Pollution incident reduction plan 2025-26

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Wessex Water
YTL GROUP

FOR YOU. FOR LIFE.

Foreword

Our commitment to achieving zero pollution incidents remains unwavering. We recognise that as a water company operating within nature's water cycle, our actions have a direct and lasting impact on the environment and the communities we serve. This responsibility is embedded in our purpose: *For you, for life*.

We are therefore disappointed that our pollution incident reduction efforts did not result in a decrease in total pollution incidents in 2024. We recorded 217 incidents, an increase from 125 in 2023. This rise was driven by two key factors:

- **Extreme weather:** Eight named storms in 2024 disrupted external power provision, which we were unable to mitigate at the time.
- **Excessive rainfall:** Following an already wet 2023, we experienced 132% of the long-term average rainfall, leading to significant flooding exacerbated by the region's geology.

Despite these challenges, we are proud to have achieved **zero serious pollution incidents** (Environment Agency Category 1 or 2), reflecting the effectiveness of our mitigation and response strategies.

Since launching our pollution incident reduction plan in 2020, we have continuously expanded its scope from foul sewers to include water recycling centres, sewage pumping stations, and water supply assets. Each year, we analyse root causes and introduce new initiatives, technologies, and process improvements to drive progress.

As we move into our new five-year investment cycle called Asset Management Plan number 8 or AMP8 (April 2025 – March 2030), we are committed to accelerating our efforts. We are building on successful interventions, adopting predictive monitoring, and collaborating with stakeholders to address emerging risks. Our focus remains on proactive, data-driven solutions that enhance asset performance and reduce environmental harm.

We know there is more to do. This plan reflects our determination to learn, adapt, and deliver lasting improvements for our environment and our communities.

Ashlea Lane

Director of Water Recycling
Wessex Water

Contents

Each year, we analyse root causes and introduce new initiatives, technologies and process improvements to drive progress

Background

Wessex Water Region Coverage:

- Dorset
- Somerset
- Bristol
- Most of Wiltshire
- Parts of Gloucestershire
- Parts of Hampshire

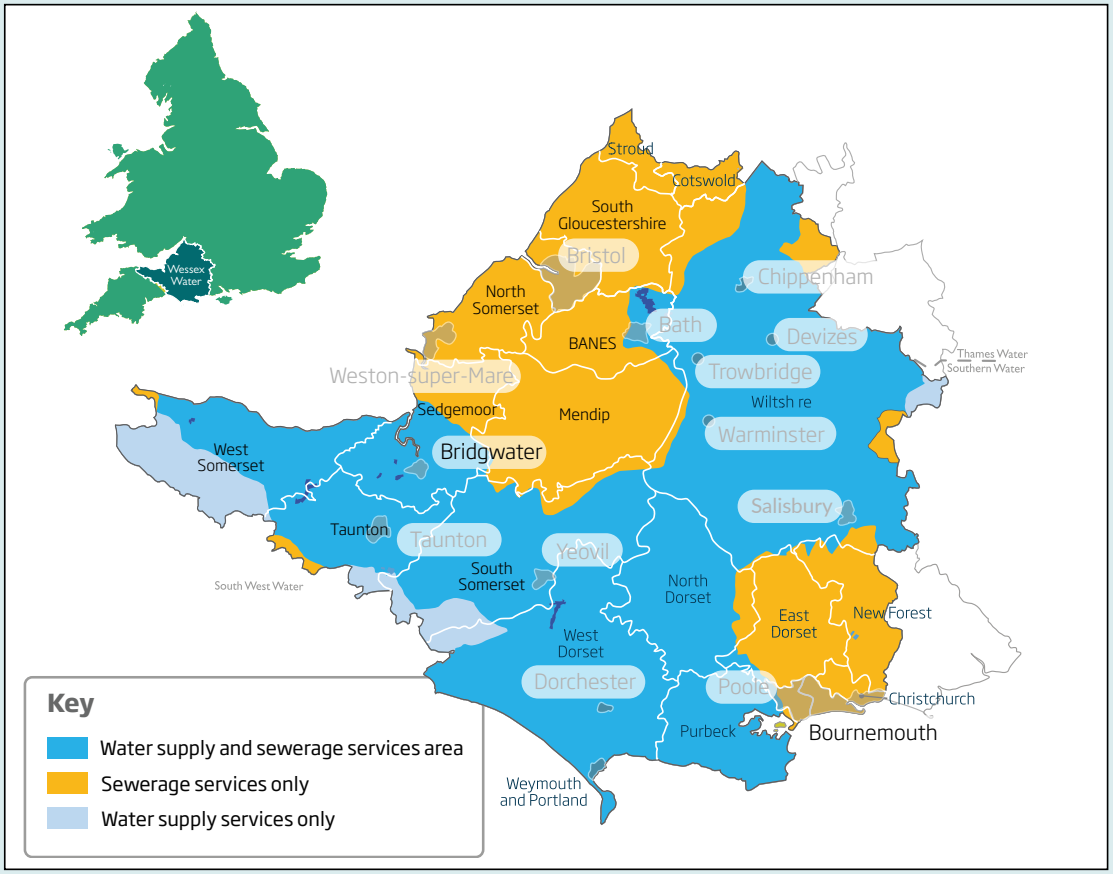
Environmental Significance:

- 470 Sites of Special Scientific Interest (SSSIs)
- 35 Special Areas of Conservation (SACs)
- 8 Areas of Outstanding Natural Beauty (AONBs)
- Over 6,200 designated Local Wildlife Sites
- 338 waterbodies

Service Provision:

- High-quality water services to 2.9 million customers

To deliver our essential services, we operate a comprehensive network of water treatment facilities, reservoirs, water mains, water recycling centres, sewage pumping stations, and sewer systems. Our top priority is the ongoing improvement, maintenance, and monitoring of these assets to ensure reliable, high-quality service for our customers while minimising our environmental footprint.



12,146 kilometres of water mains

2,172 sewage pumping stations

398 water recycling centres

35,138 kilometres of sewers

231 water sources and treatment centres

312 service reservoirs and water towers

Purpose

One of our four core strategic aims is to protect and enhance the environment. We view ourselves as an environmental services company, committed to ensuring that none of our operations cause harm to the natural world.

Our work is closely connected to the environment, and we recognise that many of our activities, if not carefully managed, could impact air, water, or land. We believe that any level of environmental damage is unacceptable, and we are dedicated to preventing it.

Protecting and improving the environment is essential to the sustainability and long-term success of our business. This commitment is reflected in our performance targets, outlined in our business plan for the previous Asset Management Plan (AMP) 7 period (2020-2025), and continues into AMP8 (2025-2030).

Our original pollution incident reduction plan document released in 2020 explains our historical and current pollution performance, the initiatives put in place to reduce pollutions and our plans to continuously improve. You can find a copy of this report at: https://corporate.wessexwater.co.uk/our-future/our-plans/pollution-incident-reduction-plan

This document provides an update on the fifth year (2024) of implementing our plan, it highlights work undertaken, our successes, and our key activities and opportunities to improve and develop the plan as we move into AMP8.

Our business plan for AMP8 allocated over half of the total planned investment, £1.3bn, on improving the way we manage wastewater. Most of which is ultimately to better protect the health of our rivers and seas. We have an important role to play in protecting and enhancing the water environment in our beautiful region. Key activities in this plan include storm overflow improvements and nutrient reduction.

Pollution incident reduction plan (PIRP) - our aspiration: zero pollution incidents

Our ultimate goal is to eliminate all pollution incidents. The successful delivery of our strategic and environmental plans will guide us toward achieving this aspiration. Every action we take through investment, innovation, and rigorous performance monitoring is designed to move us closer to a future where our operations have no negative impact on the environment.

In this document we have focused on three key themes:

- Customers and stakeholders
- Innovation
- Asset data and asset management

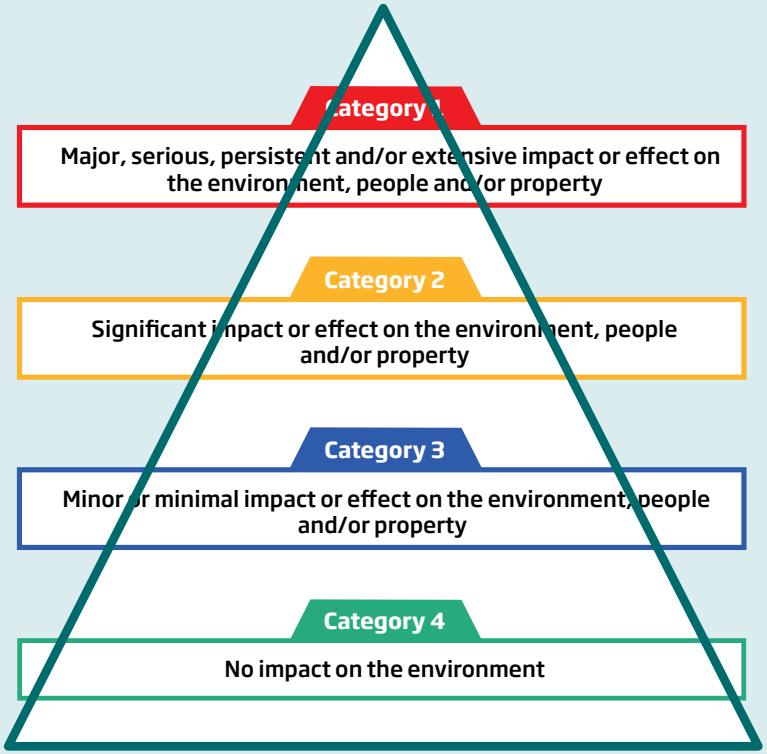
These key themes are reflected in our approach to the prevention of pollution incidents and also our response to pollution incidents when they do occur.

Pollution Targets

While our long-term aspiration is to eliminate pollution incidents entirely, we recognise that achieving this will take time. In the short term, we are focused on meeting the targets outlined in the Water Industry Strategic Environmental Requirements (WISER), which include:

- Ensuring that serious pollution incidents continue to trend toward zero.
- Minimising all pollution incidents (Categories 1 to 3) by 2025, with a goal of at least a 40% reduction across the industry compared to 2016 levels.

These targets guide our immediate actions and investments, helping us build momentum toward our broader environmental ambitions.



In 2025, the public confirmation of Environmental Performance Assessments (EPA) for the industry has been delayed meaning that we are unable to confirm our actual performance for 2024 in this way at the time of writing.

While we anticipate a 2-star rating against the EPA criteria for 2024 due to exceeding our total pollutions metric, we remain proud of the progress made throughout the year. Most notably, we achieved our target of zero serious pollutions (Category 1 or 2), demonstrating the effectiveness of our proactive approach in preventing incidents with significant environmental impact. In addition, we successfully met our targets for discharge compliance, self-reporting of pollutions, safe sludge disposal, and delivery of our WINEP programme - reflecting our continued commitment to environmental protection and operational excellence.

Despite a challenging 2024, we are committed to maintaining our focus on a trajectory towards zero pollutions.

What is a pollution?
A pollution is the introduction of contaminants into the natural environment that cause harm.

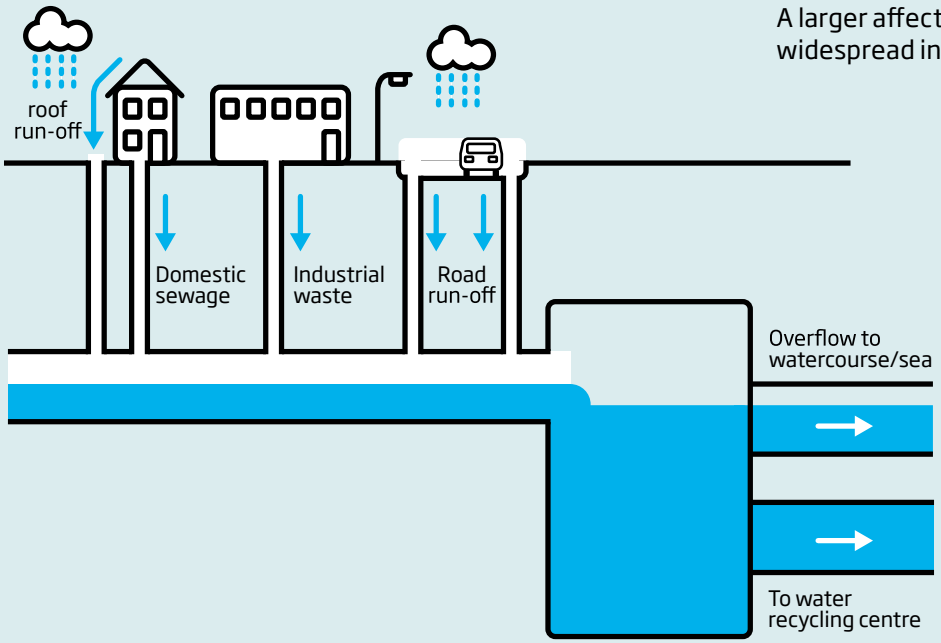
How this relates to Wessex Water
In our operations, pollution typically refers to the unintended release of:

- **Wastewater** – untreated sewage from our sewerage network or water recycling centres that has not met permit conditions and has an impact on the environment.
- **Potable water** – chlorinated drinking water from our clean water network and potentially silt or soil from ground disturbance related to a burst pipe.

These releases usually occur when something goes wrong within our network or treatment facilities, or when our sewers are misused.

Understanding 'spills'
You may have seen recent media coverage about environmental 'spills'. Most of these refer to discharges from our storm overflows, which occur when heavy rainfall causes the volume of water entering our sewers to exceed their capacity.

When these overflows operate as designed and within the terms of their permits, they do not constitute pollution. However, we are committed to improving the performance of these systems, and details of our improvement activities can be found in our specific storm overflows improvement plan. You can find more details at: wessexwater.co.uk/overflows.



Classification of pollutions
The EA classifies pollution incidents into four categories based on the severity of impact.

The Environment Agency (EA) considers several factors when determining the severity of a pollution incident. These factors are listed below and influence which of the four categories an incident falls into:

- **Duration of Incident and Impact**
  Longer-lasting incidents or impacts tend to cause greater damage.
- **Sensitivity of the Impacted Environment**
  Fragile ecosystems or protected areas are more vulnerable to harm.
- **Concentration of Contaminant**
  Higher concentrations of pollutants typically result in greater environmental risks.
- **Size of Area Affected**
  A larger affected area can indicate a more serious and widespread incident.

Pollution response and staff training

Our pollution response documentation outlines guidance that applies to all areas of our business. This guidance is supported by training to raise awareness of our procedures and ensure a timely and effective response to any potential pollution incident. All of our training, guidance and procedures are reviewed and updated regularly to reflect process improvements and best practice as well as highlighting focus areas. Our most recent procedure review includes new information on how our control room has the capability to remotely control some of our assets and how this can prevent a pollution from occurring at all or significantly reduce the duration of a pollution.

The initial hours of a pollution response are critical in minimising environmental impact. Therefore, it is essential that any staff member who may be required to attend a pollution incident is well-informed and prepared. Once we are notified of a potential pollution event, our aim is to attend the site within two hours, regardless of the time of day.

Our data shows that in 2024 we met this target 87% of the time. Instances where we don't meet this target are often due to periods of extreme weather where we have multiple sites to attend simultaneously.

During 2024, 505 of our colleagues undertook pollution prevention and awareness training. This training package is mandatory and refresher training is required every year. We routinely update our training and guidance material to reflect changes to our procedures, industry best practice and regulatory changes. We have designed individual training modules for each of our business areas with tailored information that directly links to the activities they are involved in on a day-to-day basis.

For all pollution incidents, water samples are collected and analysed at our UKAS-accredited laboratory. This process is carried out in strict accordance with our pollution response procedures to ensure accurate classification by the Environment Agency. Our rigorous approach ensures transparency and accountability in our operations.

Our pollution response procedure

1. **Detection**
   Pollution or potential pollution identified.
2. **Remote control detection**
   An increasing number of our assets can be controlled remotely from our control room. Where this is available, a person working in our control room will reset assets like pumps remotely, immediately.
3. **Rapid response**
   We attend within two hours to confirm and act.
4. **Notification**
   We report the pollution to the Environment Agency (EA) within one hour.
5. **Evidence collection**
   We gather samples, root cause data, and photographs.
6. **Containment**
   We take immediate action to stop the pollution.
7. **Mitigation**
   We put measures in place to reduce environmental impact.
8. **Review and prevention**
   We identify root causes and preventative actions.

Review of 2024

Reflecting on 2024

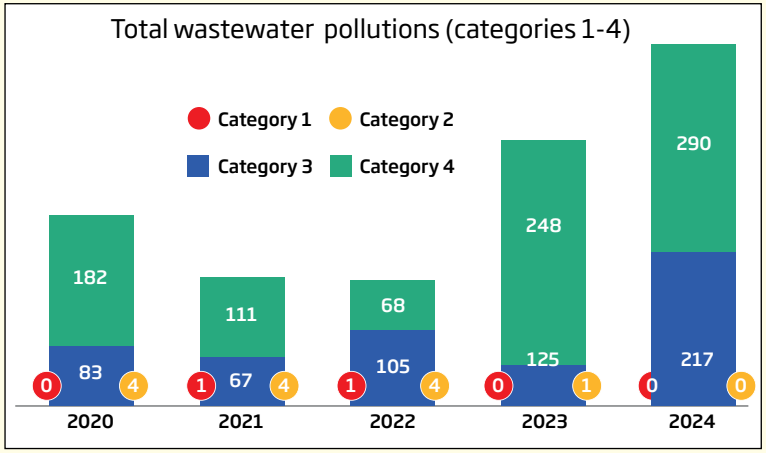
We continued our improving performance in terms of serious pollutions from 2023 into 2024 where we reached our aim of zero category 1 or category 2 incidents in the year. Zero is the only acceptable number of serious pollutions so we are pleased to have achieved it in 2024 and are committed to maintaining this in 2025.

However, we did observe an increase in total pollutions from 125 to 217* (including incident categories 1-3, see graph 1). This meant we did not achieve our total pollution target (less than 71 pollution incidents) for 2024.

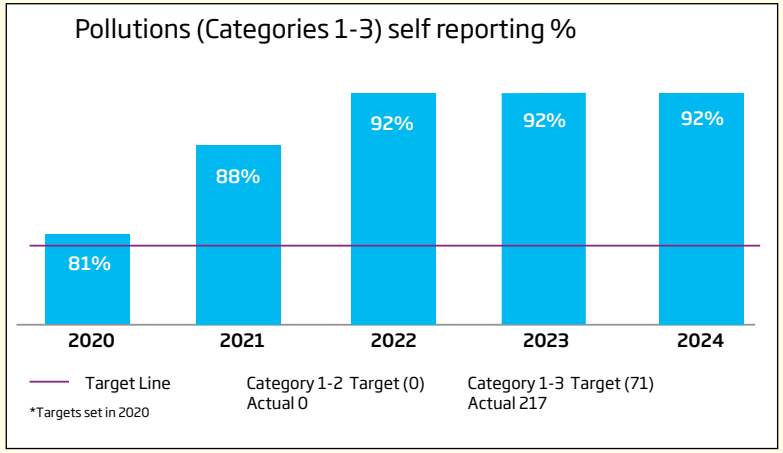
2024 saw the highest number of named storms (8) since this convention began in 2015. This resulted in significant power-related outages as well as high levels of rainfall across our region. Although rainfall was slightly above the long-term annual average in the UK (107%), the Wessex region saw periods of intense rainfall over relatively short durations, most notably during Storm Bert and Storm Conall (November 2024) which came in quick succession where, in one weekend, around three quarters of the whole month's average rainfall fell on the region. This wet weather was combined with very strong winds causing significant disruption to power and communication systems alongside significant network capacity issues when handling the short duration downpours.

While periods of intense rainfall provide important context for the rise in lower-category pollution incidents, we recognise we need to do more. We are focused on learning from every event. This is achieved through our Make It Right review process where a multidisciplinary team assess the circumstances of the pollution and determine improvements that could prevent a reoccurrence. These improvements are implemented at all relevant sites, not just the site that had the event.

***- 2024 EPA publication has been delayed at the time of writing so data for 2024 is based on our records rather than data published by the EA**.



Graph 1



Graph 2

Self-reporting

For every incident that is reported to the Environment Agency, it is logged as either Wessex Water (self-reported) or by someone outside of Wessex Water (not self-reported).

Self-reporting is a core organisational value that reflects our commitment to diligence, openness, transparency, and accountability. By taking ownership of pollution incidents, we create opportunities to reflect, learn, and continuously improve our environmental performance.

Our self-reporting rate improved slightly in 2024 up to 93% of all category 1-3 pollution incidents (graph 2). Throughout AMP7, we have exceeded the EA's target of 80% which includes all Category 1-3 pollutions for water and wastewater treatment and network incidents which shows our commitment to this target.

For monitored assets including water recycling centres (WRCs) and sewage pumping stations (SPSs), we achieved 97% self-reported incidents against a target of 90%.

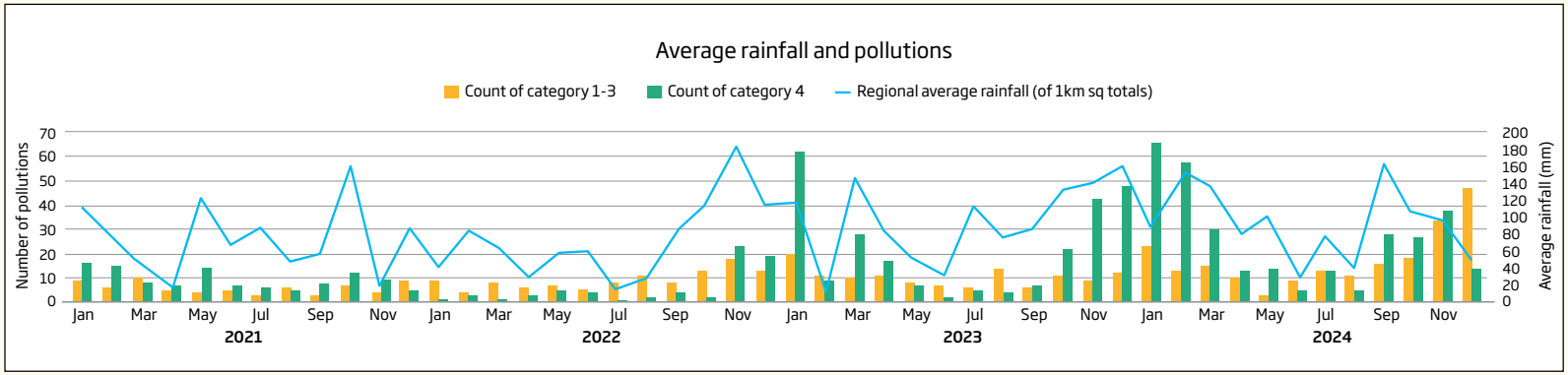
It is important to note that our self-reporting performance has remained stable at this high level even through a challenging year when total pollution numbers have increased. This reflects that our culture for openness and transparency is embedded in our people and the procedures, and these are followed even in challenging circumstances.

Extreme weather and climate change

Extreme weather events, which we've experienced more frequently in recent years, are expected to become even more common due to climate change (according to the Met Office). As we can see from the data in graph 3, we experienced high average rainfall in the autumn and winter of 2024 but a much lower average in the summer. Our assets are increasingly vulnerable to these impacts; heavy rainfall, flooding, and rising groundwater levels can hydraulically overwhelm our systems. Conversely, drought conditions reduce river flows and dissolved oxygen , increasing pollution sensitivity in watercourses that may already be stressed.

In 2024 we experienced eight named storms, the highest number since the naming convention began. These events, often occurring in quick succession and bringing short, severe downpours or gale force winds, are challenging for our infrastructure and can lead to power outages and flash flooding.

As a business, we are committed to strengthening our climate resilience and reducing the vulnerability of our infrastructure. This includes adapting our systems and strategies to better withstand both wet and dry extremes, ensuring we continue to protect the environment effectively.



Graph 3

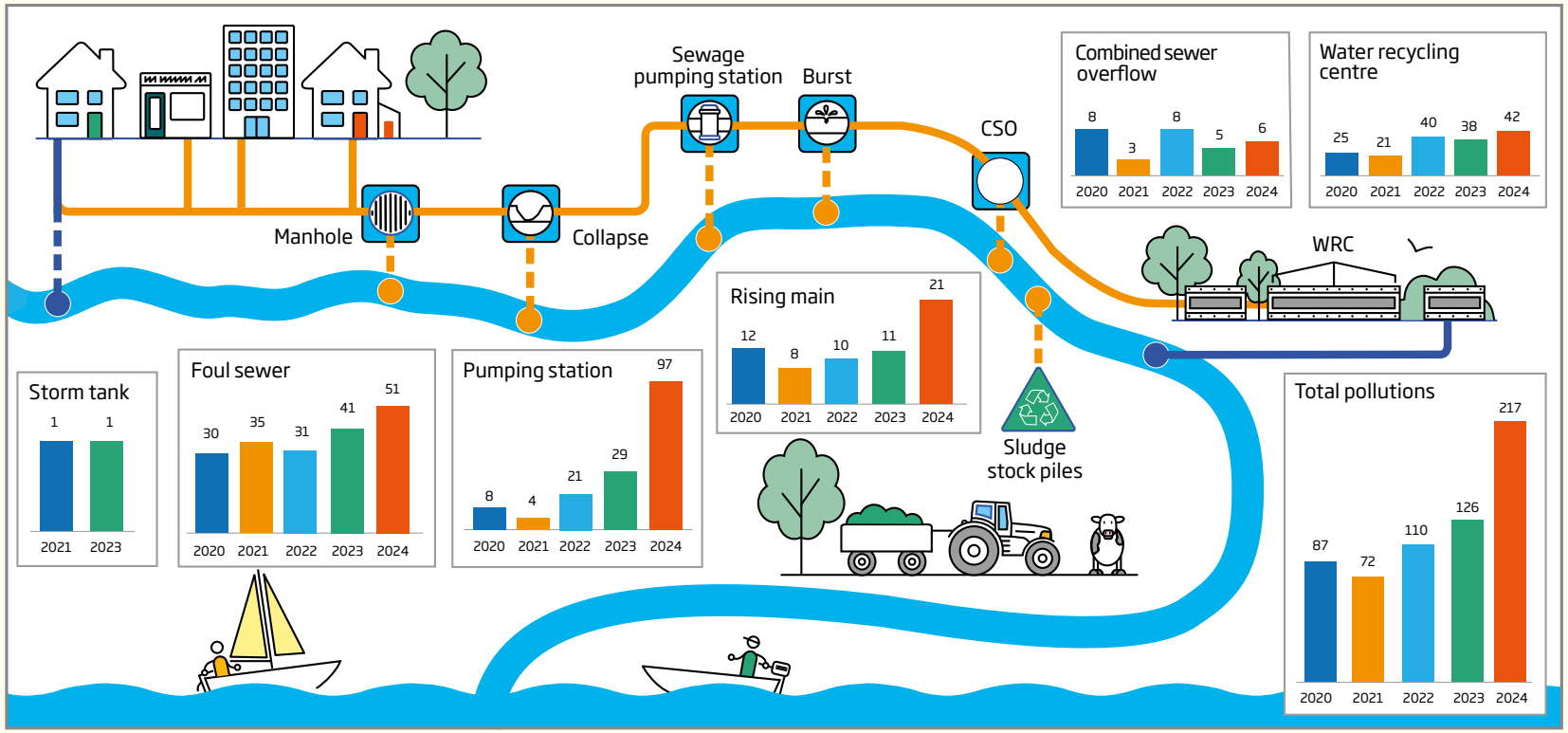
Pollution incidents across asset type

Pollution levels differ across various asset types. By identifying the assets that contribute most to pollution, we can better prioritise funding and more effectively target our pollution reduction efforts. Our initial PIRP in 2020 focused predominately on foul sewers as the outstanding single greatest asset leading to pollutions, but over time the work targeted at this area and additional monitoring have demonstrated changes in the asset types with highest number of associated incidents.

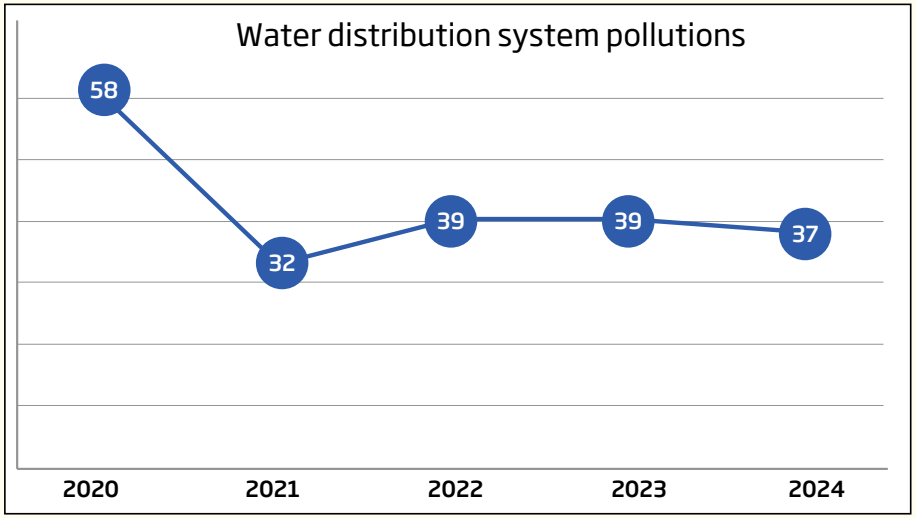
It is clear that 2024 saw a rise in category 3 minor impact pollutions across lots of our asset types. Pollutions linked to foul sewers increased from 40 to 51. Water recycling centre (WRC) related pollutions increased from 38 to 42 and storm overflows (SO) also increased from 5 to 6 but stayed below the 8 reported in 2022. We achieved zero pollutions of category 1-3 linked to storm tanks, down from 1 in 2023. Category 3 pollutions linked to rising mains increased from 11 to 21 between 2023 and 2024.

Our most significant increase is against our sewage pumping station (SPS) asset base where the increase from 2023 to 2024 was from 29 to 97. This is reflective of the challenges faced through 2024 which significantly impacted this asset type most notably through power outages which is described in more detail later in this document. We recognise that more work is required in this area and there are several specific initiatives detailed in this document that directly link to planned improvements here.

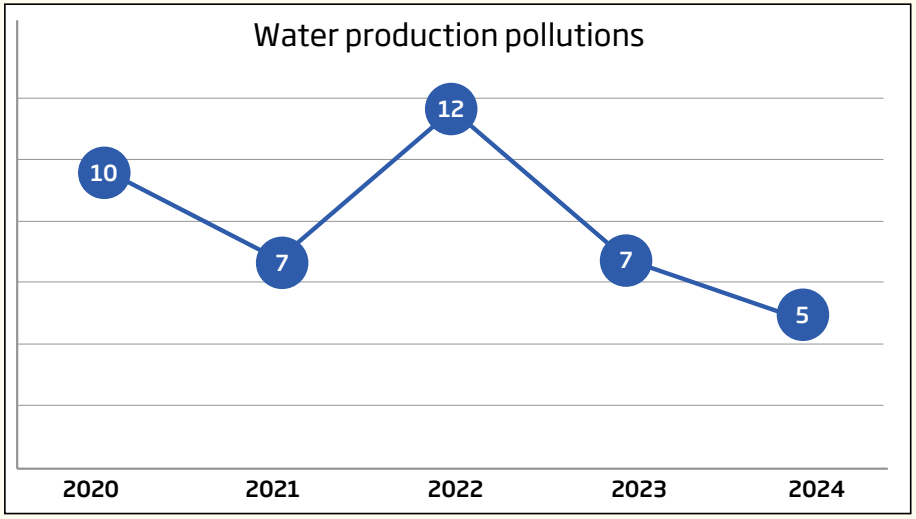
Pollution incidents from water supply assets are reported to the EA along with all other pollution incidents. However, if they are category 3 they are not included in the total pollution figures reported by the Environment Agency (EA) in the Environmental Performance Assessment (EPA). However, serious pollution events and self-reported incidents from these assets do contribute to the EPA.



It is therefore essential that these incidents are recognised and addressed as part of our pollution reduction efforts to ensure the best possible environmental outcomes. This year, we have chosen to include Category 3 pollution incidents from supply assets in our pollution incident reduction plan (PIRP). Encouragingly, both water production and the distribution network have shown a reduction in pollution incidents between 2023 and 2024 (graph 4 and 5).



Graph 4

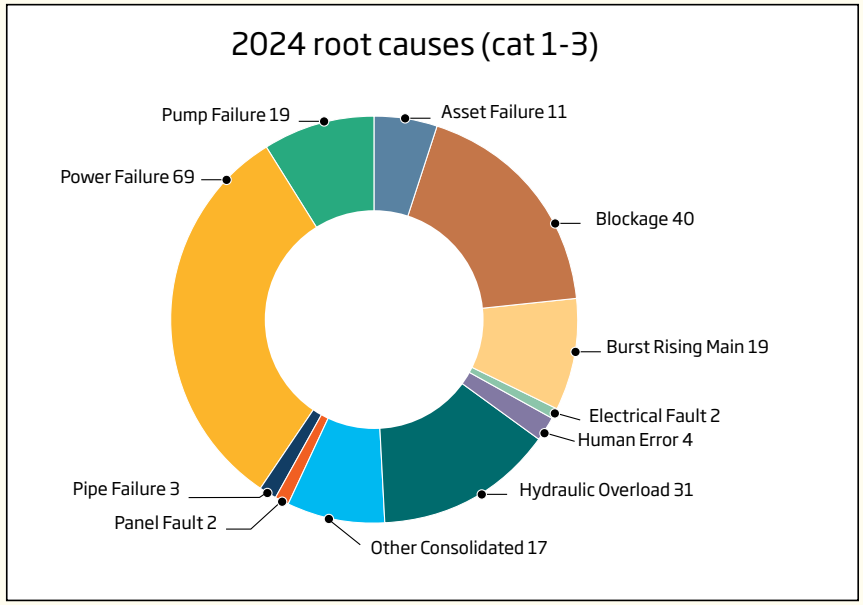


Graph 5

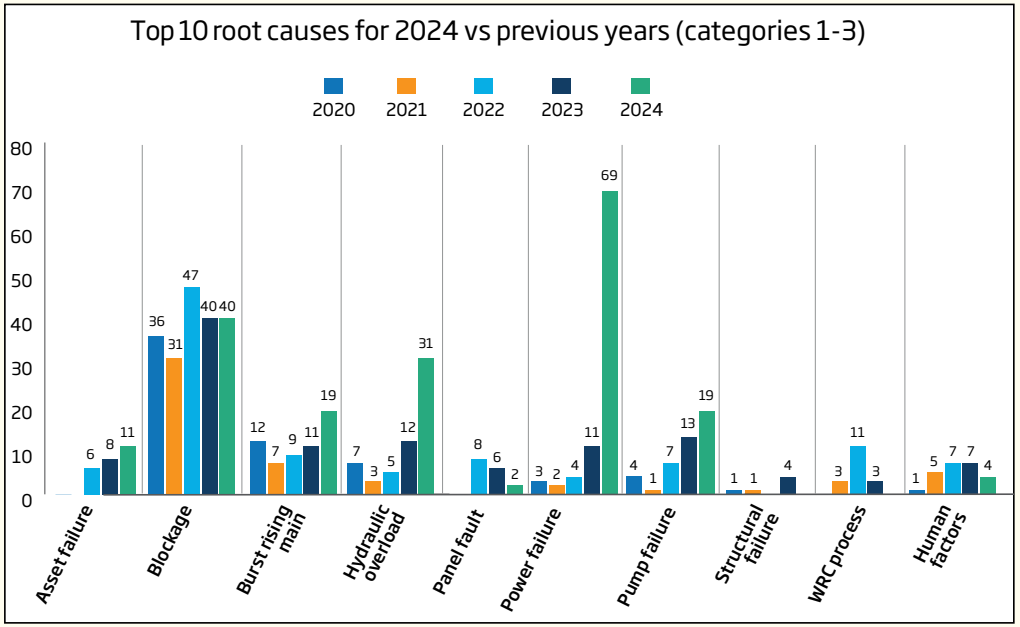
Root causes

For every pollution event we complete a Make It Right (MIR) review. This is a detailed analysis of all the factors that resulted in the pollution occurring and most importantly what we are going to do to prevent a reoccurrence. This review is completed by a multidisciplinary team to ensure that all angles of events have been considered.

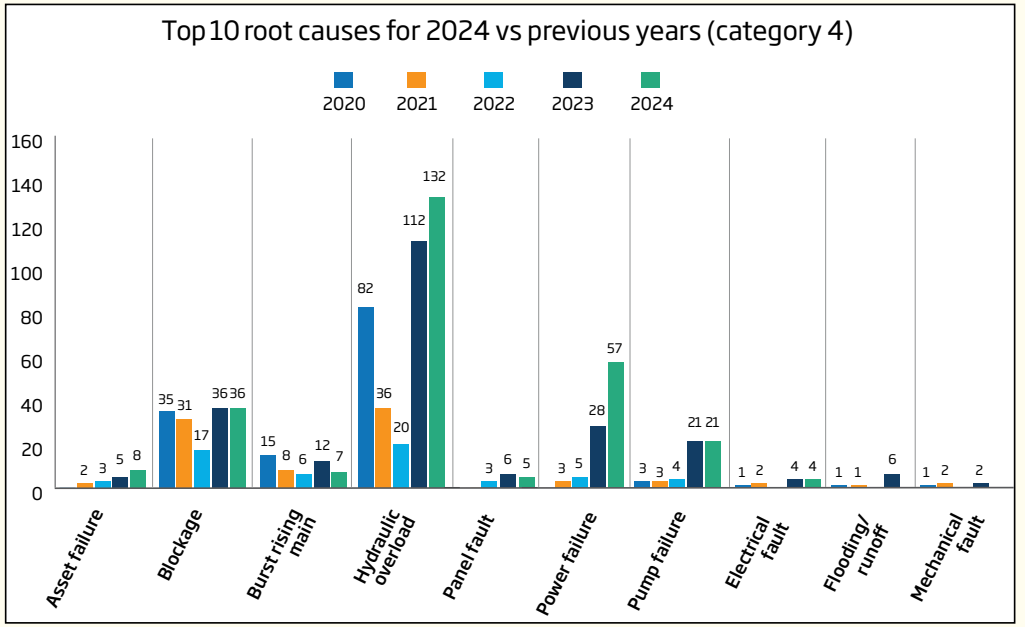
As part of the review we also confirm the root cause of the event. This is critical to ensure that we are focusing our efforts and investment in the areas that we make the most difference to the environment.



Graph 6



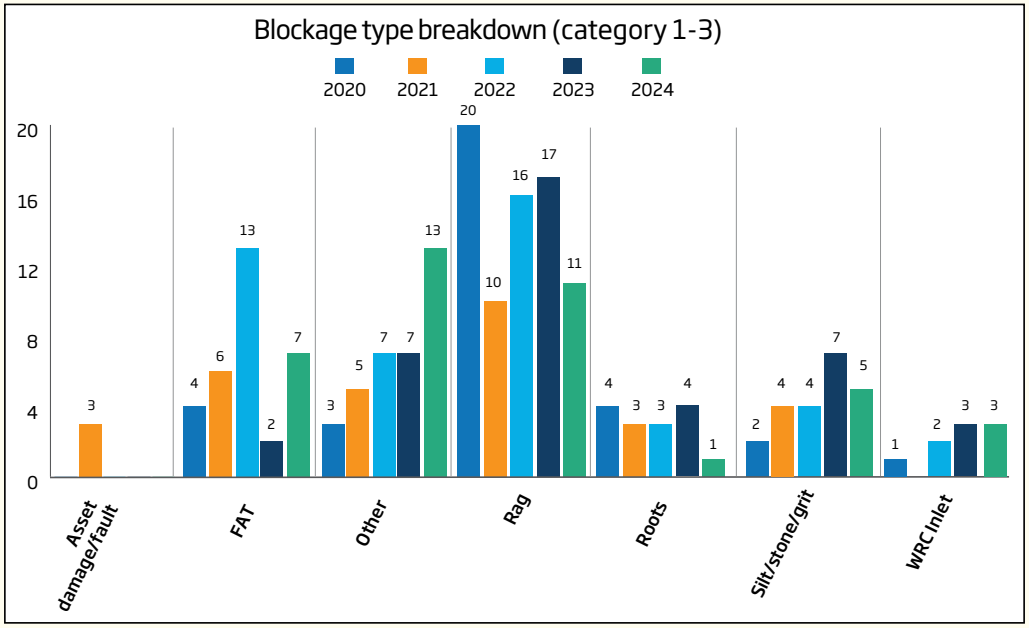
Graph 7



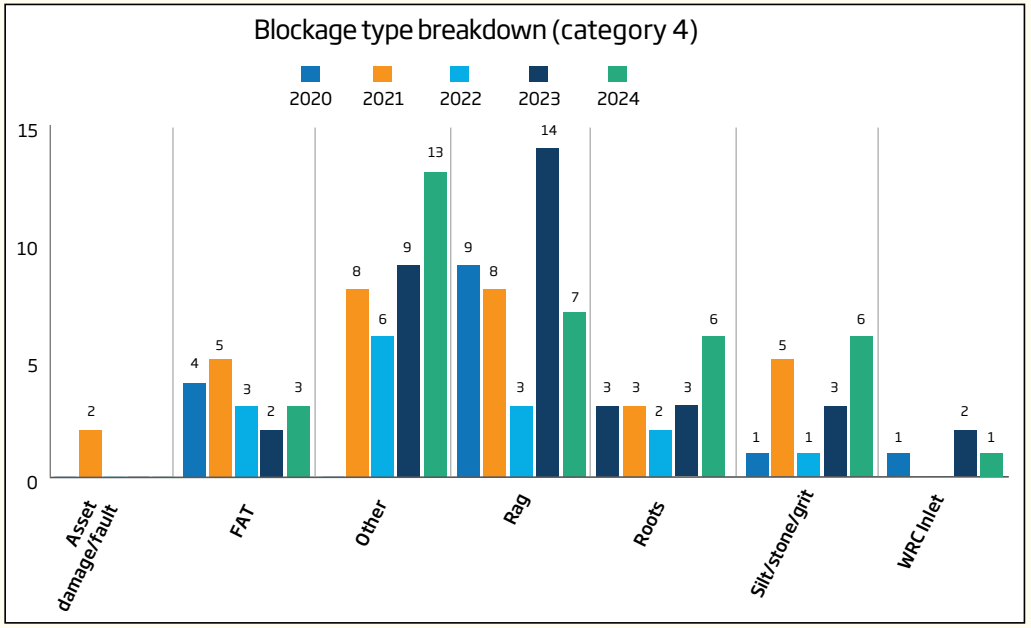
Graph 8

Power failures were the most significant shift in our root causes of pollutions in 2024. Our region experienced several named storms and severe weather events that led to multiple, simultaneous mains power outages across our region. This was most notable across our 2,146 sewage pumping station assets. These are often smaller sites without permanent secondary sources of power (generators or similar).

Although we are reliant on the resilience of the electricity network, we have invested in a fleet of mobile generators. We have also trained our teams to be able to deploy our mobile generators in an average of two hours. This works extremely well in most circumstances, but in these extreme weather events we were seeing a much less resilient power network with nearly 100 sites without power at any one point, far beyond the capability that we can manage through our mobile generator fleet and our external generator contracts.



Graph 9



Graph 10

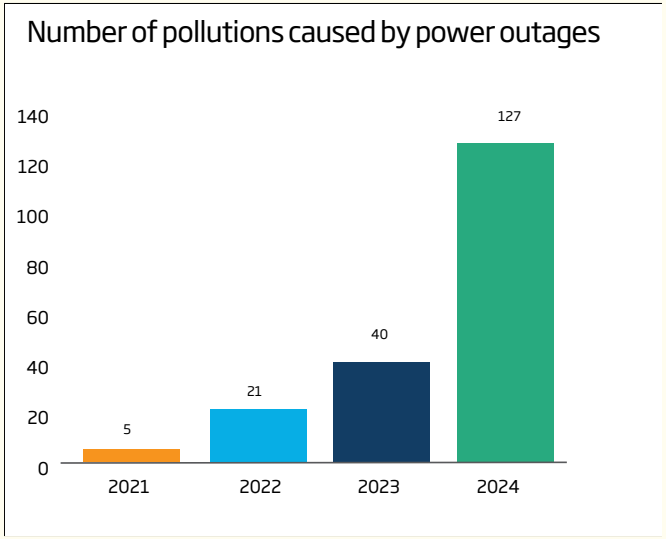
Blockages continue to be a significant factor in our root cause analysis, with pollutions as a result of blockages reducing slightly in 2024 from levels in both 2023 and 2022. When we look at the main causes of blockages, sewer misuse is still a challenge with fats, oil and grease (FOG) along with wet wipes and rag forming almost 50% of our total blockages that resulted in pollution events. We are continuing to focus on customer behaviour and preventative maintenance to reduce the impact of these factors.

Root causes across asset type

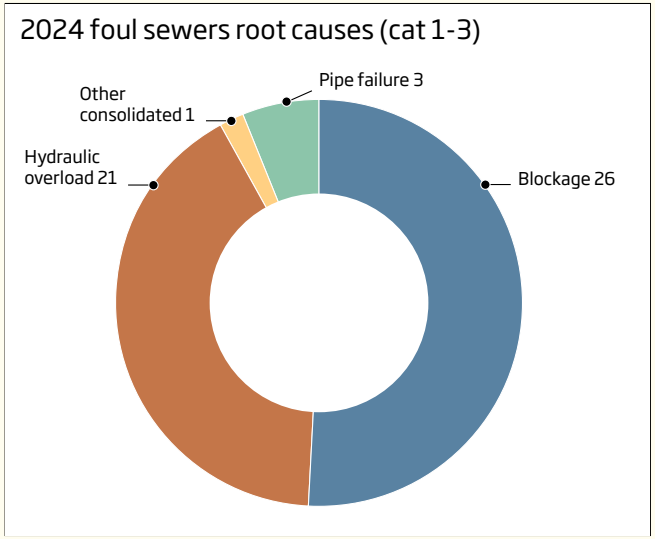
The root cause of pollution incidents varies significantly depending on the asset type. For incidents involving foul sewers, blockages and hydraulic overload are the main contributors for both category 3 and category 4 (no impact) pollutions. When we consider sewage pumping stations, 67% of our total category 3 pollutions were attributed to power failures. These instances were more frequent during the number of storm events that we experienced during 2024 where power outages across large parts of our region caused pumps to stop passing flow through our network, resulting in spilling sewage that is diluted with rainwater to the environment. Our initiatives, both new and ongoing, will continue to focus on improving resilience in our network.

Graph 11 shows that we have experienced 25 times more incidents linked to power outages since 2021. The increase was three times greater between 2023 and 2024 alone.

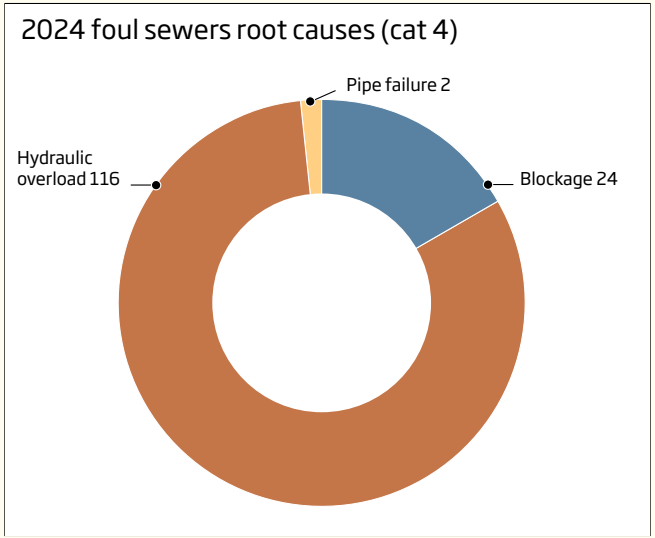
Our root cause analysis data includes 'other' categories as can be seen in some of the graphs. This category includes any incidents where the cause is not clearly attributable to one of the more common categories or where the cause is unknown. We continually review our root cause analysis process and one of the areas we are working to improve is to reduce the times where we use 'other' as a root cause so we can be clear on exactly what is contributing to pollution incidents.



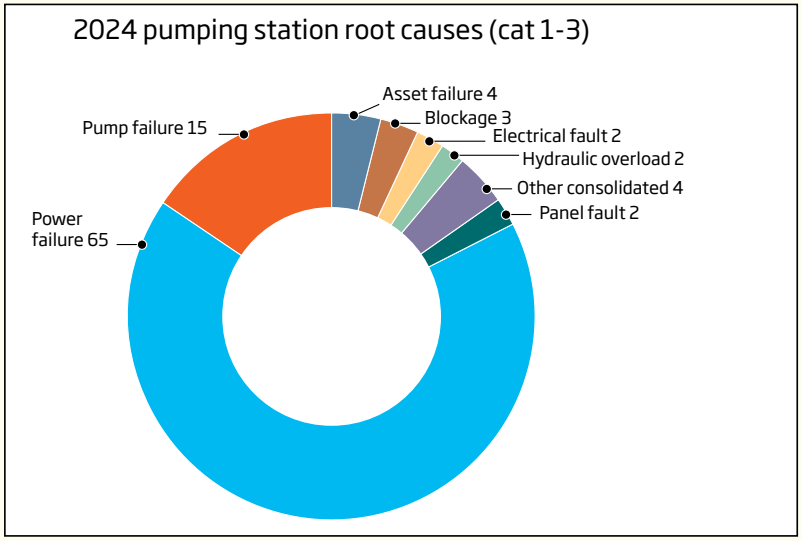
Graph 11



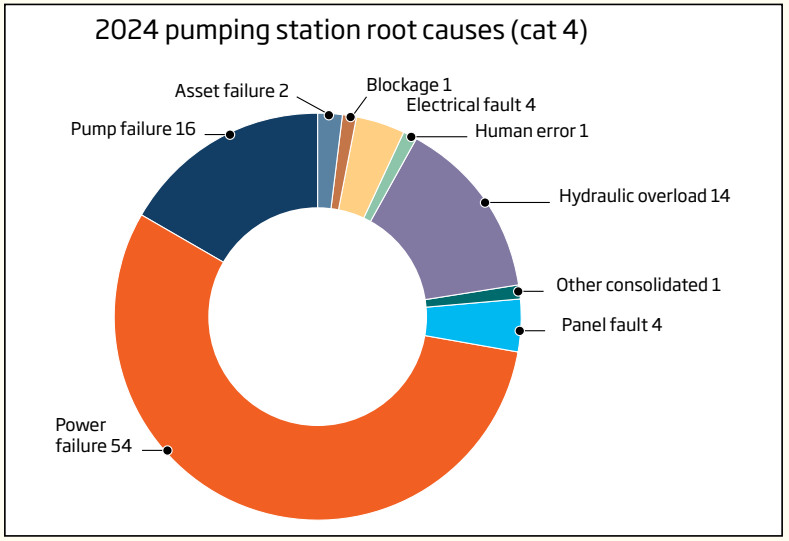
Graph 12



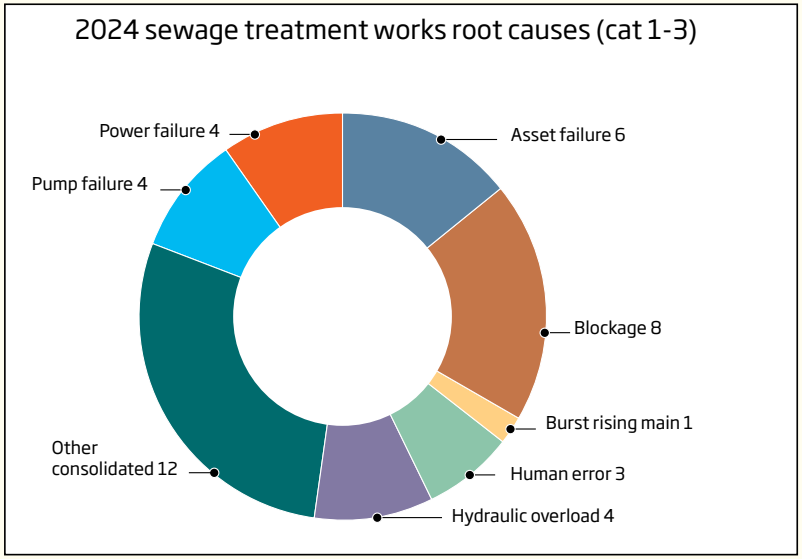
Graph 13



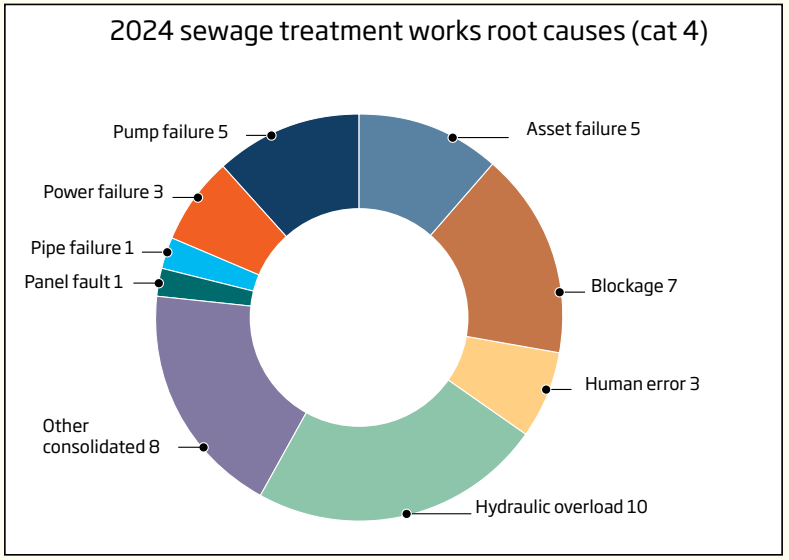
Graph 14



Graph 15



Graph 16



Graph 17

What have we learnt

Conducting Make it Right (MIR) reviews following wastewater pollution incidents, sample failures, and near misses is part of our 'business as usual' approach. These reviews examine the root causes of each event and can include investigating relevant asset failures including mechanical or electrical breakdowns, site-specific conditions that contributed to the incident, and the maintenance and performance history of the affected assets.

Insights from these reviews are used to identify and implement targeted actions aimed at preventing recurrence. These actions may include:

- Site-specific improvements or modifications to the affected assets.
- Company-wide enhancements to similar asset types.
- Adjustments to maintenance schedules and frequencies.
- Improvements in staff training, operational procedures, and staff awareness.
- Installation of fail-safes such as alarms or monitoring equipment.
- Reprioritisation of specific sites or asset types within our investment planning.

In 2024, we conducted 541 lessons learnt reviews. These reviews are a vital part of our continuous improvement process, enabling us to identify potential issues early and initiate timely operational responses to prevent pollution or sewage flooding incidents.

We have continued to refine our lessons learnt procedure to enhance its effectiveness in detecting early warning signs. The insights and actions identified through these reviews, combined with detailed root cause analyses, are used to evaluate and shape our pollution reduction initiatives and routine operational tasks.

This structured approach ensures that we continuously learn from past events and proactively strengthen our systems to reduce future risks. In 2025 we are reviewing this process to ensure that we have a common methodology across our business so that every learning opportunity is identified and that positive improvements can be shared.

Compliance at permitted sites

All of our wastewater sites that have a permit must comply with conditions set by the Environment Agency (EA) before discharging into the environment.

Permit conditions fall into two main categories:

- **Volume-Based Permit conditions (quantitative):** These specify the volume of flow that must be treated before any untreated effluent can be discharged.
- **Quality-Based Permit conditions (qualitative):** These define the quality standards that treated effluent must meet before being released into the environment.

In 2024, 99.7% of our permitted sites which include water recycling centres (WRCs) and water treatment centres (WTCs) were assessed as compliant by the EA. This exceptional level of compliance plays a critical role in preventing environmental pollution and safeguarding public and ecological health.

To maintain this high standard, we rely on extensive monitoring, proactive maintenance, appropriate operation and strategic investment . Sustaining WRC compliance is a cornerstone of our pollution incident reduction plan (PIRP) and a key pillar in our commitment to environmental protection.

Activities and performance across asset type

Sewer network

The sewer network carries wastewater from households to our water recycling centres (WRCs) to be treated. We manage over 35,000km of sewers – enough to stretch almost around the Earth! This vast underground system includes gravity sewers, pumping stations, and rising mains, all working together to transport wastewater safely and efficiently. Our goal is to protect public health and the environment by ensuring that wastewater is treated to the highest standards before being returned to rivers or the sea.

Due to the periods of extreme weather experienced in 2024, our primary contributor to pollutions linked to foul sewers changed from blockages to hydraulic overload. This is where the flow that enters the network is above its operating capacity . This is normally a result of rainwater or groundwater entering the sewerage network. During 2023, we reported eight category 3 pollutions linked to hydraulic overload in foul sewers. This number rose to 29 category 3 pollutions in 2024 illustrating the impact that named storms and high groundwater levels had on our pollution performance.

Asset data and asset management

What have we done so far?

Sewer rehabilitation (relining)

The sewerage network cannot be designed to be fully sealed and is susceptible to damage, infiltration and root ingress. Small cracks can allow groundwater or fluvial (river) flooding to enter the system, contributing to hydraulic overload, while root intrusion can restrict flow and increase the risk of blockages. Our teams monitor flow at various points in the sewerage system and can determine where rainfall has a significant impact on what we 'pass forwards' to treatment. When these areas are identified, our teams use in-sewer CCTV technology to assess the condition of the assets and create a list of remedial work required to reduce or stop groundwater or flood water being able to enter the network. In addition to this, we constantly monitor and track groundwater levels across our region to give us early warning of where we might encounter hydraulic capacity problems and pick up on longer-term trends.

To address these issues without having to dig up and fully replaces pipes, we use trenchless relining technology to seal assets like sewers and manholes. These methods enable us to reinforce sewers more quickly, sustainably, and with minimal disruption, as it accesses the network through existing manholes rather than excavation. In 2024, we relined 5,985 metres of sewer, targeting the worst affected areas of our network as part of our pollution prevention programme.

We evaluate the effectiveness of this rehabilitation by comparing incident rates before and after the work, with a focus on the immediate area of repair. In areas where proactive rehabilitation has been carried out, we've seen an average 57.15% reduction in wastewater incidents. This demonstrates a clear positive impact on pollution, blockages, and flooding, with improvements typically observed within a year of completion.

What's next?

Whole catchment approach
We have refocussed to a whole catchment approach in 2025. While we continue with our rolling programme of sewer relining and sealing activities, this new catchment-wide approach will target whole areas for a range of improvement activities rather than investment focused on high-risk aspects that are dispersed across many different locations. We use a range of tools to help us identify which catchments to target and highlight the assets that we should improve. These tools include our risk models which are continually updated and reviewed.

Network monitoring
Our sewerage network is inherently challenging to observe and monitor. It is a complex environment of over 35,000km in length with 2.9 million customers, most of which is extremely difficult to reach making regular physical checks problematic. As such we have implemented monitoring and data analysis techniques that allow us to proactively identify issues on our network before they result in a problem.

What have we done so far?
In 2022 our network monitoring team was created to utilise data captured by sensors installed across our sewer network. Data from these sensors feeds into enhanced analysis and machine learning tools, such as StormHarvester, allowing the team to interrogate and proactively resolve issues before they result in pollutions or flooding incidents. Analysis principally focuses on detecting blockages, rising main bursts, pump operation and discharges to the environment. These are measured by monitors known as Event Duration Monitors (EDM) and in-sewer level monitors. In 2024 the network monitoring team made over 580 'good catches' (a 45% increase on 2023). Good catches are classed as issues that may have caused a pollution or negative operational impact if they had not been identified and resolved. This is estimated to have prevented at least 40 category 3 pollution incidents, and up to 6 serious (category 1 or 2) pollution incidents, from occurring in 2024 from blockage detection alone.

As part of our pollution prevention programme, 2024 saw us triple the number of in-sewer level monitors installed across the region. This phase of work saw the installation of over 2,800 additional sensors focused on high-risk pollution areas. These monitors measure the depth of sewage within the sewer and can alert us to any abnormalities such as blockages. The locations for monitors were informed by historic issues, pollutions, asset data, modelling data, and the knowledge of our local operational teams. Data from these devices has the added benefit of allowing us to gain a deeper understanding of how the sewerage network operates aiding maintenance prioritisation, infiltration detection and prevention activities.

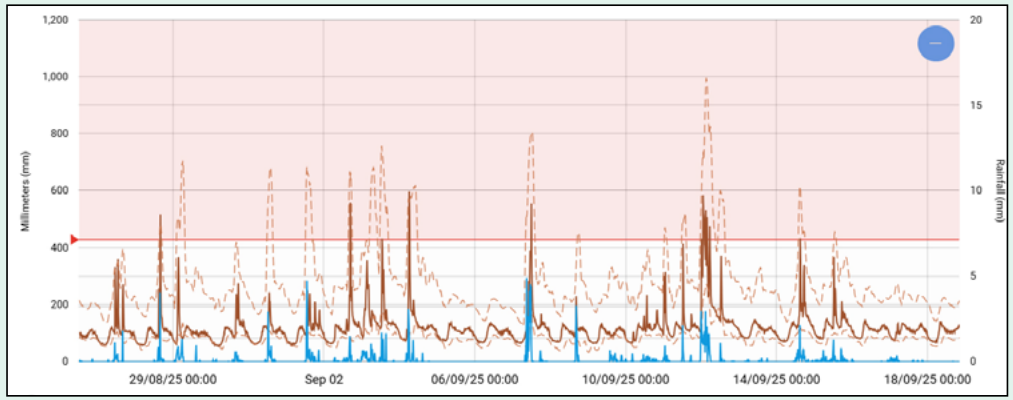
What's next?
A further 4,000 in-sewer depth monitors are expected to be installed by the end of March 2026, with the aim of installing 12,000 monitors by the end of 2030. This will be combined with the expansion of the network monitoring team to undertake the additional data analysis and alert management that would be required with the significant increase in monitoring.

As well as this, the machine learning services provided by StormHarvester are being expanded to cover water recycling centres and sewage pumping station sites for analysis and alerting as well as the existing coverage of the foul sewer network. This will increase visibility and help us continue to develop and expand our proactive operational approach.

Asset data cleansing

Data is critical in understanding the performance of our assets and identifying areas we need to improve. We have spent lots of time in the last year improving our asset data and optimising the way that we collect and use that information. This helps us integrate information into the various analytical/AI tools that we use. For example, our sewer level analytical tool:

By cleansing the data that we hold and use as part of operating our assets, it allows us to have more confidence in the alerts that we receive from our analytical tools and prioritise our operational responses and investment plans. This helps us to continually target the highest risk areas for pollutions.



Graph 18

Installing monitoring equipment and analytics

We have continued to install more monitoring equipment to alert us of a change of state, decline in performance, or imminent failure. This includes more in-sewer monitors, secondary monitors, proximity sensors, flow and pressure monitoring equipment. We have continued to install more cameras to allow remote monitoring of features such as overflows and pumping stations and have also developed a local trigger to increase the frequency images are taken when prompted.

We have further developed analytical tools and on-site control functionality to improve reliability of our assets, examples of this include:

- remote access (to enable some remote fault finding and resetting pumps),
- pump health monitoring
- burst detection
- low flow detection
- auto reset functionality
- screen operation
- maintenance and dosing optimisation

These all work towards identifying potential problems with our network as soon as possible and trigger responses from our operational teams to intervene. This helps to reduce the duration of spills where they do occur but can also prevent spills from occurring at all in some instances.

Smart waste systems project

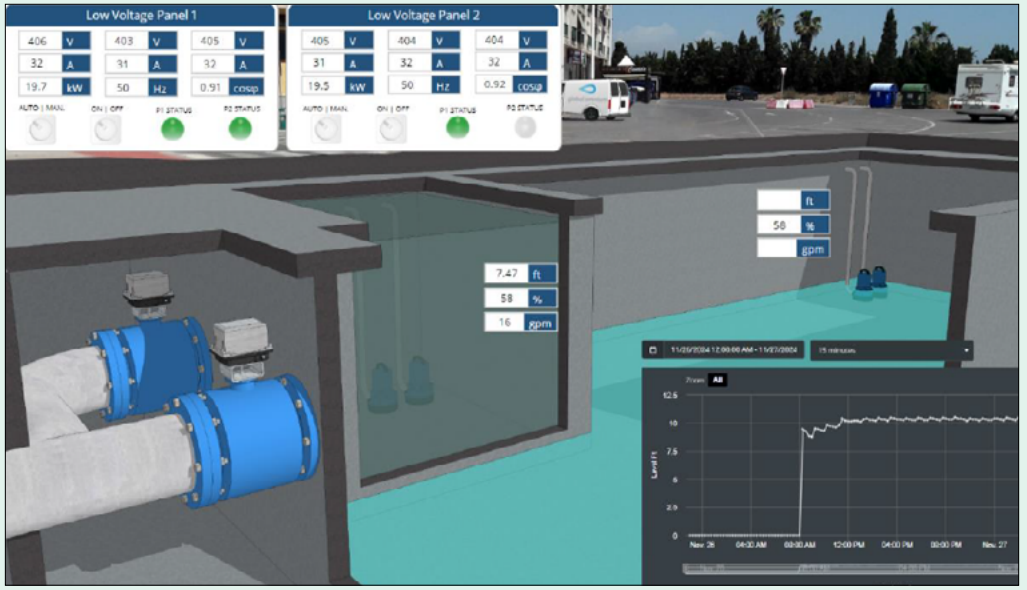
The SMART waste systems project is a forward-thinking initiative aimed at leveraging modern technologies to enhance our operational insight, optimise system performance, and reduce environmental impact. By focusing on a single sewer catchment area, we can apply systems thinking, accelerate learning, and identify scalable solutions that can be applied more broadly across our network.

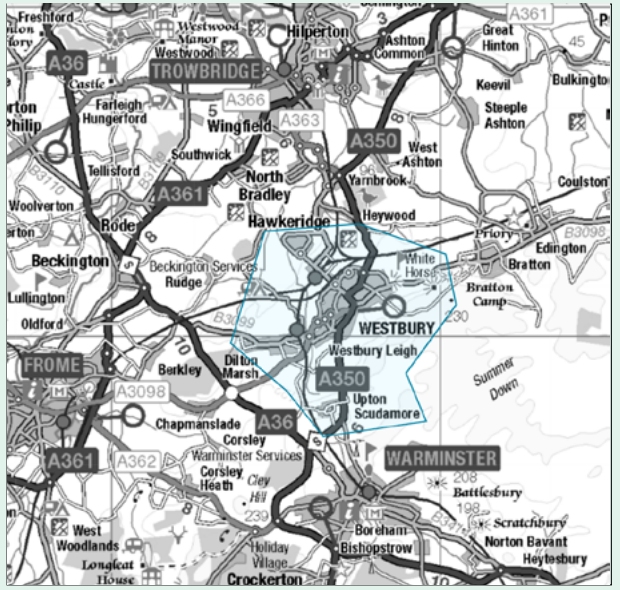
We have been piloting new equipment and carrying out research and development in our Westbury sewer catchment in Wiltshire. Westbury has a population of around 17,000 people and a mixture of different types of businesses that discharge wastewater from industrial processes. The water recycling centre has a collection of different treatment processes in operation which makes it a good location to test a range of different innovations that are described in this section.

An introduction to some of our SMART waste systems pilots

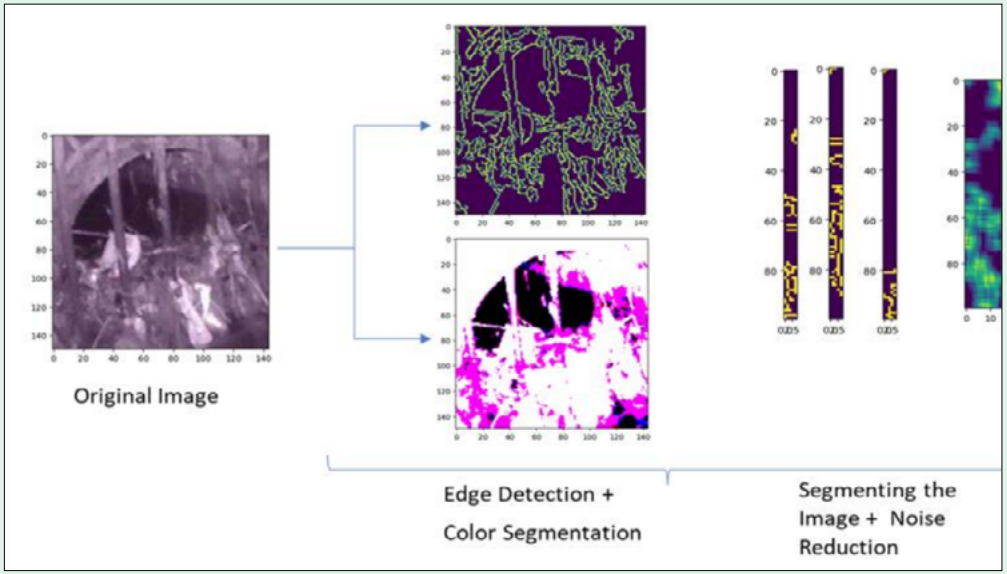
Sensors:
We are testing a variety of sensors that monitor the operation of our sewer networks and water recycling centres. These devices provide data and early warnings of potential issues such as blockages or flooding and reduce the risk of pollutions. Data from some of these sensors is transmitted to a machine learning model that provides early warning to the onset of blockages and flooding.

Advanced image process cameras:
We have deployed cameras at locations around our region that provide real-time images of critical assets meaning we can view their condition far more regularly via virtual visits, rather than our routine site maintenance visits. We've supercharged the power of cameras watching our assets with artificial intelligence to let our teams know if something isn't right so it can be resolved. This technology is already showing promise in applications such as identifying blocked screens and is expected to support a growing number of use cases as research and development continues.





Remote operation and control:
Our 24/7 control room now has the capability to remotely access and reset approximately 1,000 pieces of equipment across our sites. This includes the ability to reset systems that have failed, a task that would traditionally require an operator to attend site. This remote functionality reduces our carbon footprint, shortens response times and lowers the risk of pollution by enabling faster resolution of operational issues. Our system alerts us to a problem which is then analysed in our control room, we then use the remote operation technology to resolve the problem by restarting a pump or operating a valve which is completed in a matter of minutes by sending signals remotely to the site. This completely removes the delay in deploying an operator to drive to a site, diagnose the issue and then resolve before driving away again. This can often take hours so the environmental benefit of this new approach in terms of reducing the length of time of a pollution as well as the carbon saved by not physically travelling to sites is significant.



Customers and stakeholders

Water Guardians
We are committed to improving the environment in our region and engaging with the communities we serve. We have recognised that by providing a platform for communities, trusts and action groups to work with us we can identify potential problems and bring them to resolution quicker and in some cases before a pollution has occurred.

What have we done so far?
We are working with a range of organisations in our region under our 'Water Guardian' programme where volunteers sign up to receive information and training about how we operate our business and interaction with local watercourses. These volunteers are usually people with a strong connection to their local environment. They "own" a section of watercourse that they routinely walk in all seasons to enable them to share information regarding when things look normal and when they don't. The Water Guardian programme provides funding for organisations like wildlife trusts to employ coordinators and buy equipment so that volunteers are able to safely monitor their local areas and pass information between the trust they are engaged with and us. We have also built a bespoke pathway through our customer service unit so that Water Guardians are identified as soon as they call in to speak to us. This allows the information to be passed immediately to the right part of our operational team to be investigated.

What's next?
During AMP8 (2025-2030) we intend to build on the relationships we have with our Water Guardian partnerships and promote more collaboration. We will host more engagement sessions such as guided access to our nature-based solution at Cromhall or a tour of our laboratory services. We invite volunteers into our business to give an insight into how we work to prevent pollutions and our response when they do occur. We'll also continue to take feedback from these groups and use it to review and improve our operations. This increased engagement will ensure the Water Guardians stay connected with us and continue to work with us to identify and report incidents as soon as possible.

Water recycling centres

Sewage is collected through the foul sewer network and delivered, by gravity or pumping, to water recycling centres (WRCs). At the WRCs the sewage is treated through a series of treatment processes into final effluent which can be returned to the natural environment according to limits set by the Environment Agency. The treatment processes used at the WRCs are primarily biological or mechanical, with the addition of chemicals in specific circumstances. Analysis of pollutions at WRCs indicate that blockages are still the main cause of pollutions followed by hydraulic overload and asset failure.

Asset data and asset management

What have we done so far

Enhanced and improved root cause analysis has been implemented across incidents at WRCs, including near misses. This is providing additional detail and insight into events and importantly identifying specific areas of improvement that can be implemented across all WRCs. During 2024 we identified an increased risk of pollutions from mains power interruptions. To ensure continued operation in the case of power failure we have installed 10 new generators on WRCs at strategic locations. The addition of generators not only ensures the specific sites will continue to operate with uninterrupted power but increases the value of our mobile generator fleet by reducing the number of sites that might need them.

What's next

We will keep our generator fleet under review to ensure it is in line with our demands. We will also continue to use the learning that we generate through our root cause analysis processes to identify areas for improvement. As blockages are still a high cause of pollution incidents at WRCs, we have also committed to a prioritised screen refurbishment programme designed to improve the operation of inlet screens at a number of WRCs reducing the number of blockages leading to pollutions.

Innovation

What have we done so far

Following a successful trial of StormHarvester, (an artificial intelligence system designed to identify unusual activity in the sewerage network), at 10 WRCs we have expanded it to a further 227 WRC inlets to provide identification and notifications of blockages to prevent pollutions.

The significant increase in monitoring at WRCs has resulted in a corresponding increase in data available. In order to utilise this data to improve performance across our WRCs we are developing and improving our flow data management system. The new system will provide enhanced analysis and insight into the performance of our WRCs improving our ability to identify issues or areas of improvement quickly and implement remedial actions to return the WRC to normal operation.

The SMART waste system refenced earlier continues to evolve and will continue to highlight opportunities where successful innovations can be rolled out across other sites.

What's next

We will be integrating StormHarvester into business-as-usual functionality and developing the processes to enable more accurate identification of risks. This will provide greater insight into the underlying causes of unexpected issues allowing us to implement quicker and more effective solutions. We will also be building on knowledge gained through our SMART waste project at Westbury WRC to provide benefit at other WRCs within our region both through utilising new technology which has proven to be successful and also investigating additional catchments to expand the programme.

We will be targeting inlets at WRCs with a holistic approach to remove or minimise the potential for pollutions through modifications to assets or how the assets are controlled. The solutions implemented from this approach will be specific to the individual WRC taking into account the site assets, sewerage catchment and site performance allowing for more innovative and effective ideas which would not be possible on a wider basis.

Customers and Stakeholders

What have we done so far

We continue to engage with and educate customers across our region. We hosted Around the Bend tours at 11 WRCs for over 1,000 customers, where visitors had the chance to learn more about the water recycling process and how, through correct use of the sewer, they can help prevent issues such as pollutions.

What's next

We will be repeating and expanding the Around the Bend tours to include different sites and reach more customers in different locations while continuing to engage with customers regarding the correct use of the sewer, particularly in areas where sewer misuse issues are identified.

Sewage pumping stations

Sewage pumping stations (SPS) are underground tanks or storage facilities equipped with electromechanical systems designed to lift sewage to higher elevations where gravity alone cannot maintain flow within the sewer network. Our network includes over 2,000 pumping stations of varying sizes. SPS was the single highest contributor to our total pollution number in 2024.

Asset data and asset management
SPS are critical assets that require specialist operation and maintenance. Because they are so numerous and their characteristics vary a great deal from site to site, it's vital that our asset information is accurate and our maintenance schedules are effective as they can have a significant impact if they fail. SPS are at greater risk of being affected by weather as they usually rely on mains electricity and telemetry communication to function. 2024 showed that when we experience extreme weather patterns, our pumping stations can be susceptible to power outages.

What have we done so far?

Proactive maintenance
All SPS receive regular scheduled inspections, with additional reactive visits arranged as needed. These routine inspections focus on assessing equipment condition and verifying that each site is operating correctly. As we continue to install more monitoring technologies - such as flowmeters and pressure sensors, we are increasingly able to rely on data and analytics to detect early signs of performance deterioration. By tracking flow and pressure trends over time, we can identify deviations from normal operating conditions that may indicate emerging issues. When such anomalies are detected, we carry out targeted operational maintenance aimed at restoring or improving asset efficiency. This may involve adjusting pump settings, lifting and inspecting components, or replacing pumps entirely. Enhanced data collection enables a more focused and proactive response, allowing us to better prioritise operational efforts and address potential pollution risks before they escalate.

Wet well cleaning
The below-ground storage tanks at our SPSs are known as wet wells. These tanks temporarily hold wastewater from the sewer network before it is pumped onward. Due to the nature of incoming flows, wet wells often accumulate fats, oils, and grease (FOG), as well as grit. If not managed, these materials can build up, leading to blockages or potential damage to the pumps. For this reason, it is essential that high-risk sites undergo regular cleaning to maintain operational reliability. In 2024, a total of 613 wet well cleans were completed across our network. Approximately 34% of our sites are included in a planned cleaning programme, with a minimum cleaning frequency of once every two years. For those on the planned programme, cleaning frequencies range from monthly to biennial, and are optimised based on site criticality, historical cleaning outcomes, pump blockage incidents, odour complaints, and other operational feedback. The remaining 66% of sites are managed through an ad hoc or condition-based approach, triggered by visual inspections.

Innovation

Power generators
Power resilience at our SPS remains a key operational priority, aimed at minimising the risk of pollution during power outages. Currently, 119 SPS sites are equipped with permanently installed diesel generators, supported by an enhanced maintenance programme to ensure their ongoing reliability. For the remaining sites, resilience is managed through available storage capacity within the wet wells which contain sewage in the site until power is restored. This is combined with reactive measures such as deploying mobile generators or tankering when outages are expected to exceed storage limits. To improve our response strategy, we have undertaken modelling to better understand the 'usable' storage capacity at each site and the likely flow rates we should anticipate under varying conditions. This enables us to prioritise mobile generator deployment to locations with the least available storage, ensuring a more targeted and effective mitigation approach.

What's next?
Our earlier case studies on the SMART waste project and our programme of rising main 'pigging' which is described later on, have shown some of the areas of innovation that we are building on and developing. We are confident these will have a positive effect on the performance of our SPS assets when it comes to reducing pollution incidents.

Rising mains
Rising mains are the pipes that allow pumped flow from SPS to be passed forwards in the network either to a gravity sewer, a downstream SPS or a water recycling centre (WRC). This type of pipe has to sustain varying amounts of pressure in order to allow

sewage to move uphill and over long distances. These assets form a smaller portion of our total sewer length but carry a greater risk of bursting than normal gravity sewers, as they are pressurised.

When rising mains do burst, large volumes of sewage can escape very quickly, making containment challenging. In 2023, we recorded 11 rising main bursts (compared to 9 in 2022), and in 2024 this increased slightly to 13. We can see that, although slight, the trajectory of this trend is not satisfactory, so we are implementing some measures from 2025 to combat this.

We are continuing to increase our coverage of burst detection systems that alert us to subtle changes in behavior of our SPS and Rising Main assets. These help us to respond to potential burst rising mains far sooner and prevent or reduce pollution incidents occurring.

Asset data and asset management

What have we done so far?

Air valve maintenance
Air can accumulate in rising mains taking up space which restricts flow and reduces their capacity. This can lead to increased internal pressure, which raises the risk of bursts. To manage this, air valves are installed at key locations that regulate the entry and release of air, helping to maintain stable pressure levels. This not only extends the lifespan of the rising mains but also reduces the likelihood of bursts and the efficiency of our SPS assets.

We currently operate 2,162 critical assets designed to protect our rising mains. These are maintained through scheduled maintenance rounds, with frequencies ranging from every 2 months to 3 years, depending on the asset's location, sensitivity and risk of blockages. In 2024, we successfully completed 98% of our scheduled maintenance activities.

Rising main replacement
Over the course of AMP7 (2020 - 2025) we have spent £11.5m replacing 22.4km of our rising mains, preventing approximately 120 bursts. Our data shows that around 20% of burst rising mains result in a pollution event so potentially 24 pollutions may have been avoided through this programme of work. Our rising main replacement programme will continue into AMP8 (2025-2030) prioritising the highest risk assets to avoid as many pollution incidents as possible.

Innovation

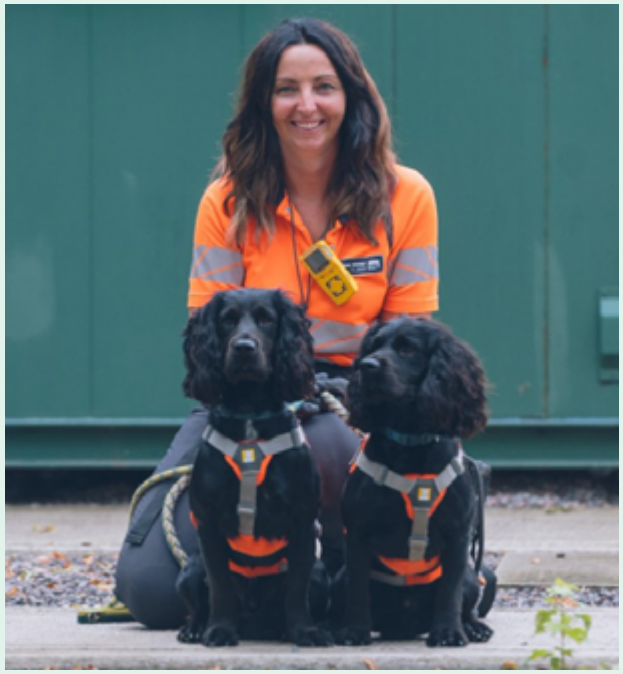
What's next?

Foam pigging

In 2024 we successfully trialled a method of rising main cleaning called 'pigging'. Our trial was a success and we are now moving towards making this a routine activity across our rising main assets.

Detection Dogs

We have successfully trained two specialist detection dogs alongside our partners CAPE who can detect misconnections in our surface water network. This is trailblazing across the industry and the results we are seeing so far are very positive. The detection dogs are capable of identifying things like detergents and foul sewage in very small amounts that would not normally be detectable by humans. We then use our specialist Streamclean team to follow up on these indications to confirm where misconnections to the surface water sewerage system have taken place and arrange for corrections to be carried out. The detection dogs, Bluey and Bandit, are able to cover large areas in a catchment over a short period of time along with their handler, Nikki.



CASE STUDY

Cleaning our pressurised rising mains

Cleaning our pressurised rising mains

Rising main assets are susceptible to accumulating material build up inside the pipes which can reduce the operating capacity and in turn make our pumps work much harder to push flow through them.

'Pigging' is a term used to describe a method of cleaning pipelines. The 'pig' is what we call the cylindrical foam swab that is inserted into the pipeline in order to clean it.

Build-up of material inside rising mains

Since 2021 we have been gathering flow, pressure and velocity data at our SPS sites to allow us to create accurate system and pump performance data that can be shown as data curves. We noticed a trend of our measured system curves showing higher frictional losses than expected when comparing to a desktop study. Higher frictional losses cause lower pumped flow. In 2021 the standard method to clean these mains was to use conventional jetting equipment 200 meters at a time and digging down on the pipe to gain access.

In 2023, we started to 'pig' our rising mains as a trial. Before the pigging work was introduced, we had already been identifying restrictions and blockages in our rising mains through 'pump performance testing'.

Pigging allows us to clean our rising mains without digging a hole and cutting into the pipeline. The cylindrical foam swab is inserted at the SPS and pushed up the pipe by our own pumps and flow. The swab scrapes any debris off the inside wall of the pipe, therefore taking it back to its true internal diameter. The before and after photos below show the difference this method can make:

Before

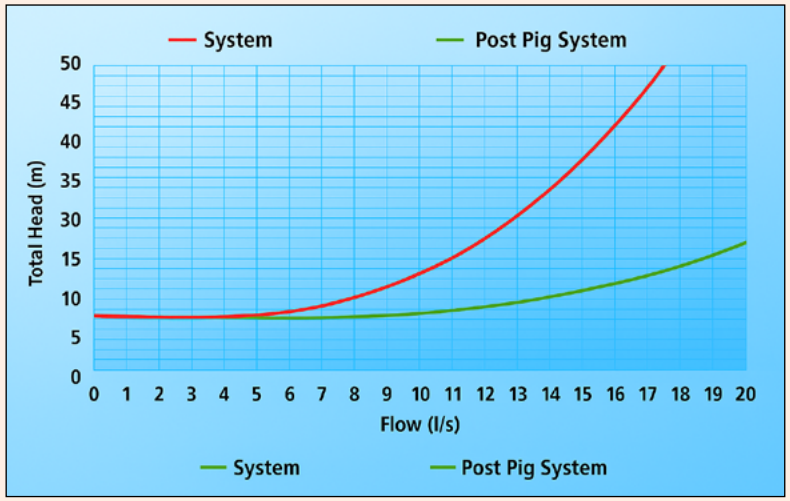
After

Key benefits of this process are:

- robust method of maintaining our pressurised pipelines
- improving pumping capacity in our network
- reducing wear and tear on pumps
- reducing spills from overflows at SPS and WRCs by maintaining flow rates
- reduced energy use

Through our trials, we have proven that this method has a great potential to significantly improve the performance of our rising mains. From 2025, we have formed a dedicated team to work through a planned programme of 'pigging' activities across the region, targeting the highest risk locations as a priority. By keeping our pumping systems in the best possible condition, we anticipate this will positively impact our pollution performance and also prolong the life of some of our critical assets.

Before and After system curves, the flatter profile is post pigging:



Graph 19

Our journey of understanding pumping systems over the last 5 years has been industry leading and recognised at a national level through the Water Industry Maintenance Work Group (WIMWG). We are ensuring that the lessons we have learnt through this process are shared both within our business and with the industry.

Storm overflows

What role do storm overflows play, and why do they sometimes spill to the environment?

Some parts of our sewer network use a combined system, where rainwater from roads and roofs flows into the same pipes as sewage from homes and businesses. During heavy rain or when groundwater levels are high, rainwater or groundwater can enter the sewers and the system can become overwhelmed.

To prevent flooding in homes, streets, and gardens, the network includes storm overflows; safety valves that release excess water into the environment when the system reaches capacity.

The flows released from storm overflows when they operate is heavily diluted by rain or groundwater. When used as designed and within permitted limits, these releases are not considered pollution. They are a controlled way to protect communities and homes from more serious flooding.

What have we done so far?

We manage around 1,295 storm overflows across our sewer network. Each one is fitted with an Event Duration Monitor (EDM), which records the start and stop times of any discharges to the environment. We completed the installation of these monitors in December 2023, giving us full visibility of all storm overflow activity.

Since April 2024, we've been publishing near real-time information about these discharges on our website: wessexwater.co.uk/coastwatch. Later in 2024, this same data became available on a national map, alongside information from all other water companies.

We've been improving storm overflows for decades, starting in 1989. Each five-year investment plan (AMP) has included upgrades. By the end of 2023, 600 overflows had already been significantly improved.

Looking ahead, new government targets mean that around 650 more will need improvement by 2050. As part of our AMP8 plan (2025–2030), we're investing £400 million to improve 128 storm overflows.

Our goal is ambitious: by 2050, we want each overflow to spill fewer than 10 times per year, compared to an average of 32 times in 2023.

What's Next?

We're tackling the problem in two main ways:

- increasing the capacity of our sewer network
- reducing the amount of rainwater and groundwater entering the system

To do this, we're:

- expanding treatment capacity at our water recycling centres
- installing storage tanks to hold excess water during storms
- separating rainwater drains from wastewater pipes
- lining and sealing pipes to stop groundwater from getting in

Visit these website pages to find out more:

wessexwater.co.uk/overflows

https://corporate.wessexwater.co.uk/our-purpose/rivers-and-coastal-waters/storm-overflow-investment

wessexwater.maps.arcgis.com

www.gov.uk/government/publications/storm-overflows-discharge-reduction-plan

Water distribution and production

Our water supply network is made up of water treatment centres, service reservoirs, booster pumping stations and water mains that supply around 273 million litres of wholesome drinking water to around 1.4m customers in our region every day. Events like burst water mains have the potential to cause pollution incidents if not managed effectively which is why this part of our business is included in our PIRP.

Customers and stakeholders

What have we done so far?
Continuous improvements in our response to leaks and bursts on our water supply network mean that we now have a 24/7 dedicated team that monitor thousands of telemetry alarms across our supply region. These alarms alert us when things go wrong so that we can act quickly to control and resolve problems minimising impact to customers and the environment. Lots of these alarms are so finely tuned that they often tell us something is happening before customers notice changes to their service. Our aim is to catch leaks on our network before they develop into bursts which have a higher probability of causing an environmental impact.

Our commitment to protecting the environment and maintaining supplies to our customers is built into our procedures to ensure that planned and reactive activities consider discharges from our sites and assets are managed appropriately and reported in the same way that we would for a wastewater discharge.

What's next?
The internal reporting process that we use for communicating water supply events in real time 24-hours a day has been overhauled allowing us to move from an email-based system to a web-based system that connects into our corporate reporting system. This will greatly improve the way that we review and learn from incidents, including where pollutions have occurred, as we will have the functionality to report on trends that can then steer further improvements in the future.

Our supply network teams have also changed how they work by bringing the expert network operators and expert leak detection technicians into the same local teams. This will go further to reduce leakage from our supply network and ensure that there is consistency across how we manage our water supply assets.

Industry best practice

Collaborating across the water industry to reduce pollution
The water industry regularly brings together experts through national forums to share best practices and drive innovation.

1. National Pollution Group

This group meets monthly and includes all major wastewater companies in England, as well as Welsh Water and Scottish Water. The forum focuses on sharing best practices for predicting, preventing, response, and mitigation of pollution incidents. We are proud to be active contributors, both sharing our insights and learning from others, to help reduce pollution across the UK.

2. Network Protection and Sewer Abuse Prevention Forum

This forum addresses issues related to sewer misuse, particularly from commercial food establishments. Topics include the improper disposal of fats, oils, and grease (FOG), the misuse of wet wipes, and customer education on what should and shouldn't go down the drain. Since misuse is a leading cause of sewer blockages and subsequent pollutions, this forum plays a vital role in driving targeted improvements.

3.Extreme Weather National Conference

We engage with national and international conferences that cover topics such as extreme weather patterns and climate change. This helps us to stay ahead of the latest information and share learning across industries who serve customers and are impacted by weather events and climate change. We feed this information into our processes to make sure we are as resilient as possible.

These forums aim to reduce the frequency and severity of pollution incidents by promoting new ideas, tools, and collaborative ways of working. The ultimate goal is to create a positive impact on our communities, protect wildlife, and safeguard the environment, working together not in competition or isolation.

4. Water Industry Maintenance Work Group (WIMWG)

The WIMWG allows maintenance personnel to benefit significantly from the knowledge and experiences of their peers in other companies and will also give them the opportunity to collaborate in pilot studies, technical events and discussions relating to high level strategy, common problems and new technology. We actively engage with this group to share lessons learned and best practice with our peers as well as share the valuable insights from trials and pilots where new technology or approaches to asset maintenance are tested.

Our future strategy

Long Term Ambition

Our customers, communities, and environment are central to all we do. This is reflected in our purpose "to support our customers' health and wellbeing and enhance the environment and the diverse communities we serve". This ambition was reflected in our latest business plan, which proposed a doubling of investment to meet legal and regulatory requirements in the manner that most appropriately meets the needs of customers and the environment.

Key to this is an effective sewerage system that ensures that we play our part in securing good river and coastal water quality across our region. We agree with our customers that there are urgent improvements to be made, which requires upgrading and building new infrastructure as well as harnessing nature to safeguard water quality. The level of investment built into our business plan is a response to a growing population, higher environmental standards, and the impacts of climate change. Reducing pollutions is key to these outcomes, and the pollution incident reduction plan is a vital part of achieving our long-term ambition. As a result, we have an ambitious plan for our future activities, building on our existing process. These are explained below in line with the three core themes: customer and stakeholder, innovation and asset data and asset management.

Customer and stakeholder

Catchments

Taking a catchment-based approach to the water sector is not a new concept. For example, we have worked with farmers for over 20 years to reduce pollution across the water cycle. The principle focusses of a catchment-based approach is that employing multiple coordinated techniques and solutions in a single geographical area maximises the benefits realised there. This contrasts with conventional schemes which tend to carry out lots of isolated smaller scale works across a larger area.

However, there is still huge scope for the sector to do more in this regard and a greater emphasis of catchments is a core part of our future strategy. We are confident that taking such an approach can provide significant benefits to our pollution incident reduction plan. Using a catchment-based approach solve multiple contributing issues in a single catchment and provide real, visible benefits to our customers. It will also allow us to build bespoke solutions designed around the needs and risks present in each catchment.

Rainwater management

Rainwater: too much, too little, too polluted, or in the wrong place at the wrong time. The water that falls from the sky plays a vital role in supporting our societies and has been a plentiful resource in the UK. Yet is it typically wasted and undervalued. This is reflected in the fact that nationally the approach to rainwater management is fragmented, inefficient, and unclear. This mismanagement of rainwater has a huge impact on our customers, our operations, and how we are perceived. In the context of our pollution incident reduction plan, many pollution events are a result of the impact rainwater has on our wastewater networks.

Therefore, we must prioritise managing rainwater at source to support our customers and enhance the environment. In practice, this means moving to a future position where all rainwater is considered holistically. For our operations, this will mean utilising distributed solutions that deliver an outcome-based approach to abstraction, treatment, supply, pollution reduction and recycling.

Our Rainwater Management Platform has won the OFWAT Innovation Award and offers a unique chance to transform and improve how society manages rainwater where it lands.

Partnerships
We are working hard to address societal challenges of unprecedented scale and urgency. However, the size of these challenges means that we cannot address these issues on our own. We understand that we have a responsibility to do what we can in partnership with others, including our customers and stakeholders. This means we need to bring together partners to work with us towards common goals, mainly to support our customers' health and wellbeing, and enhance the environment and the diverse communities we serve. Central to this is how we can encourage and incentivise others to adopt different practices and behaviours or by working together to design, deliver, and fund solutions that align with our purpose. This can be achieved via our pollution incident reduction plan in several ways, such as financial contributions and collaborative delivery models.

Affordability
A step change in investment is needed to meet our obligations and deliver the outcomes our customers expect. We have one chance to do that, which we are committed to, and this is why we requested the levels of funding in our latest business plan that we did.

But we must ensure that customers can afford the cost of water. We believe that water should always be affordable for all customers, whatever their circumstances. We are committed to ending water poverty by ensuring no one spends more than 5% of their disposable income on our water and sewerage services. This ambition is even more important given that increased living costs and reduction in disposable income for many in the past few years.

Innovation

Efficient delivery
We have an enduring record of being efficient, on both cost and quality. We don't always get everything right, but the focus of the business is on correcting where we fall below expected standards. In relation to pollution reduction, we recognise that not every initiative will succeed - and that's okay. Therefore, our future strategy will embrace a 'fail fast, learn fast' mindset. This will allow us to explore new innovations quickly, discard what doesn't work, and focus on solutions that deliver the greatest value to the environment and our customers. As a result, our pollution incident reduction plan will continue to evolve with a dynamic and agile approach, guided by data and grounded in our "Plan-Do-Act-Review" cycle. This iterative process enables us to assess the effectiveness of our initiatives, ensuring they deliver meaningful pollution reduction, and to adapt our strategies as needed.

Embracing new technology
We actively encourage innovation from within, empowering our people to share ideas through collaborative platforms that connect them directly with senior leaders and executives. These leaders provide the support and resources needed to turn promising ideas into impactful actions. For example, we are applying detection dogs and robots that target contamination with our surface water system.

Asset data and asset management

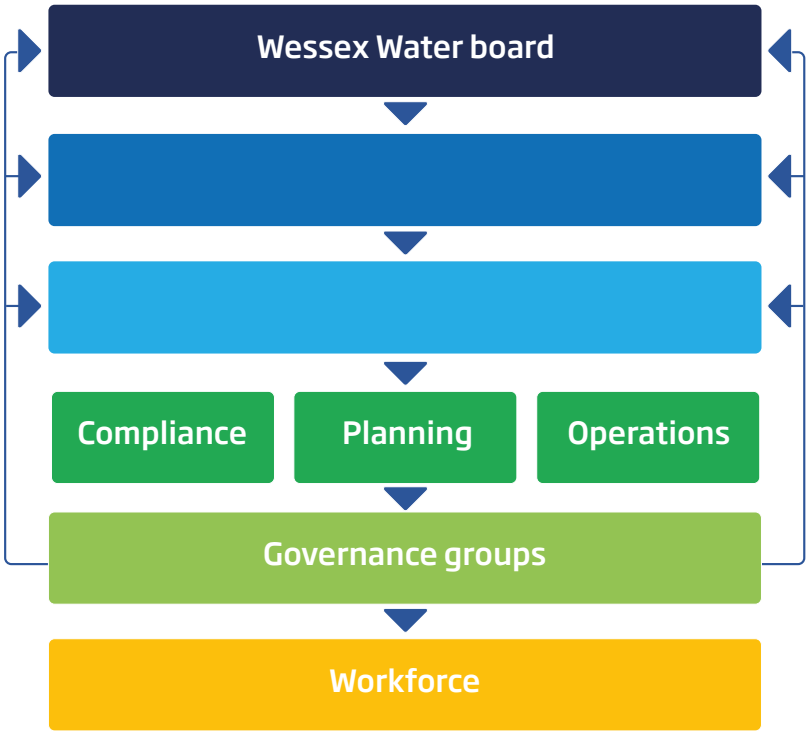
Climate change
Climate change, caused by greenhouse gas emissions from human activity, is our biggest long-term challenge. We are committed to protecting our planet and we are making strides to limit our environmental impact while still providing the best service for our customers.

We have already made significant progress toward net zero. But we must maintain this momentum and embed these principles into our operations so that they become business as usual. We plan to develop a whole-life total carbon approach, connecting both operational and embodied carbon emissions . This must be central to our decision-making processes as we tackle pollutions to enable our transition into a truly low carbon business.

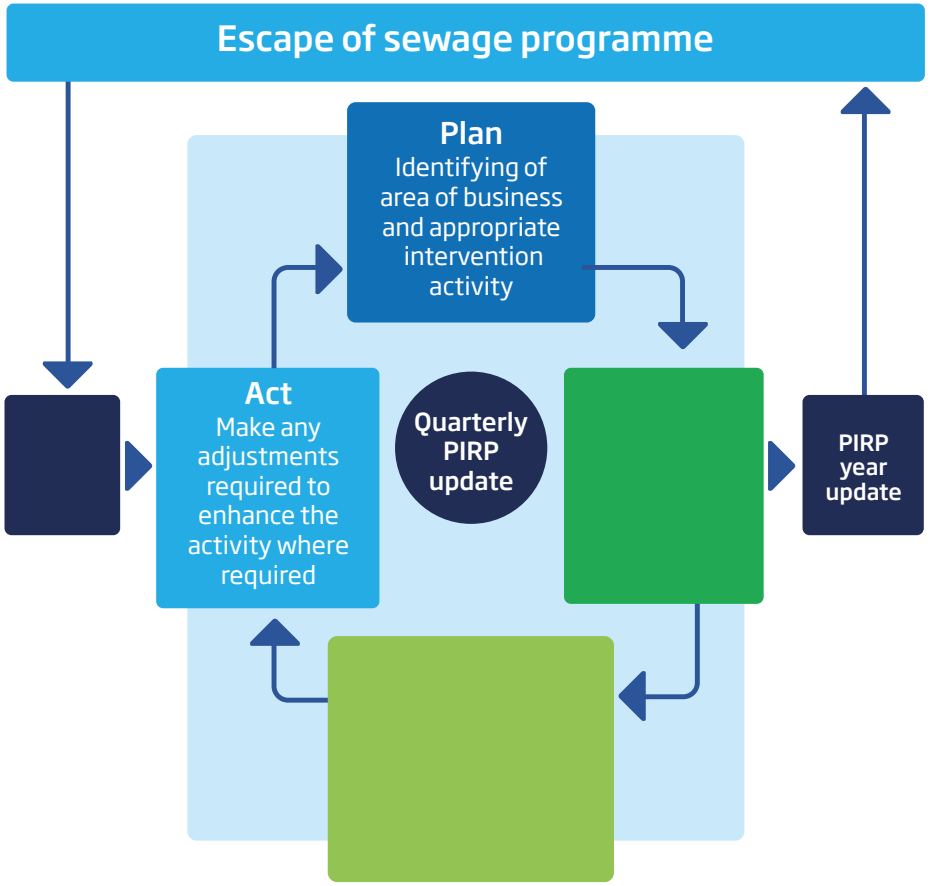
Asset management
The health of our assets is vital as we ensure we have a resilient asset base. Understanding how our current assets will perform into the future ensures that the investment decisions we make are considering the whole lifecycle of our assets. This is a particularly important step in our journey towards zero pollutions as we can start to feed vital asset data into our systems and risk models allowing us to project where our investment priorities should be in the short, medium, and long term.

Asset data
In recent years, we have invested heavily to improve both the quality and quantity of data we record. This is underpinned by our rapidly expanding estate of monitoring equipment which we will continue to develop to cover more and more of our asset base. The real development in this space will be how we use this information to feed into our risk models. This will allow us to get ahead when it comes to planned maintenance activities and identifying investment needs, avoiding pollutions. Our teams are constantly building new ways of reporting and analysing our asset data, and these will be an invaluable part of our pollution incident reduction plan throughout AMP8 and beyond.

Governance



PIRP actions and root cause correlation



AMP7:	Asset Management Plan 7 which encompasses the business plan from 2020-2025
AMP8:	Asset Management Plan8 which encompasses the business plan from 2025-2030
CEO:	Commercial engagement officer
Control room:	The centre in which all our alarms and telemetry are handled and actioned
CSO:	Combined sewer overflow which spills to the environment to relieve pressure on combined sewer networks
DEO:	Domestic engagement officer
Detritus:	Waste or debris
EDM:	Event Duration Monitor which records the start and stop times of events
Effluent:	Treated wastewater from our water recycling centres
Environment Agency:	Environmental regulator
Environmental Permit:	Conditions set out by the EA that must be met before discharging to the environment
FOG:	Fats, oil and grease
Fatberg:	A fatberg is a mass of waste matter formed by the combination of flushed non-biodegradable solids (i.e. wet wipes) with fat, oil, and grease deposits
Infiltration:	When external water such as ground water leaks/ infiltrates into the public or private sewer network
Jetvac:	A vehicle that has the capability for both high pressure water jetting and vacuum storage
NMT:	Network monitoring team
Ofwat:	The economic regulator of the water sector
Rag:	A term used to encompass unflushable items such as wet wipes and sanitary products
Self-report:	The act of Wessex Water reporting an incident directly to the EA
SPS:	Sewage pumping station
SSSI:	Site of Special Scientific Interest
StormHarvester:	AI software trained on monitoring data that generates alerts based on abnormal data patterns
Pigging:	A method of cleaning/maintaining rising main sewer pipes using cylindrical foam tools known as 'pigs'
PR24:	Ofwat's Price review, detailing the investment and bill levels for 2025-2030 period
Telemetry:	In-situ monitoring equipment that collects and transmits data
Trenchless:	Operational intervention that is done without the need for digging trenches
UKAS:	United Kingdom Accreditation Service which assesses the competence of organisations that provide certification, testing, inspection and calibration services
Unflushables:	A product that is not designed to be flushed down the toilet i.e. wet wipes
WOC:	Waste operational control (WOC) team that monitor and analyse the telemetry and alarms originating from our WRCs on a 24/7 basis and action an operational response when needed
WRC:	Water recycling centres treat wastewater to make sure it is safe to release into local waterways.
WTC:	Water treatment centres remove contaminants and bacteria from water abstracted from water sources such as reservoirs and aquifers before delivering clean and safe water to customers for consumption

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