DRAFT SHEFFIELD PLAN

Our City, Our Future

Water Efficiency Optional Technical Standard Topic Note – January 2024

Sheffield City Council

Planning Service
City Growth

Topic Paper: Water Efficiency

This note sets out how Sheffield City Council has established a clear need to include the optional higher target on water efficiency from Building Regulations Approved Document G: Sanitation, hot water safety and water efficiency in the Draft Sheffield Plan

The optional requirement restricts the consumption of wholesome water of a new dwelling to no more than 110litres/per person/per day.

The decision to include the optional requirement on water efficiency is based on the following strategies and Management Plans, supported by statements (including speeches and articles) (extracts included below).

National

Government's 25 year Environment Plan (2018)

One of the core goals of the 25 year environment plan is clean and plentiful water, with commitments to:

- Increase water supply,
- Incentivise greater efficiency,
- Less personal use.

Statements made by Chief Executive of the Environment Agency, Waterwise Conference (March 2019)[1][2]

- England is set to run short of water within 25 years.
- The country is facing the ''jaws of death", the point where water demand from the country's rising population surpasses the falling supply resulting from climate change.
- However, this could be avoided with ambitious action to cut people's water use by a third and leakage from water company pipes by 50%, along with big new reservoirs, more desalination plants and transfers of water across the country.
- The average person's daily water use of 140 litres could be cut to 100 litres in 20 years by more efficient use in homes and gardens. Currently, about a third of water is lost to leaks or wastage.
- On large infrastructure projects to help mitigate a reduction in supply – 'While there will be political challenges, there should be less difficulty over the economics, because the investment needed to increase our resilience is modest compared with the cost of not doing it. While a severe drought would cost each household more than £100, the cost per household of the investment that would greatly reduce the risk is only £4 a year.
- Climate change will result in hotter and drier summers in the UK resulting in water shortages and by 2050, the amount of water available could be reduced by 10-15%, with some rivers seeing 50-80% less water during the summer months.
- The population is predicted to grow from 67 million now to 75 million by 2050, resulting in increased demand for water.
- Measures to mitigate this need to focus on reducing demand and increasing supply.

[1] Taken from: **'**England could run short of Water in 25 years' Guardian article (18.03.19)

[2] Sir James Bevan 'Escaping the jaws of death' speech made as Chief Executive of the Environment Agency at the Waterwise Conference (delivered on 19.03.19)

- Reducing demand can be achieved by reducing leakage, increased water metering, incorporating SuDS, delivering water efficiency through building regulation and finding ways to cut down the amount of water we use as individuals.

Regional

Institute for Public Policy Research North – Natural Assets North Study; Water in the Northern Powerhouse[3] (August 2019)

- In Yorkshire, water supply in the main Water Resource Zones (WRZ) is forecast to fall below demand in a scenario where no further action is taken. This is attributed primarily to the effects of climate change.
- Yorkshire Water forecasts that its main WRZ (called the Grid Surface Water Zone, which includes Leeds & Sheffield City Regions) will be in deficit relative to target headroom from 2035/36 onwards without intervention to mitigate this risk.
- Public attitudes to, and awareness of, future pressures on water supply need to change, with a key role for policymakers to encourage more responsible use of water for example by requiring all developers to build to higher water efficiency standards.

Local

Sheffield City Council (SCC) Habitats Regulations Assessment Appropriate Assessment (HRAAA) (August 2023)

- Consultants ECUS carried out a HRAAA for SCC's draft Sheffield Plan, which involved consulting with Yorkshire Water (YW) to assess any potential impacts on habitats or species through water abstraction or discharge. Yorkshire Water have undertaken their own HRA, which ECUS used to assess any potential impact.
- Subject to the implementation of appropriate mitigation measures YW's HRA concluded that there would be no adverse effects to the integrity of any European Sites in relation to water resource and discharge. However, also included in SCC's HRAAA is reference to YW's latest **draft Water Resources Management Plan (2024)**[4], which has identified some significant risks to future supply-demand balance. These risks include the impacts of climate change, population growth, reductions in supply to protect the environment and the loss of a water transfer they currently receive from Severn Trent via the Derwent Valley reservoirs (west of Sheffield).

Yorkshire Water Draft Water Resource Management Plan (2024)

- The draft WRMP identifies additional and significant risks in relation to future water resource position. Risks include a need for neighbouring company, Severn Trent Water, to cease an existing transfer of raw water provided to the South Yorkshire area, and which is a critical source of supply to that area. The transfer is planned to cease by 2035.
- The bulk export agreement currently sees Upper Derwent Valley Reservoirs providing approximately 50 mega litres (50,000,000 litres) per day to the Rivelin Water Treatment Works in western Sheffield.

[3] Natural Assets North: Water in the Northern Powerhouse | IPPR
[4] https://www.yorkshirewater.com/media/km2fmv4l/yorkshire-water-draft-water-resources-management-plan-2024-technical-document.pdf

In conclusion, the impact of likely forthcoming changes to water supply to Sheffield, resulting from changes to the transfer of water from the Upper Derwent Valley reservoirs, and the wider forecast water supply-demand deficits at both regional and national levels, there is a clear need to focus on improving water efficiency where possible.