Water Efficiency Calculations to Satisfy 17.K Compliance (Part G)

Property Address:
Plot 1, Meredith Farm, Llancloudy

Produced For:
Quattro Design Architects.

Assessor:
Angela Wood

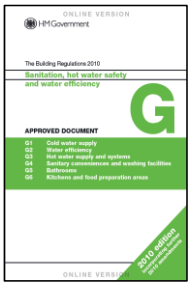
Date:
22/07/2021

1 Russell Mews
High Street
Chipping Sodbury
South Gloucestershire
BS37 6BJ
Tel: 0333 5777 577
Fax: 01454 528 416
enquiries@darren-evans.co.uk

www.darren-evans.co.uk

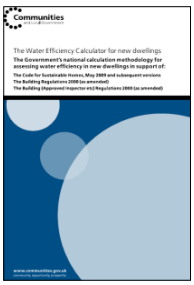
Approved Document G

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 in New Dwellings

17K.—(1) The potential consumption of wholesome water by persons occupying a dwelling to which this regulation applies must not exceed 125 litres per person per day, calculated in accordance with the methodology set out in the document "The Water Efficiency Calculator for New Dwellings".



Performance Targets

In the Secretary of State's view, Requirement G2 will be met for new dwellings if:
"the estimated consumption of wholesome water resulting from the design of cold and hot water systems (calculated in accordance with the guidance set out in the Approved Document Part G and taking into account the use of any alternative sources of water provided in accordance with G1(2)) is not greater than the standard set by the Secretary of State of 125 litres/head/day of wholesome water"

Regulation	Water consumption (litres/person/day)	Requirement
CSH Water 1	120	-
Part G; 17K	125	All New Dwellings
Part G; 17K	125	Change of use to dwellings
-	No Limit	Existing dwellings

Code For Sustainable Homes

Under the Code for Sustainable Homes 'Wat1' a water calculation is mandatory.
"Credits are awarded based on the predicted average household water consumption for the Dwelling type. The mandatory minimum standards and Corresponding predicted average household water consumption are show in the table below:"

Water consumption (litres/person/day)	Available Credits	Code For Sustainable Homes Levels
120	1	CSH Level 1 & 2
110	2	-
105	3	CSH Level 3 & 4
90	4	
80	5	CSH Level 5 & 6

Please Note: This Report is not a design tool for water supply and drainage systems. It is also not capable of calculating the actual potable water consumption of a new dwelling. Behaviour and changing behaviour can also have an effect on the amount of potable water used throughout a home.

Results Summary

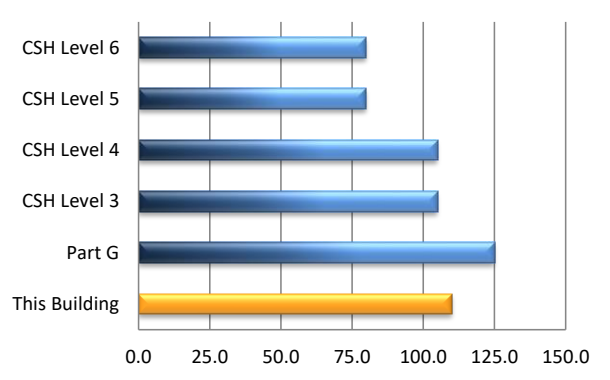
Total Water Use:	110.0	litres per person per day

Dwelling is Compliant ✓

Water Used:	109.99	Building Requirement:	Part G
Water Harvested:	0.00	Maximum water use for regulation:	125

The predicted water consumption of the dwelling is lower than building regulations.

Total Water Consumption (ltr/p/d)



Water Usage Breakdown

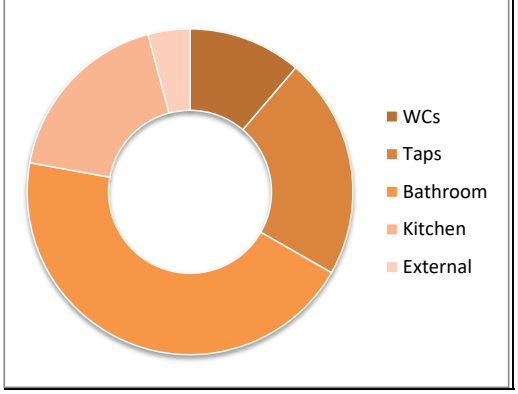


Table 1: The water calculator for new dwellings

Installation type		Flow rate or Capacity * (see Table 2)		Use factor (from CLG)		Fixed Use ltr/p/d		Totals ltr/p/d
Toilets:								
WC (dual flush) - Full flush		4.00	x	1.46			=	5.84
WC (dual flush) - Part flush		2.60	x	2.96			=	7.70
Taps:								
Taps (exc kitchen/utility)		7.00	x	1.58		1.58	=	12.64
Taps (kitchen/utility)		8.00	x	0.44		10.36	=	13.88
Bathroom:								
Bath		170.00	x	0.11			=	18.70
Shower		8.00	x	4.37			=	34.96
Kitchen and utility:								
Washing machine	Not Defined*	8.17	x	2.10			=	17.16
Dishwasher	Not Defined*	1.25	x	3.60			=	4.50
Water softener	Not Defined*							
Waste disposal	Not Defined*							
Total calculated use								**115.37**
Contribution from Rain/Greywater:		No system installed						0.00
Total internal water consumption		(with utilisation factor of 91%)			=	**104.99**		
External water use:				(Part G assumption)	=	5		
Total water consumption				(Combined total)		**109.99**		

Calculations completed by:

NOTE:
*Not specified so default values used
Tap and shower flow rates will be achieved by fitting flow restrictors in the pipework

Angela Wood

Sustainability Consultant