Memo

From	Subject	Date
Ralph Beuken	Asset replacement in the Netherlands	18 April 2025
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UK Competition and Markets Authority	Mirjam Blokker (KWR), Matthew Humphrey (Anglian Water)	1/2

Dear Madam/Sir,

I was asked by Matthew Humphrey of Anglian Water to share insights from the Netherlands regarding the need for the replacement of drinking water mains.

In the Netherlands, drinking water companies are publicly owned by municipalities and provinces. The legal framework governing these companies is established by the Drinking Water Act and its associated regulations. The Act mandates that the owner of a drinking water company must ensure the continuous supply of high-quality drinking water to consumers and other customers, in sufficient quantity and at adequate pressure, in the interest of public health. The Drinking Water Decree further specifies that core processes—including the transport and distribution of water—must be incorporated into a comprehensive risk assessment and management system. Dutch water companies actively take measures to safeguard drinking water quality, which fundamentally depends on a well-maintained network. From an asset management perspective, this entails maintaining low leakage levels, carrying out swift repairs, proactively replacing underperforming mains, and implementing information systems to monitor network performance

Risk assessments for water mains consist of several key components. Burst registration is used to identify individual mains that are more susceptible to failure and to define sub-groups of mains that underperform. This data also highlights consumer groups frequently affected by supply interruptions, providing input for calculating customer minutes lost. Risk assessments additionally consider specific high-priority areas, such as offices, schools, and hospitals. Beyond service interruptions, the risk of damage from pipe failures is also evaluated. Water companies are required to demonstrate that risks to public infrastructure—such as dykes, railways, and highways—remain within acceptable limits. In recent years, numerous urban infrastructure initiatives have led to frequent excavation of the underground environment—for example, sewer upgrades, electricity grid reinforcement, and the installation of district heating systems. Water companies actively collaborate with other stakeholders to minimize disruption to citizens, reduce costs, and ensure that their own replacement priorities are achieved.

The Netherlands consistently ranks among the highest internationally in terms of drinking water quality and reliability. All households are connected to the water supply and are metered. In 2020, the volume of non-revenue water (NRW) was 550 m^3/km/year (EurEau, 2021). Thanks to high treatment standards and minimal leakage, Dutch drinking water companies are able to supply water without the use of residual chlorine (ILT, 2024). The timely replacement of underperforming mains is a key element in maintaining network integrity. According to EurEau, the average renewal rate is 0.6% of the network length per year (EurEau, 2021). The Environmental and Transport Inspectorate (ILT) oversees the sustainable operation and resilience of the Dutch drinking water supply. In the summary of its latest benchmarking report (ILT, 2023), it states: “On average, 0.60% of the pipeline network per year has been renewed. For the next 10 years, the drinking water industry expects an average annual renewal rate of 0.74%. Water companies will therefore need to increase investments in the coming years to meet the anticipated replacement requirements. Postponing or failing to carry out such investments—whether for

replacement, expansion, or renewal—could negatively impact the security of supply for the respective drinking water company."

Ralph Beuken,
Researcher at KWR Water Research Institute

ILT (2024): Drinkwaterkwaliteit 2023, Inspectie Leefomgeving en Transport.
EurEau (2021): Europe's Water in Figures, An overview of the European drinking water and waste water sectors.
ILT (2023): Prestatievergelijking drinkwaterbedrijven 2022, Inspectie Leefomgeving en Transport.

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