



The alternative drainage design software

http://www.mstdrain.co.uk. email: sales@mstdrain.co.uk

Seawinds, Carpenters Lane,
Brook, Newport,
Isle of Wight PO30 4EU
Tel: 01983 740064

Job No.			
Sheet no.	1		
Date	25/09/10		
By	IJ	Checked	Approved

MasterDrain
SW 8.00

Project **Gwynedd Property Developments**

Title **Foul drainage calculations for TREASEARTH_FOUL.FL**

Entry No.	Section No.	Length m	Fall mm	Grad 1 in	Diam mm	Flowrate l/s	Discharge units	App. flow	Depth of flow %	H.M.D.	Proport. area	Velocity m/s	Proport. vel. m/s	Time of flow s.	Pipe vol	System vol	
1	1.01	8.1	732	11	150	1.19	5.7	0.00	6.27	0.16	2.55	2.65	0.79	3.1	0.14	0.14	I
2	1.02	4.7	77	60	150	1.19	5.7	0.00	11.14	0.28	5.97	1.13	0.49	4.1	0.08	0.23	I
3	1.03	12.0	200	60	150	1.42	8.1	0.00	12.55	0.31	7.12	1.13	0.52	10.6	0.21	0.44	I
4	1.04	12.7	421	30	150	1.84	13.5	0.00	11.70	0.29	6.51	1.60	0.71	8.0	0.23	0.66	I
5	1.05	15.2	578	26	150	2.15	18.5	0.00	12.55	0.31	7.12	1.71	0.79	8.9	0.27	0.93	I
6	2.01	12.7	797	16	150	1.16	5.4	0.00	6.92	0.18	2.99	2.20	0.70	5.8	0.22	1.16	B
7	1.06	11.3	544	21	150	2.71	29.3	0.00	13.43	0.34	7.95	1.93	0.93	5.9	0.20	1.36	I
8	1.07	8.0	133	60	150	2.71	29.3	0.00	19.56	0.47	13.54	1.13	0.69	7.1	0.14	1.50	I
9	3.01	10.6	199	53	150	0.77	2.4	0.00	8.07	0.21	3.64	1.20	0.42	8.8	0.19	1.69	B
10	3.02	11.5	1333	9	150	1.36	7.4	0.00	6.27	0.16	2.58	2.99	0.89	3.9	0.20	1.89	B
11	1.08	8.0	433	18	150	3.13	39.1	0.00	14.34	0.36	8.65	2.05	1.03	3.9	0.14	2.03	I



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Data summary for printout

Design data

System volume (m ³)	= 2.03	Total flow rate (l/s)	= 3.13
Total fall of index run m	= 3.12	Total leng. of index run m	= 80.07
Total number of DU's	= 31.3	Outfall diameter (mm)	= 150
Minimum velocity (m/s)	= 0.85	Percentage gradient	= 60%
Pipe roughness factor (mm)	= 1.50	Maximum depth of flow	= 75%
Usage factor	= Intermittent - dwelling, offices		

Pipe sizes

The pipe definition file used for these calculations allows the following diameters:-

100	-----	375	allowed	600	allowed	900	allowed	1200	allowed	1800	allowed
150	allowed	400	allowed	700	allowed	1000	allowed	1350	allowed	1950	allowed
225	allowed	450	allowed	750	allowed	1050	allowed	1500	allowed	2100	allowed
300	allowed	500	allowed	800	allowed	1125	allowed	1650	allowed	2400	allowed