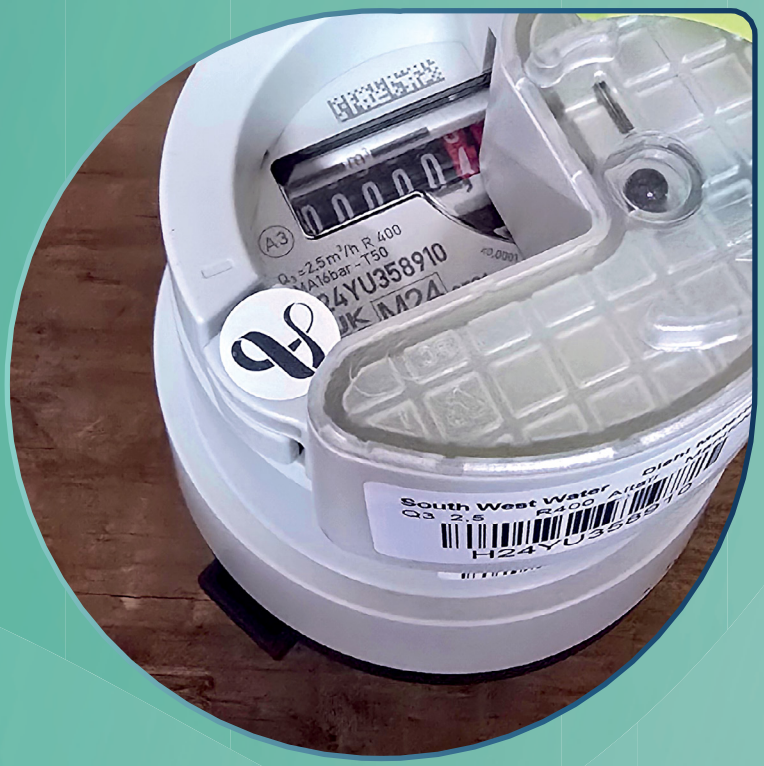
Pennon



Task Force on Climate-related Financial Disclosures 2025

Bringing water to life

Supporting the lives of people and the places they love for generations to come

Task Force on Climate-related Financial Disclosures (TCFD) and Task Force on Nature-related Financial Disclosures (TNFD)

We are driven by our strategic focus of leading on UK environmental infrastructure, delivering for the benefit of our customers, communities, and the environment.

We depend on the natural environment to deliver essential services to customers and communities. We therefore need to address the challenges posed by climate change, the nature emergency, and the transition to Net Zero.

We operate in a changing environment where the impacts of climate change and biodiversity loss are increasingly evident. To remain resilient, we monitor environmental risks, assess their implications, and embed these insights into our strategic planning and investment decisions. Our disclosures under the TCFD and TNFD frameworks reflect our commitment to transparency, accountability, and continuous improvement.

Our regulated water business is the focus of our TCFD and TNFD disclosures, with most of our assets, revenues, and expenditures related to this area of our business.

TCFD Recommendations

Created by the Financial Stability Board (FSB), the TCFD published its recommendations in June 2017. This is our sixth year of TCFD reporting and the below shows our progress and consistency to the recommendations including the additional TCFD guidance (2021 Annex).

> In alignment with the FCA listing rule 6.6.6(8) we have taken into account available knowledge and guidance concerning the listing rule and climate-related risks to develop our TCFD disclosure, which is consistent to the TCFD framework. Pennon has addressed the 11 recommended disclosures and have considered the best practice guidance from the TCFD.

As part of our ongoing TCFD programme, we have continued to enhance our assessment of physical risks, transition risks, and climate-related opportunities. Our disclosure refers to several plans, reports and data – all of which is supplementary information beyond our disclosures.

TNFD Recommendations

The TNFD published their final framework in September 2023. This is our fourth year of voluntarily reporting against the TNFD framework. We continue to integrate TNFD into our TCFD disclosures, recognising the substantial overlap and synergies between action on climate change and the nature emergency. At the same time, we also recognise some trade-offs in meeting our goals around resilience, Net Zero, and nature. There is further work to do on the recommended TNFD disclosures, and we are continuing to monitor the inclusion of nature risks in the UK sustainability disclosure requirements.

Developments in 2024/2025

The year has been marked by unprecedented weather patterns, characterised by above–average rainfall and frequent storms, resulting in extreme precipitation and high winds.

As weather extremes intensify, so too does the risk of water contamination and disruption to essential services. We are proactively addressing these challenges by reinforcing our infrastructure, enhancing monitoring systems, and strengthening our rapid response capabilities.

Recent weather events underscore the importance of building climate change resilience and preparedness, and have afforded us valuable insights into our capacity to withstand such occurrences. We are using these insights to inform our physical climate risk assessment and adaptive strategies.

Progress is detailed in our Climate Adaptation Report, recently published as part of the UK government's adaptation reporting cycle, and which will feed into the next UK Climate Change Risk Assessment (available https://www.southwestwater.co.uk/siteassets/documents/environment/climate-change-adaptation-report_2024.pdf.).

Our Climate Adaptation Report identified that we have made adaptation progress in all areas. Whilst we are recognised as industry leaders in managing sewer flooding risk, the increased intensity of rainfall is contributing to a rise in wider surface water and fluvial flooding risks. These challenges, combined with heightened customer and regulatory expectations, mean we need to go further to manage the impacts of extreme weather, including the risks to storm overflows and sewer flooding. This is a key area of focus for us, our customers, and other stakeholders.

Over the past year our acquisition of SES Water has been finalised, and we are integrating SES Water into our Group-wide risk management approach and strategic planning.

In December 2024 Ofwat approved our business plan to invest £3.2 billion across 2025-2030, focusing on four priorities – water quality and resilience, storm overflows and pollution, Net Zero and environmental gains, and addressing customer affordability. Importantly, this will ensure we can strengthen our climate and nature resilience.

Our TCFD and TNFD disclosure reflects our updated current and future actions to mitigate climate and nature risks and realise related opportunities.

We are focused on delivering for our stakeholders. We are continuing to embed climate change resilience, sustainability, and nature-positive practices into decision-making within our business, as well as managing near-term inflationary pressures, including power prices. We will also continue to manage changes to our investments to explore new technology, materials, and nature-based solutions, within global capacity and supply chain constraints, to deliver both affordability and fairness for our customers.

As a Group, we maintain strong reporting with the CDP (Carbon Disclosure Project), presenting our efforts to combat climate change and our GHG emissions since 2013. Our GHG emissions reduction continues to improve, reported through our CDP Climate Change submission in which we received an 'A-' rating in 2024 for both climate change and water security. You can read our GHG emissions performance on page 91 of our Annual Report and Accounts 2024/25.

Overview of Progress

Governance

Our governance around climate-related and nature-related risks and opportunities

2024/25 progress

- We are continuing to enhance our governance framework, including increased recognition of the role that each Board Committee and several executive committees play in managing climate and nature risks and opportunities, such as our ESG Committee which provides strategic oversight of environmental performance and sustainability.
- We continue to incorporate carbon values into our investment decision-making, and we continue to incentivise our Executives to deliver through performance-linked targets tied to customer and environmental outcomes.

Strategy

The actual and potential impacts of climate-related and nature-related risks and opportunities on our business, strategy, and financial planning

2024/25 progress

- We have reviewed and enhanced our assessments of physical and transitional climate risks and opportunities. We have re-assessed the materiality of key risks with stakeholders across the Group and enhanced the actions we are taking to manage the most pressing risks.
- Climate change resilience and nature recovery are central to our Business Plan 2025-2030.
- We have updated our Environmental Policy this year (January 2025): Group Environment Policy. This can be found here: https://www.pennon-group.co.uk/sites/default/files/attachments/pdf/group-environment-policy.pdf
- Overall ownership and responsibility for climate strategy is held by the chair of the organisation's ESG Committee. Implementation of this Environmental Policy is the direct responsibility of the Board and senior management, and indirectly, all Directors, employees and contractors working for the organisation.

Risk Management

The processes we use to identify, assess, and manage climate-related and nature-related risks and opportunities

2024/25 progress

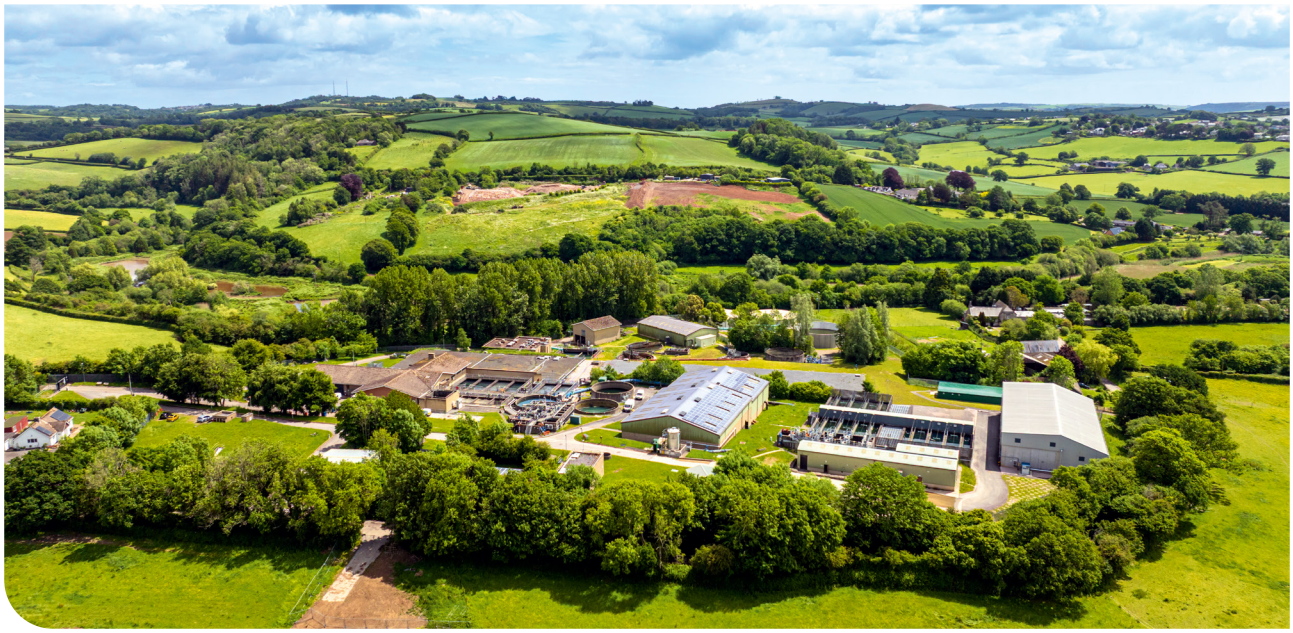
- We have reviewed how climate change, Net Zero, and the nature emergency impact and influence our principal risks and inform our strategic risk management.

Metrics and Targets

The metrics and targets we use to assess and manage the relevant climate-related and nature-related risks and opportunities

2024/25 progress

- We have continued to monitor key metrics linked to selected climate and nature risks and opportunities, and our investments in climate action. We are tracking progress against our ESG targets and our Net Zero commitments and renewable energy generation through regular reporting and governance oversight.
- We have undertaken analysis to quantify key physical climate change risks, including identifying assets vulnerable to coastal flooding, as well as actively monitoring proposed coastal flooding defence schemes, to assess where our infrastructure may remain exposed.



Climate-related and Nature-related Governance

TCFD/TNFD Recommendation: Disclose the organisation's governance around climate-related and nature-related risks and opportunities.

Board Oversight

The Group has a strong governance structure in place to oversee the effective operation of our business and to manage all risks, including climate-related and nature-related risks and opportunities. Overall ownership and responsibility for risks, opportunities, and mitigation actions rests with the Pennon Group Board, which regularly reviews principal risks as part of its risk management processes.

The Board considers climate-related and nature-related risks and opportunities throughout its duties – including when considering the Group's strategy and objectives, monitoring business and operational performance, business planning and annual budget setting, reviewing major capital expenditures and existing investments, and in considering acquisitions/divestitures.

Several Board Committees support this oversight: The ESG Committee provides strategic direction and monitors environmental performance and climate-related matters. The Audit Committee oversees risk management and internal controls. The Remuneration Committee ensures incentives are aligned with the delivery of sustainability and environmental goals. The Nomination Committee supports Board composition and succession planning, including consideration of ESG and climate-related expertise. The Health and Safety Committee monitors operational resilience and asset health, including how health, safety, and environmental risks are managed across the Group.

As a UN Global Compact signatory, we embed its principles on human rights, labour, environment, environment, and anti-corruption into our ESG approach and report progress annually.

We recognise that climate change, the nature emergency, and the transition to Net Zero influence several of the Group's principal risks (see our Principal Risks report on pages 70 to 79 of our Annual Report and Accounts 2024/25). Principal risks are reviewed as part of our audit governance processes.

Each of our regulated water companies has its own Board, which reports to the Pennon Group Board and oversees climate- and nature-related risks within its operations. New Board members, such as the new Chair who joined last year, are briefed on key climate- and nature-related risks, for example through site visits and strategic discussions . For more information see our Corporate Governance report pages 128 to 187 of our Annual Report and Accounts 2024/25.

Pennon Group Board Committees

All Board Committees play a role in managing our climate-related risks and opportunities, and several play a role in managing our nature-related risks and opportunities, and we are continuing to raise awareness of these issues across Board Committees. Matters are escalated to the Board as appropriate. Board Committees report their actions and decisions to the Board, ensuring robust governance – including for matters influenced by climate change, nature recovery and the transition to Net Zero. The responsibility for climate-related and nature-related risks and opportunities is cascaded through the business in order to meet our targets and objectives. Governance of nature-related risks and opportunities has been enhanced for AMP8 with performance commitments that now include biodiversity.

Audit Committee

Meetings and composition: Meets at least four times annually. Attended by the members of the Committee and other regular attendees at the invitation of the Committee.

Role relating to climate risks and opportunities: The Committee monitors the Group's financial reporting, including how the impacts of climate risks are accounted for in financial statements. The Committee also reviews key risks and opportunities (including climate-related risks) and challenges and tests the Group's internal control processes including risk management and internal audit. Further information on pages 151 to 157 of our Annual Report and Accounts 2024/25.

ESG Committee

Meetings and composition: Meets four times annually. Attended by the members of Pennon Board, CEO, CFO, and other Group Executives.

Role relating to climate and nature risks and opportunities: Provides the platform for discussion of the Group's ESG agenda and related climate and nature risks and opportunities, as well as setting and reviewing key metrics relating to ESG targets and goals. The Sustainable Financing reporting and monitoring is reported to the Committee for onward submission to the Board. Further information on pages 158 to 160 of our Annual Report and Accounts 2024/25.

Nomination Committee

Meetings and composition: Meets four times annually. Attended by the Chair and other Non-Executive Directors.

Role relating to climate risks and opportunities: Considers competency related to climate risks and opportunities when reviewing the structure, size, and composition of the Board and senior executives In the Group. Further information on pages 148 to 150 of our Annual Report and Accounts 2024/25.

Remuneration Committee

Attendance: Meets four times annually. Attended by the Chair and other Non-Executive Directors.

Role relating to climate risks and opportunities: Considers the Group's objectives and responsibilities, and advises the Board on the framework of executive remuneration for the Group and for the wider workforce, including mechanisms to incentivise achievement of the Group's objectives related to climate change, Net Zero, and sustainability goals. Further information on pages 163 to 183 of our Annual Report and Accounts 2024/25.

Health and Safety Committee

Attendance: Meets two times annually. Attended by the Chair, CEO, CFO, and other Non-Executive Directors.

Role relating to climate risks and opportunities: Supports the Executive Board on matters of risk across all areas of health and safety, resilience, and process safety – including areas impacted by climate-related risks, particularly related to harm from extreme weather events. Also reviews the effectiveness of the Group's procedures for Health and Safety reporting and performance. Further information on pages 161 to 162 of our Annual Report and Accounts 2024/25.

Management's role

Executive managers play a key role in identifying, assessing, and managing climate-related risks and opportunities, and Executive managers sit on relevant Executive committees. Over the past year we have reorganised our business into four business units: Clean Water, Wastewater, Pennon Power, and Retail; all supported by our Corporate Functions. Management within each business unit are responsible for owning, managing, and assessing climate-related and nature-related risks in their business units – including risks related to water resources, wastewater, regulation, procurement, engineering, natural resources/biodiversity, and finance. Risk is identified and categorised within each business unit prior to being formally passed onto senior management responsible for those business units. Each business function and department maintains a risk register, and management escalates risks to the Executive teams through meetings as appropriate. We are continuing to raise awareness and the capacity of teams and executive management to identify, assess, and manage climate and nature risks and opportunities.

The Executive Directors' remuneration policy is set to incentivise the achievement of key performance objectives. This includes ESG objectives and broader environmental performance including targets that align with the Group's climate and sustainability ambitions.

Pennon Executive Committee (PEx)

Attendance: CEO, CFO, Pennon General Counsel & Company Secretary, Chief People Officer, Chief Strategy and Regulation officer, Managing Directors for the Business Units, Chief Engineering Officer.

Role relating to climate and nature risks and opportunities: The Committee monitors, approves and reviews business objectives and plans, and provides challenge and feedback to investment decisions. Throughout these processes climate-related and nature-related risks and opportunities are considered and actions to manage risks are embedded in business planning and Investment decision-making. There are several executive committees who report to PEx, including Business unit senior leadership teams.

Strategy

TCFD/TNFD Recommendation: Disclose the actual and potential impacts of climate-related and nature-related risks and opportunities on the organisation's businesses, strategy, and financial planning where such information is material.

Climate-related Risks and Opportunities

Our most material physical and transitional climate-related risks and opportunities are presented on the following pages. These have been identified by considering the climate scenarios described on page 26. The risks have been assessed using the Pennon 4x4 risk assessment matrix which puts the highest risks in the red category under the RAG rating. Further information on our risk assessment methodology can be found on page 70 of our Annual Report and Accounts 2024/25. We have identified impacts over short (0-10 years), medium (10-25 years) and long term (25 years and beyond) horizons (the rationale behind these time horizons is presented on page 26).

Due to the nature of our business, the opportunities are not only assessed on their ability to increase our revenues, some are opportunities to save costs and/or carbon, which supports our ability to provide the best outcomes for our customers and stakeholders.

We then present our findings from our scenario analysis, exploring the potential range of impacts and our strategic responses under plausible contrasting climate scenarios (see page 28).

Key

Risk ratings: High, Medium, Low

Risk Trend: Increasing, Stable, Decreasing

Physical climate risks

Key physical climate risk

Increasing frequency and intensity of droughts – risks to water supply and impacts on the overall water cycle.

Relevant time horizon

Short, medium and long term, with increasing likelihood and magnitude of risk over each horizon

This year's risk rating

Current risk rating

Risk score in 2050 without further action

Last year's risk rating

Current risk rating

Risk score in 2050 without further action

Key impacts identified on our operations and customers

- Sustained drought can lead to supply shortfalls with a heightened risk for recovering water storage if there are consecutive drought years.
- Risk compounded by high temperature events that increase daily and peak demand for garden watering, crop irrigation, and tourism exceeding the capacity to redistribute water.
- Drought events lead to loss of supply and de-pressurisation of pipelines, greater incidence of pipe failure and contamination.
- More extreme wetting and drying cycles cause soil movement, more pipe movement/ subsidence and bursts/ increased leakage.
- Lower river flows, as a result of drought events, reduce yields. Could lead to reductions in our future abstraction allowances and increased need to release more water to rivers/the environment (see also 'climate-related regulation in the Water sector' transition risk).
- Lower groundwater levels reduce borehole yields. Intake, borehole pump and reservoir draw-off levels may not match reduced levels.
- Demand for environment protection impacts the availability of water for sustainable abstraction. Water companies' legal obligations and our environmental ambition to protect, restore and enhance the environment is increasingly challenging with increased frequency and severity of droughts.
- Saline intrusion as lower groundwater levels reduce the natural pressure that keeps seawater at bay, exacerbated by rising sea levels (see 'Rising sea levels' risk).
- Decreased intake raw water quality (see 'risks to raw water quality and treatment' risk).
- Impacts on wastewater networks from lower flows of surface water into the network, such as less storm overflow volumes but increased risk of sediment build up.
- Prolonged low water levels increasing the spread of invasive non-native species (INNS), as stressed native ecosystems become more vulnerable and INNS exploit newly available habitats.

Key physical climate risk

Gradual and significant increasing average and high temperatures – risks to raw water quality and water treatment

Relevant time horizon

Short, medium and long term, with increasing likelihood and magnitude of risk over each horizon

This year's risk rating

Current risk rating

Risk score in 2050 without further action

Last year's risk rating

Current risk rating

Risk score in 2050 without further action

- Increased catchment erosion leads to decreased water quality (odour, discolouration, dissolved organics, microbes) requiring additional resources and cost to remove pathogens from drinking water or ensure water quality meets regulatory standards at WTWs.
- Increased microbe propagation and survivability affecting treatment processes.
- Algal blooms, triggered by catchment erosion and runoff, are exacerbated by higher temperatures.
- Higher peak demand for water compounded by reduced runoff yields due to higher temperatures increasing evaporation (see 'Increasing frequency and intensity of droughts' risk).
- Decreased water quality compounded by overheating of equipment/assets.
- Cascading impacts to interdependent networks (e.g. power supply) from overheating, leading to service disruption.
- Increased prevalence of INNS.

Examples of our actions to mitigate risks and realise opportunities through PR24 investments	Primary financial and reputational impacts to our business
Current actions: **Strategic Planning and Regional Collaboration** • Publication and delivery of the 2024 Water Resource Management Plan, setting out long-term strategies for sustainable supply. • Active participation in regional water resource management through water resource groups: West Country Water and Environment and Water Resources South East. • Enhanced drought planning, including preparation for more extreme events using stochastic and multi-year drought analysis to test system performance under prolonged dry conditions. **Infrastructure Investment and Supply Resilience** • Repurposed disused mines and quarries to create new water storage capacity. • Enhancements to the distribution system to remove bottlenecks and support peak demand. • Implementation of Abstraction Incentive Mechanism (AIM) schemes to promote sustainable abstraction practices. **Innovation and Efficiency** • LeakBot trials underway at households to help reduce leakage levels across the network. • Participation in the Ofwat Innovation Project, Water Net Gain, focused on piloting smart ponds to provide localised water storage solutions. **Planned or future actions:** **Strategic Planning and Regional Collaboration** • Development of the Water Resources Management Plan 2029, including new water supply and demand reduction options. **Infrastructure Investment and Supply Resilience** • Commencement of the Cheddar 2 reservoir, a major new storage scheme to benefit the entire South West region. • Poole Reuse: A strategic reuse project that will pump treated wastewater from Poole to a new advanced treatment facility before discharging into the River Stour, in order to support water supply and the environment in Bournemouth. • Increased water grid connectivity to improve resilience in areas such as Roadford and Colliford. **Innovation and Efficiency** • Continued development of desalination schemes to enhance drought management, including progressing feasibility studies across Cornwall and the Isles of Scilly.	**Impacts from mitigating the risk:** Proactive investment in drought resilience, including storage, leakage reduction, and desalination, supports long-term water security, reduces service disruption, and protects environmental flows during prolonged dry periods. **Impacts of the unmitigated risk:** Failure to mitigate drought risk could lead to water supply shortfalls, infrastructure damage, environmental degradation, and regulatory non-compliance, with significant financial, operational, and reputational consequences.
Current actions: **Nature-Based Solutions and Catchment Management** • Exceeding Upstream Thinking catchment management targets, delivering benefits for water quality, wildlife, water resources, and peatland restoration. • Implementation of an INNS (Invasive Non-Native Species) programme, with two South West Water sites upgraded from bronze to silver in the AQUA biodiversity accreditation scheme. • Embedded our 'Green First' approach into all decision-making, promoting the use of nature-based solutions wherever possible. **Innovation and Research** • Ongoing innovation through the Centre for Resilience in Environment, Water and Waste (CREWW), a purpose-built research facility supporting cross-sector collaboration and applied research. **Infrastructure and Operational Resilience** • Upgraded treatment works, including the rollout of state-of-the-art treatment technologies designed to make our sites and assets more resilient to future challenges, including the rebuilding of two strategically important treatment works in the Bournemouth Water region. • Maintained robust health and safety practices and management across operations, to support operational resilience and workforce protection in the face of increasing climate-related physical risks. **Planned or future actions:** **Infrastructure and Operational Resilience** • Continued modernisation and upgrade of treatment infrastructure, ensuring they are future proofed against climate risks. **Innovation and Research** • Continued innovation through cross-sector collaboration via the CREWW research programme, supporting long-term resilience and environmental outcomes.	**Impacts from mitigating the risk:** We could incur increased expenditure (Capex and Opex) for water treatment, and to increase capacity for water supply infrastructure. Some of these costs could be recoverable through the regulatory system. Increased energy and material use could impact our operational and embodied carbon. **Impacts of the unmitigated risk:** Service disruptions and lower quality service provision could negatively impact our reputation and reduce ODI rewards/increase ODI penalties (affecting our revenue). We could face additional expenditure (Opex and Capex) to recover from service disruptions, reduce leakage, and manage water demand. Some of our assets could deteriorate and face impairment due to physical impacts.

Key
Risk ratings: High, Medium, Low
Risk Trend: Increasing, Stable, Decreasing

Physical Climate Risks continued

Key physical climate risk

Increasing frequency of heavy rainfall and floods – risks to sewer flooding

Relevant time horizon
Short, medium and long term, with increasing likelihood and magnitude of risk over each horizon

This year's risk rating

Current risk rating

Risk score in 2050 without further action

Last year's risk rating

Current risk rating

Risk score in 2050 without further action

Key impacts identified on our operations and customers

- Impacts from intense rainfall overwhelming the surface water drainage system and from prolonged rainfall leading to groundwater flooding.
- Flooding of assets and treatment works, loss of access to assets, and greater sediment levels in raw water which disrupt services and potentially impact the environment.
- Cascading impacts to interdependent networks (e.g. power supply) from flooding, leading to service disruption.
- Increased groundwater leading to increased infiltration into assets.
- Increased volumes of storm-water exceed pump capacity leading to service failures.
- Exceedance of storm tank design and asset flooding/damage with interruption to service.
- Increased frequency and duration of storm overflows, with potential impacts to water bodies – including potential closure of beaches.
- Increased river flows and risk of bank erosion exposing wastewater pipes, increasing the risk of collapse.
- Catchment erosion in moorland or peatland areas, with nutrients leaching that increase algal growth in waterbodies and reservoirs.
- Dilution of, and rapid variations in, influent flows – longer retention of water in storm tanks leads to increased septicity and operational problems.
- Increased flood incidence impacts water quality for some boreholes, may result in temporary inaccessibility or contamination.
- Increased turbidity of water sources.
- Increased river flows and riverbank erosion. Risk to riverside pipework and assets.

Key physical climate risk

Rising sea levels and coastal erosion – risks to assets and services

Relevant time horizon
Short, medium and long term, with increasing likelihood and magnitude of risk over each horizon

This year's risk rating

Current risk rating

Risk score in 2050 without further action

Last year's risk rating

Current risk rating

Risk score in 2050 without further action

- Direct asset damage from flooding, storm damage and/or coastal erosion.
- Cascading impacts to interdependent networks (e.g. power supply) due to damage from coastal flooding, storm damage and/or coastal erosion.
- Rising sea levels increase the extent of the saline intrusion zone. Tidal limits move upstream, causing increased salinity at river intakes. This can cause accelerated asset deterioration and reduced process performance efficacy.
- Increased health and safety implications e.g. hydrogen sulphide gas from wastewater treatment works.
- Saltwater intrusion of groundwater sources causing source to become unusable (compounded by lowering groundwater levels – see our 'Increasing frequency and intensity of droughts' risk).
- Coastal estuarine storm overflow discharges become tide-locked hindering free discharge.
- Increased environmental ambition by other stakeholders to replace lost coastal habitat and manage coastal erosion, impacting our assets and services (in some cases requiring us to carry out actions which may not be funded through the regulatory system).

Examples of our actions to mitigate risks and realise opportunities	Primary financial and reputational impacts to our business
Current actions: **Strategic Planning and Collaboration** • Development of the National Storm Overflows Plan, setting out plans to reduce storm overflows and supporting national-level strategy, transparency, and alignment. • Development of Pollution Incident Reduction Plan (PIRP) to identify and address pollution risk. • Catchment Systems Thinking Co-operative (CaSTCo) project with CREWW, exploring how nature-based solutions can reduce surface water inputs to combined sewer networks. **Network Resilience and Pollution Reduction** • Achieved 100% storm overflow monitoring, enabling better oversight and real-time response. • Investment in WaterFit Plans, reducing storm overflow with a focus on beaches and high-amenity areas improving water quality and restoring habitats. • Proactive sewer investigations, cleaning, and repair, combined with network improvements, to prevent flooding and reduce failure risk. • Implementing sustainable solutions, such as surface water separation to reduce pressure on the sewerage network, and phosphorus removal schemes to support river health. • Partnership flood schemes, including work at Countess Wear Wastewater Treatment Works (Exeter). **Nature-Based and Community Solutions** • Catchment management through Upstream and Downstream Thinking, supporting water quality and flood resilience, working with local partners and communities in 15 catchments. • Collaborative work to achieve designated inland bathing waters in the South West – a first for the region. **Innovation and Risk Mapping** • Developing a Groundwater Infiltration Risk Map with CREWW, incorporating climate change scenario modelling. **Planned or future actions:** **Strategic Planning and Collaboration** • Commencing the next cycle of our Drainage and Wastewater Management Plan (DWMP), in collaboration with stakeholders and flood risk management organisations, to address shared responsibilities for surface water flooding and drainage. • Ongoing and regular updates to the Pollution Incident Reduction Plan (PIRP) to reflect new risks and performance data. **Network Resilience and Pollution Reduction** • Expanded investment to address storm overflows at beaches and shellfish waters, including storm storage, sewer separation, and other infrastructure upgrades as part of our £3.2 billion Business Plan • Continued improvements to incident management to reduce pollution and service disruption. **Nature-Based and Community Solutions** • Assessing storm overflow solutions using the 'Green First' principle, prioritising nature-based approaches. • Expanding the Upstream Thinking initiative to further enhance catchment-scale water quality and resilience. • Promoting improved understanding that the number of combined sewer overflows (CSOs) does not directly equate to environmental or human health impact.	**Impacts from mitigating the risk:** We could incur additional expenditure (Opex and Capex) to improve operational resilience and flood defences, and to enhance our Upstream and Downstream Thinking programmes. Some of these costs could be recoverable through the regulatory system. Increased energy and material use could impact our operational and embodied carbon. **Impacts of the unmitigated risk:** Service disruptions and combined storm overflows could negatively impact our reputation and reduce ODI rewards/increase ODI penalties (affecting our revenue). We could incur additional expenditure (Opex and Capex) to recover our services and repair damaged assets. Some of our assets could deteriorate and face impairment due to physical impacts.
Current actions: **Climate-Informed Risk Assessment and Planning** • Five-yearly asset flood risk assessments incorporating the latest UK Climate Projections to inform Shoreline Management Plans to work collaboratively with other land holders on shared solutions. • Drainage and Wastewater Management Plan (DWMP) supports long-term resilience planning. **Operational Resilience and Asset Protection** • Deployment of Operational Response and Recovery Plans to manage flood risks and ensure service continuity. • Enhanced flood resilience across coastal assets, including targeted defences against saline intrusion (e.g. Otter Basin). • Delivery of partnership flood schemes, such as Countess Wear WWTW in Exeter, to strengthen regional protection. **Customer and Community Support** • Prioritised support for vulnerable customers during extreme weather events. • Ongoing engagement with coastal erosion risk management authorities. **Planned or future actions:** **Strengthening Coastal and Water Resource Resilience** • Expansion of saline intrusion protection to additional at-risk sites. • Desalination programme to replace 'at risk' sources such as Isles of Scilly boreholes. **Collaborative Planning and Adaptation** • Continued collaboration with risk management authorities to inform and evolve Shoreline Management Plans.	**Impacts from mitigating the risk:** We could incur additional expenditure (Opex and Capex) for protecting our sites and assets from coastal flooding and saline intrusion. Some of these costs could be recoverable through the regulatory system. Increased energy and material use could impact our operational and embodied carbon. **Impacts of the unmitigated risk:** Service disruptions could negatively impact our reputation and reduce ODI rewards/increase ODI penalties (affecting our revenue). We could face additional expenditure (Opex and Capex) for using alternative water supply if sites/sources become unusable. Some of our assets could deteriorate and face impairment due to physical impacts.

Key

Risk ratings: High, Medium, Low

Risk Trend: Increasing, Stable, Decreasing

Physical Climate Risks continued

Key physical climate risks

Increasing frequency of extreme weather events, heatwaves and storms – Acute risks to assets and services

Relevant time horizon

Short, medium and long term, with increasing likelihood and magnitude of risk over each horizon

This year's risk rating

Current risk rating

Risk score in 2050 without further action

Last year's risk rating

Current risk rating

Risk score in 2050 without further action

Key impacts identified on our operations and customers

- Power supply failure due to high winds, heavy rainfall/flooding, lightning at key network and treatment sites and resultant cascading impacts to interdependent networks, including water supply delivery and wastewater management.
- Cold snaps and freeze/thaw events leading to pipe bursts/increased leakage.
- Reduced ability for our services and assets to recover under consecutive storms.
- Surges in customer water use during heatwave events leads to operational challenges to treat and distribute water at pace even when there is enough water in sources (also see 'Increasing frequency and intensity of droughts' risk).
- Damage to our assets due to extreme weather and/or heatwaves e.g. overheating of electrical equipment.
- Decreased water quality during heatwaves (also see 'risks to raw water quality and treatment' risk).

Examples of our actions to mitigate risks and realise opportunities

Current actions:

Operational Resilience and Incident Management

- Improved operational and incident response across our South West Water and Bournemouth regions to minimise the impact of power failures.
- Continued investment in control room operations and alternative water supply teams to ensure service continuity.
- Severe and cold weather protocols and winter preparedness activities on operational assets to reduce disruption, protect critical infrastructure, and prioritise support for vulnerable customers during extreme conditions.
- Regular sector-wide coordination through Water UK Platinum Incident Management and National Incident Management calls.

Energy Resilience and Diversification

- Power resilience visualisation tool developed to assess vulnerability to national energy outages and drive targeted investment in resilience.
- Diversified energy supply, including onsite renewable energy generation, to reduce reliance on the national grid.
- Use of sludge to generate energy, powering parts of operations and enhancing energy self-sufficiency.
- Backup power systems at treatment plants to manage energy supply interruptions.
- Standby generator roll-out programme, with a switch from diesel to Hydrotreated Vegetable Oil (HVO) for lower carbon emissions.

Collaboration and Supply Chain Resilience

- Working with energy providers and other stakeholders to enhance regional resilience.
- Mutual aid agreements in place to manage competing demands during emergency events.
- Supply chain resilience initiatives, including a new commercial framework to diversify suppliers for critical items like treatment chemicals and HVO.
- Development of a Business Continuity and Visualisation Tool with Water UK and other companies to support operational decisions and reduce customer impacts, especially for vulnerable populations.

Planned or future actions:

Strategic Planning and Climate Adaptation

- Future climate adaptation and transition planning, ensuring long-term resilience to evolving climate risks.

Operational Resilience and Incident Management

- Continual improvement of operational and incident response, incorporating lessons learned from past events and building on the appointment of a new incident management team.
- Continued collaboration with Water UK and industry groups to strengthen regional and national resilience to power outages.

Energy Resilience and Innovation

- Further investment in renewable energy generation and backup power infrastructure to enhance energy security.
- Investment in mobile Granulated Activated Carbon (GAC) units, to allow us to respond to climate related raw water quality issues, ensuring that we can continue to treat water through weather extremes.

Primary financial and reputational impacts to our business

Impacts from mitigating the risk:

We could incur additional expenditure (Opex and Capex) for maintenance and upgrades to assets to enhance resilience to storms. Some of these costs could be recoverable through the regulatory system. Increased energy and material use could impact our operational and embodied carbon.

Impacts of the unmitigated risk:

Service disruptions could negatively impact our reputation and reduce ODI rewards/increase ODI penalties (affecting our revenue).

We could face additional expenditure (Opex and Capex) to restore services and repair assets. Some of our assets could deteriorate and face impairment due to physical impacts.

Key

Risk ratings: High | Medium | Low

Risk Trend: Increasing | Stable | Decreasing

Transition Risks continued

Type as defined by TCFD

Policy, Regulation and Legal Risks

Relevant time horizon

Short and medium term

Potential for this risk to decrease over time as regulation evolves to remove contradictions and misalignment, and as leadership on climate action becomes commonplace across Government and the economy.

Current risk rating

Last year's risk rating

Key impacts identified on our operations and customers

Risk of challenges balancing trade-offs in regulation in the Water sector between agendas of Net Zero, climate resilience, environmental enhancement, and other objectives, posing the risk of increasing costs and carbon: Prioritising different regulatory goals can result in undesired climate impacts. Rapid changes in policies and regulations can misalign holistic actions with stringent agendas, posing risks to Pennon. Some examples include:

- Stricter environmental regulations for climate adaptation and nature-positive agendas, with reduced abstraction allowances and increased river compensation flows (see our 'drought' physical risk)
- Increased environmental ambition to restore coastal habitat and manage erosion. (see our 'rising sea levels' physical risk).
- Changes to carbon accounting methodologies and scope boundaries, such as using location-based instead of market-based GHG accounting (e.g. disincentivising power purchase agreements (PPAs) for renewable energy).
- Increased energy demand and subsequent carbon footprint due to the use of modular desalination to ensure drought resilience at pace, and enhanced treatment requirements (e.g. phosphorus removal, UV disinfection, reducing combined sewer overflows in cases where the scale and pace required disadvantages nature-based solutions);
- Regulation contradicting Net Zero goals, with limited incentives for broader actions outside the regulated water business.

Examples of our actions to mitigate risks and realise opportunities

Current actions:

- Horizon scanning for new regulations.
- Engaging with stakeholders and maintaining public relations.
- Net Zero programme.
- Tracking small outperformance through the voluntary ODI under the Green Recovery Initiative.
- Establishment of science-based targets (SBTi) for carbon reduction.
- Communicating the impact of regulations on climate risks to regulators.
- Clarifying carbon accounting with sector partners.
- Engaging with customers via WaterShare+ Customer Advisory Panel.
- Adaptive planning approach within WRMP24 and DWMP23.
- Considering actions which Pennon can take outside of the regulatory framework (e.g. offsite investment in renewable energy).
- Seeking and implementing Ofwat innovation-funded projects for additional investment.
- Establishment of the Centre for Resilience in Environment, Water and Waste (CREWW) to collaborate with academia on water sector challenges.

Future actions:

- Upstream Thinking programme for nature recovery and nature-based solutions.
- Investment in innovation, R&D and climate resilience.
- Consideration of internal carbon pricing.
- Public value assessments in decision-making.
- Seeking opportunities for additional funding within and outside the regulatory system.
- Future climate adaptation and transition planning.
- Engaging with WaterUK and contributing as a reviewer for industry-wide developments.
- Review of ESG priorities considering the new materiality assessment.

Primary financial and reputational impacts to our business

Impacts from mitigating the risk:

Regulatory changes may increase Opex and Capex for new equipment installation and operation. Some costs might be recoverable through the regulatory system. Increased energy and material use could raise our carbon footprint.

Impacts of the unmitigated risk:

Failing to balance regulatory requirements could reduce ODI rewards and increase penalties, impacting revenue. Negative public perception could harm our reputation. High carbon emissions or poor environmental outcomes may lead to asset obsolescence and impairment.

Key

Risk ratings: High, Medium, Low

Risk Trend: Increasing, Stable, Decreasing

Transition Risks continued

	Key impacts identified on our operations and customers
Type as defined by TCFD **Policy, Regulation and Legal Risks** **Relevant time horizon** **Short and medium term** In the short term the risk is more focused on funding to achieve Net Zero, over the medium and long term the risk will increasingly focus on funding to enable adaptation to climate change. **Current risk rating** **Last year's risk rating**	Achieving operational Net Zero by 2030 and delivering timely climate adaptation may be affected by evolving regulatory expectations and the pace of funding approvals. Emerging requirements may not be fully reflected in regulatory cycles, creating uncertainty around future investment pathways and delivery timelines.
Type as defined by TCFD **Technology Risks** **Relevant time horizon** **Short and medium term** In the short term the risk is primarily driven by limited supply and readiness of technology and resources (due to past underinvestment in skills development and infrastructure across the UK and beyond, particularly in the South West), over the medium term the risk will be increasingly driven by high demand for technology and resources. **Current risk rating** **Last year's risk rating**	**Capacity and readiness of technology and resources to achieve Net Zero before other sectors and the wider UK:** Risks that skills, technology, resources, and infrastructure are not ready to enable Pennon's transition to Net Zero operational carbon by 2030, causing delays and high costs. Examples include: • Workforce and supply chain availability to design low-carbon solutions affected by geopolitical events and macro-economic conditions. • Technology and infrastructure capacity for Pennon's renewable energy projects. • High demand for resources and technologies from others causing delays and increasing costs for Pennon (e.g. demand for expertise, batteries, electric vehicles). • Unsuccessful investment in new technologies, with risks around recovering costs through the regulatory system. • Larger-than-expected innovation needed to reduce process emissions, risking unsuccessful R&D investments and suboptimal decisions. • Readiness and performance uncertainty of nature-based solutions.

Examples of our actions to mitigate risks and realise opportunities	Primary financial and reputational impacts to our business
Managing regulatory funding risk: **Current actions:** **Strategic Integration** • Climate and multi-capital considerations embedded in business planning to align with long-term sustainability goals. • Climate objectives regularly reviewed to ensure they remain ambitious, achievable, and responsive to evolving policy and regulatory landscapes. • Our Green First Approach used to underpin value-driven decision-making, promoting nature-based and best-value solutions that deliver environmental and social benefits. **Engagement and Collaboration** • Maintaining dialogue with regulators, customers, and stakeholders to foster alignment on climate goals and co-develop solutions that support a low-carbon transition. • Monitoring regulatory developments to identify opportunities for strategic alignment and early adoption of climate-related initiatives. **Innovation and Delivery** • Evaluating and prioritising carbon reduction and bioresource initiatives based on long-term value creation, operational efficiency, and environmental impact. • Cultivating partnerships with industry leaders, research institutions, and technology providers to accelerate the development and deployment of sustainable solutions. • Advancing initiatives – such as those of Pennon Power – showcasing a commitment to climate action that goes beyond compliance and regulatory expectations. • Leveraging Power Purchase Agreements (PPAs) to ensure reliable access to renewable energy, enhance energy security, and reduce exposure to market volatility.	**Impacts from mitigating the risk:** Strategic investment in carbon reduction and climate resilience, both within and beyond the regulated business, supports long-term value creation, operational efficiency, and stakeholder confidence. Enhanced engagement with regulators and stakeholders strengthens alignment and may unlock new opportunities for innovation and revenue growth (see our 'Products and Services' climate opportunity). **Impacts of the unmitigated risk:** Delaying or underinvesting in climate action could limit our ability to meet performance targets, potentially affecting outcome delivery incentives (ODIs). It may also lead to increased long-term operational and customer costs, reputational challenges, and reduced asset performance due to physical climate risks. Proactive investment today helps avoid these future impacts and positions us as a climate-resilient leader (see our 'Negative public and stakeholder' and 'Customer affordability' reputation risks).
Managing capacity constraints: **Current actions:** • Continuing to enhance capacity through training and recruitment, collaboration with partners and financial planning. • Establishment of the Pennon Innovation Committee, which is a network across Pennon working alongside CREWW, promoting innovation opportunities and preparing Ofwat innovation applications. **Managing supply chain and infrastructure limitations:** **Current actions:** **Enabling Infrastructure and Capacity** • Collaborating with infrastructure providers, regulators, and Government to encourage investment that expands network capacity. • Enhancing internal capacity and increasing operational efficiency to reduce reliance on external suppliers for renewable energy. **Expanding Renewable Energy Access** • Developing Pennon Power to provide renewable energy from outside the South West region, supporting broader decarbonisation goals. **Future actions:** **Strengthening Supply Chain Resilience** • Diversifying suppliers to enhance resilience and reduce exposure to supply disruptions. • Developing procurement strategies to secure key technologies and expertise critical to climate and energy objectives. **Reducing Network Dependency** • Exploring decentralised solutions such as onsite battery storage to reduce reliance on external network capacity.	**Impacts from mitigating the risk:** Increased Opex to build capacity and access skills and technology, some of which can be recoverable through the regulatory system. **Impacts of the unmitigated risk:** Increased Opex and Capex due to delays and high resource demand; unsuccessful technology investments leading to increased costs; penalties and reputational damage if targets are missed and limited ability to reduce carbon emissions (See our "Policy and Regulation" transition risk).

Key

Risk ratings: High | Medium | Low

Risk Trend: Increasing | Stable | Decreasing

Transition Risks continued

Type as defined by TCFD

Market Risks

Relevant time horizon

Short and medium term

In the short term the risk is primarily driven by limited supply of renewable energy and low-carbon materials (due to past under investment in infrastructure and materials across the UK and beyond), over the medium term the risk will be increasingly driven by high demand for renewable energy and low-carbon materials.

Current risk rating

Last year's risk rating

Key impacts identified on our operations and customers

Increased costs of energy and materials due to the transition to Net Zero, impacts of climate change, and wider factors: Costs are rising due to the Net Zero transition, climate change impacts, geopolitical events, and macro-economic conditions like high inflation. Examples include:

- Electricity prices, especially for 100% renewable energy, reached record highs in recent years due to market volatility. While prices have since eased, the experience highlights the need for long-term energy resilience and investment in self-supply.
- Increased prices for liquid fuels and gas.
- Higher costs for chemicals and construction materials (e.g. cement, steel) due to rising energy prices and carbon reduction measures.
- Increased prices for renewable electricity technologies due to high demand and limited supply.
- Increased energy demand due to the acquisition of companies reliant on groundwater (e.g. SES).

Examples of our actions to mitigate risks and realise opportunities	Primary financial and reputational impacts to our business
Managing cost of energy: **Current actions:** **Renewable Energy & Supply Resilience** • Generate renewable energy and explore additional options and power purchase agreements (PPAs). • Championing upscaling of renewables across our regions. • Acquisition of renewable energy projects to support energy resilience and stabilise costs. **Efficiency & Cost Management** • Increasing efficiency to reduce energy demand (e.g. enhance energy efficiency, reduce leakage – see our 'resource efficiency' opportunity). • Electricity price hedging. • Secure long-term contracts for renewable electricity to manage price volatility. • Accounting for cost recovery mechanism allowed by Ofwat for energy pricing. **Future actions:** **Transition to Low-Carbon Energy** • Switch to alternative fuels, eliminating fossil fuels where possible. • Investing in solar PV sites and innovative renewable projects (e.g. floating solar) • Support Government and wider sectors actions to increase energy security and supply of low-carbon energy. **Smarter Energy Use** • Changing operational practices to reduce energy use and costs (e.g. off-peak electricity pricing). • Exploring low-energy options (e.g. nature-based solutions). **Managing cost of input materials:** **Current actions:** **Smarter Procurement & Cost Management** • Implement cost-reducing procurement strategies (e.g. competitive pricing). • Use whole life carbon tools to understand costs of high-carbon materials. **Supply chain resilience** • Enhanced supply chain resilience by diversifying and expanding suppliers to increase competitiveness and reduce costs. **Future actions:** **Resource Efficiency & Innovation** • Increase efficiency to reduce material use and consumption. • Innovate with different chemicals and materials (e.g. using excavated materials and recycling waste).	**Impacts from mitigating the risk:** Increased Opex and Capex for renewable energy and low-carbon materials, some recoverable through the regulatory system with potential ROI (see our 'energy source' and 'markets' climate opportunities). **Impacts of the unmitigated risk:** Increased Opex and Capex due to higher energy and material costs; limited ability to reduce carbon emissions.

Key

Risk ratings: High, Medium, Low

Risk Trend: Increasing, Stable, Decreasing

Transition Risks continued

	Key impacts identified on our operations and customers
Type as defined by TCFD **Reputational Risks** **Relevant time horizon** **Short and medium term** In the short term customers and stakeholders are primarily concerned about impacts on water quality and aquatic environments. Over time it is likely that customers and stakeholders will have higher concern for carbon emissions and other sustainability objectives. **Current risk rating** Increasing, High **Last year's risk rating** Stable, High	**Negative public and stakeholder relations due to Pennon failing to be a seen as a leader in environmental sustainability:** Negative perception from the public/stakeholders/regulators, possibly linked to a major climate-related incident/event/failure. Some examples include: • Public concern about climate-induced pollution events and sewer overflows. • Concern about the environmental impact of abstraction and wastewater discharge. • Public/media focus on high-energy activities like desalination over carbon reduction efforts. • Shifts in stakeholder/customer expectations related to carbon and climate. • Potential negative perceptions related to development of renewable energy projects, such as impacts on biodiversity. • Stakeholder and customer dissatisfaction if Pennon fails to meet Net Zero commitments.
Type as defined by TCFD **Reputational Risks** **Relevant time horizon** **Short and medium term** The need for additional investment to meet the Net Zero and climate adaptation challenges will likely continue to impact across the medium term, particularly if global climate action is slow and the physical impacts are greater. **Current risk rating** Increasing, Medium **Last year's risk rating** Stable, Medium	**Customer affordability and fairness concerns for achieving Net Zero and adapting to climate change:** Affordability for customers and questions around fairness could become challenging, added to the end of the Government contribution to water and wastewater bills. This risk includes: • Large climate change investments may cause customer and stakeholder dissatisfaction. • Fairness issues, especially for residents in high-impact areas like Cornwall and Devon. • Misalignment among Government departments and regulators requiring increased investment.

Examples of our actions to mitigate risks and realise opportunities	Primary financial and reputational impacts to our business
Managing public and stakeholder relations: **Current actions:** **Environmental Leadership & Climate Action** • Investing in environmental performance and risk reduction, delivering Net Zero and nature programmes (e.g. WINEP, Biodiversity Strategy). • Developing renewable energy projects (e.g. repurposing a disused coal mine). • Committing to global sustainability standards (e.g. UNGC, SBTi). **Stakeholder Engagement & Strategic Thinking** • Engaging customers and communities (e.g. PR24, Nature Recovery, education programmes). • Applying the '6 capitals' framework to guide sustainable decision-making. • Collaborating with research partners (e.g. CREWW) to drive innovation. **Future actions:** **Climate Commitment & Policy Evolution** • Continue delivering on our 'Promise to the Planet' to reach Net Zero. • Enhance sustainability policies and practices, including ESG materiality assessment. **Customer & Community Engagement** • Strengthen customer and community engagement. • Expand the Watershare+ Scheme to reach one in every 10 households.	**Impacts from mitigating the risk:** Potential increased Opex to manage stakeholder relations. **Impacts of the unmitigated risk:** Negative public perception impacting reputation (see also our 'Challenges balancing trade-offs' policy transition risk).
Managing customer affordability: **Current actions:** **Supporting Customers and Communities** • Support programmes and social tariffs for customers struggling to pay bills, including working with regulators and policymakers on initiatives such as a national single social tariff. • WaterShare+ engagement scheme to encourage customers to become shareholders, involved in the company's decisions. • Board's pledge of zero customers in water poverty by 2030. **Delivering Efficient, Long-Term Investment** • Driving efficient investment programmes over the long term whilst ensuring bills reflect value for money. • Phased investment in climate adaptation and Net Zero over time to reduce pressures on bills. • Engaging with customers, stakeholders, regulators, and Government to explain investment needs. **Innovating for Affordability and Resilience** • Exploring cost-reduction actions and innovative tariffs, such as our Smart Saver tariff and seasonal tariffs supporting water efficiency whilst keeping bills low. **Future actions:** **Customer Engagement** • Further encourage customers to have a stake and a say in the company through WaterShare+. **Innovating for Efficiency and Fairness** • Ongoing programme to introduce innovative and progressive charges. • Rolling out smart meters to support water efficiency.	**Impacts from mitigating the risk:** Potential increase to Opex to manage public perception. **Impacts of the unmitigated risk:** Negative public perception impacting reputation and potential penalties for not supporting vulnerable customers.

Key

Risk ratings: High, Medium, Low

Risk Trend: Increasing, Stable, Decreasing

Climate-related Opportunities

Type as defined by TCFD

Resilience

Relevant time horizon

Short and medium term

Enhancing resilience to climate change and extreme weather events is of high relevance today, with increasing likelihood and magnitude of risk over each horizon.

Current opportunity rating

Last year's opportunity rating

Key impacts identified on our operations and customers

Enhancing resilience across Pennon's operations, asset base, and supply chain to avoid costs and enhance value: Opportunity to invest in enhancing resilience across Pennon's business and supply chain, in some cases saving costs (e.g. avoided damage to assets, avoided losses in revenue, avoided penalties on ODIs and GSS) and enhancing Group reputation and value. Some examples include:

- Investing in climate change adaptation (e.g. drought and flood prevention) to avoid customer disruption and asset damage.
- Enhancing supply chain resilience by diversifying suppliers and investing in buffers/storage for critical resources.

Type as defined by TCFD

Energy Source

Relevant time horizon

Short and medium term

This opportunity is of high relevance to meet our 2030 Net Zero target, with continued relevance into the medium and long term due to increasing market risks to energy pricing and resilience of energy supply as physical risks increase in magnitude and likelihood over each horizon.

Current opportunity rating

Last year's opportunity rating

Reducing carbon and enhancing energy resilience and revenue by using and generating renewable energy: Opportunities to lower carbon emissions by using renewable energy and opportunities to invest in renewable energy generation which can lower our carbon emissions, enhance our energy resilience (e.g. less reliance on energy suppliers), and enhance our revenue through sale of renewable energy.

Some examples include:

- Generating renewable energy on Pennon's sites and through partnerships (e.g. PPAs, bioresources, solar and wind energy).
- Switching fuels to lower-carbon sources.

Type as defined by TCFD

Markets

Relevant time horizon

Short and medium term

In the short term the opportunity is more focused on financing to achieve Net Zero and current physical risks; over the medium and long term the opportunity will increasingly focus on environmental targets and climate change resilience to long-term challenges.

Current opportunity rating

Last year's opportunity rating

Generating value and reducing our financing costs through sustainable financing: Opportunity to reduce our cost of finance and avoid cost increases through access to sustainable financing and generation of green financial assets. Our Sustainable Finance Framework is part of our strategy for taking action on climate change, and our approach is evolving as policy and markets change and information becomes available. We are exploring the implications for our business, including regulatory developments such as the EU Taxonomy/UK Green Taxonomy.

Examples of our actions to mitigate risks and realise opportunities	Primary financial and reputational impacts to our business
Enhancing Pennon's resilience: **Current actions:** **Building Resilience and Adapting to Climate Risk** • Diversify water sources (e.g. desalination, repurposing quarries/mines) and pursuing new reservoir capacity. • Plan for company resilience and climate risk assessment and adaptation. • Investments in response and recovery to operational disruption. • Upgrade and modernise infrastructure. **Advancing Renewable Energy and Sustainability** • Generation of renewable energy and explore additional options and power purchase agreements (PPAs) (see our 'market' transition risk). **Future actions:** **Enhancing Climate Resilience** • Actions to adapt to climate change (e.g. enhancing drought resilience) and to mitigate climate risks. • Investing in desalination plant in Cornwall by 2025 to promote climate resilient water resources during periods of drought. **Integrating Nature-Based and Sustainable Solutions** • Incorporate nature-based solutions to improve drainage and reduce reliance on storm overflows.	**Impacts from realising opportunities:** Opportunity to reduce costs (Opex), enhance reputation and increase revenue through improved performance (reduction in penalties or increased rewards). Achieving this will involve strengthening our infrastructure and enhancing our ability to adapt to changing conditions. These efforts will require coordinated planning and resource allocation, and may involve engagement with regulatory frameworks. As we implement climate resilience initiatives, we will also need to carefully manage their associated carbon footprint.
Using renewable energy: **Current actions:** **Renewable Energy Strategy** • Renewable energy procurement strategy. • Supply contract for 100% renewable energy for South West Water. • Exploring additional options and power purchase agreements (PPAs). **Onsite Renewable Generation** • Generation of renewable energy. • Investment in generating renewable energy. **Targeted Carbon Reduction and Net Zero Delivery** • Net Zero programme. • Prioritising investments for highest carbon reduction and return on investment. **Future actions:** **Innovation and Low-Carbon Technologies** • Trials of low-carbon fuels. • Innovation programme (e.g. energy recovery from sewers). • Use of energy recovered from bioresources to power our operations. **Strategic Partnerships** • Engagement with partners for PPAs. • Establishing arrangements to co-fund renewable energy investments.	**Impacts from realising opportunity:** Investing in renewable energy supports our transition to a lower-carbon future and strengthens long-term operational resilience (see our 'market' transition risk and 'market' opportunity). These initiatives can also create new revenue streams through the sale of renewable energy. As we expand our generation capacity, we will continue to manage the environmental footprint associated with these activities.
Sustainable finance: **Current actions:** **Sustainability Embedded into Financial Decision-Making** • Our sustainable financing framework aligned with investment decisions and environmental and ESG. • Sustainable finance market requirements reviewed to ensure alignment with evolving expectations from regulators, investors, and stakeholders. **Future actions:** **Advancing Sustainable Finance** • Establishing commercial and legal arrangements for green financial assets and credits. • Preparing for future disclosure and ESG initiatives, including alignment with frameworks such as the EU/UK Taxonomy, TNFD, ISSB, and Transition Plan Taskforce (TPT). • Exploring third-party funding opportunities to support sustainability-led projects and unlock investment opportunities.	**Impacts from realising opportunity:** By embedding sustainability into our financial practices, we strengthen our position as a forward-looking, responsible business. These actions open up opportunities to attract values-aligned investors, access innovative funding mechanisms, and demonstrate leadership in climate and nature-related transparency, enhancing trust and long-term resilience (see our 'reputation' transition risks).

Key

Risk ratings: High | Medium | Low

Risk Trend: Increasing | Stable | Decreasing

Climate-related Opportunities continued

Type as defined by TCFD

Resource Efficiency

Relevant time horizon

Short and medium term

In the short and medium term, investment in resource efficiency is central to many of our options and decisions in our business plan and WRMP's best value plan. This will enhance our resilience, our ability to meet our environmental and our Net Zero targets, and reduce our Opex over the medium and long term.

Current opportunity rating

Last year's opportunity rating

Key impacts identified on our operations and customers

Saving water, energy, materials, and carbon by enhancing efficiency, using low-carbon and nature-based solutions, and reducing emissions across Pennon's supply chain: Opportunities to invest in enhancing efficiency and reduce wastage of water, energy, and materials, opportunities to use low-carbon construction, and nature-based solutions, and opportunity to work with suppliers to reduce their carbon footprints and enhance their sustainability. Some examples include:

- Leakage reduction, water efficiency, smart metering, rainwater harvesting, and incentivising customers to use less water.
- Enhancing efficiency of process equipment buildings and transport to reduce energy and chemical use.
- Using low-carbon construction materials and local sourcing.
- Employing technology like Real Time Control in sewers to avoid high-carbon interventions (see also our 'technology' risk).
- Constructing wetlands and sustainable drainage systems (SuDS).
- Investing in marine carbon opportunities, peatland restoration, tree planting and soil and grassland activities.
- Working with suppliers to reduce their carbon footprint and enhance their sustainability.

Examples of our actions to mitigate risks and realise opportunities	Primary financial and reputational impacts to our business
Enhancing water efficiency: **Current actions:** **Empowering Customers and Communities** • Customer education and outreach. • Supporting community water-saving projects like the Heathfield Allotment Trust. • Offering free leak fixes for eligible customers. **Leveraging Smart Technology and Data** • Installing AMI smart meters for direct water usage data. • Addressing water leaks using smart meter data. **Driving Sustainable Water and Land Use** • Demand management and water efficiency programmes, including PCC (per capita consumption) and leakage reductions. • Farm water efficiency and resilience project – 1,000 pond nature-based solutions. • Incorporation of carbon values into capital planning and decision making. **Future actions:** **Empowering Customers to Use Water Wisely** • Incentivising customers to use less water. • Supporting customer affordability through efficiency schemes and metered tariffs. • Promoting rainwater harvesting as a sustainable water source. **Enhancing Monitoring and Control Capabilities** • Extending real-time monitoring and control to improve system responsiveness and efficiency. **Enhancing process, building, and transport efficiency:** **Current actions:** **Improving Operational and Energy Efficiency** • Enhancing process efficiency through smarter operations, energy-conscious building practices, and low-emission transport solutions. • Energy efficiency programmes for buildings. • Efficient building requirements in leases. **Reducing Emissions Through Smarter Mobility** • Reducing travel needs through remote monitoring. • Procuring/leasing efficient vehicles. **Future actions:** **Driving Innovation and Operational Excellence** • Investments in innovation for efficiency. • Enhancing operational practices (e.g. real-time monitoring). • Partnerships with suppliers and outsourcing specific operations to improve efficiency and flexibility. **Promoting Low-Carbon Mobility** • Encouraging employee carpooling. • Light-weighting vehicles to reduce emissions and improve fuel efficiency. **Using low-carbon solutions:** **Current actions:** **Embedding Carbon Considerations into Decision-Making** • Implementing capital carbon accounting. • Implementing carbon values in decision making. **Future actions:** **Decarbonising Supply Chains and Materials** • Engaging the supply chain for low-carbon solutions. • Collaborations with suppliers to reduce embodied carbon. • Procurement strategies that incorporate ESG criteria. • Innovation programmes focused on alternative, low-carbon materials.	We can reduce our carbon footprint and Opex through resource efficiency, but it requires significant investment in monitoring, metering, and capital projects. Some costs may be recoverable through the regulatory system. We will need to manage the carbon footprint associated with actions to realise resource efficiency opportunities.

Key

Risk ratings: High | Medium | Low

Risk Trend: Increasing | Stable | Decreasing

Climate-related Opportunities continued

Type as defined by TCFD	Key impacts identified on our operations and customers
Type as defined by TCFD **Products and services** **Relevant time horizon** **Short, medium and long term** Opportunity in the short, medium, and long term to enhance Pennon's revenue through delivery of Strategic Water Resource and bioresources schemes. **Current opportunity rating** **Last year's opportunity rating**	**Enhancing revenue through providing resilient water solutions, bioresources, and expertise to other water companies:** Opportunities to invest in water resources schemes linked to climate change, bioresources opportunities which align with the transition to Net Zero, and other opportunities to enhance our revenues. Some examples include: • Delivering strategic resource options (SROs) and resilient water solutions for other water companies e.g. modular desalination technology. • Selling expertise and technologies for water efficiency and leakage reduction. • Selling bioresources (e.g. biogas, nutrients, sludge etc). • Selling expertise in bioresources to other companies.

Examples of our actions to mitigate risks and realise opportunities	Primary financial and reputational impacts to our business
Advancing Net Zero Leadership and Learning • Net Zero programme with a focus on embodied carbon initiatives. • Learning from other companies in the UK and internationally to adopt best practices and accelerate progress. **Using nature-based solutions:** **Current actions:** **Integration of Nature-Based Solutions** • Practising catchment management to improve water quality, biodiversity, and ecosystem health through landscape-scale interventions. • Embedding natural capital and valuing carbon in decision making. • Investing in innovation and piloting. **Future actions:** **Nature-Based Solutions Through Collaboration** • Partnering with stakeholders (e.g. landowners) to co-develop and deliver NBS. • Collaborations with the supply chain to integrate Green First and nature-based approaches into projects and operations. • Learning from other companies in the UK and internationally to adopt best practices and accelerate impact. • Launching the Nature Recovery Fund to support initiatives that restore and enhance natural ecosystems. **Reducing supply chain carbon:** **Current actions:** • Engaging with suppliers to drive climate action across the value chain, with a commitment of 60% of suppliers to have science-based targets by the end of March 2028. **Future actions:** **Embedding Sustainability into Procurement Practices** • Procurement strategies with ESG criteria to ensure suppliers align with environmental and social standards. • Establishing life cycle assessment requirements for suppliers to evaluate and reduce carbon impacts across product and service lifecycles. **Strengthening Supply Chain Resilience and Learning** • Diversifying the supply chain and sourcing locally where possible. • Learning from other companies in the UK and internationally to adopt best practices in supply chain decarbonisation.	
Delivering water resource schemes and bioresources opportunities: **Current actions:** **Advancing Strategic Water Resource Planning and Collaboration** • Preparatory work on three Strategic Water Resource schemes to secure long-term water resilience. • Engagement with other water companies, regulators, and stakeholders to coordinate planning and delivery of regional solutions. • Establishing commercial and legal arrangements for Strategic Resource Options (SROs) and the sale of bioresources. **Driving Innovation in Resource and Technology Deployment** • Business plan includes opportunity related to pyrolysis for bioresources, supporting circular economy and carbon reduction. • Roll out of new technology in the region to enhance efficiency and sustainability. **Future actions:** **Building Public Support and Driving Innovation** • Engagement with customers to build support (e.g. social licence). • Innovation and R&D in collaboration with CREWW.	**Impacts from realising the opportunity** Potential revenue increase through SROs and bioresources sales, requiring significant investment (Opex and Capex). Some costs may be recoverable through the regulatory system. We will need to manage the carbon footprint of SRO and bioresources schemes.

Short, medium and long-term horizons

In determining our strategy, we have processes in place for identifying, assessing, and responding to climate-related risks and opportunities. In shaping the strategy, we consider short, medium, and long-term horizons.

Short-term – 1 to 10 years

Over this horizon we define key targets (operational, financial, sustainability) and we consider changing regulatory frameworks and emerging Government policies. We develop business plans every five years, defining our actions and investments over this period. Operational risks are planned and budgeted for over this time frame and planning begins during this period for the next regulatory period. Our operational Net Zero 2030 commitment falls within this time horizon, as well as the price reviews in 2029 (PR29) and 2034 (PR34). Transition risks and opportunities are likely to have the largest impacts to our business across this period, with physical risks projected to increase over time.

Medium-term – 10 to 25 years

Our WRMP and DWMP strategic plans consider requirements up to 25 years. Major projects and operational plans will be renewed and managed over this time frame to ensure projects meet the correct regulatory period plans. Our 2045 total Net Zero target falls within this horizon, as well as the UK's 2050 Net Zero target, which will continue to present emerging policy and market changes. Transition risks and physical risks will both impact our business across this period to varying levels, depending on global GHG emissions and the Net Zero pathway taken by the UK and globally.

Long-term – 25 years and beyond

Typically for longer-term strategic direction, risk, and resilience planning. Investment requirements for our long-life assets are considered, such as mains pipes and reservoirs. Current projections are that by the end of this century the planet will have warmed by up to 3°C, however there is much uncertainty related to the effectiveness of global climate change mitigation. Physical climate risks are likely to have the largest impacts to our business over this time horizon.

Climate scenario analysis

Scenarios

In alignment with the TCFD guidance, we have assessed the risks and opportunities associated with climate change and the transition to a Net Zero climate-resilient economy. We have used plausible contrasting scenarios to explore the potential range of impacts in the future and in turn the possible range in our strategic responses required to mitigate risks and build adaptive capacity in an uncertain future.

Our physical risk scenarios are informed by the IPCC's Representative Concentration Pathways (RCPs) from the IPCC's 5th assessment (2014), including a high and a low emissions scenario, which are also used as the basis for planning by Ofwat as part of the PR24 methodology. The IPCC's 6th Assessment report was released in 2023, and in it the IPCC has adopted new climate scenarios know as Shared Socioeconomic Scenarios (SSPs). However, Pennon has continued to use the RCP scenarios due to these being mandated by Ofwat's PR24 methodology.

Our transition scenarios are informed by high and low levels of socio-economic drivers surrounding policy ambition, the speed at which policy is implemented, and the pace of technological advancement. In 2024 we updated our transition risk assessment to adopt scenarios developed by the Network for Greening the Financial System (NGFS). These transition scenarios have become widely adopted in the UK.

The two Network for Greening the Financial System (NGFS) transition scenarios used are: (1) Orderly transition, aligned to the NGFS Net Zero 2050 and (2) Hot house world aligned to the NGFS Current Policies. The NGFS Net Zero 2050 aligns closely with the IEA Net Zero 2050 scenario. We have selected these contrasting scenarios as they span a range of possible futures, and present different challenges and opportunities for our business.

The NGFS Disorderly Transition Scenario has also been considered, but our view is that negative impacts for our Group are more significant under the NGFS Current Policies Scenario, so it has been the focus of our scenario analysis to provide a stress test of our resilience.

We will continue to re-visit our scenario analysis in future, including considering the merit in selecting additional scenarios.

Our scenarios can be defined as follows:

Physical climate risk scenarios

RCP2.6[1]: Lower Physical Impacts

An approximate 2°C warming scenario by the year 2100 – corresponding to a low emissions 'optimistic' scenario.

RCP8.5[1]: High Physical Impacts

An approximate 4°C warming scenario by the year 2100 – corresponding to a high emissions 'business-as-usual' scenario, which is appropriate to use when considering high risks.

Climate Transition risk scenarios

1.5 degree scenario: NGFS Net Zero 2050

A scenario which sees the UK as a global leader with strong policies and actions to mitigate climate, aligned with the Paris Agreement.

Policy ambition
1.5°C

Government policy
Immediate and smooth

Technology change
Fast change

3-degree scenario: NGFS Current Policies

A scenario which sees the UK make incremental progress to mitigate climate change, but assumes no major policy changes and results in missing the targets of the Paris Agreement.

Policy ambition
3°C+

Government policy
None – current policies

Technology change
Slow change

Key assumptions

For our scenario analysis, the following assumptions for all scenarios were made:

- Scenarios focus on the UK policy and regulatory context and are semi-independent of global action and temperature pathways.
- It is assumed that the current high energy prices remain high throughout this decade.
- The Government's ambition around environmental protection and conservation remains high, regardless of the pace of transition.
- No significant change to Pennon Group's business activities.
- Population in our region increases by 0.4 million by 2050, overall water demand remains unchanged from today (due to leakage reduction and water efficiency measures), and overall volume of wastewater treated remains unchanged from today (due to actions taken to reduce surface water flows to sewers).

1. The IPCC's Representative Concentration Pathways from the IPCC's 5th assessment (2014)

Physical Climate Risks – Scenario Analysis

Approach taken

The Group undertook qualitative scenario analysis in 2021 considering the financial implications of physical climate risks for South West Water under two climate scenarios based on the IPCC's Representative Concentration Pathway (RCP) scenarios. Potential material financial impacts were considered over the 10-year horizon to 2030, aligning with the Group's regulatory financial viability testing. Material impacts on our business and strategy were considered over the time horizon to 2050, aligning with a medium-term view of climate change impacts before uncertainty increases beyond 2050. Since 2021 we have extended our analysis to cover Bristol Water, and we look to include SES Water as we update our scenario analysis in future e.g. when Ofwat updates the physical risk scenarios used in business planning. This year we have revised our scenario analysis based on changes over the past year, using the same physical climate scenarios as the previous years.

Impacts

This section discusses impacts under both of the physical climate risk scenarios (RCP2.6 and RCP8.5).

- **Climate resilience will require increased expenditure and investment.** The most significant financial impacts for the Group are on our expenditures (Opex and Capex), to mitigate against future climate risks by increasing capacity for water supply infrastructure; managing drought conditions and water demand; improving water and wastewater treatment and odour management; reducing storm overflow discharges; improving operational resilience to flooding, saline intrusion and storms; and enhancing our Upstream and Downstream Thinking programmes. These financial impacts would be significantly greater under the higher emissions scenario over the long-term horizon as they will require higher levels of adaptive capacity, although adaptive planning will seek to minimise this impact by identifying low-regret options under both high and low emissions scenarios to inform investment decisions. These costs could be recoverable through the regulatory system.
- **Investments in our natural capital will be central to climate adaptation.** Within the water industry, healthy and functioning ecosystems are critical for resilient operations. Therefore, the risks to Pennon's infrastructure are affected by risks to the natural environment. Accordingly, increased expenditures (Opex and Capex) include heavy investment in our natural capital schemes, catchment management, partnerships, and research and development in this area, as well as implementing our comprehensive Biodiversity Strategy and Environment Plan 2050. Our 'Green First' framework prioritises nature-based solutions to improve climate adaptation and resilience.
- **Climate impacts will affect our ability to meet performance commitments and objectives.** The Group could also be impacted financially by Outcome Delivery Incentive (ODIs) penalties and rewards due to potential failure to achieve performance commitments as part of the regulatory framework, further resulting in negative impacts to our reputation. This impact is more likely under the higher emissions scenario over the long-term horizon due to higher projected magnitude of climate impacts and frequency of extreme weather events.
- **Investment required is high, but the cost of inaction is much higher.** Our risk assessment clearly shows long-term significant risks if the impacts of climate change are not mitigated. Pennon Group operates over £8 billion of assets, the majority of which relate to water and wastewater and will be impacted by climate change in some way. The drought in 2022 cost the Group around £20 million, and following this we have invested to enhance resilience. The unmitigated risk would result in additional expenditure (Opex and Capex) to recover from service interruptions and repair or replace deteriorated assets. The unmitigated risk would result in more frequent and greater ODI penalties. Although some of this will be our expenditure, wider flood protection investments will be required by others to protect wide-ranging coastal assets.
- **Impacts are worse with every bit of additional warming.** We would experience these impacts for extreme events over all time horizons, however these impacts would increase over each horizon as extreme weather events increase in frequency and magnitude and are compounded by higher average temperatures and drier summer conditions. This trend is more pronounced for the higher emissions scenario, particularly over the long-term horizon, where temperature increases are projected to accelerate.

Our strategic response

Our strategy for managing physical climate risks and financial impacts is underpinned by the following principles in order to maintain and improve our Group's performance to the year 2050:

- Adapt to climate change
- Enhance resilience
- Innovate
- Become more efficient
- Collaborate
- Balance investment over time

This will require significant action and investment by our Group, as well as action by our supply chain partners and wider actors (e.g. Government agencies, local authorities, and major land owners in our regions).

Longer-term investment, as outlined in our strategic plans, will be needed to manage future risks to acceptable/tolerable levels. The long-term risk is significant and will require additional investment to mitigate their effect. To achieve this, regulatory and Government support within their policy frameworks will be needed.

In the South West of England, the combined characteristics of low population density, high coastline to land area ratio, and tourism-based seasonal flux on water demand present a unique set of challenges. Through the years, by innovating, investing, and adapting, we have achieved industry-leading results in many areas of the business. Our extensive programme of environmental improvement with Upstream and Downstream Thinking catchment management has resulted in some of the finest bathing waters in Europe. This has been instrumental for us to tackle these challenges and meet the expectations of our customers. Having seen record visitors to our region following the COVID-19 pandemic, it is expected further investment will be required to continue building on the progress made by Pennon Group to protect the environment and our bathing waters.

Our strategic responses within our WRMP24 and DWMP23 for delivering reliable, efficient, and high-quality drinking water and wastewater services is driven by best-value adaptive planning, as per Ofwat's methodology for PR24. This means that, using the same physical scenarios analysed here (RCP2.6 and RCP8.5), our WRMP24 has developed adaptive investment programmes which: 1) fulfil immediate and most probable future needs; 2) respond to external pressures in the future with alternative investment options that are triggered under specific conditions; 3) identify low and least-regret investments that enable future options or return benefits under the broadest range of potential futures. Subsequently, our strategies for mitigating climate risks and building adaptive capacity are similar under the high and low emissions scenario in the short and medium term, however, additional options will be required under the RCP8.5 scenario, or options may need to be implemented earlier than the RCP2.6 scenario over the long term. Climate change adaptation is a continual, evolving and iterative process, we regularly review our adaptation progress, and like we did during the 2022 drought, we learn from the challenges we have faced to inform our future adaptation actions. As part of our adaptive planning approach, we have predefined trigger points and decision points to implement strategies of the appropriate pathway sufficiently early, so that we can have a proactive and more resilient response to climate change, including greater opportunity to implement nature-based solutions – rather than more costly reactive approaches which may have higher operational and embodied carbon.

Impacts on financial planning

Compared to today, overall our revenue is unlikely to be impacted significantly by climate change as we operate in a regulated environment funded through Price Reviews, although impacts could be felt on annual revenue recovery. However, there is a higher risk of reduced regulatory rewards and increased penalties (ODIs) due to climate change. Our operating costs are likely to increase compared to today due to climate change, and additional capital investment will be required to build climate resilience. The value of our assets and our cost of capital would remain relatively unchanged compared to today if we continue to enhance our resilience.

Climate Transition Risks – Scenario Analysis

Approach taken

The Group undertook qualitative scenario analysis in 2022, considering the financial implications of transition climate risks and opportunities under the two transition scenarios described earlier. The assessment considered impacts to the year 2030; this time horizon was selected as it aligns with our operational Net Zero target and there is much uncertainty beyond this time with regards to changes to policy, technology, markets, and public opinion. In 2024 we updated our scenario analysis to consider the NGFS scenarios described earlier.

This year we have revised our scenario analysis based on changes over the past year.

Impacts – NGFS Current Policies scenario

This scenario provides a challenging context for meeting our 2030 operational Net Zero target. In this scenario we have identified the following main impacts for our business:

- **The cost to our business of achieving our 2030 Net Zero target rises, and there is less ability to recover costs through the regulatory pricing system.** This is compounded by the readiness and higher costs for access to low-carbon technologies and related skills (due to the UK's under-investment in this scenario), and increased costs related to both our own renewable energy generation, and the purchasing of green electricity from external suppliers (where demand is likely to outstrip supply).
- **The current UK policies might not be sufficient enough to deliver the necessary carbon emission reductions.** As such this could impact our business transition through increased higher costs from the reliance on carbon-intensive energy and internal combustion engine vehicles.
- **Meeting our 2030 target requires greater use of carbon offsets.** The enabling environment for decarbonisation is weaker and costs are higher, which leads to slower progress in emissions reductions across our business. As a result, the residual emissions that need to be offset rise, which adds to our costs.
- **Environmental targets require additional energy use.** New guidance on targets for both nutrients and storm overflows will require a significant increase in energy use and associated capital and operational carbon. While nature-based solutions will form part of the solution (our Green First Principle), there will be significant reliance on engineered solutions due to potential inflexibility in regulation and deadlines to improve outcomes. The increased energy and carbon use compounds impacts above.
- **Reputational risks are significant and require careful management.** Some of our customers and stakeholders may have differing priorities and preferences for actions to meet our 2030 target, for example regarding the increased use of carbon offsets. Some may be highly sensitive to affordability, and increasingly scrutinise our investment choices.
- **Opportunities are lower than the Net Zero 2050 Transition scenario.** Opportunities for our business remain, however, they are in general more limited, and with lower returns than in the Net Zero 2050 Transition scenario. Increasing efficiency of energy and resource use, and pursuing low-carbon energy alternatives are the primary opportunities and can help to offset some of the additional energy and carbon costs. There is also an opportunity to clearly identify and communicate the synergies between environmental objectives and the transition to a Net Zero business in order to increase support from customers, stakeholders, and regulators.

Impacts on financial planning

Compared to today, overall our revenue is unlikely to be impacted significantly in this scenario, but also our non-water revenue is less able to grow. Our costs to achieve operational Net Zero may increase relative to our current plans, however, early investment in decarbonising the business to meet the 2030 target remains more cost-effective in the long term (post 2030), and reduces the risk to our Group and our customers from measures such as carbon pricing, as well safeguarding our reputation on environment and climate change. The value of our assets and our cost of capital would remain relatively unchanged compared to today.

Impacts – NGFS Net Zero 2050 Scenario

This scenario is more favourable to our business and to the UK's Net Zero goals, as it creates a more supportive enabling environment to achieve our 2030 operational Net Zero target. However this may present challenges balancing trade-offs between the agendas of Net Zero and environmental gains, water quality and climate resilience, environmental protection, addressing customer affordability, and other objectives. In this scenario we have identified the following main impacts for our business:

- **Cost to our business of achieving our 2030 Net Zero target is lower than the NGFS Current Policies Transition scenario.** There is much greater regulatory support in order to support the step change in investment required, with an increase in costs which can be recovered through customers' bills. The maturity of technology and associated business models progresses rapidly, and helps to drive down costs across many areas, including in renewables, resource efficiency, and demand-side measures. Greater R&D programmes with gated investment and piloting will minimise technology investment risks compared to the Current Policies Transition scenario, where strategies could be more reactive than proactive.
- **Access to the skills and resources needed is costly.** There is very high demand for low-carbon technologies, skills, and expertise across the economy in this scenario, which significantly outpaces supply (partly due to the UK's past under-investment and the time required to develop supply chains). This adds to our costs associated with decarbonisation, and risks delaying key projects.
- **Environmental targets require additional energy use.** This impact is the same as the Current Policies Transition scenario, however the regulatory environment may be more favourable for nature-based solutions (NBS) which can also sequester carbon, as there may be more stringent carbon management requirements, and carbon markets would also be stronger and provide more incentives for NBS.
- **Enhanced support to low-income customers may be needed.** Fairness in the distribution of the costs of the UK's transition to Net Zero is a key concern among stakeholders. Increased support to some customers may be required, and our investments will need to be carefully planned and phased to ensure they are efficient and avoid sudden price impacts.
- **Opportunities are higher than the Current Policies Transition scenario.** The more favourable enabling environment means that our opportunities are enhanced in this scenario, and they are easier to realise. There are particular opportunities to further invest and innovate on energy and resource efficiency, and to attract further investment through sustainable finance opportunities.

Impacts on financial planning

Compared to today, overall our revenue is unlikely to be impacted significantly in this scenario, but our non-water revenue has greater potential to grow. Our costs to achieve Net Zero may remain largely unchanged compared to today. The value of our assets may increase as we decarbonise and enhance our natural capital, and our cost of capital may decrease compared to today.

Our Strategic Response

Although there are important differences in the impacts between the different transition scenarios, there are a number of common elements which will require us to implement a common strategic response. The relative importance of each, and specific elements within the response, will vary across the two scenarios, but we have identified six key focus areas which will enhance resilience to transition risks, and better position the Group to take advantage of opportunities:

- **Investing in efficiency.** Under both scenarios, significant carbon savings and performance improvements can be achieved by driving greater efficiency across our operations. This includes energy efficiency (for example, more efficient pumping to reduces water losses), as well as optimising processes, reducing waste, and deploying smart technologies to improve the performance of our water supply and transmission systems. Many of these opportunities will reduce costs. We are currently investing in programmes to streamline operations, enhance resource efficiency, reduce energy use and carbon across our operations. This will accelerate our progress toward operational Net Zero and help manage the cost of the transition.
- **Enhancing our resilience.** We will continue to invest in building resilience across our operations to address climate-related and transition risks. This includes generating more of our own renewable energy to reduce exposure to energy price volatility and to enhance our options for energy supply, which is favourable under both scenarios, We are strengthening our ability to respond to physical climate impacts such as flooding and drought – by improving the robustness of our infrastructure, increasing water storage and supply flexibility, and integrating adaptive technologies and nature-based solutions.
- **Enhancing our access to green economy resources.** Across both scenarios there will be a shortage of skills and resources across key areas of the green economy that we will need to support our transition. To manage this we will diversify our supply chain of low-carbon suppliers, and invest in a programme of internal capacity-building to ensure access to the skills needed. We will also work with partners across the industry and engage with peers, regulators, and Government to enable rapid investment in the skills and capacity needed to support Net Zero.
- **Engage on environmental targets and trade-offs.** New ambitious targets on nutrients and storm overflows will require increased energy use and new infrastructure, and subsequently higher operational and capital carbon. There is a trade-off between action to meet these targets and action on decarbonisation, with implications for the balance between nature-based, and engineering solutions. We will engage in ongoing consultations on environmental targets and strategies for meeting them, and seek clear guidance on managing different trade-offs. We will advocate for policies which enable flexibility and time to scale up nature-based solutions so we can maximise co-benefits for our customers and the environment.
- **Enhance our stakeholder and customer engagement.** There are significant reputational risks associated with both scenarios, although the balance of concerns will vary. We will develop plans for enhanced programmes of engagement and communication with our customers and stakeholders, in particular focusing on explaining the costs and benefits of the investments we are making, potential trade-offs and synergies between Net Zero and other environmental targets, and affordability.
- **Pursue opportunities to deliver more value for customers and shareholders.** We will continue to pursue opportunities to reduce costs and enhance sustainability. This includes reducing our financing costs through our sustainable finance framework, investing in our environmental programme which includes restoring ecosystems to capture carbon, and working with partners and suppliers to enhance our resilience and reduce emissions across our supply chain. We will also continue to explore opportunities to enhance our revenue through water resource options, selling renewable energy, and markets for bioresources and natural capital.

Statement of resilience

There are clear impacts on our business under different climate scenarios, in particular:

- Higher costs in the short term to meet our operational Net Zero target by 2030 under the Current Policies Transition scenario;
- Higher costs in the short, medium, and long term under the RCP8.5 Higher Physical Impacts scenario.

Several of the strategic responses outlined above are already included in our strategic plans and business plan, and we have confidence that our Group has a range of strategic options to manage the impacts, can take advantage of opportunities, and will remain resilient under the different climate scenarios considered. Further analysis, including quantitative analysis, is planned going forward to enhance Pennon's confidence related to resilience both in terms of our strategy and our business model.

There will be the requirement to invest more to improve our resilience to climate change and deliver Net Zero. Assets are likely to require additional protection, and planning for new assets will require a greater level of embedded climate resilience. Significant action and investment will be required by our Group, as well as action by our supply chain partners and wider actors (e.g. Government, local authorities, major landowners/users, and other providers of infrastructure and services).

Nature-related financial risks and opportunities – Strategy

Our most material nature-related impacts and dependencies for our direct operations are in the freshwater, land, and atmosphere biomes. We rely on water supply from the environment, and we recycle water back to the environment from our wastewater treatment facilities. We also discharge treated biosolids to land, and emit gasses to the atmosphere in our treatment processes.

Our ESG Capitals framework tracks a wide range of metrics to manage our multi-capitals performance, and our materiality assessment has been fundamental in helping inform and update our future ESG targets. By taking all of the capitals into consideration when planning for the future, we will deliver more sustainable outcomes and make decisions based on what matters most.

Our business planning and financial planning are underpinned by a series of environmental strategies, plans and commitments that interlink up to 2050. Key examples include:

- Growing Nature to 2035: our strategy for nature recovery, sets out the key activities that we will take to support nature recovery and biodiversity on our land, in our everyday operations and beyond. There are three principles in the strategy: 1) Protect the best – take action to protect the valuable biodiversity that we have on our landholdings, 2) Restore and enhance the rest – take action across our landholdings and assets to enhance biodiversity in the everyday management of our sites, and 3) Beyond our landholdings – work in partnership with others across the region, taking a catchment approach to deliver biodiversity enhancement and nature recovery. These principles align with the LEAP process advocated by the TNFD, by taking a site approach (locate), formulating plans to monitor those sites via undertaking biodiversity baselines and natural capital assessments (evaluate), and creating management plans (assess) with actions to work across the estate with own staff (e.g. Nature Safe) and external partners, to improve the biodiversity condition. The outputs of these plans will enable Pennon to prepare to respond to and report on material nature-related issues. Our biodiversity strategy aligns fully with our PR24 Business Plan.
- Our 'Green First' Framework, published May 2023, sets out our approach to utilise NBS and natural flood management wherever possible and practicable to do so. As such, our planning assumptions are based on achieving 50% reduction in surface water flow entering sewers, through nature-based solutions and a minimum removal of 10% of impermeable surfaces.
- The launch of WaterFit in 2022 is our plan for healthy rivers and seas as part of c.£100 million of investment to 2025 focused on the protection of our 860 miles of coastline and rivers in the South West. This includes an additional c.£45 million reinvestment of out-performance.
- Our catchment management initiative, Upstream Thinking, applies natural solutions to reduce agricultural impact on biodiversity and water quality. It does so whilst supporting farmers and the rural economy, by providing long-term resilience to climate change, by: installing waterside fencing, building ponds, improving farm tracks, increasing slurry storage and planting trees and buffer strips to catch and filter water.
- In early 2024, our Board approved a pilot programme of bespoke, evidence-based "Natural Catchment Management Plans" (NCMPs) at selected catchments in Devon and Cornwall. These will create a blueprint for all bathing water catchments from this year onwards, primarily in relation to bathing water quality issues.
- In preparation for Asset Management Period AMP8, our Tier 1 suppliers were tested for their ability to deliver NBS for wastewater and drinking water. In March 2025, we became a partner of the Supply Chain Sustainability School (SCSS), reinforcing our commitment to upskilling our supply chain and colleagues across key sustainability topics, including climate and nature. This partnership provides access to industry-leading training and resources, enabling our teams and suppliers to deepen their understanding of key topics, and drive positive change across our operations. By working collaboratively with SCSS, we are empowering our supply chain to meet higher sustainability standards as we move into AMP8.
- South West Water has renewed its commitment to improving the management of natural assets and resources by re-signing the Catchment Management Declaration. The declaration promotes collaborative, cross-sector working in order to better manage water resources.
- We have used remote-sensing technology to determine a baseline condition assessment of habitats on our landholdings. This information will be used to help us target positive biodiversity interventions.
- We are investing in research on new and emerging risks such as microplastics, invasive freshwater mussel species, and on the sustainable management of sludge applied to land.

Going forward:

- The new Biodiversity Performance Commitment requires all water companies to set out their plans for delivering measurable biodiversity enhancement units measured using the Defra Natural England biodiversity metric. These will be achieved as a result of the actions that we will deliver under our nature plans and strategies across the areas we serve.
- We are creating a 'Nature Safe Framework' to support our employees and contractors across operational sites to understand and protect nature – in alignment with our Biodiversity Strategy. We are in the scoping phase and envisage this framework to be analogous to our 'Home Safe Framework' related to employee health and safety.
- Over the next year we will continue to develop our approach to embedding nature-risk and opportunity management across our business, including conducting materiality ratings of the ecosystem services that we depend on

Risk Management

TCFD/TNFD Recommendation: Disclose how the organisation identifies, assesses, and manages climate-related and nature-related risks.

The Group's risk management framework is explained in detail on pages 70 to 79 of our Annual Report and Accounts 2024/25, including the methodology for assessing risks.

The Group is continuing to integrate climate-related and nature-related risk management within the Group's overall risk management process. Climate-related and nature-related risks and opportunities are assessed using the same methodology as other business risks. In the past few years we have undertaken specific work to identify and assess climate-related risks and opportunities, and we are moving towards this risk identification and assessment being integrated within business subsidiaries/functions. We have the processes in place to enable this integration, and a key area we are continuing to work on is raising awareness and competency so that the key people across our subsidiaries/business functions can effectively identify climate-related and nature-related risks, like they do with other risks (in many cases, climate and nature risks are an amplifier or additional driver to risks we have already identified, rather than presenting novel risks). For the past three years we have convened workshops with senior management from across business functions to re-visit and re-assess climate-related risks and actions, and management will take forward the responsibility to integrate climate risks into risk registers owned by each business subsidiary/function.

Furthering our progress, the Group has identified several principal risks which are impacted or influenced by physical and transitional climate and nature risks and opportunities, and as such we are increasingly cognisant that climate and nature risk management is integral to the performance and resilience of our business and strategy. The link between climate-related and nature-related risks and opportunities on our principal risks is summarised in the table over the page.

We recognise the evolving landscape of climate-related and nature-related risk which is reflected in the changing regulatory frameworks, customer expectations and Government policies that are inherent to our operating context.

This is particularly true for climate change, nature, and Net Zero where new policies and technologies are rapidly emerging, and markets are rapidly changing.

For the climate-related risks that have been identified, a desired 'target' net risk level is documented within the Group's risk framework. This target risk level or tolerance level reflects the acceptable level of risk by the Group and also stands as a target and equitable measure for alleviatory measures to approach the risk going forward. We seek to minimise risks on operational activities within the regulatory environment. Climate-related risks are approached with a minimal level of appetite, and this is subject to Board approval where all appetite levels are established.

Environmental compliance requirements are high, so our risk appetite for environmental impacts is low. Where there is no risk to regulatory compliance, we are willing to take more risks to innovate e.g. NBS.

The appropriate action then follows from the level of difference between the net risk and the desired risk appetite. Actions to manage risks cover four response types:

- Tolerate: where decisions are taken to tolerate a risk, subject to ongoing monitoring. An example is climate-related risks where uncertainty is high and therefore we might decide to monitor risks until such time as it may be necessary to take further action.
- Treat: where actions are taken to manage and reduce risks, such as implementing operational measures in our drought plan or capital investments to enhance our resilience to droughts.
- Transfer: used where possible to transfer risks to other organisations – such as through insurance or through contracting out responsibilities. We recognise it is not possible to fully transfer risks, rather this approach helps to reduce our exposure. For example, reducing our exposure to the impacts of flooding through flood insurance.
- Terminate: where decisions are taken to stop activities so that we are not exposed to particular risks. For example, we may decide not to undertake a capital project if risks cannot be effectively mitigated – for example due to high costs for energy, materials, and specialist resources related to Net Zero or climate adaptation.

Actions to mitigate risks are allocated to action owners and progress is monitored through the risk review process.

Climate-related and nature-related risks impact and influence our principal risks

Below we outline our principal risks which are impacted or influenced by climate-related and nature-related risks and opportunities, including where our response to these principal risks needs to consider nature recovery, climate change, and Net Zero. The climate and nature emergency are amplifying our principal risks.

		Physical Risks	Transition Risks
Our Principal Risks	**Law, Regulation and Finance**		
	Changes in Government policy		● ●
	Changes in regulatory frameworks and requirements		● ●
	Non-compliance with laws and regulations	● ●	● ●
	Inability to secure sufficient finance and funding, within our debt covenants, to meet ongoing commitments	● ●	● ●
	Non-compliance or occurrence of an avoidable health and safety incident	●	●
	Failure to pay all pension obligations as they fall due and increased costs to the Group should the defined benefit pension scheme deficit increase	● ●	
	Market and Economic conditions		
	Macro-economic near-term risks impacting on inflation, interest rates and power prices		● ●
	Operational performance		
	Failure to secure, treat and supply clean drinking water	● ●	● ●
	Failure to improve wastewater performance results in environmental commitments not being delivered	● ●	● ●
	Failure to provide excellent service or meet the needs and expectations of our customers and communities	● ●	● ●
	Inability to attract and retain staff with the skills to deliver the Group's strategy		● ●
	Business Systems and Capital		
	Insufficient capacity and resilience of the supply chain to deliver the Group's operational and capital programme	● ●	● ●
	Inadequate technological security results in a breach of the Group's assets, systems, and data		

We recognise how climate-related and nature-related risks are impacting our principal risks and/or how our response to these risks needs to consider climate resilience, nature, and Net Zero

Key

● Climate change influence

● Nature related influence

Metrics and targets

TCFD/TNFD Recommendation: Disclose the metrics and targets used to assess and manage relevant climate-related and nature-related risks and opportunities where such information is material.

We are continuing to enhance the metrics we use to quantify key climate and nature risks and to monitor progress towards managing risks and achieving our targeted objectives.

We continue to disclose comprehensive data relating to our GHG emissions and energy consumption (SECR report on pages 91 - 93 of our Annual Report and Accounts 2024/25). We report on all Scope 3 categories which are relevant and material to our business (ESG Databook). Our SASB disclosures can be found in the ESG Databook. We report on progress against our ODIs, performance commitments and WINEP delivery in our Annual Performance Report. All material data for TCFD compliance is in the TCFD report.

The Group is committed to improving its sustainability, climate change, and nature-related disclosures and will continue to enhance this over the coming years. Some metrics relate only to South West Water (SWW) including Bournemouth Water, Bristol Water (BW), or SES Water (SESW).

	Description of the metric	Metric for 2023/24	Metric for 2024/25	Related Targets
GHG emissions	Scope 1, 2 (market based), and 3 GHG emissions (in tCO_2e).	368,265[1]	356,076	• Operational Net Zero by 2030 (SWW, BW, SES). • We have met our target to reduce operational GHG emissions by 70% by 2025 (Scope 2 market-based) (tCO_2e) (SWW & BW). • We have met our target to reduce operational GHG emissions by 70% by 2025 (Scope 2 market-based) (tCO_2e) (SWW & BW). • The Group commits to reduce absolute scope 1 and scope 2 GHG emissions by 68% by 2032/33 from a 2021/22 base year. • The Group commits to reduce absolute Scope 3 GHG emissions from 'well to tank' electricity and fuels, the delivery of electricity, emissions from waste, and business travel and commuting, by 30% over the same timeframe. The Group commits that 60% of its suppliers by emissions covering purchased goods and services, capital goods and upstream transportation and distribution will have science-based targets by 2027/28. The Group commits to increase annual sourcing of renewable electricity to 100% by 2030.
	GHG Reduction from the baseline year 2021 (Scope 2 market-based) (tCO_2e).	71.9%	70.68%	
	Carbon intensity of our water services in tonnes of CO_2e per megalitre of water supplied to customers.	38.8 SWW 358.5 BW[2]	30.68 SWW 358.82 BW 32.19 SESW	
	Carbon intensity of our business in tonnes of CO_2e per £100k of our revenue based on Scope 1 and 2 GHG emissions.	6.0	5.4	
	Reduce scope 1 and 2 GHG emissions by 68% by 2032/33 from a 2021/22 base year (science-based target).		51%[1]	
	Reduce absolute Scope 3 GHG emissions from 'well to tank' electricity and fuels, the delivery of electricity, emissions from waste, and business travel and commuting, by 30% by 2032/33 from a 2021/22 base year (science-based target).		(9%)[1]	
	60% of suppliers by emissions covering purchased goods and services, capital goods and upstream transportation and distribution will have science-based targets by 2027/28 (science-based target).		35.23%[1]	
	The Group commits to increase annual sourcing of renewable electricity to 100% by 2030 (science-based target).		85%[1]	
Climate-and/or nature-related Transition risks Selected metrics for some material risks	Risk of increased energy costs: Proportion of our operational expenditure on electricity (%).	c.21%	14.6%	• Generate 50% of the electricity we use through our own renewable energy generation by 2030, measured against SWW's 2020/21 grid import requirements for usage.
	Transition risks in our supply chain: proportion of our key and strategic suppliers who have evidenced they are working towards a Net Zero target.	51%	80%	• Met: 100% of our key and strategic suppliers have evidenced an ESG policy or equivalent by 2025. • The Group commits to reduce absolute Scope 3 GHG emissions from 'well to tank' electricity and fuels, the delivery of electricity, emissions from waste, and business travel and commuting, by 30% by 2032/33 from a 2021/22 base year. • The Group commits that 60% of its suppliers by emissions covering purchased goods and services, capital goods and upstream transportation and distribution will have science-based targets by 2027/28.
	Risk of customer affordability in achieving Net Zero and adapting to climate change: our customer affordability measure.	98.1% SWW 100% BW	100% SWW 100% BW 91.6% SESW	• Zero customers in water poverty by 2030. • Maintain zero customers in water poverty by 2050. • Over 100,000 customers supported via social tariffs by 2030. (SWW) • We are planning to improve our WaterShare+ scheme uptake to 1 in every 10 households by 2030. (SWW).

1. 2023/24 GHG accounting did not include SESW.
2. Renewable Energy Guarantees of Origin (REGOs) are purchased for all of SWW & SESW electricity consumption but not BW, hence BW is more GHG intensive.

	Description of the metric	Metric for 2023/24	Metric for 2024/25	Related Targets
Climate-and/or nature-related Physical risks Selected metrics for some material risks	Proportion (%) of customers currently at risk of severe restrictions in a 1-in-200-year drought.	7.6%	0%	• Our 2050 target is to achieve 0% of customers at risk of severe restrictions in a 1-in-500-year drought, aligning with Government planning guidance.
	Proportion (%) of customers at risk of sewer flooding in 2050 in a 1-in-50-year storm.	9.77%	10.18%	• Our long-term target is to reduce this metric to zero, assuming funding is provided to achieve this through the regulatory system.
	Number of major sites/assets at high risk of coastal flooding and erosion.	36	36	• Our long-term target is to achieve 0 of our key sites/assets at high risk, assuming funding is provided to achieve this through the regulatory system.
	Annual average number of spills from each storm overflow (number per calendar year).	43	41.3	• Reduce spills to an average of 20 per year from each storm overflow by 2025. • Zero harm to rivers and seas by 2030.
Climate-and/or nature-related opportunities Selected metric for some material opportunities	Enhancing our energy resilience and reducing our carbon emissions with renewable energy: Amount of renewable energy we have generated (MWh).	34,480	32,496[1]	• Generate 50% of the electricity we use through our own renewable energy generation by 2030, measured against South West Water's 2020/21 grid import requirements for usage.
	Proportion of our energy use which came from energy we generated ourselves (%)[2]	7.5%	7.14%	
	Reducing our financing costs through sustainable finance: proportion of new finance under our sustainable finance framework during the year.	100%	100%	• We have exceeded our target of 75% of new finance to be raised via sustainable financing framework by 2025. • Raise a further £2 billion of funding through our Sustainable Financing Framework by 2030.
	Biodiversity enhancement (ha) (cumulative)	126,733	144,120	• Plant over 500,000 trees by 2030 (cumulative). • We're targeting to deliver at least 10% biodiversity net gain.
Capital deployment Selected metrics for material capital investments	Investment (£) earmarked for our renewable energy generation capital plans to 2030.	£160m	£160m	• Generate 50% of the electricity we use through our own renewable energy generation by 2030, measured against South West Water's 2020/21 grid import requirements for usage.
Remuneration	Proportion of our management incentive schemes linked to ESG outcomes, including climate change	20%	27.4%	Further information is provided in the remuneration report.
Internal carbon value	Value of carbon used in business cases and whole life carbon assessments (£/tCO_2e)	£252/tCO_2e Sensitivity testing: Low: £126/tCO_2e High: £378/tCO_2e	£294/tCO_2e Sensitivity testing: Low: £147/tCO_2e High: £442/tCO_2e	

1. Does not include energy used in transport.
2. Reported in line with our 2025 ESG Target scope.

Our Net Zero carbon commitments will provide a step change to how we run our business and look to manage the risks of climate change, an update on our progress during the last year is found on pages 88 to 90 of our Annual Report and Accounts 2024/25.

Further detail on our progress with driving environmental gains is provided on page 48 to 51 of our Annual Report and Accounts 2024/25.

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