# Part G Calculation

(Flat-type 1) 3 Clifton Cresent, 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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# Part G Calculation

**(Flat-type 1) 3 Clifton Cresent, Folkstene, Kent, CT20 2EL**

Ref: PHD.CC.CT20

**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.

## 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** | **2** | **8.0** |
| | Totals | **2** | **8.0** |
| | 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 |
|---|---|---|---|
| Showers | 9.0 | 1 | 9.0 |
| Abv Bath | 9.0 | 1 | 9.0 |
| | Totals | 2 | 18.00 |
| | 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 | 2 | 6.7 |
| | Totals | 2 | 6.66 |
| | Average flow rate | | 3.33 |

## 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 |