



Property Services

**Pantanas House
Pantanas
Treharris
South Wales
CF46 5BN**

Phone 07737 172483 – 01443 411942

Email: roger.francis3@btinternet.com

Wholesome Water Use Calculations

Property Details:

**Rear of 11-13 Gilfach Cynon
Twynrodyn
Merthyr Tydfil**

Client Details:

Mr M Collins

Wholesome Water Use Calculations

Scope of Instruction

GWP Property Services has been instructed by Mr Marc Collins to undertake wholesome water calculations for a new dwelling at:

Rear of 11-13 Gilfach Cynon, Twynrodyn. Merthyr Tydfil.

The calculations are required to prove that the dwelling meets the wholesome water use requirement as set out in current Building Regulations.

Building Regulations Requirements: Water Efficiency in New Dwellings

Building regulations requirements relating to Water Efficiency in New Dwellings are contained in Approved Document G, Building Regulations 2010 (Amended 2018)

Part G2 and Regulation 36(1) of Approved Document G deal with water efficiency where a dwelling is:

- (a) Erected
- (b) Created by a material change of use

The Requirements G2 and Regulation 36(1)

Water efficiency:

G2. Reasonable provision must be made by the installation of fittings and fixed appliances that use water efficiently for the prevention of undue consumption of water.

Water efficiency of new dwellings:

36 (1) The potential consumption of wholesome water by persons occupying a newly erected dwelling to which this regulation applies must not exceed 110 litres per person per day, calculated in accordance with the methodology set out in the document "The Water Efficiency Calculator for New Dwellings".

Specification of water use fittings to be installed at the dwelling

A specification for the Water use of the fixtures and fittings to be installed at the dwelling. has been produced (Table 1 Attached)

The installation of fittings in line with the figures contained in Table 1 will ensure Building Regulations Compliance

Wholesome Water Calculations.

Calculations have been undertaken in line with the methodology as set out in "The Water Calculators for New Dwellings" and having regard to the fixture and fittings specification. (Table 2 Attached)

Result Summery

Based on information supplied the dwelling as designed achieves a wholesome water use of 109.31 litres per person per day

Building Regulations Compliance

Compliance with Building Regulation 36(1) has been demonstrated in the case of this dwelling

Table 1: Specification of Water Use Calculations Design Inputs				
Fitting Type	Flow Rate-Ltr/Min	Capacity-Ltr	Volume-Ltr	Quantity
WC Single Flush	0			0
WC Dual Flush	4/2.6			3
Taps: Kitchen/Utility	6			2
Taps: Basin/Other	5			3
Bath		200		1
Shower	8			2
Washing Machine			8.17 per Kg load	1
Dishwasher			1.25 place setting	1
Waste Disposal	0	0	0	0
Water Softener	0	0	0	0
Rainwater contribution	0	0	0	0

Table 2: The Water use Calculator for New Dwellings

Installation Type	Unit of Measure	(1) Value	(2) Use Factor	(3) Fixed Use	(4) Litres/ Person /Day
WC Single Flush	Litres	0	4.42	0.00	0
WC Dual Flush	Full Flush Vol: Litres	4	1.46	0.00	5.84
	Part Flush Vol: Litres	2.6	2.96	0.00	7.69
WC Multiple Fittings	Average Effective Flush Vol: Litres	0	4.42	0.00	0
Taps Kitchen/Utility	Flow Rate: Litres Minute	6	0.44	10.36	13.00
Taps Basin/Other	Flow Rate: Litres Minute	5	1.58	1.58	9.48
Bath No Shower	Capacity to overflow: Litres	0	0.50	0.00	0
Bath Shower Present	Capacity to overflow: Litres	200	0.11	0.00	22.00
Shower No Bath	Flow Rate: Litres Minute	0	5.6	0.00	0
Shower Bath Present	Flow Rate: Litres Minute	8	4.37	0.00	34.96
Washing Machine	Litres kg Dry Load	8.17	2.1	0.00	17.16
Dishwasher	Litres Place Setting	1.25	3.6	0.00	4.50
Waste Disposal	Litres/Use	0	3.08	0.00	0
Water Softener	Litres Person per day	0	1.0	0.0	0
		(5)	Calculated Use = (Sum Column 4) Litre/Person/Day		114.63
		(6)	Contribution from Greywater Litre/Person/Day		0
		(7)	Contribution from Rainwater Litre/Person/Day		0
		(8)	Normalisation Factor -		0.91
		(9)	Total domestic use =(5)-(6)-(7)x(8)		104.31
		(10)	Plus External Water Use		5
		(11)	Total Water Consumption Building Regulations 17K Litres/Person/Day		109.31