

Water Neutrality Baseline – Horsham (Part G calculator)

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This report sets out the baseline potable water consumption for a proposed residential development in Horsham District (Sussex North Water Resource Zone), using the Government's Water Efficiency Calculator for New Dwellings (Part G).

Project summary

Proposed development:

4-bed (5 persons)

Method and regulatory context

We follow the Building Regulations Part G methodology: calculate the per-person daily use from sanitary fittings and white goods using declared flow/volume plus fixed uses and usage factors; apply the normalisation factor; then add the 5 L/person/day external allowance. The calculated result is expressed in litres/person/day (l/p/d).

Regulatory thresholds: Part G requires ≤ 125 l/p/d, with an optional tighter standard of ≤ 110 l/p/d where required by planning conditions or local policy. Horsham's water-neutrality process expects applicants to evidence water use with the Part G calculator and to present figures in l/p/d.

Assumed fittings/appliance performance (Part G calculator inputs)

Fixture / Appliance	Assumed spec	Part G usage formula	L/p/d (exact)	L/p/d (rounded)
WC (full flush)	4 L per flush	4×1.46	5.840	5.84
WC (part flush)	2 L per flush	2×2.96	5.920	5.92
Basin taps (excl. kitchen/utility)	2.7 L/min	$2.7 \times 1.58 + 1.58$	5.846	5.85
Bath (with shower present)	143 L capacity to overflow	143×0.10	14.300	14.30

Shower (with bath present)	5 L/min	5×4.37	21.850	21.85
Kitchen/utility tap	4 L/min	$4 \times 0.44 + 10.36$	12.120	12.12
Washing machine	8.17 L/kg	8.17×2.10	17.157	17.16
Dishwasher	1.25 L/place setting	1.25×3.60	4.500	4.50

Calculator steps and results

Sum of internal uses before normalisation: 87.533 l/p/d.

Apply normalisation factor 0.91: $87.533 \times 0.91 = 79.655$ l/p/d.

Add external allowance: $79.655 + 5.00 = 84.655$ l/p/d.

Per-person total used for baseline: 84.655 l/p/d (≈ 84.66 l/p/d).

Per-dwelling baseline (daily)

Dwelling	Persons	L/p/d	Total L/d (exact)
House 4 -bed (5 persons)	5	84.655	423.275

Scheme total (daily): 423.275/day (≈ 1.185 m³/day).

Scheme total (annual): 154,495 L/year ($\approx 154.49^3$ /year).

Notes

- Part G outputs are in litres/person/day and are independent of the absolute number of occupants; occupancy is only used to scale the per-person value to a site-wide total for water-neutrality baselining.
- The assumed specifications above are consistent with achieving ≤ 110 l/p/d where appropriate. If the final product schedule departs from these assumptions, the calculator should be rerun.

References

- Approved Document G (G2 Water efficiency) – requirement ≤ 125 l/p/d, optional ≤ 110 l/p/d; and instruction to use the Water Efficiency Calculator for New Dwellings (DCLG, 2009/2014 updates).
- WRc ‘Water Efficiency Calculator for New Dwellings’ – online calculator showing usage factors and fixed uses for WCs, taps, showers, bath, washing machine and dishwasher.

- Horsham District Council – Water neutrality and planning applications: requires water-neutrality statements and expects Part G calculator outputs in l/p/d; notes 110 l/p/d as current plan maximum for development-plan purposes.
- Example Part G calculation table (independent technical note) showing similar flows/uses yielding ≈ 84.66 l/p/d total with normalisation and external allowance.