

Part G Calculation

(Flat-type 2) 3 Clifton Crescent, Folkstene, Kent, CT20 2EL



Ref: PHD.CC.CT20

Water efficiency calculation - Summary

Table A1: The water efficiency calculator

Installation type	Unit of measure	Capacity / Flow rate	Use factor	Fixed use (l/p/d)	Litres per person per day
WC (Dual flush) - Full flush	Flush volume (litres)	4.00	1.46	0	5.84
WC (Dual flush) - Part flush	Flush volume (litres)	3.00	2.96	0	8.88
Taps (Wet room basins)	Flow rate (litres / minute)	4.00	1.58	1.58	7.90
Baths	Capacity to overflow (litres)	170.0	0.11	0	18.70
Showers	Flow rate (litres / minute)	9.00	4.37	0	39.33
Taps (Kitchen and utility)	Flow rate (litres / minute)	6.00	0.44	10.36	13.00
Washing Machine	Litres / kilograms of dry load	8.17	2.10	0	17.16
Dishwashers	Litres / place setting	1.25	3.60	0	4.50
Waste Disposal	Litres per use	0	3.08	0	0.00
Water Softener	Litres / person / day	0.00	1.00	0	0.00
Total calculated use					115.3
Contribution from greywater					0.00
Contribution from rainwater					0.00
Normalisation factor					0.91
External water use					5.00
Total water consumption					109.9

Assessed by: Pete Wilcock in the Energist Technical Team on 8 Feb 2019.

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Water efficiency calculation - Methodology compliance for Approved Document Part G

Assessment Criteria

Target methodology:	Part G 2015 (Enhanced)	110.0 litres/person/day
Calculated:		109.9 litres/person/day
Compliance:		Yes

Fittings approach

As an alternative approach to calculating the water consumption, a fittings approach that is based on the water efficiency calculator methodology may be used.

Where the fittings approach is used, the water consumption of the fittings provided must not exceed the values in the following Table. If any value is exceeded, the water efficiency calculator must be completed to demonstrate compliance.

Similarly, where a shower is not to be provided, or where a waste disposal unit, a water softener or water re-use system is specified, the water efficiency calculator must be completed.

Part G (2015)* Table 2.2:

Maximum fittings consumption (optional requirement level)

Water fitting	Maximum consumption	Proposed	Notes
WC (Dual flush)	4 / 2.6 litres per flush	4 / 3	* Outside the requirement
WC (Single flush)	N/A		
Shower	8 litres per minute	9.0	* Outside the requirement
Bath	170 litres to overflow	170	Within the requirement
Basin taps	5 litres per minute	4.0	Within the requirement
Sink taps	6 litres per minute	6.0	Within the requirement
Dishwasher	1.25 litres per place setting	1.25	Within the requirement
Washing machine	8.17 litres per kilogram	8.17	Within the requirement

Summary

A water efficiency calculation is required for this dwelling: The WC flush volume is too high to use the fittings approach. The volume of the bath tubs is too high to use the fittings approach.

* Includes 2016 amendments.

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Water efficiency calculation - Tables

Table A2: Consumption calculator

Table A2.1: Taps (excluding kitchen and utility)

Tap fitting name	Flow rate litres / minute	Quantity	Total litres / minute
Basin Taps	4.0	1	4.0
Totals		1	4.0
Average flow rate			4.0
Maximum flow rate			4.0
Proportionate flow rate			2.8

Table A2.2: Baths

Bath fitting type	Capacity litres	Quantity	Total litres
Bath	170.0	1	170.0
Totals		1	170.0
Average capacity			170.0
Maximum capacity			170.0
Proportionate capacity			119.0

Table A2.3: Taps (kitchen and utility)

Tap fitting name	Flow rate litres / minute	Quantity	Total litres / minute
Kitchen Taps	6.0	1	6.0
Totals		1	6.0
Average flow rate			6.0
Maximum flow rate			6.0
Proportionate flow rate			4.2

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Water efficiency calculation - Tables

Table A2: Consumption calculator

Table A2.4: Dishwashers

Dishwasher type	Capacity litres / place setting	Quantity	Total litres / place setting
	1.25	1	1.25
Totals		1	1.25
Average litres per place setting			1.25
Highest litres per place setting			1.25
Proportionate litres per place setting			0.88

Table A2.5: Washing machines

Washing machine type	Capacity litres / kg	Quantity	Total litres / kg
None - Default assumed	8.17	1	8.17
Totals		1	8.17
Average litres per kg of dry load			8.17
Highest litres per kg of dry load			8.17
Proportionate litres per kg of dry load			5.72

Table A2.6: Showers

Shower fitting type	Flow rate litres / minute	Quantity	Total litres / minute
Abv Bath	9.0	1	9.0
Totals		1	9.00
Average flow rate			9.00
Maximum flow rate			9.00
Proportionate flow rate			6.30

Table A2.7: WCs

WC type	Effective flush litres	Quantity	Total litres
Toilets	3.3	1	3.3
Totals		1	3.33
Average flow rate			3.33

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Water efficiency calculation - Tables

Table A3: Water softener consumption calculation

Total capacity used by regeneration	0.0	%
Water consumed per regeneration	0.00	litres
Average number of regeneration cycles	0.00	per day
Number of occupants served by system	3	
Water consumed beyond 4%	0.00	litres/day
	0.00	l/p/d

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