

Our Drainage and Wastewater Management Plan

A summary of our DWMP24 for customers

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YorkshireWater

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Welcome to our Drainage and Wastewater Management Plan, DWMP24.

**This document provides a summary
of our DWMP, our first published long-term
drainage and wastewater plan.**

**You can find the full technical, non-technical plan here:
[yorkshirewater.com/about-us/drainage-
and-wastewater-management-plan/](https://yorkshirewater.com/about-us/drainage-and-wastewater-management-plan/)**

Yorkshire Water and our DWMP

We are proud to play water's role in making Yorkshire a brilliant place to be – now and always. Today, every day and forever, it is our job to make sure that everyone in Yorkshire has the water they need for their busy lives. When they have used it, it is our job to take it away and return it safely back to Yorkshire's environment.

Water is one of life's most basic essentials and we care deeply about taking care of it in the right way for everyone, all of the time.

Every day we collect and treat around 1 billion litres of wastewater and rainwater from homes and businesses, which flows into our 52,000km of sewers. We operate over 2000 wastewater pumping stations and 617 wastewater treatment works, to safely collect, and treat wastewater and rainwater before returning it safely back to the environment.

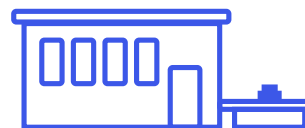
Yorkshire is a beautiful and diverse region, comprising of small rural villages through to large urban and industrial areas. All with varying topography, weather systems, geology and infrastructure which make the drainage requirements and challenges of each area unique.



Every day we collect and treat around **1 billion litres** of wastewater and rainwater from homes and businesses



This flows into our **52,000km of sewers**



We operate **617 wastewater treatment sites**, and over **2000 wastewater pumping stations** to safely collect, and treat wastewater and rainwater before returning it safely back to the environment.

The challenges we face

Population

Significant future population growth and development will add pressure to our existing drainage and wastewater systems.



Climate change

Climate change is expected to bring warmer, wetter winters and hotter, drier summers to our region. Rainfall events will likely become more intense and these more intense events are likely to occur more frequently, increasing the risk of flooding and potential for storm overflow operation. Storm overflows allow excess flows to spill into rivers or the sea in times of heavy rainfall. This helps to protect people's homes from flooding. Whilst the use of storm overflows has served us well in the past, their use is increasingly considered unacceptable.



Rising sea levels

Rising sea levels and more frequent storms will make our systems vulnerable due to increased flood risk and accelerated coastal erosion.



The impact of these changes varies across our region. Our DWMP helps us to improve our understanding of the current and future challenges and to ensure our drainage and wastewater systems are robust and resilient, now and for the long-term.

Why we developed our DWMP?

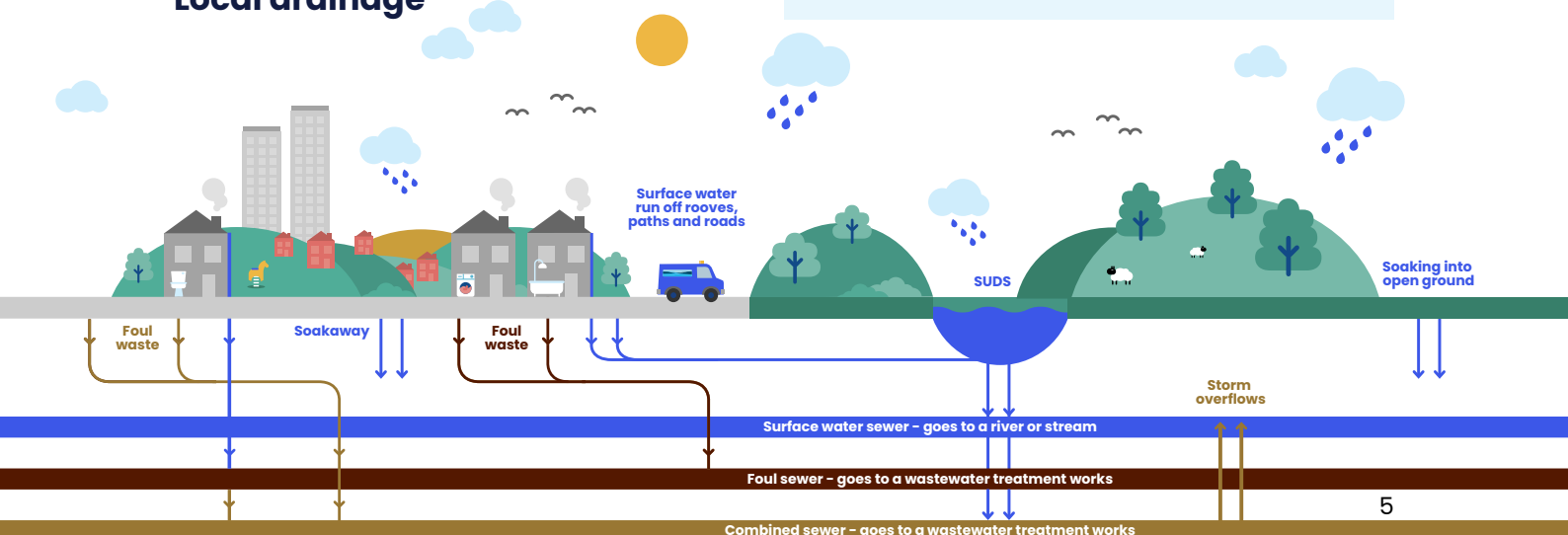
In 2018 the water sector produced a framework, working with WaterUK, to help companies produce consistent Drainage and Wastewater Management Plans. The first cycle of these plans have been developed and published for consultation.

Multiple agencies are responsible for the management of water within the wider Yorkshire region. In order to develop the most successful and cost-effective solutions, particular attention will be given to sewer flooding priority areas, sewerage escapes, storm overflows, and protecting the environment. In order to do this we will seek to work in partnership with others. Setting out our long-term plans through our DWMP will support us in establishing partnerships that will ensure we deliver long-term solutions with the best value and benefits for our customers and the environment.

The Drainage and Wastewater Management Plan that we have developed will help us to:

- **Meet our long-term ambitions** of reducing sewer flooding and protecting and enhancing the environment; by considering the operation and impact of our wastewater treatment works and storm overflows.
- **Prepare and adapt to the future challenges** that we face, notably climate change and a growing population.
- **Facilitate greater collaboration and partnership** working with stakeholders to ensure targeted investment which benefits our environment and local communities more effectively.
- **Understand customer and stakeholder expectations and requirements** and set out how we will work to meet these expectations - particularly around priority areas linked to sewage flooding, sewage escapes, storm overflows and protecting the environment.
- **Align with strategies and regulations set out by Government and the Environment Agency** to achieve a common set of objectives and goals.
- **Develop a plan which considers a wide range of options**, balancing the needs of customers and communities today and for the future.

Local drainage



How our DWMP has been produced

The basic building blocks of our DWMP are the 617 Level 3 wastewater treatment works catchments in Yorkshire, which are grouped into 17 larger Level 2 strategic planning areas. Our DWMP considers all aspects of our wastewater networks (foul, combined and surface water) as well as our wastewater treatment works.

Our DWMP has been produced following an industry developed national framework¹. This includes a series of screening stages and risk assessments which use existing performance data and hydraulic modelling results. This allows us to identify and focus on the catchments with the highest levels of immediate and emerging risk.

Our DWMP considers the latest guidance, scientific understanding, and modelling techniques to evaluate our levels of risk in relation to:

- Hydraulic internal and external sewer flooding of customers properties. Hydraulic flooding is caused by the capacity of the sewer being exceeded.
- The operation of storm overflows.
- Compliance with our wastewater treatment works permits.

Our DWMP shows the risk level now and how it is predicted to change by the year 2050. This helps us to plan what we need to do to manage our current risks and the risks that may emerge over this time period.

Our solutions will look to address the increasing pressures on the sewer and drainage networks as a result of climate change, population growth and development. Throughout the creation of our DWMP we have engaged with customers and a number of key local stakeholders including Lead Local Flood Authorities, The Rivers Trust and the Environment Agency. We will look at how we can deliver solutions in partnership with other agencies wherever possible, use sustainable nature-based solutions and provide the best value for our customers.

¹ [water.org.uk/policy-topics/managing-sewage-and-drainage/drainage-and-wastewater-management-plans/](https://www.water.org.uk/policy-topics/managing-sewage-and-drainage/drainage-and-wastewater-management-plans/)



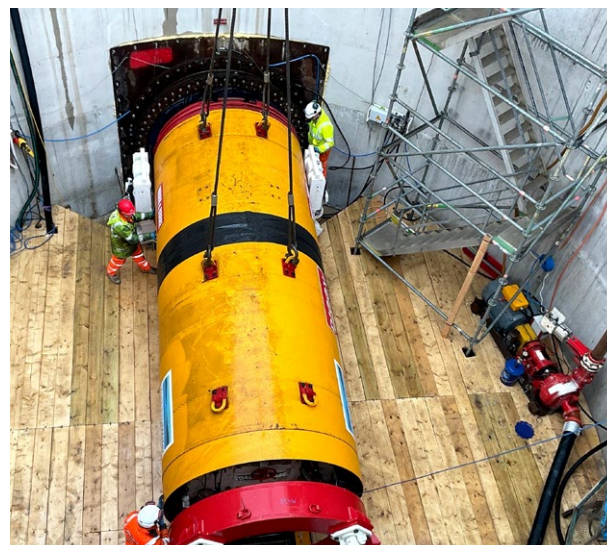
Summary of our DWMP

We presented our draft DWMP for consultation in June 2022 and presented four scenarios with differing targets for 2050. Taking account of feedback on our draft DWMP and following the publication of the Storm Overflow Discharge Reduction Plan (SODRP), which sets out specific requirements for Water Companies in respect of storm overflows, we have focused our final DWMP on one scenario. This was termed scenario two in our draft plan and is detailed below:

Scenario 2 summary

Element	Details	Timing
Deliver the requirements of the Storm Overflow Discharge Reduction Plan	<p>Annual average of no more than 10 spills per storm overflow</p> <p>Annual bathing season average of no more than 2 spills per storm overflow discharging to coastal bathing waters, to support achieving excellent bathing water classification</p> <p>Annual bathing season average of no more than 1 spill per storm overflow discharging to inland bathing waters</p> <p>Installation of continuous water quality monitoring to assess any impact from storm overflows and wastewater treatment works discharge outlets</p> <p>Provision of screening at all storm overflows</p> <p>Ensure no local ecological harm from storm overflows</p>	<p>75% high priority sites achieved by 2035</p> <p>100% bathing water sites achieved by 2035</p> <p>Monitoring installed by 2035</p> <p>Screens by 2050</p>
Reduce Modelled Hydraulic Flood Risk	Reduce model predicted risk of internal and external hydraulic sewer flooding of properties up to a 1 in 30 return period, compared to the 2050 position	By 2050
Maintain WwTW Compliance	Ensure all of our wastewater treatment works remain compliant with current environmental permits and any future changes to permits	100% in AMP8

Within our final DWMP we have called this our 'preferred plan' and we have considered two main approaches to achieve this:



Reduce + Enhance - Adopt blue-green solutions to manage and reduce the amount of rainfall entering our network to reduce our levels of risk (e.g. through the use of blue-green infrastructure and nature-based solutions or Sustainable Drainage Systems (SuDS) which look to manage flow in a cost-effective way whilst benefitting the environment and surrounding communities), then utilise traditional grey infrastructure solutions to meet the target if still necessary.

Enhance - Increase the capacity of our network through traditional 'grey' solutions, i.e. building bigger pipes, storage tanks and upgrading our existing assets.

We have also produced a core plan which delivers only our regulatory outcomes through a combination of grey and blue-green solutions, and a least-cost plan which delivers our regulatory outcomes through mainly traditional grey solutions.

Our customers and stakeholders have expressed a preference to the use of blue-green infrastructure solutions - SuDS and nature-based solutions to address the challenges we face, alongside working in partnership.

It is widely accepted that these options provide wider social and environmental benefits than traditional grey solutions although they will not always be appropriate for specific locations and may not provide the best value or least cost option.

How much do we need to invest?

If we did not invest in our wastewater assets by 2050 the forecast impact of population growth and climate change would result in an increase in storm overflow activations, the region would be at increased risk of flooding and levels of performance of our wastewater treatment works would be impacted.

We have created a preferred plan which complies with all the targets set out in the Storm Overflow Discharge Reduction Plan, ensures our wastewater treatment works remain compliant and reduces modelled sewer flood risk to our customers.

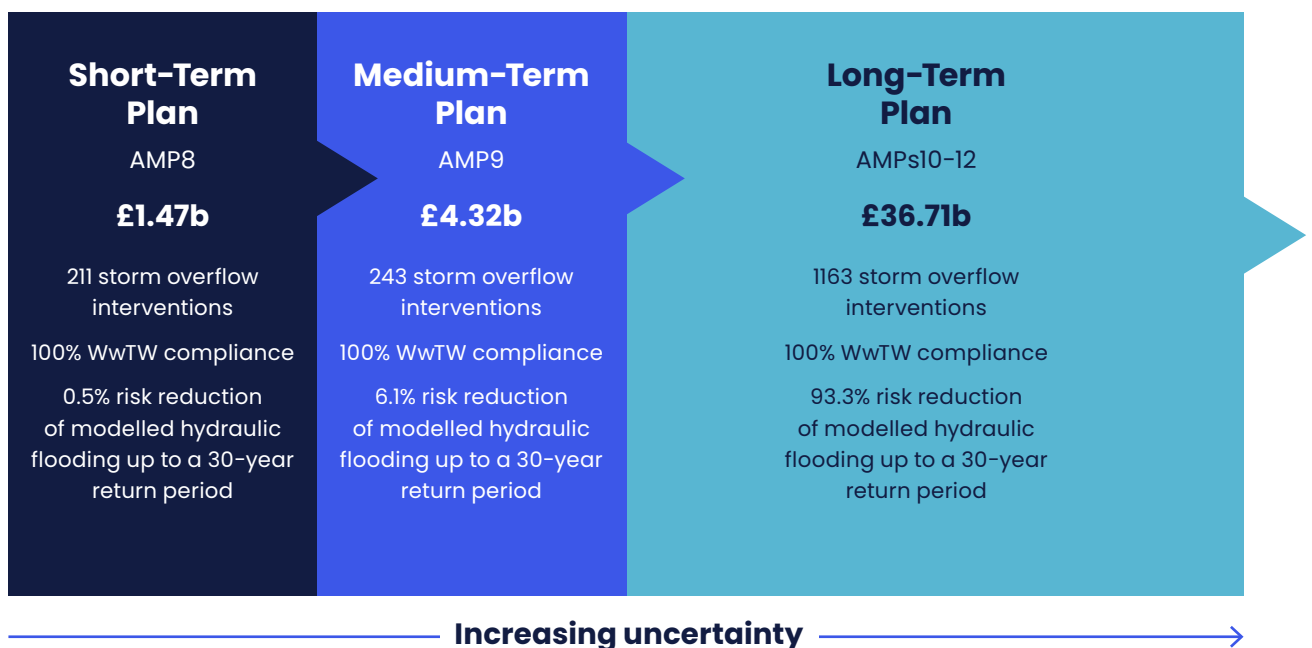
Our preferred plan incorporates our company ambition for the delivery of the Storm Overflow Discharge Reduction Plan to include blue-green elements in 20% of solutions in AMP8 and 50% of solutions from AMP9 onwards. Our core plan delivers our regulatory requirements only through a mixture of grey and blue-green infrastructure solutions. Our least cost plan delivers our regulatory requirements but has minimal blue-green interventions. We can now share with you our short-medium and long-term plan costs across our 25-year timeframe.

Level 1 Plan Capital Costs – CAPEX (price base 2020/2021)

	Short-Term by 2030	Medium-Term by 2035	Long-Term by 2050	Total
Preferred Plan	£1.47b	£4.32b	£36.71b	£42.49b
Core Plan	£1.39b	£4.06b	£11.41b	£16.87b
Least Cost Plan	£1.31b	£2.21b	£6.62b	£10.14b

What benefits will we see?

We have also summarised our preferred plan costs and benefits below.



In our preferred plan we will be investing in 1,617 storm overflows to reduce the number of spills per annum to the regulatory targets, we will achieve 100% WwTW flow and quality compliance by AMP8 and invest in our network to reduce modelled hydraulic flood risk for our customers by 2050.

In the first 5-years of our plan this means an investment of £1.47billion on 211 storm overflows interventions and the delivery of our wastewater treatment works improvements, alongside investigations into no local adverse ecological harm from our storm overflows and the commencement of installation of continuous water quality monitoring.

Over the lifetime of our plan, we have less certainty about the requirements and the interventions that may be required, our certainty will increase progressively in each 5-year review of our plan. We will look to be flexible, by using an adaptive planning approach, changing our plan as required to meet changing requirements across the 25-years. Affordability and regulatory requirements will be factored into each five-year review of our plan. We will look to adapt and change our plan as we progress and utilise any new technologies that emerge to support the delivery of our goals and our strategic plan development.

What's Next?

We are finalising our Business Plan for 2025–2030, this will set out in detail how we manage all aspects of our wastewater service and will be submitted to Ofwat in October 2023. It will contain a detailed view of how we plan to deliver the first five years of the long-term 25-year ambition set out in our DWMP, particularly for storm overflows and the components of maintaining wastewater treatment works compliance, some of which are contained within the Water Industry National Environment Plan (WINEP).

Through our established partnerships, we will continue to work with others to collaboratively develop and deliver solutions and will proactively identify opportunities for new partnerships, laying the foundations for future collaborative working.

We have identified the potential levels of investment required in the medium and long-term to reduce our risks and achieve our long-term targets.

Through the next cycle of our DWMP process which will cover the 25-year period from 2030 to 2055, we will adapt our DWMP based on the outcomes of investigations, continued monitoring of scheme impacts, emerging risks and increase our certainty about the impacts of climate change and population growth by monitoring against current projections. We will look to incorporate feedback and learnings into future cycles with an aim of identifying more efficient future interventions to reduce the impacts of climate change and population growth.

We will also monitor new and emerging technologies to see where these offer opportunities to provide best value. Through the continued engagement with our customers and stakeholders and partnership working we will ensure that we deliver the best value solutions to communities, customers and the environment.



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