SUSTAINABLE WATER CONFERENCE

18 SEPTEMBER 2018

Mike Waite, FWR Water Supply Co-ordinator

Water and Wastewater Treatment organised its 7th annual water conference, focussing on *Sustainable Water*. With 18 experts taking the platform, it was an intensive yet very informative day and the Birmingham Conference and Events Centre proved an excellent venue. It was innovative in its use of SLIDO, an app which allowed live votes from the audience to questions posted during the meeting. One negative was the use by some presenters of PowerPoint slides with too much information and too small to read!

The first session, **Protecting our future: The role of the Water Industry** started with Sarah Hendry (Defra), who addressed **the government's 25 year plan to improve the environment**. The plan aims to leave the environment in a better state than it was at the start of the plan and deliver a green Brexit. The plan is the first such programme in the world to use a Natural Capital approach which considers not just costs but also puts a value on the benefits such as amenity, wildlife and nature. It proposes an independent statutory body to hold government to account for upholding environmental standards and oversee the plan's delivery. Sarah referred to EnTrade which is a tool that can make allocation of funding more efficient, by providing an online platform to allow buyers and sellers to come together to identify the most cost-effective combination of measures to enable a specified environmental outcome. She also outlined the work of Water Resources East, a partnership looking at the water needs of the East of England, rounding off with examples of innovation such as the Refill campaign for free tap water refilling, and the Yorkshire Water commitment to plant one million trees.

Graham Southall (Northumbrian Water) then spoke about the **advantages of partnership working as seen in the Northumbrian Integrated Drainage Partnership**. The partnership, which involves Northumbrian Water, the Environment Agency, and the region's 13 local authorities, takes a catchment based approach and aims to be development-enabling rather than development-restricting. It has studied 20 areas to date and come up with 10 schemes to invest £9 million and protect 1,000 homes, and has a 10-year programme which could protect up to 20,000 properties.

The second session **Collaborative approaches to environmental challenges** was opened by Pete Fox (EA) who spoke about **modernising the regulatory framework and taking a collaborative approach**. In 2016, 86 per cent of river water bodies had not reached good ecological status, and pressures on the water environment are likely to increase. He stressed that if we get things wrong, the environment suffers and remediation can be a long and expensive process. He suggested that the regulatory framework needs modernising and some flexibility is appropriate, for example, allowing flexible permits for phosphorus where companies can show that receiving waters will not be adversely affected. He then gave examples of natural flood management measures such as leaky dams, tree planting, off-stream storage and saltmarsh restoration.

Sally Watson (Mott MacDonald) emphasised **the value of collaboration which can foster innovation**, illustrated by a more detailed description of Water Resources East (WRE), which does not replace water company planning frameworks but provides a strategic regional framework within which detailed company plans can be developed. It bridges the gap between focus on water utility plans and focus on river basin management

plans. WRE has three groups: leadership, delivery and technical steering, and has a five-stage decision-making process. For more details see http://www.waterresourceseast.com

Ed Mitchell (Pennon Group) then spoke about rising to **the challenges of sustainable water through cross-sector solutions**. He described how the Environment Agency had given the go-ahead to see if phosphorus could be managed in the Axe catchment by land management rather than by treatment. He went on to explain that by providing in-system storage such as green roofs, swales, and ponds, a natural capital benefit of £40 million can be achieved with a cost/benefit of 1:3. However, public support is needed along with better design of developments.

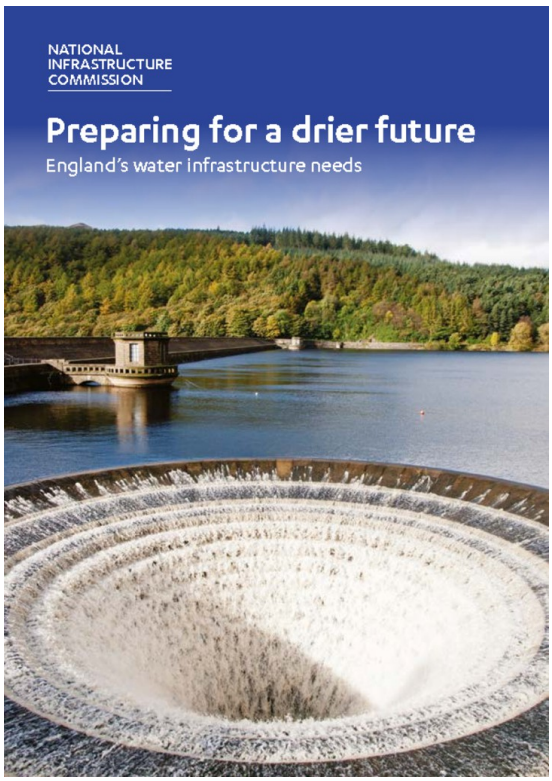
Ben Earl (Southern Water) described the company's **Target 100, a plan to reduce per capita consumption to 100 l/day**. This can only be achieved with the support of customers and he outlined some of the many steps the company has been taking to involve and incentivise customers. It has a programme of home visits and the company itself has been fixing leaking toilets, providing water butts, adjusting service valves, and providing smart meters on request. It also supplies kits to convert single-flush toilets to dual-flush. And rather than imposing penalties for failure to reduce consumption, it is supporting community projects where consumption is reduced.

Hordron Clough, Little Don River. Photo © Stephen Horncastle (cc-by-sa/2.0)

Session 3 addressed **Putting sustainability at the heart of decision-making**. Yvette de Garis (Thames Water) discussed **the steps being taken to tackle the problem of plastics in water**. The government has a plan for zero avoidable plastic use by 2042. One problem is that materials go into sewers which shouldn't, and as part of its emerging risks programme, Thames Water is looking at microplastics. In-house it is avoiding the use of plastic beverage bottles, providing aluminium bottles and free water refills and surcharging persons not providing their own re-usable cups when buying drinks. Yvette mentioned that UKWIR has developed a flushability protocol to show that flushability means 'suitable to flush' rather than 'will go down the loo'.

Hannah James (Yorkshire Water) and Petrina Rowcroft (AECOM) then gave a joint presentation describing **how sustainability accounting is used for evaluating schemes**. This means that account is taken of six 'capitals': Financial, Manufactured, Natural, Human, Intellectual and Social. As an example, the Little Don Recreation Plan in Yorkshire was outlined and costed. After evaluating options, including active recreation, active biodiversity, sustainable farming and sustainable forestry, applying sustainability accounting has shown that active recreation offered the maximum benefit.

Matt Crossman from the National Infrastructure Commission ended the session, explaining **the role of the Commission in supporting sustainable economic growth across all regions of the UK**, improving competitiveness and quality of life. The Commission has produced the report *Preparing for a drier future*. It suggests that in future in England there will be a need for the current 3,000 Ml/d to increase to 4,000 Ml/d to ensure long-term supplies. Over the next 30 years, if reliance is placed solely on emergency measures such as tankering, costs of *c*.£40 billion will be incurred, whilst building in resilience need only cost £21 billion. This could be achieved by halving leakage, thereby saving 1,400Ml/d, and reducing per capita demand to 1,18l/d. Even so, a further 1,300Ml/d will be required and this will require additional infrastructure and possibly greater use of water transfers. The report strongly advocates compulsory smart metering. Climate change will increase the risk of both drought and flooding; at present one million homes have a 1% risk of flooding while 1 in 4 homes are at risk of drought before 2050. The report has been submitted to government and a formal response is awaited.



The final session of the day was devoted to **Sustainable Water in Action: Driving Innovation.** Steena Nasapen-Watson (Northumbrian Water) talked about **Flood risk and resilience** and described the company's Rainwise strategy to reduce risk of flooding to properties by diverting rainwater from the sewer network. The Northumbrian Integrated Drainage Partnership has been established and is ranking risks of flooding in the various drainage areas. High-risk areas are undergoing a jointly-funded study, balancing short-term needs with longer-term strategic planning.

Philip Briscoe (Rezatec) then outlined **how satellite data can be a useful tool for resource management**. He showed examples of satellite data use for mapping diffuse pollution risks within catchments, modelling sensitivity to possible pollution loads, preparing for risks of climate change in cities, and identifying land for possible offsetting of flood risk.

The meeting was rounded off by a presentation from Guy Thompson (Wessex Water) on **EnTrade**, a platform which enables buyers of environment improvements to invite bids from potential sellers of services. To date, Wessex Water has engaged with 97 farmers in 14 schemes involving £350k to remove 193 tonnes of nitrate across 4,500 hectares in 520 fields. This scheme enables farmers and landowners to be incentivised and recompensed for environmental improvements. Satellite and aerial imagery, along with site visits, can verify the actions taken and the benefits accrued.

As you can tell, I left the conference with plenty of information to digest on my way home!