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18 May 2023

Dear David,

### **Water company asset management**

To support the National Infrastructure Commission's Baseline Report for our second National Infrastructure Assessment we issued an open call for evidence. In response issues were raised about asset replacement rates in the water sector. Following up on this, I wrote to water companies in England requesting information on how they manage underground asset renewal and replacement.

The Commission received responses from twelve of the fifteen companies, which covered 100% of the sewer network and over 90% of the water network. The responses showed that companies have different approaches to how they determine when to replace or repair assets. Some of these are backward-looking, focusing on past failures rates, while others take a more forward-looking whole life approach.

In Price Review 19, Ofwat funded companies based on plans to renew water mains at a rate of 0.4 per cent per year which, if maintained across assets of a uniform age and considering the rates of renewal seen since the 1990s, would imply asset lives of up to 180 years. The data water companies supplied to us suggested that asset replacement rates need to be significantly higher. However, the different approaches taken by companies to estimate asset lives means the Commission cannot make firm conclusions on what the appropriate level of replacement should be.

The Commission recognises that asset age on its own is not the best indicator of asset condition. Asset deterioration is dependent on a range of factors including the interaction between soil type and pipe material and company asset management interventions. The Commission also recognises that it is challenging to establish the appropriate replacement rate as Ofwat will not want to incentivise asset replacement when it is not needed. However, the metrics Ofwat uses to incentivise maintaining asset health and to understand industry performance when benchmarking efficient replacement rates in its base cost model – mains repairs, unplanned outages and sewer collapses - are lagging indicators. While they provide information about the condition of assets today,

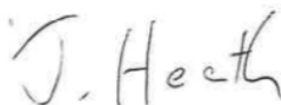
they do not on their own give insights into the future condition of assets because their only data point is the point of failure. At present there does not appear to be a comprehensive and consistent understanding of asset condition across the sector and how this may change in the future. A more complete view of asset health in the sector would support a multi-AMP view of the investment required to maintain asset health and, consequently, service performance and reliability.

We welcome the work Ofwat has done with companies on the Asset Management Maturity Assessment, and that Ofwat is gathering more data on asset health as part of the PR24 process. This information should be used to inform a more in depth and forward-looking understanding of asset health in future. The Commission believes that Ofwat should take a lead on asset health and, building on its work on asset management maturity, develop consistent forward-looking metrics for defining and measuring asset health. This could be underpinned by a regulatory mechanism requiring companies to develop a longer term and more in depth understanding of the health of their assets, which is used as the basis for investment proposals. This could be in the form of a licence requirement or an appropriate incentive mechanism.

A better understanding of long term asset health will enable the water sector to prepare for future climate resilience challenges. As set out in the Climate Change Committee's third Climate Change Risk Assessment, some water assets are particularly vulnerable to projected changes in climate. For example, water pipes will be more vulnerable to bursts caused by drought-related soil movement, increasing leakage rates. As the sector seeks to reduce leakage, a better understanding of asset health will also enable a higher level of preparedness for future resilience challenges. For service performance and resilience reasons, and the need to understand asset condition to enable multi-AMP planning, the Commission encourages Ofwat to play a leadership role and work closely with companies.

I would be happy to meet with you to discuss potential approaches to improving the sector's understanding of asset health further.

Yours sincerely,



**James Heath**  
**Chief Executive, National Infrastructure Commission**  
cc Sir John Armitt, Chair, National Infrastructure Commission,  
Iain Coucher, Chair of Ofwat