Blueprint for Water
WATER PEOPLE NATURE

Wildlife and Countryside LINK

Defra Consultation on Measures to Reduce Personal Water Use

https://consult.defra.gov.uk/water/measures-to-reduce-personal-water-use/

Blueprint for Water is a unique coalition of environmental, water efficiency, fisheries and recreational organisations, part of the wider environmental NGO coalition, Wildlife and Countryside Link. Blueprint members come together to form a powerful joint voice across a range of water based issues.

This response is supported by the following organisations:

- A Rocha UK
- Amphibian & Reptile Conservation
- Angling Trust
- RSPB
- Salmon & Trout Conservation
- The Rivers Trust
- The Wildlife Trusts
- Waterwise
- WWF-UK

Building Regulations

1. Do you consider that the current approach in Building Regulations (i.e. a mandatory minimum standard for new homes but with local authorities in water stressed areas having discretion to ask for a higher standard through a Building Regulations Optional Requirement) is effective? a. Yes b. No c. No view Please give reasons to support your answer

B, No.

Whilst Blueprint members strongly support incorporating a minimum water efficiency standard into Building Regulations for new homes we support the Environmental Audit Committee 2018 recommendation for a single ambitious national minimum standard[1] that tightens over time rather than the current spatially limited option for local authorities to ask for greater ambition.

A single standard would be simpler for local authorities and developers and would recognise that droughts can happen in areas not classed as water stressed and that we need a national approach to resilience. It allows for the benefits of greater water efficiency to be realised nationally including reducing energy use and carbon emissions; improving affordability and leaving more water in the environment.

Given the move towards regional water resources planning and the consideration of regional solutions

1 https://publications.parliament.uk/pa/cm201719/cmselect/cmenvaud/826/826.pdf

such intra- and inter-company transfers, plus the predicted scale of water shortages that the nation as a whole may face in future, it would seem short-sighted to opt to ignore the opportunity to implement more ambitious demand management measures across the board. A single, more ambitious standard will also serve to tackle the commonly-held public view that water is a cheap and limitless commodity with which there is no need to be careful.

2. Do you consider that the current minimum standard of 125 litres per person per day and optional requirement of 110 litres per person per day should be changed, and if so what might be an appropriate new standard? a. Yes b. No c. No view Please give reasons to support your answer

A, Yes.

We want to see the current minimum Building Regulations standard tightened to reflect increased understanding of the scale of the water scarcity challenge and of the potential benefits of greater water efficiency. Currently it is higher than the long term ambition set out in many water company Water Resource Management Plans[2]. It is also higher than the recommended levels set out by the NIC[3], Climate Change Committee[4], Environmental Audit Committee[5] and in the Bricks and Water report[6].

We want to see a single national minimum standard of 100 l pppd adopted nationally immediately with a commitment to reduce it to at least 95 l pppd by 2030. Recent analysis from the Energy Savings Trust highlighted the water and energy savings[7] that could be realised at various more ambitious levels of water efficiency in new homes with pay-back achieved within 14 months. Significant energy use in the home is associated with the heating of water, meaning that water efficiency can make an important contribution to carbon reduction targets, both through savings in the home (with direct financial savings for householders) and through the reduced need to abstract, treat and transport water in the first place. (See our response to q4 for more detail).

3. Are there any other issues relevant to using Building Regulations to set water efficiency standards that the Government should consider?

We would like to flag the following two further issues:

1 - Moving to just a “fittings based” approach in Building Regulations. A “fittings based” approach would provide a simple and more reliable way to link the design and specification of new build

2 https://www.ofwat.gov.uk/regulated-companies/price-review/2019-price-review/draft-determinations/
3 https://www.nic.org.uk/publications/preparing-for-a-drier-future-englands-water-infrastructure-needs/
4 uk-climate-change-risk-assessment-2017
5 https://publications.parliament.uk/pa/cm201719/cmselect/cmenvaud/826/826.pdf
6 Bricks-water-plan-action-building-homes-and-managing-water-england
7 Phase 2 Summary Report (2019); Phase 2 Technical Report (2019)

houses to minimum efficiency standards for fittings

2 - We want to see government re-introduce a simple way of "grading" or banding new homes for water efficiency. There are a range of examples for "grading" water efficient homes that could be applied in the UK. These could help promote water efficient homes potentially as part of the Future Homes Standard

4. To what extent do you agree or disagree that Government should work with water companies and local authorities to run partnership retrofit and behaviour change programmes in existing homes? a. Strongly agree b. Slightly agree c. Neither agree nor disagree d. Slightly disagree e. Strongly disagree f. Don't know Please explain your answer

A, Strongly agree

Given that around 80% of England's 2050 housing stock has already been built it is vital that Government work with water companies, local authorities and others to run retrofit programmes, which we would like to see focus particularly on social housing and on those with known affordability issues.

We believe there are significant benefits in linking energy and water efficiency advisory and retrofit programmes given the links between the two. Of all the CO2 emissions in the UK, 6% are from water use. A massive 89% of this comes from heating water in our homes[8]. Around 20% of a typical household gas bill is due to heating water in the home[9]. Achieving join up between water and energy should be an objective of the proposed Future Homes Standard.

A mandatory water labelling scheme linked to minimum standards for fittings would make a significant difference in reducing water use in existing buildings over time and can be easily linked to retrofit campaigns.

Water Labelling

5. To what extent do you agree or disagree that information on water efficiency should be displayed on water using products? a. Strongly agree b. Slightly agree c. Neither agree nor disagree d. Slightly disagree e. Strongly disagree f. Don't know Please explain your answer

A, strongly agree.

8 https://www.energysavingtrust.org.uk/policy-research/home-water
9 https://www.energysavingtrust.org.uk/home-energy-efficiency/saving-water

Currently it is difficult for customers to make informed choices about the water efficiency of water-using products they buy. Introducing a mandatory water labelling scheme linked to fittings standards will address this and is the single most important thing that government could do to help reduce personal water use. A ratings system like that used for energy efficiency is one that is reasonably well-understood by consumers and a similar approach could be adopted for water.
A mandatory water labelling scheme linked to minimum standards has been in place in Australia since 2005. In 2017 a review found that the scheme was saving over 300 Ml/d of water and had at that point reduced emissions by 11 Mt CO2e. It was delivering total annual household bill savings of $1 billion per year[10].

A similar scheme implemented in England could save us over 1,500 Ml/d of water by 2045, reducing personal consumption by over 30 l pppd. Over 25 years it would reduce household utility bills by £34 billion and cut emissions by over 50 MtCO2e[11].

6. To what extent do you agree or disagree that providing information about products' water efficiency changes peoples' purchasing behaviour and reduces their use of water? a. Strongly agree b. Slightly agree c. Neither agree nor disagree d. Slightly disagree e. Strongly disagree f. Don't know Please explain your answer

A, strongly agree.

Market research undertaken for the Australian Water Efficiency Labelling Scheme (WELS) shows that water efficiency is now the highest or second highest consideration for customers in their purchasing decisions for products covered by their mandatory water label[12]. The scheme is also helping drive the product market to offer Australians more water efficient products, with poorer performing products dropping out.

7. To what extent do you agree or disagree that water efficiency labels should be linked to building standards and minimum standards? a. Strongly agree b. Slightly agree c. Neither agree nor disagree d. Slightly disagree e. Strongly disagree f. Don't know Please explain your answer

A, strongly agree.

The impact of a water label in driving water and energy savings is far greater if it is linked to building regulations and minimum standards, as it has been in Australia.
Research by the Energy Savings Trust has shown that over four times as much water could be saved in England after 10 years with a link to Building Regulations and minimum standards compared to

10 https://www.waterrating.gov.au/about/review-evaluation/environmental-effects
11 https://www.waterwise.org.uk/resource/water-labelling-phase-2-reports/
12 https://www.waterrating.gov.au/about/review-evaluation/consumers

just having a mandatory water label alone[13]. The levels of water saving achieved within 25 years are significant when compared to the 4000 Ml/d that the NIC identified was needed to address water supply resilience risks[14].

Alongside water savings significant energy and financial savings can also be achieved through a joined-up approach, with householders saving between £30 and £40 a year and with payback of any additional costs for new homes reached within around one year. All the scenarios see significant energy savings and emission reductions helping us reach net zero targets. The 55 mtCO2e saved over 25 years in the 85 l pppd scenario is equivalent to taking over 23 million cars off the road for a year.

8. How else could Government or water companies encourage people to use more water efficient devices/appliances at home?

There are a number of additional ways that government or water companies could encourage people to use more water efficient devices at home. These include:

- Ensuring that the public understand why water efficient products are important (national campaign) and how they can help save water, money, energy and leave more water in the environment (see responses to Q22 and Q23)
- Ensuring that the performance of the products themselves are acceptable to the public
- Ensuring that water efficient products are fit for purpose. The mis-use of confusing dual flush toilet buttons and water lost through leaking toilet valves and fittings risk negating all the savings offered by dual flush water efficient toilets (see our response to Q24).
- Engaging manufacturers and retailers to encourage them to promote water saving products and to provide information with the products on how purchases can save water

We also believe that there is a need to undertake large scale research into water using behaviours in the home. This research should include a review of the potential to use insights from metering data, particularly smart meters, to encourage greater efficiency.

Metering

9. To what extent do you agree or disagree that people should pay for water according to how much they use? a. Strongly agree b. Slightly agree c. Neither agree nor disagree d. Slightly disagree e. Strongly disagree f. Don't know Please explain why.

A, Strongly agree.

We know that customers that pay for their water by meter use 12-22% less than those that pay by

13 https://www.waterwise.org.uk/resource/water-labelling-phase-1-technical-report-re-issue/
14 https://www.waterwise.org.uk/resource/water-labelling-phase-2-reports/

rateable value[15]. Paying according to how much is used is the fairest, most progressive, approach whilst recognising that vulnerable customers will need targeted support. A key part in achieving reductions in personal water use is more customer awareness and valuing of water and this can only be achieved if customers know how much they personally use. Water companies should be encouraged to include, in their future Business Plans, proposals to provide water efficiency support to customers who are struggling to pay their bills (as opposed to purely financial support). This will provide those customers with greater scope to reduce their water use in order to manage their bills.

10. To what extent do you agree or disagree that the amount of households charged by metered volume should be increased beyond and/or faster than what is already planned by water companies? a. Strongly agree b. Slightly agree c. Neither agree nor disagree d. Slightly disagree e. Strongly disagree f. Don't know Please explain why.

A, strongly agree.

The rate of meter penetration nationally is not currently fast enough. We agree with the National Infrastructure Commission that meter roll out needs to be more ambitious[16] with greater pace needed both to improve water security but also deliver benefits of leakage reduction and water efficiency. Analysis of water company consumption data since 1999 shows that the higher the level of meter penetration the lower the mean volume of water used per property with metering particularly effective in reducing consumption amongst very high users. Metering is an important tool in a basket of measures to support customers to waste less water, and can enable other engagement to drive change in water-using habits[17].

To facilitate this, we recommend that Government removes the restriction which prevents companies not in areas designated as 'Water Stressed' from progressing compulsory metering programmes. In these areas, metering is typically achieved piecemeal (such as at a customer's request, or when properties change hands), which is an extremely cost-inefficient way of delivering metering, achieves a very low rate of penetration, and to a certain degree reaches customers who feel they will benefit from a meter and so are likely to already be relatively water-efficient. The need to save water across the board in order to enable the benefits of doing so to be utilised through regional solutions is highlighted in our response to Q1.

11. If you agree that the amount of households charged by metered volume should be increased, what do you think would be the best or most appropriate approach? Do you have suggestions for increasing metering other than what is mentioned above?

15 Ornaghi C. & Tonin, M. (2017) The Effect of Metering on Water Consumption - Policy Note
16 https://www.nic.org.uk/publications/preparing-for-a-drier-future-englands-water-infrastructure-needs/
17 The-long-term-potential-for-deep-reductions-in-household-water-demand

Our preferred approach would be full universal metering across England as recommended by the NIC[18]. This would require a change in policy and removal of restrictions that prevent faster roll-out across England.
It would be preferable that all installations are smart meters as this would yield greater demand reductions.

12. Are there any other issues we need to consider with regard to increasing metering?

CCWater show that 3m households struggle to pay their water bills[19]. Therefore affordability needs to be considered alongside metering policy. Whilst metering has been shown to help customers save water and therefore can reduce water and energy bills for customers, it may result in bill rises and affordability issues for some if this is not addressed alongside metering rollout. Water companies already provide support to vulnerable customers and this could be used/extended to minimise any adverse impacts. Water efficiency retrofit visits offered by companies alongside metering can also help manage bills down.

Smart metering

13. To what extent do you support or oppose the use of smart water meters instead of manual meters? a. Strongly support b. Slightly support c. Neither support nor oppose d. Slightly oppose e. Strongly oppose Please explain why.

A, strongly support.

Wherever possible we want to see water companies putting in smart meters as opposed to traditional meters read once or twice a year. The greater resolution of data from smart meters can help customers engage more with their own water use and their water company. Evidence is already showing they can help save more water than traditional meters[20,21]. Smart meters are also better at helping identify internal plumbing losses, such as leaky loos.

Incentives

14. To what extent do you support or oppose the use of incentives to encourage customers to use less water? a. Strongly support b. Slightly support c. Neither support nor oppose d. Slightly oppose e. Strongly oppose Please explain why.

18 https://www.nic.org.uk/wp-content/uploads/NIC-Preparing-for-a-Drier-Future-26-April-2018.pdf
19 https://www.ccwater.org.uk/blog/2018/12/04/water-debt-hurting-poorest-families-uk-poverty-report/
20 Pericly & Jenkins (2015) Smart meters and domestic usage
21 Pathways to Long-term PCC Reduction, WaterUK (Artesia, 2019)

A, strongly support.

Blueprint supports the use of incentives as the evidence shows they can encourage customers to use less water. By utilising a variety of personal motivators[22] (e.g. environmental, financial or community) incentives can help encourage customers to reduce their water consumption.
Such approaches may be particularly helpful amongst the customer base consisting of relatively affluent, high water users, who may be less likely to respond to the cost-saving benefits of metering alone.

Incentives offer the customer a 'reward' for their water-saving behaviour. Through the use of gamification this could also allow more engagement with the customer and further opportunities to educate, inform and further reduce their water consumption.

15. What incentives could water companies use to reduce customer use of water?

Community/Environmental Incentives: In the River Itchen Challenge[23] six communities (Cheriton, Kilmeston, Bramdean, Hinton Ampner, Bishop's Sutton & Beauworth) took part in-year long challenge saving 6% of water compared to their neighbouring communities benefiting the nearby chalk river. The reward was financial support from Southern Water to a local community project.

Financial Incentives: Green Redeem is a rewards scheme that allows customers to gain points from saving water (similar to Tesco clubcard points) these points can then be used at a variety of highstreet shops or donated to a charity of your choice. There is an online portal that allows customers to track their usage and exchange their points for rewards. Currently Green Redeem[24] are working with Thames Water, South West Water and Anglian Water

RWH and water reuse

16. To what extent do you support or oppose the use of RWH and GWR schemes at individual level? a. Strongly support b. Slightly support c. Neither support nor oppose d. Slightly oppose e. Strongly oppose Please explain why.

A, strongly support.

22 River Itchen Challenge
23 River Itchen Challenge
24 https://www.greenredeem.co.uk/

Blueprint supports initiatives to reduce demand on mains supply and the environment, including using rain and recycled water for non potable use. To reach very low levels of personal water use reusing water and harvesting rainwater will need to be part of the tool kit.
However, the cost: benefit case is generally stronger when undertaken at a community scale. For this reason, these elements need to be promoted through Building Regulations or other similar means (e.g. local plans and policies) to encourage use by developers, since adoption at scale will not be achieved if relying on installation by individual homeowners.

17. To what extent do you support or oppose the use of RWH and GWR schemes at community scale? a. Strongly support b. Slightly support c. Neither support nor oppose d. Slightly oppose e. Strongly oppose Please explain why.

Blueprint supports the use of rain and recycled water to reduce demand on mains supply and protect the environment. Using RWH/GWR will be particularly cost effective if done on a community scale, employing systems with the fastest payback periods which utilise large collection surface areas. The additional benefit of community scale projects is that they are often better maintained in the long term. We would like to see a requirement for rainwater harvesting to be considered in the design stage of community scale developments.

To facilitate uptake, there needs to be better join-up between flood management policies requiring the management of surface water, and water efficiency policies. Many developments are required to incorporate rainwater collection to ensure that there is no increased risk of flooding as a result of the development, yet this typically goes to soakaway, with few examples of proactive developers building on this storage requirement to then provide a beneficial use for the collected water. Uses could range from extremely simple measures (e.g. hose connection points to enable watering of gardens / grounds with rainwater), to full incorporation of rainwater use within the development for toilet flushing, clothes washing, and so on.

18. How can Government or water companies most effectively encourage people to reuse water in their homes?

Government can raise awareness of the potential and the myths surrounding water reuse, can encourage water companies to enable people to see the reductions of something like water recycling in their bills, can ensure that new technology is accessible to customers and can incentivise building developers to build water reuse systems into their designs and to ensure that they are properly maintained.

Supply pipe leakage

19. Do you have any evidence/views/comments on the potential impacts on water bills for various customers and geographical regions should the management of supply pipes be transferred to water companies?

Blueprint members do not hold any evidence.

However, we would expect that transferring responsibility to water companies for finding and fixing leaking supply pipes would result in greater water savings and be more cost-efficient when undertaken at scale rather than by individual householders.

Government should look to the lessons that can be learned from the transfer of responsibilities for previously-private sewers and drains to water companies in 2011.

20. Of the alternative options below, which is your preferred? Please explain why or if you have other ideas.

- ***Increased use of metering and/or smart metering.***
- ***National policy for a single continuous pipe from main to wall mounted meter box in new build properties, to address leakage.***
- ***Create a mandatory code of practice for water supply companies (rather than voluntary)***
- ***Require water supply companies to assist with maintenance and repair.***
- ***Voluntary adoption of supply pipes by water supply companies.***
- ***Water supply companies to run public relations exercise to identify and address problem pipes and clarify property owner responsibilities.***

Our preferred option is for increased use of metering and/or smart metering. Not only does this option help find leaking supply pipes it also has wider benefits for water efficiency and in flagging leaks within the home.

21. What other options are available to reduce leakage from customer supply pipes?

Increasing the pace of smart metering (see Q10) would help reduce leakage from customer supply pipes as they would be found more rapidly. Having a consistent approach from water companies to dealing with supply pipe leakage repairs would also be helpful.

Communications and behaviour change

22. What are the main barriers to changing behaviours to reduce personal water use? Please rank your top three options by order of importance:

a. Insufficient access to support and advice b. Insufficient information about personal water usage c. Insufficient information about water scarcity d. Lack of financial incentive e. Investment in more water efficient equipment is prohibitively expensive f. Difficulty in changing habits g. People feel they are already doing all they can to reduce water use h. Hygiene reasons i. Other (please specify)

Blueprint members believe the main barriers to changing behaviours to reduce personal water use are a combination of b and c and a combination of f and g.
Tackling insufficient information on water scarcity and personal water use is essential to motivate water saving behaviours, providing the "why" water saving is needed. This should include raising awareness of the environmental impacts caused by abstraction and water stress.

Research has shown that many people already consider themselves to be water efficient and therefore that they don't need to change habits and do more to save water. However average water use pppd is higher in the UK than in many other countries in Europe, suggesting that further savings should be eminently achievable with the right support.

23. Which organisation(s) (if any) should communicate about how to reduce personal water use? Please select all that apply. a. Water companies b. Government c. Local government d. Environmental non-governmental organisations, for example environmental charities e. Other – please specify

Blueprint believes that we need a cross sector, collaborative approach in order to raise awareness of the need for greater water efficiency and how it can be achieved. This collaborative approach is essential if we are to realise ambitious reductions in personal water use. This should not be solely the responsibility of the water industry but utilise government, partnerships, industry leaders, manufacturers, eNGOs and developers. Other sectors such as public health and housing would also be helpful advocates.

Other

24. If there are any further matters that you would like to raise or any further information that you would like to provide in relation to measures to reduce personal water use, please give details here.

We want to see government, regulators and the water sector working together more effectively to incentivise greater water efficiency in the business water retail market. Between 20% and 25% of

water put into supply is used by business and so it is critical that we see reductions in business water use alongside domestic use if we are to reduce overall water demand and increase resilience. Increased water efficiency was trailed as one of the big benefits of opening up the business retail market. However, despite some examples of good practice, the sector is struggling to realise and demonstrate these benefits to all customers.

Waterwise held a workshop on this issue in May 2019 that highlighted some of the issues limiting progress and identified a number of key actions[25] including the recommendation for a joint letter from Government and Regulators (Defra, Ofwat, EA) setting out:

a. A statement of need and of ambition on business water efficiency
b. Clarification of what wholesalers can do directly with businesses (e.g. business visits) and with retailers (e.g. water saving incentives)
c. Proposals for further action (see recommendations below)
d. The above could be accompanied by a statement of support from a broader coalition of organisations including MOSL, CCW, and Waterwise.

We support Waterwise's call for greater efforts to address the 5-8% of dual flush toilets that are leaking - so called Leaky Loos[26]. Fixing leaky loos can reduce water wastage, lower customers' bills and increase resilience to drought.

A leaking toilet wastes between 215 and 400 litres of clean drinking water on average every day and around 400 million litres of water is estimated to leak from UK toilets daily, which is enough water to supply 2.8 million people - the populations of Edinburgh, Cardiff, Belfast, Manchester, Sheffield, Liverpool and Bristol combined. Fixing leaky loos could contribute around 10% of the additional water capacity needed to cope with an extreme drought in England by 2050.

We need to ensure that the Water Fittings Regulations and the testing regime is fit for purpose and that manufacturers address the design flaws that contribute to the problem. We would also like to see a national awareness raising campaign to help the public find leaking toilets and address them.

We want to see action to address current confusion over which dual flush toilet button does what. According to research conducted by SES Water only 25% of people use dual flush buttons correctly leaving 75% of people using them incorrectly, wasting water, and research by the Energy Savings Trust has shown that we could be wasting some 220 Ml/d nationally which equates to 3.5 litres per person per day[27].

These design flaws also contribute to a lack of uptake of dual flush controls by domestic customers when refurbishing their homes. We need to see design and information improvements on products that make it clearer what button does what together with a national campaign to raise public awareness.

We believe that the combination of these measures will help respond to the ecological and climate crises by reducing the pressure of public water abstraction on the environment and the impacts on

[25] https://www.waterwise.org.uk/resource/retail-water-market-note-from-joint-workshop- 14th-may-2019/
[26] https://www.waterwise.org.uk/resource/leaky-loos-position-statement/
[27] https://www.waterwise.org.uk/resource/water-labelling-phase-2-reports/

our waterways, such as our chalk streams and the wildlife which depend on them.[28] The need for a reduction in consumption will be particularly important to manage water security, supply and demand in the context of continued drought and future population growth.

25. Please provide evidence regarding what reduction in personal water use could be made by 2050:

We would like Government to adopt a target of getting personal water use to below 100 l pppd by 2050, in line with their commitment to set 'an ambitious personal consumption target', made in the 25 Year Plan to Improve the Environment
To achieve this 2050 target government must:

1. Bring forward proposals for a mandatory water labelling scheme (Q5) linked to tightening water efficiency standards for fittings (Q7) and in Building Regulations (Q2).
2. Promote a faster roll-out of smart meters (Q11) and remove restrictions on water companies outside of areas of "serious water stress" (Q10) such that they can switch customers to metered billing

We want to see government work with a range of stakeholders to develop and implement a cross sector, co-owned Roadmap to reduce overall water demand, including both domestic and business consumption. The roadmap should draw on the work of the Environment Agency led National Water Resources Framework, and the UK Water Efficiency Strategy launched by Waterwise in 2017.

[28] https://www.theriverstrust.org/media/2019/06/Chalk-streams-dossier_June-2019_FINAL_FINAL-1.pdf