DRAINAGE AND WASTEWATER MANAGEMENT PLAN FOR 2030-55

Strategic context technical document

NORTHUMBRIAN WATER *living water*

EXECUTIVE SUMMARY

The Strategic Context sets out the long-term goals, challenges and priorities that will guide the development of our next Drainage and Wastewater Management Plan (DWMP).

We published our first DWMP in May 2023, known as **DWMP23**, which set out how we would manage and improve our drainage and wastewater systems to protect homes, communities and the environment.

Northumbrian Water delivers water and wastewater services across the North East, serving diverse urban, rural, and coastal communities. For more detail on **what we do**, our **operating areas**, and **how we are performing**, please explore the links provided.

We are now preparing the next plan, DWMP28. Published in 2028, it will guide investment and decision-making from 2030 to 2055, reflecting the latest evidence and future challenges such as climate change and growth across the region.

This Strategic Context outlines what DWMP28 needs to achieve and the principles that will guide its development, and how we will assess and select the solutions and investment options proposed for inclusion in the plan.

Recent national reporting shows a decline in customer trust in the water sector, particularly around environmental performance and storm overflows.

DWMP28 provides a clear and transparent framework for addressing these challenges, setting out long-term actions to improve environmental outcomes and support greater confidence in our services.

Many of the objectives and long-term targets within DWMP28 are shaped by statutory requirements set by the UK Government, such as the **Storm Overflows Discharge Reduction Plan** and the Government's **25-Year Environment Plan**. These legally binding commitments require substantial investment across the sector.

Delivering these commitments will have a significant impact on future customer bills, and we are committed to being transparent about these drivers. **Defra's Storm Overflows Discharge Reduction Plan** provides further detail on the expected national costs of meeting these statutory obligations.

The DWMP is now a core component of our strategic planning framework and will shape our business plan submission for the next price review in 2029. DWMP28 builds on DWMP23 and broadens the scope of our wastewater planning. Looking ahead from 2030 to 2055, it reflects updated **Defra statutory guidance** issued in May 2025 and aligns with wider national policy requirements, including the Government's **Storm Overflows Discharge Reduction Plan** and the **25-Year Environment Plan**.

DWMP28 also plays a key role in supporting sustainable growth and economic development across our region.

With Government ambitions for new housing, regeneration and infrastructure expansion, the plan will help ensure that drainage and wastewater systems enable future development rather than constrain it. By working closely with local authorities, developers and regional partners, DWMP28 supports the conditions needed for long-term economic prosperity in the North East.

Customer and stakeholder engagement is critical to developing our DWMP. We have set out a framework to ensure that interactive engagement happens across a broad range of stakeholders to gain support for and involvement in the development and implementation of a DWMP. Organisations and forums that we have or will engage with include combined and local authorities, technical forums, and customer panels, ensuring input at all levels. The planning structure of the DWMP is organised across multiple geographic levels and time horizons, enabling robust analysis and reporting.

We outline the 13 Strategic Objectives that are core to the DWMP and four wider Value Objectives to which the DWMP contributes.

We assess future trends, such as climate change, population growth, technology and regulatory change, for their likely impact on system performance, and we make proposals for how these trends are forecast. We share our proposed approach to assessing common and emerging indicators of system performance across the 25-year period and we propose two bespoke indicators covering Asset Health and Bioresources.

We propose a value framework to evaluate options developed to mitigate future performance risks and ensure we present the best value plan for the North East.

The DWMP will be delivered through a suite of reports and interactive tools, including customer summaries and technical documentation published on our website, and supported by interactive GIS-based platforms. Following publication of our DWMP28, annual reviews will ensure the plan remains responsive to evolving needs. These reviews will be undertaken each year alongside our annual performance reporting.

We want you to be a part of shaping the future of wastewater services across our region and invite you to provide feedback on this document to ensure it reflects the shared priorities and ambitions of the people and organisations in the North East.

Letah Burn

FOREWORD

Thank you for taking the time to read the Strategic Context for the second cycle of our Drainage and Wastewater Management Plan (DWMP). This document sets out the long-term direction for how we will plan, deliver and maintain a reliable and resilient drainage and wastewater system for the future.

Caring for the environment and the communities we serve is at the heart of everything we do. Our work plays a vital role in protecting the places people live, work and enjoy, and it motivates our teams every day. Many of our colleagues live locally with their families, and they take great pride in safeguarding our rivers, coasts and wider environment both now and for generations to come.

The DWMP is now a fundamental part of our strategic planning approach, shaping the decisions we make today and the investments we propose for the future. It will inform our business plan for the next regulatory price review in 2029.

We have published this Strategic Context for a six-week public consultation because your views matter. The insights of our customers, partners and stakeholders help us build a plan that reflects shared priorities, whether that's reducing flooding, supporting development or improving the health of our rivers and watercourses.

Delivering the best outcomes will only be possible through collaboration. We will continue to work closely with those involved in planning, development, risk management and environmental stewardship, and we welcome all contributions throughout this process. By working together, we can create a drainage and wastewater system that is resilient, sustainable and fit for the future, protecting our communities and the environment for decades to come.

Richard Warneford
Wastewater Director

The DWMP is now a **fundamental** part of our strategic planning approach

The Cheviots, Northumberland

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The River Tyne

1. INTRODUCTION TO THE STRATEGIC CONTEXT

We will publish our second DWMP in August 2028 with a draft issued for consultation in November 2027. The DWMP looks 25 years into the future from 2030 to 2055 and aims to set out how we will maintain, improve, and extend a robust and resilient drainage and wastewater system to serve our customers and protect the environment. Our first DWMP (DWMP23) was published in May 2023 and can be read here.

Our DWMP sits within the wider context of our Long-Term Strategy, our Environment Strategy, our approach to Asset Health and Criticality, and a number of statutory or legal requirements such as the Storm Overflows Discharge Reduction Plan (SODRP) and the Government's 25 Year Environment Plan (25YEP). Within this wider context, our DWMP is at the heart of delivering reliable and affordable wastewater services to our customers to fulfil Our Purpose in line with our vision, values and long-term goals, as shown in Figure 1.

Figure 1 – Our company Purpose, vision, strategic themes, values and six long term goals.

LONG-TERM GOALS

Reliable service and unrivalled customer experience
Deliver clean, clear and great tasting drinking water and world class service

Caring for the long-term needs of the environment
Restore and enhance our local and global environment

Sustainability and resilience
Be the national leader in the provision of sustainable and resilient water and wastewater services in a changing world

Affordable and inclusive services
Provide affordable water and wastewater services for all our customers always

Efficiency and prudent investment
Lead in efficiency and innovation in the water sector

Caring for our communities
Support communities and economies in our regions

This Strategic Context document sets out how we intend to build our drainage and wastewater management plan for 2030-55 and includes the following elements which are depicted in Figure 2 below:

- **Strategic Objectives** - defined goals and ambitions the plan will help deliver (our destination)
- **Planning areas** - the area boundaries for collaboration, analysis and reporting
- **Planning horizons** - the points in time (milestones) at which performance and the interventions needed to maintain performance are assessed
- **Future trends** - the trends and challenges that will affect wastewater performance (obstacles and hazards we need to avoid)
- **Performance Indicators** - the metrics used to assess current and forecast future performance (and steer us in the right direction)
- **Value Framework** - how we will assign costs and benefits to evaluate options and determine the best value plan (confirm the best route to take)

Our plans are developed in line with the latest Guidelines for Statutory Drainage and Wastewater Management Plans (DWMPs) issued by Defra in May 2025.

We are developing this DWMP at a point in time when the water sector is undergoing significant regulatory change.

The Independent Water Commission Final Report, also known as the Cunliffe review, made several recommendations to Government on the future approach to strategic planning in the water sector. Northumbrian Water is working with Government to assist the implementation of the recommendations made by this review, which may result in changes to the DWMP process.

As part of the review, the Government has now published a white paper: A New Vision for Water which sets out their action plan for reform. We are therefore progressing with development of the DWMP in line with current guidance, while recognising that we may need to be agile in our approach and adapt to deliver what is required by the evolving regulatory landscape.

The updated statutory framework also expands the scope and depth required from DWMP28 compared to DWMP23, influencing the more detailed planning approach set out in this document.

Stakeholder involvement is critical to delivering a successful plan for our region. We would welcome your views and feedback to help shape our ambition and align where possible on trends, performance measurement, and value assessment.

Feedback from early stakeholder engagement (in June and July 2025) with those who participated and contributed to our first DWMP is included in this document. Following further engagement and workshops with stakeholders in November 2025, we updated our Strategic Context based on the feedback received. Further information can be found on page 17.

Figure 2 – Interaction between key elements of Strategic Context

2. DRAINAGE AND WASTEWATER MANAGEMENT PLANS

2.1 WHAT IS A DWMP?

DWMPs were a key recommendation of Water UK's 21st Century Drainage Programme. They are intended to enable the UK water industry, working in partnership with others, to make long-term future plans to ensure the sustainability of our drainage infrastructure, the services it provides to customers and to protect the environment.

The framework for undertaking drainage and wastewater management plans was first published by WaterUK in September 2018. Our first DWMP was published in May 2023, proposed £4.7bn investment in wastewater services from 2025-60 and formed the basis of £1.9bn investment proposed in our 2025-30 business plan. In May 2025, Defra published the Guidelines for Statutory Drainage and Wastewater Management Plans (DWMPs), setting out how water companies in England and Wales must prepare, publish and maintain their statutory DWMPs.

Building on our first DWMP, and in line with statutory requirements under the Environment Act 2021 and the Water Industry Act 1991, the updated guidance covers:

- Assessment of current and future demands on the drainage and sewerage system
- Sufficient system capacity to meet current and future demand
- System resilience to external stresses and the impacts of asset health
- Measures proposed, or to be continued, to meet statutory obligations
- Likely sequence and timing of implementing those measures
- Relevant environmental risks and proposed mitigation.

A BROADER AND MORE COMPLEX PLANNING REQUIREMENT

DWMP28 marks a significant shift from our first plan. DWMP23 was developed under a non-statutory industry framework that focused primarily on long-term pressures such as climate change, population growth and urban creep. While this provided a strong foundation, it offered flexibility in scope and methodology.

By contrast, DWMP28 is being developed within a statutory framework that places wider and more detailed planning obligations on sewerage undertakers.

The new requirements extend beyond forecasting future pressures to include a more comprehensive assessment of asset health, operational resilience, treatment capacity, interdependencies with other drainage systems, and alignment with a broader range of statutory plans. The statutory guidance also introduces the need to define our use of nature-based solutions and to demonstrate clear sequencing, timing and deliverability of measures across the full planning horizon.

As a result, the scope of DWMP28 is considerably broader than DWMP23, and the nature and scale of change introduced by the statutory framework means the plan we publish in 2028 will differ significantly from the one published in May 2023. This reflects the evolution of regulatory expectations rather than a change in ambition, and ensures DWMP28 provides a more complete, evidence-led and transparent long-term plan for wastewater services in the North East.

As Northumbrian Water Limited (NWL), we provide water and wastewater services to customers in the North East, and as Essex and Suffolk Water, we provide water-only services in those regions. Our DWMP covers customers in the Northumbrian Water area only, including customers that receive their water service from Hartlepool Water (owned by Anglian Water) and their wastewater service from us. Our Essex & Suffolk customers' wastewater services are covered by the DWMPs produced by Thames Water and Anglian Water. Where our operating area crosses with Yorkshire Water in North Yorkshire and United Utilities in Cumbria we will collaborate on our plans.

The DWMP scope primarily includes our wastewater and drainage system (foul, combined and surface water sewers, sewage pumping stations, wastewater treatment works).

We also consider the interconnected systems owned by others (e.g. highway drains, culverted watercourses) and the communities and landscapes in which they are situated so we can understand and manage risks to and from our systems. We are responsible for producing the DWMP and wish to work closely with customers and stakeholders to develop the plan. The benefits of this approach are summarised in Figure 3.

Our ambition is to identify stakeholder risks, opportunities and ambitions through an integrated and collaborative approach, facilitating joint planning and funding for future initiatives. Our DWMP builds on Northumbrian Water's strong track record of partnership working across the region, including long standing collaboration through the Northumbria Integrated Drainage Partnership (NIDP), which brings together NWL, the Environment Agency, and Lead Local Flood Authorities to jointly reduce flood risk and deliver sustainable drainage solutions. We continue to demonstrate leadership in integrated water management through initiatives like Blue Green Newcastle, working with Newcastle City Council and partners to enhance SuDS, improve habitats, and coordinate long-term planning supported by shared DWMP modelling. We also play a leading role in the Catchment Based Approach through our work linking our activities and ambitions to those of Catchment Partnerships in our region.

The DWMP formalises and enhances this collaborative approach by offering a shared evidence base, long-term risk assessments, and alignment with regional priorities such as climate resilience, nature recovery, and placemaking.

It also creates a consistent framework for partners to co-identify and co-fund opportunities, and coordinate programmes across planning cycles. By integrating existing partnership successes into a statutory long-term plan, the DWMP provides a platform for scaling multi-benefit solutions across the North East. It ensures that the collaborative spirit already embedded in NIDP, Blue Green Newcastle, and Catchment Partnerships continues to grow, delivering even greater value for communities, the environment, and future generations.

This work will contribute to our **Environment Strategy** commitment to create Integrated Catchment Plans with our partners for all our major catchments by 2030, and help ensure we embed our key principles of systems thinking, partnership mindset and natural solutions first in all our business activities.

This approach is strongly reinforced by the findings of the **Independent Water Commission's Final Report (2025)**, which emphasised that the most effective and affordable long-term solutions will come from cross-sector collaboration and shared catchment planning. The Commission highlighted that opportunities such as nature-based solutions have the potential to deliver multi-billion-pound benefits across the sector.

By aligning DWMP28 with the Commission's recommendations, we can scale up multi-benefit, cross-sector solutions that deliver the greatest value for the environment and our communities across the North East.

Figure 3 – Summary of the benefits of a DWMP

STRATEGIC OUTCOMES & LONG-TERM VISION

- Show how we will shape our long-term plans to support economic growth, create resilient communities, work towards achieving net zero, protect our environment and enhance biodiversity.
- Facilitate innovation in the development of sustainable and affordable plans

RISK, RESILIENCE & SYSTEM UNDERSTANDING

- Provide a systematic understanding of service, system risks and vulnerability, embedded in business as usual processes
- Promote informed debate about acceptability of different levels of risk

PLANNING, OPTIONS & DECISION-MAKING

- Demonstrate a structured and auditable approach to identifying and developing options and working with stakeholders to provide best-value decisions
- Provide a clear, transparent, consistent planning approach with agility to adapt to changing drivers

ENGAGEMENT, PARTNERSHIPS & CONFIDENCE

- Facilitate and identify partnership opportunities for co-creation, co-delivery and co-funding of schemes
- Provide a basis for effective customer and stakeholder engagement on current and future levels of service, resilience and environmental performance, and the choices and costs to deliver that service

2.2 EVOLUTION OF DWMP

MOVING TO A NEW STATUTORY PLANNING APPROACH

Our first Drainage and Wastewater Management Plan (DWMP23), published in 2023, was developed under earlier non-statutory guidance. It introduced a consistent long-term planning approach for understanding pressures such as climate change, population growth and urbanisation, while strengthening collaboration with local authorities, environmental partners and community stakeholders.

Implementation of Section 79 of the Environment Act 2021 means sewerage undertakers must now prepare, publish and maintain a statutory DWMP under Section 94A of the Water Industry Act 1991. The new statutory guidance expands the scope of the plan with clearer expectations on treatment capacity, operational resilience, asset health, base maintenance, third-party impacts and river water quality.

These broader expectations mean that DWMP28 requires a more extensive and detailed assessment than DWMP23, resulting in a plan that will naturally differ from the one published in 2023.

DWMP23 highlighted the essential need to plan for investment of around £947 million to reduce spills from combined sewer overflows in order to meet the ambitious targets set by Government.

Through this planning process we also identified opportunities, including those developed through the Northumbria Integrated Drainage Partnership which together represent over £65 million, as well as a range of nature-based and catchment-led approaches that could help manage future costs to customers while delivering wider environmental benefits.

DWMP28 will build on this foundation, working with partners to deliver best value for customers and communities and protect the places people live and love for generations to come.

2.3 DELIVERY PROGRAMME

The high-level DWMP28 programme is shown in Figure 4.

This expanded scope will be delivered in three years, compared to the five years for DWMP23, to align with the price review in 2029 (PR29) for our next business plan. Although there is a shorter period than usual to influence DWMP28 outputs, the DWMP is now statutory, so engagement will continue throughout DWMP28 and beyond.

Our ambition is to deliver a living plan that evolves over time through ongoing annual reviews. We are now defining the risks and investment needs for the 25-year plan and in 2026 we will develop high-level options to enable a programme of the interventions required to be completed in early 2027. Stakeholder feedback and input on our Strategic Context and subsequent key stages will help shape and direct the plan.

Figure 4 – DWMP28 high-level programme


Fellgate SuDs

2.4 PLANNING STRUCTURE

PLANNING AREAS

Our DWMP is structured at the following levels for collaboration, analysis and reporting

Level 1-3 areas are the same as used in DWMP23. We have 485 drainage areas and we have combined those that are hydraulically linked to a single treatment works forming 413 Level 3 areas.

Whilst Level 2 areas normally align to river basin district management catchments, there are only two in the North East covering a vast area (Northumbria and Solway Tweed). In developing DWMP28, we have sought to identify planning areas that support effective technical analysis and enable meaningful local engagement with customers, local authorities and wider stakeholders. Smaller, more locally recognisable areas help to maximise the value of collaboration, ensure plans reflect local priorities, and provide an appropriate scale for joint working.

The seven Strategic Planning Areas used in DWMP23 were found to work well in this regard, providing a balanced geography that supports both strategic coordination and local partnership working.

These areas were a combination of Northumbrian Water planning areas, Lead Local Flood and Planning Authority areas, and Environment Agency (EA) catchment areas as shown in Figure 5 to the right. On this basis, and recognising the benefits seen through DWMP23, we propose to retain the same seven Strategic Planning Areas for DWMP28.

Level 3 areas could be subdivided into Level 4 areas for local solutions, if appropriate.

Figure 5 – Maps showing Level 1 Northumbrian Water area comprising the seven Level 2 Strategic Planning Areas and Level 3 Sewerage Catchments areas.

PLANNING HORIZONS

Water companies plan and invest for Asset Management Plan (AMP) periods, normally of five years' duration. Ofwat determines performance and funding requirements for each period through its Price Review process. PR29 is the Price Review in 2029 that will set funding and performance targets for AMP9, which will start in 2030 for a duration to be set through Defra regulatory reform Transition Plan in 2026.

DWMPs must cover a minimum 25-year period and assess performance and investment needs at short term (five years), medium term (10-20 years) and long term (25 years+) planning horizons.

Table 1 outlines our chosen set of planning horizons as 5, 10 and 25 years to align the DWMP with our price reviews and to support the development of our next business plan. Planning to these time horizons is consistent with the direction of water sector reform set out by the **Independent Water Commission's Final Report (2025)** and the Government's white paper **A New Vision for Water**. Both documents emphasise the need for clearer, more consistent planning milestones across the sector to support long-term investment, improved regulatory alignment and coherent regional planning. The time horizons set out in Table 1 provide the structured framework expected by Government and national policy, while also aligning the DWMP with future price reviews and the development of our next business plan.

Table 1 – Planning Horizons for DWMP

Year*	Planning Horizon	Description
2030	Base Year	The first year assessed for predicted performance and used to benchmark future performance.
2035	Short term	Aligns with PR29 for funding AMP9 (2030-35) and our ambition to use the DWMP to feed our 5-year business plan. Provides a short-term view of performance.
2040	Medium term	Aligns with PR34 for funding AMP10 (2035-40) and our ambition to use the DWMP to create a 10-year investment plan. Provides a medium-term view of performance.
2055	Long term	Provides a long-term view of performance.

*Financial years 2030-31, 2035-36, 2040-41 and 2055-56


Bamburgh Castle

PLANNING SCENARIOS

The key components used in defining planning scenarios for the DWMP are summarised below and shown in Figure 6. The planning scenarios we propose to use are listed in Table 2.

Future trends are changes that could impact on the performance of the drainage and wastewater system such as population growth, development and climate change. Because there is significant uncertainty, a low, medium and high impact is defined for each trend at different planning horizons. Future trends are explored further in Section 6 of the document.

Change scenarios are the aggregation of impacts from all trends into low, medium and high change profiles, representing the range of potential impacts on the plan over time.

Planning Horizons were defined in Table 1 in the previous section and are the points in time at which performance needs to be assessed in the short, medium and long-term.

Planning Scenarios are a specific combination of change scenarios at different planning horizons for which a best-value plan is generated. They are selected to minimise the planning required and enable a robust comparison over a range of futures. Scenarios A, B1 and C are suggested in the guidance and we added B2 for the 2055 planning horizon. Scenarios A, B1 and B2 represent the most likely outcome at those planning horizons. Scenario C represents a worst case outcome at the 2055 planning horizon.

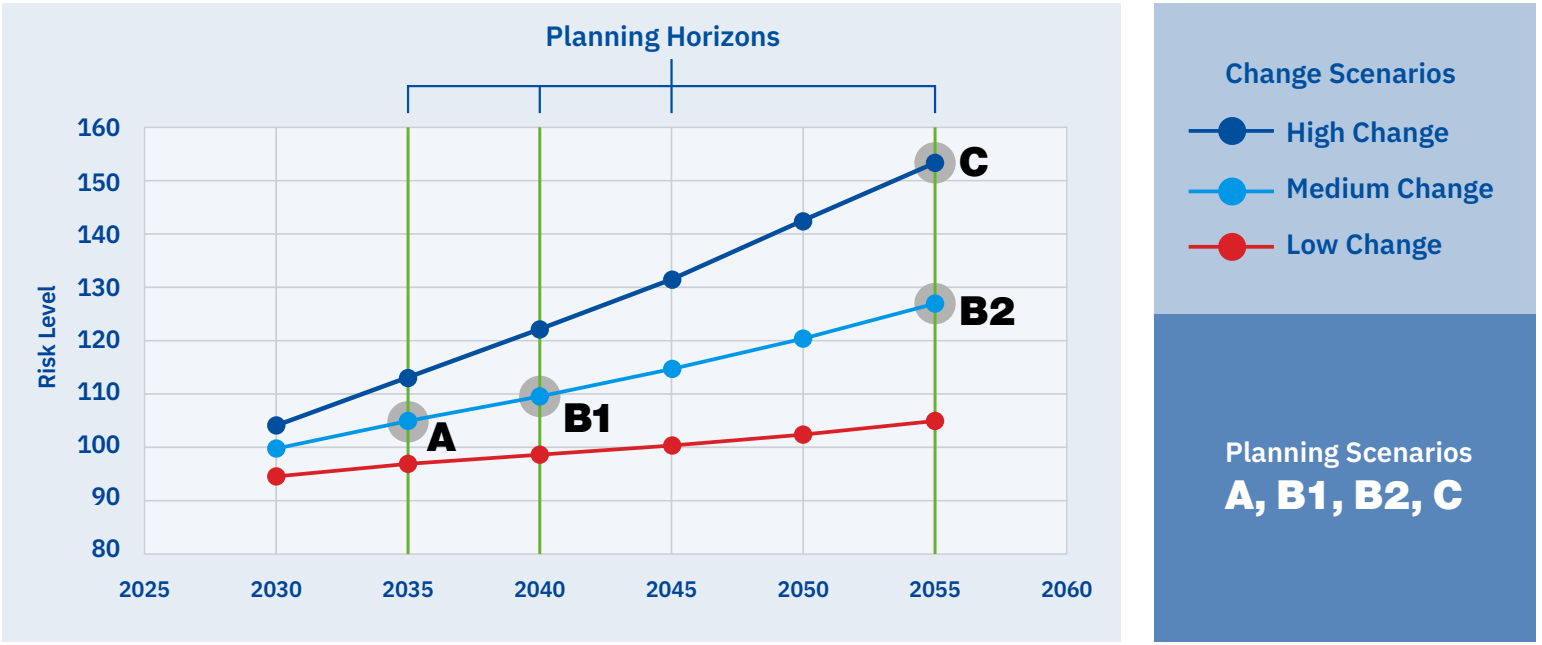
Table 2 – Planning Scenarios for the DWMP

Planning Scenario	Description	Planning Horizon
A*	5-year medium: most plausible for planning	Short term 2035
B1*	10-year medium: core scenario high likelihood for long-term planning	Med term 2040
B2**	25-year medium: core scenario high likelihood for long-term planning	Long term 2055
C*	25-year high: conservative worst case for long-term planning	Long term 2055

*suggested in guidance, ** additional proposed


Sewage Treatment Works

Figure 6 – Change Scenarios, Planning Horizons and Planning Scenarios for the DWMP



TESTING THE DWMP AGAINST FUTURE UNCERTAINTY

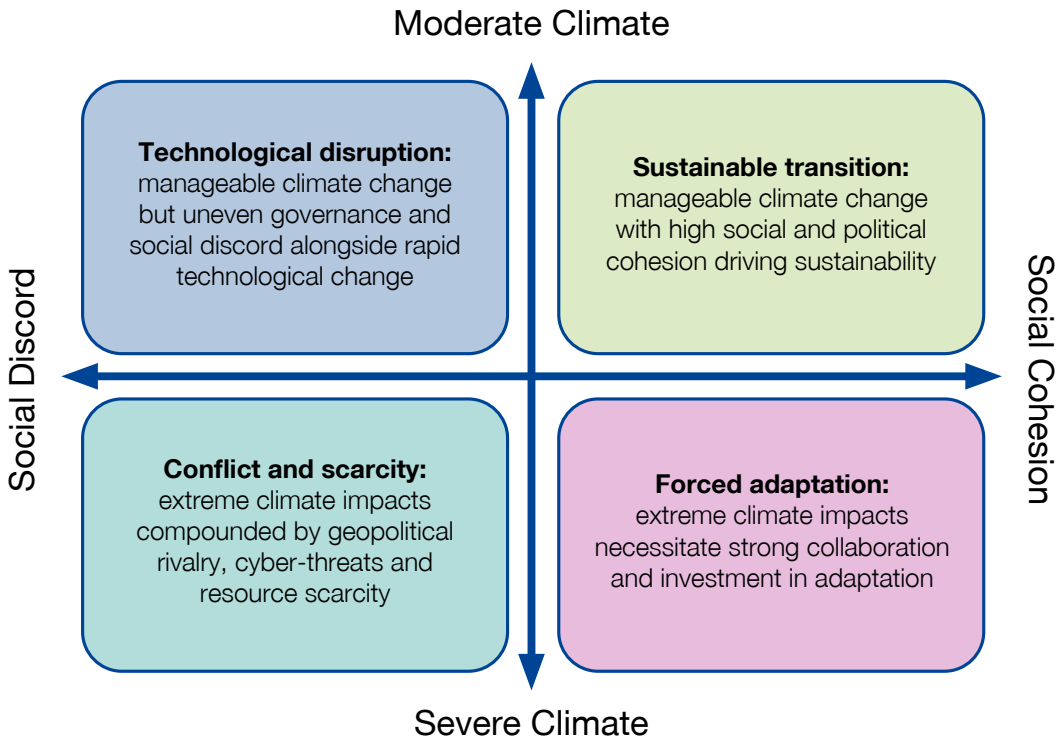
The DWMP is a long-term plan and so must be adaptable to whatever the future may hold. We test the ability of our strategic plans, including our DWMP, to manage future uncertainty using scenario analysis.

To develop scenarios, in July 2025 we ran a workshop with futurologists, water technology specialists, customer experts and risk analysts to explore plausible futures Northumbrian Water may face over the next 25 years.

Through this workshop we first assessed potential shocks and trends against a PESTLE framework (Political, Economic, Societal, Technological, Legal and Environmental) before grouping key issues into a Wilson matrix, which identified areas of uncertainty and their possible impact. By then focusing on issues with both high uncertainty and high potential impact, such as climate change, we identified the four future scenarios shown in Figure 7.

We will refine these scenarios and use them as a framework to test our DWMP and other strategic plans, ultimately coming together in the next iteration of our Long-term strategy. This approach builds on the lessons we have learnt from creating our current Long-Term Strategy.

Figure 7 – Future scenarios for stress testing the DWMP




Pipebot Patrol – our autonomous sewer robot

The questions throughout this document are intended to support engagement with stakeholders. Separate questions for customers are included in the Customer Summary*.*

QUESTIONS FOR EXTERNAL STAKEHOLDERS

1. From your organisation's perspective do you agree that the aims of the DWMP are clear? (Page 7)
2. How well does our ambition for a collaborative, integrated DWMP align with your organisation's needs and expectations? Please explain which aspects you support and where you feel further clarity or change is needed.
3. What key plans does your organisation develop that could interact with the DWMP? What are their planning horizons?
4. How well do the geographic and time horizon elements of our planning framework align with those used by your organisation? What opportunities or barriers could these create?

3. HOW CUSTOMERS WILL HELP SHAPE OUR DWMP PLANS

Customers are at the heart of everything we do. Customer engagement will play a key role in shaping DWMP28 from the earliest stages of development through to prioritisation and option selection. Our approach is built around ongoing challenge, consideration and insight, ensuring that customer perspectives meaningfully influence our choices rather than being considered after decisions are made.

THE ROLE OF THE WATER FORUM

Our Customer Challenge Group, the Water Forum, provides independent oversight and challenge on behalf of customers. The Water Forum scrutinises our research methods, tests our assumptions, and helps ensure we are using robust and inclusive approaches to understand customer priorities. Crucially, they engage from the start of the planning process, review the questions we ask, the evidence we gather, and how we interpret customer preferences.

As part of this consultation, we are seeking feedback from the Water Forum on our engagement approach, the framing of our Strategic Objectives, and how customer evidence should inform prioritisation within DWMP28. Their early challenge ensures that customer insight is embedded from the outset and remains central as the plan develops.

OUR ENGAGEMENT APPROACH

DWMP28 will be shaped through a structured programme of customer engagement, including:

- Ongoing challenge and assurance from the Water Forum
- Deliberative engagement with our Northumbrian People Panels
- Targeted research on environmental outcomes, flooding, resilience and storm overflows
- Representative customer surveys and qualitative insight
- Joint engagement with stakeholders where priorities overlap.

This continuous cycle of engagement ensures that customers' values help define what we plan, why we prioritise certain outcomes, and how we create a best value programme for the region.

CASE STUDY:

TESTING OUR STRATEGIC CONTEXT WITH PEOPLE PANELS

We have begun by talking to our Northumbrian People Panel and Northumbrian Future Customers People Panel. People Panels are groups of current and future customers, who represent the regions we work in. We convene meetings with them to hold deliberative discussions to help us shape our plans.

In a session on 6 November 2025, we introduced our People Panellists to the thirteen core Strategic Objectives delivered by the DWMP, and explored in turn to understand:

- Whether Panellists understood the objective, or thought it was unclear in any way.
- How important Panellists felt it was that we include the objective in the customer summary document for DWMP28.

After outlining each of the objectives and sub-elements (see Table 3 for detail), polls were launched to measure Panellists' understanding, and the level of importance they placed against each objective. The results of the polls are summarised in Table 3.

Levels of understanding varied across the objectives, and objectives that had a more direct customer impact were considered more important.

Table 3 – People Panellists poll results

Name of Strategic Objective	% Panellists who understood objective	Mean importance score (higher = more important)
Improving Bathing and Shellfish Water	73%	3.83
Improve Waterbody Ecological Status	59%	3.93
Reduce Storm Overflow Impact	72%	4.21
Reduce Pollutions	72%	4.45
Ensure Treatment and Asset Compliance	68%	3.90
Optimise Bioresources	55%	3.48
Contribute to Company Net Zero	68%	3.90
Take a Catchment Water Management Approach	65%	3.65
Maintain Asset Health	93%	3.83
Reduce Sewer Flooding	100%	4.32
Support Growth & Development	72%	3.43
Ensure Climate Resilience	79%	4.00
Reduce Water Demand	81%	3.97

Two clear themes emerged throughout the discussions:

- The language used across all objectives was a barrier to understanding.
- The lack of context provided was another barrier to understanding.

Panellists commented on technical jargon and complex wording. They requested plain English, definitions and examples and suggested that diagrams could be valuable in communicating processes.

Panellists asked for additional information to support understanding and clarity, such as understanding baseline positions when discussing targets, and more clear delivery plans – the 'how'.

In addition, an explanation of why the objectives matter in terms of how they affect customers and the environment.

Overall, Panellists felt that in their current form, the Strategic Objectives were not entirely accessible to customers and that consideration should be given to the choice of language and presentation of the information when creating the customer summary DWMP document. Panellists considered the objectives that were associated with direct impacts to customers and the environment (i.e. reduce pollutions and reduce sewer flooding) to be of higher importance and agreed they should be included in the customer summary DWMP document.

Where additional explanation was provided to ensure Panellists understood the objectives, the level of importance increased, supporting the need for clarity.

The immediate outcome from this engagement was the creation of a 'customer-friendly', non-technical **Customer Summary** of the Strategic Context document, which we will publish alongside this document.

The feedback gathered through this process will inform how we continue to engage with customers as we develop our DWMP.

NEXT STEPS IN CUSTOMER ENGAGEMENT

The customers' feedback we have received so far will shape how we continue to engage with our customers as we develop our DWMP.

When we consult with stakeholders in the development of the DWMP, we will make sure that, where appropriate, we will also consult with our customers using non-technical, jargon-free language. We will use the People Panels, where appropriate, and we will also engage with customers through other methods such as deliberative discussions and structured surveys.

We will develop a forward-looking programme of research, scrutinised by the Water Forum, that will test:

- Customer preferences for different intervention types
- Customer views on trade-offs between affordability and environmental outcomes
- The level of resilience customers expect from wastewater services
- How customers believe we should prioritise investment across different risks and locations.

The People Panels will complement our customer research and engagement approaches while the Water Forum will continue to challenge and review our approach at each stage of DWMP28, beginning with their feedback on this Strategic Context consultation. This ensures that customer insight remains embedded throughout the development of the DWMP, from risk identification through to option appraisal and final plan development.

4. HOW STAKEHOLDERS WILL HELP SHAPE OUR DWMP

Drainage and wastewater systems are complex, interconnected networks that face growing pressures from climate change, population growth, urbanisation, ageing assets, and rising customer expectations.

Developing a DWMP cannot be achieved by Northumbrian Water alone. While we lead the delivery, the plan's effectiveness depends on the active support and collaboration of a wide range of stakeholders. The DWMP must both integrate with and influence wider national and regional strategies. Whilst these are subject to change, current strategies include:

- Company and Regional Water Resources Management Plans (WRMPs)
- Water Industry National Environmental Programme (WINEP)
- River Basin Management Plans (RBMPs)
- Flood Risk Management Plans (FRMPs)
- National Flood and Coastal Erosion Risk Management Strategy (FCERM)
- Highways Asset Management Plans (HAMPs)
- Local Development Plans (LDPs)
- Local Nature Recovery Strategies (LNRSs)
- Change for a better environment (EA2030)
- Ecological Emergency Action Plans (EEAPs) where available.

4.1 KEY STAKEHOLDERS

Key external stakeholders that will influence our DWMP are outlined in Table 4. By working together with our stakeholders, we can deliver a DWMP that is a sustainable, long-term, adaptive roadmap for resilience, growth, and environmental enhancement in the North East.

4.2 STAKEHOLDER ENGAGEMENT PLAN

A comprehensive stakeholder engagement plan will help us understand our environment, our communities, and shape the DWMP to secure long-term performance and resilience. We will regularly consult at different levels building on the network and structure established in DWMP23. Figure 8, on page 16, shows the key strategic elements for engagement, stakeholder groupings and the engagement process.

Table 4 – Key DWMP Stakeholders and linked plans

Key Stakeholder	Linked Plans
Customers via focus groups, Regional Flood & Coastal Committee, Consumer Council for Water (CCW)	All plans have a focus on improving services and the environment for customers
Environment Agency (EA)	WRMPs, WINEP, RBMPs, FCERM, EA2030
Office of Water Services (Ofwat) / successor	Price Reviews and Business Plans
Department for Environment Food & Rural Affairs (DEFRA)	Wastewater, drainage and environmental guidance and policy including DWMP
Lead Local Flood Authorities (LLFAs) - 14 in our area	FRMPs
Local Planning Authorities (LPAs) and Developers	LDPs, LNRSs, EEAPs
Environmental Partners (e.g. CaBA Catchment Based Approach partnerships in the North East)	WRMPs, WINEP, RBMPs, FCERM, FRMPs
Highway Authorities	HAMPs
Partnership Groups (e.g. Northumbria Integrated Drainage Partnership NWL + EA + LLFAs)	FRMPs, WINEP, FCERM
Natural England	LNRSs


The River Tweed

PROPOSED ENGAGEMENT ARRANGEMENTS

To ensure our DWMP aligns with statutory Government guidance and reflects the priorities of our region, we are establishing a three-tier engagement structure. We will meet with Level 1 and Level 2 groups twice a year. Additional meetings will be scheduled as needed during the development of the DWMP to share progress, receive feedback, inform risks and opportunities, and co-create options.

Level 1 - Strategic Planning Group

This strategic director level group will serve as a regional body for policy and procedural decisions, providing a balanced and informed perspective across all key stakeholders. Its purpose is to help shape the strategic direction of the DWMP and assess the value of impacts on customers, the environment, recreation, and the local economy. In addition to company-wide director level input, this group will include economic and environmental regulators, representatives from local authorities and the Water Forum.

Level 2 - Strategic Planning Groups

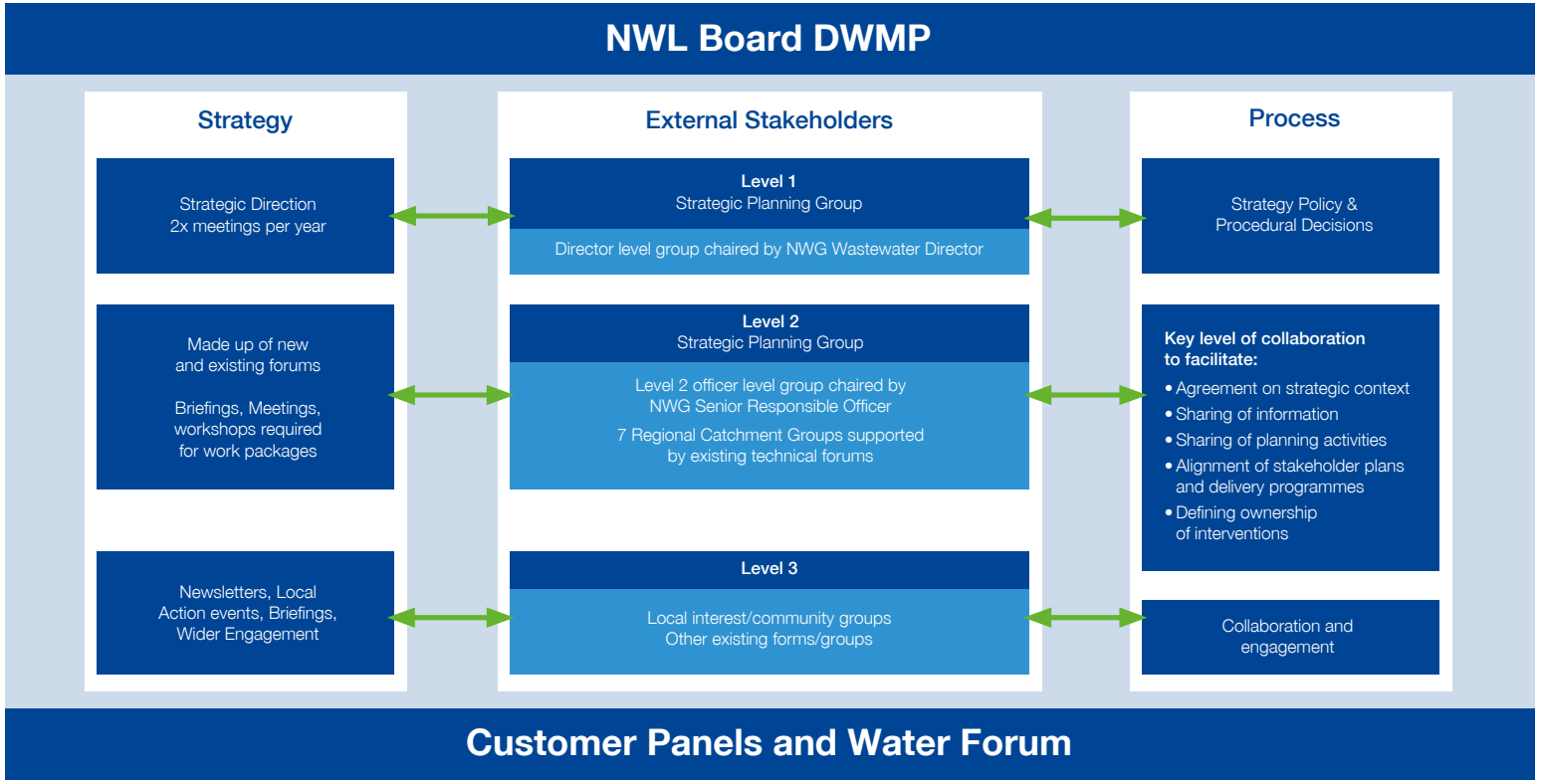
Strategic Planning Groups will discuss operational and technical detail. They will enhance existing partnership arrangements (e.g. catchment partnerships, flood partnerships, NIDP, Northumbria Regional Flood and Coastal Committee, Planning Liaison Meetings), avoid duplicating interfaces and play a critical role in developing the DWMP. Engagement will be a blend of face-to-face and virtual forums to ensure the programme is delivered efficiently.

Level 2 groups will be engaged flexibly through the process to maximise potential partnership working and effective regional and local engagement, recognising that some authorities cover multiple catchments.

Level 3 - Local interest / community groups and customers

Our existing Local Action programme provides an avenue for local interest and community groups' voices and opinions to be heard. Ensuring that the DWMP reflects local priorities, addresses real community needs, and builds trust through inclusive, place-based decision-making. Customers' interests will also be incorporated through our People Panels, formal customer research, endorsed via representation at the Level 1 Group.

Figure 8 – Stakeholder Engagement Structure for the DWMP



STAKEHOLDER ENGAGEMENT SESSIONS

To launch the DWMP we convened a L1 Director Level Group on 10 October 2025 and three L2 Strategic Planning Groups (South, Central and North) on 11,12 and 13 November 2025. We introduced the DWMP and outlined our ambition to make it an adaptive, collaborative plan. We explored how we could work together to shape the DWMP, complement stakeholder plans, collaborate on options development, and explore partnership working. We also shared early customer insight from our People Panels to ensure stakeholder discussions reflected customer priorities. Stakeholders highlighted several priorities for making the DWMP effective:

Environment Focus:

Most Strategic Objectives are aligned e.g. supporting growth, reducing flooding and there was a clear focus on improving the environment by reducing pollution and spills but also prioritising nature-based solutions, biodiversity improvements, and climate resilience.

Adaptability:

DWMP must remain a living, agile plan responsive to policy shifts, and address climate risks and growth pressures (housing targets) as the trends of greatest concern.

Collaboration:

The ambition to co-create the plan was shared, utilities and landowners were added as stakeholders, and use of existing forums to streamline engagement was recommended.

Data & Digital:

We agreed to collaborate on performance indicators, data sharing and enhance transparency and efficiency by developing a common data platform and interactive GIS tools.

Funding & Resources:

Were identified as constraints but we agreed to share risks, options, value measures and plans to work around misaligned investment cycles, take opportunities for flexible funding and partnership working, and support resource-constrained partners.

Communication:

Needs to be clear, concise and jargon-free to explain investment needs, priorities and decisions so we build trust in the plan, engaging the public and community groups.

We introduced the **DWMP** and outlined our ambition to make it an **adaptive, collaborative plan**.


Craster

OVERVIEW OF FEEDBACK RECEIVED FROM STAKEHOLDERS:

Aims and ambition:
DWMP aims were clear and the ambition for a collaborative adaptive plan shared. It was stressed that collaboration will be needed throughout from planning to delivery.

Planning structure:
The structure and engagement proposed will promote integration with local plans and risk strategies, details of which were shared. The need to be agile in means, methods and frequency of communication and collaboration was underlined.

Strategic Objectives:
There is broad alignment of Strategic Objectives on flood risk, protecting and improving the environment and the need to support development was a clear priority.

Trends:
The climate and growth trends were of particular concern for managing flood risk and supporting development with Government housing targets exceeding previous plans.

Performance Indicators:
There was support for exploring bioresources as a potential bespoke performance indicator and suggestions to include nutrient neutrality and growth will also be considered. Ideas were proposed on measuring shared flooding and river quality indicators.

Value Framework:
Stakeholders agreed to share values for shared objectives such as flooding and biodiversity and welcomed the plan to shape options development with local issues.

Reporting:
The need for the DWMP reports to be accessible and understandable, explaining the need to prioritise investment. This supports our plan to produce a customer-friendly version of this document. Ideas were shared for a collaborative GIS data sharing platform.

QUESTIONS FOR EXTERNAL STAKEHOLDERS

5. What else could be added or changed in our proposed stakeholder engagement approach to make it more effective?

5. STRATEGIC OBJECTIVES

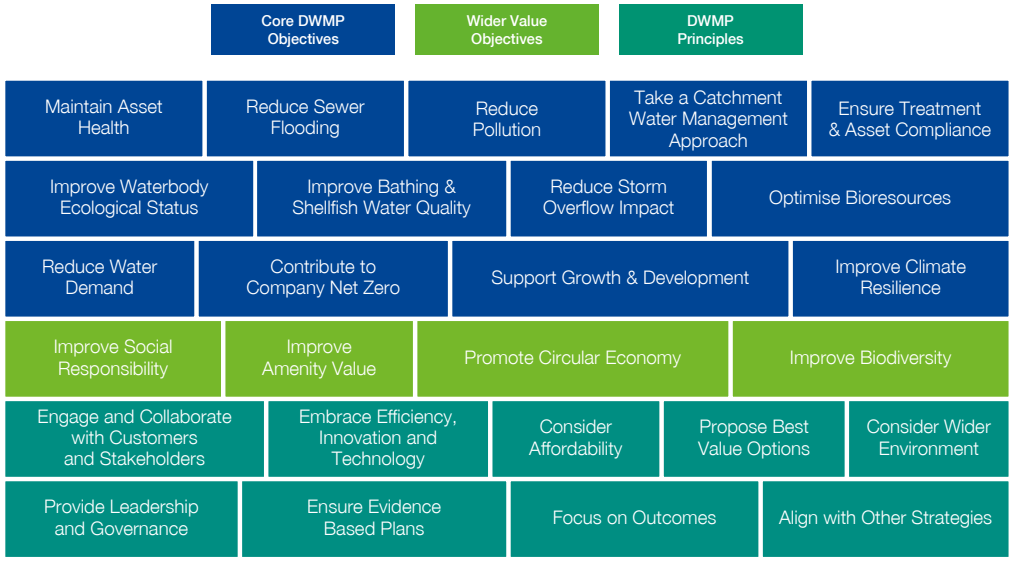
Strategic Objectives are the long-term goals and ambitions we define as a company.

They are integral to the DWMP because they help ensure the plan is purpose driven and outcomes focused through performance indicators, risk assessment, options development, prioritisation of investment and engagement with stakeholders. The objectives help ensure other strategies, plans and decisions are consistent with the DWMP by aligning them to the performance indicators and value framework.

We undertook a comprehensive review of our strategic documents (including our Long-Term Delivery Strategy and our Environment Strategy) and external sources such as Natural Capital and Environmental Metrics (NCEM) and Ofwat's Performance Commitments to identify the Strategic Objectives and commitments relevant to the DWMP. We then grouped these under our strategic themes (Figure 1), consolidated areas of overlap, and categorised them as shown in Figure 9.

- **13 Core Objectives – delivered directly by the DWMP**
- **4 Value Objectives – wider objectives to which the DWMP contributes**
- **9 Guiding Principles – applied to all of our plans and aligned to our values (Figure 1)**

Figure 9 – DWMP Core Objectives, Value Objectives and Principles



Our DWMP will adopt the Guiding Principles and track our contribution to the four wider Value Objectives. The 13 Core Strategic Objectives are listed in more detail in Table 5 and are colour-coded by their primary Strategic Theme. They include an objective title and sub-elements which have been developed from existing commitments outlined in published strategic documentation, which contribute to the overall objective and provide further detail. Our objectives are consistent with our existing Long-Term Delivery Strategy and Environment Strategy Targets for 2050 (see Annex 2 for full detail).

We will review these objectives and extend them to 2055 as part of the development of our DWMP.

QUESTIONS FOR EXTERNAL STAKEHOLDERS

6. How well do our Strategic Objectives and principles align with those of your organisation?

Table 5 – The 13 Core DWMP Strategic Objectives, Colour-Coded by Primary Strategic Theme

Objective Title & Description	Objective Sub-elements	Strategic Theme
Improve Bathing and Shellfish Water Quality: Help maintain good or excellent status at all bathing and shellfish waters in the region and support future applications	• Work with partners to achieve good or excellent status and protect marine conservation zones • Investigate and address negative contribution from our assets where appropriate	**Environment**
Reduce Storm Overflow Impact: Improve storm overflow performance to prevent environmental harm and ensure all operate within statutory spill frequency targets by 2035 and 2050	• Meet spill reduction targets by regulatory dates • No dry day spills • Deliver no environmental harm by 2050	**Environment**
Improve Waterbody Ecological Status: Help ensure 75% of our region's waters achieve good ecological status by 2050	• Work with partners to achieve good ecological status, no harm from our assets and operations • Nutrient neutrality in designated areas • Reduce Phosphorus, Nitrogen, Biological Oxygen Demand (BOD) via catchment / nature-based solutions • Reduce Phosphorus loading from treated wastewater by 56% by 2038	**Environment**
Ensure Treatment and Asset Compliance: Achieve and maintain 100% compliance across Wastewater Treatment Works (WWTWs) and all assets	• Target 100% discharge permit compliance at WWTW (maintain at least 99%) • Compliance with all flow permits • Invest in micropollutant treatment, work with multi-sector partners to control at source • Maintain permit compliance at sewage pumping stations, storm overflows, emergency overflows.	**Environment**
Optimise Bioresources: Ensure the long-term Bioresources process is optimised to provide safe, resilient, sustainable and compliant solid recycling routes and maximise value recovery	• Maximise biogas production • Max sludge to advanced anaerobic digestion • Optimise biosolids volumes through dewatering • Optimise transport options • Develop industry and wider partnerships to remove barriers to recover value from waste and promote micropollutant source control	**Environment**
Reduce Pollutions: Achieve and maintain industry leading pollution performance, no serious pollutions	• Achieve 99% self-reporting by 2040 • 50% reduction in total pollutions by 2040 from 2022 base (update with upper quartile targets) • No serious pollutions from assets/operations	**Environment**
Take a Catchment Water Management Approach: Lead partnership working to improve catchment water management, resilience and the environment	• Partner with customers and stakeholders to co - create, design, fund, deliver schemes • Remove surface water from combined systems • Enhance social value opportunities • Improve flood and drought resilience • Water reuse, contribution to demand reduction	**Environment**
Contribute to Company Net Zero: Contribute to company target net zero emissions by 2050	• Reduce Scope 1,2,3 emissions (Carbon, methane, nitrous oxide) • 20% reduction in chemicals and energy use for new assets by 2035 • Halve embodied carbon in new assets by 2040 • 100% renewable electricity by 2040 • Seek opportunities to sequester carbon	**Environment**

Table 5 – The 13 Core DWMP Strategic Objectives, Colour-Coded by Primary Strategic Theme (cont)

Objective Title & Description	Objective Sub-elements	Strategic Theme
Maintain Asset Health: Maintain or improve asset health to manage risk and secure long-term performance	• Develop whole-life maintenance and disposal plans for all asset classes • No deterioration and performance risk • Drive sustainable long-term investment • Blockages no more than 1,000 by 2050 • Collapses stable, other asset measures tbc	Customer
Reduce Sewer Flooding: Significantly reduce risk of sewer flooding to customers. 60% fewer incidents by 2050	• Reduce risk of internal and external sewer flooding by 60% from 2025 to 2050 • Work in partnership with lead local flood authorities to reduce risk	Customer
Support Growth and Development: Ensure growth and development plans supported by assessing and addressing system capacity needs	• Work with partners to support sustainable development and delivery of local development plans • Deliver new connections, first time sewerage	Customer
Ensure Climate Resilience: Plan to adapt to a 2-degree warmer world by 2050 and prepare for 4 degrees by 2100 by providing catchment and system resilience	• Support river and coastal flooding and erosion (FCERM) plans • Support Power, Heat and Drought resilience plans • Update What Ifs and Contingency plans • Develop integrated catchment plans with partners	Customer
Reduce Water Demand: Contribute to company water demand reduction targets by reducing use and promoting reuse	DWMP solutions to contribute to • Household demand 122/110 l/p/d by 2038/2050 • Non-household demand -9% / -15% by 2038/2050	People

6. FUTURE TRENDS

6.1 WHAT ARE FUTURE TRENDS?

Future trends are possible changes to political, economic, social, technological, and environmental factors that will affect drainage and wastewater performance in the next 25 years so need to be considered as part of the plan.

The trends can be generic (affecting society as a whole) or more specific (affecting our business or assets). In order to understand the risks presented by future trends we need to forecast the impact of trends to help develop our planning scenarios. We can then make plans to mitigate their impact and provide consistent, transparent, and evidence-based decision-making.

Table 6 lists the 29 generic trends that the DWMP guidance states should be considered and provides a high-level assessment of their predicted impact.

Table 6 – Generic future trends

Trend Category	Generic Trend	Predicted Impact
Climate and Environmental	1. Rainfall intensity increases 2. High river flows 3. Low river flows 4. Temperature increases 5. Sea level rise 6. Groundwater level/quality changes	These trends are predicted to have a material impact on most performance indicators and will be forecasted by established modelling practices. The expected impacts range from more power outages from higher temperatures and more intense storms, to increased flooding and capacity issues from more intense rainfall higher winter river and groundwater levels and sea level rise, and river quality issues from lower summer river flows.
Development and Population	7. Population 8. Urban Creep 9. Urban drainage changes	These trends include increased housing and development targets that mean adopted local plans will need updating to reflect latest Government expectations. They are predicted to result in increased flows and loads on our system increasing costs to operate and maintain existing systems and causing capacity issues that will need investment.
Statutory / Regulatory	10. Changing environmental regulatory requirements 11. Designation of additional bathing waters 12. Designation of additional Drinking Water Protected Areas (rivers) 13. Groundwater Safeguard Zones (groundwater) 14. Designation of additional Nutrient Advice Areas 15. Any other regulatory developments	These trends are hard to forecast. We can represent tighter treatment standards and additional bathing waters in models, but timing and locations are unknown. We can't predict new protected areas with confidence, so these will be assumed unless a potential designation is identified locally at the options stage or in annual reviews. An increase in monitoring requirements, and investment to upgrade sites to meet higher standards and permits is expected. The potential adoption of the recast Urban Wastewater Treatment Directives in line with the EU is not included due to uncertainty but could present a material risk to investment. Implementing Schedule 3 of the Flooding and Water Management Act could increase the use of SuDs and help manage the impact of development. The Cunliffe recommendations, such as creating a single integrated water regulator, new regional planning authorities, and improving consumer and environmental protections are not included.

Table 6 – Generic future trends (cont)

Trend Category	Generic Trend	Predicted Impact
Economics	16. Changing economic conditions 17. Changing willingness to pay 18. Changing benefits levels 19. Changing values of carbon and potential imposition of carbon taxes 20. Availability of other source funding	These trends are difficult to predict and largely influence the cost of different options, the financing of investment or affordability in general so will be forecast by assumption. For example, the benefit to cost ratio of implementing nature-based solutions could increase over time
Technological Changes	21. Increased online monitoring and control 22. Innovative treatment options for wastewater and runoff 23. Innovative sewer lining technology 24. Low carbon methods of construction 25. Increasing overflow and water quality monitoring	These trends are predicted to enable improved performance at lower cost but are difficult to model so will be forecast by assumption. e.g. new technologies could lead to improved failure prediction, response times and preventative maintenance. Artificial intelligence is expected to have a transformational change on our ways of working and data centres will increase demand for water. Low-carbon construction methods e.g. low or no carbon cements are a trend that will influence future building solutions.
Customer & Stakeholder Behaviours	26. Expected reductions in per capita flow due to metering and water efficiency 27. Changes in customer behaviour due to demographic trends 28. Changes to water efficiency technologies impacting domestic and industrial wastewater 29. Reduced disposal of flushed items (wipes, sanitary) and FOG (fats, oils, and grease)	Trends for water demand will be modelled in line with population and development trends. Per capita consumption is assumed to follow the profile outlined in our WRMP and will be tested for sensitivity to a range of actual PCC. The impact of demographic trends is more difficult to model so will be assumed. The introduction of water efficiency technologies and changing behaviours such as water reuse may delay the need to upsize and upgrade assets. Increased flexible working, working from home, active travel policies and implementation, and reduced car ownership in new generations might reduce road use and change demand profiles. A reduction in sewer misuse is assumed to follow increased customer awareness.

6.2 PROCESS FOR ASSESSING TRENDS

Future trends were assessed by following the structured process shown in Figure 10 to ensure alignment with DWMP guidance, our Strategic Objectives and stakeholder priorities.

6.3 PROPOSALS FOR APPLYING TRENDS

APPLICATION OF TRENDS IN DWMP

We will apply the future trends in the key stages of the DWMP as follows:

- **Risk Assessment** – trends are included in the forecast of future performance to identify risks and where and when intervention is required to mitigate risk and deliver required performance.
- **Options Development** – some trends will influence options selection and the relative cost benefit ratio of options over time so are considered in options development.
- **Programme Smoothing** – some trends are incorporated into future scenarios for sensitivity testing and adaptive planning to select the best value plan.

Figure 10 – Process for assessing future trends

Guidance review	A decision tree was created using the DWMP guidance to assess the suitability of the trends considering plausibility, materiality of impact on performance indicators and ability to forecast.
Trend Mapping	The trends from Northumbrian Water's DWMP23 and PR24 Long-term Strategy (LTDS) were compared against the 29 generic trends in the guidance to ensure alignment.
Identify additional trends	Trends in other Water and Sewerage Company DWMPs, key stakeholder and wider industry strategies such as energy, infrastructure, and transport were reviewed for potential gaps. This helped to identify potential additional trends.
Stakeholder Engagement	Feedback from stakeholders involved in DWMP23 in June-July 2025 and Level 1 and 2 Stakeholder Meetings in September - November 2025 has been incorporated to date. Feedback from continued customer and stakeholder engagement will further update the trends.
Impact on PIs	Subject Matter Experts (SMEs) assessed the expected impact of trends on all Performance Indicators as high (material) low (not material) or not applicable to guide forecasting and risk assessment.
Forecasting	SMEs reviewed the ability to forecast the trends for the required planning horizons and scenarios and confirmed the approach using models or assumptions and aligned with the Water Resources Management Plan (WRMP) where suitable.

FUTURE TRENDS SELECTION

After reviewing the 29 generic trends and benchmarking, the following recommendations were made:

- **Trends to include** – 27 of the 29 generic trends were taken forward for assessment. Most additional trends identified by benchmarking and review were added to existing trends e.g. the trend for reduced car ownership and traffic was added to the customer demographics trend.
- **Information required** – two of the 29 generic trends had insufficient information for assessment. 'Urban Drainage Changes' are expected to be site specific and only influence options choice and 'Changing Benefits Levels' might affect future values and options choices but are too uncertain.
- **Additions** – one additional trend was added: 'Technological Changes Overview', to provide a broad single category and allow a simpler prediction of the impact of technology as a whole.
- **Further defined** – one trend 'Any other regulatory developments' was defined further as the wider implementation of Schedule 3 of the Flood and Water Management Act.

TREND FORECASTING

Thirteen of the 29 trends to be assessed will use hydraulic, water quality, treatment works or asset health modelling to forecast impact on performance indicators over time for risk assessment. The other 15 trends will use evidence-based assumptions to forecast impact at different planning horizons and planning scenarios.

QUESTIONS FOR EXTERNAL STAKEHOLDERS

7. To what extent do our predicted impacts of future trends reflect the plausible futures we should be planning for? Are there any other trends you believe we should consider in developing the DWMP?

Blyth, Northumberland

7. PERFORMANCE INDICATORS

7.1 WHAT ARE PERFORMANCE INDICATORS?

Performance indicators (PIs) are metrics we use in the DWMP to measure, forecast and evaluate the performance of drainage and wastewater systems. They inform risk assessment and investment decisions, support regulatory compliance and enable performance comparisons across companies.

The guidance states that PIs should be outcomes focused, forward looking and predictable, allow comparison to backward looking performance measures, enable identification of unacceptable performance from individual locations to company level, be linked to monetary value and not excessively complex. The guidance sets out three types of indicators:

- **Common Performance Indicators** – Thirteen PIs that all water companies must evaluate for future planning horizons. Only twelve are relevant to our plan as one is specific to Wales. See Table 7.
- **Emerging Performance Indicators** – Six PIs that are difficult to forecast and are to be developed and trialled with outputs shared in DWMP28. See Table 8.
- **Bespoke Performance Indicators** – Additional PIs that can be suggested by companies if they are materially different to common PIs and have support from Level 1 stakeholders.

Table 7 – Common performance indicators as defined in the DWMP guidance

No	Common PIs	Details
1	Internal Flooding	Annual number of internal sewer flooding incidents normalised per 10,000 sewer connections, in line with the latest Ofwat Performance Commitment definition. The annualised figure is to be based on reported and forecast incidents based on 1 in 10, 1 in 20, 1 in 30 and 1 in 50 return periods.
2	External (curtilage) flooding	Annual number of external sewer flooding incidents normalised per 10,000 sewer connections, in line with the latest Ofwat Performance Commitment definition. The annualised figure is to be based on reported and forecast incidents based on 1/10, 1/20, 1/30 and 1/50 return periods.
3	Storm overflow performance (England)	Number of storm overflows predicted to be at risk of not meeting Storm Overflow Discharge Reduction Plan (SODRP) targets and/or permit non-compliance for the relevant planning horizon.
4	Storm overflow performance (Wales)	GN066 and GN021 outlines the criteria, process and methodology that water and sewerage companies must meet for an overflow to be classified as satisfactory. NOT APPLICABLE.
5	Treatment works compliance (numeric)	Annual number of wastewater treatment works predicted to fail numeric effluent quality permit limits.
6	Treatment works compliance (descriptive at numeric sites)	Annual number of wastewater treatment works predicted to fail to meet descriptive conditions at numeric permit sites.
7	Treatment works compliance: DWF	Annual number of wastewater treatment works predicted to fail to meet discharge permit conditions for Dry Weather Flows.
8	Treatment works compliance: FFT	Annual number of wastewater treatment works predicted to fail to meet discharge permit conditions for annual Flow to Full Treatment.

Table 7 – Common performance indicators as defined in the DWMP guidance (cont)

No	Common PIs	Details
9	Good Ecological and/ or Chemical Status: Public sewerage	Number of RNAGS (Reasons for Not Achieving Good Status / Deterioration) associated with sewerage assets discharges (including surface water networks).
10	Pollution incidents: serious	Annual number of serious (Category 1 and 2) pollution incidents from sewerage undertaker sewerage assets (including public surface water networks). Excludes sludge/biosolids incidents.
11	Pollution incidents: total	Annual number of pollution incidents (Category 1- 3) per 10,000 km of wastewater network from SU sewerage assets (including surface water networks). Excludes sludge/biosolids incidents.
12	Bathing water quality	Number of current and future (if known) inland and coastal bathing waters where predicted performance of sewerage assets discharges will pose a risk to compliance with "sufficient" quality classification and not deteriorating from current standards, with a view to increasing the number as "good" or "excellent".
13	Shellfish water quality	Number of current and future (if known) designated shellfish waters where predicted performance of sewerage assets discharges will pose a risk to compliance with the microbial standard specified in the Shellfish Waters Protected Areas (England and Wales) Directions.

Appropriate thresholds will be assigned to all PIs using the descriptions in Table 9 to ensure consistency over spatial areas and planning horizons. The PIs for storm overflows, emergency overflows, treatment works compliance, FFT, DWF, serious pollutions and total pollutions are assigned standard thresholds in the guidance for cross company comparison. Other thresholds will be set by companies based on their current performance and ambition and we are in the process of defining these.

Table 8 – Emerging performance indicators for development as defined in the DWMP guidance

No	Emerging PIs	Summary of approach
1	Surface water flooding (shared responsibility)	Annual number of properties per 10,000 properties indicated as at medium (3.3% – 1% Annual Exceedance Probability AEP) and/or high (greater than 3.3% AEP) areas of risk of surface water flooding estimated from reported incidents, local models from other RMAs and/or most recent EA surface water flood risk maps. This only covers surface water flooding within companies' drainage and wastewater catchments.
2	Good Ecological and/ or Chemical Status: Urban and transport (shared responsibility)	Number of RNAGS (Reasons for Not Achieving Good Status / Deterioration) attributed to discharges of urban/highway runoff and misconnections that will not be remedied through investment by you or other organisations. This only covers runoff or connections entering companies' drainage and wastewater catchments.
3	Emergency overflow performance	Number of emergency overflows that operate once or more per year.
4	Treatment works compliance (descriptive)	Annual number of wastewater treatment works predicted to fail to meet descriptive permits.
5	Groundwater pollution	Length (km) of sewer within Source Protection Zone (SPZ) 1s (and 2s in Groundwater Safeguard Zones (GSZ)) where there are likely risks to groundwater from sewer exfiltration.
6	Groundwater infiltration	Annual number of discharges during 'dry weather' caused by increase in sewer flow from groundwater infiltration.

Table 9 – Performance Indicator reporting threshold descriptions

Threshold description	
0 / Green -	Low risk of not meeting performance indicator
1 / Amber -	Moderate risk of not meeting performance indicator
2 / Red -	High risk of not meeting performance indicator

7.2 PROCESS FOR DEVELOPING INDICATORS

All Performance Indicators will be **integrated with trends** and scenario planning

Performance Indicators are being developed by following the structured process shown in Figure 11 to ensure alignment with regulatory DWMP28 guidance, our Strategic Objectives and stakeholder priorities.

Figure 11 – Process for developing Performance Indicators.

Guidance review	The PI principles in the DWMP guidance were used to review common and emerging PIs and assess potential Bespoke PIs for suitability.
PI mapping	The common and emerging PIs were mapped against our Strategic Objectives to highlight potential gaps for consideration as Bespoke PIs. Proposed Bespoke PIs will be discussed with and approved by Level 1 stakeholders.
PI Development	PI thresholds will be set by the DWMP guidance or company ambition as appropriate. PI measurement and forecasting will be agreed with subject matter experts and WaterUK groups to align approaches where possible. Some PIs will be modelled using hydraulic sewer network, wastewater treatment works, water body water quality and asset health models. Others will be forecast by using appropriate evidence and assumptions. Data quality and confidence will be assessed and recorded.
Engagement	Feedback from stakeholders involved in DWMP23 in June-July 2025 and further consultation with Level 1 and 2 stakeholder groups in September - November 2025 has been incorporated to date. Feedback from continued customer and stakeholder engagement will further update the PIs.
Testing	All PIs will be integrated with trends and scenario planning and tested with representative catchment data to check that they can be applied effectively.

7.3 PROPOSALS FOR INDICATORS

APPLICATION OF PERFORMANCE INDICATORS IN DWMP

The Performance Indicators are applied in the key stages of the DWMP as follows:

- **Risk Assessment** – establish baseline and forecast future performance without intervention enabling risk identification and where and when intervention is required.
- **Options Development** – understand the impact of potential options on performance and help select the best options.
- **Programme Smoothing** – understand the impact on performance of programme smoothing options and help select the best value core plan and alternative plans.

PROPOSED BESPOKE PERFORMANCE INDICATORS

We propose Bespoke PIs for Asset Health and Bioresources as detailed in Table 10 below. Asset health metrics are being developed by subject matter experts (SMEs) and bioresources metrics via an industry task and finish group. Several metrics were not considered suitable for the following reasons:

- They are more an output of DWMP options that contribute to wider company objectives – e.g. amenity value, biodiversity, greenhouse gas emissions, resilience scheme delivery, partnership working.
- They are better reported elsewhere – e.g. growth is already a key input to most PIs and growth projections can be updated as Local Plans are issued via Annual Reviews, nutrient neutrality is covered by WINEP, water consumption reduction is covered by WRMP, blockages and collapses are best covered as root causes for other PIs.
- There is currently insufficient understanding to forecast future performance – e.g. impact of mine water on sewer capacity.

Table 10 – Proposed Bespoke Performance Indicators and metrics

No	Bespoke PI	Justification	Potential Metrics to be developed
1	Asset Health	• Key element of guidance not covered by PI • Proposed as Strategic Objective • Need to drive understanding and delivery of sustainable levels of capital maintenance • Supported by stakeholder feedback	• Asset health index by asset class • Remaining asset life • Blockages, collapses, equipment failures • Serviceability impact
2	Bioresources	• Key part of waste process with no PI • Defra indicate they will add as emerging PI • Assess risk to sludge to land route	• % compliance on agreed criteria for capacity, permits, and sludge disposal • value recovery – gas, solids

PERFORMANCE INDICATOR FORECASTING

Our proposed approach to forecasting PIs is summarised at a high level in Tables 11 and 12 below for common and emerging PIs respectively. The approaches are under development with Subject Matter Experts and cross water company Task and Finish groups so could change further. Bespoke Indicators will be added to Table 12 below when developed sufficiently.

Table 11 – Summary of approach to forecasting common performance indicators.

No	Common PI	Definition	Thresholds	Assessment	Assumptions
1	Internal Flooding	Annual number of internal incidents / 10,000 connections as Ofwat PC	0/1/2 bands to be set at upper quartile performance	Hydraulic models (overload), asset health (other causes)	Extrapolation for different horizons, 150mm flood depth
2	External (curtilage) flooding	Annual number of external incidents/10,000 as per Ofwat PC	0/1/2 bands to be set by companies appropriate to risk	Hydraulic models (overload), asset health (other causes)	Extrapolation for different horizons
3	Storm overflow performance (England)	Number of SOs at risk of not meeting SODRP target +/or permit non-compliance	0/1/2 bands relating to different spill frequency numbers	Hydraulic models (overload), asset health (other causes)	Methodology will account for all assumptions
5	Treatment works compliance (numeric)	WWTW predicted to fail numeric effluent quality permit limits	To align with latest EPA methodology	Treatment works modelling	Asset condition (2025-55) and receiving water quality constant
6	Treatment works compliance (descriptive at numeric sites)	WWTW predicted to fail descriptive conditions at numeric permit sites	To align with latest EPA methodology	Treatment works modelling	Asset condition (2025-55) and receiving water quality constant
7	Treatment works compliance: DWF	WWTWs predicted to fail to meet DWF discharge permit condition	To align with latest EPA methodology	Treatment works modelling and asset health	Asset condition remains stable 2030-55, permits unchanged
8	Treatment works compliance: FFT	WWTW predicted to fail to meet annual FFT discharge permit conditions	To align with latest EPA methodology	Treatment works modelling and asset health	Use best available data until monitoring programme (MON4/MCERT) complete / available
9	Good Ecological and/or Chemical Status: Public sewerage	Number of RNAGS associated with sewerage assets discharges	0/1/2 bands to be set by companies appropriate to risk	Assessment: Water quality modelling – SIMCAT-SAGIS	Water assets e.g. dams and practices that can lead to RNAGs excluded
10	Pollution incidents: serious	Annual number of serious (Cat 1 and 2) pollution incidents	To align with latest EPA methodology	Hydraulic models (capacity), asset health (other causes)	Thresholds include sludge and water incidents

Table 11 – Summary of approach to forecasting common performance indicators (cont)

No	Common PI	Definition	Thresholds	Assessment	Assumptions
11	Pollution incidents: total	Definition: Annual number of pollution incidents (Cat 1-3) / 10,000 km	To align with latest EPA methodology	Hydraulic models (capacity), asset health (other causes)	New EA guidance 2026, use 'rolling ball' projections to 2055
12	Bathing water quality	Number of bathing waters where predicted performance of sewerage assets discharges will pose a risk to compliance	As defined under the Bathing Water Regulations 2013. Excellent, Good, Sufficient, Poor	Water Quality models	Bathing waters addressed by WINEP meet SODRP targets
13	Shellfish water quality	Number of shellfish waters where predicted performance of sewerage assets discharges will pose a risk to compliance	Defined in Shellfish Waters Protected Areas (England & Wales) Directions	Water quality models	Shellfish waters addressed by WINEP meet SODRP targets

Table 12 – Summary of approach to forecasting emerging performance indicators

No	Emerging PI	Definition	Thresholds	Assessment	Assumptions
1	Surface water flooding (shared responsibility)	Annual number of properties / 10,000 properties indicated as at medium and/or high areas of risk of surface water flooding	0 - Low risk (0-1% chance) 1 – Medium Risk (1-3.3% chance) 2 – High Risk (>3.3% chance)	Hydraulic Models GIS Risk Layers	Use Pluvial and Fluvial flooding GIS layers, 200mm depth, include residential and commercial properties, exclude NAVs and Insets
2	Good Ecological and/or Chemical Status: Urban and transport (shared responsibility)	Number of RNAGS associated with Urban and Transport assets discharges	0/1/2 bands to be developed and tested	Water Quality modelling	Addressing blockers (e.g. database, outfall data sharing) will generate adequate plan, pilot trials +/or Level1 assessments
3	Emergency overflow performance	Number of emergency overflows that operate once or more per year	0 – Low risk (0 Spills) 1 – Med risk (1 Spill) 2 High risk (2+ Spills)	Monitoring (EDM), Asset Health	All EO spills counted irrespective of cause and inclusive of exceptional circumstances e.g. power outage / equipment failure
4	Treatment works compliance (descriptive)	WWTW predicted to fail descriptive conditions at numeric permit sites.	To align with EPA methodology	Treatment works modelling	Asset condition (2025-55) and receiving water quality constant
5	Groundwater pollution	Length (km) of sewer within Zone (SPZ) 1s (and SPZ2s in SGZ) where there are likely risks to groundwater from sewer exfiltration	0/1/2 bands to be developed and tested	Asset Health GIS layers	Excludes point source discharges, allowance for unmapped and surveyed public sewers based on company ratio of all sewers
6	Groundwater infiltration	Annual number of discharges during 'dry weather' caused by increased sewer flow from groundwater infiltration	0/1/2 bands to be developed and tested	Asset Health Monitoring (EDM)	Include combined and settled SOs. Exclude spills from other causes. Use EA definition of 1 day drain down or longer if evidence

QUESTIONS FOR EXTERNAL STAKEHOLDERS

8. How well do the proposed Bespoke Performance Indicators for Asset Health and Bioresources capture the outcomes you consider important?

9. Are there any additional Performance Indicators you believe would strengthen the DWMP, including those that could help support more effective partnership working?

8. VALUE FRAMEWORK

8.1 WHAT IS A VALUE FRAMEWORK?

A value framework is a structured approach used in investment planning to identify and compare between different intervention options. It applies Performance Indicators and appropriate metrics, including monetary valuation, to consistently measure not only financial costs and benefits, but also the broader environmental, social and economic value each option contributes. This ensures that decisions reflect outcomes that are important to customers, communities, and the environment.

Our NWL value framework aligns with the approach and guiding principles set out in our **business plan**, using the same value categories to estimate the net value (benefit minus cost) of maintaining or improving performance, helping to define the 'best-value' options using the **Spackman discounting approach** for net present value. By providing a structured indication of how different options may improve performance from a defined baseline, the framework supports decision-making and prioritisation of investment where it delivers the greatest overall value.

It is important to note that regulatory performance measures are assessed separately from the value framework to maintain clarity between compliance and value-based planning.

This separation ensures that while regulatory performance tracking informs our understanding of service delivery, it does not constrain value-led decision-making. Examples include Outcome Delivery Incentives (ODIs) which are the financial rewards or penalties based on service performance and Performance Commitments (PCs) which are targets agreed with regulators that track delivery against expected outcomes.

8.2 PROCESS FOR DEVELOPING VALUE FRAMEWORK

Our value framework is being developed using the structured process shown in Figure 12 to ensure alignment with regulatory guidance, our Strategic Objectives and stakeholder priorities.

Regulatory performance measures are assessed separately from the value framework to maintain clarity between compliance and value-based planning

Figure 12 – Process for developing value framework.

Guidance review	The value framework guidance was reviewed and compared to the value approaches taken for DWMP23 and the PR24 business plan using our Copperleaf decision support tool.
Strategic Objective Review	The Strategic Objectives appropriate to the DWMP (detailed in Section 4) were reviewed against the existing value framework to check all objectives were covered and outline any areas for development.
Value mapping	The Strategic Objectives were mapped to our 5 capitals model, value categories in our benefits framework, performance indicators, and Copperleaf value models and metrics. This gave a holistic view of value creation and understanding the interactions which will support risk and option appraisal.
Metric Development	Existing value models and metrics were assessed for suitability and potential alternatives were reviewed (MNBS Mainstreaming Nature Based Solutions common Value Framework and the EA's NCEM Natural Capital Evidence and Metrics). Any development needs were noted and plans proposed to address them.
Engagement	Feedback from stakeholders involved in DWMP23 in June-July 2025 and Level 1 and 2 stakeholder engagement meetings in October-November 2025 has been incorporated to date. Feedback from continued customer and stakeholder engagement will further update the framework.
Testing	After completion of any development as appropriate, all value models and metrics will be tested with representative catchment data to check that they can be applied effectively.

8.3 PROPOSALS FOR THE VALUE FRAMEWORK

APPLICATION OF THE VALUE FRAMEWORK

The value framework will be applied in the key stages of the DWMP as follows:

- **Options Development** – to evaluate alternative solutions and help select the best options;
- **Programme Smoothing** – to support the selection and sequencing of interventions that deliver the greatest overall value and determine the best value core plan;
- **Reporting and assurance** – to demonstrate how decisions are underpinned by a robust, transparent valuation methodology aligned with Strategic Objectives.

VALUE CATEGORIES AND METRICS

The value categories we use are listed in Table 13, mapped to the strategic themes from Figure 1 and the Five Capitals we use to deliver our products and services.

Table 13 – Strategic themes, five capitals, and value categories

Strategic Themes	Five Capitals	Value Categories
Environment	Natural Capital	Environmental Performance
		Supply and Demand
		Carbon/Operational Emissions
		Regulatory Compliance
Communities	Social Capital	Regional Economy
		Social Responsibility
		Public Perception
Customer	Manufactured Capital	Security
		Cyber Security
		Customer Experience
		Water Performance
		Wastewater Performance
Competitiveness	Financial Capital	Financial Efficiency
People	Human Capital	Health and Safety
		Staff Retention and Productivity

Table 14 below lists our proposed Strategic Objectives, mapped against these strategic themes and outlines the proposed value metrics we will use for each objective.

Please refer to Table 5 for the sub-elements of each objectives, and Annex 3 for the full mapping of Strategic Objectives against the value categories and five capitals.

Objectives marked 'N' in Table 14 will not be included in the value framework either because there is insufficient data, a risk of double counting, they are difficult to assess consistently or have a low impact on options decisions. They will however still be included at the options screening stage, where potential options will be qualitatively assessed for a High, Medium or Low contribution to each of these objectives.

Table 14 – Proposed Strategic Objectives and value metrics to be included in our value framework

Objective Title	Strategic Theme	Objective Type	Included in VF	Draft Value Metrics
Improve Bathing & Shellfish Water Quality	Environment	Core	Y	BW - Number bathing waters transitioning from 'Poor', Sufficient' > 'Good' 'Poor', 'Sufficient', 'Good' > 'Excellent' SW - Number actual and potential shellfish waters: • Improved • Maintained • Deteriorated
Reduce Storm Overflow Impact	Environment	Core	Y	• Non-compliance type • Likelihood (No.) • Frequency (No./yr) • Population band
Improve Waterbody Ecological Status	Environment	Core	Y	River length (km) and estuarine/marine area (km²) transitioning from: • 'Bad', 'Poor', 'Moderate' 'Good' • 'Bad', 'Poor', 'Moderate', 'Good' 'Excellent' Load per river length (km): Phosphorus (P), Nitrogen (N), Biological Oxygen Demand (BOD
Ensure Treatment & Asset Compliance	Environment	Core	Y	• Non-compliance event type • Likelihood (No.) • Population band • Frequency (No./yr)
Optimise Bioresources	Environment	Core	Y	To be developed once PI metrics agreed by task and finish group
Reduce Pollution	Environment	Core	Y	Total and serious incidents: • Type (Water/Wastewater) • Category (Cat 1-3 to align with new EPA method) • Likelihood (No.) • Frequency (No./yr)

Table 14 (cont) – Proposed Strategic Objectives and value metrics to be included in our value framework

Objective Title	Strategic Theme	Objective Type	Included in VF	Draft Value Metrics
Take a Catchment Water Management Approach	Environment	Core	N	Options screening: H/M/L contribution (detail to be developed)
Contribute to Company Net Zero	Environment	Core	Y	Whole life carbon including: • Operational emissions (tCO2e) • Embodied emissions (tCO2e) • Transport emissions (tCO2e)
Improve Biodiversity	Environment	Wider Value	Y	Area (Ha) and condition/benefit level for: • SuDS-managed impermeable surfaces (H/M/L) (detail to be developed) • Urban/rural woodlands, wetlands, grasslands • Farmland, peatland, mountain moor and heath, coastal margins Bare ground/hard standing (area only)
Promote Circular Economy	Environment	Wider Value	N	Options screening: H/M/L contribution (detail to be developed)
Improve Amenity Value	Communities	Wider Value	Y	Change in visitor numbers
Improve Social Responsibility	Communities	Wider Value	N	Options screening: H/M/L contribution (detail to be developed)
Maintain Asset Health	Customer	Core	Y	To be developed once PI metrics agreed by SMEs
Reduce Sewer Flooding	Customer	Core	Y	Internal and external flooding: • Properties (No.) • Likelihood (%) • Expected failures (No./yr)
Support Growth & Development	Customer	Core	N	Options screening: H/M/L contribution (detail to be developed)
Improve Climate Resilience	Customer	Core	N	Options screening: H/M/L contribution (detail to be developed)
Reduce Water Consumption	People	Core	N	Options screening: H/M/L contribution (detail to be developed)

QUESTIONS FOR EXTERNAL STAKEHOLDERS

10. Are there any specific metrics you think we should use to measure the Strategic Objectives? Now thinking about our DWMP being a collaborative plan, can you suggest any other metrics we should consider?

9. REPORTING STRUCTURE

Our DWMP28 reporting structure is based on the guidance and is consistent with DWMP23, as seen in Table 15.

As required, we will also review our DWMP annually following publication. The first annual review will take place in 2029 and we will outline any significant changes to our plan as part of this review process.

Table 15 – Reporting structure

Level	Report	Purpose
Level 1 (Company DWMP)	Strategic Context (this document)	Sets the direction for the DWMP and how it will be developed and invites feedback to shape the plan.
	Customer Summary	Provides a customer-friendly summary of the main themes in the Strategic Context
	Non-Technical Summary	Provides more details on the approach taken, the results and proposed plan but avoids technical detail for sharing with stakeholders.
	Technical Summary	Goes into detail about the approach taken, the results and proposed plan using technical detail for sharing with risk management practitioners.
Level 2	Area summaries	The non-technical summary for each Strategic Planning Area presented as a report and in a GIS portal.
Level 3	Area summaries	The non-technical summary for each Sewerage catchment presented in a GIS portal.
Other	Strategic Environmental Assessment & Habitats Risk Assessment	Reports to capture potential impact of the plan and proposed mitigation as appropriate.
	Technical methodologies	Detailed methodologies for each key stage of the DWMP with supporting evidence and audit trail of decision making aligned to the guidance.
	Options Development Register	Details of options assessed, rejected and selected to address risks to show how solutions were derived.
	Collaborative funded projects	Details of collaborative schemes where funding comes from more than one stakeholder.
	Data tables	Summarising the plan, risks, proposed solutions and investment for different scenarios and alternative plans.

10. NEXT STEPS

The Strategic Context is the first step of the DWMP process, it sets the direction of the DWMP and aims to raise awareness with stakeholders and invite feedback to shape the plan. Feedback on this document will shape how we will proceed to deliver the DWMP.

It is envisaged that the Strategic Context will further evolve as the needs of national stakeholders such as Defra, Ofwat, the Environment Agency, National Infrastructure and Services Transformation Authority and more local stakeholders develop. The annual review of trends and system performance may also identify a material change to the Strategic Context and DWMP and trigger an update subsequent to publication of the DWMP in August 2028.

Alnwick, Northumberland

11. YOUR FEEDBACK HELPS SHAPE OUR PLAN

We would be really grateful for your feedback on this document and suggestions for improving our approach. Your engagement and contributions really do help shape the plan. You can find the feedback form **here** and through the QR code on this page.

As referenced in this document, we have also created a **Customer Summary** document and developed a specific set of questions to seek feedback from our customers. We are keen to understand the views of our stakeholders and customers to ensure we are working collaboratively.

Scan this QR code to access feedback form

If you wish to contact us about this document or about the DWMP, please do get in touch via **DWMP@nwl.co.uk** and we will get back to you as soon as possible.

QUESTIONS FOR EXTERNAL STAKEHOLDERS

1. From your organisation's perspective to what extent do you agree that the aims of the DWMP are clear?
2. How well does our ambition for a collaborative, integrated DWMP align with your organisation's needs and expectations? Please explain which aspects you support and where you feel further clarity or change is needed.
3. What key plans does your organisation develop that could interact with the DWMP? What are their planning horizons?
4. How well do the geographic and time horizon elements of our planning framework align with those used by your organisation? What opportunities or barriers could these create?
5. What else could be added or changed in our proposed stakeholder engagement approach to make it more effective?
6. How well do our Strategic Objectives and principles align with those of your organisation?
7. To what extent do our predicted impacts of future trends reflect the plausible futures we should be planning for? Are there any other trends you believe we should consider in developing the DWMP?
8. How well do the proposed Bespoke Performance Indicators for Asset Health and Bioresources capture the outcomes you consider important?
9. Are there any additional Performance Indicators you believe would strengthen the DWMP, including those that could help support more effective partnership working?
10. Are there any specific metrics you think we should use to measure the Strategic Objectives? Now thinking about our DWMP being a collaborative plan, can you suggest any other metrics we should consider?
11. Have you got any suggestions for improving the reporting structure?

ANNEX 1 – GLOSSARY OF TERMS

Key term/Acronym	Definition
AEP	Annual Exceedance probability
AMP8, AMP9, AMP10	Asset Management Periods. AMP8 is the 5 year period 2025-30, AMP9 2030-35, and AMP10 2035-40
CaBA	Catchment Based Approaches
CCG	Customer Challenge Group
CCW	Consumer Council for Water
Change scenarios	Aggregation of impacts from all future trends into low, medium and high change profiles
Cunliffe review	The Independent Water Commission report published in July 2025 that proposed a fundamental regulatory overhaul for the water sector in England and Wales
Defra	Department for Environment, Food & Rural Affairs
DWF	Dry Weather Flow
DWMP	Drainage and Wastewater Management Plan
EA	Environment Agency, public body responsible for the protection and enhancement of the environment in England
EDMs	Event Duration Monitors for overflow spills
eFLAG	Enhanced Future Flows and Groundwater
EOs	Emergency Overflows
EPA	Environmental Performance Assessment
FCERM	Flood and Coastal Erosion Risk Management Strategy
FFT	Flow to Full Treatment
FOG	Fats, oils and grease
FRMPs	Flood Risk Management Plans
Future scenarios	Plausible futures developed in our Long Term Delivery Strategy to stress test our business plan.
Future trends	The trends and challenges that will affect wastewater performance
FWMA	Flood and Water Management Act
HAMPs	Highways Asset Management Plans
ISG	Internal Steering Group
LDPs	Local Development Plans
Level 1 area	Northumbrian Water Company Level area
Level 2 area	Strategic Planning Areas
Level 3 area	Sewerage catchments

ANNEX 1 – GLOSSARY OF TERMS (CONT)

Key term/Acronym	Definition
Level 4 area	Scheme or asset level area for solutions to be defined at options stage
LLFAs	Lead Local Flood Authorities
LNRSs	Local Nature Recovery Strategies
LPAs	Local Planning Authorities
LTDS	Long Term Delivery Strategy part of the PR24 business plan submission that presents the strategy for the 25 years from 2025 to 2050.
MCERT	Monitoring Certification Scheme
NAVs	New Appointments and Variations
NbS	Nature-based Solutions
NCEM	Natural Capital Evidence and Metrics
NECA	North East Combined Authority
NIDP	Northumbria Integrated Drainage Partnership
NWL	Northumbrian Water Limited
Ofwat	Office of Water Services, economic regulator of water industry in England and Wales
Options Development	Process to develop and assess options to address performance risks, shortlisting feasible options and identifying preferred best value options
Options Planning	Process to define framework for assessing and developing options
Outcome Delivery Incentives (ODIs)	Financial rewards or penalties based on service performance.
PCC	Per Capita Consumption – the amount of water
Performance Commitments (PCs)	Targets agreed with regulators that track delivery against expected outcomes.
People Panels	Regional representative groups of current and future customers that we reconvene to hold deliberative discussions with to help shape our plans
Performance Indicators (PIs)	The metrics used to assess current and forecast future performance
PFAS	Polyfluoroalkyl substances (forever chemicals)
Planning areas	The area boundaries for collaboration, analysis, reporting and collaboration
Planning horizons	The points in time at which performance and interventions are assessed
Planning scenarios	Specific combination of change scenarios at different planning horizons for which a best value plan is generated
Plan production	Process by which key DWMP reports and data tables are produced
PR24	Price Review is the process by which water companies submit business plans for the next 5-year Asset Management Plan AMP period so PR24 was the price review in 2024 for AMP8 2025-30
PR29	Price Review in 2029 for AMP9 2030-35

ANNEX 1 – GLOSSARY OF TERMS (CONT)

Key term/Acronym	Definition
PR34	Price Review in 2034 for AMP10 2035-40
Programme development and smoothing	Process to take preferred options and build a programme of work for Level 3 catchments and Level 1 company area to address performance risks and smooth delivery of performance and expenditure profile, accounting for deliverability and affordability to customers
RBMPs	River Basin Management Plans
RCP8.5	Representative Concentration Pathways are climate change scenarios that project future greenhouse gas concentration and impact on weather. RCP8.5 predicts global temperatures will rise by 4°C by 2100
RedUP	A tool that allows historic time series rainfall data to be perturbed to be representative of future climate for using in model forecasts
Risk assessment	Process used to identify risks, and to determine where and when interventions are required in order to mitigate those risks
Risk based planning	Process to provide current risk position first screening of the catchments to prioritise for risk assessment
RNAGS	Reasons for Not Achieving Good Status
SAGIS-SIMCAT	UK Water Industry Research and Environment Agency-developed GIS-based tool that quantifies pollutant loads (specifically nutrients like Phosphorus) to surface waters
SMEs	Subject Matter Experts
SODRP	Storm Overflow Discharge Reduction Plan
SOs	Storm Overflows
SPS	Sewage Pumping Station
SPZ	Source Protection Zone
SRO	Senior Responsible Owner
Strategic Objectives	Defined company goals and ambitions the plan will help deliver
SuDS	Sustainable Drainage Systems
TRG	Technical Review Group
TVCA	Tees Valley Combined Authority
UKCEH	UK Centre for Ecology & Hydrology
UKWIR	UK Water Industry Research
Value Framework	How we will assign costs and benefits to evaluate options and determine the best value plan
Wider Objectives	Defined company goals and ambitions the plan will contribute to
WINEP	Water Industry National Environment Programme
WRMPs	Water Resources Management Plans
WWD	Wastewater Director
WWTW	Wastewater Treatment Works

ANNEX 2 – LONG TERM TARGETS FROM THE OUR LONG-TERM STRATEGY

	Long-term targets (2050)
	Consistently deliver high quality water (Compliance Risk Index (CRI) of zero).
	Deliver leading levels of customer service (as defined by current metrics C-MeX, D-MeX and BR-MeX).
	Reduce household water consumption (per capita consumption to 122 l/p/d by 2038 and 110 l/p/d by 2050).
	Reduce non-household water demand by 9% by 2038 excluding growth (from 2019/20 levels).
	Reduce leakage by 55% by 2050 in the north (to 61.1Ml/d) and 40% in ESW (to 40.1MV/d) so
	that we achieve the national target of 50% companywide (from 2017/18).
	Year on year reductions in number of storm overflows operating more than 10 times a year on average, and none doing so by 2050.
	Leading levels of river water quality - work with partners to eliminate, all impediments to our rivers achieving good ecological status caused by our operations, to ensure 75% of our rivers achieve good ecological status, including by reducing net phosphorous loading from treated wastewater by 50% by 2028 and 80% by 2038 from a 2020 baseline.
	Leading levels of pollution incidents - zero serious pollution now and always and reduce the number of category 1-3 pollutions by 50% by 2040 (from 2022 baseline).
	Enhance biodiversity - by 2050 all our activities result in a net gain in biodiversity 5% above legal requirement.
	Reduce internal sewer flooding by 60% from our 2025 performance commitment levels.
	Reduce external sewer flooding by 60% from our 2025 performance commitment levels.
	Eliminate Water Poverty - we are reviewing our target. For more information see our 2023 Inclusivity Report.
	Achieve Net Zero Scope 1, 2 and 3 emissions by 2050.
	Increase sustainability of chemical treatment by reducing use of existing chemical sources in current treatment processes across water and wastewater by 20% by 2035 and 40% by 2050.
	Ensure all household customers continue to have a sufficient and secure supply of water (Plan to be resilient to 1 in 500 year drought).
	Maintain a reliable sewerage network (no more than 1,000 sewer blockages per year by 2050).
	Everyone home safe, every day (zero High Potential Incidents by 2050).
	100% of our electricity will come from additional* renewable generation by 2040.
	Leading in efficiency - be the most efficient company in the sector in the round by 2030 and maintain that position.
	Have an innovation pipeline of at least £100m (including Ofwat innovation fund competition) by 2030 and maintain it.
	Supporting our local economies - to spend at least 60p in every £ with suppliers in our region every year.
	Giving time back to the community - for at least 50% of our employees to spend time volunteering every year.

ANNEX 3 – STRATEGIC OBJECTIVES MAPPED TO VALUE CATEGORIES

Strategic Theme	Environment				Communities			Customer					Competitiveness	People	
5 Capitals	Natural				Social			Manufactured					Financial	Human	
Objective Title	Environmental Performance	Supply & Demand	Carbon Ops Emissions	Regulatory Compliance	Regional Economy	Social Responsibility	Public Perception	Security & Resilience	Cyber Security	Customer Experience	Water Performance	Wastewater Performance	Financial & Efficiency	Health & Safety	Staff Retention & Productivity
Improve Bathing & Shellfish Water Quality	X			X	X	X	X	X			X	X		X	
Improve Waterbody Ecological Status	X			X			X	X			X	X		X	
Reduce Storm Overflow Impact	X			X			X	X			X	X	X	X	
Ensure Treatment & Asset Compliance	X			X				X		X	X	X	X	X	
Optimise Bioresources	X		X			X	X	X				X	X		
Reduce Pollution	X			X			X	X				X		X	
Take a Catchment Water Management Approach	X			X		X	X	X		X	X	X	X	X	
Contribute to Company Net Zero	X		X	X		X	X	X			X	X		X	
Improve Biodiversity	X			X		X	X	X		X	X	X			
Promote Circular Economy	X		X			X	X				X	X	X		
Improve Amenity Value	X				X	X	X			X	X			X	
Improve Social Responsibility	X				X	X	X			X			X	X	X
Maintain Asset Health	X		X	X			X	X		X	X	X	X	X	
Reduce Sewer Flooding	X			X		X	X	X		X		X		X	
Support Growth & Development				X	X	X	X	X			X	X	X		
Improve Climate Resilience	X		X			X	X	X			X	X	X		
Reduce Water Demand	X	X		X		X	X	X					X		

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Cover image: River Tweed, Northumberland
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