Ofwat Price Determinations

Competition and Markets Authority

The Cabot

25 Cabot Square

London

E144QZ

Dear Sirs

Ofwat Price Determinations

As a way of introduction, I have over 40 years in the water industry, I am currently a Visiting Professor at Exeter University. Previously Director for Water Consultancy and then Main Board Director of Atkins Consultants and I am a past President of the Chartered Institution of Water and Environmental Management and a Fellow of the Royal Academy of Engineering.

I have retained a specific interest in understanding and assessing the maintenance requirements for the water sector. It was based on this interest and experience I was asked to peer review the Bush-Earwaker Paper on Capital Maintenance referred to in paragraph 4.159 of the CMA's Provisional Findings.

In October 1999 I was asked by Water UK to report on Future Water and Sewerage charges 2000-2005 Draft Determinations, specifically the Implications for Capital Maintenance Expenditure. The rationale for this report was in direct response to the July 1999 decision by Ofwat to reduce companies' capital maintenance plans from £8.3bn to £6.2bn (at the price of the day), a cut of 25%.

In that report I identified a number of significant problems to Ofwat's approach, for example:

- No account for the need for increasing capital maintenance associated with aging assets
- Ofwat's serviceability criteria were backward looking, with no forward-looking assessment of future need, risking problems to be built up
- Capital efficiency assessment had not been robustly justified
- Customer support via surveys were ignored by Ofwat

In PR99 Ofwat prepared capital maintenance expenditure models, the conclusions from a review of these models (NERA) that '*The Ofwat Capital Maintenance models are substantially at odds with the technical knowledge of the industry. As constructed the models rely on the volume and mix of assets as explanatory factors. Key cost drivers such as asset age, vintage, utilisation and condition, and especially in condition sine 1992/93, have been excluded from the analysis*.'

In subsequent Price Reviews a forward-looking approach was adopted by the sector in the form of the Capital Maintenance Planning: A Common Framework, developed by UKWIR. This approach addressed the criticisms in my report and wider external criticism, for example the House of Common Environmental Audit, 7th Report. It also aligns with Ofwat own previous MD161 requirements.

The reason for highlighting these apparent flaws and the subsequent positive actions undertaken is that, upon review of the Ofwat PR19 Final Determination and the companies' Statement of Cases in this redetermination, there are clear parallels to the shortcomings I identified in 1999. I find this deeply concerning, especially in light of the expected future pressures on existing asset bases in light

of aging assets, the increasing importance of resilience, and the ever increasingly volatile climate conditions.
In the 20 years since my original report there has been a clear regression.

It is axiomatic that older assets require more maintenance. For instance an old car needs more maintenance than a newish car as more components near the end of their life. The same applies to elements of a water system. Whilst as the population increases and water standards become tighter, new assets are added, it is clear that, for almost all elements, assets are both increasing and ageing.

"*4.164 Ofwat said that it did not use an age-based assessment of capital maintenance because asset age did not directly correlate with asset performance*." Indeed, as an example there are some pipe systems, such as early ductile iron and PVC pipes, that age faster than other pipe systems. Thus age per see would not directly correlate with performance. Further pipe bursts can be triggered by heavy frost in winter leading to brittle fracture and by shrinkage in clay surround during summer droughts thus opening joints. But these are short term effects and must not be confused with long term pipe deterioration. Thus performance variation does not contradict the assessment that, as pipe system age, they deteriorate and require more capital maintenance.

"*4.163 Anglian said that its was reasonable to conclude that historical levels of capital maintenance would not be sufficient in future AMPs to ensure the continued serviceability of Anglian's asset base*." I agree.

The CMA provisional report states
"*4.181 We acknowledge Anglian's and Northumbrian's argument that Ofwat's cost assessment is backward looking and that potential issues with capital maintenance may be forward looking. This…may become more important. We therefore suggest that Ofwat considers developing indicators …enable it to enhance its analysis with a forward looking element…"* Indeed. But this issue is already important so it needs to be taken account of in the current PR.

Upon review of the CMA's provisional findings, I consider that the CMA should go further than its current position (para 4.181). The CMA's Final Determination should provide an opportunity to clearly commit the sector to again work together to develop an approach which is forward-looking, and asset focussed, which is used to complement the wider regulatory tools for setting allowances such as econometric models. I believe the sector is well placed to develop such an approache in advance of any subsequent Price Reviews.

Based on this representation the CMA could modify the provisional finds to:

Based on the representations we require the sector to collaborate to jointly develop a framework that establishes the capital maintenance requirements based on sound engineering and asset management principles and robust forward looking econometric models and takes into account climate change and other long term scenarios. These should be in place by April 2022 to inform PR24.

Yours sincerely

Professor Chris Binnie MA, DIC, HonDEng, FREng, FICE FCIWEM