

16 April 2021

Our ref: Gloucester CC Examination

Dear Sir/Madam,

In Support of Examination Question 34 relating to Policy G7 Water Efficiency

Please find Severn Trent's response to the Gloucester City Plan Examination Question 34 relating to policy G7 Water Efficiency.

Policy G7

'Development proposals must demonstrate that the estimated consumption of wholesome water per dwellings should not exceed 110 litres of water per person per day.'

The NPPF sets out that plans should take a proactive approach to mitigating and adapting to climate change, taking into account long-term implications for flood risk, water supply, biodiversity and landscapes. Gloucester City lies within the Severn Trent Strategic Grid area, which has been identified as 'high vulnerability' within the Water Resource Management Plan (2019). It is therefore important that the amount of water used is reduced and that new developments install water efficient fitting and appliances in new homes. More generally, improved water efficiency provides wider benefits to the water cycle and environment.

Question 34. Is the application of the Optional Technical Housing Standard for water efficiency justified and consistent with national policy in relation to need and viability?

Severn Trent are supportive of the policy to impose the expectation on developers that properties are built to the optional requirement in Building Regulations of 110 litres of water per person per day (l/p/d), this goes beyond the 125 l/p/d that is specified in Part G of Building Regulations. We are supportive of planning policy that takes an approach of installing specifically designed water efficient fittings in all areas of the property as this should help to achieve a lower overall consumption than the maximum volume specified in the Building Regulations. In particular, Severn Trent recommends that in all cases development consider:

- Single flush siphon toilet cistern and those with a flush volume of 4 litres
- Showers designed to operate efficiently and with a maximum flow rate of 8 litres per minute
- Hand wash basin taps with low flow rates of 4 litres or less

- Water butts for external use in properties with gardens

We believe this policy is justified for the following reasons:

- 1) New development in Gloucester City, and the Severn Trent region as a whole, will result in a need for an increase in the amount of water to be supplied across the Severn Trent region. Issues with the sustainability of some of our water sources are placing our supply resilience at risk. It is therefore vital that we reduce the amount of water used. Whilst there are a number of steps Severn Trent is undertaking to reduce this risk such as reducing leakage, finding alternative sources of supply and investing in new technologies such as increasing metering coverage, there is also a role to be played by new developments in reducing consumption of future customers by using readily available technology of water efficient fittings and design.
- 2) Delivery against the optional higher target of 110 l/p/d provides wider benefits to the water cycle and environment as a whole and is therefore the most sustainable. This is supported by National Planning Policy Framework (July 2018) Paragraph 149 which states: *“Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures. Policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.”*
- 3) Wider benefits include having a positive impact on the energy efficiency of new builds. Water efficient products like dishwashers, washing machines, shower heads and tap regulators reduce the consumption of hot water, therefore less energy is needed to heat water reducing the amount of household carbon used. This type of water usage makes up a large proportion of the energy use in the home. The use of energy within the water system is significant at the development level. One of the key findings of an Environment Agency report named ‘Greenhouse gas emissions of water supply and demand management options’ - [link](#) is that *“89 per cent of carbon emissions in the water supply - use - disposal system is attributed to “water in the home” and includes the energy for heating water (excludes space heating), which compares with public water supply and treatment emissions of 11 per cent.”*
- 4) The River Severn River Basin Management Plan - [link](#) section 3.2 identified measures to prevent deterioration and protect the water environment and the benefits it provides. The section titled ‘Changes to natural flow and levels of water’ identifies a role that regulators, operators, influencers and project undertakers have to make sure water is used efficiently. Under the role of local government it specifically advises that *‘Local government sets out local plan policies requiring new homes to meet the tighter water efficiency standard of 110 litres per person per day as described in Part G of Schedule 1 to the Building Regulations 2010.’*

- 5) Gloucester City Council area sits within the Severn Trent Strategic Grid Water Resource Zone (WRZ) as is shown in the Severn Trent Water Resource Management Plan – August 2019 [link](#). By far the largest WRZ, the Strategic Grid extends from the Peak District in the north, encompassing most of Derbyshire and Leicestershire. The WRZ then extends south-west through Warwickshire to Gloucester, and then north-west covering most of Worcestershire and some of Shropshire. The strategic grid is made up of 14 major water treatment works (WTW), five reservoir complexes, three major grid booster pumping stations and a number of strategic pipeline network connections and aqueducts. The WRZ serves a population of 5.08 million (64.9% of the total population supplied by Severn Trent). Whilst the ability to transport water from areas of supply to demand within the Strategic Grid helps to provide resilience to local supply issues, it also means that areas where water scarcity is an issue and the environmental damage that this could cause may extend wider than the immediate area of Gloucestershire. As a result, Severn Trent are advocating similar policies to Local Planning Authorities across the entire Severn Trent region.
- 6) Due to the interlinked nature of the Strategic Grid, other River Basin Management Plans (RBMP) which support the tighter 110l/p/d target apply to this justification. For example the Humber RBMP – [link](#) which also covers much of the Strategic Grid also includes the same comment as mentioned above in relation to the River Severn RBMP.
- 7) There are a variety of reports from Government bodies and agencies consulting with the government which are supportive of reducing Per Capita Consumption. In December 2018, the Government stated the need for a reduction in Per Capita Consumption (PCC) and issued a call for evidence on future PCC targets in January 2019, with an intention of setting a long term national target. The National Infrastructure Commission (NIC) has already presented a report including recommendations for an average PCC of 118 l/p/d. In Wales, the 110 l/p/d design standard was made mandatory in November 2018.
- 8) In February 2021 the Environment Agency issued a consultation document 'Updating the determination of water stressed areas in England' - [link](#), this document outlines how the approach to determining classification of which areas are 'Water Stressed' has been updated to reflect the considerable changes made in the field since the previous classification in 2013 - [link](#). This new approach includes the impact of climate change, pressure on the environment and how to meet the challenges they create. The proposed water stress method takes a long-term view of the availability and the demand for public water supply, rather than a snapshot of shorter or peak periods. It accounts for future population growth, climate change, environmental needs and increased resilience. If the results of this consultation are accepted, the Severn Trent region, including GCC area would be classified as 'seriously water stressed' and would justify the need for the optional 110l/p/d target. The implication of this classification would be looked at and incorporated in the next review of the Severn Trent WRMP as part of the PR24 business plan submission, alongside appropriate actions and option assessment for future planning. The current levels of growth identified in GCC Local Plan are already accounted for in the 2019 WRMP so the classification would not cause problems for accepting current planned growth.

Should Policy G7 reference a more holistic approach to implementing measures to achieve required levels of water efficiency?

Policy G7 could reference the Severn Trent Water Resource Management Plan WRMP to demonstrate that this policy is part of a more holistic approach to achieve required levels of water efficiency. Our latest WRMP can be found on our website [here](#), where you will be able to find out what Severn Trent is doing to achieve the required levels of water efficiency across our region and the Strategic Grid. Data is provided in the document [here](#) specifically for the Strategic Grid showing feasible and preferred options which were selected through the WRMP process.

I hope this response help to answer your concerns, please let me know if you have any further questions.

Yours sincerely

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