

Escher Silverman		Page 1
Lone Barn Studios Stanbridge Lane Romsey SO51 0HE	251 Pagham Road Pagham Green Field Run Off	
Date December 2016 File	Designed By KN Checked By	
Micro Drainage	Source Control W.11.2	

IH 124 Mean Annual Flood

Input

Return Period (years)	1	SAAR (mm)	700.000	Urban	0.000
Area (Ha)	50.000	Soil	0.450	Region Number	7

Results l/s

QBAR Rural	219.7
QBAR Urban	219.7

Q	1 year	186.7
Q	1 year	186.7
Q	2 years	193.5
Q	5 years	281.2
Q	10 years	355.8
Q	20 years	440.0
Q	25 years	471.8
Q	30 years	497.8
Q	50 years	575.5
Q	100 years	700.7
Q	200 years	823.7
Q	250 years	863.2
Q	1000 years	1133.4

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STORM SEWER DESIGN by the Modified Rational Method

Global Variables

Pipe Size File C:\Program Files\Micro Drainage Ltd\WinDes\STANDARD.PIP
Manhole Size File C:\Program Files\Micro Drainage Ltd\WinDes\STANDARD.MHS

Location - England & Wales

Return Period (years)	1	Maximum Backdrop Height (m)	1.500
M5-60 (mm)	19.000	Min Cover Depth for Optimisation (m)	1.200
Ratio R	0.350	Min Vel for Auto Design Only (m/s)	1.00
Maximum Rainfall (mm/hr)	50	Min Slope for Optimisation (1:X)	500
Foul Sewage (l/s/ha)	0.00	Minimum Outfall Invert (m)	0.000
O'flow Setting (*Foul only)	0	Ground Level at Outfall (m)	0.000
Volumetric Runoff Coeff.	0.75	Outfall Manhole Name	
Add Flow / Climate Change (%)	0	Outfall Manhole Dia/Length (mm)	0
Minimum Backdrop Height (m)	0.200	Outfall Manhole Width (mm)	0

Designed with Level Soffits

Network Design Table

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	T.E. (mins)	DWF (l/s)	k (mm)	HYD SECT	DIA (mm)
1.000	90.00	0.250	360.0	0.064	5.00	0.0	0.600	o	150

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	E.Area (ha)	E.DWF (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	CAP (l/s)	Flow (l/s)
1.000	39.6	7.9	5.600	0.064	0.0	0.0	0.0	0.52	9.3	6.9

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PIPELINE SCHEDULES

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH No.	C.Level (m)	I.Level (m)	C.Depth (m)	MH DIAM., L*W (mm)
1.000	o	150	1	0.000	5.600	-5.750	1050

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH No.	C.Level (m)	I.Level (m)	C.Depth (m)	MH DIAM., L*W (mm)
1.000	90.00	360.0		0.000	5.350	-5.500	0

Section: Civils		 ESCHER · SILVERMAN <i>Civil & Structural Consulting Engineers</i> The Stables, Lone Barn Studios, Stanbridge Lane, Romsey, Hampshire, SO51 0HE Tel: 01794 521213, Fax: 01794 522195, email: mail@eschers.co.uk www.eschersilverman.co.uk			
Project: 251 Pagham Road, Pagham					
Client : Crayfern Homes Homes					
Date: December 2016	Job No. ES1662	Page No. 1	Chk:	By: KHN	Rev:
Reference	Calculation Existing Site Discharge				Result
<u>Existing Green Field Run off from IH124</u> Existing permeable site area 1.3H Q_{bar} discharge from 50Ha site = 219.7lits/sec (see MicroDrainage IH124 results) Applying ratio of existing site to this discharge: $1.3/50 \times 219.7 = 5.712 \text{ lit/sec}$ <u>Surface Water Discharge from Existing Impermeable Area</u> Existing impermeable site area 640sqm. 1 in 1 year storm discharge 6.9 lits/sec (see MicroDrainage analysis) Total discharge to ditch from existing site: $5.712\text{l/s} + 6.9\text{l/s} = 12.6 \text{ lits/sec}$ This discharge rate will be split between the two proposed outfalls giving Outfall 1 - 8.0 lits/sec Outfall 2 - 4.6 lits/sec					