

## Water Use Calculation – 3 Bedroom House

*Prepared in spreadsheet form for planning application / Part G water efficiency review*

| Project Details                                             |                                     |     | Key Result                             |       |
|-------------------------------------------------------------|-------------------------------------|-----|----------------------------------------|-------|
| Site: Plot 1 Adj to Lyne House, Links Road, Worthing        |                                     |     |                                        |       |
| Bedrooms                                                    |                                     | 3   | Total water consumption (l/person/day) | 106.3 |
| Dwelling type                                               | House – all bedrooms double         |     | Planning target (l/person/day)         | 110.0 |
| Planning / optional target (l/person/day)                   |                                     | 110 | Status                                 | PASS  |
| Regulatory basis                                            | England Part G optional requirement |     |                                        |       |
| Part G water softener occupancy assumption (if added later) |                                     | 4   |                                        |       |

### Assumptions used in this draft calculation

- This workbook uses the Part G water efficiency calculator structure and the 110 l/person/day optional requirement commonly secured by planning condition in Adur & Worthing.
- Fitting schedule updated to suit the submitted description: 3 double bedrooms, 2 bathrooms with showers, 2 additional shower rooms, 5 WCs in total, utility sink/tap and washing machine, kitchen sink/tap and dishwasher.
- Rainwater harvesting is noted for external use only. No internal rainwater credit is claimed in the Part G calculation unless the design is revised to supply WCs and/or the washing machine.
- The local planning occupancy benchmark for a 3-bedroom house is 2.2 persons/dwelling, but the Part G calculator's bedroom-based occupancy assumption for water softener inputs remains 4 occupants.

## Detailed Water Efficiency Calculation

Blue cells are editable inputs. Formula structure follows Approved Document G Appendix A / Table A1.

### Property

3 bedroom house – all bedrooms double Target

110 l/person/day

| Installation type                | Unit of measure                        | Proposed value | Spec / note                                    | Use factor | Fixed use | Calculated l/person/day | Reference            |
|----------------------------------|----------------------------------------|----------------|------------------------------------------------|------------|-----------|-------------------------|----------------------|
| WC (dual flush) – full flush     | Flush volume (litres)                  | 4              | Assumed compliant dual flush WC                | 1.46       | 0         | 5.84                    | Table 2.2 max        |
| WC (dual flush) – part flush     | Flush volume (litres)                  | 2.6            | Assumed compliant dual flush WC                | 2.96       | 0         | 7.7                     | Table 2.2 max        |
| Taps (excluding kitchen/utility) | Flow rate (litres/min)                 | 5              | Assume 5 low-flow basin taps to sanitary rooms | 1.58       | 1.58      | 9.48                    | Table 2.2 max        |
| Bath (where shower also present) | Capacity to overflow (litres)          | 170            | 2 bathrooms assumed to include baths           | 0.11       | 0         | 18.7                    | Table 2.2 max        |
| Shower (where bath also present) | Flow rate (litres/min)                 | 8              | 4 showers total (2 bathrooms + 2 shower rooms) | 4.37       | 0         | 34.96                   | Table 2.2 max        |
| Kitchen/utility room sink taps   | Flow rate (litres/min)                 | 6              | 1 kitchen tap + 1 utility tap                  | 0.44       | 10.36     | 13                      | Table 2.2 max        |
| Washing machine                  | Litres/kg dry load                     | 8.17           | Default / compliant assumption                 | 2.1        | 0         | 17.16                   | Table 2.2 max        |
| Dishwasher                       | Litres/place setting                   | 1.25           | Default / compliant assumption                 | 3.6        | 0         | 4.5                     | Table 2.2 max        |
| Waste disposal unit              | Litres/use (1 if present, 0 if absent) | 0              | Assumed absent                                 | 3.08       | 0         | 0                       | If present calculate |
| Water softener                   | Litres/person/day beyond 4% threshold  | 0              | Assumed absent                                 | 1          | 0         | 0                       | If present calculate |

| Summary                          |  |        |              |
|----------------------------------|--|--------|--------------|
| Total calculated use             |  | 111.34 | l/person/day |
| Contribution from greywater      |  | 0.00   | l/person/day |
| Contribution from rainwater      |  | 0.00   | l/person/day |
| Normalisation factor             |  | 0.91   |              |
| Total internal water consumption |  | 101.30 | l/person/day |
| External water use               |  | 5.0    | l/person/day |
| Total water consumption          |  | 106.3  | l/person/day |
| Planning target                  |  | 110.0  | l/person/day |
| Status                           |  | PASS   |              |

## Fixture Schedule for Planning Water Use Statement

| Item                  | qyt | Assumed performance    | Manufacturer / model | Linked calc row                  | Notes                                       |
|-----------------------|-----|------------------------|----------------------|----------------------------------|---------------------------------------------|
| Dual flush WC         | 5   | 4 / 2.6 litres         | generic              | WC dual flush rows               | 5 WCs total                                 |
| Wash hand basin tap   | 5   | 5 l/min                | generic              | Taps (excluding kitchen/utility) | Assumed one per bathroom / shower room / WC |
| Bath                  | 2   | 170 litres to overflow | generic              | Bath (where shower also present) | Assumed in 2 bathrooms                      |
| Shower                | 4   | 8 l/min                | generic              | Shower (where bath also present) | 2 in bathrooms + 2 in shower rooms          |
| Kitchen sink tap      | 1   | 6 l/min                | generic              | Kitchen/utility room sink taps   | Combined in calc with utility tap           |
| Utility room sink tap | 1   | 6 l/min                | generic              | Kitchen/utility room sink taps   | Combined in calc with kitchen tap           |
| Washing machine       | 1   | 8.17 l/kg dry load     | generic              | Washing machine                  | Default / compliant assumption              |
| Dishwasher            | 1   | 1.25 l/place setting   | generic              | Dishwasher                       | Default / compliant assumption              |
| Waste disposal unit   | 0   | Absent                 | generic              | Waste disposal unit              | Assumed absent                              |
| Water softener        | 0   | Absent                 | generic              | Water softener                   | Assumed absent                              |
| Rainwater harvesting  | 1   | External use only      | generic              | No Part G internal credit        | Not claimed against internal potable demand |

## Sources and compliance notes

| Source                     | URL / note                                                                                                                                                                                                                                    |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Approved Document G</b> | <a href="https://www.gov.uk/government/publications/sanitation-hot-water-safety-and-water-efficiency-approved-document-g">https://www.gov.uk/government/publications/sanitation-hot-water-safety-and-water-efficiency-approved-document-g</a> |
| <b>WRc calculator</b>      | <a href="https://wrcpartgcalculator.co.uk/">https://wrcpartgcalculator.co.uk/</a>                                                                                                                                                             |
| <b>LABC guidance note</b>  | <a href="https://www.labc.co.uk/news/how-get-it-right-domestic-water-usage-new-dwellings">https://www.labc.co.uk/news/how-get-it-right-domestic-water-usage-new-dwellings</a>                                                                 |
| <b>Compliance note</b>     | In England, the normal regulatory limit is 125 l/person/day, but where planning permission imposes the optional requirement, the calculated consumption should not exceed 110 l/person/day.                                                   |
| <b>Occupancy note</b>      | If a water softener is later specified, the guidance assumes two occupants in the master / first bedroom and one occupant in each additional bedroom, i.e. 4 occupants for a 3-bedroom house.                                                 |