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Woodcote Grove Ashley Road Epsom Surrey KT18 5BW		
Date 01/10/2012 14:48 File Indicative Chan...	Designed by mill13494 Checked by	
Micro Drainage	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)	30	Add Flow / Climate Change (%)	0
M5-60 (mm)	19.000	Minimum Backdrop Height (m)	0.000
Ratio R	0.400	Maximum Backdrop Height (m)	3.000
Maximum Rainfall (mm/hr)	50	Min Design Depth for Optimisation (m)	0.100
Foul Sewage (l/s/ha)	0.00	Min Vel for Auto Design only (m/s)	1.00
Volumetric Runoff Coeff.	1.000	Min Slope for Optimisation (1:X)	1000
PIMP (%)	100		

Designed with Level Soffits

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	n	HYD SECT	DIA (mm)
1.000	266.000	0.266	1000.0	2.870	5.00	0.0	0.050	\	-2
2.000	221.000	9.609	23.0	0.857	5.00	0.0	0.050	\	-1
1.001	125.000	2.500	50.0	0.000	0.00	0.0	0.050	\	-2

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	13.22	113.650	2.870	0.0	0.0	0.0	0.54	2317.2	518.2
2.000	50.00	6.84	124.000	0.857	0.0	0.0	0.0	2.01	1550.7	154.7
1.001	50.00	14.09	113.384	3.727	0.0	0.0	0.0	2.41	10362.9	672.9

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Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out			Pipes In			Backdrop (mm)
					PN	Invert Level (m)	Diameter (mm)	PN	Invert Level (m)	Diameter (mm)	
1	114.650	1.000	Junction		1.000	113.650	-2				
2	125.000	1.000	Junction		2.000	124.000	-1				
3	115.570	2.186	Junction	0	1.001	113.384	-2	1.000	113.384	-2	207
								2.000	114.391	-1	
	0.000		Open Manhole	0		OUTFALL		1.001	110.884	-2	

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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	\/	-2	1	114.650	113.650	-0.500	Junction	
2.000	\/	-1	2	125.000	124.000	0.300	Junction	
1.001	\/	-2	3	115.570	113.384	0.686	Junction	

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
1.000	266.000	1000.0	3	115.570	113.384	0.686	Junction	
2.000	221.000	23.0	3	115.570	114.391	0.479	Junction	
1.001	125.000	50.0		0.000	110.884		Open Manhole	0

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

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

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

PN	Storm	Return Period	Climate Change	First X Surcharge	First Y Flood	First Z Overflow Act.	O/F	Lvl Exc.
1.000	15 Summer	30	0%		30/15 Summer			1
2.000	15 Summer	30	0%					
1.001	15 Summer	30	0%					

PN	US/MH Name	Water		Flooded			Pipe		Status
		Level (m)	Surch'd Depth (m)	Volume (m³)	Flow / Cap.	O'flow (l/s)	Flow (l/s)		
1.000	1	114.650	-0.500	0.139	0.33	0.0	755.2	FLOOD	
2.000	2	124.296	-0.404	0.000	0.23	0.0	354.1	OK	
1.001	3	113.725	-1.159	0.000	0.09	0.0	883.9	OK	