Core Strategy Selective Review

Leeds Local Plan

Development Plan Document

Note on a Maximum Water Consumption Standard for Leeds

July 2018

NOTE ON A MAXIMUM WATER CONSUMPTION STANDARD FOR LEEDS

1. Core Strategy Housing Targets

1.1 Housing growth in Leeds means extra demand for water. Additionally climate change predictions indicate an increasingly erratic weather pattern which is likely to lead to extreme weather events including droughts. For these reasons it is important for Leeds to ensure that the significant housing growth that is planned for over the next 15 years takes place in a way that makes prudent use of our natural resources.

2. The Water Framework Directive (2000/60/EC)

2.1 The Water Framework Directive (WFD) is a substantial piece of European legislation that aims to achieve 'good ecological and chemical status' in surface waters and 'good chemical and quantitative status' in groundwaters by 2021 or 2027. It aims for an integrated system of water protection, improvement and sustainable use achieved by partnership working with many people and organisations.

2.2 The Water Framework Directive introduces a system of regional River Basin Management Plans across England and Wales. Under the Water Framework Directive (England and Wales) Regulations (SI 2003 No. 3242) all public bodies must have regard to River Basin Management Plans. In the Leeds District the relevant Plan is the Humber River Basin Management Plan which was adopted in December 2015.

2.3 The objectives of the Water Framework Directive can be summarised as follows:

1. to achieve 'good' status for all water bodies by 2015 (or later dates of 2021 or 2027 subject to criteria set out in the Directive);
2. to prevent deterioration in the status of water bodies;
3. to reduce pollution from priority polluting substances;
4. to prevent and/or limit pollution input into groundwater;
5. to conserve aquatic ecosystems, habitats and species;
6. to mitigate the effects of floods and droughts;
7. to promote sustainable use of water as a natural resource, and balance abstraction and recharge.

2.4 The environmental objectives of the WFD are:

- to prevent deterioration of the status of surface waters and groundwater
- to achieve objectives and standards for protected areas
- to aim to achieve good status for all water bodies or, for heavily modified water bodies and artificial water bodies, good ecological potential and good surface water chemical status
- to reverse any significant and sustained upward trends in pollutant concentrations in groundwater
- the cessation of discharges, emissions and loses of priority hazardous substances into surface waters

- progressively reduce the pollution of groundwater and prevent or limit the entry of pollutants.

2.5 The Directive sets targets for all surface water and groundwater bodies, however, it recognises that some water bodies are 'artificial' or 'heavily modified' because they have been created or modified to support uses such as water supply, flood protection, navigation or urban infrastructure, and sets lower targets accordingly. 'Artificial' or 'heavily modified' water bodies need to reach 'good ecological potential' by 2027. The River Aire (and Aire and Calder Navigation) as it flows through the heart of Leeds is classified as a 'heavily modified' water body. The Environment Agency have consistently encouraged Leeds to promote sustainable water use within new building design. This was previously delivered through the Core Strategy EN2 policy requiring levels of the Code for Sustainable Homes, which included a water consumption element. However since the Code for Sustainable Homes has now been abolished Leeds needs to create a new water consumption policy to help ensure that it meets the WFD objectives.

2.6 The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003 provide the following:

i) Regulation 17 places a duty on all public bodies to *"have regard"* to River Basin Management Plans (and supplementary plans) in exercising their functions.
ii) Regulation 19 requires all public bodies to provide information and provide *"such assistance as the (Environment) Agency may reasonably seek in connection with its WFD functions …".*

Additionally, the Environment Agency Water Stressed Areas Classification of 2013 classifies water bodies according to their risk of environmental impacts as a result of overexploitation from abstraction and this shows the Yorkshire Water area to be classed as having a medium stress risk.

3. Humber River Basin Management Plan

3.1 The Environment Agency carried out Strategic Environmental Assessment on the Humber River Basin Management Plan (HRBMP). Section 3.2 of the SEA identified the importance of ongoing water efficiency measures in preventing deterioration of water quality. It states that all sectors with an interest in the water environment have a role to play. Para 3.1 of the main report of the HRBMP seeks for local government to consider urban diffuse pollution pressures when developing spatial plans and incorporate sustainable drainage schemes and water efficiency measures where practical and affordable. More specifically, para 3.2 calls for local government to set 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.

3.2 The HRBMP includes a programme of measures which are needed to improve the water environment by 2021. Para 3.3 notes that climate change will affect the future demand for water as well as its availability and quality. Rivers and groundwater water bodies are already under pressure. Demand for water is increasing due to population growth, urban development and land-use change. Climate change is expected to alter the frequency and distribution of rainfall,

increasing temperatures and increasing the frequency and severity of extreme weather events. Dealing with unsustainable abstraction and implementing water efficiency measures is essential to prepare and be able to adapt to climate change and increased water demand in future.

4. Natural Resources and Waste Local Plan 2013

4.1 In 2010 Leeds City Council carried out a Natural Resource Flow Analysis which found that overall water consumption within Leeds is higher than average. This was the driver for the creation of a water efficiency policy in the Natural Resources and Waste Local Plan and in 2013 the following policy was adopted:

WATER 1: WATER EFFICIENCY
All new developments should include measures to improve their overall water efficiency where appropriate. This will be achieved through a mixture of measures to use less treated water and reduce wastewater such as:
- **Sustainable urban drainage systems,**
- **Rainwater collection and storage,**
- **Grey water recycling and storage systems, and**
- **More absorbent surfaces for water drainage**

4.2 Whilst this policy encourages water efficiency the issue of water consumption is largely dealt with in the Core Strategy through the EN2 policy requirement to meet higher standards of the Code for Sustainable Homes and BREEAM. The abolition of the Code for Sustainable Homes has meant that there is no specific mechanism for Leeds to require measures to use less treated water in new residential development. Consequently, the wording of EN2 has been amended to include a daily water consumption restriction for new residential development that reflects the tighter optional standard in building regulations.

The proposed EN2 policy wording states:

Residential developments of 10 or more dwellings (including conversion) where feasible are required to meet a maximum water consumption standard of 110 litres per person per day.

5. Additional Benefits of a Water Consumption Policy:

i) Reduced carbon emissions - research by the Energy Savings Trust in 2013 shows that hot water use contributes £228 to the average annual combined energy bill and emits 875kg of CO2 per household per year (see http://www.energysavingtrust.org.uk/sites/default/files/reports/AtHomewithWater%287%29.pdf). The Energy Saving Trust reported in its Quantifying the Energy and Carbon Effects of Water Saving summary report (2009) that 89% of all emissions arising from the domestic water supply is attributable to use within the home (the remaining 11% from water treatment/supply processes). Consequently, it follows that water efficiency will help Leeds to meet its carbon reduction targets.

ii) Reduced customer bills – this includes both water and energy bills.

iii) Resilience to climate change – i.e. enabling Leeds and Yorkshire as a whole to cope better in the event of more frequent/extreme drought.

iv) Reducing water use to make more water available for future growth in housing or industry.
v) Cost of retrofitting (putting in water efficiency measures to housing after it is built) is greater than including water efficiency in the original build.

6. Written Ministerial Statement, March 2015

6.1 The Written Ministerial Statement issued on 25 March 2015 sets out the government's intention for the setting of technical standards for new housing. The new system comprises new additional optional Building Regulations on water and access.

6.2 Paragraph 13 of the Government's guidance on the optional technical standards states that the local planning authority may consider whether a tighter water efficiency requirement for new homes is justified to help manage demand. The tighter optional standard within building regulations for water consumption is 110 litres per person per day.

6.3 The two standards for water consumption are explained as follows in the Building Regulations:

> "Water efficiency G2. Reasonable provision must be made by the installation of fittings and fixed appliances that use water efficiently for the prevention of undue consumption of water. Water efficiency of new dwellings 36.—(1) The potential consumption of wholesome water by persons occupying a new dwelling must not exceed the requirement in paragraph (2). (2) The requirement referred to in paragraph (1) is either— (a) 125 litres per person per day; or (b) in a case to which paragraph (3) applies, the optional requirement of 110 litres per person per day, as measured in either case in accordance with a methodology approved by the Secretary of State. (3) This paragraph applies where the planning permission under which the building work is carried out— (a) specifies the optional requirement in paragraph (2)(b); and (b) makes it a condition that that requirement must be complied with. (4) In this Part, "new dwelling" does not include a dwelling that is formed by a material change of use of a building within the meaning of regulation 5(g)."

7. Cost

7.1 The proposed policy approach in EN2 is not considered to be a barrier to delivery. Achieving a water efficiency standard of 110 litres per person per day is the equivalent of the standard at Code Level 3 of the Code for Sustainable Homes. The current Core Strategy EN2 policy seeks Code Level 6 and the viability study at the time showed it to be economically viable. The standard now being sought is less onerous than the existing policy. Nether-the-less the policy change has been viability tested using a median cost of £220 per property in the Economic Viability Study Update, January 2018 (CD2/8). This cost is considerably more generous than the cost figures provided by the Environment Agency which estimates the cost of achieving 110 l/p/d compared to achieving the baseline building regulations standard (125 l/p/d) as just £0 - £9 per dwelling. The Economic Viability Study Update,

January 2018 (CD2/8) shows the EN2 water consumption standard to be viable.

7.2 The proposed Policy wording for EN2 would allow the optional standard of 110 litres per person per day to be applied to all housing development in Leeds thereby ensuring that efficient use of water is an integral part of future growth in the District.