

THE WAY FORWARD
FOR UK WATER

Tackling the industry's
toughest challenges –
from CSOs to Net-Zero



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THE WAY FORWARD FOR UK WATER

Tackling the industry's toughest challenges - from CSOs to Net-Zero

The water industry has set the ground-breaking goal to achieve Net-Zero by 2030, aiming to save up to 10 million tonnes of greenhouse gas over the next nine years – two decades ahead of the government's 2050 decarbonisation deadline.

The industry-wide initiative is the first of its kind, aligning every water supplier behind a common purpose. But it's a single goal with no single resolution. Each company must plot its own path to Net-Zero, negotiating ageing assets, economic uncertainty, and complex customer and shareholder demands. Success will require ongoing cooperation between consumers, policymakers, water companies, and every link in the supply chain.

Water UK's 2030 Routemap outlines the ambitious 10-point plan to get the job done. An estimated £2-4 billion capex investment will drive advancements in critical focus areas, including renewable power, low emission vehicles, and water and energy savings. The programme – which offers a range of possible pathways and interventions – also promises to boost infrastructure and supply resilience, invest in flood preparation and prevention, and restore native habitats.



Adler & Allan
CONSULTING & CONSTRUCTION



Our methodology

Between May and July 2021, Adler and Allan along with the Institute of Water ran a number of polls on social media to gain insights on the water industry's Net-Zero and pollution reduction programmes.

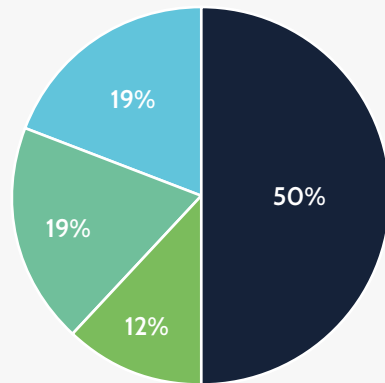
Respondents were made up of environmental risk, operations, Net-Zero strategy, pollution reduction, and health and safety managers. The results were processed internally by Adler and Allan.

THE CURRENT SITUATION

In your own words

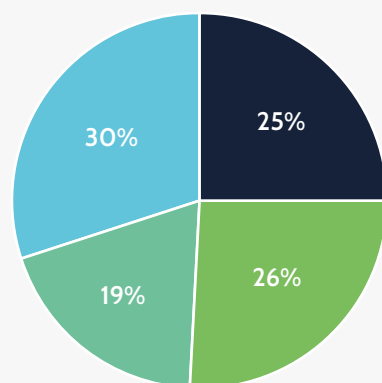
We polled a number of water companies to get their perspective on the way ahead.

Positively, participants had already selected a primary pathway to Net-Zero, with **50% opting for a technology-led approach, two clusters of 19% choosing demand-led and removals-led strategies, and 12% following combined methodologies.** However, only one respondent was 'completely confident' about achieving Net-Zero in the next nine years.



- Demand-led
- Removals-led
- Technology-led
- Combination

When asked about their decarbonisation progress to date, **19% said they were ahead of target, 30% reported being on target, while 25% were behind.** The remaining 26% didn't know.



- Ahead of target
- On target
- Behind target
- Don't know

While one contributor thought water companies had ‘already gone above and beyond, at great expense to themselves’, many believed more work was to be done throughout the sector.

“
Preventable leakage reduction is a massive issue where excuses for not applying improved practice is not acceptable.
”

“
[Installing] sumps before outfalls to catch pollutants, spring flaps that work, and electronic monitoring.
”

“
More support and advice on technology.
”

“
Look for ways to prevent hydrocarbons entering the ground.
”

Feedback shows a clear crossover of concerns – and an opportunity for meaningful collaboration. With key deadlines looming, it’s time to share the load with partners who are equally committed to environmental compliance. When asked how suppliers could support their goals, our respondents suggested hands-on help across product development, reporting, knowledge building, and more.

“
Advice on available monitoring systems and procedures.
”

“
Wider publication of statistics and pressure applied by greater public awareness.
”

“
Explain the options available to reduce charges.
”

Against a backdrop of Combined Sewer Overflow (CSO) reliance and infrastructure decline, the move to Net-Zero is a monumental task. Even industry leaders admit there are no silver bullet solutions – but there are partners poised to help. An environmental risk expert can identify emissions and pollution hazards across your estate, shape your long-range approach (whether it’s led by demand, technology or removals), and uncover quick wins to swiftly cut your carbon footprint. All eyes are on the water industry – but you needn’t rise to the Net-Zero challenge alone. Let’s take on 2030’s bold targets together.



THE ROAD TO NET-ZERO

Potential pathways and interventions

The Water UK Routemap models several pathways to carbon neutrality. The scenario illustrates ‘alternative futures’ based on the water industry and its stakeholders concentrating decarbonisation activities within three distinct areas.

Demand-led

This course of action focuses on managing demand for water and wastewater services by encouraging sustainable consumption and exceeding 2030 commitments in areas such as leakage and per capita consumption (PCC).

Technology-led

This pathway centres on decarbonising the sector’s largest emissions contribution areas through technological innovations. This could involve rapid investment in renewables, sustainable transport systems, and process technologies.

Removals-led

This approach accelerates work that improves the water sector’s natural sequestration capacity via insets, offsets, and purchased offsets within companies’ own estates and across the country.

Along each route, water companies can employ specific interventions that deliver both immediate impact and lasting advantages. Our ideal Net-Zero solution is likely to combine complementary interventions across a range of critical areas – from decarbonising core processes to offsetting CO₂ with natural restoration activities.

That said, how do you make it all work? How do you reconcile ambitious Net-Zero commitments with real-world budgets, timescales, and PR pressures? The answer is to balance today’s possibilities with tomorrow’s purpose, creating a programme that incorporates:

- Low-cost, short-term gains that start your journey and show stakeholders you’re taking action

- Proactive, collaborative planning that maps the way forward – including key projects and operational changes, required skills, resources, and financial commitments, and necessary supplier support
- Sustainable investments and initiatives that spread cost and deliver benefits over time

Whatever your Net-Zero priorities and chosen pathway, the important takeaway is to begin now. With only nine years until the 2030 target date, it’s essential to break ground on your overarching carbon reduction plan.

Let’s consider some quick wins and longer-term tactics you could include in your Net-Zero strategy.



Burning fossil fuels interventions

Many water and wastewater treatment processes rely on the combustion of fossil fuels. By adopting cleaner practices, you can introduce greater efficiencies and eliminate a major proportion of your overall emissions.

Quick win:

Replacing gas oil with HVO

Inexpensive and readily available, gas oil is the go-to fuel for many water and wastewater processes. But it comes at a high environmental cost. Swapping red diesel for Hydrotreated Vegetable Oil (HVO) – a 100% renewable ‘drop in’ alternative – is a swift and simple solution.

A qualified consultant will support the transition across all site processes, starting with a detailed asset survey to ensure they’re HVO-compatible.

After tanks are cleaned and inspected, gas oil quantities are removed by specialist fuel uplift tankers and replaced with HVO. Your partner should also provide a detailed maintenance schedule to head off risks of microbial contamination and fuel degradation.

Proactive planning:

Transforming sewage sludge into biogas

A pivotal part of Net-Zero success is rethinking the way we deal with waste. Solutions include reducing it at source, responsibly removing it from site, and closing the loop by converting it into green energy supplies.

A growing number of wastewater facilities have already installed combined heat and power (CHP) engines as part of wider renewable fuel generation programmes. These units use the natural process of anaerobic digestion (AD) to transform sludge into biogas, which can be used to power site operations, combusted to create electricity and heat, or sold back to the local grid. In turn, the heat generated from CHP facilities can be repurposed to accelerate the AD cycle.

The move to biogas generation requires long-term investment, but those water companies already generating power from sewage sludge have seen significant cost and carbon reduction benefits. To assess viability, a specialist partner will initially review your site structure, operations and assets, then signpost required infrastructure and tech upgrades to begin the transition.

Long-term strategy: Planning for sustainable onsite hydrogen production

While still in its infancy, onsite hydrogen production could emerge as the industry's Net-Zero saviour. Water companies would be wise to consider its capabilities sooner rather than later.

Electrolysis can extract hydrogen from partially treated wastewater with no carbon emissions. The process occurs in electrolyzers, which are manufactured in containers of varying sizes and outputs. When powered by a green energy source such as wind or solar, the units facilitate a waste-free hydrogen production cycle with a range of commercial and ecological benefits.

A possible scenario would involve powering a wastewater plant during the day using the hydrogen produced onsite. When operations slow outside core hours, electrolysis continues, creating a valuable reserve of surplus energy. Green hydrogen could be:

- Stored to fuel your water company's vehicles
- Injected into the national grid
- Sold to hydrogen consumers such as chemical plants and refineries
- Used to power local services, including buses, domestic waste vehicles, and police cars

The heat and oxygen elements of hydrogen production could also be re-channelled, maximising efficiency even further.

Hydrogen-based solutions are developing at pace, so it's important to start the conversation early. Connect with a proven environmental partner who understands UK regulations and the realities of alternative energy and has access to experienced implementation specialists. With the proper support, you can evaluate feasible options across system design and integration, production, compression, and storage – and prepare your staff and sites for fossil-free operations.



Transport interventions

Sludge tankering operations produce on average 900g CO₂/km, so there's plenty of scope for positive change. Embracing alternative fuels and scaling up existing technology can measurably cut emissions while maintaining the service levels your customers expect.

Quick win: Energy efficiency – journey reduction

Every load of effluent and hazardous waste tankered from your site increases your overall carbon emissions. The solution starts with smarter asset and waste management.

Upgrading your drainage systems minimises wastewater volumes and the road miles to remove them, which directly contribute to your CEMARs reporting.

A comprehensive programme of waste reduction, recycling, and repurposing will limit the runoff/removal cycle, curb journey requirements, and bring you a sizable step closer to carbon-free practices.

Quick win: Alternative technologies – electric vehicles (EV)

Your fleet is a significant source of emissions – but one of the simplest to address. It's possible to tick your first box towards Net-Zero within weeks by installing EV charging points across key sites, using ready-to-rollout technology.

A trusted partner can also map your longer-term transition to greener vehicles. Your

end-to-end solution should include a design and feasibility study, DNO application assistance, full peripheral civil engineering works, electrical infrastructure implementation, supply and installation of charging equipment, and commissioning and sign off.

Long-term strategy: Hydrogen or biogas fuel infrastructures

Hydrogen is fundamental to UK water's Net-Zero future – and green power for your HGV fleet is already available. To prepare your site for hydrogen-driven transport, engage with a skilled environmental consultant to assess possible avenues and create a point-by-point conversion plan.

The timeline should include interim adaptations, as well as guidance on decommissioning your existing framework and designing, implementing, and maintaining a fully hydrogen-led infrastructure.

If you're not ready to make the leap to hydrogen, your environmental partner can also guide you through a cost-effective conversion to biofuel.



Natural sequestration interventions

Your green credentials can make or break your relationship with customers and investors, so the way you manage, transform, and dispose of your land is a vital strand of your Net-Zero strategy.

Water companies should begin by engaging stakeholders to better understand the carbon removal benefits of peatland and grassland restoration across your landholdings and identifying suitable sites to restore.

Quick win: Planting trees

The water sector has set a collective target to plant 11 million trees in England by 2030. The programme will introduce saplings across 6,000 hectares of land, reinstate original woodland, and boost natural habitats.

While trees take decades to effect measurable change on CO₂ levels, planting can still be a quick win for water companies.

It's a comparatively low-cost, highly visible way to demonstrate environmental commitment and a responsible method of repurposing portions of your estate.

However, any planting project should be carried out with sensitivity, care, and expertise. Working with an ecologist to survey land and select appropriate tree species, yield class, and management practices will ensure your investment supports and enhances native environments and thrives for generations to come.

Long-term strategy: Peatland restoration

Degraded peatlands are responsible for a large portion of carbon emissions from natural systems. Restoring these rare and ecologically important natural spaces prevents the further breakdown of stored plant material and provides essential biodiversity benefits.

A trained environmental consultant can manage the delicate process of 're-wetting', which involves restoring the land's natural flow of water and soil saturation. They will also provide expert support on peatland feasibility surveys, design, excavation, and planting.



Long-term strategy: Grassland restoration

Grassland restoration encompasses a range of techniques that enhance the natural landscape and preserve biodiversity.

The success of each method depends on the area's condition, history, and availability of propagules and/or donor sites – as well as project budgets and timescales.

Working with an environmental specialist removes costly guesswork, providing guidance on your ideal approach – including spontaneous succession, sowing seed mixtures, transfer of plant material, and topsoil removal and transfer – as well as strategies to boost species richness within ex-arable spaces.

Key services will cover feasibility surveys, design support, grassland excavation, and planting.

Natural sequestration removes CO₂ across your own estate and other territories, while supporting habitat creation, water quality improvements, and natural flood management. An experienced specialist will ensure the success of your biodiversity project through comprehensive, compliant preparation that should include:

- **Ground monitoring** – identifying contaminants on your site
- **Land decontamination services** – excavating and removing contaminated earth and replacing it with clean material
- **Water and ecology services** – assessing a range of habitat ecologies to provide biodiversity enhancement and habitat restoration
- **Environmental monitoring** – ongoing bespoke monitoring programmes, sampling, analysis, and reporting

SEWAGE MANAGEMENT AND CSOs

The pressures of an ageing infrastructure

The race to reach Net-Zero is crucial because climate change is fuelling shortfalls in other areas. Extreme weather events – from high winds to heatwaves – are occurring more often.

Annual rainfall levels are rising, causing rivers to burst their banks more frequently. A study by Heriot-Watt University predicts flooding will increase by an average of 15-35 per cent by 2080. The trend is too much for an infrastructure dating back to the 1850s. To drive change, Ofwat's 2019 pricing review challenged water companies to create forward-facing five-year business plans, which were assessed on their 'level of quality, ambition and innovation.'

Operators set out detailed programmes to address affordability issues and boost network resilience in the face of climate change and population growth. The regulator earmarked £13 billion to support improvements, and significant upgrades are under way – but the industry is under pressure to pick up the pace.

A clear call to action

An area of intense scrutiny is the increased use of combined sewage overflows (CSOs). Across most of the UK's infrastructure, clean rainwater, sewage from buildings, and wastewater from toilets, bathrooms, and kitchens are transported for treatment in the same pipe. These channels can become overloaded during torrential rain (or blocked by wet wipes, fats, and kitchen grease), risking the release of untreated effluent into homes, roads, and open spaces.

To protect properties from flooding, water companies are permitted to intermittently discharge diluted raw sewage into waterways using CSOs. The Environment Agency (EA) acknowledges these 'overflow valves' as a 'necessary part of the existing sewerage system' – but is now joining environmental advocates, the media, and the public in calling out water companies' CSO use.

New accountability levels for UK water companies

In March 2020, the Environment Agency shared statistics¹ on Event Duration Monitoring (EDM), detailing how often and for how long CSOs have been used since 2016. While the report pointed to a climb in CSO reliance, it also illustrated higher-than-ever tracking activity between 2019 and 2020 – an important first step towards issue resolution. The EA data showed:

- The average number of spills per storm overflow was 33, although there was significant variance between water and sewerage companies (min/max average 21/59).
- The average duration of each overflow event was 8 hours (min/max average 5/12 hours).

¹ Source – Event duration monitoring – lifting the lid on storm overflows

Notably, the report highlighted a 14-fold increase in the coverage of monitors, from 862 in 2016 to 12,092 in 2020. Figures also revealed an uplift in the number of storm overflows with monitoring devices, which grew from 8,276 in 2019 to 12,092 in 2020. Intelligence is now collected on over 80% of the sewerage network.

Historically, water companies self-regulated their CSO use, but the government has recently pushed for more transparency. The creation of a Storm Overflows Taskforce – made up of Defra, the Environment Agency, Ofwat, Consumer Council for Water, Blueprint for Water, and Water UK – has driven improvements and encouraged a collaborative approach to tracking and reporting. More than 12,000 monitors have since been installed ², and a further 1,600 CSOs will be either investigated or improved between 2020 and 2025.

Operators have also committed to:

- Making real-time data on sewage discharges available at bathing sites all year round, particularly after heavy rainfall
- Accelerating work to implement monitoring devices to create a complete picture of activity by 2023
- Publishing annual monitoring data online to track reduction in CSO use. The Environment Agency will compile this data into an easily accessible annual report

Concurrently, Philip Dunne, MP for Ludlow and Chair of the Environmental Audit Committee, introduced a Private Members Bill ³ in February 2020 to stop the discharge of untreated sewage into rivers or other inland water bodies.

The COVID-19 pandemic has delayed full debate of the Sewage (Inland Waters) Bill but government is moving key elements forward, including legal obligations on water companies to publish data on storm overflow operation on an annual basis.

² Source – Taskforce sets goal to end pollution from storm overflows

³ Source – New measures to cut water companies' reliance on storm overflows to discharge sewage into rivers to become law



Practical approaches to cut CSO use

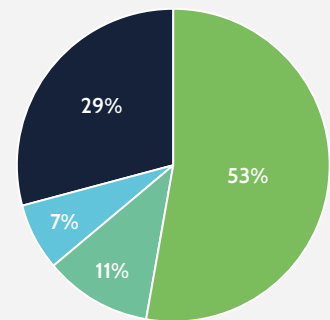
The legislation aims to 'eliminate harm' from combined sewage overflows. Additional monitoring is a meaningful start – but what comes next? Water companies are confronting the complex challenge of shaping sustainable drainage strategies within a network that's already beyond capacity. And for ratepayers and regulators, change can't come quickly enough.

Despite increased EDM efforts and reporting, policymakers and the public are pushing for more concrete results. The Environment Act – which received Royal Assent in November 2021 – demands targeted improvement plans for poorly performing assets. Customers are forcing action by refusing to pay their bills. The Environment Agency is cracking down with record fines for non-compliance.

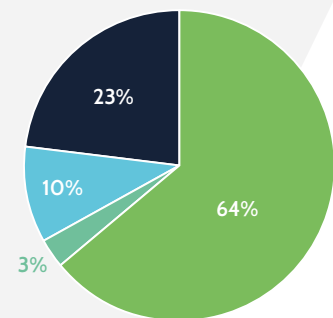
To minimise pollution risks, the EA has introduced a mandatory schedule of storm overflow surveys and maintenance as part of its permitting process. Assets must be classified as either unsatisfactory, substandard, or satisfactory, and low-grade sewers should be marked out for investment and renewal.

Our survey showed that water companies were aware of their responsibilities, but had reached different stages of delivery:

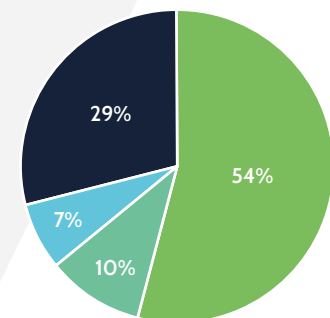
- When asked about achievements against the goal to implement CSO monitoring devices by 2023, **11% of respondents reported being ahead of target, 7% were on target, 29% felt their business was behind target, and 53% didn't know.**



- Similar statistics emerged when evaluating the Sewage (Inland Waters) Bill objective to annually publish data on storm overflow operation. **3% of participants were ahead of target, 10% were on target, 23% considered their company behind target, and 64% didn't know.**



- Feedback also revealed varying degrees of headway on the EA's requirement for a rolling schedule of storm overflow surveys and maintenance. Among the water suppliers we connected with, **10% were ahead of target, 7% were on target, 29% were behind target, and 54% didn't know.**



- Ahead of target
- On target
- Behind target
- Don't know

Proactive CSO solutions – without capital expenditure

Water companies are experiencing pressure from all sides – but collaborating with an environmental expert can lighten the unprecedented load.

The current AMP cycle does not allow for capital spending on increased storm tank capacity through in-line or off-line retention storage. So water companies need to get creative. By introducing innovative solutions that complement the Environment Agency's prescribed programme, it's possible to accelerate progress against the sector's tough targets and cost-effectively reduce reliance on CSOs.

Specialist support and strategic, small-scale investments can boost capacity, cut CSO use, and extend asset life – without the red tape of CapEx requirements.

Knowing your unique ecologies

Environmental monitoring services, such as biological riverbed surveys and upstream catchment surveys, accurately classify the status of storm overflows. Coupled with the installation of event duration monitors, these specialist services use cumulative data to detect underperforming assets and prioritise investigation and improvement work.

Biological surveys of riverbeds

A biological survey uses a riverbed's macroinvertebrate population to indicate water quality and health. Typically, the riverbed undergoes a kick sampling survey, which involves capturing resident macroinvertebrates for laboratory examination. Species are assigned scores dependent on their tolerance for poor water quality.

The technique is applied up and downstream of a discharge point to determine if the sewer is negatively impacting the watercourse. Results help to accurately classify the status of storm overflows and swiftly pinpoint emerging pollution risks before they cause long-term harm.

Upstream catchment management

River systems are contained within geographical catchments: land areas where water collects and drains into soil, creeks, and progressively larger waterways. For example, watercourses start as small streams at the top of the catchment – often marked by hills or mountains – and merge into rivers at the bottom of the catchment before joining the sea.

By commissioning an upstream catchment study, you can assess water quality and conditions surrounding a particular CSO. The survey tracks upstream pollutants – such as runoff from farmland, forestry, and other industries – to locate and contain contamination risks at specific points throughout the river system. These moment-in-time snapshots make maintenance work and spill prevention measurably more effective.



Pinpointing your network's weak spots

CSO use is the symptom of an overburdened system.

Structural issues, pinch points and blockages restrict flow and performance, so every storm becomes a significant spill hazard.

An environmental risk professional can regulate and rebalance your infrastructure, identifying hidden drainage problems that disrupt movement and trigger costly CSO discharges. Using a range of cutting-edge techniques, the right partner can highlight pollution sources and provide an actionable view of your estate.

CCTV surveys

CCTV asset management surveys examine sewers, sewer diversions, culverts, and tunnels up to 500 metres. The remote, highly accurate inspections diagnose existing or emerging drainage concerns, including collapsed drains, concrete or grout accumulation, cracked or displaced pipes, and root intrusion.

Sonar tracing services

When a CCTV survey uncovers a drainage problem, sonar tracing equipment is your second line of defence. Pulse signals zero in on the exact location of the defective or collapsed sewer, indicating its line, depth, and direction. Your environmental consultant then uses this data to determine the most suitable repair method and excavation point, if digging is required.

Syphon surveys

Syphon blockages can limit a pipe's hydraulic capacity, reducing throughput, placing additional stress on CSOs, and potentially causing substantial sewage releases. Regular maintenance is crucial, starting with a thorough asset review to evaluate syphon condition, access routes, and hazards.

Qualified confined space entry crews determine ideal isolation, drainage, and cleaning techniques, while CCTV reveals grease or debris build-up, snag points, and fractures.

Infrastructure mapping

A detailed outline of your infrastructure helps you systematically manage upgrades, budgets, and resources. As a first step, an OS19X-qualified team will produce CAD drawings that map out your underground estate. The comprehensive survey will expose urgent repairs and longer-term targets for routine cleaning, maintenance, and monitoring. For added peace of mind, the accompanying reports are coded using the authority approved WinCan software and produced according to the WRc Manual of Sewer Classification.

Environmental asset assessments

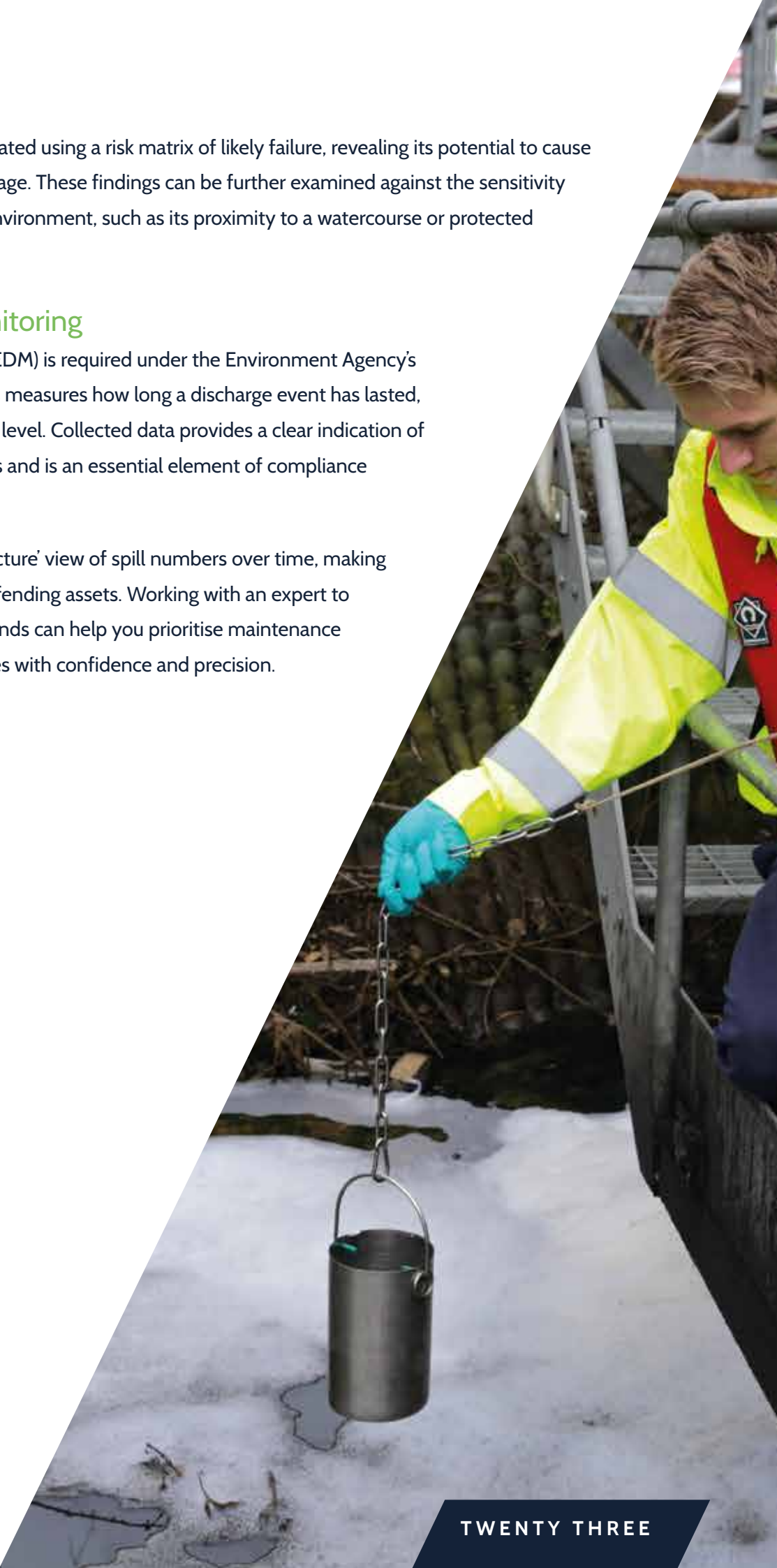
Tackling either a single sewage overflow or your entire estate, an environmental assessment provides a fact-based risk profile and a clear catalogue of declining assets. A trained engineer will initially conduct a visual survey to check for structural defects, and evidence of wear and poor maintenance.

Asset condition is then evaluated using a risk matrix of likely failure, revealing its potential to cause spillages and ecological damage. These findings can be further examined against the sensitivity of the sewer's surrounding environment, such as its proximity to a watercourse or protected site.

Event duration monitoring

Event Duration Monitoring (EDM) is required under the Environment Agency's permitting rules. The process measures how long a discharge event has lasted, gauging both flow and water level. Collected data provides a clear indication of storm overflow effectiveness and is an essential element of compliance reporting.

Outputs also deliver a 'big picture' view of spill numbers over time, making it simpler to isolate worst-offending assets. Working with an expert to interpret and act on EDM trends can help you prioritise maintenance activity and allocate resources with confidence and precision.



Maximising and maintaining your assets

With in-depth knowledge of your network, an experienced consultant will plot the route back to optimum performance. This could involve instant fixes to restore pipe capacity or estate-wide maintenance plans for ongoing compliance.

High pressure jetting

High-pressure water jetting equipment effectively clears root intrusion, silt build-up, concrete deposits, bricks, and grout. Large-scale blockages are removed by powerful vacuum tankers, while environmentally friendly recyclers treat and re-use water for jet cleaning. All-terrain vehicles (remote reels) clean drainage systems even in inaccessible areas, such as woodland, steep gradients, and poor ground conditions.

Drainage repairs and planned preventative maintenance (PPM)

Through fixed-cost network cleaning, repair, and management, you remain a step ahead of CSO releases. In the short term, pollution threats are swiftly identified and controlled using purpose-built remediation equipment for sewerage, effluent, and surface water. Down the line, proactive repairs and routine maintenance extend the longevity of your estate, with maximum transparency and minimum outlay.

Infrastructure upgrades

Considered, budget-conscious upgrades – such as the construction of supplementary storm tanks – can prevent the back-ups and bottlenecks that lead to sewage discharges. A specialist will support you in scoping, designing, and selectively extending your network to minimise and manage excess effluent, preventing contaminants from entering waterways.

With selective storage additions, you can help your estate handle growing volumes of wastewater and hold diverted sewage in an environmentally responsible way – without reaching the tipping point of a potential pollution event.

POLLUTION RESPONSE

Pinpointing and preventing environmental risk

Population growth and climate change are making it more difficult to provide clean, accessible, and affordable water.

The burdens of flooding, drought, and spiralling consumer demand have left the UK's ageing infrastructure unstable and overloaded.

Despite ongoing upgrades, legacy issues mean that sewage and other hazardous materials can enter our waterways through burst pipes, leaks, and misconnections. Statistics from the Environment Agency show that pollution events reached 2,204 in 2019, the highest count in five years. In that time, the regulator brought 44 prosecutions against water companies, leading to £34 million in financial penalties.

Our research showed that operators are also battling emerging environmental threats, brought on by new products and technologies.

Our participants' top concerns covered:

- Plastics and microplastics entering the water table
- Battery storage materials, processing, and disposal
- Paint and solvent contamination

The industry has responded by authoring and implementing detailed Pollution Incident

Reduction Plans (PIRPs) and pledging to cutting serious pollution incidents by 90% by the end of 2025. The Environment Agency's Water Industry Strategic Environmental Requirements (WISER) document sets out the sector's targets in detail:

- Serious pollution incidents (category 1 and 2) must continue to trend towards zero by 2020 with at least a 50% reduction compared to numbers of serious incidents recorded in 2012.
- Trend to minimise all pollution incidents (category 1-3) by 2025. There should be at least a 40% reduction compared to numbers of incidents recorded in 2016.
- Minimise all category 3 incidents.
- High levels of self-reporting of pollution incidents with at least 80% of incidents self-reported by 2025 and more than 90% of incidents self-reported for wastewater treatment works and pumping stations.

Positive changes are happening across the industry. The sector's current commitments build on the achievements of the last two decades, also outlined in the EA's WISER document. Pollutions are steadily dropping, and treated wastewater is now returned to rivers with 40% fewer phosphates, 70% less ammonia, and 50% less cadmium and mercury. The UK's coasts have the cleanest bathing waters since records began and, in 2019, 98.3% met or exceeded the minimum standard. More than 70% were rated as excellent.

But as risks evolve, progress becomes harder to realise. Climate change will bring fresh challenges. Population growth will gather pace. Declining assets will pose new pollution dangers.

To maintain momentum, water and sewerage companies must be able to anticipate and address emerging threats.

Asset risk assessments

The first step to scaling back pollution incidents is to understand risk levels across your estate. An asset risk matrix highlights vulnerable segments of your infrastructure, helping you prioritise pollution hotspots and strategically plan remediation work.

Many companies assume their oldest assets will automatically be their worst performers, but there are less apparent considerations at play. An environmental specialist will uncover hidden hazards across your portfolio that pose subtle – yet significant – threats to wildlife, water sources, and public health.

A comprehensive asset review involves a physical and visual survey of your infrastructure, evaluating its condition against a risk matrix of likely failure, leaks, and spillages. Crucially, the assessment also examines asset performance in an ecological context, observing the sensitivities of the site's surroundings.

This holistic approach allows you to target improvements in areas that pose the most acute environmental and financial risks.

Planned preventative maintenance

Water and sewerage companies have a duty to deliver on their environmental promises – but ambitious goals require ample resources.

The industry is struggling to accurately allocate funds in the face of an unstable post-COVID economy and opposing pressures from shareholders, customers, and regulators.

The 2021 Spring Budget offered a helping hand with the creation of the National Infrastructure Bank, which will provide investment to 'level up opportunities across the country, catalyse growth, and support the transition to Net-Zero carbon emissions by 2050'. Similarly, the National Savings and Investment (NS&I) UK Green Bond promises to fund projects that tackle climate change and speed the shift to a low carbon economy.

So while hope is on the horizon, the water industry is still firefighting a fast-deteriorating infrastructure. A programme of planned preventative maintenance can help providers regain control. Proactive services such as smart asset monitoring, separator and bund servicing and cleaning, and hazardous waste removal, allow you to act on early warning signs, avoid unexpected equipment failures, and lower the likelihood of costly pollution events.

A proactive spend is always lower than a reactive one, and an environmental expert can help you efficiently maintain assets and resolve the root cause of pollutions. By taking a systematic approach to spend and risk reduction, you can decrease ongoing costs, swiftly respond to problems, and stay a step ahead of spills and leaks.

Emergency response

Even with a robust prevention strategy in place, incidents can still occur. By aligning with an experienced consultant, you are poised to react immediately, quickly assess the event's scale and category, and co-ordinate resources to minimise ecological damage. Your ideal partner should have round-the-clock access to a range of specialist equipment and the expertise to engineer an end-to-end solution – from containment and clean-up to disposal, reporting, and post-incident analysis.

While your on-the-spot response to spills is critical in reducing environmental harm and mitigating financial and reputational impact, your track record in the run-up to an incident is also a defining factor. Under sharp public scrutiny, the Environment Agency is more readily enforcing pollution-linked crimes, often assigning the highest category of severity, unless challenged.

Meticulous documentation and due diligence can make a measurable difference to the level of fines issued. A trusted consultant can ensure you meet regulatory and compliance requirements during your emergency response, while advising on vital preventative and reactive measures that can curb the far-reaching fallout of a pollution event.



Working together for the future of uk water

We've reached a turning point for the UK's water supply, and it's time to act – together.

The shared challenges of reaching Net-Zero, navigating an ageing infrastructure, and reducing pollution and CSO reliance are too great to tackle alone. More than ever, the sector's common goals require a collective approach.

Aligning with a trusted expert – who understands your risks, requirements, pain points, and opportunities – will speed your journey. The right partner can shape your ideal pathway and intervention programme, drawing on existing and emerging technologies to help you achieve sustainability and compliance – quickly, creatively, and cost-effectively.

There is much ground to cover in the next nine years, and the task demands a team effort. For the good of our planet and the interests of our industry, water companies, suppliers, and stakeholders need to work side by side, step by step.

So, by pooling our expertise, insights, and innovations we can deliver quick wins and long-term initiatives that work for today and for future generations to build a better way forward for UK water – to 2030 and beyond.



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ENVIRONMENTAL RISK REDUCTION