

36, Station Road, Hayling Island

Foul Drainage

Dwelling, guesthouse, office	Kdu
Hospital, school, restaurant, hotel	0.5
Toilets / shower open to public	0.7
Laboratory Buildings	1
	1.2

Kdu
Kdu

0.5
0.7

Appliance

1 Washbasin, shower	0.6
2 Urinal	0.8
3 Bath, kitchen sink	1.3
4 Dishwasher	0.8
5 Household washing machine	0.8
6 Commercial washing machine	1.5
7 WCs	2.5
8 Floor drains	2

Total Foul Draniage Discharges	
2nd floor	3.31 L/s
1st floor	3.57 L/s
Ground floor	2.70 L/s
Retail unit	1.85 L/s
	L/s
	L/s
Total	11.44 L/s

From Architects proposal drawing:

Unit 2nd floor

Appliance

DU	No. props	No. DU	Sum DU
1 Washbasin, shower	0.6	6	3.6
2 Urinal	0.8		0
3 Bath, kitchen sink	1.3	12	15.6
4 Dishwasher	0.8	6	4.8
5 Household washing machine	0.8	6	4.8
6 Commercial washing machine	1.5		0
7 WCs	2.5	6	15
8 Floor drains	2		0
Total		0	43.8
		0	3.309 L/s

Unit 1st floor

Appliance

DU	No. props	No. DU	Sum DU
1 Washbasin, shower	0.6	7	4.2
2 Urinal	0.8		0
3 Bath, kitchen sink	1.3	14	18.2
4 Dishwasher	0.8	7	5.6
5 Household washing machine	0.8	7	5.6
6 Commercial washing machine	1.5		0
7 WCs	2.5	7	17.5
8 Floor drains	2		0
Total		0	51.1
		0	3.574 L/s

Unit Ground floor

Appliance

DU	No. props	No. DU	Sum DU
1 Washbasin, shower	0.6	4	2.4
2 Urinal	0.8		0
3 Bath, kitchen sink	1.3	8	10.4
4 Dishwasher	0.8	4	3.2
5 Household washing machine	0.8	4	3.2
6 Commercial washing machine	1.5		0
7 WCs	2.5	4	10
8 Floor drains	2		0
Total		0	29.2
		0	2.702 L/s

Unit Retail unit

Appliance

DU	No. props	No. DU	Sum DU
1 Washbasin, shower	0.6		0
2 Urinal	0.8		0
3 Bath, kitchen sink	1.3		0
4 Dishwasher	0.8		0
5 Household washing machine	0.8		0
6 Commercial washing machine	1.5	2	0
7 WCs	2.5	1	5
8 Floor drains	2	2	2
Total		0	7
		0	1.852 L/s

Max discharge pipe capacity (pipes flowing full)		Max velocity		Reynolds	
Max velocity	Max flow	Max velocity	Max flow	Reynolds	Reynolds
10.0	10.0	10.0	10.0	10.0	10.0

Start	End	Foul (l/s)	Storm (l/s)	Total (l/s)	Size (D.i.)	Fail (from survey)	Ks (Comb)	Peak Flow (Q)	Pipe V (m/s)	exp. pipe (l/s)	Peak Flow (m/s)	1/3 Design flow (m/s)
Half		5.719	0.00	5.72	0.1	80	1.5	5.719	0.7433	5.838	0.728	0.75
All		11.437	0.00	11.44	0.15	80	0.6	11.437	1.1233	19.850	0.576	0.75

36. Station Road Foul Drainage (British water sizing guide)

Standard Residential			Flow rate			BOD Grams per day		NH3	
Flats/Units	Beds/Staff	No. person	Ltr/day	Total	Per Head	Total	Per Head	Total	
2nd floor	2	24	150	3600	60	1440	8	192	
1st floor	2	20	150	3000	60	1200	8	160	
1st floor	1	6	150	900	60	360	8	48	
Grd floor	2	14	150	2100	60	840	8	112	
Retail	3	9	90	810	38	342	5	45	
P	73	8.33 m3/day		8328		4182		557	NH3

Total=6xDWFF+10% 54964.8 Ltrs

Proposed foul Flow L/s

Station Road Foul Drainage (Sewers for Adoption)

No. units	21	4000	Ltrs/24 hours	84000	L/24hrs
				0.97	L/s