

Andrew Gough Development Consultant		Page 1																																																																												
9 Joyce Way Whitchurch Shropshire SY13 1TZ	Willington Grange 1 in 100 + 30% Simula...																																																																													
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Micro Drainage Network W.12.6.1																																																																														
<u>Existing Network Details for Storm</u> <table><tr><th>PN</th><th>Length (m)</th><th>Fall (m)</th><th>Slope (1:X)</th><th>I.Area (ha)</th><th>T.E. (mins)</th><th>k (mm)</th><th>HYD SECT</th><th>DIA (mm)</th></tr><tr><td>1.000</td><td>14.000</td><td>0.035</td><td>400.0</td><td>0.011</td><td>2.00</td><td>0.600</td><td>o</td><td>450</td></tr><tr><td>2.000</td><td>19.000</td><td>0.047</td><td>404.3</td><td>0.022</td><td>2.00</td><td>0.600</td><td>o</td><td>450</td></tr><tr><td>1.001</td><td>2.577</td><td>0.032</td><td>80.5</td><td>0.000</td><td>0.00</td><td>0.600</td><td>o</td><td>150</td></tr></table> <table><tr><th>PN</th><th>US/MH Name</th><th>US/CL (m)</th><th>US/IL (m)</th><th>US C.Depth (m)</th><th>DS/CL (m)</th><th>DS/IL (m)</th><th>DS C.Depth (m)</th><th>Ctrl</th><th>US/MH (mm)</th></tr><tr><td>1.000</td><td>1</td><td>98.950</td><td>97.913</td><td>0.587</td><td>98.850</td><td>97.878</td><td>0.522</td><td></td><td>900</td></tr><tr><td>2.000</td><td>2</td><td>98.875</td><td>97.925</td><td>0.500</td><td>98.850</td><td>97.878</td><td>0.522</td><td></td><td>900</td></tr><tr><td>1.001</td><td>3</td><td>98.850</td><td>97.878</td><td>0.822</td><td>98.850</td><td>97.846</td><td>0.854</td><td>Orifice</td><td>900</td></tr></table>			PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	k (mm)	HYD SECT	DIA (mm)	1.000	14.000	0.035	400.0	0.011	2.00	0.600	o	450	2.000	19.000	0.047	404.3	0.022	2.00	0.600	o	450	1.001	2.577	0.032	80.5	0.000	0.00	0.600	o	150	PN	US/MH Name	US/CL (m)	US/IL (m)	US C.Depth (m)	DS/CL (m)	DS/IL (m)	DS C.Depth (m)	Ctrl	US/MH (mm)	1.000	1	98.950	97.913	0.587	98.850	97.878	0.522		900	2.000	2	98.875	97.925	0.500	98.850	97.878	0.522		900	1.001	3	98.850	97.878	0.822	98.850	97.846	0.854	Orifice	900
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Micro Drainage Network W.12.6.1		

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	450	1	98.950	97.913	0.587	Open Manhole	900
2.000	o	450	2	98.875	97.925	0.500	Open Manhole	900
1.001	o	150	3	98.850	97.878	0.822	Open Manhole	900

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	14.000	400.0	3	98.850	97.878	0.522	Open Manhole	900
2.000	19.000	404.3	3	98.850	97.878	0.522	Open Manhole	900
1.001	2.577	80.5		98.850	97.846	0.854	Open Manhole	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)
1.001		98.850	97.846	0.000	0	0

Simulation Criteria for Storm

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m³/ha Storage	0.000
Hot Start (mins)	0	Inlet Coeffiecient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1

Number of Input Hydrographs	0	Number of Storage Structures	0
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Summer
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Storm Duration (mins)	30
Ratio R	0.363		

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<u>Online Controls for Storm</u> <u>Orifice Manhole: 3, DS/PN: 1.001, Volume (m³): 5.6</u> Diameter (m) 0.063 Discharge Coefficient 0.600 Invert Level (m) 97.878		
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