

Odyssey		Page 1
Tuscany House	Stakers Farm, Yapton	
White Hart Lane	70 Units	
Basingstoke RG21 4AF	Permeable Paving (exc drives)	
Date 28/07/2020 12:48	Designed by AK	
File perm paving.MDX	Checked by	
Micro Drainage	Network 2020.1	

STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Storm

Pipe Sizes STANDARD Manhole Sizes STANDARD

FEH Rainfall Model			
Return Period (years)	10	Volumetric Runoff Coeff.	0.750
		PIMP (%)	100
FEH Rainfall Version	2013	Add Flow / Climate Change (%)	0
Site Location	GB 497682 103581 SU 97682 03581	Minimum Backdrop Height (m)	0.200
Data Type	Point	Maximum Backdrop Height (m)	1.500
Maximum Rainfall (mm/hr)	50	Min Design Depth for Optimisation (m)	0.100
Maximum Time of Concentration (mins)	30	Min Vel for Auto Design only (m/s)	0.50
Foul Sewage (l/s/ha)	0.000	Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

Time Area Diagram for Storm at outfall (pipe S1.005)

Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.148	4-8	0.119

Total Area Contributing (ha) = 0.267

Total Pipe Volume (m³) = 9.362

Time Area Diagram at outfall (pipe S2.002)

Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.046	4-8	0.007

Total Area Contributing (ha) = 0.053

Total Pipe Volume (m³) = 5.769

Odyssey		Page 2
Tuscany House	Stakers Farm, Yapton	
White Hart Lane	70 Units	
Basingstoke RG21 4AF	Permeable Paving (exc drives)	
Date 28/07/2020 12:48	Designed by AK	
File perm paving.MDX	Checked by	
Micro Drainage	Network 2020.1	

Time Area Diagram at outfall (pipe S3.001)

Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.040	4-8	0.002

Total Area Contributing (ha) = 0.042

Total Pipe Volume (m³) = 4.202

Time Area Diagram at outfall 16 (pipe S4.003)

Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.082	4-8	0.083

Total Area Contributing (ha) = 0.165

Total Pipe Volume (m³) = 8.533

Time Area Diagram at outfall 12 (pipe S6.002)

Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.045	4-8	0.009

Total Area Contributing (ha) = 0.054

Total Pipe Volume (m³) = 3.659

Network Design Table for Storm

« - Indicates pipe capacity < flow

PN	Length	Fall	Slope	I.Area	T.E.	Base	k	HYD	DIA	Section	Type	Auto
	(m)	(m)	(1:X)	(ha)	(mins)	Flow	(l/s)	(mm)	SECT	(mm)		Design

Odyssey		Page 3
Tuscany House White Hart Lane Basingstoke RG21 4AF	Stakers Farm, Yapton 70 Units Permeable Paving (exc drives)	
Date 28/07/2020 12:48 File perm paving.MDX	Designed by AK Checked by	
Micro Drainage	Network 2020.1	

Network Design Table for Storm

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)
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Micro
Drainage

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)	Section Type	Auto Design
S1.000	15.871	0.010	1587.1	0.149	5.00	0.0	0.600	o	300	Pipe/Conduit	
S1.001	15.860	0.100	158.6	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.002	42.144	0.200	210.7	0.037	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.003	26.463	0.400	66.2	0.036	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.004	25.732	0.300	85.8	0.022	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.005	6.380	0.007	911.4	0.023	0.00	0.0	0.600	o	300	Pipe/Conduit	
S2.000	34.516	0.250	138.1	0.000	5.00	0.0	0.600	o	300	Pipe/Conduit	
S2.001	42.849	0.150	285.7	0.028	0.00	0.0	0.600	o	300	Pipe/Conduit	
S2.002	4.246	0.005	940.4	0.025	0.00	0.0	0.600	o	300	Pipe/Conduit	
S3.000	50.386	0.600	84.0	0.000	5.00	0.0	0.600	o	300	Pipe/Conduit	
S3.001	9.058	0.030	300.0	0.042	0.00	0.0	0.600	o	300	Pipe/Conduit	
S4.000	34.586	0.200	172.9	0.000	5.00	0.0	0.600	o	150	Pipe/Conduit	
S4.001	56.604	0.100	566.0	0.086	0.00	0.0	0.600	o	150	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S1.000	50.00	5.69	5.850	0.149	0.0	0.0	0.0	0.39	27.3	20.2
S1.001	50.00	5.90	5.840	0.149	0.0	0.0	0.0	1.25	88.1	20.2
S1.002	50.00	6.55	5.740	0.186	0.0	0.0	0.0	1.08	76.3	25.2
S1.003	50.00	6.78	5.540	0.222	0.0	0.0	0.0	1.94	136.8	30.1
S1.004	50.00	7.03	5.140	0.244	0.0	0.0	0.0	1.70	120.1	33.0
S1.005	50.00	7.24	4.840	0.267	0.0	0.0	0.0	0.51	36.2	36.2
S2.000	50.00	5.43	5.240	0.000	0.0	0.0	0.0	1.34	94.5	0.0
S2.001	50.00	6.20	4.990	0.028	0.0	0.0	0.0	0.93	65.4	3.8
S2.002	50.00	6.34	4.840	0.053	0.0	0.0	0.0	0.50	35.7	7.2
S3.000	50.00	5.49	5.540	0.000	0.0	0.0	0.0	1.72	121.4	0.0
S3.001	50.00	5.66	4.940	0.042	0.0	0.0	0.0	0.90	63.8	5.7
S4.000	50.00	5.76	5.840	0.000	0.0	0.0	0.0	0.76	13.5	0.0
S4.001	50.00	8.03	5.640	0.086	0.0	0.0	0.0	0.42	7.3	11.6



Micro
Drainage

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)	Section Type	Auto Design
S5.000	33.137	0.200	165.7	0.000	5.00	0.0	0.600	o	300	Pipe/Conduit	
S5.001	12.873	0.100	128.7	0.020	0.00	0.0	0.600	o	300	Pipe/Conduit	
S4.002	43.150	0.100	431.5	0.021	0.00	0.0	0.600	o	300	Pipe/Conduit	
S4.003	8.760	0.150	58.4	0.038	0.00	0.0	0.600	o	300	Pipe/Conduit	
S6.000	22.887	0.350	65.4	0.027	5.00	0.0	0.600	o	300	Pipe/Conduit	
S6.001	22.887	0.350	65.4	0.027	0.00	0.0	0.600	o	300	Pipe/Conduit	
S6.002	5.992	0.100	59.9	0.000	0.00	0.0	0.600	o	300	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	50.00	5.45	5.840	0.000	0.0	0.0	0.0	1.22	86.1	0.0
S5.001	50.00	5.61	5.640	0.020	0.0	0.0	0.0	1.38	97.8	2.7
S4.002	50.00	8.99	5.540	0.127	0.0	0.0	0.0	0.75	53.1	17.2
S4.003	50.00	9.06	5.440	0.165	0.0	0.0	0.0	2.06	145.7	22.3
S6.000	50.00	5.20	5.840	0.027	0.0	0.0	0.0	1.95	137.6	3.7
S6.001	50.00	5.39	5.490	0.054	0.0	0.0	0.0	1.95	137.6	7.3
S6.002	50.00	5.44	5.140	0.054	0.0	0.0	0.0	2.03	143.8	7.3

Odyssey		Page 6
Tuscany House	Stakers Farm, Yapton	
White Hart Lane	70 Units	
Basingstoke RG21 4AF	Permeable Paving (exc drives)	
Date 28/07/2020 12:48	Designed by AK	
File perm paving.MDX	Checked by	
Micro Drainage	Network 2020.1	

Area Summary for Storm

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
1.000	-	-	100	0.149	0.149	0.149
1.001	-	-	100	0.000	0.000	0.000
1.002	-	-	100	0.037	0.037	0.037
1.003	-	-	100	0.036	0.036	0.036
1.004	-	-	100	0.022	0.022	0.022
1.005	-	-	100	0.023	0.023	0.023
2.000	-	-	100	0.000	0.000	0.000
2.001	-	-	100	0.028	0.028	0.028
2.002	-	-	100	0.025	0.025	0.025
3.000	-	-	100	0.000	0.000	0.000
3.001	-	-	100	0.042	0.042	0.042
4.000	-	-	100	0.000	0.000	0.000
4.001	-	-	100	0.086	0.086	0.086
5.000	-	-	100	0.000	0.000	0.000
5.001	-	-	100	0.020	0.020	0.020
4.002	-	-	100	0.021	0.021	0.021
4.003	-	-	100	0.038	0.038	0.038
6.000	-	-	100	0.027	0.027	0.027
6.001	-	-	100	0.027	0.027	0.027
6.002	-	-	100	0.000	0.000	0.000
				Total	Total	Total
				0.581	0.581	0.581

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)
S1.005		5.700	4.833	0.000	0	0

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)
S2.002		5.700	4.835	0.000	0	0

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Odyssey		Page 7
Tuscany House	Stakers Farm, Yapton	
White Hart Lane	70 Units	
Basingstoke RG21 4AF	Permeable Paving (exc drives)	
Date 28/07/2020 12:48	Designed by AK	
File perm paving.MDX	Checked by	
Micro Drainage	Network 2020.1	

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)
S3.001		5.700	4.910	0.000	0	0

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)
S4.003	16	6.300	5.290	0.000	1200	0

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)
S6.002	12	6.000	5.040	0.000	1200	0

Odyssey		Page 8
Tuscany House White Hart Lane Basingstoke RG21 4AF	Stakers Farm, Yapton 70 Units Permeable Paving (exc drives)	
Date 28/07/2020 12:48 File perm paving.MDX	Designed by AK Checked by	
Micro Drainage	Network 2020.1	

Online Controls for Storm

Weir Manhole: 1, DS/PN: S1.002, Volume (m³): 2.0

Discharge Coef 0.544 Width (m) 1.200 Invert Level (m) 6.320

Weir Manhole: Spur Road 2.1, DS/PN: S1.003, Volume (m³): 3.9

Discharge Coef 0.544 Width (m) 1.200 Invert Level (m) 6.120

Weir Manhole: 2, DS/PN: S1.004, Volume (m³): 2.8

Discharge Coef 0.544 Width (m) 1.200 Invert Level (m) 5.720

Pump Manhole: 3, DS/PN: S1.005, Volume (m³): 2.7

Invert Level (m) 4.840

Pump Manhole: Out Spur Road 1, DS/PN: S2.002, Volume (m³): 3.9

Invert Level (m) 4.840

Pump Manhole: Out Spur Road 2, DS/PN: S3.001, Volume (m³): 4.4

Invert Level (m) 4.940

Pump Manhole: Out Spur Road 4, DS/PN: S4.003, Volume (m³): 3.9

Invert Level (m) 5.440

Weir Manhole: 19, DS/PN: S6.001, Volume (m³): 2.5

Discharge Coef 0.544 Width (m) 1.200 Invert Level (m) 6.070

Odyssey		Page 9
Tuscany House White Hart Lane Basingstoke RG21 4AF	Stakers Farm, Yapton 70 Units Permeable Paving (exc drives)	
Date 28/07/2020 12:48 File perm paving.MDX	Designed by AK Checked by	
Micro Drainage	Network 2020.1	

Pump Manhole: Out Spur Road 3, DS/PN: S6.002, Volume (m³): 2.5

Invert Level (m) 5.140

Odyssey		Page 10
Tuscany House	Stakers Farm, Yapton	
White Hart Lane	70 Units	
Basingstoke RG21 4AF	Permeable Paving (exc drives)	
Date 28/07/2020 12:48	Designed by AK	
File perm paving.MDX	Checked by	
Micro Drainage	Network 2020.1	

Storage Structures for Storm

Porous Car Park Manhole: Non-inf parking 2, DS/PN: S1.000

Infiltration Coefficient Base (m/hr)	0.00000	Porosity	0.30	Slope (1:X)	0.0
Membrane Percolation (mm/hr)	1000	Invert Level (m)	5.850	Depression Storage (mm)	5
Max Percolation (l/s)	228.8	Width (m)	28.7	Evaporation (mm/day)	3
Safety Factor	2.0	Length (m)	28.7	Cap Volume Depth (m)	0.600

Porous Car Park Manhole: 1, DS/PN: S1.002

Infiltration Coefficient Base (m/hr)	0.00540	Porosity	0.30	Slope (1:X)	0.0
Membrane Percolation (mm/hr)	1000	Invert Level (m)	5.840	Depression Storage (mm)	5
Max Percolation (l/s)	53.7	Width (m)	13.9	Evaporation (mm/day)	3
Safety Factor	2.0	Length (m)	13.9	Cap Volume Depth (m)	0.600

Porous Car Park Manhole: Spur Road 2.1, DS/PN: S1.003

Infiltration Coefficient Base (m/hr)	0.00540	Porosity	0.30	Slope (1:X)	210.0
Membrane Percolation (mm/hr)	1000	Invert Level (m)	5.540	Depression Storage (mm)	5
Max Percolation (l/s)	51.3	Width (m)	4.8	Evaporation (mm/day)	3
Safety Factor	2.0	Length (m)	38.5	Cap Volume Depth (m)	0.600

Porous Car Park Manhole: 2, DS/PN: S1.004

Infiltration Coefficient Base (m/hr)	0.00648	Porosity	0.30	Slope (1:X)	66.0
Membrane Percolation (mm/hr)	1000	Invert Level (m)	5.140	Depression Storage (mm)	5
Max Percolation (l/s)	41.3	Width (m)	4.8	Evaporation (mm/day)	3
Safety Factor	2.0	Length (m)	31.0	Cap Volume Depth (m)	0.600

Porous Car Park Manhole: 3, DS/PN: S1.005

Infiltration Coefficient Base (m/hr)	0.00648	Porosity	0.30	Slope (1:X)	86.0
Membrane Percolation (mm/hr)	1000	Invert Level (m)	4.840	Depression Storage (mm)	5
Max Percolation (l/s)	45.2	Width (m)	4.8	Evaporation (mm/day)	3
Safety Factor	2.0	Length (m)	33.9	Cap Volume Depth (m)	0.600

Odyssey		Page 11
Tuscany House	Stakers Farm, Yapton	
White Hart Lane	70 Units	
Basingstoke RG21 4AF	Permeable Paving (exc drives)	
Date 28/07/2020 12:48	Designed by AK	
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Micro Drainage	Network 2020.1	

 Porous Car Park Manhole: Spur Road 1, DS/PN: S2.001

Infiltration Coefficient Base (m/hr)	0.00648	Porosity	0.30	Slope (1:X)	138.0
Membrane Percolation (mm/hr)	1000	Invert Level (m)	4.990	Depression Storage (mm)	5
Max Percolation (l/s)	59.7	Width (m)	4.8	Evaporation (mm/day)	3
Safety Factor	2.0	Length (m)	44.8	Cap Volume Depth (m)	0.600

 Porous Car Park Manhole: Out Spur Road 1, DS/PN: S2.002

Infiltration Coefficient Base (m/hr)	0.00648	Porosity	0.30	Slope (1:X)	285.0
Membrane Percolation (mm/hr)	1000	Invert Level (m)	4.840	Depression Storage (mm)	5
Max Percolation (l/s)	70.5	Width (m)	4.8	Evaporation (mm/day)	3
Safety Factor	2.0	Length (m)	52.9	Cap Volume Depth (m)	0.600

 Porous Car Park Manhole: Out Spur Road 2, DS/PN: S3.001

Infiltration Coefficient Base (m/hr)	0.00612	Porosity	0.30	Slope (1:X)	84.0
Membrane Percolation (mm/hr)	1000	Invert Level (m)	4.940	Depression Storage (mm)	5
Max Percolation (l/s)	117.5	Width (m)	4.8	Evaporation (mm/day)	3
Safety Factor	2.0	Length (m)	88.1	Cap Volume Depth (m)	0.600

 Porous Car Park Manhole: Non-inf parking 1, DS/PN: S4.001

Infiltration Coefficient Base (m/hr)	0.00000	Porosity	0.30	Slope (1:X)	0.0
Membrane Percolation (mm/hr)	1000	Invert Level (m)	5.640	Depression Storage (mm)	5
Max Percolation (l/s)	238.5	Width (m)	29.3	Evaporation (mm/day)	3
Safety Factor	2.0	Length (m)	29.3	Cap Volume Depth (m)	0.600

 Porous Car Park Manhole: 7, DS/PN: S5.001

Infiltration Coefficient Base (m/hr)	0.00540	Porosity	0.30	Slope (1:X)	165.0
Membrane Percolation (mm/hr)	1000	Invert Level (m)	5.640	Depression Storage (mm)	5
Max Percolation (l/s)	33.6	Width (m)	4.8	Evaporation (mm/day)	3
Safety Factor	2.0	Length (m)	25.2	Cap Volume Depth (m)	0.600

 Porous Car Park Manhole: Spur Road 4, DS/PN: S4.002

Infiltration Coefficient Base (m/hr)	0.00540	Porosity	0.30	Slope (1:X)	0.0
Membrane Percolation (mm/hr)	1000	Invert Level (m)	5.540	Depression Storage (mm)	5
Max Percolation (l/s)	36.4	Width (m)	4.8	Evaporation (mm/day)	3
Safety Factor	2.0	Length (m)	27.3	Cap Volume Depth (m)	0.600

Odyssey		Page 12
Tuscany House	Stakers Farm, Yapton	
White Hart Lane	70 Units	
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Date 28/07/2020 12:48	Designed by AK	
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Micro Drainage	Network 2020.1	

Porous Car Park Manhole: Out Spur Road 4, DS/PN: S4.003

Infiltration Coefficient Base (m/hr)	0.00540	Porosity	0.30	Slope (1:X)	431.0
Membrane Percolation (mm/hr)	1000	Invert Level (m)	5.440	Depression Storage (mm)	5
Max Percolation (l/s)	76.9	Width (m)	4.8	Evaporation (mm/day)	3
Safety Factor	2.0	Length (m)	57.7	Cap Volume Depth (m)	0.600

Porous Car Park Manhole: 19, DS/PN: S6.001

Infiltration Coefficient Base (m/hr)	0.00612	Porosity	0.30	Slope (1:X)	65.0
Membrane Percolation (mm/hr)	1000	Invert Level (m)	5.490	Depression Storage (mm)	5
Max Percolation (l/s)	33.3	Width (m)	4.8	Evaporation (mm/day)	3
Safety Factor	2.0	Length (m)	25.0	Cap Volume Depth (m)	0.600

Porous Car Park Manhole: Out Spur Road 3, DS/PN: S6.002

Infiltration Coefficient Base (m/hr)	0.00612	Porosity	0.30	Slope (1:X)	65.0
Membrane Percolation (mm/hr)	1000	Invert Level (m)	5.140	Depression Storage (mm)	5
Max Percolation (l/s)	61.1	Width (m)	4.8	Evaporation (mm/day)	3
Safety Factor	2.0	Length (m)	45.8	Cap Volume Depth (m)	0.600

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

Simulation Criteria

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

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
Number of Online Controls 9 Number of Storage Structures 14 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FEH Site Location GB 497682 103581 SU 97682 03581 Cv (Summer) 0.750
FEH Rainfall Version 2013 Data Type Point Cv (Winter) 0.840

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

Profile(s) Summer and Winter
Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years) 10, 100
Climate Change (%) 0, 40

PN	US/MH Name	Event	Duration (mins)	US/CL (m)	Water		Total Infil. Vol (m³)	Maximum Vol (m³)	Half Drain Time (mins)	Pipe Flow (l/s)	Status
					Level (m)	Flooded Volume (m³)					
S1.000	Non-inf parking 2	10080 minute 10 year Winter I+0%	10080	6.700	6.147	0.000	0.000	73.615	7032	0.5	OK
S1.001	Spur Road 3.1	10080 minute 10 year Winter I+0%	10080	6.700	6.146	0.000		1.318		0.4	SURCHARGED
S1.002	1	10080 minute 10 year Winter I+0%	10080	6.600	6.147	0.000	2846.454	19.285	7536	0.0	SURCHARGED
S1.003	Spur Road 2.1	480 minute 10 year Winter I+0%	480	6.400	5.784	0.000	1448.591	10.049		0.0	OK
S1.004	2	600 minute 10 year Winter I+0%	600	6.000	5.461	0.000	876.225	5.999		0.0	SURCHARGED
S1.005	3	480 minute 10 year Winter I+0%	480	5.700	5.125	0.000	902.927	6.099		0.0	OK
S2.000	4	15 minute 10 year Summer I+0%	15	6.100	5.240	0.000		0.000		0.0	OK
S2.001	Spur Road 1	480 minute 10 year Winter I+0%	480	5.850	5.072	0.000	241.270	0.852	216	0.9	OK
S2.002	Out Spur Road 1	480 minute 10 year Winter I+0%	480	5.700	5.072	0.000	1679.035	12.387		0.0	OK
S3.000	Spur Road 2	15 minute 10 year Summer I+0%	15	6.400	5.540	0.000		0.000		0.0	OK
S3.001	Out Spur Road 2	720 minute 10 year Winter I+0%	720	5.800	5.340	0.000	1348.867	11.563		0.0	SURCHARGED
S4.000	5	15 minute 10 year Summer I+0%	15	6.600	5.840	0.000		0.000		0.0	OK
S4.001	Non-inf parking 1	2880 minute 10 year Winter I+0%	2880	6.500	5.728	0.000	0.000	22.820	1464	-0.6	OK
S5.000	6	15 minute 10 year Summer I+0%	15	6.700	5.840	0.000		0.000		0.0	OK
S5.001	7	2880 minute 10 year Winter I+0%	2880	6.500	5.729	0.000	596.553	1.141	1320	-0.2	OK

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

PN	US/MH Name	Event	Duration (mins)	US/CL (m)	Water Level (m)	Flooded Volume (m³)	Total Infil. Vol (m³)	Maximum Vol (m³)	Half Drain Time (mins)	Pipe Flow (l/s)	Status
S4.002	Spur Road 4	2880 minute 10 year Winter I+0%	2880	6.400	5.733	0.000	1269.438	9.021	2496	1.5	OK
S4.003	Out Spur Road 4	2880 minute 10 year Winter I+0%	2880	6.300	5.737	0.000	3033.348	21.956	2712	0.0	OK
S6.000	Spur Road 3	480 minute 10 year Winter I+0%	480	6.700	6.080	0.000		0.266		0.8	OK
S6.001	19	480 minute 10 year Winter I+0%	480	6.350	6.080	0.000	1278.444	16.477		0.2	FLOOD RISK
S6.002	Out Spur Road 3	960 minute 10 year Winter I+0%	960	6.000	5.279	0.000	472.269	1.176	352	0.0	OK

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

Simulation Criteria

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

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
Number of Online Controls 9 Number of Storage Structures 14 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FEH Site Location GB 497682 103581 SU 97682 03581 Cv (Summer) 0.750
FEH Rainfall Version 2013 Data Type Point Cv (Winter) 0.840

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

Profile(s) Summer and Winter
Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years) 10, 100
Climate Change (%) 0, 40

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

										Water Level	Flooded Volume	Total Infil.	Half Drain		Pipe Flow		
		US/MH					Duration	US/CL				Maximum					
PN		Name	Event				(mins)	(m)	(m)	(m³)	Vol (m³)	Vol (m³)	(mins)	(l/s)	Status		
S1.000	Non-inf	parking 2	5760	minute	100	year	Winter	I+40%	5760	6.700	6.340	0.000	0.000	121.613	0.9	SURCHARGED	
S1.001	Spur	Road 3.1	4320	minute	100	year	Winter	I+40%	4320	6.700	6.340	0.000		1.597	0.9	SURCHARGED	
S1.002		1	4320	minute	100	year	Winter	I+40%	4320	6.600	6.338	0.000	2846.454	30.601	0.9	FLOOD RISK	
S1.003	Spur	Road 2.1	8640	minute	100	year	Winter	I+40%	8640	6.400	6.138	0.000	1448.591	31.612	4704	0.8	FLOOD RISK
S1.004		2	10080	minute	100	year	Winter	I+40%	10080	6.000	5.736	0.000	876.225	18.490	3000	0.6	FLOOD RISK
S1.005		3	10080	minute	100	year	Winter	I+40%	10080	5.700	5.500	0.000	902.927	24.861	1992	0.0	FLOOD RISK
S2.000		4	15	minute	100	year	Summer	I+40%	15	6.100	5.240	0.000		0.000	0.0	OK	
S2.001	Spur	Road 1	600	minute	100	year	Winter	I+40%	600	5.850	5.235	0.000	241.270	7.116	490	1.0	OK
S2.002	Out	Spur Road 1	600	minute	100	year	Winter	I+40%	600	5.700	5.235	0.000	1679.035	26.301		0.0	SURCHARGED
S3.000	Spur	Road 2	720	minute	100	year	Winter	I+40%	720	6.400	5.578	0.000		0.037		0.0	OK
S3.001	Out	Spur Road 2	720	minute	100	year	Winter	I+40%	720	5.800	5.578	0.000	1348.867	28.007		0.0	FLOOD RISK
S4.000		5	2160	minute	100	year	Winter	I+40%	2160	6.600	5.903	0.000		0.066		0.0	OK

ARUN DISTRICT COUNCIL Y/7/20/RES

Odyssey		Page 16
Tuscany House	Stakers Farm, Yapton	
White Hart Lane	70 Units	
Basingstoke RG21 4AF	Permeable Paving (exc drives)	
Date 28/07/2020 12:48	Designed by AK	
File perm paving.MDX	Checked by	
Micro Drainage	Network 2020.1	

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm													
PN	US/MH Name	Event	Duration (mins)	US/CL (m)	Water Level (m)	Flooded Volume (m³)	Total Infil. Vol (m³)	Maximum Vol (m³)	Half Drain Time (mins)	Pipe Flow (l/s)	Status		
S4.001	Non-inf parking 1	2160 minute 100 year Winter I+40%	2160	6.500	5.903	0.000	0.000	68.519		0.6	SURCHARGED		
S5.000		6 2160 minute 100 year Winter I+40%	2160	6.700	5.901	0.000		0.064		0.0	OK		
S5.001		7 2160 minute 100 year Winter I+40%	2160	6.500	5.901	0.000	596.553	8.180	1968	0.2	OK		
S4.002	Spur Road 4	2160 minute 100 year Winter I+40%	2160	6.400	5.901	0.000	1269.438	16.365		0.6	SURCHARGED		
S4.003	Out Spur Road 4	2160 minute 100 year Winter I+40%	2160	6.300	5.901	0.000	3033.348	36.254		0.0	SURCHARGED		
S6.000	Spur Road 3	60 minute 100 year Winter I+40%	60	6.700	6.127	0.000		0.319		8.5	OK		
S6.001		19 60 minute 100 year Winter I+40%	60	6.350	6.121	0.000	1278.444	17.966		11.4	FLOOD RISK		
S6.002	Out Spur Road 3	960 minute 100 year Winter I+40%	960	6.000	5.794	0.000	472.269	22.125		0.0	FLOOD RISK		

ARUN DISTRICT COUNCIL Y/72/20/RES