
Pollution Incident Reduction Plan

March 2026

NORTHUMBRIAN
WATER *living water*



CONTENTS

Welcome to the 2026 Pollution Incident Reduction Plan



Foreword	3	Wastewater and clean water 2025 pollution performance (Cat 1-3)		Planned additional measures	
Executive summary		All wastewater incidents by month	24	Across the asset base	52
Our Pollution Incident Reduction Plan	4	All clean water incidents by month	25	Foul sewer	54
PIRP assurance and accessibility	4	Summary of wastewater and clean water incident numbers by asset class	26	Combined sewer overflows	56
Innovation	5	Summary of serious pollutions	30	Rising mains	58
Smart sewers	6	Summary of total pollutions by asset class	30	Wastewater pumping stations	59
Power resilience	7			Wastewater treatment works	62
Funding allowances	8			Water distribution network	63
				Water treatment works	65
Understanding pollution in the context of our region		Root cause analysis		Drainage and Wastewater Management Plan	67
Our regions	9	Introduction to root cause analysis (RCA)	31		
Our Business Model	10	Wastewater 2025 root cause analysis (Cat 1-3)	32	Glossary	
What is a pollution?	11	Power outages	32	Definitions	68
How can customers help?	14	Back up batteries	33	Acronyms	68
		Partial blockages / blockages	34		
Future changes to legislation and its impact upon future numbers	15	Pump failure	34		
		StormHarvester	35		
Historical pollution performance		Inundation	36		
Serious pollutions Cat 1-2 (wastewater and clean water)	16	Operator response	36		
Total pollutions (wastewater and clean water)	17	Rising mains	36		
Total pollutions (wastewater only)	18	Clean water 2025 root cause analysis (Cat 1-3)	37		
Total pollutions (clean water only)	19	Wastewater and clean water root cause by asset class	37		
Wastewater performance and clean water – self reporting	20				
		Steps taken to maintain the system			
Performance targets		Across the asset base	41		
Ofwat targets	21	Foul sewer	43		
Other targets	23	Combined sewer overflows	44		
		Rising mains	46		
		Wastewater pumping stations	47		
		Wastewater treatment works	49		
		Water distribution network	50		
		Water treatment works	51		

FOREWORD

We are making real progress in protecting the environment we operate in

This is one of our most important responsibilities and we know how much rivers, coasts and local environments matter to the communities we serve.

We are delivering the largest investment programme in our history, investing at pace to reduce pollution and achieve better environmental outcomes. Across our wastewater network, we are increasing capacity, strengthening resilience and prioritising improvements where they will have the greatest impact.

We are leading innovation in this space, using technology and data to accelerate progress and deliver better value for customers. Through Smart Sewers, Pipebots, monitors and drones, we are detecting and preventing issues before they affect customers or the environment. Our £25 million investment in the world-leading Smart Sewers programme is already delivering results, using artificial intelligence to better manage flows and reduce the risk of storm overflow spills. This approach is enabling earlier intervention, better targeting of risk and faster response across our network.

We are also extending our impact through strong partnerships. By working with organisations such as The Rivers Trust, we are improving water quality through catchment based and nature led solutions. Our Bluespaces programme has invested nearly £1 million to enhance local environments, planting more than 19,000 trees and creating 417 hectares of new wetland alongside communities and partners.

This combined approach is delivering measurable improvements. Storm overflow performance has improved, with spill frequency reduced and outperforming our target. Coastal water quality remains strong, with 33 of our 35 bathing waters rated Good or Excellent. We are working closely with the Environment Agency, local authorities and partners to address the remaining two sites, with a clear ambition to achieve this standard across all our bathing waters.

We are also increasing transparency so people can better understand what is happening across our rivers and coastline. The rollout of inland river monitors is providing near real time data, giving communities greater visibility and helping us better understand and manage environmental performance across our catchments.

As expectations increase and reporting evolves, the way performance is measured across the sector is changing. New national requirements, including the incorporation of Event Duration Monitoring data and changes to incident classification, will increase the number of recorded pollution incidents from 2026. At the same time, external factors such as power outages, often outside our control, continue to present challenges across our region, particularly during severe weather.

We are taking action to address these challenges and strengthen resilience. We made a strong, evidence based case to the Competition and Markets Authority and secured additional funding to improve power resilience across our sites. While reported pollution incidents have increased compared to 2024, this reflects sector wide reporting changes and external pressures rather than a like for like decline in performance.

We remain focused on what matters most, preventing pollution at source, reviewing every incident, learning quickly and acting decisively.

Looking ahead, we will continue to invest, innovate and collaborate to protect the environment and build a more resilient future for the communities we serve. We are committed to leading progress in this space and delivering lasting improvements.

I confirm that I have personally reviewed and approved this Pollution Incident Reduction Plan for 2026, in accordance with the requirements of the Water Industry Act 1991, as amended by the Water (Special Measures) Act 2025. I am fully committed to delivering the actions set out in this plan.



Heidi Mottram CBE
Chief Executive
Northumbrian Water Group



Heidi Mottram, CEO

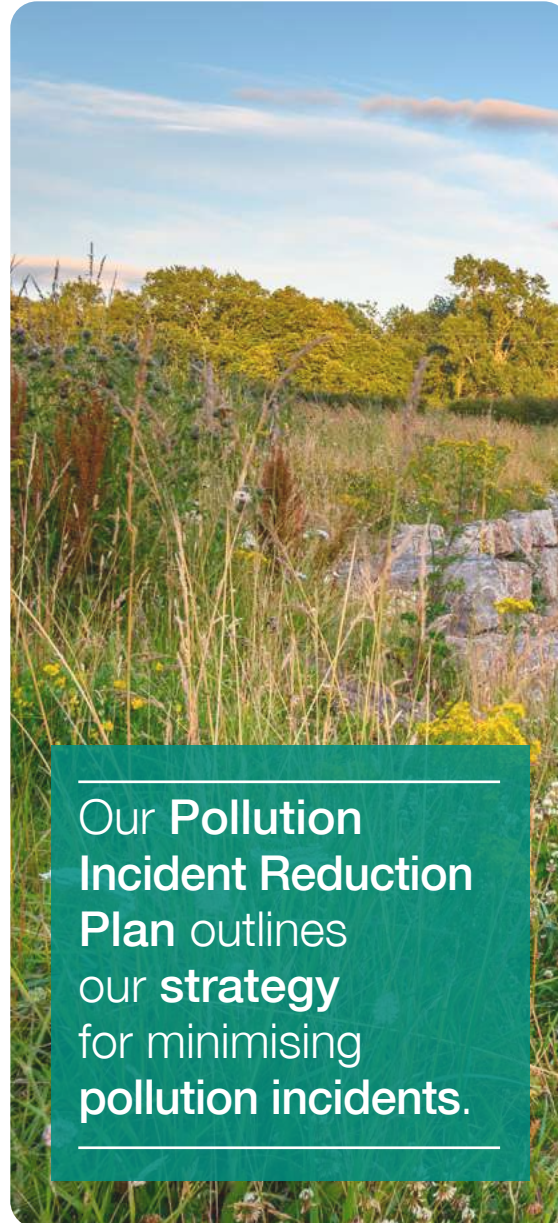
EXECUTIVE SUMMARY

Our Pollution Incident Reduction Plan

This document is our Pollution Incident Reduction Plan (PIRP), setting out our strategy to minimise pollution incidents and improve environmental outcomes across our operations. The preparation and publication of a PIRP is now an annual statutory requirement under the Water (Special Measures) Act 2025, which amends the Water Industry Act 1991¹.

Developed in line with Environment Agency guidance, this is our first PIRP under the new statutory framework and was published on 31 March 2026. The plan sets out the actions we will take to reduce pollution risk, reflecting the challenges of our operating region and the expectations of our customers and stakeholders.

The Executive Summary outlines three key areas that will drive improvement: accelerating innovation, strengthening power resilience across our operations and aligning funding and investment to priority risks.



Our Pollution Incident Reduction Plan outlines our strategy for minimising pollution incidents.

PIRP ASSURANCE AND ACCESSIBILITY

The Northumbrian Water Internal Audit Team were requested to carry out an independent review of the Northumbrian Water PIRP 2026, published on 31 March 2026

This assurance we have provided is in addition to the first and second line assurance provided by data providers and reviewers, as well as the governance processes that have included review and challenge by senior leaders and directors in the business.

Our audit involved reviewing the detailed guidance and critically comparing the PIRP to ensure that the guidance had been followed and we had been transparent in our approach.

Our work highlighted some improvement points (that were also raised in the PIRP) particularly related to the maturity of our root cause analysis process to secondary and tertiary level causes. There were also issues related to our performance commitment levels for 2026 and beyond as this measure has been changed and levels have not yet been reset – again, this is transparent in the PIRP and is common to all WASCs.

In conclusion, we can confirm that the Northumbrian Water PIRP for 2026 has been produced in accordance with all requirements of the guidance.

This PIRP will remain on our website for at least five years from publication and a copy of this document has been shared with the Environment Agency.

This document has been published as a fully searchable PDF. To enhance accessibility of our PIRP, we have:

- Made sure our PIRP is optimised for screen readers by including alternative text for any images, tables or graphics.
- Provided a short summary of key points and commitments on our website alongside this plan, enabling quick access to essential information without downloading the full document.
- Our ReciteMe tool allows users to view the pdf document in a format that best meets their requirements, including alternative languages and a screen reader.

Smart Sewers: using live data to reduce storm overflow spills

Heavy rainfall can quickly overwhelm parts of the sewer network, increasing the risk of storm overflow spills and sewer flooding.

Our Smart Sewers programme tackles this challenge head on by using AI and smart sensors to predict when and where rainfall is likely to impact the network, allowing wastewater to be diverted to emptier parts of the system before pressure builds and is released through storm overflows.

In practice, this means we can act earlier and more intelligently during wet weather. Hundreds of sensors installed across the network monitor flows and levels in real time, while advanced modelling combines this information with detailed weather forecasts. Together, this allows teams to anticipate stress in the system and take action in advance – rather than reacting once assets are already under strain.

The programme focuses on making better use of the infrastructure we already have. By holding back or redistributing flows across pipes, pumping stations and existing storage tanks, Smart Sewers help create capacity where it's needed most during rainfall events, reducing the likelihood of spills and flooding without relying solely on major new construction.

We've been investing at scale to deliver this approach. In Tyneside, a £20m programme has seen hundreds of sensors installed across the catchment, supporting more proactive, network-wide control during wet weather. Early operational results show the impact this type of approach can have, with significant reductions in spills and spill volumes achieved through active management of flows.

The programme continues to expand, with further phases underway beyond North Tyneside, including work at Marske in Teesside and looking at opportunities in our AMP8 storm overflow investment programme. Each phase builds on what we learn from real rainfall events, helping refine forecasts, improve responses and strengthen performance over time.

Why it matters:

By predicting and managing flows more intelligently, Smart Sewers help prevent spills, reduce flood risk and protect coasts and rivers – while making smarter use of existing assets.



EXECUTIVE SUMMARY

Power resilience

For Northumbrian Water (NW) the challenge remains in reducing the impact from severe and named storms that result in power dips (brownouts) or total power outages (blackouts) from our external Distribution Network Operator (DNO). Although we have begun to realise the benefit from our 2025 interventions to mitigate against these impacts from storm events, the largest root cause of our 2025 Category 1-3 pollution events remains the impact of brownouts and blackouts (18% of all events, and 46% of sewage pumping station-related pollutions).

NW operates in a region that presents a more challenging operating context than many other parts of England, including exposure to more frequent and severe weather events and a large, geographically dispersed asset base serving rural and coastal communities. These factors increase the vulnerability of assets to power-related disruption and can result in longer restoration times following network interruptions.

Wastewater services are inherently dependent on a continuous electricity supply to maintain pumping, treatment and control processes. Disruptions to this supply, even for short durations, can interrupt critical operations and increase the risk of pollution incidents. Evidence from our resilience analysis shows that third-party power failure is a leading cause of pollution incidents.



Our region presents a more challenging operating context than many other parts of England

Infrastructure resilience from our DNO, Northern Powergrid, is not within our direct control, and this industry-wide challenge is being recognised by Ofgem in its consultation on shaping the next electricity distribution price control (ED3), which will run from 1 April 2028 to 31 March 2033. Ofgem has highlighted the need for DNOs to demonstrate how they will address short-duration interruptions, particularly those lasting less than three minutes. For NW, these short interruptions represent a material driver of pollution risk, as they can interrupt critical processes and lead to loss of containment within wastewater systems, even where overall network resilience is improving.

46% of our **2025 Category 1-3 pollution events** from sewage pumping stations were due to power failures

Ofgem has highlighted the need for DNOs to demonstrate how they will address short-duration interruptions

EXECUTIVE SUMMARY

Funding allowances

We built our 2025-30 Business Plan (PR24) around the expectations of our customers, including significant investment in wastewater and storm overflow improvements.

Ofwat’s Final Determination confirmed £6.2 billion of overall funding for the business. Within this, Ofwat allowed c.£2.9 billion for wastewater, including bioresources, and £1 billion for storm overflows to help reduce their use.

However, Ofwat allowed less than we proposed in areas that customers told us were important. For example, against our £47.4 million proposal to address climate-related risks at 84 wastewater assets, Ofwat allowed £4.6 million which covers mitigation at six sites. Ofwat also did not include our proposed £13.5 million Pollution Enhancement Case, despite tighter EA thresholds coming into effect from 1 January 2026.

We believed strongly that our full proposals were needed to deliver the environmental improvements our customers expect. For this reason, we asked Ofwat to refer its decision to the CMA.

The CMA’s final decision includes changes to capital allowances compared with Ofwat’s Final Determination, supporting investment in areas such as power resilience and reducing pollution risk from storm events and power disruption.

As a result, we will be able to invest in more wastewater sites than originally allowed. This will strengthen resilience at assets that are vulnerable to external power failures and help reduce the likelihood of pollution incidents, supporting the environmental outcomes our customers have told us matter most.

Ofwat confirmed £6.2 billion of overall funding for the business.

c.£2.9 billion for wastewater.

£1 billion to reduce the use of storm overflows.



Our customers told us that improving the environment, reducing pollution and strengthening resilience were priorities.

UNDERSTANDING POLLUTION IN THE CONTEXT OF OUR REGION

Our regions

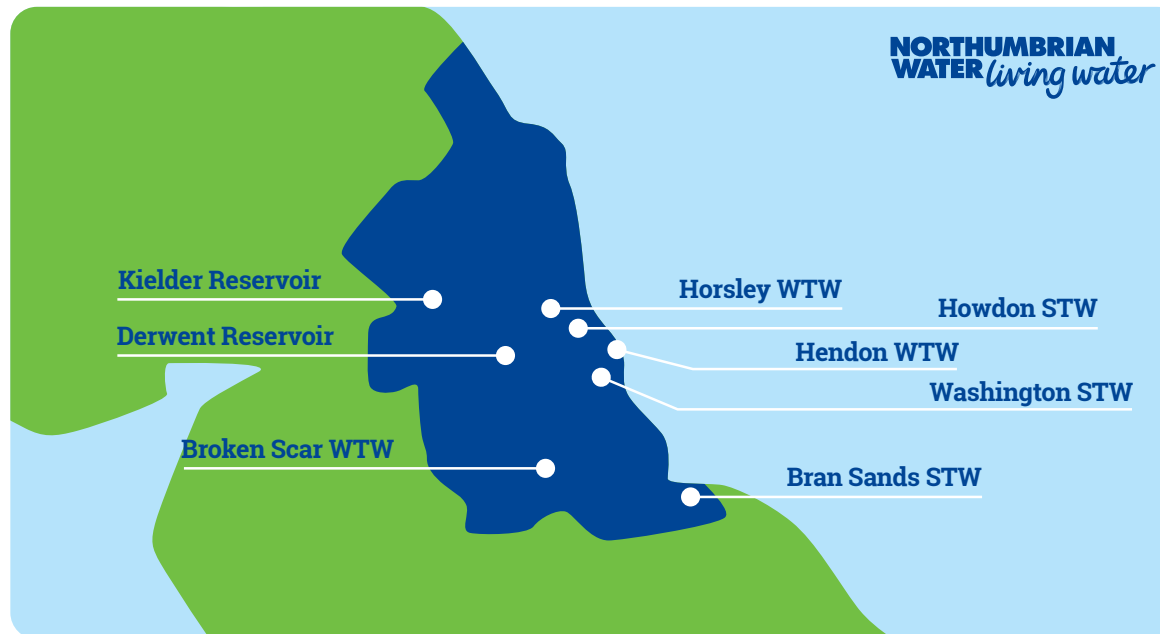
Our Purpose is caring for the essential needs of our communities and the environment, now and for generations to come. We do this by providing reliable and affordable drinking water and wastewater services for our customers. We make a positive difference by operating efficiently and investing prudently, to maintain a sustainable and resilient business.

Making sure we protect and enhance the environment in everything we do is a key part of our vision to be the national leader in the provision of sustainable water and wastewater services. We aim to manage our assets and operations with minimal environmental impact and, where possible, deliver positive environmental outcomes.

Northumbrian Water Limited (NWL) operates as Northumbrian Water (NW), supplying water and sewerage services to 2.7 million customers across the North East of England, and as Essex & Suffolk Water (ESW), supplying water only services to 1.8 million customers across Essex, Suffolk and some London boroughs.

Every day we supply 1,104 megalitres (1.1 billion litres) of water. This water is drawn from reservoirs, where it is collected and stored, rivers and groundwater sources. It is treated at our works before it is delivered by a network of pipes to homes and businesses.

Wastewater is then collected from these properties via the sewerage network and treated at our works before it is returned to the environment as either clean water or sludge which can be recycled as fertiliser or used to generate energy.



We employ c. 4,200 people, and operate:

50 water treatment works

385 water pumping stations

304 water service reservoirs

26,366km of water mains

412 sewage treatment works

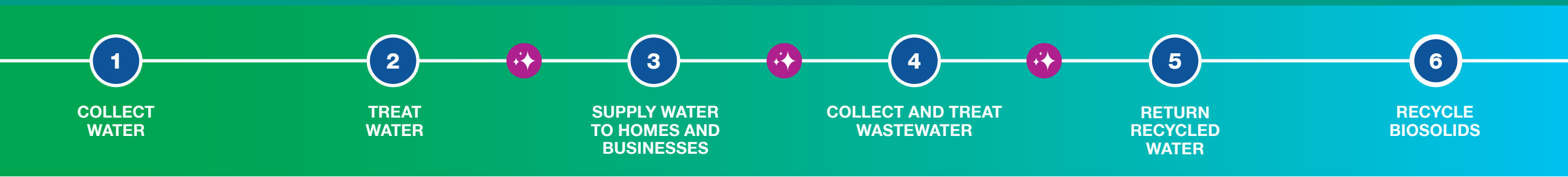
966 sewage pumping stations

30,237km of sewers

Our Business Model

The value chain at the centre of our business model has six components.

- ① ② ③ Northumbrian Water
Essex & Suffolk Water
- ④ ⑤ ⑥ Northumbrian Water
- 🌟 Artificial Intelligence



We manage the following resources and relationships to ensure the long-term success of our business model.

RESOURCES

-  **Physical assets**
-  **Natural resource**
-  **Financial capital**

RELATIONSHIPS

-  **Customers and communities**
-  **Our people**
-  **Suppliers and partners**
-  **Regulators**

UNDERSTANDING POLLUTION IN THE CONTEXT OF OUR REGION

What is a pollution?

The Water Industry Act 1991 describes a pollution incident as the discharge from any structure or apparatus forming part of a water company's system of any content which may be harmful to health or to the quality of the environment, excluding discharges of treated effluent made in accordance with an environmental permit (and its conditions).

The seriousness of a pollution incident is outlined in the Common Incident Classification Scheme (CICS)² being:

Category 1 (Cat 1)

A persistent and/or extensive effect on water quality which has a serious effect on the quality or use of that water being evident at least seven days from the date that contamination enters the water. It affects over several kilometres of a watercourse or a large area of a still water or coastal waters and include levels of dangerous substance(s) exceeding toxicity levels known to cause serious harm/death to aquatic life or dissolved oxygen levels falling to critical levels.

Category 2 (Cat 2)

Significant but normally localised effect on water quality which has a significant impact on the quality or use of that water. Impacts include silt or soil, low dissolved oxygen or high ammonia levels along an extensive stretch of a water body. Impacts may be up to a couple of hundred metres in a larger water body or effects over several kilometres (such as a heavy rainbow coloured oil film).

Category 3 (Cat 3)

Limited and localised effect on water quality which has a minimal impact on the quality or use of that water. Impacts are normally localised around the point of discharge, but could include an impact extending over a few kilometres of a stream (such as a thin oil sheen).

Category 4 (Cat 4)

Substantiated incident with no impact to water quality.

New metrics and tightening existing pollution thresholds came into effect from 1 January 2026

In line with EA's published guidance, our PIRP does not make reference to Category 4 incidents. As a result, these incidents are not included in the narrative or tables within this document.

For the 2025 reporting period, pollution incidents have been categorised using the Cat 1 - Cat 4 criteria. However, from 1 January 2026 this approach has changed following the implementation of updated regulatory reporting requirements. All pollution incidents are managed and recorded on the National Incident Reporting Scheme (NIRS), which is owned by the EA with water and wastewater companies' performance being assessed within the Environment Performance Assessment (EPA). For 2025 performance, companies have been benchmarked against the EPA methodology version 11, which changed to EPA methodology version A from 1 January 2026³.

During 2025 the EA concluded a consultation on amendments to the EPA and environmental performance reporting (Water Industry Regulation Incidents – WIRI) which will strengthen its requirements through the inclusion of new metrics and tightening existing pollution thresholds which came into effect from 1 January 2026. For NW, these changes are expected to result in an increase of >300% upon our recorded Cat 1-3 pollution performance.

The primary driver in this increase is associated with the removal of Cat 4 classification if a discharge flows to a watercourse in addition to the retrospective reporting of dry day spills (DDS) from our event duration monitors (EDM) located at our storm overflows.

At present, neither regulators nor water and wastewater companies can quantify the material impact of this change upon actual pollution performance.

This industry uncertainty means that Total Pollutions (Cat 1-3) will not count towards the sector's EPA performance for 2026-27, although they will still be shadow reported. These regulatory changes do not affect how Serious Pollutions are reported.

UNDERSTANDING POLLUTION IN THE CONTEXT OF OUR REGION

Our pollution performance this year

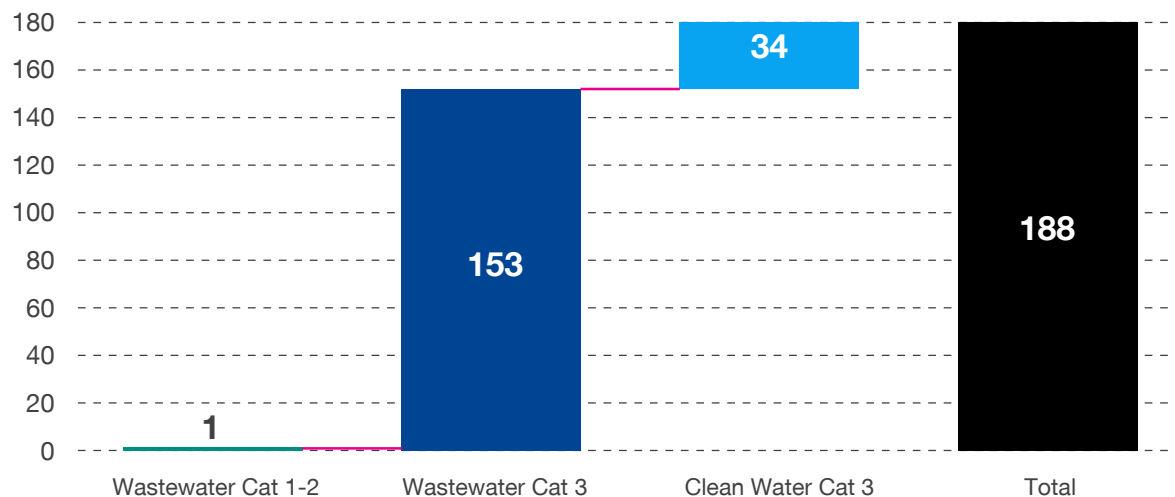
NW have achieved an industry-leading status on serious pollutions with zero serious clean water pollution incidents (Cat 1 or 2) since 2020.

Most of the time, our assets and infrastructure perform as intended, treating and distributing potable water and safely returning effluent to receiving watercourses. However, operational issues or extreme weather events can impact performance and, in some circumstances, result in a pollution incident.

A total of 188 pollutions have been recorded in the 2025 calendar period across both our wastewater and clean water operations.

Figure 1 – NW 2025 pollution overview

2025 total pollutions clean water and wastewater



Based upon the EPA version 11 methodology and the EA’s Water Company Performance Tracker on 17 February 2026, 154 total pollutions for wastewater have been registered, which is inclusive of one serious incident. Although the EA published its March Water Company Performance Tracker on 18 March 2026, the update did not provide sufficient time to perform the required analysis and completion of our governance and assurance processes for the publication of this PIRP. This performance continues to be validated by the EA and may change upon finalising this process.

The reporting requirements for EPA total pollutions (Cat 1–3) are for wastewater incidents only and do not include clean water which is reflected in the difference between the 188 and 154 values indicated in Figure 1.

Water is a precious resource and, while our assets are designed to treat and distribute drinking water to customers, bursts and leaks can occasionally occur on water pipes. In such cases, treated water (which may contain chlorine and/or fluoride) can be discharged into watercourses, with the potential to adversely affect local ecology and wildlife.



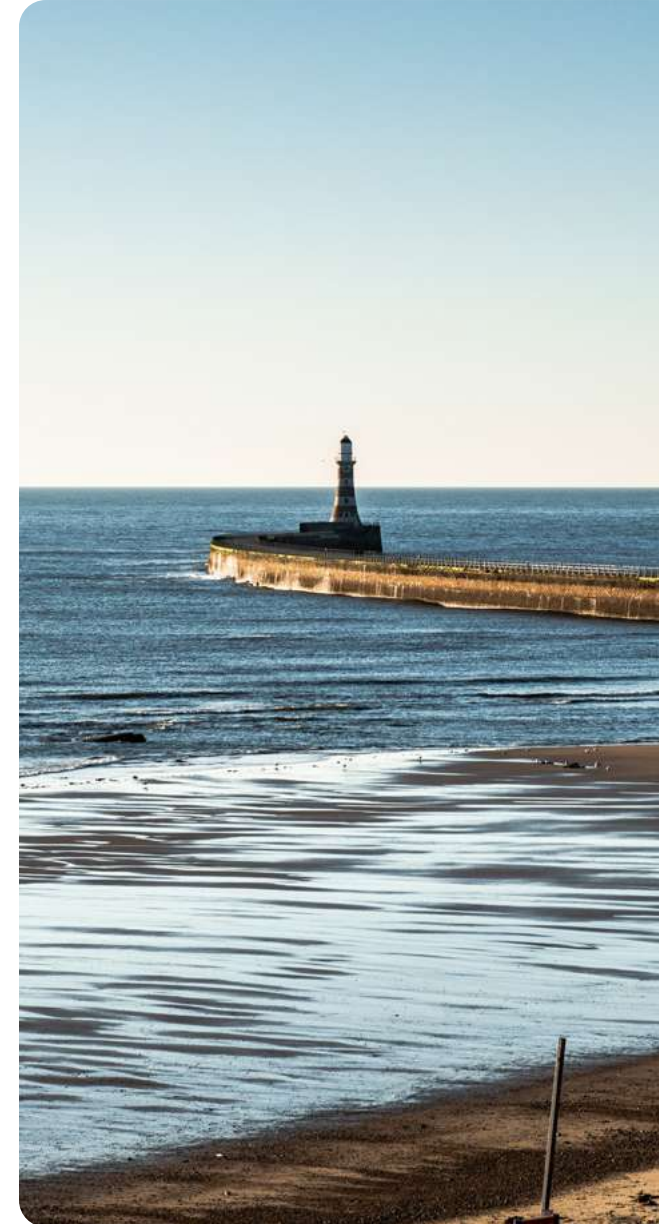
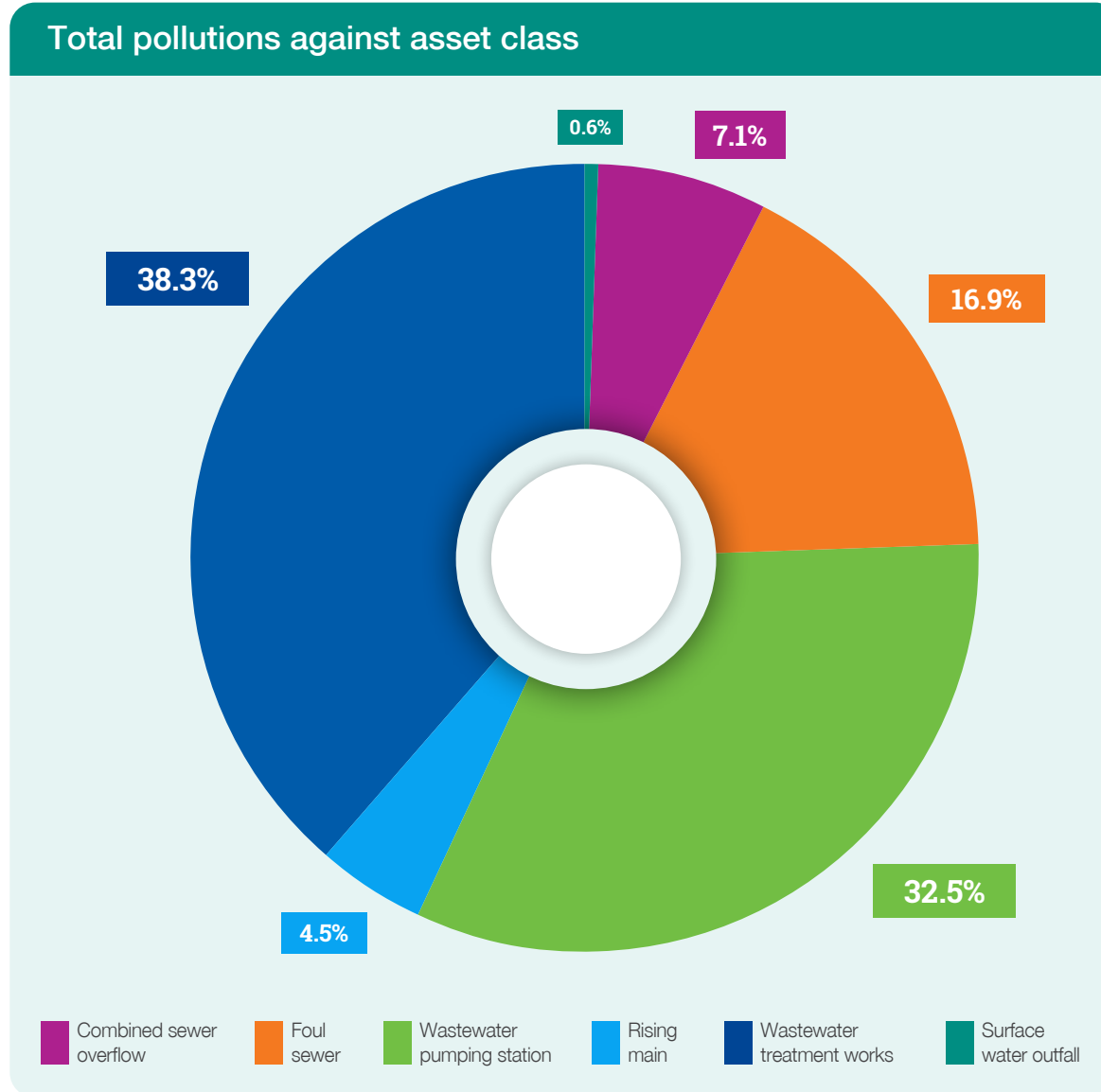
UNDERSTANDING POLLUTION IN THE CONTEXT OF OUR REGION

The primary assets that contributed to our 2025 EPA pollution performance were associated with our Wastewater Treatment Works at 38.3% (WWTW), Wastewater Pumping Stations at 32.5% (WWPS) and Rising Mains at 4.5% (RM). Our WWTW were impacted by a variety of themes including 8% from external power outages compared to 46% at our WWPS with blockages also significantly contributing to our treatment works performance.

Our network operations, which include 30,237 km of foul sewers, combined sewer overflows and surface water outfalls accounted for 24.7% of wastewater pollution incidents. Problematic customer behaviour, such as the flushing of inappropriate items leading to blockages, and other misuses of our network, have a considerable impact upon this figure.

Infiltration of rain and surface water into our wastewater network can exacerbate the likelihood of a pollution event from these assets especially when these flows are combined with the severity of named storms. In addition we continue to manage the historical impact of watercourse and land drainage systems that have been connected directly into our network which also contributes to flooding of our networks in storm periods.

Figure 2 – NWL total pollutions Cat 1–3 (wastewater only)



UNDERSTANDING POLLUTION IN THE CONTEXT OF OUR REGION

How can customers help?

We continue to engage with our stakeholders and customers to reduce the impact of their actions upon our pollution performance through our misconnections, disposal of fats, oils and greases (FOG) and Bin the Wipe programmes.

Our misconnections programme operates under the guidance of the Environment Agency to prioritise targeted work that identifies sources of foul/wastewater entering our surface water sewers. The aim is to improve the quality of water bodies across our region.

Our Polluted Surface Water Outfall (PSWO) list contains details of known polluted outfalls and the catchments they serve. Each outfall has an action plan developed following a catchment-based investigation, which identifies potential sources of diffuse pollution.

Once prioritised, the possible causes for each PSWO are investigated in more detail at property level by our survey teams. These teams produce detailed drainage plans for both domestic and commercial properties.

Homeowners and property owners are responsible for the private drainage serving their property. This means that, regardless of when a misconnection was made, if it is found on private pipework, the property owner is legally required to correct it.

If the misconnection is identified on an asset owned by Northumbrian Water, we will carry out the necessary corrective work. When fats, oils, greases (FOG), and food waste enter the sewer it begins to cool and harden within the pipes. Over time, this build-up can cause blockages, leading to flooding in or around customers' homes and, in severe cases, pollution of the environment.

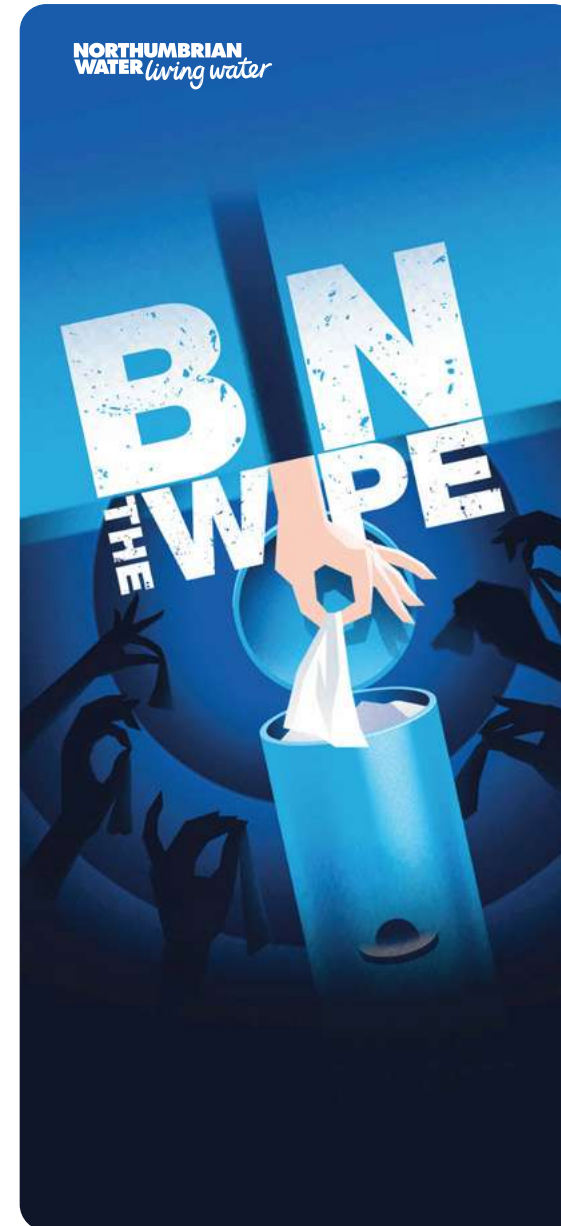
FOG and food waste from items such as meat, fats, dairy products, cooking oils, butter, sauces, salad dressings, starch water, baked goods, and lard - produced during food preparation, cooking, and cleaning - are all contributing sources.

Our FOG programme promotes best kitchen practices for domestic customers, including the use of small FOG pots and sink strainers to prevent waste entering the sewer.

Commercial, Food Service Establishments (FSEs), are required to have adequately maintained FOG management installed. We proactively investigate known problem areas to identify non-compliant FSEs and work with them to provide education, guidance, and support until all required compliance actions are completed.

The risk of sewer blockages caused by wet wipes has been addressed through a sustained regional customer awareness and engagement programme. The Bin the Wipe campaign was established to reduce the flushing of wipes and other non-flushable items, which are a significant contributor to blockages, sewer flooding and in some instances can lead to pollution events.

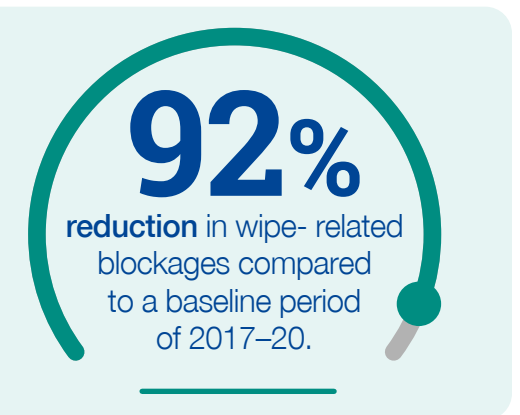
Since its introduction, the Bin the Wipe campaign has reached a substantial proportion of customers across the North East and has contributed to measurable reductions in wipe-related blockages and external flooding in identified hotspot areas. This is an award-winning initiative (Best Long-Term Campaign Award at the CIPR Excellence Awards) and was adopted as a national campaign by Water UK in 2023.



Since the marketing campaign launched in 2020, we have engaged with more than 1 million households, raising awareness of the impact that flushing wipes can have on our network. The programme has also supported improvements in customer awareness of the environmental impacts associated with flushing wipes and has been delivered in collaboration with local authorities and housing associations.

This combined approach has led to up to a 92% reduction in wipe-related blockages compared to a baseline period of 2017-20, and influenced wider regulatory and legislative developments. This includes the UK Government's announcement in November 2025 of a ban on the sale of wet wipes containing plastic, due to come into force from spring 2027, aimed at reducing plastic pollution and the incidence of sewer blockages.

By reducing water consumption, customers can play an important role in protecting the natural environment. We work with customers to encourage behaviours to help them to use less water, which in turn limits unnecessary inputs into the sewer system. Advice includes taking shorter showers and reducing car washing and garden watering during dry periods. These actions help maintain capacity within the sewer network and reduce the risk of pollution incidents, particularly during storm conditions.



FUTURE CHANGES TO LEGISLATION AND ITS IMPACT UPON FUTURE NUMBERS

We indicated in our 2025 PIRP that the EA had commenced a consultation on a revision to the EPA reporting which would impact upon the Total Pollutions metric

As part of this consultation the EA proposed to expand and strengthen requirements through the introduction of new metrics and the tightening of existing pollution thresholds which represent a significant shift in the reporting landscape.

This new EA guidance was published on 15 October 2025, entitled Guidance for Reporting and Assessing Water Industry Regulation Incidents (“WIRI guidance”). This guidance replaces the EA’s 16_02 Operational Instruction and sets out how water companies are expected to report and record pollution incidents. The new guidance came into effect on 1 January 2026 with the update intending to provide greater transparency around water company pollution performance.

The key features of the guidance that will impact our future pollution incident numbers include:

- **Incorporation** of new storm overflow Event Duration Monitoring (EDM) technology (retrospective reporting of pollution incidents from dry day spills)
- **Clarification** of when ‘no impact’ claims can be made (Category 4 pollution incidents)
- **Increased** reporting requirements
- **Amendments** to reflect recently updated regulatory approaches.

Alongside the revised guidance, the EA has also released an updated methodology for the Environmental Performance Assessment (EPA) covering the 2026-30 calendar period. Future assessments of water company environmental performance will use eight metrics to determine a rating system, ranging from one (worst) to five (best) instead of the four-star rating used in 2025.

Although actual pollution numbers will still be included in the EPA, it will not be categorised against threshold limits (red, amber, green) and will not contribute to the company performance rating being classified as ‘shadow reporting’ in the 2026 and 2027 periods. The material impact of this data will be collected within this two year period to allow actual performance to be re-baselined to support target setting in 2028 including threshold levels, at which point total pollution incidents will again count toward the performance rating.

Implementation of the new guidance from 1 January 2026 will increase our pollution numbers by a considerable amount. Initial analysis indicates this increase could be >300% from our 2025 performance results.

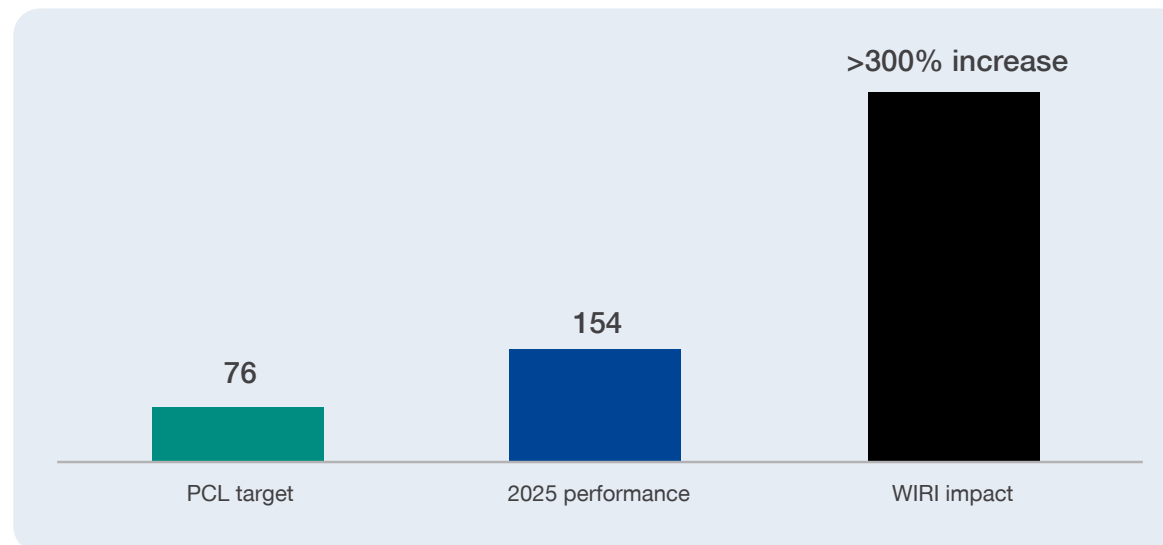
The new guidance states the removal of Cat 4 ‘no impact’ claims for incidents that have reached a water body and includes reporting of dry day spills (when a storm overflow discharges to the environment in a period of low or no rainfall) and the application of a stricter bar on the assessment of third-party interference.

Such incidents are caused by the actions of a third party upon our assets (e.g. vandalism, accidental damage, contractor activity) which are now highly unlikely to be excluded or downgraded from our performance numbers even with evidence. If the third-party act (or event) was unanticipated or unforeseeable to an extraordinary degree, a pollution event may be assigned to a third party and discounted from our pollution performance numbers. If it was not, it will remain as assigned to the water company.

We will see a significant increase in the number of recorded Cat 3 incidents, as water companies cannot now justify through evidence that a pollution event has had no impact (Cat 4) on the receiving watercourse. Any discharge that has reached the watercourse will automatically be classified as a minor impact (Cat 3) event. These changes will increase the number of reported pollution incidents irrespective of deterioration in the water environment.

This illustrative impact on our 2025 pollution performance is driven by two key factors, being the removal of Cat 4 classification when an incident has contacted a watercourse and the reporting of Dry Day Spills (DDS) from our combined sewer overflows (CSO). The removal of the Cat 4 classification is expected to impact our performance by approximately 35% with DDS being forecast at 25%.

Figure 3 – How WIRI would have impacted upon our 2025 performance (wastewater)



⁴Guidance for reporting and assessing water industry regulation incidents (WIRI) ⁵Water and sewerage companies: EPA methodology for 2026 to 2030

HISTORICAL POLLUTION PERFORMANCE

Serious pollutions Cat 1-2 (wastewater and clean water)

NW have achieved an industry-leading status on serious pollutions with zero serious clean water pollution incidents (Cat 1 or 2) since 2020 or a serious wastewater incident since 2021 having seen a period-high of nine Cat 1 or Cat 2 events in 2016, which dramatically impacts our overall performance range across the 2016-24 illustrated period.

During the 2025 period we registered our first wastewater Cat 2 pollution incident since 2021, caused by a burst rising main. Although a rising main did burst we do not believe it caused the reported impact and that third party actions were responsible for any impact upon the watercourse. This is disappointing, and we therefore continue to review the classification of this incident.

Figure 4 – Serious pollution sector overview (wastewater & clean water)

Annual number of serious pollution incidents (category 1 and 2) from sewerage and water supply assets for each of the 9 water and sewerage companies 2016 to 2024 with range and average (mean)

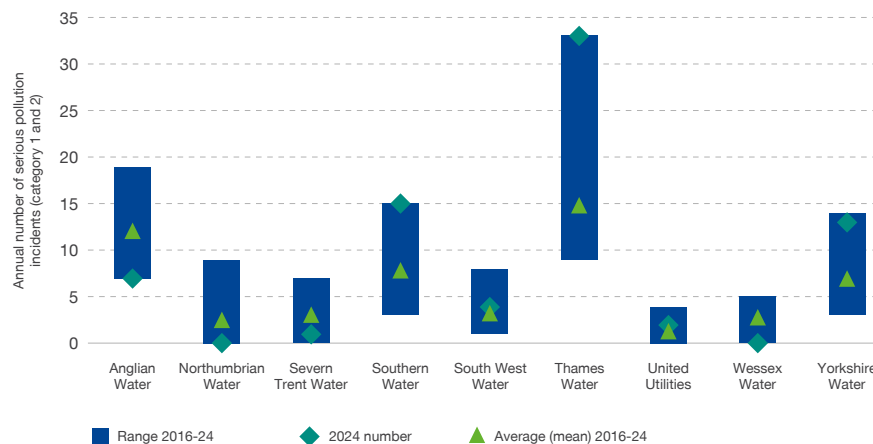


Illustration taken from the EA Water and sewerage companies in England: pollution incident report for 2016 to 2024 updated 5 August 2025.

Figure 5 – NW serious pollution overview (wastewater)

Annual number of serious pollution incidents (category 1 and 2) from NW assets (sewerage and from 2021 including water supply), also showing EPA status and thresholds

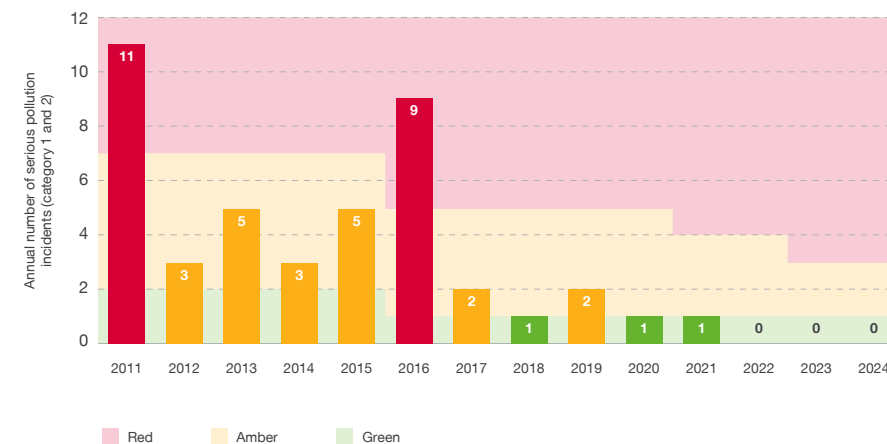


Illustration taken from the EA Northumbrian Water EPA data report 2024 published 23 October 2025.



HISTORICAL POLLUTION PERFORMANCE

Total Pollutions (Wastewater and Clean Water)

As demonstrated in Figure 6, NW has been a leading performer in terms of Total Pollutions for both wastewater and clean water assets across the 2016–24 period.

In 2015, we established the Pollution Best Practice Group (PBPG) and Pollution Management Plan (PMP) as transformative actions to significantly reduce pollution incidents. Our aim was to foster a culture focused on all aspects of pollution risk, which is evident in our pollution performance from 2016 onwards with climate change impacting upon our incidents considerably from 2023 onwards, especially from named storms.

We have been a **leading performer** in terms of Total Pollutions for **both wastewater and clean water** assets across the 2016–24 period

Figure 6 – Total pollution sector overview (wastewater & clean water)



Illustration taken from the EA Water and sewerage companies in England: pollution incident report for 2016-24 updated 5 August 2025.



HISTORICAL POLLUTION PERFORMANCE

Total Pollutions (Wastewater only)

Figure 7 represents our EPA performance for wastewater incidents only for Total Pollutions (Cat 1–3) over previous years in absolute values. It excludes clean water impacts as these are not included within the EPA reporting requirements for Total Pollutions. It also excludes our 2025 wastewater performance which is still being validated with the EA.

Prior to 2024, pollution events from severe or named storms, which are demonstrably outside of our control, would have been considered by the EA to be discounted from our EPA pollution results. However following the EA issuing its position in an Information Letter to all water companies in November 2023, such instances are now included.

Our operations experienced nine named storms within the 2024 calendar period. Storm Darragh alone in December 2024 resulted in 22 pollution incidents within our region, contributing to 26% of our 2024 total pollution events (Cat 1–3). This storm impacted the entire UK region, with peak wind gusts up to 96 mph and unfortunately resulted in three fatalities. In total, 51 pollution incidents were recorded during named storm events (44% of total Cat 1–3 recorded) in 2024 which clearly illustrates the challenges associated with climate change and power resilience.

Figure 7 – NW total pollution Cat 1–3 events (wastewater)

Annual number of pollution incidents (Cat 1-3) from NW sewerage assets, also showing EPA status and thresholds

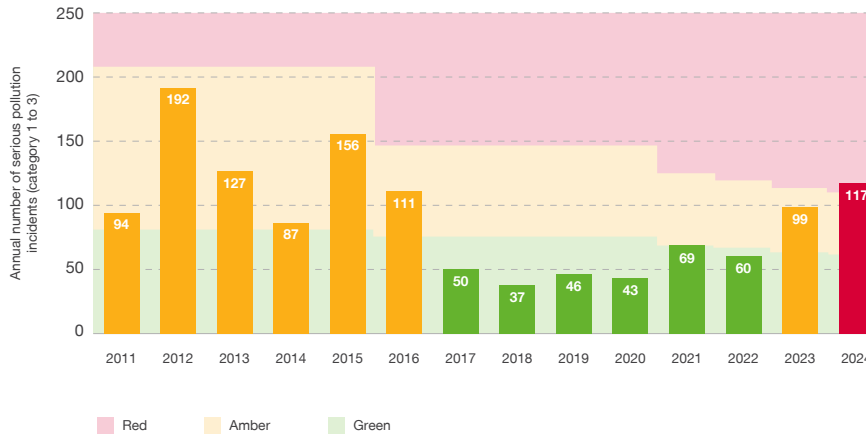


Illustration taken from the EA Water and sewerage companies in England: pollution incident report for 2016-24 updated 5 August 2025.

Previously the asset classes predominately contributing to our 2024 pollution performance were Wastewater Pumping Station (WWPS) at 45% and Wastewater Treatment Works (WWTW) at 31%.

During 2025 we have seen a reduction in incidents involving our WWPS assets from 45% to 33% which is partially a reflection of the successes of our targeted interventions to mitigate incidents from storm events and restrictions in our network. Our WWTW incidents have increased from 31% to 38%, which were primarily associated with blockages, operator response and treatment issues.



Figure 8 – NW 2025 Cat 1–3 pollutions events by asset class

Asset type	Cat 1-3 events	%
Combined sewer overflow	11	7%
Foul sewer	26	17%
Wastewater pumping station	50	32%
Rising main	7	5%
Wastewater treatment works	59	38%
Surface water outfall	1	1%
Total	154	100%

HISTORICAL POLLUTION PERFORMANCE

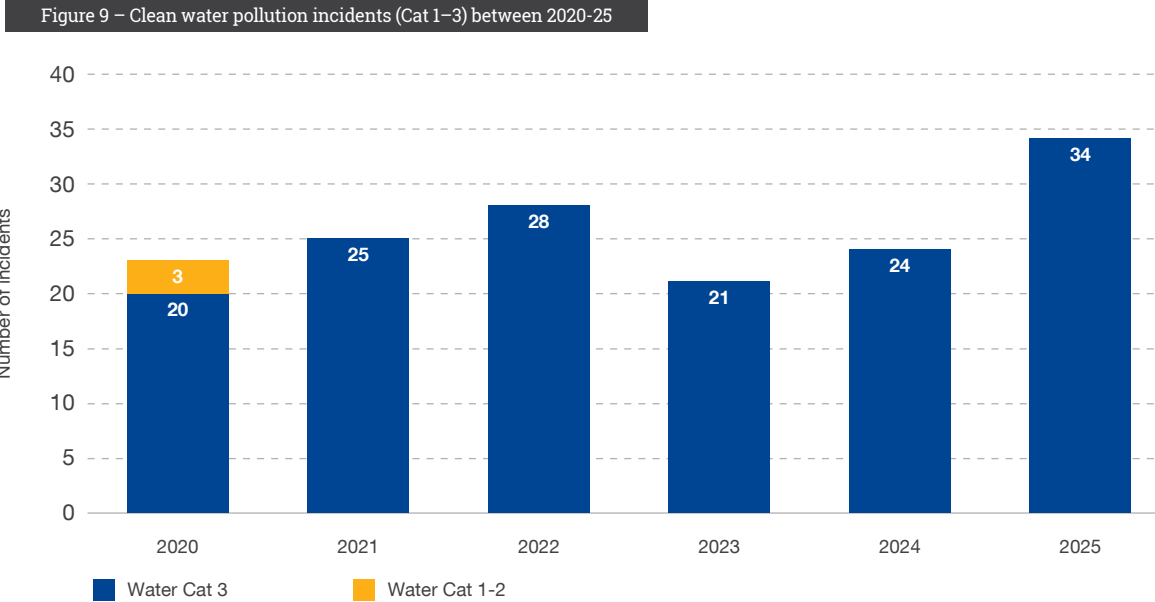
Total Pollutions (clean water only)

Over the last five years we have seen a sustained decrease in the number of Cat 1–2 pollution incidents from our Water Treatment Works (WTW) and water distribution system assets (Figure 9).

In 2020, we had three Cat 2 pollution events, but since then we have experienced zero Cat 1–2 pollutions, establishing us as a leading performer and frontier company. The number of Cat 3 pollution incidents has remained generally consistent over the last five years, ranging between 20 to 34 incidents.

With the recent regulatory change to report on water asset pollutions within the PIRP, we continue to develop our methodology of understanding causes of water asset pollutions and develop appropriate interventions building upon past actions. The first inclusion for Water and Sewerage Companies (WaSC) to include clean water within their PIRP reporting was in 2024 publications with The Water (Special Measures) Act 2025 now also requiring Water only Companies (WoCs) to publish a PIRP.

Since 2021 we have experienced **zero** Cat 1-2 clean water pollutions...



We are actively implementing learning from the Wastewater directorate and implementing appropriate measures which have proved successful in improving pollution performance. For example, we are currently actively reviewing actions such as the wastewater understanding of root cause analysis methodologies and data capture processes which will allow us to build on our existing clean water tactical plans to allow continuous development of interventions with the aim of improving the water asset pollution performance in the PR24 (2025–30) period.

...establishing us as a **leading performer** and frontier company



HISTORICAL POLLUTION PERFORMANCE

Wastewater performance and clean water (Self-reporting)

One proactive activity that all Water and Sewerage Companies (WaSCs) must report on as part of their EPA is the self-reporting of pollution incidents to the EA. Self-reporting is when a water company reports a pollution incident from one of their clean or wastewater assets to the EA before a member of the public or third party does.

This EPA metric measures the percentage of pollution incidents from both sewerage and water supply assets that were self-reported to the EA in a calendar year from Cat 1–3 events.

We have performed well against these criteria since 2017, continuously remaining within the green threshold and have been one of the leading companies on this metric throughout the previous business period (2020–24).

Our provisional 2025 self-reporting performance, which is still being validated by the EA and may change, is 89% – compared to 90% in 2024 for Cat 1–3 incidents and 92% for self-reporting of WWPS and WWTW Cat 1–3 incidents, the same as our 2024 performance, which is a reflection of the effort our teams make in addressing pollution events. Both metrics remain within the green threshold limits.

Figure 10 – NW self reporting Cat 1–3 events

Annual self-reporting of pollution incidents (Cat 1-3) from NW sewerage and water supply assets, also showing EPA status and thresholds

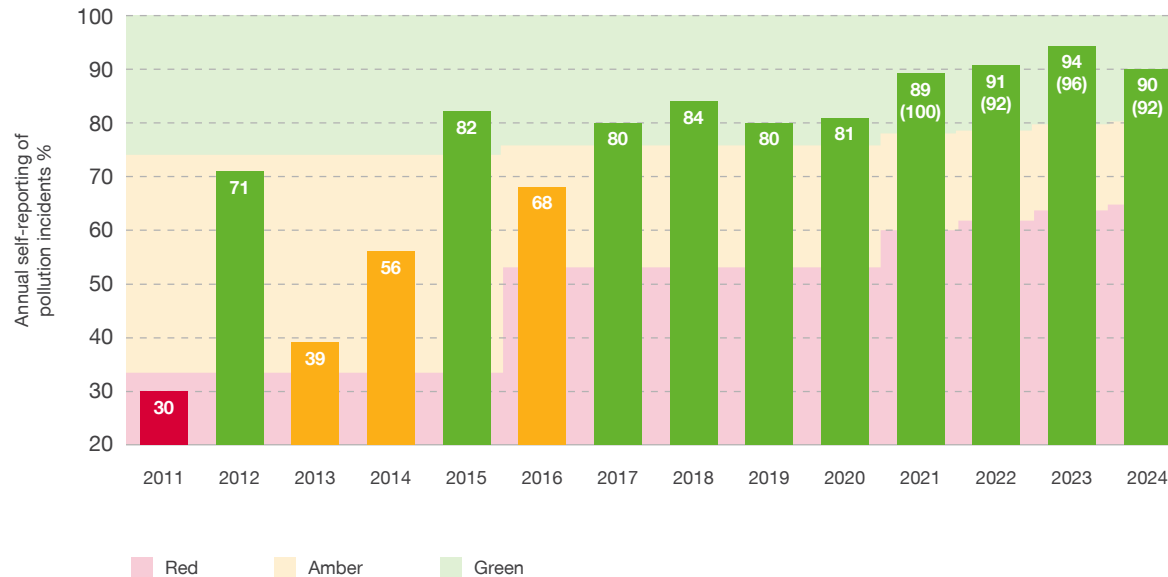


Illustration taken from the EA NW EPA data report 2024 published 23 October 2025.

Both WWPS and WWTW Cat 1-3 incident metrics remain within the green threshold limits.



PERFORMANCE TARGETS

Ofwat targets

Ofwat’s PR24 Final Determination for total pollutions required that we meet our performance commitment, by setting the baseline for 2025 at the median of all companies’ average 2020–24 performance and is illustrated below.

Year	2025	2026	2027	2028	2029	Directorate
Normalised total pollution incidents (per 10,000 km of sewer length)	25.02	23.42	21.82	20.23	18.63	Wastewater only
Absolute total pollution incidents (rounded)	76	71	66	61	56	Wastewater only
Number of serious pollution incidents	0	0	0	0	0	Clean water and Wastewater

Ofwat has acknowledged and stated there is a considerable level of uncertainty on the material impact the new EPA methodology version A and WIRI will have upon total pollution incidents to which the previous proposed performance are no longer realistic.

Based upon this, Ofwat commenced a consultation in October 2025 to consider changes to their associated Performance Commitment Levels (PCLs), Outcome Delivery Incentives (ODIs) and financial risk protections. They have stated that these changes will take effect from 1 April 2026, at which point we will review its impact upon our pollution strategies.

This would mean that performance for 2026 will be based on EPA version A, while reported performance for the charging year 2025 will remain based on version 11 of the methodology.

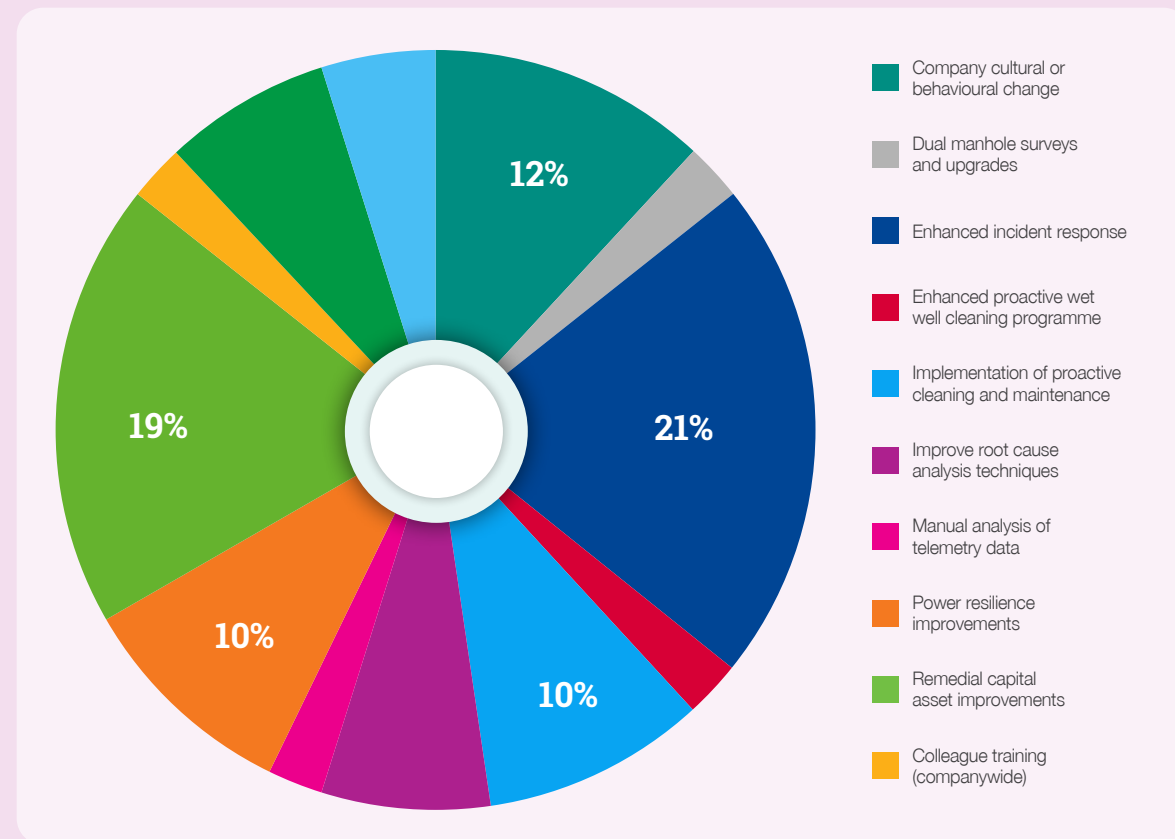
Our teams delivered a total of 42 interventions during 2025 that mitigated against pollution incidents occurring. However we regrettably report that we have not achieved our 2025 PCL targets for both serious pollutions (target 0 vs actual 1) and total pollutions (target 76 vs forecast 154). Our 2025 pollution incidents continue to be validated by the EA which may result in changes to our stated performance.

While power resilience remained a leading factor in our pollution performance, we also saw an increase in blockages and partial blockages during the period, which together accounted for 31% of all events. To address this, we are continuing our CCTV investigations and our find-and-fix maintenance programmes at 34 locations across the region, along with 100 high-priority sites. We are also installing 200 additional sewer level monitors in addition to the 1,200 already in place to help provide early warnings of blockages.

We will also complete 21 km of maintenance at high-risk locations near watercourses and contact a further 350,000 households through our Bin the Wipe campaign to prevent blockages.

All interventions delivered in 2025 are described in more detail later within this document and are summarised in Figure 11 illustrating the core themes (measures) to which these actions have been categorised against.

Figure 11 – NW key measures delivered in 2025



PERFORMANCE TARGETS

Delivering targeted interventions to reduce pollution risk

In 2025, we delivered a broad programme of targeted interventions to reduce pollution risk across our wastewater and water networks.

These actions are focused on addressing the main causes of pollution incidents, including power outages, blockages and operational factors by strengthening resilience at critical assets and improving our operational response. Early evidence indicates that this approach is helping to prevent incidents, improve response times and better manage risks across the network.

The areas set out here highlight where we have focused our efforts in 2025, and how these interventions are contributing to reducing pollution risk.

A high proportion of those interventions deployed within the 2025 period will continue into 2026 which will also see new actions being introduced including new mobile power solutions, targeted DDS action plans, a 'control room of the future' with wastewater personnel triaging the alarms to ensure the highest risk incidents are prioritised along with new power resilience being.

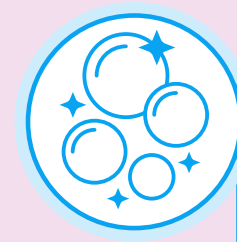
Our **Enhanced Incident Response** measures (21%) have included an increased headcount, introducing new protocols and proactively deploying equipment prior to storm events occurring. These actions have included rapid investigations at our CSOs based upon spill duration, improving responses to pump failure along with a spares strategy across the asset base, targeted deployment of both generators and tankers prior to storm events and additional headcount in our maintenance teams.



Our **Company Culture and Behaviour Change** (12%) can deliver considerable impact in reducing our pollution numbers. Across the business we have introduced enhanced protocols to prioritise alarms whilst building upon our team leaders' best practice to ensure a consistent decision-making process towards avoiding pollutions across our assets. We have continued to engage with our DNO, seeking to improve our routes of communication when interruptions occur or when network outages are planned.



We continued to deliver our **Remedial Capital Asset Improvements** (19%) across our foul sewers, CSOs, rising mains and WWPS. These activities included surveys of our assets and rehabilitation find-and-fix schemes of our sewer network with replacement and lining of our rising mains. Our CSOs had servicing and replacement of key valves that control the flow of our networks in storm events along with the installation of low-sided weirs allowing additional time for our teams to attend site and prevent a pollution event. Additional actions included the replacement of tidal flap valves and rehabilitation improvement programmes.



Implementation of **Proactive Cleaning and Maintenance** (10%) has been a targeted action across our foul sewers and CSOs. These activities have been across our network but also specifically targeted sewers near watercourse (SNWC) including the use of CCTV. Our Bin the Wipe action has contacted 348,822 households in 2025 targeting high-potential areas and investigating potential problem households and cleansing of the network.



Power Resilience activities (10%) have been a key focus area across our WWTW and WWPS within 2025 to mitigate against the impact of storm events. These actions have included the modification to alarm logic to allow auto resetting of equipment, changes in run modes of key pumps when alarms are lost whilst we successfully trialled the innovative use of batteries to provide power resilience for a period of time to allow our teams to attend site before a pollution event occurs.

PERFORMANCE TARGETS

Other targets

Previously, the EA and Natural England set out environmental performance requirements in their jointly-published Water Industry Strategic Environment Requirements (WISER) document (updated May 2022). These objectives included zero serious pollution incidents (Cat 1–2) and at least a 30% reduction of all pollution incidents (Cat 1–3) by 2030 on current 2025 targets. This objective may now be unrealistic due to the regulatory reporting changes and needs to be assessed.

For pollutions, we will seek to lead the sector in delivering zero serious pollutions caused by our assets or operations and reduce the number of Cat 1–3 pollutions by 50% by 2040 from a 2022 baseline of 60 pollution incidents. Again, this objective needs to be reviewed considering the recent changes to our reporting requirements.



**As part of
our 2025-30
Business
Plan we
set out a
series of
long-term
targets that
we want
to deliver
by 2050.**

WASTEWATER AND CLEAN WATER 2025 POLLUTION PERFORMANCE (CAT 1-3)

All wastewater incidents by month

Based upon the Water Company Performance Tracker (published 17 February 2026) NW has recorded a total of 153 Cat 3 pollution incidents (minor or minimal impact) and one Cat 2 event (significant) which is still being validated by the EA.

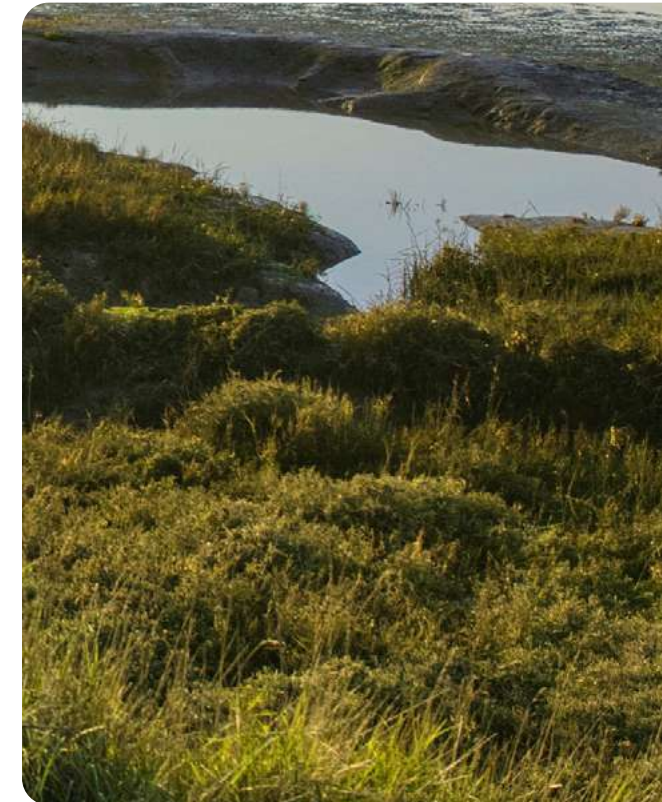
The most significant storm of 2025 was Storm Éowyn, in January 2025, the UK's most powerful windstorm for over a decade. A quantity of 14 (66%) Cat 3 incidents recorded in the January period were associated with external power loss or dips from our DNO.

July and August experienced a considerable level of pollution events associated with a variety of root causes from failures of external power supplies, excessive incoming flows and blockages in both the network and treatment works. Changes in ground conditions due to the dry period also contributed towards several bursts in our foul sewer network and pumped rising mains between July and October, which also recorded our first wastewater serious pollution (Cat 2) since 2021.



Table 1 - Consolidated overview of all incidents

Month	Category 1 pollution incidents	Category 2 pollution incidents	Category 3 pollution incidents	Total
January	0	0	21	21
February	0	0	8	8
March	0	0	5	5
April	0	0	12	12
May	0	0	11	11
June	0	0	8	8
July	0	0	21	21
August	0	0	21	21
September	0	0	12	12
October	0	1	4	5
November	0	0	16	16
December	0	0	14	14
Total	0	1	153	154



WASTEWATER AND CLEAN WATER 2025 POLLUTION PERFORMANCE (CAT 1-3)

All clean water incidents by month

Table 2 - Consolidated overview of all incidents

Month	Category 1 pollution incidents	Category 2 pollution incidents	Category 3 pollution incidents
January	0	0	2
February	0	0	0
March	0	0	1
April	0	0	3
May	0	0	1
June	0	0	4
July	0	0	4
August	0	0	4
September	0	0	6
October	0	0	5
November	0	0	3
December	0	0	1
Total	0	0	34

A total of 34 Cat 3 pollution incidents were recorded from water assets. 32 Cat 3 pollution events were recorded across our water distribution network. Of these, 31 were associated with burst water mains resulting in water escaping to the natural environment with one event being caused by a third party damaging our infrastructure.

A further two events were related to our water treatment operations, a result of sediment being disturbed during routine operations which entered a nearby watercourse.



WASTEWATER AND CLEAN WATER 2025 POLLUTION PERFORMANCE (CAT 1–3)

Summary of wastewater and clean water incident numbers by asset class

Table 3 - Frequency and seriousness of pollution incidents from foul sewers in 2025

Month	Category 1 pollution incidents	Category 2 pollution incidents	Category 3 pollution incidents
January	0	0	1
February	0	0	2
March	0	0	1
April	0	0	4
May	0	0	2
June	0	0	1
July	0	0	3
August	0	0	3
September	0	0	2
October	0	0	2
November	0	0	1
December	0	0	4

A total of 26 Cat 3 pollution events were recorded across our foul sewer assets associated with asset condition, ingress of roots, fats, oils and greases and other contributing factors which caused some of our 30,237 km of network to surcharge. This is when the hydraulic capacity of the sewer becomes full.

Key actions taken in this period have included:

- Targeted find-and-fix programmes
- Greater visibility of our networks through continued delivery of sewer level monitoring
- Sewer surveys
- Proactive maintenance

26 Cat 3 pollution events were recorded across our foul sewer assets associated with asset condition

11 Cat 3 pollution events were recorded across our combined sewer overflows.

Table 4 - Frequency and seriousness of pollution incidents from combined sewer overflows in 2025

Month	Category 1 pollution incidents	Category 2 pollution incidents	Category 3 pollution incidents
January	0	0	1
February	0	0	0
March	0	0	2
April	0	0	0
May	0	0	0
June	0	0	2
July	0	0	0
August	0	0	3
September	0	0	1
October	0	0	0
November	0	0	2
December	0	0	0

A total of 11 Cat 3 pollution events were recorded across our combined sewer overflow assets associated with blockages, debris, dry weather discharges and tidal inflow triggering our instrumentation.

Key actions taken in this period have included:

- High spill investigations
- Installation of high-sided weirs
- Targeted separation of surface water from our foul network
- Cleaning and maintenance programmes
- Installation of flow control devices
- CCTV inspections

WASTEWATER AND CLEAN WATER 2025 POLLUTION PERFORMANCE (CAT 1–3)

Table 5 - Frequency and seriousness of pollution incidents from rising mains in 2025

Month	Category 1 pollution incidents	Category 2 pollution incidents	Category 3 pollution incidents
January	0	0	0
February	0	0	0
March	0	0	0
April	0	0	1
May	0	0	4
June	0	0	0
July	0	0	0
August	0	0	0
September	0	0	0
October	0	0	1
November	0	0	0
December	0	0	0

A total of six Cat 3 pollution events were recorded across our rising mains assets associated with pipe bursts. We recorded our first wastewater Cat 2 pollution event since 2021. We continue to review the classification of this incident.

Key actions taken in this period have included:

- Minor works programmes (relining)
- Mains replacement

6 Cat 3 pollution events were recorded across our rising mains assets associated with pipe bursts.

Table 6 - Frequency and seriousness of pollution incidents from wastewater pumping stations in 2025

Month	Category 1 pollution incidents	Category 2 pollution incidents	Category 3 pollution incidents
January	0	0	15
February	0	0	5
March	0	0	2
April	0	0	3
May	0	0	2
June	0	0	2
July	0	0	4
August	0	0	4
September	0	0	3
October	0	0	1
November	0	0	6
December	0	0	3

A total of 50 Cat 3 pollution events were recorded across our wastewater pumping station assets with 42% (21) occurring in January and November when we experienced the impact of considerable storm events.

Impacts from power failure across the entire period contributed to 46% (23) of pollution events from WWPS assets with the remaining 54% (27) being associated with equipment failure, internal electrical infrastructure and blockages.

Key actions taken in this period have included:

- Improvements in equipment reliability
- Auto resetting functionality to key equipment
- Proactive tanker and generator deployment
- Continued engagement with our DNO
- Response to equipment failure
- Increases in maintenance cover
- Targeted cleaning of asset
- Trials of innovative power resilience technology

WASTEWATER AND CLEAN WATER 2025 POLLUTION PERFORMANCE (CAT 1–3)

Table 7 - Frequency and seriousness of pollution incidents from wastewater treatment works in 2025

Month	Category 1 pollution incidents	Category 2 pollution incidents	Category 3 pollution incidents
January	0	0	4
February	0	0	1
March	0	0	0
April	0	0	4
May	0	0	3
June	0	0	2
July	0	0	14
August	0	0	11
September	0	0	6
October	0	0	0
November	0	0	7
December	0	0	7

A total of 59 Cat 3 pollution events were recorded across our wastewater treatment works with 42% (25) of the incidents occurring in July and August associated with a variety of root causes including blockages which had the highest impact across the year. Other incidents included equipment and system failures.

- Key actions taken in this period have included:
- Installation of enhanced telemetry
- Proactive maintenance programmes ahead of failure

Additional interventions which although classified as a business wide benefit within our PIRP also have a high impact upon our Wastewater Treatment Works and include:

- Formalised alarm protocol and daily review
- Weekend monitoring of alarms
- Team leader best practice programmes
- Prioritisation alarm logic

Table 8 - Frequency and seriousness of pollution incidents from surface water sewer and associated outfalls in 2025

Month	Category 1 pollution incidents	Category 2 pollution incidents	Category 3 pollution incidents
January	0	0	0
February	0	0	0
March	0	0	0
April	0	0	0
May	0	0	0
June	0	0	1
July	0	0	0
August	0	0	0
September	0	0	0
October	0	0	0
November	0	0	0
December	0	0	0

A total of one Cat 3 pollution event was recorded across our surface water sewer and associated outfalls associated with debris at the outfall.

There were no pollution events recorded at our storm tanks and associated outfalls throughout the 2025 period.

Only one Cat 3 pollution event was recorded across our surface water sewer.

WASTEWATER AND CLEAN WATER 2025 POLLUTION PERFORMANCE (CAT 1–3)

Table 9 - Frequency and seriousness of pollution incidents from the water distribution network in 2025

Month	Category 1 pollution incidents	Category 2 pollution incidents	Category 3 pollution incidents
January	0	0	2
February	0	0	0
March	0	0	0
April	0	0	3
May	0	0	1
June	0	0	3
July	0	0	4
August	0	0	4
September	0	0	6
October	0	0	5
November	0	0	3
December	0	0	1

32 Cat 3 pollution events were recorded across our water distribution network of which 31 were associated with burst water mains resulting in water escaping to the natural environment.

One event, recorded in October 2025, was as a result of a third party damaging our infrastructure during construction works. Although we had no control over this particular event, there is still a regulatory requirement to include this incident within our reported pollution numbers.

NW were made aware that a contractor working on behalf of a house builder had damaged an air valve off a large strategic main with a tracked excavator.

To clear the water off the building site, the contractors pumped the water into a newly created SuDS pond (Sustainable Drainage Systems) in another field which is classified as a watercourse and therefore a pollution incident.

Although the third party accepted liability the event still remains as a NW pollution event.

Key actions taken in this period have included:

- Proactive cleaning of networks
- Colleague training
- Mains renewal / replacement

Table 10 - Frequency and seriousness of pollution incidents from water treatment works in 2025

Month	Category 1 pollution incidents	Category 2 pollution incidents	Category 3 pollution incidents
January	0	0	0
February	0	0	0
March	0	0	1
April	0	0	0
May	0	0	0
June	0	0	1
July	0	0	0
August	0	0	0
September	0	0	0
October	0	0	0
November	0	0	0
December	0	0	0

Throughout the 2025 period a total of two Cat 3 pollution events were recorded across our water treatment works associated with test pumping of borehole assets in our ESW operating area. One of these events was due to contractor error with lessons learnt to ensure that this error does not reoccur.

The second incident was due to a natural chemical reaction in the environment during which naturally occurring soluble iron from the borehole left a small amount of sediment staining upon contact with the receiving watercourse. As soon as this incident was noticed, we responded to mitigate the impact and notified the EA.

Key actions taken in this period have included:

- Review of chemical bunding
- Review of key standard operating procedures
- Drainage mapping
- Discharge compliance programme of works

Only two Cat 3 pollution events were recorded across our water treatment works associated with test pumping of borehole assets in our ESW operating area.

WASTEWATER AND CLEAN WATER 2025 POLLUTION PERFORMANCE (CAT 1–3)

Summary of serious pollutions

We have led the sector and been a frontier company in achieving zero serious pollution incidents (Cat 1–2) from clean water since 2021 and wastewater since 2022. However, during the 2025 period we experienced a Cat 2 incident from a wastewater asset – the first in four years.

Table 11 - Cause of serious pollutions from rising mains in 2025

Event number	Reported date and time	Location	Seriousness	Primary root cause	Secondary root cause	Tertiary root cause
2436115	14/10/2025 15:11	Stamfordham Road, Woolington	Category 2	Burst rising main	Asset condition	No tertiary cause

Although a rising main burst, we do not believe that it could have caused the impact that was seen in the watercourse and that other external factors contributed to the event. We continue to review the classification of this incident.

There were no serious pollution events recorded at our foul sewers, combined sewer overflows, wastewater pumping stations, wastewater treatment works, surface water sewer and associated outfalls, storm tanks, water distribution network and water treatment works throughout the 2025 period.

Summary of total pollutions by asset class

Table 12 - Wastewater Cat 3 incident summary by asset class

Month	Category 3 pollution incidents	Proportion of Category 3 pollution incidents (%)
Combined sewer overflow	11	7.14
Foul sewer	26	16.88
Wastewater pumping station	50	32.47
Rising main	7	4.55
Wastewater treatment works	59	38.31
Surface water outfall	1	0.65

During 2025 we recorded a total of 153 wastewater Cat 3 events, with most incidents occurring at our WWPS and WWTW, which contributed to 71% (109) of our total pollution performance.

2025 ROOT CAUSE ANALYSIS

Using Root Cause Analysis (RCA) to target our interventions in 2026

We are using root cause analysis to identify and prioritise the actions that will have the greatest impact on reducing pollution incidents in 2026. By focusing on the main drivers of incidents across our assets, we are targeting interventions where they can make the biggest difference to performance. This work supports our teams to better understand the root causes of pollution incidents and to develop targeted strategies to improve performance across our networks.

Discussions continue across the sector and with the EA to work towards a common methodology and categorisation of RCA, but this will be challenging and take time to deliver. As such, there will be sector-wide differences on methods and interpretation of the root cause across the common asset base.

NW RCA is completed across the entire wastewater asset base and is reviewed in the monthly Pollution Root Cause Deep Dive meetings attended by our networks and operations teams covering all pollution incidents. Our clean water teams continue to develop and mature their RCA reviews in line with those currently used by our wastewater teams.

Outputs from these reviews have identified some interventions common across the sector, but also unique actions in 2025, specifically the recycling and upgrading of automotive batteries to provide power resilience of up to four hours at nominated WWPS and WWTW locations. Initial trial deployments, although small in quantity, have already successfully delivered pollution avoidances at these sites. These developments are still in their confirmation phase, and if deemed to be reliable could re-shape the way the business reduces risks associated with power interruptions from our DNO.

Although this is an innovative step forward, the impact of climate change will remain an evolving challenge. This was seen in the latter part of 2025 when our region experienced a prolonged period of dry weather, resulting in low watercourse levels and the emergence of fungus at our discharge locations, whilst our WWTW operations remained compliant.

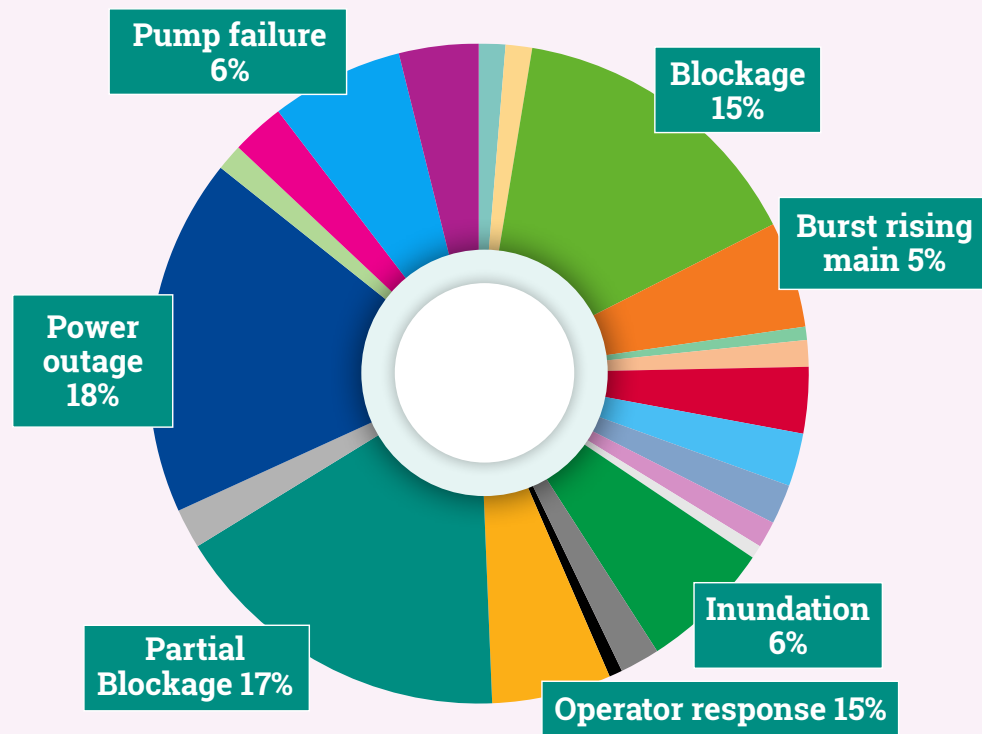


We remain focused on developing existing and new interventions for inclusion within our tactical plan based upon our RCA methodology.

2025 ROOT CAUSE ANALYSIS

Wastewater 2025 Root Cause Analysis (Cat 1–3)

Figure 12 – 2025 Overview of Wastewater Root Cause Analysis



Power outages

Power outages remain the highest root cause at 18% of our total pollutions recorded in 2025 for Cat 1–3 incidents of which 85% occurred at our WWPS and 15% at our WWTW. These power outages are associated with failures from our DNO, with whom we continue to discuss, and future mitigation strategies.

These interruptions to power supply (whether brief or long term) causes significant disruption to our operations and are predominately associated with two types of electricity supply root cause being brownouts or blackouts.

A brownout, also called a voltage dip, is a temporary disruption in electrical power characterised by a substantial reduction in voltage levels within an electrical system. Unlike blackouts, where power is completely lost, brownouts entail a diminished voltage supply that can profoundly impact the operation of electrical devices. In some cases, sensitive electronic devices and components may experience malfunctions or even sustain damage.

Blackouts are a complete loss of electrical power within a specific geographical area or an entire power grid. Unlike the temporary voltage reductions experienced in brownouts, blackouts entail a complete and abrupt absence of electricity, with severe weather conditions one of the primary root causes.

During 2024 we reported 28 pollution events associated with blackout and brownout events compared to 27 in 2025 associated with our WWPS and WWTW. During 2026 we will continue to invest in additional power resilience including both conventional generators and new innovative solutions in the form of alternative power sources (batteries) if proven to be successful. In addition, discussions with our DNO on how we can influence their pending investment cycle continue, specifically around those interruptions that are <3 minutes.

Since July 2025 we have introduced a new method of tracking actual pollution avoidance from our wastewater operations following the new appointment of our Pollutions Manager earlier in the year. This tracking has confirmed a total of 85 pollution avoidances associated with power failures from our DNO, which have not occurred due to pre-emptive actions. This success has been associated with the proactive deployment of generators and tankers before an actual pollution event has occurred, forecasting potential areas at risk from the impact of high winds and inundation of rainfall.

In total, we can confirm that, since July 2025, wastewater operations have avoided a total of 115 pollution events within a six-month period, which illustrates the effort our teams are making across the entire region.

Power outages caused **18%** of our total pollutions recorded in 2025 for Cat 1-3 incidents

Keeping sites running through power outages

Power outages can quickly create pollution risk at wastewater sites.

When electricity is lost, pumping stations can go offline – and while teams mobilise straight away, restoring power can be complicated by access, fault type, or the time it takes to get generators to site. Every minute counts when it comes to protecting the environment.

To reduce this risk, we're assessing an innovative battery resilience system across some of our highest-risk wastewater sites. Working in partnership with STN Power Systems, and with input from our wastewater teams, we've developed a bespoke battery unit designed to seamlessly kick in when an outage occurs, helping sites continue operating with minimal interruption.

These systems use recycled batteries to provide a clean, reliable backup power source. Unlike traditional generators – which can take time to start up – the battery solution responds instantly, reducing downtime at the point it matters most. The design is also modular, making it quicker to construct and replicate across different types of site and equipment.

The results so far are already clear. Across the first three installations at high-risk pumping stations, the system has prevented three pollution incidents, avoiding environmental harm.

Early performance also suggests the batteries are capable of providing several hours of continuous backup power which gives the site increased resilience and improves our ability to manage the pollution risk presented by power interruptions.

Building on this success, we'll be seeking to extend the rollout of this innovative solution throughout 2026 across our Northeast operating region. Locations will be prioritised where power outages are more likely and where the consequences of lost power could be most severe.

Why it matters:

Resilient power reduces the likelihood of outages turning into incidents – protecting waterways, communities and customers while improving environmental performance.



2025 ROOT CAUSE ANALYSIS

Partial blockages / blockages

A partial blockage in a wastewater network is a condition where our sewer network becomes obstructed but not completely closed, allowing some flow to pass, which reduces its capacity. Such blockages can be caused by fats, oils and greases (FOG), root intrusion and pipe damage.

Partial blockages within our 30,237 km of foul sewer network contributed to 17% of our 2025 pollution incidents, whilst physical blockages contributed to 15% of pollutions caused by rags, grits and other items at our smaller WWTW.

We have continued to install Sewer Level Monitors across our NW network during 2025 and avoided between five and nine pollution events. This intervention will continue at our high-risk locations in 2026, providing proactive digital alerts of emerging blockages before they result in a pollution event. In addition, interventions deployed in 2025 will continue into 2026 targeting our high-risk locations, including sewer rehabilitation find-and-fix schemes, proactive maintenance activities and continued engagement with our customers through the Bin the Wipe initiative, avoiding the occurrence of between six and 24 pollution events.



Pump failure

Both our WWTW and WWPS require pumps to physically move wastewater flows to the next stage of our network or within our treatment processes. From time to time these pumps fail either due to internal components failing or airlocks stopping their functionality. These types of scenarios resulted in causing 6% of our pollution incidents recorded in 2025

During 2024 we reported a total of eight incidents associated with this root cause compared to 10 in 2025, with 2026 realising a full-year benefit from our targeted actions delivered in 2025. These interventions included dedicated operational teams to proactively monitor and maintain these pumps along with new protocols to prioritise responses to duty pump failures, avoiding 12 to 41 pollution events. In addition, we continue to roll out our wet well cleaning program within our WWPS, which can provide valuable time for our teams to attend sites in the event of a pump failure prior to a pollution event occurring.

New protocols to prioritise responses to duty pump failures avoided 12 to 41 pollution events

StormHarvester: spotting risk early at pumping stations

StormHarvester uses real site information and operational data, combined with machine learning algorithms, to provide insight into the performance of our sewage network and pumping stations.

It continuously monitors the network, collecting data from multiple points and analysing changes in performance. When it detects a change, StormHarvester sends an alert to our teams. These alerts allow issues to be identified early and addressed before they escalate.

One example demonstrates how this works in practice. An alert indicating a change in pump performance prompted an operational inspection at a sewage pumping station, where teams identified a blockage caused by a build up of wipes and sanitary waste.

Following the inspection, the blockage was removed, the pump was checked for damage, and the station was returned to normal operation. Acting at this stage prevented a potential pump failure and avoided the wider impacts that can result from prolonged downtime or equipment damage.

The impact of StormHarvester's alerting capability has been significant. By identifying issues earlier, teams are able to maintain operational efficiency, reduce disruption and support more proactive management of pumping stations.

In addition, StormHarvester supports compliance with environmental regulations by helping prevent issues that could otherwise develop into unplanned discharges or pollution incidents.

Why it matters:

Early identification of emerging issues helps prevent failures escalating into pollution incidents, protecting the environment and maintaining reliable wastewater services.



2025 ROOT CAUSE ANALYSIS

Inundation

Wastewater inundation contributed to 6% (10 events) of our pollutions in 2025 due to flooding of a sewer network, typically during extreme weather or other events that force large volumes of water into the wastewater network.

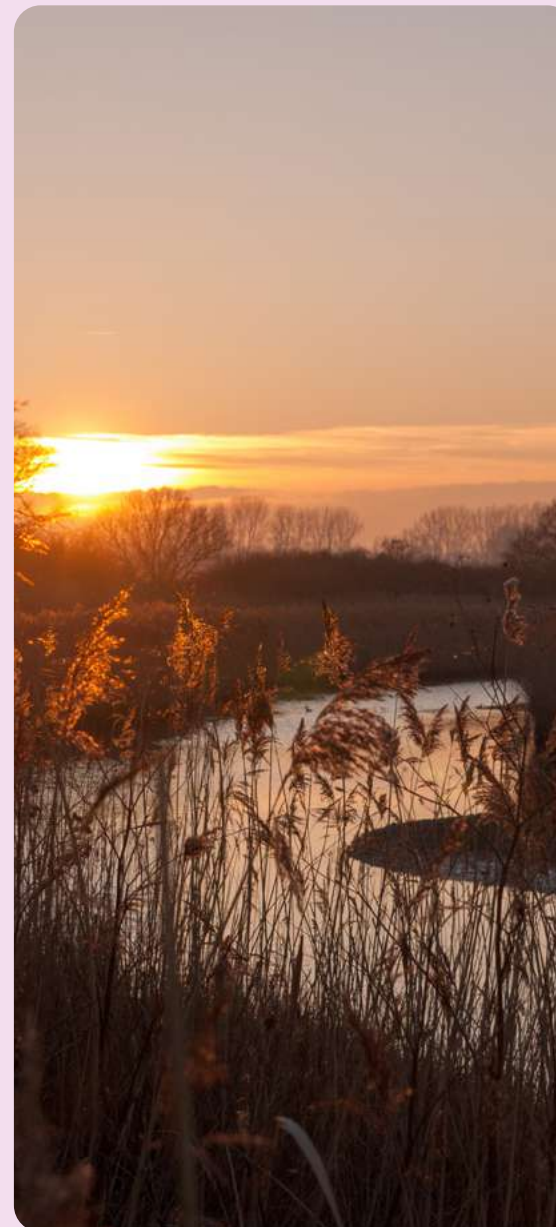
This is compared to six events in 2024. Our networks have a design hydraulic capacity, which in these types of events become full. If these networks become reduced in their capacity the impact of these inundation events will occur more quickly and more frequently with interventions associated with infiltration reduction and partial blockages. We continue to improve the capacity at our storm overflows by increasing the height of their weirs where applicable and the installation of network flow control devices which are forecast to avoid between six and 13 pollution events.

The installation of network flow control devices are forecast to avoid between six and 13 pollution events.

Operator response

Although our operational teams work continuously to avoid pollution events there are still occasions when their unintentional actions become a contributing factor, or where they were unable to attend a site or location in time to prevent an incident occurring.

This contributed to nine (6%) of pollution incidents during the 2025 period. We continually provide training and awareness on our pollution performance to ensure our people understand the potential impact of their actions. Improving communication between teams has been a key focus in 2025, as better coordination could, in some cases, have helped prevent pollution incidents.



Rising mains

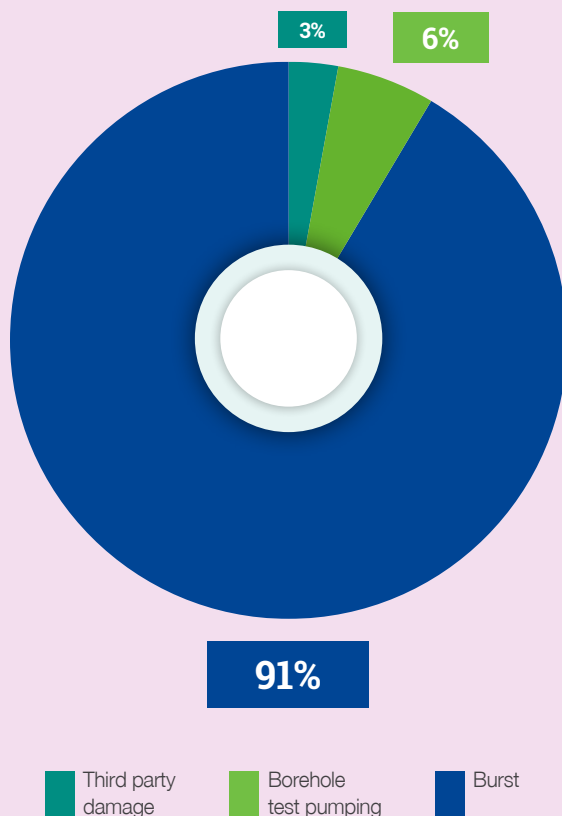
Our rising mains contributed to eight (5%) of our 2025 pollution events compared to three in 2024. These assets feature a pressurised pipe used to convey wastewater from a lower elevation to a higher elevation. It is an essential part of our wastewater system, which in some instances can fracture or burst due to ground conditions or the condition of the pipe itself. Maintenance programmes on our systems' air valves (pressure relief valves) and targeted minor capital remediation works continue addressing areas of concern within the network, which are expected to avoid between three and 12 pollution events.

Other root causes included pump control, process control, treatment issues, asset condition, asset design, collapse, consent breach, contractor activity, electrical faults, flow control, hydraulic capacity, misconnections and mechanical faults.

2025 ROOT CAUSE ANALYSIS

Clean water 2025 root cause analysis (Cat 1–3)

Figure 14 – Overview of clean water root cause



Water mains bursts are our predominant root cause at 91% (31) of our total pollutions recorded in 2025 from clean water assets. Of our total pollution incidents, 6% (two) were attributed to water treatment assets, specifically boreholes during routine test pumping operations, which saw minor amounts of sediment enter nearby watercourses.

We have learnt lessons from these incidents and will continue to improve our awareness and methods when test-pumping boreholes to avoid future incidents. 3% (one) of our pollution incidents categorised was outside of our control – a result of a building contractor damaging one of our water main assets on our distribution network. As the asset belongs to us, the EA include the pollution event in our reporting numbers. We continue to improve our RCA of pollution incidents from water treatment and distribution assets to improve our targeted approach to pollution reduction.

Wastewater and clean water root cause by asset class

Our wastewater root cause methodology continues to mature with the expectation that the sector will move towards a common framework in years to come. In the meantime we seek to continue to improve our current methods based upon a primary, secondary and tertiary structure methodology to assess the root causes of our pollution events, giving regard to the new PIRP guidance published on 22 December 2025. Our clean water teams have begun to adopt our wastewater team’s current methodology, although this process is in its early stages.

Table 14 - Causes of Cat 3 pollution incidents from foul sewers in 2025

Primary root cause	Secondary root cause	Tertiary root cause	Number of category 3 pollution incidents	Proportion of category 3 pollution incidents (%)
Asset condition	No secondary cause	No tertiary cause	2	7.69
Collapse	No secondary cause	No tertiary cause	1	3.85
Contractor activity	No secondary cause	No tertiary cause	2	7.69
Inundation	Infiltration	No tertiary cause	1	3.85
Inundation	No secondary cause	No tertiary cause	1	3.85
Partial blockage	FOG	No tertiary cause	2	7.69
Partial blockage	FOG	Roots	1	3.85
Partial blockage	FOG	Wipes	1	3.85
Partial blockage	No secondary cause	No tertiary cause	11	42.31
Partial blockage	Roots	No tertiary cause	1	3.85
Partial blockage	Third party	Cleaning regime	1	3.85
Partial blockage	Third party	No tertiary cause	1	3.85
Partial blockage	Wipes	No tertiary cause	1	3.85

Partial blockages contributed to 73% (19) of our recorded pollutions in our foul sewer assets. These partial blockages, primarily from tree roots, fats, oils and greases (FOG), and other objects such as wipes, reduce forward flow which results in unpermitted spills from our storm overflows and surcharging our networks.

2025 ROOT CAUSE ANALYSIS

Table 15 - Causes of Cat 3 pollution incidents from combined sewer overflows in 2025

Primary root cause	Secondary root cause	Tertiary root cause	Number of category 3 pollution incidents	Proportion of category 3 pollution incidents (%)
Consented discharge	No secondary cause	No tertiary cause	1	9.09
Contractor activity	No secondary cause	No tertiary cause	1	9.09
Inundation	Dry day spill	No tertiary cause	1	9.09
Inundation	No secondary cause	No tertiary cause	1	9.09
Partial blockage	Contractor activity	No tertiary cause	1	9.09
Partial blockage	No secondary cause	No tertiary cause	6	54.55

Partial blockages contributed to 64% (seven) of our recorded pollutions in our combined sewer overflows. These partial blockages, primarily from sewers downstream from the asset, silting and debris, reduce forward flow, which results in unpermitted spills from our storm overflows.

Table 16 - Causes of Cat 3 pollution incidents from rising mains in 2025

Primary root cause	Secondary root cause	Tertiary root cause	Number of category 3 pollution incidents	Proportion of category 3 pollution incidents (%)
Burst rising main	No secondary cause	No tertiary cause	7	100

Burst rising mains contributed to 100% of our recorded pollutions in our rising main assets.

Table 17 - Causes of Cat 3 pollution incidents from wastewater pumping stations in 2025

Primary root cause	Secondary root cause	Tertiary root cause	Number of category 3 pollution incidents	Proportion of category 3 pollution incidents (%)
Blockage	Alarms	Maintenance	1	2.00
Blockage	Alarms	No tertiary cause	1	2.00
Blockage	Dry day spill	No tertiary cause	1	2.00
Blockage	FOG	No tertiary cause	1	2.00
Burst rising main	Asset condition	No tertiary cause	1	2.00
Consented discharge	No secondary cause	No tertiary cause	1	2.00

Table 17 - Causes of Cat 3 pollution incidents from wastewater pumping stations in 2025 (cont)

Primary root cause	Secondary root cause	Tertiary root cause	Number of category 3 pollution incidents	Proportion of category 3 pollution incidents (%)
Electrical fault	Level unit fault	Power – Brown out	1	2.00
Electrical fault	No secondary cause	No tertiary cause	1	2.00
Inundation	Contractor activity	No tertiary cause	1	2.00
Inundation	Flow control	No tertiary cause	1	2.00
Inundation	No secondary cause	No tertiary cause	2	4.00
Inundation	Pump issue	No tertiary cause	1	2.00
Operator response	Pump issue	No tertiary cause	1	2.00
PLC fault / logic issue	Storm event	No tertiary cause	1	2.00
Power outage	Asset design	No tertiary cause	1	2.00
Power outage	No secondary cause	No tertiary cause	7	14.00
Power outage	NPG – generator failed	No tertiary cause	3	6.00
Power outage	Storm event	Lack of storage	1	2.00
Power outage	Storm event	No tertiary cause	6	12.00
Power outage	Storm event	Operator response	1	2.00
Power outage	Storm event	Pump failure	2	4.00
Power outage	Tanker / generator availability	No tertiary cause	2	4.00
Pump control	Air release	No tertiary cause	1	2.00
Pump control	Electrical fault	No tertiary cause	1	2.00
Pump control	No secondary cause	No tertiary cause	1	2.00
Pump failure	Contractor activity	No tertiary cause	1	2.00
Pump failure	No secondary cause	No tertiary cause	7	14.00
Pump failure	Operator response	No tertiary cause	1	2.00

Power outages contributed to 46% (23) of our recorded pollutions in our wastewater pumping stations.

2025 ROOT CAUSE ANALYSIS

Table 18 - Causes of Cat 3 pollution incidents from wastewater treatment works in 2025

Primary root cause	Secondary root cause	Tertiary root cause	Number of category 3 pollution incidents	Proportion of category 3 pollution incidents (%)
Asset condition	No secondary cause	No tertiary cause	1	1.69
Asset Design	Operator re-sponse	Alarms	2	3.39
Blockage	Dry day spill	No tertiary cause	3	5.08
Blockage	No secondary cause	No tertiary cause	14	23.73
Consent breach	Asset design	No tertiary cause	1	1.69
Consent breach	Fungus	No tertiary cause	1	1.69
Consented discharge	Dry day spill	No tertiary cause	1	1.69
Consented discharge	No secondary cause	No tertiary cause	2	3.39
Contractor ac-tivity	Communications issue	No tertiary cause	1	1.69
Electrical fault	Pump issue	No tertiary cause	1	1.69
Flow control	Blockage	PLC fault / logic issue	1	1.69
Flow control	No secondary cause	No tertiary cause	2	3.39
Inundation	No secondary cause	No tertiary cause	1	1.69
Mechanical fault	Alarms	No tertiary cause	1	1.69
Mechanical fault	Electrical fault	Pump failure	1	1.69
Mechanical fault	No secondary cause	No tertiary cause	1	1.69
Operator re-sponse	Flow control	Consent breach	1	1.69
Operator re-sponse	Flow control	No tertiary cause	1	1.69
Operator re-sponse	Level unit fault	Process control	1	1.69
Operator re-sponse	No secondary cause	No tertiary cause	4	6.78
Operator re-sponse	Process control	Foam	1	1.69
Partial blockage	No secondary cause	No tertiary cause	1	1.69
PLC fault / logic issue	No secondary cause	No tertiary cause	2	3.39
Power outage	No secondary cause	No tertiary cause	1	1.69

Table 18 - Causes of Cat 3 pollution incidents from wastewater treatment works in 2025 (cont)

Primary root cause	Secondary root cause	Tertiary root cause	Number of category 3 pollution incidents	Proportion of category 3 pollution incidents (%)
Power outage	Storm event	No tertiary cause	3	5.08
Process control	Alarms	No tertiary cause	1	1.69
Process control	No secondary cause	No tertiary cause	1	1.69
Pump failure	Electrical fault	No tertiary cause	1	1.69
Pump failure	No secondary cause	No tertiary cause	1	1.69
Treatment issue	Consent breach	Discolouration	2	3.39
Treatment issue	Consent breach	Fungus	2	3.39
Treatment issue	No secondary cause	No tertiary cause	1	1.69
Treatment issue	Process control	No tertiary cause	1	1.69

Blockages contributed to 29% (17) of our recorded pollutions in our wastewater treatment works. These blockages, primarily associated with our inlet pipes and pumps, were caused by numerous materials including rags. We also experienced challenges with our operators responding to alarms efficiently, and lapses in communication which contributed to a pollution event.

Table 19 - Causes of Cat 3 pollution incidents from surface water sewer and associated outfalls in 2025

Primary root cause	Secondary root cause	Tertiary root cause	Number of category 3 pollution incidents	Proportion of category 3 pollution incidents (%)
Misconnection	No secondary cause	No tertiary cause	1	100

A misconnection contributed to 100% of our recorded pollutions in our surface water sewer and associated outfalls.

Table 20 - Causes of Cat 3 pollution incidents from the water distribution network in 2025

Root cause	Number of category 3 pollution incidents	Proportion of category 3 pollution incidents (%)
Burst	31	96.9
Third party damage	1	3.1

Bursts on our water mains contributed to 97% of our recorded pollutions in our water distribution network throughout 2025. We currently do not have a root cause methodology to interrogate this data further. However, we will develop further root cause analysis throughout 2026 to give us better visibility of the underlying issues leading to burst mains.

3% of our total pollution events were due to a third party causing damage to our infrastructure from plant machinery during their own construction works. Whilst this incident was outside of our control, we include the incident in reporting numbers for transparency.

2025 ROOT CAUSE ANALYSIS

Table 21 - Causes of Cat 3 pollution incidents from water treatment works in 2025

Root cause	Number of category 3 pollution incidents	Proportion of category 3 pollution incidents (%)
Borehole test pumping	2	100

Borehole test pumping contributed to 100% of our recorded pollutions from our water treatment assets. Borehole test pumping is a routine operation during which we extract water from borehole assets at a controlled rate for a sustained period of time to measure sustainable ground water yield, groundwater properties and water quality.

During one of these events, contractor error led to a pollution incident. We have learnt from this event and now brief contractors more clearly to avoid similar incidents. The other pollution event recorded was due to the presence of a low level of soluble iron (naturally occurring in some water sources) which oxidised upon contact with the receiving watercourse, causing the iron to precipitate out and cause ferrous staining to a small stretch of the natural environment.

Due to having no Cat 3 pollution events at any of our storm tanks there is therefore no root cause table for this asset class.



STEPS TAKEN TO MAINTAIN THE SYSTEM

Across the asset base

Table 22 - Measures taken across the asset base in 2025

Measure	Description of action(s)	Scale of action(s)	Impact of the measure (category 1–3 incidents prevented)	Root cause(s) addressed by the measure	Recent pollution incident performance issues identified in the DWMP	Delivery status of the measure
Improve root cause analysis techniques	Enhanced RCA techniques Improved root cause analysis methods to better identify underlying causes of incidents and target effective preventative actions. 100% of our incidents will undergo RCA to get to the true causal factor.	100%	1–4 low impact	Other	Under development	BAU
Company cultural or behavioural change	Formalise week-end alarm review A structured week-end process to review and assess alarms, ensuring emerging issues are identified and acted on promptly. Applied across all telemetry-monitored wastewater assets.	100%	1–4 low impact	Other	Under development	BAU
Manual analysis of telemetry data	High level daily monitoring Routine daily monitoring of telemetry-derived KPIs and alarms to provide early visibility of emerging risks across wastewater assets, with mandatory response to all Priority 2B (P2B) alarms. This applies to all telemetry-enabled sites, comprising 415 STW and 966 WWPSs, which are monitored continuously with daily alarm review. A small number of assets (104) without telemetry are excluded from this intervention. Alarms are prioritised as follows: P1 – Immediate / emergency response required P2A – High-priority operational response (no delay) P2B – Prompt operational response required, but not “immediate” P3 – Next day P4 – Next working day	92%	1–4 low impact	Pumps	Under development	BAU
Use of predictive analytics	StormHarvester analysis Use of StormHarvester data analytics to assess asset performance and identify emerging risks linked to weather and flow conditions.	83%	1–4 low impact	Pumps	Under development	BAU

STEPS TAKEN TO MAINTAIN THE SYSTEM

Table 22 - Measures taken across the asset base in 2025 (cont)

Enhanced incident response	Incident response time Focused actions to reduce response times to incidents, minimising duration, impact and environmental harm. Action to be completed at 100% of relevant assets.	100%	1–4 low impact	Other	Under development	BAU
Colleague training (companywide)	Colleague training Colleagues are trained and aware of pollution prevention processes and procedures. All new starters complete competency training, including a Level 3 NVQ, and receive ongoing education through pollution reviews.	90%	0 – enabler	Pumps	Under development	Enabler
Company cultural or behavioural change	Team leader best practice Team leaders promote and apply best practice in operational decision-making to support consistent application of pollution prevention processes and procedures.	85%	0 – enabler	Other	Under development	In delivery
Company cultural or behavioural change	Implement and review alarm priority Alarm logic is implemented and regularly reviewed to make sure alarms are effective, correctly prioritised, and support timely operational response to reduce the risk of pollution incidents.	100%	0 – enabler	Pumps	Under development	In delivery

STEPS TAKEN TO MAINTAIN THE SYSTEM

Foul Sewer

Table 23 - Measures taken to maintain foul sewers in 2025

Measure	Description of action(s)	Scale of action(s)	Impact of the measure (category 1–3 incidents prevented)	Root cause(s) addressed by the measure	Recent pollution incident performance issues identified in the DWMP	Delivery status of the measure
Remedial capital asset improvements	Sewer rehab find and fix A short-cycle programme to identify high-risk sewer defects and deliver rapid, targeted repairs to reduce the risk of pollution incidents and improve network reliability. An initial set of 34 target locations and an actual delivery of 40.	40	5–9 medium impact	Infiltration	Under development	BAU
Telemetry installation	Sewer level monitors Installation of sewer level monitors to provide digital alerts of emerging blockages, reducing risk through new device installations and trials of innovative technology, with approximately 1,200 monitors installed and full coverage at CSOs reported in the last Asset Return.	49	5–9 medium impact	Network blockages	Under development	BAU
Telemetry installation	SLM at high-risk locations Visibility of network (VON): Sewer level monitors (SLMs) are installed at high-risk locations adjacent to watercourses to provide early warning of potential blockages and support timely intervention to reduce the risk of pollution incidents.	110	5–9 medium impact	Network blockages	Under development	In delivery
Remedial capital asset improvements	Sewer ancillary surveys sub-programme An inspection programme to identify and manage pipebridge condition and associated structural risks, delivered through the Sewer ancillary surveys sub-programme.	160	1–4 low impact	Other	Under development	BAU

STEPS TAKEN TO MAINTAIN THE SYSTEM

Table 23 - Measures taken to maintain foul sewers in 2025 (cont)

Implementation of proactive cleaning and maintenance	Implementation of proactive maintenance SNWC (Sewers near watercourses) Planned, risk-based maintenance of foul sewers undertaken ahead of failure to address blockages, asset deterioration and reduce the risk of pollution incidents.	21km	10+ high impact	Network blockages	Under development	BAU
Implementation of proactive cleaning and maintenance	Bin the Wipe A targeted Bin the Wipe programme focused on changing customer behaviour in hotspot areas through engagement and on-the-ground intervention to reduce the risk of sewer blockages caused by wipes.	348,822	1-4 low impact	Network blockages	Under development	In delivery

Combined sewer overflows

Table 24 - Measures taken to maintain combined sewer overflows in 2025

Measure	Description of action(s)	Scale of action(s)	Impact of the measure (category 1-3 incidents prevented)	Root cause(s) addressed by the measure	Recent pollution incident performance issues identified in the DWMP	Delivery status of the measure
Remedial capital asset improvements	Flow control devices (SO) Installation, adjustment, maintenance or replacement of flow control devices at storm overflows to regulate pass-forward flows and reduce the frequency and volume of spills.	10 per year	1-4 low impact	Infiltration	Under development	In delivery
Improve root cause analysis techniques	High spiller investigations Targeted investigations at storm overflows with frequent spills to identify underlying causes and define appropriate actions to reduce the risk of spills and associated environmental impact.	40	5-9 medium impact	Infiltration	Under development	In delivery
Remedial capital asset improvements	Low sided weirs Raising or modifying low-sided storm overflow weirs to retain additional flow within the sewer network and reduce the risk of spills to the environment.	100 delivered	5-9 medium impact	Infiltration	Under development	In delivery

STEPS TAKEN TO MAINTAIN THE SYSTEM

Table 24 - Measures taken to maintain combined sewer overflows in 2025 (cont)

Use of predictive analytics	Smart networks Use of network-wide sensors, telemetry and data analytics to monitor sewer performance in near-real-time, identify and predict emerging risks, and support proactive interventions to reduce the risk of spills and pollution incidents.	700	1–4 low impact	Infiltration	Under development	Enabler
Dual manhole surveys and upgrades	Dual manholes Installation or upgrade of dual manhole arrangements to separate flows and improve monitoring, access and control at storm overflow locations, supporting a reduction in pollution risk.	20	1–4 low impact	Network blockages	Under development	In delivery
Implementation of proactive cleaning and maintenance	Proactive sewer cleaning / inspection (CCTV & CSO Inspection) Planned, risk-based sewer inspections and cleansing undertaken ahead of failure to identify defects and remove blockages, reducing the risk of pollution incidents.	100%	5–9 medium impact	Network blockages	Under development	BAU
Remedial capital asset improvements	CSO and ancillary AMP8 sub-programme A planned AMP8 sub-programme delivering prioritised minor works and rehabilitation at combined sewer overflows and associated ancillary assets to maintain serviceability and support a reduction in pollution risk.	10	1–4 low impact	Network blockages	Under development	BAU
Remedial capital asset improvements	Tidal intrusion issues (flap valves) Investigation and mitigation of seawater ingress into the sewer network during high tides to manage elevated levels, reduce spill risk, and limit the potential for pollution incidents.	30	1–4 low impact	Infiltration	Under development	In delivery
Implementation of proactive cleaning and maintenance	Bin the Wipe A targeted Bin the Wipe programme focused on changing customer behaviour in hotspot areas through engagement and on-the-ground intervention to reduce the risk of sewer blockages caused by wipes.	348,822	1–4 low impact	Network Blockages	Under development	In delivery

STEPS TAKEN TO MAINTAIN THE SYSTEM

Rising mains

Table 25 - Measures taken to maintain rising mains in 2025

Measure	Description of action(s)	Scale of action(s)	Impact of the measure (category 1–3 incidents prevented)	Root cause(s) addressed by the measure	Recent pollution incident performance issues identified in the DWMP	Delivery status of the measure
Remedial capital asset improvements	Rising mains minor works sub-programme Delivery of targeted minor capital works on rising mains to address defects, improve asset reliability and support a reduction in the risk of failures and pollution incidents.	1 in progress to be replaced 1 in progress being relined	1–4 low impact	Pumps	Under development	BAU
Remedial capital asset improvements	Burst rising main procedure A defined operational response procedure to rapidly isolate, manage and repair burst rising mains, supporting mitigation of pollution impacts and service disruption.	100%	1–4 low impact	Pumps	Under development	Complete

STEPS TAKEN TO MAINTAIN THE SYSTEM

Wastewater pumping stations

Table 26 - Measures taken to maintain wastewater pumping stations in 2025

Measure	Description of action(s)	Scale of action(s)	Impact of the measure (category 1–3 incidents prevented)	Root cause(s) addressed by the measure	Recent pollution incident performance issues identified in the DWMP	Delivery status of the measure
Remedial capital asset improvements	Outstation / PLC Project Upgrade and standardisation of outstation and PLC control systems to enhance reliability, monitoring capability and operational control across wastewater assets.	58	1–4 low impact	Other	Under development	Complete
Power resilience improvements	Installation of auto reset alarm logic Installation of auto-reset alarm logic at new and existing wastewater pumping stations to support continued operation following power dips or control system issues, reducing the risk of pollution incidents. 154 sites (out of 966 wastewater pumping stations).	15%	1–4 low impact	Power	Under development	In delivery
Power resilience improvements	Develop generator procurement strategy A strategic approach to securing and deploying generators to enhance resilience to power outages at critical wastewater sites.	100%	1–4 low impact	Power	Under development	BAU
Company cultural or behavioural change	Northern Powergrid engagement strategy Structured engagement with the Distribution Network Operator (DNO) to strengthen coordination, information sharing and response arrangements during power interruptions affecting wastewater assets.	100%	0–enabler	Power	Under development	BAU
Enhanced incident response	Proactive storm preparation Planned pre-storm actions to position resources and prepare wastewater assets ahead of forecast severe weather, supporting mitigation of pollution risk.	100%	5–9 medium impact	Power	Under development	BAU

STEPS TAKEN TO MAINTAIN THE SYSTEM

Table 26 - Measures taken to maintain wastewater pumping stations in 2025 (cont)

Enhanced incident response	Tanker support for outages Deployment of tankers during power or asset outages to maintain containment and support mitigation of the risk of uncontrolled discharges.	100%	5–9 medium impact	Power	Under development	BAU
Enhanced incident response	Dedicated Pumping Station team A specialist operational team dedicated to proactive maintenance, monitoring and rapid response at wastewater pumping stations, strengthening operational resilience and supporting pollution risk mitigation.	100%	1–4 low impact	Power	Under development	Complete
Enhanced incident response	Duty pump failure response A defined operational response to rapidly manage duty pump failures, supporting mitigation of spill risk and service disruption at wastewater pumping stations.	100%	1–4 low impact	Pumps	Under development	BAU
Enhanced proactive wet well cleaning programme	Proactive wet well cleaning Regular planned cleaning of wet wells at wastewater pumping stations to manage rag build-up and blockages, supporting mitigation of pump failure and pollution risk.	100%	1–4 low impact	Pumps	Under development	BAU
Enhanced incident response	Hire pump approach Use of temporary hired pumping equipment to maintain flows during asset failures or planned works, supporting mitigation of pollution risk and service disruption.	100%	1–4 low impact	Pumps	Under development	BAU
Enhanced incident response	Increased mobile response engineer (MRE) cover Increased MRE cover providing enhanced operational resource to support proactive maintenance and rapid response, strengthening resilience and supporting mitigation of pollution risk and impact.	50%	5–9 medium impact	Pumps	Under development	In delivery
Improve root cause analysis techniques	Pumping station assessments Targeted pumping station assessments to identify compliance, resilience and operational risks, informing prioritised actions to support reduction of spill frequency and pollution risk. (94 completed)	94	5–9 medium impact	Pumps	Under development	In delivery

STEPS TAKEN TO MAINTAIN THE SYSTEM

Table 26 - Measures taken to maintain wastewater pumping stations in 2025 (cont)

Power resilience improvements	SPS fail-safe modes Implementation of fail-safe operating modes at sewage pumping stations to enable continued operation during level sensor failures that affect pumping station control, supporting containment and pollution risk mitigation.	20%	1–4 low impact	Pumps	Under development	In delivery
Company cultural or behavioural change	NWG / NPG outage circulation Formal circulation of power outage information between NWG and Northern Powergrid to strengthen awareness, coordination and response during power interruptions affecting wastewater assets, supporting mitigation of pollution risk.	100%	0–enabler	Power	Under development	Complete
Implementation of proactive cleaning and maintenance	Back-up power supply Proof of concept to trial the use of recycled battery packs as an alternative power resilience solution to support continued operation of wastewater assets during power outages.	3	1–4 low impact	Power	Under development	Complete

Wastewater treatment works

Table 27 - Measures taken to maintain Wastewater Treatment Works in 2025

Measure	Description of action(s)	Scale of action(s)	Impact of the measure (category 1–3 incidents prevented)	Root cause(s) addressed by the measure	Recent pollution incident performance issues identified in the DWMP	Delivery status of the measure
Telemetry installation	Descriptive STW telemetry project Installation of enhanced telemetry at sewage treatment works to support improved visibility of asset performance and operating conditions, enabling proactive operational management.	95%	1–4 low impact	Other	Under development	In delivery
Implementation of proactive cleaning and maintenance	Implementation of proactive maintenance Planned, risk-based maintenance activities undertaken ahead of failure to manage asset deterioration and support mitigation of pollution risk across wastewater assets.	100%	1–4 low impact	Other	Under development	BAU

STEPS TAKEN TO MAINTAIN THE SYSTEM

Water distribution network

Table 28 - Measures taken to maintain the water distribution network in 2025

Measure	Description of action(s)	Scale of action(s)	Impact of the measure (category 1–3 incidents prevented)	Root cause(s) addressed by the measure	Delivery status of the measure
Remedial capital asset improvements	Annual programme of works to renew/replace mains Targeted mains renewal programmes based upon burst rates. Delivered 0.1% per year throughout AMP7.	1	0–enabler	Burst mains	Enabler
Implementation of proactive cleaning and maintenance	Regular proactive cleaning of water networks We undertake annual routine, planned flushing of the water network to minimise discoloration and water quality risks. Should a pollution event occur, the severity is likely to be decreased due to maintaining a clean water network.	>3,000 km	0–enabler	Burst mains	Enabler
Colleague training (Water Distribution Network)	Colleague training, pollution We have implemented and continue to deliver training to Water Networks colleagues on Environmental Impact Awareness to ensure knowledge of what constitutes a pollution incident and measures that should be taken to avoid and report incidents. We are averaging over 100 colleagues per calendar year which equates to a training rate of the water networks teams of 25% per year.	100	0–enabler	Burst mains	Enabler
Colleague training (Water Distribution Network)	Water Shed training We have an in-house training setup to simulate how to operate water mains called the Water Shed. All new Water Networks colleagues in NW and ESW undertake training on this setup called “Network discoloration and you”. Training includes how to operate valves on the network whilst minimising disruptions including through reducing pressure transience which can cause bursts and therefore pollutions. We average over 50 colleagues trained per year on this setup.	50	0–enabler	Burst mains	Enabler

STEPS TAKEN TO MAINTAIN THE SYSTEM

Water treatment works

Table 29 - Measures taken to maintain Water Treatment Works in 2025

Measure	Description of action(s)	Scale of action(s)	Impact of the measure (category 1–3 incidents prevented)	Root cause(s) addressed by the measure	Delivery status of the measure
Site chemical barrier implementation	Review of chemical bunding at all WTW Review of WTW to identify where chemical storage and dosing is and is not bunded. Continued review to be actioned with action plans to be developed for those assets without bunding.	1	0–enabler	Discharge to the environment	Enabler
Colleague training (Water Treatment Works)	Review of run to waste SOPs Ongoing review of Standard Operating Procedures (SOPs) to ensure accurate guidance on how to manage run to waste activities at WTW assets.	1	0–enabler	Discharge to the environment	Enabler
Cultural/behavioural change	WTW drainage mapping We have implemented an initial review of drainage on WTW sites including markup of surface water, combined and foul sewers. We will continue to improve our methodology and outputs.	1	0–enabler	Asset drainage misconnections	Enabler
Remedial capital asset improvements	Discharge compliance annual programme of work We have implemented an annual programme of work to improve discharge compliance which in turn has a benefit of minimising pollution risks through capital maintenance interventions. The programme delivers over £500,000 worth of improvements per year.	1	0–enabler	Discharge to the environment	Enabler

PLANNED ADDITIONAL MEASURES

Across the asset base

Table 30 - Planned measures to be taken across asset base in 2026

Additional Measures	Description of action(s)	Scale of action(s) in the next calendar year	Expected impact of the measure in the next calendar year (category 1 to 3 incidents prevented)	Root cause(s) addressed by the measure	Recent pollution incident performance issues identified in the DWMP	Implementation start date of the measure	Implementation completion date of the measure
Improve root cause analysis techniques	Enhanced RCA techniques Improved root cause analysis methods to better identify underlying causes of incidents and target effective preventative actions.	30%	1–4 low impact	Other	Under development	Jan–26	Dec–26
Company cultural or behavioural change	Formalise weekend alarm review A structured weekend process to review and assess alarms, ensuring emerging issues are identified and acted on promptly. Applied across all telemetry-monitored wastewater assets.	100%	1–4 low impact	Other	Under development	Jan–26	Dec–26
Manual analysis of telemetry data	High level daily monitoring Routine daily monitoring of telemetry-derived KPIs and alarms to provide early visibility of emerging risks across wastewater assets, with mandatory response to all P2B alarms. This applies to all telemetry-enabled sites, comprising 415 Sewage Treatment Works and 966 Wastewater Pumping Stations, which are monitored continuously with daily alarm review. A small number of assets (104) without telemetry are excluded from this intervention.	92%	1–4 low impact	Pumps	Under development	Jan–26	Dec–26
Use of predictive analytics	StormHarvester Analysis Use of StormHarvester data analytics to assess asset performance and identify emerging risks linked to weather and flow conditions.	100%	5–9 medium impact	Pumps	Under development	Jan–26	Dec–26
Enhanced incident response	Incident response time Focused actions to reduce response times to incidents, minimising duration, impact and environmental harm. Action to be completed at 100% of relevant assets.	100%	1–4 low impact	Other	Under development	Jan–26	Dec–26

PLANNED ADDITIONAL MEASURES

Table 30 - Planned measures to be taken across asset base in 2026 (cont)

Colleague training (companywide)	Colleague training Colleagues are trained and aware of pollution-prevention processes and procedures. All new starters complete competency training, including a Level 3 NVQ, and receive ongoing education through pollution reviews.	100%	0–enabler	Pumps	Under development	Jan–26	Dec–26
Company cultural or behavioural change	Team leader best practice Team leaders promote and apply best practice in operational decision-making to support consistent application of pollution prevention processes and procedures.	100%	0–enabler	Other	Under development	Jan–26	Dec–26
Power resilience improvements	Fixed power generation Installation of fixed standby power generation at high-priority wastewater pumping stations and wastewater treatment works to strengthen on-site power resilience during external power outages. Six sites identified.	6	1–4 low impact	Power	Under development	Jul–26	Dec–26
Company cultural or behavioural change	Control room of the future A dedicated wastewater team within the control room triages alarms and prioritises responses on a 24/7 basis. An additional two full-time roles provide focused support on alarms across our entire operation, ensuring 100% coverage.	100%	5–9 medium impact	Other	Under development	Jun–26	Dec–26
Company cultural or behavioural change	Implement and review alarm priority Alarm logic is implemented and regularly reviewed to ensure alarms are effective, correctly prioritised, and support timely operational response to reduce the risk of pollution incidents.	100%	0–enabler	Pumps	Under development	Jan–26	Dec–26

Our StormHarvester intervention will benefit both our combined sewer overflow and wastewater pumping station assets, delivering a forecast pollution avoidance of between five and nine incidents, mitigating against pump failure and inundation. Our new control is expected to deliver a medium impact (five to nine) covering a multitude of root causes across our entire wastewater operations.

PLANNED ADDITIONAL MEASURES

Foul sewer

Table 31 - Planned measures to be taken for foul sewers in 2026

Additional Measures	Description of action(s)	Scale of action(s) in the next calendar year	Expected impact of the measure in the next calendar year (category 1 to 3 incidents prevented)	Root cause(s) addressed by the measure	Recent pollution incident performance issues identified in the DWMP	Implementation start date of the measure	Implementation completion date of the measure
Remedial capital asset improvements	Sewer rehab find and fix A short-cycle programme to identify high-risk sewer defects and deliver rapid, targeted repairs to reduce the risk of pollution incidents and improve network reliability. An initial set of 34 target locations.	34	5–9 medium impact	Infiltration	Under development	Jan–26	Dec–26
Customer engagement	Bin the Wipe A targeted Bin the Wipe programme focused on changing customer behaviour in hotspot areas through engagement and on-the-ground intervention to reduce the risk of sewer blockages caused by wipes.	350,000	1–4 low impact	Network blockages	Under development	Jan–26	Dec–26
Telemetry installation	Sewer level monitors Installation of sewer level monitors to provide digital alerts of emerging blockages, reducing risk through new device installations and trials of innovative technology, with approximately 1,200 monitors installed and full coverage at CSOs reported in the last Asset	200	10+ high impact	Network blockages	Under development	Jan–26	Dec–26
Telemetry installation	SLM at high-risk locations VON: SLMs are installed at high-risk locations adjacent to watercourses to provide early warning of potential blockages and support timely intervention to reduce the risk of pollution incidents.	100	5–9 medium impact	Network blockages	Under development	Jan–26	Dec–26

PLANNED ADDITIONAL MEASURES

Table 31 - Planned measures to be taken for foul sewers in 2026 (cont)

Remedial capital asset improvements	Sewer ancillary surveys sub-programme An inspection programme to identify and manage pipebridge condition and associated structural risks, delivered through the Sewer Ancillary Surveys sub-programme.	160	1–4 low impact	Other	Under development	Jan–26	Dec–26
Implementation of proactive cleaning and maintenance	Implementation of proactive maintenance Sewers near watercourses (SNWC) Planned, risk-based maintenance of foul sewers undertaken ahead of failure to address blockages, asset deterioration and reduce the risk of pollution incidents. 21km worth of coverage is our target.	21km	10+ high impact	Network blockages	Under development	Jan–26	Dec–26

Both our sewer level monitors and implementation of proactive maintenance interventions are forecast to deliver >20 pollution avoidances within the 2026 period, targeting network blockages. In addition, our sewer rehabilitation find-and-fix program is also forecast to avoid between five and nine pollution events, addressing the challenges associated with infiltration upon our networks.

PLANNED ADDITIONAL MEASURES

Combined sewer overflow

Table 32 - Planned measures to be taken for combined sewer overflows in 2026

Additional Measures	Description of action(s)	Scale of action(s) in the next calendar year	Expected impact of the measure in the next calendar year (category 1 to 3 incidents prevented)	Root cause(s) addressed by the measure	Recent pollution incident performance issues identified in the DWMP	Implementation start date of the measure	Implementation completion date of the measure
Remedial capital asset improvements	Flow control devices (SO) Installation, adjustment, maintenance or replacement of flow control devices at storm overflows to regulate pass-forward flows and reduce the frequency and volume of spills.	10	1–4 low impact	Infiltration	Under development	Jan–26	Dec–26
Improve root cause analysis techniques	High spiller investigations Targeted investigations at storm overflows with frequent spills to identify underlying causes and define appropriate actions to reduce the risk of spills and associated environmental impact.	40	1–4 low impact	Infiltration	Under development	Jan–26	Dec–26
Remedial capital asset improvements	Low sided weirs Raising or modifying low-sided storm overflow weirs to retain additional flow within the sewer network and reduce the risk of spills to the environment.	100 candidates	5–9 medium impact	Infiltration	Under development	Jan–26	Dec–26
Use of predictive analytics	Smart networks Use of network-wide sensors, telemetry and data analytics to monitor sewer performance in near-real-time, identify and predict emerging risks, and support proactive interventions to reduce the risk of spills and pollution incidents.	1,000	1–4 low impact	Infiltration	Under development	Jan–26	Dec–26
Dual manhole surveys and upgrades	Dual manholes Installation or upgrade of dual manhole arrangements to separate flows and improve monitoring, access and control at storm overflow locations, supporting a reduction in pollution risk.	35	1–4 low impact	Network blockages	Under development	Jan–26	Dec–26

PLANNED ADDITIONAL MEASURES

Table 32 - Planned measures to be taken for combined sewer overflows in 2026 (cont)

Implementation of proactive cleaning and maintenance	Proactive sewer cleaning / inspection (CCTV & CSO Inspection) Planned, risk-based sewer inspections and cleansing carried out ahead of failure to identify defects and remove blockages before they lead to pollution incidents. Introducing CCTV to 2 lengths downstream and one length upstream (100% of the asset base, once per annum).	100%	5–9 medium impact	Network blockages	Under development	Jan–26	Dec–26
Remedial capital asset improvements	AMP8 sub-programme A planned AMP8 sub-programme delivering prioritised minor works and rehabilitation at combined sewer overflows and associated ancillary assets to maintain serviceability and support a reduction in pollution risk.	10	1–4 low impact	Network blockages	Under development	Jan–26	Dec–26
Remedial capital asset improvements	Tidal intrusion issues (flap valves) Investigation and mitigation of seawater ingress into the sewer network during high tides to manage elevated levels, reduce spill risk, and limit the potential for pollution incidents.	30	1–4 low impact	Infiltration	Under development	Jan–26	Dec–26
Enhanced incident response	SREM intervention A coordinated inspection and response approach that prioritises high-risk storm overflow sites for rapid assessment and action, strengthening incident response and supporting a reduction in pollution risk.	3,500	0 - enabler	Incident response	Under development	Jan–26	Dec–26
Improve root cause analysis techniques	DDS action plans Submission of action plan to the EA to reduce repeat pollution events from sites with extended drain down.	75	10+ high impact	Infiltration	Under development	Jan–26	Dec–26
Remedial capital asset improvements	Pollution network blockages A higher-intensity programme of targeted CCTV inspections and extended cleansing at high-spilling wastewater assets to identify defects, remove blockages and inform follow-on actions to support reduction of pollution risk.	40	5–9 medium impact	Network blockages	Under development	Jan–26	Dec–26

Both our low-sided weirs and proactive sewer cleaning interventions are each forecast to deliver between five and nine pollution avoidances, mitigating against infiltration and network blockages. Our pollution network blockage program of works is expected to avoid between five and nine pollution events. Dry day spills (DDS) action plans are expected to deliver the most benefit for our CSOs, which is forecast to be more than 10 events associated with infiltration.

PLANNED ADDITIONAL MEASURES

Rising mains

Table 33 - Planned measures to be taken for rising mains in 2026

Additional Measures	Description of action(s)	Scale of action(s) in the next calendar year	Expected impact of the measure in the next calendar year (category 1 to 3 incidents prevented)	Root cause(s) addressed by the measure	Recent pollution incident performance issues identified in the DWMP	Implementation start date of the measure	Implementation completion date of the measure
Air valve maintenance	Air valve maintenance Routine inspection and maintenance of air valves on rising mains to prevent pressure build-up, asset damage and pollution incidents.	5 replacements	1–4 low impact	Pumps	Under development	Jan–26	Dec–26
Air valve maintenance	Air valve maintenance Routine inspection and maintenance of air valves on rising mains to prevent pressure build-up, asset damage and pollution incidents.	3 condition surveys	1–4 low impact	Pumps	Under development	Jan–26	Dec–26
Remedial capital asset improvements	Rising mains minor works sub-programme Delivery of targeted minor capital works on rising mains to address defects, improve asset reliability and support a reduction in the risk of failures and pollution incidents.	2 replacements	1–4 low impact	Pumps	Under development	Jan–26	Dec–26

Both our air valve maintenance and rising main minor works interventions are forecast to deliver between three and 12 pollution avoidances, mitigating some of the challenges we have with pumps and the rising main associated. It is forecast we will complete five air valve replacements to avoid pressure build up, which may cause a burst. It is also forecast that we will complete three condition surveys to mitigate asset failure due to its life and condition.

PLANNED ADDITIONAL MEASURES

Wastewater pumping stations

Table 34 - Planned measures to be taken for wastewater pumping stations in 2026

Additional Measures	Description of action(s)	Scale of action(s) in the next calendar year	Expected impact of the measure in the next calendar year (category 1 to 3 incidents prevented)	Root cause(s) addressed by the measure	Recent pollution incident performance issues identified in the DWMP	Implementation start date of the measure	Implementation completion date of the measure
Remedial capital asset improvements	Outstation / PLC project Upgrade and standardisation of outstation and PLC control systems to enhance reliability, monitoring capability and operational control across wastewater assets.	50	1–4 low impact	Other	Under development	Jan–26	Dec–26
Power resilience improvements	Installation of auto reset alarm logic Installation of auto-reset alarm logic at new and existing wastewater pumping stations to support continued operation following power dips or control system issues, reducing the risk of pollution incidents.	50%	1–4 low impact	Power	Under development	Jan–26	Dec–26
Power resilience improvements	Develop generator procurement strategy A strategic approach to securing and deploying generators to enhance resilience to power outages at critical wastewater sites.	100%	1–4 low impact	Power	Under development	Jan–26	Dec–26
Company cultural or behavioural change	Northern Powergrid engagement strategy Structured engagement with the DNO to strengthen coordination, information sharing and response arrangements during power interruptions affecting wastewater assets.	100%	0–enabler	Power	Under development	Jan–26	Dec–26
Enhanced incident response	Proactive storm preparation Planned pre-storm actions to position resources and prepare wastewater assets ahead of forecast severe weather, supporting mitigation of pollution risk.	100%	5–9 medium impact	Power	Under development	Jan–26	Dec–26

PLANNED ADDITIONAL MEASURES

Table 34 - Planned measures to be taken for wastewater pumping stations in 2026 (cont)

Enhanced incident response	Tanker support for outages Deployment of tankers during power or asset outages to maintain containment and support mitigation of the risk of uncontrolled discharges.	100% regional coverage	10+ high impact	Power	Under development	Jan-26	Dec-26
Enhanced incident response	Dedicated pumping station team A specialist operational team dedicated to proactive maintenance, monitoring and rapid response at wastewater pumping stations, strengthening operational resilience and supporting pollution risk mitigation.	100%	1-4 low impact	Pumps	Under development	Jan-26	Dec-26
Enhanced incident response	Duty pump failure response A defined operational response to rapidly manage duty pump failures, supporting mitigation of spill risk and service disruption at wastewater pumping stations.	100%	1-4 low impact	Pumps	Under development	Jan-26	Dec-26
Enhanced proactive wet well cleaning programme	Proactive wet well cleaning Regular planned cleaning of wet wells at wastewater pumping stations to manage rag build-up and blockages, supporting mitigation of pump failure and pollution risk.	100%	1-4 low impact	Pumps	Under development	Jan-26	Dec-26
Enhanced incident response	Hire pump approach Use of temporary hired pumping equipment to maintain flows during asset failures or planned works, supporting mitigation of pollution risk and service disruption.	100%	1-4 low impact	Pumps	Under development	Jan-26	Dec-26
Enhanced incident response	Increased MRE Cover Increased MRE cover providing enhanced operational resource to support proactive maintenance and rapid response, strengthening resilience and supporting mitigation of pollution risk and impact.	70%	10+ high impact	Pumps	Under development	Jan-26	Dec-26

PLANNED ADDITIONAL MEASURES

Table 34 - Planned measures to be taken for wastewater pumping stations in 2026 (cont)

Improve root cause analysis techniques	Pumping station assessments Targeted pumping station assessments to identify compliance, resilience and operational risks, informing prioritised actions to support reduction of spill frequency and pollution risk. (94 completed)	167 sites	1-4 low impact	Pumps	Under development	Jan-26	Dec-26
Power resilience improvements	SPS fail safe modes Implementation of fail-safe operating modes at sewage pumping stations to enable continued operation during level sensor failures that affect pumping station control, supporting containment and pollution risk mitigation.	60%	1-4 low impact	Pumps	Under development	Jan-26	Dec-26
Power resilience improvements	Mobile power solutions Deployment of mobile power solutions, such as generators and temporary power supplies, to maintain operation of critical assets during power outages and reduce the risk of pollution incidents.	4 extra mobile power units delivered	1-4 low impact	Power	Under development	May-26	Dec-26
Power resilience improvements	Back-up power supply Deployment of innovative backup power technology to provide short-duration (two to four hours) power resilience at priority wastewater assets during external power outages. 2026 will focus on deployment at approximately seven locations.	7 units	1-4 low impact	Power	Under development	Jan-26	Dec-26
Enhanced incident response	Alarm logic Use of alarm logic to help manage alarm traffic in the control room.	50%	1-4 low impact	Network blockages	Under development	Jan-26	Dec-26

Mitigation against pollution events caused by power failure remains a high priority for our wastewater pumping station assets. We will continue with our proactive storm preparations and strategic deployment of tankers prior to storm events, which are both expected to avoid >15 pollution events. We will continue with our targeted MRE activity to mitigate against pump failures, with this intervention expected avoid >10 pollution incidents.

PLANNED ADDITIONAL MEASURES

Wastewater treatment works

Table 35 - Planned measures to be taken for Wastewater Treatment Works in 2026

Additional Measures	Description of action(s)	Scale of action(s) in the next calendar year	Expected impact of the measure in the next calendar year (category 1 to 3 incidents prevented)	Root cause(s) addressed by the measure	Recent pollution incident performance issues identified in the DWMP	Implementation start date of the measure	Implementation completion date of the measure
Implementation of proactive cleaning and maintenance	Implementation of proactive maintenance Planned, risk-based maintenance activities undertaken ahead of failure to manage asset deterioration and support mitigation of pollution risk across wastewater assets.	100%	1–4 low impact	Other	Under development	Jan–26	Dec–26
Telemetry installation	Descriptive STW telemetry project Installation of enhanced telemetry at sewage treatment works to support improved visibility of asset performance and operating conditions, enabling proactive operational management.	100%	1–4 low impact	Other	Under development	Jan–26	Dec–26

The interventions outlined at our wastewater treatment works for 2026 are forecast to deliver a pollution avoidance between two and eight, targeting proactive maintenance to manage asset deterioration and the installation of telemetry and our descriptive works to improve operating condition.

There are currently no targeted interventions for 2026 delivery associated with our surface water sewer and associated outfalls, as well as storm tanks.

We seek to deliver interventions at the earliest opportunity within the 2026 period. However, some will commence later in the year due to approval protocols and enabling works. These later deployments will include mobile power solutions (May), the control room of the future (June) and fixed power generators (July) which all forecast to deliver between seven and 17 pollution avoidances.

PLANNED ADDITIONAL MEASURES

Water distribution network

Table 36 - Planned measures to be taken for the water distribution network in 2026

Additional Measures	Description of action(s)	Scale of action(s) in the next calendar year	Expected impact of the measure in the next calendar year (category 1 to 3 incidents prevented)	Root cause(s) addressed by the measure	Implementation start date of the measure	Implementation completion date of the measure
Cultural/behavioural change	Mapping of burst locations near combined sewers We will undertake analysis and mapping of previous burst main locations and their impact upon pollutions. We will review locations and their impacts upon the sewer network to provide us a better understanding of where and how the water network may impact pollution events from the wastewater network.	1	0–enabler	Enabling measure only allowing better reporting and analysis of pollution events and near misses on the water network. Implementation will allow future analysis and targeted implementation.	Jan–26	Dec–26
Cultural/behavioural change	Review of burst water mains near watercourses We will undertake a review of recent and historical burst water mains and their proximity to watercourses. This review will assist in identifying mains at greater risk of causing pollution incidents which can then be better prioritised for renewal.	1	0–enabler	Enabling measure only allowing better reporting and analysis of pollution events and near misses on the water network. Implementation will allow future analysis and targeted implementation.	Jan–26	Dec–26
Colleague training (Water distribution network)	Training of Water Networks colleagues We will review training material and update its rollout to operational colleagues to ensure clearer guidance on how to read and track the wastewater network, ensuring that all checks are completed when dealing with running potable water that has potential to enter the sewer network.	75	0–enabler	Enabling measure only allowing better training of operational colleagues to identify pollution risks and actions to be taken in the event of suspected incident.	Jan–26	Dec–26
Cultural/behavioural change	Additional mitigation equipment We will undertake a review of mitigation/containment equipment issued to Water Networks colleagues to understand where gaps may lie and develop a plan to address gaps.	1	0–enabler	Enabling measure only allowing better reporting and analysis of pollution events and near misses on the water network. Implementation will allow future analysis and targeted implementation.	Jan–26	Dec–26
Colleague training (Water distribution network)	Production of SOP for temporary discharges Development and roll-out of SOP for activities that will result in temporary discharges of water to the environment which will ensure support and governance regarding permitting applications. Inclusion of monitoring expectations and processes as well as steps to mitigate pollutions.	1	0–enabler	Removal of any unpermitted activity that may result in temporary water discharge to the environment.	Jan–26	Dec–26

PLANNED ADDITIONAL MEASURES

Table 36 - Planned measures to be taken for the water distribution network in 2026 (cont)

Air valve maintenance	<p>Air valve maintenance We will define and implement a risk categorisation system for air valves across the company asset base and implement appropriate inspection frequency. We will standardise this inspection regime with the production of a SOP. We will also develop guidance for operational teams regarding different types of air valves and how to isolate and maintain them. Training will be rolled out to all colleagues conducting air valve inspection and maintenance.</p>	1	1–4 low impact	Failure of air valves that may lead to increased mains pressure and mains bursts.	Jan–26	Dec–26
Improve root cause analysis techniques	<p>PMS reporting ESW We are implementing our Essex region into our PMS to accurately record pollutions and root causes, in line with other regions of our business.</p>	1	0–enabler	Enabling measure only allowing better reporting and analysis of pollution events and near misses on the water network. Implementation will allow future analysis and targeted implementation.	Jan–26	Dec–26
Improve root cause analysis techniques	<p>Update root cause capture on PMS We will review our root cause analysis process with regards to documenting the cause of water networks pollutions and implement this drop-down selection within our PMS.</p>	1	0–enabler	Enabling measure only allowing better reporting and analysis of pollution events and near misses on the water network. Implementation will allow future analysis and targeted implementation.	Jan–26	Dec–26
Remedial capital asset improvements	<p>Proactive mains replacement We will increase our investment in proactive mains renewal to 0.43% per year as documented in our PR24 enhancement business case, supported by an Ofwat Price Control Deliverable (PCD).</p>	1	1–4 low impact	Burst mains	Jan–26	Dec–26

Point to note: the majority of our planned interventions on our clean water assets are enabling measures to allow improved reporting and analysis of pollution events and near misses on the water distribution network. Implementation will allow future analysis and targeted implementation, which is why the expected impact of the measure falls within the 0–5 Low Impact category. These actions will not directly reduce pollution incidents but have the capacity to improve our performance in future years. Where we have a more tangible deliverable, for example delivery of training modules, we have estimated the scale of impact across the next year by reviewing five years’ worth of previous data for similar measures. Where we have estimates of scale, it is difficult to quantify the impact of the measure due to an underdeveloped root cause analysis of our incident history. However, these interventions will improve our ability to understand – and therefore improve – our performance in future years.

PLANNED ADDITIONAL MEASURES

Water treatment works

Table 37 - Planned measures to be taken for Water Treatment Works in 2026

Additional Measures	Description of action(s)	Scale of action(s) in the next calendar year	Expected impact of the measure in the next calendar year (category 1 to 3 incidents prevented)	Root cause(s) addressed by the measure	Implementation start date of the measure	Implementation completion date of the measure
Colleague training (Water Treatment Works)	Training for WTW site managers We will review training material and update its rollout to operational colleagues to ensure clearer guidance on what may constitute a pollution from WTW and how to mitigate and avoid such incidents.	15	0–enabler	Enabling measure only allowing better training of operational colleagues to identify pollution risks and actions to be taken in the event of suspected incident.	Jan–26	Dec–26
Improve root cause analysis techniques	PMS reporting ESW We will undertake an update to our PMS to ensure that our Essex region has the ability to report pollution incidents and root cause, a gap which we have identified against other operating regions.	1	0–enabler	Enabling measure only allowing better reporting and analysis of pollution events and near misses on water treatment assets. Implementation will allow future analysis and targeted implementation.	Jan–26	Dec–26
Improve root cause analysis techniques	Update root cause capture on PMS We will review our root cause analysis process with regards to documenting the cause of water treatment works pollutions and implement this drop down selection within our PMS.	1	0–enabler	Enabling measure only allowing better reporting and analysis of pollution events and near misses on water treatment assets. Implementation will allow future analysis and targeted implementation.	Jan–26	Dec–26
Colleague training (Water Treatment Works)	Production of SOP for temporary discharges Development and roll-out of SOP for activities that will result in temporary discharges of water to the environment which will ensure support and governance regarding permitting applications. Inclusion of monitoring expectations and processes as well as steps to mitigate pollutions.	1	0–enabler	Enabling measure only allowing removal of any unpermitted activity that may result in temporary water discharge to the environment.	Jan–26	Dec–26

PLANNED ADDITIONAL MEASURES

Table 37 - Planned measures to be taken for Water Treatment Works in 2026 (cont)

Colleague training (Water Treatment Works)	Review of pollution SOP Review of SOP guidance to WTW managers of how to manage a pollution response in order to prevent detriment to the environment.	1	0-enabler	Enabling measure only allowing review of standard operating procedures to address pollution incidents.	Jan-26	Dec-26
Site chemical barrier implementation	Review of chemical bunding at all WTW Continued review of outstanding sites and methodologies to be actioned with action plans to be developed for those assets without bunding.	1	0-enabler	Escape of potentially contaminated effluent to watercourses.	Jan-26	Dec-26

Point to note: the majority of our planned interventions are enabling measures to allow improved reporting and analysis of pollution events and near misses at our water treatment assets. Implementation will allow future analysis and targeted implementation, which is why the expected impact of the measure falls within the 0-5 Low Impact category. These actions will not directly reduce pollution incidents, but have the capacity to improve our performance in future years. Where we have a more tangible deliverable, for example, delivery of training modules, we have estimated the scale of impact across the next year by reviewing five years' worth of previous data for similar measures. Where we have estimates of scale, it is difficult to quantify the impact of the measure due to an underdeveloped root cause analysis of our incident history. However, these interventions will improve our ability to understand – and therefore improve our performance – in future years.

DRAINAGE AND WASTEWATER MANAGEMENT PLANS

Following DEFRA's updated statutory guidance (May 2025), NW is preparing its second Drainage and Wastewater Management Plan (DWMP28), which covers the 25 years from 2030–55

Our DWMP is our long-term strategy for managing and improving drainage and wastewater services across our region. It sets out how we will maintain, enhance, and adapt our sewerage and drainage systems over the next 25 years to meet growing demand, address the impacts of climate change, and protect the environment. Through the DWMP, we assess risks to our infrastructure and the environment, identify priorities for investment, and outline the actions we will take to ensure resilient and sustainable wastewater services now and in the future.

The DWMP provides a forecast of future performance against a suite of indicators, including pollution, and identifies the short-, medium- and long-term investment required to mitigate performance risk and deliver performance targets.

The guidance specifically states that the DWMP should reflect the immediate (current – within the Asset Management Period, or AMP) actions planned and taken as part of our Pollution Incident Reduction Plans so the plans need to be aligned.

The DWMP will form the evidence base for all our drainage and sewerage investment needs ahead of each Price Review. The draft plan will be published in November 2027 and the final plan in August 2028. We will review the plan annually and update it at least every five years in line with regulatory requirements.



GLOSSARY

Definitions

Pollution incident

Pollution incidents are defined in section 205A(3) of the Act as discharges of any content from the undertaker's system which may be harmful to health or the quality of the environment. This does not include discharges of treated effluent operating in compliance with an environmental permit.

Relevant undertaker

A company who has statutory powers and duties to supply water, sewerage or both services to premises within an appointed geographical area under the Act. These are the incumbent water companies and new appointees. Referred to in this guidance as 'you'.

Seriousness (of the pollution incident)

Seriousness refers to the impact the pollution incident has had on the water environment. References to seriousness should follow the methodology (for undertakers operating in England) outlined in The Common Incident Classification Scheme (CICS).

System

System refers to all assets within the sewage disposal network or the water treatment and supply system.

Measure or step

A measure or step is an action or series of actions you have taken for the purpose of reducing the risk of pollution incidents. They directly contribute to this over the next calendar year or in the future. This includes both:

- new actions started in the next calendar year
- pre-existing actions where they continue to directly contribute to fewer pollution incidents over the next calendar year or in the future

These measures can cover any aspect of your business activities including but not limited to operations and maintenance, human resources and culture, incident response, collection and use of data and customer engagement.

Impact (of the measure or step)

The impact of the measure or step is the number of pollution incidents prevented, or expected to be prevented, through delivery of the relevant measure or step. This definition is derived from section 205A (4) of the Act, which refers to the impact that the undertaker considers measures taken will have in reducing pollution incidents. This is distinct from the impact of a pollution incident, referred to in the definition of 'seriousness'.

Causes (of the pollution incident)

The reasons why the pollution incident occurred, including the actions taken or not taken by you or another party that caused the issue or allowed it to persist.

Acronyms

NW/NWL – Northumbrian Water Limited or Northumbrian Water

AMP – Asset Management Period – The water industry develops plans on a five-year basis. Each five-year period is called an AMP, thus AMP7 covered 2020–25 and AMP8 will cover 2025–30.

EA – Environment Agency – The environmental regulator.

EDM – Event Duration Monitor – These monitors have been installed on our storm overflows so we can report the number of times and duration of time they spill to the environment to the Environment Agency.

EPA – Environmental Performance Assessment – an assessment framework used by the Environment Agency each year to report on environmental measures in the water sector.

FOG – Fat, oil and grease – Blockages are the main root cause of serious pollutions, and 80% are completely avoidable – made up of unflushables and FOG.

NIRS – National Incident Reporting Scheme – Where pollution incidents are managed and recorded, a list jointly owned by the EA and NWL.

ODI – Outcome Delivery Incentives – A performance mechanism set by Ofwat which allows companies to earn rewards if they beat targets and be penalised if they fail targets.

Ofwat – Economic regulator for the water sector.

PC/PCL – Performance Commitment Level.

SO, CSO – Storm Overflow – An asset that acts as a relief valve when the sewerage system is at risk of being overwhelmed, such as during heavy downpours when a lot of rainwater runs into drains and the sewerage system in a short space of time.

PR24 – Ofwat's Price Review which took place in 2024, covering the Business Plan Period 2025–30.

PSWO – Polluted Surface Water Outfalls – Where water from a drainage system, typically collecting rainwater runoff from streets and surfaces, discharges into a body of water like a river or lake, but is contaminated with pollutants like sewage, chemicals, or debris due to improper connections or system malfunctions.

Pumping Station or Sewage Pumping Station (PS, SPS or WWPS) – An asset that moves sewage forward towards a water recycling centre for treatment when gravity cannot be used.

Rising Main – A sewer which is pressurised using pumps to move sewage along the flat landscape or uphill. Sludge – The organic waste matter from sewage and used water.

Transferred Sewer – Small sewers that serve individual or small groups of properties. Until 2011 these were the responsibility of homeowners and as such not all have been well maintained. In 2011 a new law was passed to move these into water company ownership and responsibility.

WISER – Water Industry Strategic Environmental Requirements – The strategic steer to water companies on the environment, resilience and flood risk for business planning purposes.

WINEP – Water Industry National Environment Programme – A set of actions that the Environment Agency have requested all 20 water companies operating in England to complete between 2020 and 2025, in order to contribute towards meeting their environmental obligations.

