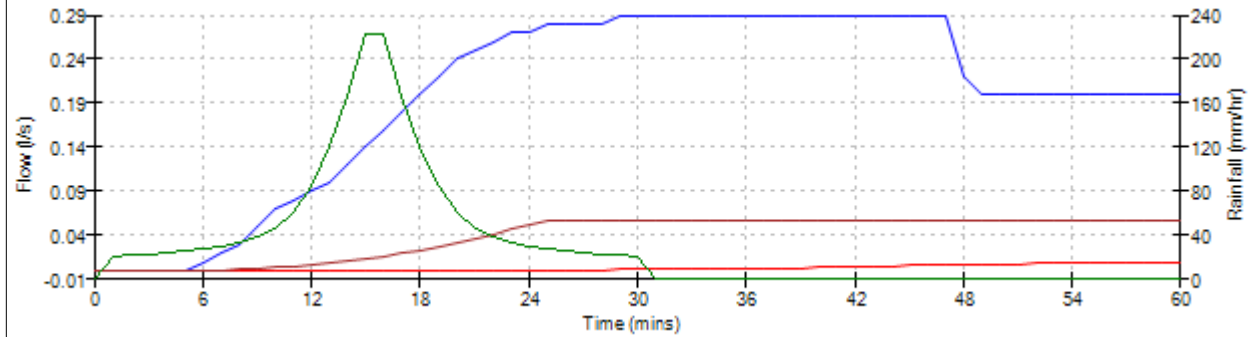


Dixon Hurst Kemp		Page 13
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road, Hassocks Surface Water Drainage Design Simulation Rev03	
Date Nov 25	Designed by JS	
File COMBINED ATTENUATION ...	Checked by	
Elstree Computing Ltd	Network W.12.6	

Graphs for Pipe 1.003 US/MH S4 (Storm)
30 minute 100 year Summer
Status: SURCHARGED



Graphs for Pipe 1.004 US/MH RAIN GARDEN (Storm)
30 minute 100 year Summer
Status: SURCHARGED



Dixon Hurst Kemp		Page 15
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road. Hassocks Surface Water Drainage Design Simulation Rev03	
Date Nov 25	Designed by JS	
File COMBINED ATTENUATION ...	Checked by	
Elstree Computing Ltd	Network W.12.6	

Flows and Levels for Pipe 1.000 US/MH RE1 (Storm)
30 minute 100 year Summer
Average Rainfall Intensity 63.033 mm/hr

Time (mins)	Upstream Level (m)	Downstream Level (m)	Surcharged Depth (m)	Total (l/s)	O/F Velocity (m/s)	Pipe Flow (l/s)
1	65.401	63.505	-0.109	0.0	0.3	0.1
2	65.403	63.509	-0.107	0.0	0.6	0.1
3	65.404	63.513	-0.106	0.0	0.9	0.2
4	65.406	63.517	-0.104	0.0	1.2	0.3
5	65.407	63.519	-0.103	0.0	1.3	0.3
6	65.408	63.519	-0.102	0.0	1.3	0.4
7	65.409	63.520	-0.101	0.0	1.2	0.4
8	65.409	63.521	-0.101	0.0	1.2	0.4
9	65.410	63.523	-0.100	0.0	1.1	0.5
10	65.411	63.525	-0.099	0.0	1.1	0.6
11	65.412	63.528	-0.098	0.0	1.2	0.6
12	65.413	63.532	-0.097	0.0	1.4	0.8
13	65.415	63.539	-0.095	0.0	1.5	1.1
14	65.417	63.548	-0.093	0.0	1.6	1.5
15	65.421	63.595	-0.089	0.0	1.7	2.0
16	65.423	63.645	-0.087	0.0	1.8	2.5
17	65.424	63.669	-0.086	0.0	1.8	2.9
18	65.424	63.663	-0.086	0.0	1.8	2.9
19	65.423	63.623	-0.087	0.0	1.8	2.7
20	65.421	63.573	-0.089	0.0	1.7	2.2
21	65.417	63.543	-0.093	0.0	1.6	1.6
22	65.415	63.536	-0.095	0.0	1.5	1.2
23	65.413	63.530	-0.097	0.0	1.3	0.9
24	65.412	63.526	-0.098	0.0	1.2	0.7
25	65.411	63.524	-0.099	0.0	1.1	0.6
26	65.410	63.522	-0.100	0.0	1.1	0.5
27	65.409	63.520	-0.101	0.0	1.2	0.5
28	65.409	63.520	-0.101	0.0	1.2	0.4
29	65.408	63.519	-0.102	0.0	1.3	0.4
30	65.407	63.518	-0.103	0.0	1.3	0.4
31	65.406	63.515	-0.104	0.0	1.2	0.3
32	65.404	63.511	-0.106	0.0	0.9	0.2
33	65.403	63.507	-0.107	0.0	0.5	0.2
34	65.401	63.501	-0.109	0.0	0.3	0.1
35	65.400	63.496	-0.110	0.0	0.0	0.0
36	65.400	63.494	-0.110	0.0	0.0	0.0
37	65.400	63.494	-0.110	0.0	0.0	0.0
38	65.400	63.494	-0.110	0.0	0.0	0.0
39	65.400	63.494	-0.110	0.0	0.0	0.0
40	65.400	63.494	-0.110	0.0	0.0	0.0
41	65.400	63.494	-0.110	0.0	0.0	0.0
42	65.400	63.494	-0.110	0.0	0.0	0.0
43	65.400	63.494	-0.110	0.0	0.0	0.0
44	65.400	63.494	-0.110	0.0	0.0	0.0
45	65.400	63.494	-0.110	0.0	0.0	0.0
46	65.400	63.494	-0.110	0.0	0.0	0.0
47	65.400	63.494	-0.110	0.0	0.0	0.0
48	65.400	63.494	-0.110	0.0	0.0	0.0
49	65.400	63.494	-0.110	0.0	0.0	0.0
50	65.400	63.494	-0.110	0.0	0.0	0.0

Dixon Hurst Kemp		Page 16
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road. Hassocks Surface Water Drainage Design Simulation Rev03	
Date Nov 25	Designed by JS	
File COMBINED ATTENUATION ...	Checked by	
Elstree Computing Ltd	Network W.12.6	

Flows and Levels for Pipe 1.000 US/MH RE1 (Storm)
30 minute 100 year Summer
Average Rainfall Intensity 63.033 mm/hr

Time (mins)	Upstream Level (m)	Downstream Level (m)	Surcharged Depth (m)	Total (l/s)	O/F Velocity (m/s)	Pipe Flow (l/s)
51	65.400	63.494	-0.110	0.0	0.0	0.0
52	65.400	63.494	-0.110	0.0	0.0	0.0
53	65.400	63.494	-0.110	0.0	0.0	0.0
54	65.400	63.494	-0.110	0.0	0.0	0.0
55	65.400	63.494	-0.110	0.0	0.0	0.0
56	65.400	63.494	-0.110	0.0	0.0	0.0
57	65.400	63.494	-0.110	0.0	0.0	0.0
58	65.400	63.494	-0.110	0.0	0.0	0.0
59	65.400	63.494	-0.110	0.0	0.0	0.0
60	65.400	63.494	-0.110	0.0	0.0	0.0

Dixon Hurst Kemp		Page 18
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road. Hassocks Surface Water Drainage Design Simulation Rev03	
Date Nov 25	Designed by JS	
File COMBINED ATTENUATION ...	Checked by	
Elstree Computing Ltd	Network W.12.6	

Flows and Levels for Pipe 1.001 US/MH S1 (Storm)
30 minute 100 year Summer
Average Rainfall Intensity 63.033 mm/hr

Time (mins)	Upstream Level (m)	Downstream Level (m)	Surcharged Depth (m)	Total (l/s)	O/F Velocity (m/s)	Pipe Flow (l/s)
51	63.494	63.482	-0.110	0.0	0.0	0.0
52	63.494	63.481	-0.110	0.0	0.0	0.0
53	63.494	63.481	-0.110	0.0	0.0	0.0
54	63.494	63.481	-0.110	0.0	0.0	0.0
55	63.494	63.480	-0.110	0.0	0.0	0.0
56	63.494	63.480	-0.110	0.0	0.0	0.0
57	63.494	63.479	-0.110	0.0	0.0	0.0
58	63.494	63.479	-0.110	0.0	0.0	0.0
59	63.494	63.479	-0.110	0.0	0.0	0.0
60	63.494	63.478	-0.110	0.0	0.0	0.0

Dixon Hurst Kemp		Page 19
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road, Hassocks Surface Water Drainage Design Simulation Rev03	
Date Nov 25	Designed by JS	
File COMBINED ATTENUATION ...	Checked by	
Elstree Computing Ltd	Network W.12.6	

Flows and Levels for Pipe 2.000 US/MH RE2 (Storm)
30 minute 100 year Summer
Average Rainfall Intensity 63.033 mm/hr

Time (mins)	Upstream Level (m)	Downstream Level (m)	Surcharged Depth (m)	Total (l/s)	O/F Velocity (m/s)	Pipe Flow (l/s)
1	65.402	65.003	-0.108	0.0	0.3	0.1
2	65.403	65.005	-0.107	0.0	0.6	0.1
3	65.405	65.008	-0.105	0.0	0.9	0.2
4	65.407	65.011	-0.103	0.0	1.1	0.3
5	65.409	65.012	-0.101	0.0	1.0	0.3
6	65.410	65.012	-0.100	0.0	0.9	0.4
7	65.411	65.012	-0.099	0.0	0.9	0.4
8	65.411	65.013	-0.099	0.0	0.9	0.4
9	65.411	65.013	-0.099	0.0	0.9	0.5
10	65.412	65.014	-0.098	0.0	1.0	0.6
11	65.413	65.015	-0.097	0.0	1.1	0.6
12	65.414	65.017	-0.096	0.0	1.2	0.8
13	65.416	65.021	-0.094	0.0	1.3	1.1
14	65.420	65.024	-0.090	0.0	1.3	1.5
15	65.423	65.029	-0.087	0.0	1.4	2.0
16	65.426	65.032	-0.084	0.0	1.5	2.5
17	65.427	65.034	-0.083	0.0	1.6	2.9
18	65.427	65.033	-0.083	0.0	1.6	2.9
19	65.426	65.030	-0.084	0.0	1.5	2.7
20	65.423	65.026	-0.087	0.0	1.4	2.2
21	65.420	65.023	-0.090	0.0	1.3	1.6
22	65.416	65.019	-0.094	0.0	1.3	1.2
23	65.414	65.016	-0.096	0.0	1.2	0.9
24	65.413	65.015	-0.097	0.0	1.1	0.7
25	65.412	65.014	-0.098	0.0	1.0	0.6
26	65.411	65.013	-0.099	0.0	0.9	0.5
27	65.411	65.012	-0.099	0.0	0.9	0.5
28	65.411	65.012	-0.099	0.0	0.9	0.4
29	65.410	65.012	-0.100	0.0	0.9	0.4
30	65.409	65.012	-0.101	0.0	1.0	0.4
31	65.407	65.010	-0.103	0.0	1.1	0.3
32	65.405	65.007	-0.105	0.0	0.9	0.2
33	65.403	65.004	-0.107	0.0	0.6	0.2
34	65.402	65.001	-0.108	0.0	0.3	0.1
35	65.400	65.000	-0.110	0.0	0.0	0.0
36	65.400	65.000	-0.110	0.0	0.0	0.0
37	65.400	65.000	-0.110	0.0	0.0	0.0
38	65.400	65.000	-0.110	0.0	0.0	0.0
39	65.400	65.000	-0.110	0.0	0.0	0.0
40	65.400	65.000	-0.110	0.0	0.0	0.0
41	65.400	65.000	-0.110	0.0	0.0	0.0
42	65.400	65.000	-0.110	0.0	0.0	0.0
43	65.400	65.000	-0.110	0.0	0.0	0.0
44	65.400	65.000	-0.110	0.0	0.0	0.0
45	65.400	65.000	-0.110	0.0	0.0	0.0
46	65.400	65.000	-0.110	0.0	0.0	0.0
47	65.400	65.000	-0.110	0.0	0.0	0.0
48	65.400	65.000	-0.110	0.0	0.0	0.0
49	65.400	65.000	-0.110	0.0	0.0	0.0
50	65.400	65.000	-0.110	0.0	0.0	0.0

Dixon Hurst Kemp		Page 20
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road. Hassocks Surface Water Drainage Design Simulation Rev03	
Date Nov 25	Designed by JS	
File COMBINED ATTENUATION ...	Checked by	
Elstree Computing Ltd	Network W.12.6	

Flows and Levels for Pipe 2.000 US/MH RE2 (Storm)
30 minute 100 year Summer
Average Rainfall Intensity 63.033 mm/hr

Time (mins)	Upstream Level (m)	Downstream Level (m)	Surcharged Depth (m)	Total (l/s)	O/F Velocity (m/s)	Pipe Flow (l/s)
51	65.400	65.000	-0.110	0.0	0.0	0.0
52	65.400	65.000	-0.110	0.0	0.0	0.0
53	65.400	65.000	-0.110	0.0	0.0	0.0
54	65.400	65.000	-0.110	0.0	0.0	0.0
55	65.400	65.000	-0.110	0.0	0.0	0.0
56	65.400	65.000	-0.110	0.0	0.0	0.0
57	65.400	65.000	-0.110	0.0	0.0	0.0
58	65.400	65.000	-0.110	0.0	0.0	0.0
59	65.400	65.000	-0.110	0.0	0.0	0.0
60	65.400	65.000	-0.110	0.0	0.0	0.0

Dixon Hurst Kemp		Page 22
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road. Hassocks Surface Water Drainage Design Simulation Rev03	
Date Nov 25	Designed by JS	
File COMBINED ATTENUATION ...	Checked by	
Elstree Computing Ltd	Network W.12.6	

Flows and Levels for Pipe 2.001 US/MH S2 (Storm)
30 minute 100 year Summer
Average Rainfall Intensity 63.033 mm/hr

Time (mins)	Upstream Level (m)	Downstream Level (m)	Surcharged Depth (m)	Total (l/s)	0/F Velocity (m/s)	Pipe Flow (l/s)
51	65.000	63.482	-0.110	0.0	0.0	0.0
52	65.000	63.481	-0.110	0.0	0.0	0.0
53	65.000	63.481	-0.110	0.0	0.0	0.0
54	65.000	63.481	-0.110	0.0	0.0	0.0
55	65.000	63.480	-0.110	0.0	0.0	0.0
56	65.000	63.480	-0.110	0.0	0.0	0.0
57	65.000	63.479	-0.110	0.0	0.0	0.0
58	65.000	63.479	-0.110	0.0	0.0	0.0
59	65.000	63.479	-0.110	0.0	0.0	0.0
60	65.000	63.478	-0.110	0.0	0.0	0.0

Dixon Hurst Kemp		Page 23
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road. Hassocks Surface Water Drainage Design Simulation Rev03	
Date Nov 25	Designed by JS	
File COMBINED ATTENUATION ...	Checked by	
Elstree Computing Ltd	Network W.12.6	

Flows and Levels for Pipe 1.002 US/MH S3 (Storm)
30 minute 100 year Summer
Average Rainfall Intensity 63.033 mm/hr

Time (mins)	Upstream Level (m)	Downstream Level (m)	Surcharged Depth (m)	Total (l/s)	O/F Velocity (m/s)	Pipe Flow (l/s)
1	63.458	63.250	-0.096	0.0	0.2	0.1
2	63.466	63.251	-0.088	0.0	0.4	0.3
3	63.471	63.252	-0.083	0.0	0.5	0.7
4	63.475	63.254	-0.079	0.0	0.6	1.0
5	63.478	63.257	-0.076	0.0	0.6	1.3
6	63.479	63.260	-0.075	0.0	0.6	1.5
7	63.480	63.263	-0.074	0.0	0.6	1.6
8	63.482	63.267	-0.072	0.0	0.6	1.7
9	63.484	63.270	-0.070	0.0	0.6	1.9
10	63.487	63.275	-0.067	0.0	0.7	2.1
11	63.492	63.280	-0.062	0.0	0.7	2.5
12	63.500	63.286	-0.055	0.0	0.7	3.0
13	63.511	63.293	-0.043	0.0	0.8	3.9
14	63.528	63.306	-0.026	0.0	0.8	5.5
15	63.572	63.321	0.018	0.0	0.9	7.3
16	63.611	63.342	0.056	0.0	1.1	9.6
17	63.629	63.365	0.075	0.0	1.2	11.3
18	63.625	63.389	0.071	0.0	1.2	11.8
19	63.595	63.412	0.041	0.0	1.1	11.2
20	63.556	63.431	0.002	0.0	0.9	9.3
21	63.516	63.445	-0.038	0.0	0.8	7.1
22	63.503	63.455	-0.051	0.0	0.8	4.9
23	63.494	63.462	-0.060	0.0	0.7	3.7
24	63.489	63.467	-0.065	0.0	0.7	2.9
25	63.485	63.472	-0.069	0.0	0.7	2.4
26	63.485	63.475	-0.069	0.0	0.6	2.1
27	63.486	63.479	-0.068	0.0	0.6	1.8
28	63.487	63.482	-0.067	0.0	0.5	1.7
29	63.489	63.484	-0.065	0.0	0.4	1.6
30	63.491	63.487	-0.063	0.0	0.4	1.5
31	63.492	63.489	-0.062	0.0	0.3	1.3
32	63.493	63.490	-0.062	0.0	0.2	0.9
33	63.492	63.491	-0.062	0.0	0.1	0.6
34	63.491	63.491	-0.063	0.0	0.1	0.3
35	63.491	63.491	-0.063	0.0	0.0	0.1
36	63.490	63.490	-0.064	0.0	0.0	0.0
37	63.489	63.489	-0.065	0.0	0.0	0.0
38	63.489	63.489	-0.065	0.0	0.0	0.0
39	63.488	63.488	-0.066	0.0	0.0	0.0
40	63.488	63.488	-0.066	0.0	0.0	0.0
41	63.487	63.487	-0.067	0.0	0.0	0.0
42	63.487	63.487	-0.068	0.0	0.0	0.0
43	63.486	63.486	-0.068	0.0	0.0	0.0
44	63.485	63.485	-0.069	0.0	0.0	0.0
45	63.485	63.485	-0.069	0.0	0.0	0.0
46	63.484	63.484	-0.070	0.0	0.0	0.0
47	63.484	63.484	-0.071	0.0	0.0	0.0
48	63.483	63.483	-0.071	0.0	0.0	0.0
49	63.483	63.483	-0.072	0.0	0.0	0.0
50	63.482	63.482	-0.072	0.0	0.0	0.0

Dixon Hurst Kemp		Page 24
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road. Hassocks Surface Water Drainage Design Simulation Rev03	
Date Nov 25	Designed by JS	
File COMBINED ATTENUATION ...	Checked by	
Elstree Computing Ltd	Network W.12.6	

Flows and Levels for Pipe 1.002 US/MH S3 (Storm)
30 minute 100 year Summer
Average Rainfall Intensity 63.033 mm/hr

Time (mins)	Upstream Level (m)	Downstream Level (m)	Surcharged Depth (m)	Total (l/s)	O/F Velocity (m/s)	Pipe Flow (l/s)
51	63.482	63.482	-0.072	0.0	0.0	0.0
52	63.481	63.482	-0.073	0.0	0.0	0.0
53	63.481	63.481	-0.073	0.0	0.0	0.0
54	63.481	63.481	-0.073	0.0	0.0	0.0
55	63.480	63.480	-0.074	0.0	0.0	0.0
56	63.480	63.480	-0.074	0.0	0.0	0.0
57	63.479	63.480	-0.075	0.0	0.0	0.0
58	63.479	63.479	-0.075	0.0	0.0	0.0
59	63.479	63.479	-0.075	0.0	0.0	0.0
60	63.478	63.478	-0.076	0.0	0.0	0.0

Dixon Hurst Kemp		Page 25
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road, Hassocks Surface Water Drainage Design Simulation Rev03	
Date Nov 25	Designed by JS	
File COMBINED ATTENUATION ...	Checked by	
Elstree Computing Ltd	Network W.12.6	

Flows and Levels for Pipe 1.003 US/MH S4 (Storm)
30 minute 100 year Summer
Average Rainfall Intensity 63.033 mm/hr

Time (mins)	Upstream Level (m)	Downstream Level (m)	Surcharged Depth (m)	Total (l/s)	O/F Velocity (m/s)	Pipe Flow (l/s)
1	63.250	63.100	-0.110	0.0	0.0	0.0
2	63.251	63.100	-0.109	0.0	0.0	0.0
3	63.252	63.100	-0.108	0.0	0.0	0.0
4	63.254	63.100	-0.106	0.0	0.0	0.0
5	63.257	63.100	-0.103	0.0	0.0	0.0
6	63.260	63.100	-0.100	0.0	0.1	0.0
7	63.263	63.101	-0.097	0.0	0.1	0.0
8	63.267	63.101	-0.093	0.0	0.2	0.0
9	63.270	63.102	-0.090	0.0	0.2	0.0
10	63.275	63.104	-0.085	0.0	0.2	0.1
11	63.280	63.105	-0.080	0.0	0.3	0.1
12	63.286	63.107	-0.074	0.0	0.3	0.1
13	63.293	63.109	-0.067	0.0	0.3	0.1
14	63.306	63.111	-0.054	0.0	0.3	0.1
15	63.321	63.114	-0.039	0.0	0.3	0.1
16	63.342	63.117	-0.018	0.0	0.3	0.2
17	63.365	63.120	0.005	0.0	0.3	0.2
18	63.389	63.123	0.029	0.0	0.3	0.2
19	63.412	63.127	0.052	0.0	0.4	0.2
20	63.431	63.131	0.071	0.0	0.4	0.2
21	63.445	63.135	0.085	0.0	0.4	0.3
22	63.455	63.140	0.095	0.0	0.4	0.3
23	63.462	63.144	0.102	0.0	0.4	0.3
24	63.467	63.148	0.107	0.0	0.4	0.3
25	63.472	63.152	0.112	0.0	0.4	0.3
26	63.475	63.157	0.115	0.0	0.4	0.3
27	63.479	63.161	0.119	0.0	0.4	0.3
28	63.482	63.165	0.122	0.0	0.4	0.3
29	63.484	63.170	0.124	0.0	0.4	0.3
30	63.487	63.174	0.127	0.0	0.4	0.3
31	63.489	63.179	0.129	0.0	0.4	0.3
32	63.490	63.183	0.130	0.0	0.4	0.3
33	63.491	63.188	0.131	0.0	0.4	0.3
34	63.491	63.192	0.131	0.0	0.4	0.3
35	63.491	63.196	0.131	0.0	0.4	0.3
36	63.490	63.201	0.130	0.0	0.4	0.3
37	63.489	63.205	0.129	0.0	0.4	0.3
38	63.489	63.210	0.129	0.0	0.4	0.3
39	63.488	63.214	0.128	0.0	0.4	0.3
40	63.488	63.219	0.128	0.0	0.4	0.3
41	63.487	63.223	0.127	0.0	0.4	0.3
42	63.487	63.228	0.127	0.0	0.4	0.3
43	63.486	63.232	0.126	0.0	0.4	0.3
44	63.485	63.237	0.125	0.0	0.4	0.3
45	63.485	63.241	0.125	0.0	0.4	0.3
46	63.484	63.245	0.124	0.0	0.4	0.3
47	63.484	63.250	0.124	0.0	0.4	0.3
48	63.483	63.253	0.123	0.0	0.3	0.2
49	63.483	63.256	0.123	0.0	0.3	0.2
50	63.482	63.258	0.122	0.0	0.3	0.2

Dixon Hurst Kemp		Page 26
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road. Hassocks Surface Water Drainage Design Simulation Rev03	
Date Nov 25	Designed by JS	
File COMBINED ATTENUATION ...	Checked by	
Elstree Computing Ltd	Network W.12.6	

Flows and Levels for Pipe 1.003 US/MH S4 (Storm)
30 minute 100 year Summer
Average Rainfall Intensity 63.033 mm/hr

Time (mins)	Upstream Level (m)	Downstream Level (m)	Surcharged Depth (m)	Total (l/s)	O/F Velocity (m/s)	Pipe Flow (l/s)
51	63.482	63.261	0.122	0.0	0.3	0.2
52	63.482	63.264	0.122	0.0	0.3	0.2
53	63.481	63.266	0.121	0.0	0.3	0.2
54	63.481	63.269	0.121	0.0	0.3	0.2
55	63.480	63.272	0.120	0.0	0.3	0.2
56	63.480	63.274	0.120	0.0	0.3	0.2
57	63.480	63.277	0.120	0.0	0.3	0.2
58	63.479	63.279	0.119	0.0	0.3	0.2
59	63.479	63.282	0.119	0.0	0.3	0.2
60	63.478	63.284	0.118	0.0	0.3	0.2

Dixon Hurst Kemp		Page 27
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road. Hassocks Surface Water Drainage Design Simulation Rev03	
Date Nov 25	Designed by JS	
File COMBINED ATTENUATION ...	Checked by	
Elstree Computing Ltd	Network W.12.6	

Flows and Levels for Pipe 1.004 US/MH RAIN GARDEN (Storm)
30 minute 100 year Summer
Average Rainfall Intensity 63.033 mm/hr

Time (mins)	Upstream Level (m)	Downstream Level (m)	Surcharged Depth (m)	Total (l/s)	O/F Velocity (m/s)	Pipe Flow (l/s)
1	63.100	63.096	-0.110	0.0	0.0	0.0
2	63.100	63.096	-0.110	0.0	0.0	0.0
3	63.100	63.096	-0.110	0.0	0.0	0.0
4	63.100	63.096	-0.110	0.0	0.0	0.0
5	63.100	63.096	-0.110	0.0	0.0	0.0
6	63.100	63.096	-0.110	0.0	0.0	0.0
7	63.101	63.096	-0.109	0.0	0.0	0.0
8	63.101	63.096	-0.109	0.0	0.0	0.0
9	63.102	63.096	-0.108	0.0	0.0	0.0
10	63.104	63.096	-0.106	0.0	0.0	0.0
11	63.105	63.096	-0.105	0.0	0.0	0.0
12	63.107	63.096	-0.103	0.0	0.0	0.0
13	63.109	63.096	-0.101	0.0	0.0	0.0
14	63.111	63.096	-0.099	0.0	0.0	0.0
15	63.114	63.096	-0.096	0.0	0.0	0.0
16	63.117	63.096	-0.093	0.0	0.0	0.0
17	63.120	63.096	-0.090	0.0	0.0	0.0
18	63.123	63.096	-0.087	0.0	0.0	0.0
19	63.127	63.096	-0.083	0.0	0.0	0.0
20	63.131	63.096	-0.079	0.0	0.0	0.0
21	63.135	63.096	-0.075	0.0	0.0	0.0
22	63.140	63.096	-0.070	0.0	0.0	0.0
23	63.144	63.096	-0.066	0.0	0.0	0.0
24	63.148	63.096	-0.062	0.0	0.0	0.0
25	63.152	63.096	-0.058	0.0	0.0	0.0
26	63.157	63.096	-0.053	0.0	0.0	0.0
27	63.161	63.096	-0.049	0.0	0.0	0.0
28	63.165	63.096	-0.045	0.0	0.0	0.0
29	63.170	63.096	-0.040	0.0	0.0	0.0
30	63.174	63.096	-0.036	0.0	0.0	0.0
31	63.179	63.096	-0.031	0.0	0.0	0.0
32	63.183	63.096	-0.027	0.0	0.0	0.0
33	63.188	63.096	-0.022	0.0	0.0	0.0
34	63.192	63.096	-0.018	0.0	0.0	0.0
35	63.196	63.096	-0.014	0.0	0.0	0.0
36	63.201	63.096	-0.009	0.0	0.0	0.0
37	63.205	63.096	-0.005	0.0	0.0	0.0
38	63.210	63.096	0.000	0.0	0.0	0.0
39	63.214	63.096	0.004	0.0	0.0	0.0
40	63.219	63.096	0.009	0.0	0.0	0.0
41	63.223	63.096	0.013	0.0	0.0	0.0
42	63.228	63.096	0.018	0.0	0.0	0.0
43	63.232	63.096	0.022	0.0	0.0	0.0
44	63.237	63.096	0.027	0.0	0.0	0.0
45	63.241	63.096	0.031	0.0	0.0	0.0
46	63.245	63.096	0.035	0.0	0.0	0.0
47	63.250	63.096	0.040	0.0	0.0	0.0
48	63.253	63.096	0.043	0.0	0.0	0.0
49	63.256	63.096	0.046	0.0	0.0	0.0
50	63.258	63.096	0.048	0.0	0.0	0.0

Dixon Hurst Kemp		Page 28
Victoria Court 22 St Pancras West Sussex PO19 7GD	34 Hurst Road. Hassocks Surface Water Drainage Design Simulation Rev03	
Date Nov 25	Designed by JS	
File COMBINED ATTENUATION ...	Checked by	
Elstree Computing Ltd	Network W.12.6	

Flows and Levels for Pipe 1.004 US/MH RAIN GARDEN (Storm)
30 minute 100 year Summer
Average Rainfall Intensity 63.033 mm/hr

Time (mins)	Upstream Level (m)	Downstream Level (m)	Surcharged Depth (m)	Total (l/s)	O/F Velocity (m/s)	Pipe Flow (l/s)
51	63.261	63.096	0.051	0.0	0.0	0.0
52	63.264	63.096	0.054	0.0	0.0	0.0
53	63.266	63.096	0.056	0.0	0.0	0.0
54	63.269	63.096	0.059	0.0	0.0	0.0
55	63.272	63.096	0.062	0.0	0.0	0.0
56	63.274	63.096	0.064	0.0	0.0	0.0
57	63.277	63.096	0.067	0.0	0.0	0.0
58	63.279	63.096	0.069	0.0	0.0	0.0
59	63.282	63.096	0.072	0.0	0.0	0.0
60	63.284	63.096	0.074	0.0	0.0	0.0