

Design & Tech. Ser. Ltd		Page 1
6 Driffield Way Woodston Peterborough, PE2 9RU	Proposed Residential Development Eastfields - Highway D...	
Date Jan 2017 File Road Drainage.mdx	Designed By DTS Checked By	
Micro Drainage	Network W.12.4	

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 (%)	0
M5-60 (mm)	19.000	Minimum Backdrop Height (m)	0.200
Ratio R	0.400	Maximum Backdrop Height (m)	1.500
Maximum Rainfall (mm/hr)	75	Min Design Depth for Optimisation (m)	1.200
Foul Sewage (l/s/ha)	0.00	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

Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.058	4-8	0.026

Total Area Contributing (ha) = 0.084

Total Pipe Volume (m³) = 2.273

[illegible]

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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 DIAM., L*W (mm)
1.000	o	150	1	3.380	2.441	0.789	675 x 900
1.001	o	225	2	3.370	2.099	1.046	675 x 1240
1.002	o	225	3	3.490	1.918	1.347	675 x 1240

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH DIAM., L*W (mm)
1.000	40.000	149.8	2	3.370	2.174	1.046	675 x 1240
1.001	30.200	166.9	3	3.490	1.918	1.347	675 x 1240
1.002	9.200	167.3	S01	3.500	1.863	1.412	1200

Simulation Criteria for Storm

Volumetric Runoff Coeff	0.750	Foul Sewage per hectare (l/s)	0.000
PIMP (% impervious)	100	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start (mins)	0	Inlet Coefficient	0.800
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	0
Number of Online Controls	0	Number of Time/Area Diagrams	0
Number of Offline Controls	0		

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Summer
Return Period (years)	2	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Storm Duration (mins)	30
Ratio R	0.400		

