

QUESTIONS FOR ENVIRONMENT AGENCY, SEVERN TRENT AND ANGLIAN WATER – ENVIRONMENT AND CLIMATE CHANGE OVERVIEW AND SCRUTINY COMMITTEE

The Environment and Climate Change Overview and Scrutiny Committee would like to understand the Environment Agency's, Severn Trent and Anglian Water's approach to river, water courses and water body quality and water resource management. This includes issues such as Leicestershire's (excluding Leicester) rivers ecological and chemical status, storm overflows, raw sewage, and water leakage, especially in relation to climate change and nature recovery.

In particular the Committee would welcome a response to the following questions:

Background

- 1. What are your respective roles and responsibilities in regard to river, water course, water body quality and water resource management within the water/river sector.**

Anglian Water was the first major utility to enshrine our purpose in the fabric of our company constitution. We work to bring environmental and social prosperity to the region we serve through our commitment to Love Every Drop.

We are the largest water and water recycling company in England and Wales by geographic area. We supply water and water recycling services to almost seven million people in the East of England area.

We are responsible for supplying clean drinking water to more than four million people, and recycling water from more than six million people. As part of this, we clean a billion litres of used water in over 1,000 water recycling works, every single day. Once it's clean again, we return it back to nature.

We control and maintain 38,185 km of pipes, look after 3,300km of rivers and clean beaches all along our coast.

The quality of drinking water is regulated by the Drinking Water Inspectorate, whilst the Environment Agency controls the amount of water we take from the environment and monitors the quality of the water we return.

- 2. Please set out local Leicestershire context, facts and figures, different metrics, historic trends, sources of pollution, relative contributions, how data is gathered and collated.**

Anglian Water provides water and sewerage services in the LE16 postcode area, sewerage services to some properties in the LE7, LE8 and LE17 postcode areas and water services to a handful of properties in LE14 and LE17.

The area is split over two District Metered Areas (DMA), South Witham and Rockingham.

Further details are provided in response to the specific questions below.

Environment Agency

Questions 3-8

3. What is the current chemical and ecological status of Leicestershire rivers, water bodies and water courses? Why is this and what are the key risks to Leicestershire rivers?
4. What is the Environment Agency doing to improve the chemical and ecological status of Leicestershire rivers to reach 'good standards' by 2027 as set out in the Water Framework Directive?
5. How many serious water pollution prosecutions were recommended in Leicestershire in the last 3 years? How many were pursued and what was their success rate?
6. As environmental regulator for the discharge of liquids and waste what data for storm overflows and pollution incidents do you have, and what are the reasons for the incidents?
7. How do you monitor water companies and storm overflows reporting?
8. What programmes, plans, actions and investment are being undertaken and planned over the next five years to improve river water quality in Leicestershire?

Severn Trent Water / Anglian Water

- 9. What is the data for water leakage in Leicestershire and what are the response times that residents can expect? To include any information on fines.**

Anglian Water has one of the best leak track records in the country, repairing around 30,000 leaks every year, many within 24 hours.

Data from 1 April 2017 until 31 December 2022 shows that the South Witham DMA had a leakage level slightly above average for Anglian Water of 8.7m³/km/day. This figure is the same as the average leakage level for the UK.

Figures for the same period for Rockingham show that this DMA had a low leakage level of 1.15m³/km/day.

There are no fines information relating to leaks as leakage is not an offence.

10. Can you explain how you are tackling the issue of leakage from the water supply system?

We work hard to tackle leakage across our network and are proud to lead the water sector with water lost per kilometre at half the national average. We are particularly proud that during 2021-22 we delivered our best-ever leakage performance, surpassing the stretching target set by Ofwat and delivering the equivalent of five years' worth of leakage reduction in a single year.

We are sharing our expertise with others through the Water UK Public Interest Commitment, sponsored by our CEO, Peter Simpson.

As a frontier company with consistently strong performance, it gets incrementally harder year on year to find new ways to reduce leaks.

But we're determined to keep pushing boundaries and are investing millions of pounds in advanced technology. This investment includes:

- The world's largest fixed network hydrophone monitoring system – We now have more than 7,000 advanced leakage sensors permanently installed on 15% of our large water supply network. This monitoring technology allows us to react quickly to leaks caused by changes in weather and demands on our system. This reduces the impacts on property and the environment – and means we are not solely reliant on leaks being visible and reported to us. We've also been working with data science companies to improve the accuracy of the calculated leak locations. By using machine learning we can improve the efficiency of our analysis, and as we build our library we hope to be able to work out the size of a leak from the desktop.
- Using fibre optics to find leaks – Inserted into live water pipes, fibre-optic cables coupled with patented analysis hardware can sense vibrations in the water created by a leak. With the help of an on-board camera, we can survey up to 1km of underground pipe at a time, which not only helps pin-point leakage, but also gives us a comprehensive asset condition survey so we can make informed investment decisions. This technology also provides the opportunity to deliver broadband services to remote locations in our region, supporting the delivery of our purpose to communities.
- Pressure management – We are managing the pressure in our water systems, balancing between providing high pressure for our customers and a low-enough pressure in our pipes to reduce bursts. We're investing millions of pounds in pressure management and system optimisation in the period to 2025. Optimisation of our water systems using dynamic control systems ensures that we're operating them in the best possible way at all times. Working with innovative companies such as Optimatics, we use powerful analytics which run thousands of simulations to determine the best solution.
- Smart sensors pave the way for a digital twin – We're aiming to achieve full smart meter coverage of our network by 2030. In addition to customer meters, we're also investing in coverage of enhanced pressure monitors, noise loggers and condition

monitors for our most critical assets. These will form the backbone of our digital twin, a smart water system, which in turn will enable rapid innovation in processes that can unlock greater and sustained reductions in leakage levels.

- Satellite and drone technology – Using advanced satellite imagery and sub-surface long wave radio waves, we're working with an Israeli company using Japanese satellites to detect underground leaks. The patented analysis algorithms can differentiate ground water from chlorinated drinking water, particularly useful on long pipes that run through rural and agricultural land. In 2017 we were the first water company to successfully use drones to find underground leaks. Taking a bird's-eye view of the ground surrounding a pipe or an asset, we analyse the live video feed to observe different temperature patterns which can indicate an underground leak. Last summer during the drought, we took the opportunity to use drones again, finding and fixing leaks by spotting areas of unusual foliage growth.

11. What data do you have for sewer overflow discharges (eg. events, dates per year, volume treatment flow and event duration) in Leicestershire?

If it rains heavily, our sewers can become inundated with far more water than they were designed to cope with. As part of their design they have safety release valves known as Combined Storm Overflows (CSOs), which take pressure off the system by releasing the excess water into rivers and the sea. CSOs protect homes and businesses from flooding because otherwise the system would back through toilets, drains and manholes. Because they operate after heavy rainfall, we know the vast majority of what comes out of storm overflows is rainwater.

Sewers have not been built like this for decades, and each of our CSOs is subject to a permit issued by the Environment Agency (EA).

Across our network 75% of our CSOs are fitted with an Event Duration Monitor (EDM), these monitors tell us if, and for how long, our CSOs discharge for. This enables us to identify CSOs which are spilling too frequently and to invest accordingly to protect the environment. By the end of 2023 we will have fitted all CSOs with an EDM.

We publish details of the locations of our CSOs and our EDM data on our website –

<https://www.anglianwater.co.uk/services/sewers-and-drains/storm-overflows/improving-rivers-and-coastlines/>

and here <https://www.anglianwater.co.uk/services/sewers-and-drains/storm-overflows/>

In terms of pollutions, the table below summarises the incidents that have taken place in Leicestershire over the last five years:

Date reported	Location	Incident catchment	Pollutant	Cause	Source site
15/8/2017	Welland Park Road, Market Harborough	Welland	Grey water	Blockage in foul sewer, manhole overflowed	Outfall in Welland Park
23/10/2018	Little Bowden / Rookwell Drive, Market Harborough, LE16 8BG	Welland	Grey water	Possible leaching from unlined section of the sewer	Laughton Park
20/3/2021	Kibworth Beauchamp / Rectory Lane, Kibworth, Leicester, LE8 0NW,	Langton Brook	Crude sewage	Sewer blockage causing Sanitary Sewer Overflow (SSO) discharge during non-storm conditions	Meadowbrook Road SSO
2/8/2021	Little Bowden / Rookwell Drive, Market Harborough, LE16 8BG	Jordan	Crude sewage	Blocked sewer seeping into river	Foul sewer network

12. What programmes, plans, actions and investment are being undertaken and planned to prevent leakages and storm overflows within Leicestershire?

We have a companywide leakage strategy and have an outstanding performance on preventing and tackling leakage. As part of this, we spend £14 million per year finding and fixing water leaks.

In terms of CSOs, our AMP7 agreed investments for 2020-25 include the following investment in the installation of EDMs in Leicestershire:

Location	Investment
East Langton Sewage Treatment Works (STW)	£19,090.27
Weston by Welland STW	£19,090.27
Market Harborough STW	£14,929.14
Foxton STW	£14,804.53
Hallaton STW	£11,569.11
Knossington STW	£11,569.11
Tilton on the Hill STW	£11,569.11
Tugby STW	£11,569.11
Kibworth STW	£6,622.87

In addition, we are investing £805,960.83 in a storm tank at Market Harborough STW as well as £109,381.63 in improving storm tank capacity at Tilton on the Hill STW.

Both

13. How do partners work together to reduce water pollution, improve river water quality and tackle the areas of the biggest concern to the public such as storm overflow, raw sewage and water leakage?

In 2022, Anglian Water and Severn Trent joined together to form the [Get River Positive partnership](#), which comprises five key commitments to safeguard and improve river health in both companies' regions. The five commitments are:

- 1. Ensure storm overflows and sewage treatment works do not harm rivers**
 - Eliminate all serious pollutions by 2025
 - Reduce less serious pollutions by 45%
 - Reduce spills from storm overflows to an average of 20 per year by 2025
- 2. Create more opportunities for everyone to enjoy our rivers**
 - Work with communities and local river groups to create more inland bathing water locations – meaning that 90% of the population will live within an hour's drive by 2030
 - Increase recreational access to our reservoir sites
- 3. Support others to improve and care for rivers**
 - Champion the Bill to ban wet wipes
 - Launch a fund for river groups and communities to monitor the health of our rivers
 - Partner with every river group, local Rivers Trust, farmers, landowners, highways authorities and others to tackle river health
 - Work with the National Farmers' Union of England and Wales to promote regenerative farming practices and provide access to green financing
- 4. Enhance our rivers and create new habitats so wildlife can thrive**
 - Work in partnership with others to ensure the successful re-introduction of iconic species such as salmon, the burbot and beavers in our region
 - Support the planting of 11 million trees by 2030
- 5. Be open and transparent about our performance and our plans**
 - Ensure all our performance and plans are easily accessible via our website
 - Assemble an independent expert panel to oversee our river health strategy, challenge of our work and identify opportunities for further improvement

14. How will the water elements within the Environment Act 2021 affect future responsibilities and actions on water and river quality?

We are ahead of the deadlines with regard to the Environment Act 2021 as we have been publishing our EDM data on our website for a couple of years now. The majority of the Environment Act relating to water company obligations is not yet in force but we are working with the Environment Agency on developing drivers for AMP8 (2025-2030) and beyond to deliver the requirements of the Environment Act and should have a plan confirmed by early 2023.

The final Environment Act Long term targets were published 16 December 2022 following a consultation phase over the summer 2022, which Anglian Water responded to. There are three final targets which impact river health:

- Halve the length of rivers polluted by harmful metals from abandoned mines by 2038, against a baseline of around 1,500 km.
- Reduce nitrogen (N), phosphorus (P) and sediment pollution from agriculture into the water environment by at least 40% by 2038, compared to a 2018 baseline.
- Reduce phosphorus loadings from treated wastewater by 80% by 2038 against a 2020 baseline.

The good news about these targets is that they acknowledge the responsibility of a number of polluters (metal mines, agriculture and water companies).

15. What are your mitigation and adaption plans in respect of the impacts of climate change?

Our region is the driest and lowest lying in the UK, with over 1,200km of coastline, making it more vulnerable than most to the effects of climate change.

Water resources are precious and rising temperatures across the planet will reduce them further, meaning the threat of more frequent droughts. Yet with rising sea levels and more intense rainfall, we are also at risk to more flooding.

With the growing population expected to rise by a further 1 million homes over the next 25 years, we understand the need to tackle this issue to safeguard our region's growth and are passionate about playing our part in the global effort to limit further climate change.

Our Climate Change Adaptation Report includes the following long-term ambitions and commitments which we are working towards to make the East of England resilient to the risks of drought and flooding:

- Be a net zero carbon business by 2030
- Invest £1.4 billion overall in water resources and the environment by 2025
- Halve our number of leakage incidents by 2050
- Start work on new low carbon treatment wetland schemes by 2025

- Reduce the proportion of customers supplied by a single source of water to 14 per cent by 2025
- Increase the coverage of customers with a meter towards 95 per cent, with all meters to be smart meters
- Reduce internal sewer flooding incidents for customers by 24 per cent by 2025

A copy of our Climate Change Adaptation Report is available on our website - [How we're addressing climate change \(anglianwater.co.uk\)](https://www.anglianwater.co.uk/our-approach/our-approach-to-climate-change)

In 2021, we also launched a routemap which sets out in detail how we will reach net zero carbon by 2030.

The routemap sets out how we'll reach our ambitious goal through a three-step hierarchy:

1. Managing and reducing emissions by installing monitoring equipment at four large Anglian Water sites to inform our plan on achieving net zero emissions by 2030
2. Decarbonising our electricity supply, vehicle fleet, as well as focusing on procuring green electricity
3. Removing or offsetting our residual emissions by planting 50 hectares of woodland on Anglian Water sites, exploring nature-based opportunities using wetlands, marshes and grasslands and working with landowners to develop land management schemes that avoid and remove emissions.

We're on track to generate 45% of our energy from our own renewable sources by 2025 and become a fully net zero carbon business by 2030.

More details about the roadmap can be viewed on our website:

[Our journey to reduce carbon emissions \(anglianwater.co.uk\)](https://www.anglianwater.co.uk/our-approach/our-approach-to-climate-change)

16. Is there anything the County Council can do by working with partners to help address any concerns?

We are very much open to partnership working with the County Council and would welcome an opportunity to maintain open communications about any issues concerning councillors. We can be contacted directly via our public affairs email address – public.affairs@anglianwater.co.uk

In addition, we would welcome the chance to develop officer to officer links regarding any common operational issues.

We already work very closely with officers from LCC on managing flood risk related issues, and in particular are working closely to try and address issues of surface water management across Market Harborough. This is in addition to our industry leading partnership funding programme which allows local authorities such as Leicestershire to apply for funding to remedy or mitigate issues which affect both the local authority and Anglian Water. More information can be found on our website

- <https://www.anglianwater.co.uk/environment/supporting-our-communities/flood-risk-partnership-funding-programme/>

We have also just published our draft Water Resources Management Plan 2024 for consultation. You can view the plan via the following link and we are inviting comments on the draft by 29 March 2023. [Water resources management plan \(anglianwater.co.uk\)](https://www.anglianwater.co.uk/water-resources-management-plan)

Finally, we would welcome any support the County Council can provide as Lead Local Flood Authority to influence central government in relation to Schedule 3 of the Flood and Water Management Act 2010 and the automatic right to connect and demand sustainable water efficient housing development.

17. What is the best way that residents can contact you to report or highlight incidents they are aware of in terms of water pollution and leakages?

Residents can call us at any time on 03457 145 145 to report an incident, including water pollution. Alternatively, they can contact us via our website - [Report an issue \(anglianwater.co.uk\)](https://www.anglianwater.co.uk/report-an-issue) or via our [Pollution watch](#) site.

We also have a 24 hour leakline telephone number - 0800 771 881.

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