CORNWALL COUNCIL

GUIDANCE NOTE 3 – GUIDE TO EXPECTED FLOW RATES

Introduction

This guidance is for use by developers, applicants and members of the public, it is intended to support assessment of the practicality of providing foul water drainage and treatment from new development.

This advice should be read in conjunction with **DETR Circular 3/99 (WO Circular 10/99)** – Planning Requirements in Respect of the Use of Non-Mains Sewerage Incorporating Septic Tanks in New Development, and the revision of **Building Regulations 2002**. Local Planning Authorities are now encouraged by Government to adopt 'effective policies, practices and procedures to ensure the problems associated with non-mains sewerage are not perpetuated in any future developments producing Domestic Sewage, defined as the contents of lavatories, and water which has been used for washing or cooking'. The suitability of non-mains systems is likely to be a 'material condition' when dealing with planning applications. The inappropriate use of such systems may justify a refusal of planning permission.

Flow calculations

Critical to the impact of any system are the likely foul water flows to that system. The following table is a simple guide to different types of development and the expected peak flow conditions that could arise. Examples and information on more complex situations and extensions follows the table. These flow figures are based on Environment Agency advice.

Property	Volume per person (litres per day)	Property	Volume per person (litres per day)
Domestic*	180	Offices	55
Hotels, Guest Houses, B&B	200	Factories	65
Restaurants	25	Public Houses	15
Campsites	75	Caravans	120
Dayschool	50	Rest Homes	300
Boarding School	180	Hospitals	450

*Note additional flow requirements below

Domestic property:
1 person per bedroom + 0.5 person per household
e.g. 3 bedroom house = 3.5 x 180 = 630 litres per day.

Granny Annexes/Flats – can be attached or detached from the existing dwelling:
e.g. 1 bedroom Granny flat = 1 + 0.5 = 1.5 x 180 =270 litres per day
e.g. 2 bedroom Granny flat = 2 + 0.5 = 2.5 x 180 =450 litres per day
Static Caravans (Full time residential)
Assumed two bedrooms + 0.5 per household (as domestic).
e.g. 1 x 2.5 x 180 = 450 litres per day

Offices
e.g. 12 staff = 12 x 55 = 660 litres per day

Holiday Use
Estimated flows from holiday units assume that every bedroom will sleep two persons. A lower volume per person is used for self-catering accommodation.

Guest Houses, Hotels, B&Bs –
e.g. 2 bedrooms x 2 people x 200 = 800 litres per day.

Holiday Parks– Chalets/Units/Converted Barns for Holiday Use –
e.g. 3 bedroom unit = 6 + 0.5 per unit x 120 = 780 litres per day.

Campsites
Touring Caravans - assume sleep two persons
Tents - assume sleep two persons
e.g. 1 van x 2 persons x 75 = 150 litres per day
e.g. 5 pitches x two persons x 75 = 750 litres per day

Static Caravans for Holiday Use – assume 4 persons per van
1 van = 4 x 120 = 480 litres per day.

Residential Homes/Care Homes
Assumed that any bedrooms or extensions will be for single use.
e.g. 1 bedroom x 1 person x 300 = 300 litres per day
e.g. 2 bedrooms x 1 person x 300 = 600 litres per day

Boarding Schools - assume single bedrooms
e.g. 4 bedrooms x 180 = 740 litres per day

NOTES:

- All of the above are intended as guidelines only and are to be used in the absence of more detailed or accurate information which can be provided if suitable records are available.

- If you can reasonably demonstrate higher or lower flows by means of occupancy details this information should be used in preference to the defaults. Water bills are not helpful in establishing maximum daily use since they will only show a total use over a three-month period. This may appear to give a lower daily flow but will only be a mean and will not take into account peak daily flows.

Other Guidance Notes Availble:

Guidance Note 1 – Planning and Building Regulations for Non-Mains Foul Drainage
Guidance Note 2 – Guide to Percolation Test Requirements
Guidance Note 4 – Requirements of Full Assessment Under Circular 3/99

Useful Contacts

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