

Building regulations part G

Water UK consultation response

Summary

This is Water UK's response on behalf of the water industry in England to the UK government's consultation on a review of water efficiency standards in building regulations 2010.¹

Building regulations in the nations other than England are devolved to the Scottish and Welsh parliaments and the Northern Ireland Assembly. Water UK is not answering every question in the consultation, but instead has limited itself to those it regards as most significant. For ease of reference, the response sets out in brackets which of the consultation questions are being addressed.

The industry believes the proposals in the consultation do not go far enough because the volume of water assumed to be saved through *government* interventions by 2030 is substantial – 120 million litres per day ([section 2](#)). However this saving is very unlikely to be realised because:

1. The consultation proposes a continuation of the water calculator approach, which will not deliver any water savings (a point Water UK has been making since 2019) ([section 3](#));
2. The timeline set out in the consultation for integrating the new mandatory water efficiency label with a further revision to building regulations is too slow ([section 4](#));
3. The consultation does not set out a clear timeline for action to enable rainwater harvesting and greywater reuse, both of which could lead to substantial savings ([section 5](#)).

If water demand savings are not realised this could lead to a gap between supply and demand of water which will:

- Result in higher levels of environmental damage in the event of a drought.
- Lead to more housing developments being delayed or postponed due to concerns about water availability
- Lead more water companies to be forced to deny requests for connections to new businesses to safeguard supplies for existing domestic customers – as is already happening in parts of the south and east of England – hampering economic growth.

1. Background – proposals under consultation

The government's current consultation makes the following proposals:

- Reducing the mandatory water efficiency standard for new dwellings from 125 litres per person per day (l/p/d) to 105 litres per person per day, and the optional standard, in areas of water stress from 110 l/p/d to 100 l/p/d, and making amendments to the water calculator used to estimate the standard (questions 10-12).

¹ Defra (2025), Review of Water Efficiency Standards in Building Regulations 2010

- Updating some elements of the fittings based approach – currently an optional alternative to the ‘water calculator’ based standard set out above (question 13).
- Adopting a three-stage approach to changing building regulations:
 - » **Phase 1:** The proposals outlined above
 - » **Phase 2:** Reviewing these proposals after the mandatory water efficiency label for products is introduced in 2026 (question 20).
 - » **Phase 3:** considering greywater reuse and rainwater harvesting capability by reviewing greywater treatment systems and rainwater drainage systems at property scale and ascertaining economic and environmental advantages and disadvantages.

2. The need for demand savings

In England there is a projected gap between supply and demand of water of over 5 billion litres per day by 2055.² Water companies have planned to fill this deficit through 25 year Water Resources Management Plans which set out a combination of new supply and demand reduction options to close the gap. The current round of Water Resources Management Plans assume that government policy interventions will save 1 billion litres of water by 2050 – through mandatory water efficiency labels for products and through tightening water efficiency regulations for new buildings.³ Even by 2030, water company plans estimate that 120 million litres of water a day will be saved by government led policy interventions. This is equivalent to the water used by almost 375,000 homes.⁴ This saving is dependent on a combination of the delivery of the government’s delayed water efficiency label for water using products, and on revisions to water efficiency standards in building regulations. Given this, it is essential that government takes swifter and more effective action to deliver water demand savings – more than it is currently proposing to do in this consultation.

Even if government does take more decisive action, it is likely to leave water resource plans with unrealistically ambitious assumptions about future reduction in water demand. These assumptions should be made more accurate, shifting away from targets towards genuine trend-based forecasts. It is otherwise the public and the environment that between them hold the risk of underachievement.

3. Reducing the mandatory and optional water efficiency standard for new dwellings

The building standards consultation asks whether the mandatory and optional water efficiency standard for new buildings should be reduced to 105 and 100 l/p/d, from 125 and 110 l/p/d respectively (questions 10 and 11). It also asks whether adjustments should be made to improve the calculator (question 12).

The water industry does not believe any of these changes should be made because empirical evidence suggests **the calculator is fundamentally flawed and does not appear to deliver any demand savings.**

² Environment Agency (2025), [National Framework for Water Resources 2025](#)

³ Environment Agency (2024), [A summary of England’s revised draft regional and water resources management plans](#)

⁴ Based on a per capita consumption of 136 litres per person per day in 2024-25 and an Office for National Statistics average household occupancy of 2.36 people per dwelling.

Government should focus its efforts on different policies which are more likely to deliver water demand savings.

Evidence that the water calculator approach and building standards for water efficiency, introduced in 2010, have not delivered any savings include:

- A pre-occupancy study of 80 properties built to water efficient building standards in 2024 which found almost no impact from those standards. Average per capita consumption among the 80 properties was 135 litres per person per day.⁵ This is almost identical to the national average per capita consumption of 136 litres per person per day, despite 92% of the country's housing stock not being built to water efficient standards.
- Real-time smart meter data collected by Thames water from around 26,000 properties in its area which found that properties built to the optional 110 litres per person per day standard nevertheless used the same amount of water as houses built before water efficiency standards were introduced in 2010.
- And at a macro level, in 2010-11 the average person used 147 litres per person per day. In 2024-25 that figure, adjusted for a dry year annual average, was 140 litres per person per day.⁶ That is an almost 5% decrease in demand. That slight reduction in demand is more than explained by the increase in metering from 30% to almost 60% of properties over the same period.⁷ On average, a metered property uses around 40% less water than an unmetered property.⁸ On its own, this change should have reduced overall demand by 12%.⁹ This suggests that the 8% of new homes added to housing stock since 2010, built to new building standards, has had *no impact* on overall per capita demand.¹⁰

This evidence has three possible explanations, all of which suggest the calculator based approach should be abandoned:

1. **The calculator's assumptions are flawed:** If this is the case, the 'on paper' savings suggested by the calculator to not translate into real world water savings.
2. **Regulations are difficult to enforce:** The calculator would work if it was used correctly, but the regulations are not enforced by enforcement teams within local planning authorities – this could be because the complex calculator approach is harder to enforce than a fittings based approach which would merely involve checking that the appropriate fittings had been used.

⁵ Waterwise and Welsh Water (2024), [Building Regulations Water Efficiency Review](#), p.7

⁶ Environment Agency (2025), [Water Resources Management Plan Annual Review Data](#), with per capita consumption established as a weighted average based on each water company's population served.

⁷ [Water: Meters, question for the Department for Environment, Food and Rural Affairs](#) (2024), and Environment Agency (2009), [Impact of Household Metering in South East England](#)

⁸ 122 litres per person per day for metered properties against 171 for unmetered in 2023-24 – see <https://www.discoverwater.co.uk/amount-we-use>.

⁹ If 30% of users reduced their demand by 40%, they would use the same amount of water as 18% of households. Adding on the remaining 70% of households (who either remain unmetered, or were already metered by 2010), suggests demand ought to be 12% lower in total.

¹⁰ 2.1 million against a total housing stock in England of 25.4 million.

3. All owners of new homes are replacing water efficient fittings with less efficient products: It is possible that *some* demand savings are not achieved because some home owners are replacing water efficient products with less efficient products. *However*, for no demand savings to have been delivered across the country, this would need to be the case for *all* new households. Given the sunk cost of investing in a new build property with relatively modern fixtures and fittings, it is unlikely that householder renovation is an explanatory factor for the majority of new homes' failure to achieve demand savings. Even so, this replacement would also be less likely under a fixtures and fittings-based approach to regulation where at least some of the required water efficient fittings are likely to be baked into the property's design and therefore harder to retrofit.

For the above reasons, the industry believe government should abandon the ineffective calculator based approach, and instead focus its efforts on a fittings based approach, supported by the mandatory water efficiency label it has promised to introduce in 2026.

4. Changes to fittings regulations and alignment with the Mandatory Water Efficiency Label

The consultation proposes amending the fittings based approach but only by reducing the optional water efficiency standard for showers from eight litres per minute to six litres per minute, with no adjustments for other appliances. The water industry does not support the proposed updates to the fittings base approach because:

1. Given the demand savings the industry is required to make in Water Resources Management Plans the proposed changes – reducing the optional water efficiency standard for *one appliance* – do not go far enough.
2. The regulations retain the fittings-based approach as a *voluntary alternative* to the water calculator approach. Given the water calculator approach is flawed, the fittings-based approach should be *mandatory* rather than being optional.

The consultation suggests that *in future* government will investigate aligning building regulations with a mandatory water efficiency label, due to be introduced in 2026. The water industry remain of the view, first expressed in research for Water UK in 2019, that “the single most cost-effective intervention to save water is a mandatory government-led scheme to label water using products, linked to tightening Building Regulations and water supply fittings regulations” (question 20).¹¹ However, the pace outlined by the consultation – suggesting alignment between the label and building regulations could be introduced in 2027-2030 - is insufficient.¹² This timeline does not reflect the urgency of government led demand savings in filling the forecast gap between supply and demand. 2024 Water Resources Management Plans assume that 120 million litres of water a day will be saved by 2030 by *government* policy interventions alone.¹³ Given that the building standards using the calculator approach have not driven any detectable savings,

¹¹ Artesia (2019), [Water UK: Pathways to long-term PCC reduction](#), p.4

¹² Department for Environment Food and Rural Affairs (2025), [Reviewing the Water Efficiency Standard in the Building Regulations 2010](#), p.23

¹³ Environment Agency (2024), [A summary of England's revised draft regional and water resources management plans](#)

and the water efficiency label, first promised in 2021, will not now be delivered until next year, the industry believes this pace is not sufficient.¹⁴ Waiting until the end of the decade to align the water efficiency label and building regulations will further push back potential demand savings.

5. Requiring greywater reuse and rainwater harvesting

Alongside the above interventions, significant savings could be delivered through rainwater harvesting or greywater reuse. Research for Water UK found that community level wastewater recycling and rainwater harvesting could be between 23 and 32 litres per person per day.¹⁵ Indeed, Defra ministers in the current government have admitted that “it is completely bonkers that in this country we use drinking water to flush our toilets. That does not happen elsewhere”.¹⁶ Despite this, phase three of the consultation:

- Only proposes to ‘consider’ greywater reuse and rainwater harvesting capability, ‘review’ greywater treatment and rainwater drainage systems at property level and to ‘explore’ dual pipe water supply; and
- Does not suggest a timeline for these actions.

Given the criticality of delivering water savings through government policy interventions the industry strongly recommend that government commit to a firm timescale for mandating these technologies, which are widely used internationally, at least for new build properties, and the actions required to meet this deadline. Government should also set out how a programme of retrofitting could be delivered given that new housing, even over the three decade water resources planning horizon, will only make up a small proportion of total properties.

International examples suggest that substantial reductions in water demand are possible, but that they must be supported by effective public policy interventions such as those outlined above. For example, the Flanders region average demand is 80 litres per person per day, only around 60% of the average for England.¹⁷ One key reason for Flanders achieving this level of demand reduction is stringent requirements, first introduced in 2004 and tightened in 2013 and 2023, requiring properties to collect rainwater for non-potable purposes such as toilet flushing.¹⁸ Without these interventions, it is unclear how significant demand reductions, on which current Water Resources Management Plans depend, will be delivered.

¹⁴ George Eustice (2021), [Written Ministerial Statement: Reducing Demand for Water](#)

¹⁵ Artesia (2019), [Water UK: Pathways to long-term PCC reduction](#), pp.30-31, with numbers adjusted to per person by dividing by 2.36 (average number of people per household).

¹⁶ [Hansard: Water \(Special Measures\) Bill \[HL\]](#), UK Parliament, October 2024.

¹⁷ Belga news agency (16 October 2024), [Drinking Water Consumption in Flanders Reaches 20-year Low](#)

¹⁸ <https://antonissen.com/en/news/what-are-the-new-rainwater-regulations>