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Submitted to Review of Water Efficiency Standards in the Building Regulations 2010
Submitted on 2025-12-16 13:38:12

Reviewing the Water Efficiency Standard in the Building Regulations 2010

Section 1: Introduction

1 What is your name?

Full name:
Julie Godefroy

2 What is your email address?

Email:
jgodefroy@cibse.org

3 Would you like your response to be confidential?

No

4 Are you responding as or on behalf of:

Organisation:
CIBSE (Chartered Institution of Building Services Engineers) (including SOPHE, Society of Public Health Engineering)

Q4:
Professional body or institution

5 If you are responding as a member of the public or a building professional, what region are you responding from?

Q5:

6 If you are responding as a member of the public, are you a:

Q6:
None of the above

7 If you are responding on behalf of a business or organisation, what is the name of your business or organisation?

Business name:
CIBSE

8 If you are responding on behalf of a business or organisation, where is your business or organisation based or registered?

Q8:
Greater London

9 When you respond it would be useful if you can confirm whether you are replying as an individual or submitting an official response on behalf of an organisation and include:• your position (if applicable),• the name of organisation (if applicable)

Official response on behalf of an organisation

Q9. your position and the name of the organisation:
Head of Net Zero, CIBSE (including SOPHE, Society of Public Health Engineering)

Section 2: Background

Section 3: Plan to strengthen Water Efficiency in the Building Regulations 2010 and approved documents

Section 4: Summary of proposed options for change

Section 4.1: Water Efficiency Standard 105l/p/d and Optional Technical Standard 100l/p/d

10 Do you agree that the ‘mandatory water efficiency standard’, should be amended from 125 l/p/d to 105 l/p/d?

Yes

If you answered no to the previous question, please provide additional information to explain your answer.:

CIBSE support reducing the mandatory water efficiency standard to 105 l/p/d, subject to essential technical safeguards and the following caveats:
- changes to the water calculator, as detailed in Q12.
- the need to learn from previous iterations of the standard.
The consultation identifies persistent discrepancies between design assumptions and actual usage. Much of the supporting information is based on theoretical (calculated) water consumption, not metered. To ensure that policy ambitions translate into real outcomes, CIBSE recommends:
- Establishing minimum performance thresholds for fittings
- Mandatory commissioning and verification of flow and flush performance,
- Consideration of how lower flows affect drainage system performance.
- Clearer guidance for Building Control.
- Water consumption data on new build and existing homes to be gathered and used to inform policy and regulatory development.

11 Do you agree that the 'optional technical water efficiency standard', should be amended from 110 l/p/d, where there is a clear local need such as in areas of serious water stress, to 100 l/p/d?

Yes

If you answered no to the previous question, please provide additional information to explain your answer. :

100 l/p/d is technically achievable through efficient fittings. CIBSE support this proposal, with caveats on safeguards, effectiveness of implementation, and the need to monitor outcomes: to ensure reliable performance, we recommend strengthened commissioning requirements, minimum performance thresholds and improved oversight of actual installed fittings. We also support clearer guidance to assist local authorities in applying the optional standard consistently in areas where evidence demonstrates higher water stress.
In addition: we note that the consultation states this standard would be in place for areas in "serious water stress". However, the FHH recommendations are for it to be in place "in areas of water stress", with a more stringent standard (90l/p/d) in areas of "serious" water stress. No rationale is provided in this consultation for not following the FHH recommendations. We recommend considering the implementation of this standard in areas of "water stress".

Section 4.2: Water calculator vs fittings-based approach

12 Do you agree with the suggested updates to the water calculator?

Yes

If you answered no to the previous question, please provide additional information to explain your answer.:

CIBSE supports the suggested updates to the Water Calculator in principle, but considers that deeper reform is required for the tool to reflect real-world performance reliably. The consultation highlights that the calculator has previously enabled "on paper" compliance while fittings and user behaviour led to higher actual consumption.
To address this, CIBSE recommends:
• Strengthening minimum performance thresholds so that very low flow assumptions do not compromise hygiene, hot water delivery or drainage performance.
• Introducing mandatory commissioning and verification of actual flow and flush rates where the Calculator is used to demonstrate compliance.
• Retaining an explicit allowance for external water use until better empirical data is available.
• CIBSE also supports the fittings-based approach becoming the primary compliance route, with the Water Calculator used as a secondary or conformance tool for more complex cases.

13 Do you agree with the suggested updates to the fittings-based approach as set out in Annex A the Approved Document?

Yes

Do you agree with the suggested updates to the fittings-based approach as set out in Annex A the Approved Document? :

CIBSE supports the proposed updates to the fittings-based approach in Annex A and agrees that it should become the primary compliance route. This method is more transparent and less prone to misuse than the Water Calculator, provided that performance requirements are clearly defined. CIBSE recommends aligning flow limits with updated British Standards, requiring commissioning checks to verify actual installed performance, and recognising the impact of very low flows on drainage, hot water and hygiene performance. Clear guidance is also needed on integrating the fittings-based approach with rainwater and greywater reuse systems.

Section 4.3: Approved Document G

14 Do you agree that the Approved Document, which can be found at Annex A, reflects the current industry practice for the revised water efficiency standard as detailed in The Building Regulations 2010, Schedule 1, Part G2, Para 36?

Yes

If you answered no to the previous question, please provide additional information to explain your answer. :

CIBSE agrees that the Approved Document should be updated to support the proposed revisions to Part G2. The changes to flow limits, fittings-based compliance, and the water calculator require clear, consolidated guidance to ensure consistent national interpretation. CIBSE recommends ensuring the

document clearly sets out minimum performance requirements, the interface with drainage and hot water systems, and commissioning expectations so that lower water use does not compromise hygiene, usability or system function.

Section 4.4: Questions summary

15 If you are a devolved administration, please advise of any potential impact on Wales, Scotland or Northern Ireland by the proposals outlined in this consultation. If possible, please provide evidence to support your comments.

Q15:

n/a

16 Please provide any feedback you have on the potential impact of the proposals outlined in this consultation document on persons who have a protected characteristic. If possible, please explain your answer.

Q16:

CIBSE does not identify any direct negative impacts on protected characteristics from the proposed amendments. However, it is important that water-efficient fittings maintain accessibility, usability, and hygiene performance for all users, including older people, disabled individuals, and those with sensory or mobility needs. Minimum performance thresholds and commissioning checks will help ensure that low-flow fittings do not create barriers to safe or effective use.

17 Do you think that there are issues with compliance to the water efficiency standard(s) within the Building Regulations 2010?

Yes

Q18 Please provide additional information to explain your answer:

Yes. CIBSE agrees that there are longstanding compliance issues. These include inconsistent commissioning, substitution of specified fittings for higher-flow alternatives, insufficient oversight by Building Control, and a lack of verification that installed performance matches design assumptions. These issues have contributed to a persistent gap between predicted and actual per-capita water consumption: As mentioned in Q12, the Waterwise data available found that in the majority (75%!) of new build homes, water consumption was higher than the regulatory limit.
As mentioned in Q12, CIBSE recommend further analysis of what is currently being delivered by the regulations, stronger commissioning, clearer guidance, and verification mechanisms. In addition, a water labelling scheme taking account of quality as well as water efficiency, would make it more likely that compliant fittings and appliances, once installed, are retained by occupants.

18 Do you agree that the 5 l/p/d external water use, should be removed?

No

Q19 Please provide information to explain your answer:

CIBSE does not support removing the external water use allowance without replacing it with evidence-based guidance. We accept the statement (§40) that the assessment of external water use should be reviewed, but this does not mean the requirement should be removed altogether. The consultation itself states that external water use can often be much higher, so this use must be addressed. If not through Building Regulations, then other measures must be put in place to reduce external water use, especially at times of water stress. External demand varies significantly between households and climates, and removing the allowance risks underestimating total water consumption, particularly in water-stressed regions. A revised evidence-based allowance or a separate calculation method for external use would provide more accurate outcomes.

19 Do you agree that local planning authorities and local building control and registered building control approvers have effective procedures to deliver water efficiency measures through the Building Regulations?

Yes

c. Please provide additional information to explain your answer:

SoPHE agrees that additional guidance for local planning authorities and Building Control is necessary. Clear national guidance will help ensure consistent application of water efficiency standards, support enforcement, and align planning decisions with local water stress evidence. Training and competency expectations for Building Control would further strengthen implementation

20 Do you agree with the approach set out in this consultation to review alignment of the Mandatory Water Efficiency Label (MWEL) with the Building Regulations 2010 and AD-G through guidance, post introduction and review of the MWEL?

Yes

Q21 Please provide additional information to explain your answer:

CIBSE supports linking the Building Regulations to the Mandatory Water Efficiency Labelling Scheme. MWEL will improve product transparency and support consistent specification of compliant fittings. Alignment between MWEL and the Approved Document will simplify compliance and reduce ambiguity for designers, manufacturers and Building Control.

21 If there was an opportunity to remove l/p/d from the Building Regulations 2010 and replace the metric, what metric would you suggest as an alternative?

Q22 Please explain your answer:

CIBSE are not aware of significant evidence that the metric should be changed, or that an alternative metric would offer significant benefits. If l/p/d were removed in future, we would recommend shifting to a performance-based fittings standard supported by MWEL and verified commissioning. This would regulate the performance of individual fittings and systems rather than relying on a calculated whole-house consumption value. A fittings-based approach, combined with commissioning verification, would be clearer, harder to misuse, and more reflective of actual installed performance.

Section 5: Call for Evidence

Section 5.1: Call for Evidence Questions summary

22 To what extent do you agree or disagree that government should pursue wider reform of the water efficiency standards in Part G of the Building Regulations?

QA:
Strongly agree

23 Do you think that the 'mandatory water efficiency standard', should be amended to an even tighter standard, from 125 l/p/d to 100 or 95 l/p/d?

QB:
100 l/pp/pd

Please provide additional evidence to explain your answer:

CIBSE agrees that tighter standards may be appropriate in principle, but only where robust safeguards are implemented. Reducing consumption to 100 or 95 l/p/d increases risks related to:
– WC flush reliability and drainage self-cleansing behaviour.
– Reduced flow velocities leading to solids retention and odour issues.
– Hot water delivery times, TMV stability, and scalding/Legionella considerations.
– User dissatisfaction if flow rates fall below functional thresholds.
Any future tightening must be underpinned by:
– Clear minimum performance standards for fittings.
– Verified commissioning of flow and flush performance.
– Drainage design guidance that accounts for ultra-low flows.
– Monitoring of actual performance to validate that such targets are achievable in practice.
SoPHE supports further exploration but emphasises the need for strong technical evidence and system-wide impact assessment.

24 Do you think that the 'optional technical water efficiency standard', should be amended to an even tighter standard, from 110 l/p/d, where there is a clear local need such as in areas of serious water stress, to 90l/p/d or 85l/p/d, or 80 l/p/d?

QC:
90 l/pp/pd

Please provide additional evidence to explain your answer:

CIBSE agrees that tighter optional standards (e.g. 90 l/p/d) may be appropriate in areas of serious water stress, provided that robust technical safeguards are implemented. Any tightening must consider the practical impact on fittings performance, drainage behaviour, hot water delivery, hygiene outcomes, and user acceptability. In line with the Future Homes Hub recommendation, 90 l/p/d is considered achievable with efficient fittings and appropriate commissioning. More ambitious levels, such as 85 or 80 l/p/d, would require stronger supporting measures including:
– Mandatory commissioning and verification of flow and flush performance
– Clear minimum performance thresholds for fittings
– Consideration of drainage system performance at very low flows
– Enhanced guidance for LPAs on local evidence requirements
CIBSE supports exploring tighter standards where evidence of local water stress is strong, but emphasises that targets must not compromise system performance or public health.

25 Do you consider that reuse systems should be required through the Building Regulations 2010?

No

Please provide additional information to explain your answer:

CIBSE recommends that reuse systems continue to be encouraged where appropriate, but not required through Building Regulations at this time. Although reuse systems can reduce potable water use, mandating them introduces significant technical, operational and public-health considerations that require careful management, including microbiological safety, treatment reliability, maintenance responsibility, energy use, dual-pipework complexity, and risks associated with poor installation or insufficient upkeep. Mandating them in all new buildings would be premature without:

– Clear and enforceable water-quality and treatment standards
– Defined maintenance and operational responsibilities
– Competence requirements for installers and maintainers
– Robust commissioning, monitoring and verification protocols
– Integration with updated guidance in Part G and Part H
– Comprehensive evidence demonstrating long-term performance and cost-effectiveness.

26 If you answered yes to 'Do you consider that reuse systems should be required through the Building Regulations 2010?', what systems or enablers in your opinion are required:

QE Please provide additional information to explain your answer:

27 Please provide links to any relevant evidence that you have used to inform your views for this consultation. If there's anything else, you'd like us to know or consider please add it here.We're particularly interested in information around:Any risks and mitigations of contaminated potable water supplies associated within a development that relies on reuse systems of cross connection, backflow, microbial growth on plumbing and therefore risk of contaminated potable water supplies; Any risks and mitigations that industry is not yet ready to safely install and monitor reuse systems to run effectively and safely; Any associated costs to householders for maintenance of reuse systems, as well as higher operating costs and energy costs; Evidence that increased uptake of water reuse systems would require upskilling and training requirements for plumbing, electrics and groundwork; A further review of Approved Document G; A review of Approved Document H; Customer expectations and enjoyment of water in the home.

QF:

CIBSE's response is informed by its Society of Public Health Engineering, whose position is informed by established British Standards (including BS EN 806, BS 8558, BS EN 16941, BS 8525, BS 6465 series), CIBSE Guide G, SoPHE technical knowledge, and industry evidence relating to low-flow performance, drainage behaviour, hot water safety and commissioning practice. International research on rainwater and greywater systems further highlights the importance of treatment reliability, maintenance, and clear responsibilities for safe operation.
SoPHE recommends that government consider whole-system interactions between water efficiency, drainage, hot water delivery and public health when developing future regulatory reforms.

Section 6: Equality impacts and impacts on business

Section 7: Contact details and how to respond

28 Thank you for taking your time to participate in this online survey. It would be appreciated, if you can provide us with an insight into how you view the tool and the area(s) you feel is in need of improvement, by completing our feedback questionnaire. Overall, how satisfied are you with our online consultation tool?

QG:
Very dissatisfied

Additional information submitted by email due to limitations of the online portal:

Section 5.1 Call for Evidence Questions summary
QA. To what extent do you agree or disagree that government should pursue wider reform of the water efficiency standards in Part G of the Building Regulations?

the online form did not have a text box for supporting comments
CIBSE response:
CIBSE strongly agrees that wider reform of Part G is necessary. Current standards do not fully address modern water efficiency challenges, nor do they sufficiently link water use with drainage performance, hygiene outcomes, commissioning practice, or real-world consumption. Furthermore, the water fittings approach and water calculator approach only tackle some of the opportunities available to reduce water use. CIBSE supports a holistic, evidence-based reform programme that ensures reductions in water use do not compromise system performance or public health. Wider reform provides an opportunity to:
Improve clarity and consistency across the regulatory framework.
· Integrate water efficiency requirements with drainage (Part H) and hot water safety.
· Strengthen commissioning and verification expectations.
· Enhance alignment with the Mandatory Water Efficiency Labelling Scheme.
· Address the gap between design assumptions and actual usage.
Addressing quality of fittings, to avoid issues such as replacement by householders (in this, CIBSE support the recommendation from the Future Homes Hub report, and recommend this should be taken into account in the upcoming water labelling scheme), or leaks (in particular, CIBSE have received concerns from industry about the lack of measures to avoid WC leaks)
Encouraging best practice design, such as avoiding hot water dead legs, which would also save energy use and contribute to reducing overheating risk
Review the opportunity to extend Part G to works on existing homes: when works are carried out which are significant enough to trigger a Building Regulations application, there should be opportunities to address water efficiency through relatively simple and cost effective measures.
Outside of the water standards: review opportunities to encourage water efficient consumer behaviours through charging mechanisms e.g. ensuring that the standing charge within a water bill is not so high, that reducing water consumption only has a negligible impact on the overall bill; consider gradual ("dynamic") pricing, with higher charges above a minimum level (e.g. above the Building Regulations level, in the case of new build homes).
Consider the extension of water standards to non-domestic sectors, both through fittings and appliances, and the re-use of water (e.g. WC flushing, water cooled chillers etc). In particular, given the expected growth in datacentres, their impact on water consumption (for cooling) should be considered both in building regulations and planning.
Ensure quicker and easier access to water meters in existing homes: it is CIBSE's understanding that many are still unmetered. This is also a recommendation from the Climate Change Committee and National Infrastructure Commission.

Section 6: Equality impacts and impacts on business
Do you have any comments about the proposals in this stakeholder engagement in relation to impacts onpeople on the basis of any of the following protected characteristics under the Equality Act 2010: age; disability; pregnancy and maternity; race; religion or belief; sex; sexual orientation; gender reassignment; marriage or civil partnership? How might such impacts be mitigated? (max. 500 words)

The box in the online form did not appear to function, it was not possible to insert text.
CIBSE response:
CIBSE does not identify direct discriminatory effects arising from the proposed reforms, but highlights that the following can all disproportionately affect users with protected characteristics:

· Very low flow rates
· Poorly performing fittings
· Inconsistent commissioning
· Inadequate flushing
· Thermal instability
· Overly complex reuse systems.

Therefore, CIBSE strongly recommends minimum performance thresholds, mandatory commissioning, and accessibility-driven design safeguards to ensure water efficiency reforms do not compromise hygiene, safety, or ease of use for vulnerable groups.

Comments on the proposed updates / omissions / additions etc to standards used in Approved Document:
The consultation asks to review the proposed changes, but with no question allowing comments on it.
Overall the list of proposed changes is sensible, but there are a small number of items that would benefit from correction for currency and traceability. In particular, BS 6700 and BS 8515 are withdrawn and should not be presented as current; the schedule should instead reference BS EN 806 together with BS 8558 for domestic water services, and BS EN 16941-1 (latest edition) for rainwater systems. In addition, the Water Regulations Guide has been retired, with guidance now maintained online by WaterRegsUK, so the reference should point there.