

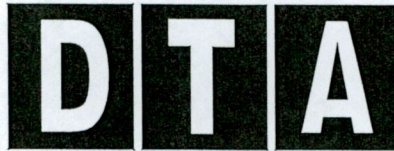


DEANE TURNER
ASSOCIATES

SUITE 6A,
BLOCK 6,
BROOMHALL BUSINESS PARK,
RATHNEW,
CO. WICKLOW
PH : 0404 32516
FAX : 0404 32517
EMAIL : deane.turner@dtassoc.ie

CONSULTING ENGINEERS

Foul, Storm Sewer and Attenuation Calculations
for Proposed Development at Edmondstown,
Rathfarnham.



DEANE TURNER
ASSOCIATES

CONSULTING ENGINEERS

SUITE 6A,
BLOCK 6,
BROOMHALL BUSINESS PARK,
RATHNEW,
CO. WICKLOW
PH : 0404 32516
FAX : 0404 32517
EMAIL : deane.turner@dtassoc.ie

Storm Sewer Calculations
Edmondstown, Rathfarnham.

STORM SEWER DESIGN by the Modified Rational Method

Global Variables

Pipe Size File c:\winDes\STANDARD.PIP Manhole Size File c:\winDes\STANDARD.MHS

Location - Scotland & Ireland

Return Period (years)	5
M5-60 (mm)	17.000
Ratio R	0.280
Maximum Rainfall (mm/hr)	200
Foul Sewage (l/s/ha)	0.00
Overflow Setting (*Foul only)	0
Volumetric Runoff Coeff.	0.75
Infiltration %	0
Minimum Backdrop Height (m)	0.200
Depth from Soffit to G.L. (m)	1.200
Min Vel. (m/s - Auto Design Only)	0.75
Min Slope (1:X - Optimisation)	500
Minimum Outfall Invert (m)	94.500
Ground Level at Outfall (m)	99.000
Outfall Manhole Name	outfall
Outfall Manhole Dia/Length (mm)	0
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	29.60	0.287	103.0	0.021	5.00	0	0.600	o	150
1.001	14.00	0.140	100.0	0.009	0.00	0	0.600	o	150
1.002	8.50	0.085	100.0	0.017	0.00	0	0.600	o	150
1.003	25.10	0.251	100.0	0.024	0.00	0	0.600	o	150
1.004	19.20	0.192	100.0	0.020	0.00	0	0.600	o	150
1.005	12.70	0.127	100.0	0.015	0.00	0	0.600	o	150
1.006	13.30	0.133	100.0	0.038	0.00	0	0.600	o	225
2.000	20.40	0.204	100.0	0.050	5.00	0	0.600	o	150
2.001	3.85	0.038	101.3	0.001	0.00	0	0.600	o	150
3.000	14.40	0.144	100.0	0.036	5.00	0	0.600	o	150
2.002	13.40	0.134	100.0	0.033	0.00	0	0.600	o	225

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	E.Area (ha)	E.DWF (l/s)	Foul (l/s)	Infil. (l/s)	Vel (m/s)	CAP (l/s)	Flow (l/s)
1.000	62.0	5.5	100.090	0.021	0	0	0	0.99	17	4
1.001	61.1	5.7	97.650	0.030	0	0	0	1.00	18	5
1.002	60.5	5.9	97.510	0.047	0	0	0	1.00	18	8
1.003	58.8	6.3	97.425	0.071	0	0	0	1.00	18	11
1.004	57.7	6.6	97.174	0.091	0	0	0	1.00	18	14
1.005	56.9	6.8	96.982	0.106	0	0	0	1.00	18	16
1.006	56.3	7.0	96.780	0.144	0	0	0	1.31	52	22
2.000	62.7	5.3	97.400	0.050	0	0	0	1.00	18	8
2.001	62.5	5.4	97.196	0.051	0	0	0	1.00	18	9
3.000	63.2	5.2	98.800	0.036	0	0	0	1.00	18	6
2.002	61.7	5.6	97.083	0.120	0	0	0	1.31	52	20

Killiskey
Ashford
Co. WicklowDate 01 January 2002 02:12
File STORM.SWSDesigned By John Turner
Checked By
System1 W.9.5

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)
1.007	13.40	0.134	100.0	0.017	0.00	0	0.600	o	225
1.008	5.50	0.055	100.0	0.002	0.00	0	0.600	o	225
1.009	8.60	0.086	100.0	0.008	0.00	0	0.600	o	225
1.010	5.50	0.055	100.0	0.008	0.00	0	0.600	o	225
1.011	9.50	0.095	100.0	0.000	0.00	0	0.600	o	225
4.000	15.30	0.153	100.0	0.015	5.00	0	0.600	o	225
1.012	4.80	0.011	425.9	0.000	0.00	0	0.600	o	300

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	E.Area (ha)	E.DWF (l/s)	Foul (l/s)	Infil. (l/s)	Vel (m/s)	CAP (l/s)	Flow (l/s)
1.007	55.7	7.2	96.647	0.281	0	0	0	1.31	52	42
1.008	55.5	7.2	95.460	0.283	0	0	0	1.31	52	43
1.009	55.2	7.3	95.405	0.291	0	0	0	1.31	52	43
1.010	54.9	7.4	95.319	0.299	0	0	0	1.31	52	44
1.011	54.6	7.5	95.264	0.299	0	0	0	1.31	52	44
4.000	63.4	5.2	97.800	0.015	0	0	0	1.31	52	3
1.012	54.2	7.6	95.094	0.314	0	0	0	0.76	53	46

Killiskey
Ashford
Co. Wicklow

Date 01 January 2002 02:12
File STORM.SWS

Designed By John Turner
Checked By
System1 W.9.5



Time Area Diagram

Time From (mins)	Time To (mins)	Area (ha)
0	4	0.205
4	8	0.109

Total Area Contributing (ha) = 0.314

Total Pipe Volume (m3) = 6.310

Killiskey
Ashford
Co. Wicklow

Date 01 January 2002 02:12

File STORM.SWS

Micro Drainage

Designed By John Turner

Checked By

System1 W.9.5



PIPELINE SCHEDULES

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH No.	C.Level (m)	I.Level (m)	Depth (m)	MH DIAM., L*W (mm)
1.000	o	150	1	102.000	100.090	1.760	1200
1.001	o	150	2	100.800	97.650	3.000	1200
1.002	o	150	3	98.500	97.510	0.840	1050
1.003	o	150	4	98.300	97.425	0.725	1050
1.004	o	150	5	98.650	97.174	1.326	1050
1.005	o	150	6	99.200	96.982	2.068	1200
1.006	o	225	7	99.800	96.780	2.795	1200
2.000	o	150	8	99.600	97.400	2.050	1200
2.001	o	150	9	98.600	97.196	1.254	1050
3.000	o	150	10	99.900	98.800	0.950	1050
2.002	o	225	11	100.100	97.083	2.792	1200
1.007	o	225	12	99.600	96.647	2.728	1200
1.008	o	225	13	99.200	95.460	3.515	1200
1.009	o	225	14	96.300	95.405	0.670	1050
1.010	o	225	15	96.200	95.319	0.656	1050
1.011	o	225	16	97.800	95.264	2.311	1200
4.000	o	225	17	98.900	97.800	0.875	1050
1.012	o	300	18	99.100	95.094	3.706	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH No.	C.Level (m)	I.Level (m)	Depth (m)	MH DIAM., L*W (mm)
1.000	29.60	103.0	2	100.800	99.803	0.847	1200
1.001	14.00	100.0	3	98.500	97.510	0.840	1050
1.002	8.50	100.0	4	98.300	97.425	0.725	1050
1.003	25.10	100.0	5	98.650	97.174	1.326	1050
1.004	19.20	100.0	6	99.200	96.982	2.068	1200
1.005	12.70	100.0	7	99.800	96.855	2.795	1200
1.006	13.30	100.0	12	99.600	96.647	2.728	1200
2.000	20.40	100.0	9	98.600	97.196	1.254	1050
2.001	3.85	101.3	11	100.100	97.158	2.792	1200
3.000	14.40	100.0	11	100.100	98.656	1.294	1200
2.002	13.40	100.0	12	99.600	96.949	2.426	1200
1.007	13.40	100.0	13	99.200	96.513	2.462	1200
1.008	5.50	100.0	14	96.300	95.405	0.670	1050
1.009	8.60	100.0	15	96.200	95.319	0.656	1050
1.010	5.50	100.0	16	97.800	95.264	2.311	1200
1.011	9.50	100.0	18	99.100	95.169	3.706	1200
4.000	15.30	100.0	18	99.100	97.647	1.228	1200
1.012	4.80	425.9	outfall	99.000	95.083	3.617	0

Killiskey
Ashford
Co. WicklowDate 01 January 2002 02:12
File STORM.SWSDesigned By John Turner
Checked By
System1 V.9.5

Micro Drainage

MANHOLE SCHEDULES

M/Hole Number	Cover Level (m)	M/Hole Depth (m)	M/Hole Diam., L*W (mm)	Pipes Out			Pipes In		
				PN	IL.(m)	D (mm)	PN	IL.(m)	D (mm)
1	102.000	1.910	1200	1.000	100.090	150			
2	100.800	3.150	1200	1.001	97.650	150	1.000	99.803	150
3	98.500	0.990	1050	1.002	97.510	150	1.001	97.510	150
4	98.300	0.875	1050	1.003	97.425	150	1.002	97.425	150
5	98.650	1.476	1050	1.004	97.174	150	1.003	97.174	150
6	99.200	2.218	1200	1.005	96.982	150	1.004	96.982	150
7	99.800	3.020	1200	1.006	96.780	225	1.005	96.855	150
8	99.600	2.200	1200	2.000	97.400	150			
9	98.600	1.404	1050	2.001	97.196	150	2.000	97.196	150
10	99.900	1.100	1050	3.000	98.800	150			
11	100.100	3.017	1200	2.002	97.083	225	2.001 3.000	97.158 98.656	150 150
12	99.600	2.953	1200	1.007	96.647	225	1.006 2.002	96.647 96.949	225 225
13	99.200	3.740	1200	1.008	95.460	225	1.007	96.513	225
14	96.300	0.895	1050	1.009	95.405	225	1.008	95.405	225
15	96.200	0.881	1050	1.010	95.319	225	1.009	95.319	225
16	97.800	2.536	1200	1.011	95.264	225	1.010	95.264	225
17	98.900	1.100	1050	4.000	97.800	225			
18	99.100	4.006	1200	1.012	95.094	300	1.011 4.000	95.169 97.647	225 225
Outfall	99.000	3.917	0		OUTFALL		1.012	95.083	300



DEANE TURNER
ASSOCIATES

SUITE 6A,
BLOCK 6,
BROOMHALL BUSINESS PARK,
RATHNEW,
CO. WICKLOW
PH : 0404 32516
FAX : 0404 32517
EMAIL : deane.turner@dtassoc.ie

CONSULTING ENGINEERS

Attenuation Calculations
Edmondstown, Rathfarnham.

Killiskey
Ashford
Co. WicklowDate 01 January 2002 02:06
File Storage.srcDesigned By John Turner
Checked By
Storage Design W.9.5

Summary of Results for 100 year Return Period

Storm Duration (mins)	Maximum Control (m3/s)	Maximum Overflow (m3/s)	Maximum Outflow (m3/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m3)	Status
15 Summer	0.0004	0.0000	0.0004	95.1975	0.0975	43.8	O K
30 Summer	0.0005	0.0000	0.0005	95.2335	0.1335	60.1	O K
60 Summer	0.0006	0.0000	0.0006	95.2715	0.1715	77.2	O K
120 Summer	0.0006	0.0000	0.0006	95.3135	0.2135	96.1	O K
180 Summer	0.0007	0.0000	0.0007	95.3395	0.2395	107.8	O K
240 Summer	0.0007	0.0000	0.0007	95.3585	0.2585	116.3	O K
360 Summer	0.0007	0.0000	0.0007	95.3855	0.2855	128.6	O K
480 Summer	0.0008	0.0000	0.0008	95.4045	0.3045	137.1	O K
600 Summer	0.0008	0.0000	0.0008	95.4185	0.3185	143.4	O K
720 Summer	0.0008	0.0000	0.0008	95.4295	0.3295	148.2	O K
960 Summer	0.0008	0.0000	0.0008	95.4445	0.3445	154.9	O K
1440 Summer	0.0008	0.0000	0.0008	95.4595	0.3595	161.7	O K
2160 Summer	0.0008	0.0000	0.0008	95.4705	0.3705	166.8	O K
2880 Summer	0.0009	0.0000	0.0009	95.4765	0.3765	169.3	O K
4320 Summer	0.0009	0.0000	0.0009	95.4775	0.3775	169.8	O K
5760 Summer	0.0008	0.0000	0.0008	95.4715	0.3715	167.2	O K
7200 Summer	0.0008	0.0000	0.0008	95.4625	0.3625	163.3	O K
8640 Summer	0.0008	0.0000	0.0008	95.4525	0.3525	158.7	O K
10080 Summer	0.0008	0.0000	0.0008	95.4425	0.3425	154.0	O K
15 Winter	0.0004	0.0000	0.0004	95.2085	0.1085	49.0	O K
30 Winter	0.0005	0.0000	0.0005	95.2495	0.1495	67.4	O K
60 Winter	0.0006	0.0000	0.0006	95.2925	0.1925	86.5	O K
120 Winter	0.0007	0.0000	0.0007	95.3395	0.2395	107.8	O K
180 Winter	0.0007	0.0000	0.0007	95.3685	0.2685	121.0	O K
240 Winter	0.0007	0.0000	0.0007	95.3905	0.2905	130.7	O K
360 Winter	0.0008	0.0000	0.0008	95.4215	0.3215	144.6	O K
480 Winter	0.0008	0.0000	0.0008	95.4435	0.3435	154.4	O K
600 Winter	0.0008	0.0000	0.0008	95.4595	0.3595	161.7	O K
720 Winter	0.0008	0.0000	0.0008	95.4725	0.3725	167.4	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	74.87	23
30 Summer	51.58	37
60 Summer	33.33	68
120 Summer	20.98	126
180 Summer	15.87	186
240 Summer	12.99	246
360 Summer	9.77	364
480 Summer	7.98	484
600 Summer	6.81	602
720 Summer	5.98	722
960 Summer	4.87	962
1440 Summer	3.65	1370
2160 Summer	2.73	1708
2880 Summer	2.22	2080
4320 Summer	1.66	2904
5760 Summer	1.35	3744
7200 Summer	1.15	4544
8640 Summer	1.01	5368
10080 Summer	0.90	6160
15 Winter	74.87	23
30 Winter	51.58	37
60 Winter	33.33	66
120 Winter	20.98	124
180 Winter	15.87	182
240 Winter	12.99	242
360 Winter	9.77	358
480 Winter	7.98	476
600 Winter	6.81	592
720 Winter	5.98	706

Killiskey
Ashford
Co. Wicklow

Date 01 January 2002 02:06

Designed By John Turner

File Storage.src

Checked By

Micro Drainage

Storage Design W.9.5



Summary of Results for 100 year Return Period

Storm Duration (mins)	Maximum Control (m3/s)	Maximum Overflow (m3/s)	Maximum Outflow (m3/s)	Maximum Water Level (m od)	Maximum Depth (m)	Maximum Volume (m3)	Status
960 Winter	0.0009	0.0000	0.0009	95.4905	0.3905	175.6	O K
1440 Winter	0.0009	0.0000	0.0009	95.5105	0.4105	184.6	O K
2160 Winter	0.0009	0.0000	0.0009	95.5205	0.4205	189.0	O K
2880 Winter	0.0009	0.0000	0.0009	95.5255	0.4255	191.3	O K
4320 Winter	0.0009	0.0000	0.0009	95.5215	0.4215	189.8	O K
5760 Winter	0.0009	0.0000	0.0009	95.5095	0.4095	184.3	O K
7200 Winter	0.0009	0.0000	0.0009	95.4945	0.3945	177.4	O K
8640 Winter	0.0009	0.0000	0.0009	95.4775	0.3775	169.9	O K
10080 Winter	0.0008	0.0000	0.0008	95.4605	0.3605	162.4	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
960 Winter	4.87	934
1440 Winter	3.65	1374
2160 Winter	2.73	1796
2880 Winter	2.22	2220
4320 Winter	1.66	3156
5760 Winter	1.35	4040
7200 Winter	1.15	4904
8640 Winter	1.01	5792
10080 Winter	0.90	6656

Killiskey
Ashford
Co. Wicklow

Date 01 January 2002 02:06

File Storage.src

Micro Drainage

Designed By John Turner

Checked By

Storage Design W.9.5

Rainfall Details

Region	SCOT+NI	Cv (Winter)	0.840
Return Period (years)	100	Shortest Storm (mins)	15
M5-60 (mm)	17.000	Longest Storm (mins)	10080
Ratio-R	0.280	Summer Storms	Yes
Cv (Summer)	0.750	Winter Storms	Yes

Time / Area Diagram

Total Area (ha) = 0.314

Time (mins)	Area (ha)	Time (mins)	Area (ha)
from: to:		from: to:	
0	4 0.205	4	8 0.109

Killiskey
Ashford
Co. Wicklow

Date 01 January 2002 02:06

File Storage.src

Micro Drainage

Designed By John Turner

Checked By

Storage Design W.9.5

Tank/Pond Details

Invert Level (m) 95.100 Ground Level (m) 99.100

Depth (m)	Area (m2)	Depth (m)	Area (m2)	Depth (m)	Area (m2)	Depth (m)	Area (m2)	Depth (m)	Area (m2)
0.00	450.0	0.60	450.0	1.20	450.0	1.80	450.0	2.40	450.0
0.10	450.0	0.70	450.0	1.30	450.0	1.90	450.0	2.50	450.0
0.20	450.0	0.80	450.0	1.40	450.0	2.00	450.0		
0.30	450.0	0.90	450.0	1.50	450.0	2.10	450.0		
0.40	450.0	1.00	450.0	1.60	450.0	2.20	450.0		
0.50	450.0	1.10	450.0	1.70	450.0	2.30	450.0		

Orifice Outflow Control

Diameter (m) 0.026 Invert Level (m) 95.100
 Discharge Coefficient 0.600

Pipe Overflow Control

Pipe Diameter (m) 0.200 Entry Loss Coef 0.500
 Slope (1:x) 100.0 Coef of Contraction 0.600
 Length (m) 10.000 Invert Level (m) 96.600
 Roughness (mm) 0.600

Q Bar Calculation Mean Annual Flood.
Edmondstown, Rathfarnham.

Return Period 100 Years

Soil 0.3

Allow area 50HA

Saar 938mm

$0.00108 \times \text{Area}^{0.89} \times \text{Saar}^{1.17} \times \text{soil}^{2.17}$

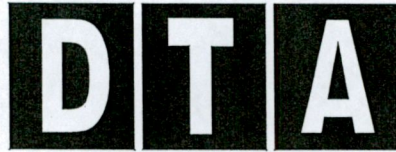
$0.00108 \times 0.5^{0.89} \times 938^{1.17} \times 0.3^{2.17}$

128.33 L/sec

2.57 L/sec

Qbar for the site (an area of 0.6332 hec)

1.625 L/Sec



DEANE TURNER
ASSOCIATES

SUITE 6A,
BLOCK 6,
BROOMHALL BUSINESS PARK,
RATHNEW,
CO. WICKLOW
PH : 0404 32516
FAX : 0404 32517
EMAIL : deane.turner@dtassoc.ie

CONSULTING ENGINEERS

Foul Sewer Calculations
Edmondstown, Rathfarnham.

FOUL SEWERAGE DESIGN

Global Variables

Pipe Size File c:\winDes\STANDARD.PIP Manhole Size File c:\winDes\STANDARD.MHS

Industrial Flow (l/s/ha)	0.00	Depth from Soffit to G.L. (m)	1.200
Industrial Peak Flow Factor	0.00	Min Vel. (m/s - Auto Design Only)	0.75
Flow Per Person (l/per/day)	180.00	Min Slope (1:X - Optimisation)	500
Persons per House	3.00	Minimum Outfall Invert (m)	96.500
Domestic (l/s/ha)	0.00	Ground Level at Outfall (m)	98.000
Domestic Peak Flow Factor	6.00	Outfall Manhole Name	EXFMH
O'flow Setting (*Foul only)	0	Outfall Manhole Dia/Length (mm)	0
Infiltration %	0	Outfall Manhole width (mm)	0
Minimum Backdrop Height (m)	0.200		

Designed with Level Soffits

Network Design Table

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Hse	DWF (l/s)	k (mm)	HYD SECT	DIA (mm)
1.000	20.60	0.343	60.1	0.000	9	0	1.500	o	150
2.000	19.00	0.317	59.9	0.000	9	0	1.500	o	150
2.001	13.75	0.229	60.0	0.000	3	0	1.500	o	150
2.002	5.50	0.092	59.8	0.000	0	0	1.500	o	150
1.001	31.60	0.527	60.0	0.000	10	0	1.500	o	150
1.002	20.70	0.345	60.0	0.000	2	0	1.500	o	150
1.003	20.50	0.256	80.1	0.000	3	0	1.500	o	150
1.004	21.40	0.267	80.1	0.000	0	0	1.500	o	150
1.005	9.10	0.087	104.6	0.000	0	0	1.500	o	150
1.006	7.70	0.073	105.5	0.000	0	0	1.500	o	150

Network Results Table

PN	US/IL (m)	E.Area (ha)	E.DWF (l/s)	E.Hse	Infil. (l/s)	P.Dep (mm)	P.Vel (m/s)	Vel (m/s)	CAP (l/s)	Flow (l/s)
1.000	98.680	0.000	0	9	0	14	0.41	1.13	20	0
2.000	98.650	0.000	0	9	0	14	0.41	1.13	20	0
2.001	98.333	0.000	0	12	0	16	0.45	1.13	20	0
2.002	98.104	0.000	0	12	0	16	0.45	1.13	20	0
1.001	98.012	0.000	0	31	0	25	0.61	1.13	20	1
1.002	97.485	0.000	0	33	0	25	0.62	1.13	20	1
1.003	97.140	0.000	0	36	0	29	0.58	0.98	17	1
1.004	96.884	0.000	0	36	0	29	0.58	0.98	17	1
1.005	96.617	0.000	0	36	0	30	0.52	0.86	15	1
1.006	96.530	0.000	0	36	0	31	0.52	0.85	15	1

Killiskey
Ashford
Co. WicklowDate 01 January 2002 00:38
File Edmondstown.FWSDesigned By John Turner
Checked By
System1 W.9.5

Micro Drainage

PIPELINE SCHEDULESUpstream Manhole

PN	Hyd Sect	Diam (mm)	MH No.	C.Level (m)	I.Level (m)	Depth (m)	MH DIAM., L*W (mm)
1.000	o	150	1	99.900	98.680	1.070	1050
2.000	o	150	2	99.900	98.650	1.100	1050
2.001	o	150	3	99.900	98.333	1.417	1050
2.002	o	150	4	99.900	98.104	1.646	1200
1.001	o	150	5	99.000	98.012	0.838	1050
1.002	o	150	6	99.500	97.485	1.865	1200
1.003	o	150	7	98.000	97.140	0.710	1050
1.004	o	150	8	98.200	96.884	1.166	1050
1.005	o	150	9	98.450	96.617	1.683	1200
1.006	o	150	10	98.100	96.530	1.420	1050

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH No.	C.Level (m)	I.Level (m)	Depth (m)	MH DIAM., L*W (mm)
1.000	20.60	60.1	5	99.000	98.337	0.513	1050
2.000	19.00	59.9	3	99.900	98.333	1.417	1050
2.001	13.75	60.0	4	99.900	98.104	1.646	1200
2.002	5.50	59.8	5	99.000	98.012	0.838	1050
1.001	31.60	60.0	6	99.500	97.485	1.865	1200
1.002	20.70	60.0	7	98.000	97.140	0.710	1050
1.003	20.50	80.1	8	98.200	96.884	1.166	1050
1.004	21.40	80.1	9	98.450	96.617	1.683	1200
1.005	9.10	104.6	10	98.100	96.530	1.420	1050
1.006	7.70	105.5	EXFMH	98.000	96.457	1.393	0

Killiskey
Ashford
Co. WicklowDate 01 January 2002 00:38
File Edmondstown.FWSDesigned By John Turner
Checked By
System1 W.9.5

Micro Drainage

MANHOLE SCHEDULES

M/Hole Number	Cover Level (m)	M/Hole Depth (m)	M/Hole Diam., L*W (mm)	Pipes Out			Pipes In		
				PN	IL. (m)	D (mm)	PN	IL. (m)	D (mm)
1	99.900	1.220	1050	1.000	98.680	150			
2	99.900	1.250	1050	2.000	98.650	150			
3	99.900	1.567	1050	2.001	98.333	150	2.000	98.333	150
4	99.900	1.796	1200	2.002	98.104	150	2.001	98.104	150
5	99.000	0.988	1050	1.001	98.012	150	1.000 2.002	98.337 98.012	150 150
6	99.500	2.015	1200	1.002	97.485	150	1.001	97.485	150
7	98.000	0.860	1050	1.003	97.140	150	1.002	97.140	150
8	98.200	1.316	1050	1.004	96.884	150	1.003	96.884	150
9	98.450	1.833	1200	1.005	96.617	150	1.004	96.617	150
10	98.100	1.570	1050	1.006	96.530	150	1.005	96.530	150
ExFMH	98.000	1.543	0		OUTFALL		1.006	96.457	150