This year, we launched our new strategy to address these challenges. By supporting long term thinking over the next quarter of a century the strategy aims to put us in the best possible position to support a cleaner, greener and more prosperous society. We are encouraged by the broad endorsement from our stakeholders, the profile given to water and wastewater infrastructure in the ‘New Decade, New Approach’ agreement for the re-established Northern Ireland Assembly and the high profile given to our challenges by our new Minister for Infrastructure.

It’s time to fix our broken funding model

Water companies sit at the heart of society and provide an essential service with considerable health dimensions. Our abstraction and sewage treatment also have major environmental consequences, and our infrastructure is a foundation for sustainable economic growth.

Despite this, Northern Ireland is unique within the UK as the only region with a broken funding model, where the regulated water utility is unable to fully implement the economic regulator’s final determination due to public expenditure constraints. Against this backdrop, NI Water has continued to successfully deliver private sector levels of performance and efficiency. This, however, cannot continue with sustained and significant underfunding. Our PC15 business plan (2015-20) stood with a constrained funding of £990m against a £1.7bn requirement. This has been further constrained by public expenditure cuts over PC15. The underfunding has already resulted in a public sector development, with new housing and businesses being unable to connect to our sewerage system in major parts of our cities and in over 100 towns.

Underfunding over PC15 is part of a generational underinvestment in the sewerage infrastructure, which adds complexity and significant inefficiency to the delivery of longer term asset resilience, risks deterioration in levels of service for customers, and is leading to inadequate environmental protection through increased sewer flooding and pollution.

Unless we start properly investing in our failing wastewater infrastructure we will have to make difficult choices about our economy and our natural environment. The scale of the problem requires a major, inescapable step change in investment. Over £2bn is required in our next business plan period PC21 (2021-27), including £0.5bn for the Living with water programme to address strategic drainage in Belfast. NI Water’s Board and Executives continue to work with stakeholders to identify a means to fund this vital investment. Although various infrastructure funding models exist across the UK and Ireland, a solution for Northern Ireland infrastructure, which adds complexity and significant inefficiency to the delivery of longer term asset resilience, risks deterioration in levels of service for customers, and is leading to inadequate environmental protection through increased sewer flooding and pollution.

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Building ‘blue green’ infrastructure

In the context of future uncertainty, the best approach may not be the obvious one and will involve more diverse infrastructure. The solution may not be additional carbon intensive ‘grey’ infrastructure, which is heavily reliant on energy, chemicals and concrete, but rather more ‘blue green’ infrastructure, which utilises nature’s ecosystem services to filter our raw water, slow flood water and store carbon. It may also include new infrastructure based on different technologies than the existing network.

We must better manage, understand and invest in water catchments, integrate land management and flood defences with water and sewerage, and do all this in ways that restore and enhance nature and support cleaner economic growth. This will require avoiding contradictory economic and environmental regulation and policy.

Getting smarter

Every aspect of society is becoming more digitalised and connected as the onset of new technologies revolutionises day-to-day life and business. Cutting-edge techniques underpinned by the use of data analytics, sensors, artificial intelligence and robotics is helping to build resilience against the effects of climate change, which will continue to make floods and droughted more likely. Reducing leakage will also become more and more important in the future. We lose around 25% of drinking water through leaks across our 27,000 km of underground water pipes. Our PC21 business plan sets out how we can embed the latest technologies such as satellite monitoring to drive down leakage.

Using less drinking water

We also need to consider water efficiency. We use around 70% more water today than we did 40 years ago. As a society, more needs to be done to reduce our water footprint by making our homes and buildings more water efficient and better understanding the hidden water in the products we buy. By designing our homes to use ‘green water’ such as recycled water, storm water or rainwater to flush our toilets, wash our clothes or for outdoor use, the average person could reduce their water usage by around 40% and NI Water’s total water demand by 25%. This can help further drive down leakage, our carbon footprint and increase water resilience, while also easing pressures on our sewerage infrastructure.

Completing the picture on wastewater compliance

We recognise the need to improve how we measure wastewater compliance. The current model is based on pre-announced rather than un-announced regulatory sampling at the treatment works and the reported wastewater compliance doesn’t incorporate flow compliance for the wastewater treatment works or the sewer network. This provides an incomplete picture of environmental compliance and protection. We are working with the Northern Ireland Environment Agency and other stakeholders to reform the wastewater compliance model to improve compliance across the whole wastewater system.

Towards net zero

The concentration of carbon in the atmosphere has been increasing remorselessly for the past quarter of a century. Almost everything we do from the moment we wake up to going to bed is carbon intensive. A key development over the past year has been the legislated target for the UK to reach net zero greenhouse gas emissions by 2050. Our strategy aims to decarbonise our business by taking a sustainable consumption path and we recognise that we can play a key role in supporting the wider societal shift to a decarbonised circular economy through areas such as battery storage, green charging infrastructures, hydrogen heating for homes and businesses and energy from waste. Biological carbon in the soil, peat bogs and forests across our water catchments can also act as major carbon sinks.

Partnering for prosperity

We can’t solve these challenges on our own. Working with a range of stakeholders across the public, private and third sectors is the only way in which we can develop a joined-up and holistic approach to help our society meet the challenges of the 21st century. We support the National Infrastructure Commission’s call for a National Infrastructure Strategy to take a long term perspective beyond the immediate spending review period and set out the Government’s expectations for infrastructure funding and policy up to 2050.

Not all heroes wear capes

Finally, I would like to pay tribute to our people. In late 2019/20 we faced one of our biggest challenges to date with the onset of Covid-19. We activated our business continuity plans and pandemic major incident plan, and successfully maintained the supply of essential water and wastewater services. As essential workers, my colleagues have my utmost respect and admiration, and they give me great confidence that we can successfully meet any challenges that we face.

Dr Leonard J. P. O’Hagan CBE DL
Chairman
25 June 2020