Comisiwn Seilwaith Cenedlaethol Cymru
National Infrastructure Commission Wales

Ein cyf/Our ref: NICW/26/WaterCon

Climate Change and Environmental Sustainability Division
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7th April 2026

Dear Sir / Madam

Green Paper: Shaping the Future of Water Governance in Wales

Delivering Sustainable Water Management for Communities, Business, the Environment, Nature, and Long-term Resilience.

The National Infrastructure Commission for Wales (NICW) welcomes the opportunity to respond to the Welsh Government's Green Paper on reforming water governance in Wales. We strongly support the ambition and scope of these proposals to reset how water is governed.

The Green Paper's key initiatives, including a new 25-year National Water Strategy, the establishment of a dedicated Welsh economic regulator for water, the creation of a National System Planning Function, and prospective legislative reforms via a future Water Bill; together signal a transformative agenda for the water sector.

We recognise that this is not solely a water-sector reform, but a structural reset of infrastructure governance in Wales, with implications for cross-sector planning alignment, investment sequencing, climate resilience, and cross-border institutional arrangements.

Water is a foundational infrastructure, and the reforms outlined, if delivered, could set a precedent for how Wales coordinates energy systems, flood resilience measures, nature-based infrastructure, and long-term capital planning. Given NICW's remit to provide independent advice on Wales's infrastructure needs over a 5–80 year horizon, we are keenly aware of the long-term significance of these proposals.

As the Green Paper sets out, a holistic approach to considering the whole water environment is required. This is welcomed, although the detail within the Paper tends to focus more on water management in terms of quality and supply rather than considering issues in relation to flooding, drought and land use management which will all have a considerable impact on our water system especially in the long-term. The new governance and institutional structures being proposed must ensure that a holistic view is central to their approach.

Our responses to the questions below articulate our overarching strategic perspective on water governance reform. This has been informed by our 2024 flooding report, our recently

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published Infrastructure Assessment of the water sector, and our own collective experience as Commissioners.

Context

The legacy of water systems at privatisation, decades of underinvestment, and scant attention to looming environmental issues have resulted in polluted waterways, poor company performance and widespread dissatisfaction with the public and politicians alike.

The Dwr Cymru not-for-profit model was supposed to deliver outcomes for Wales superior to the for-profit approach over the border. On the face of it, those improved outcomes are hard to discern. However, the very rural nature of Wales and legacy of water system development has bequeathed a large number of small treatment works and supply networks that increase the cost to Dwr Cymru, and therefore to water users.

The promise of reform via a Welsh economic regulator, a national systems planner, stronger governance, and long-term planning, creates a once-in-a-generation opportunity. But this will only be realised if Wales designs a regulatory system that is long-term, preventative, integrated, climate-ready, transparent, and rooted in public value.

Key sector data point: Only 40% of Welsh waterbodies achieved 'good' ecological status in 2024, a figure unchanged from 2021 and significantly short of the legal ambition of 100% for 2027. It is "highly unlikely" Wales will reach the 2027 Water Framework Directive target. The key issues are: diffuse agricultural pollution, unregulated urban runoff, private sewage systems, storm overflows, and legacy infrastructure. Many of the dominant sources are unregulated; only mines and wastewater are regulated.

Additionally, while Wales superficially shows higher environmental performance than England (40% achieving 'good' status vs 16% in England), Wales does not monitor for a range of pollutants that the English system collects data on. Our performance may therefore be even worse than comparisons suggest.

Question 1: What factors or priority areas should Welsh Government consider when setting the strategic direction for the water system in Wales?

In setting Wales's strategic direction for the water system, Welsh Government should begin with a clear recognition that climate adaptation, environmental recovery, and long-term resilience are immediate necessities, not optional ambitions.

Our *Building Resilience to Flooding* report demonstrated that extreme rainfall patterns are now routine rather than exceptional, and their impacts on communities, ecosystems, and infrastructure have intensified measurably in recent years. Our *Water Infrastructure Assessment 2026* reveals that ageing assets, water quality pressures, and escalating drought risks demand a shift from reactive, short-term interventions toward proactive, long-term planning. Together, these findings point to a strategic direction built on systemic resilience, catchment-scale thinking, and environmental improvement.

The strategic framework must place nature recovery, improved river health, and integrated catchment management at its core, while ensuring that investment plans are both socially fair and financially sustainable. Given the sector's recent history, the strategy must nurture transparency and public trust. Only a strategic direction that fully integrates climate realities, ecological restoration, and the well-being of current and future generations will equip Wales with a water system capable of withstanding the pressures ahead.

NICW's Water Sector Infrastructure Insights Report provides the evidence base for the scale of change required, revealing deep structural challenges across water quality, water resources, pollution sources, infrastructure condition, and climate resilience. These insights shape all of the positions set out in this response.

Question 2: How can the Price Review Forum and a potential Ministerial Statement of Water Industry Priorities (MSWIP) best support transparency and effective delivery? If introduced, what priorities should MSWIP include?

NICW's analyses of flooding resilience and water infrastructure planning indicate that strategic coherence is weakened when decision-makers operate without a shared, evidence-based understanding of risks, priorities, and trade-offs. The proposed Price Review Forum offers a valuable mechanism for collective scrutiny, forward planning, and transparent debate in the water sector. By bringing together regulators, government, and water companies, such a forum would enable holistic consideration of environmental realities, service expectations, and affordability pressures.

In parallel, a Ministerial Statement of Water Industry Priorities (MSWIP) can provide a clear, authoritative expression of Wales's long-term priorities, ensuring that price reviews and investment plans align with the nation's strategic needs.

Whilst this statement will no doubt be subject to future engagement the MSWIP should articulate a firm commitment to environmental improvement, flood and drought resilience, fair and affordable services and public transparency through regular, accessible reporting of performance and environmental data. By clearly defining these priorities, the Welsh Government would give the sector a shared frame of reference that strengthens delivery, enables coordinated decision-making, and helps rebuild public trust in water services.

On transparency and open data specifically, Commissioners believe far greater emphasis is needed. The regulator should:

- Publish interpretative dashboards on company performance and river health, including data not currently collected
- Publish catchment-by-catchment resilience assessments
- Show trade-offs, costs and consequences transparently.

Social tariffs should remain explicitly within the purview of any Welsh regulator, and fines/ODIs should be retained in Wales and reinvested into water or environmental improvements.

Question 3: What milestones or review mechanisms should be built into the strategic direction to ensure accountability and alignment with Welsh priorities?

NICW considers that accountability is strongest when progress is reviewed regularly and transparently, and when decision-makers can adjust course as conditions change. We recommend that the national strategic direction incorporate a cycle of formal reviews aligned with the 5-year price review periods, so that outcomes, environmental performance, and investment progress are assessed in an integrated way at regular intervals. This should be supplemented by annual public reporting on key metrics to maintain transparency and ensure that emerging risks are promptly spotlighted and addressed.

As many water and flooding challenges manifest differently across regions of Wales, periodic catchment-level or regional reviews would help identify local issues and confirm that regional needs are reflected in national decision-making.

Finally, the strategic direction should include adaptive “trigger points” or mechanisms for intervention if evidence shows that performance is falling short of the Welsh public interest or key targets.

In combination, this rhythm of long-term vision with short-term monitoring and flexible adjustment mirrors the approach that NICW’s studies have identified as essential for resilient, future-proof infrastructure management.

Commissioners stress that climate risk increases sharply from 2050–2100; the regulator must act accordingly from the outset. This requires:

- Using multi-decade climate scenarios in all investment decisions.
- Prioritising resilience and nature-based solutions wherever appropriate.
- Preventing deferral of asset renewal or deterioration.

Every regulatory decision should make Wales more climate-resilient, and regulation must incorporate catchment-scale flood and drought planning as standard.

Question 4: Do you support establishing a National System Planning Function for the water sector in Wales? Where should it sit?

NICW supports establishing a National System Planning Function for the water sector. Our 2026 Water Infrastructure Assessment highlighted the current fragmentation between economic regulation, environmental oversight, operational decision-making, and long-term planning in Welsh water. The proposal also aligns with our Flooding report recommendation for a Water Commissioner to provide centralised leadership and strategic coordination supported by frameworks for long-term resilience planning in Wales.

A single national planning function, with a clear mandate for whole-system, long-term infrastructure planning, would bring much-needed coherence to a sector facing simultaneous pressures from climate change, asset deterioration, and ecological decline. It will bring clarity to a complex governance landscape, as was also a conclusion of our Flooding work which highlighted, in the diagram below the multiple overlapping organisations with responsibility in this area.

The scope of the system (as described on page 21 of the Green Paper) as well as its ‘boundaries’ will need to be defined and include issues relevant to water management beyond what is currently included - i.e flooding, drought and land use/ management impacts.

In our view, placing this function within the new Welsh economic regulator offers the best opportunity for integrated decision-making – provided that its operational independence and cross-sector remit are firmly established. Housing the system planner alongside the economic regulator should enable decisions that balance affordability, resilience, and environmental improvement in a transparent, coordinated manner.

However, it is essential to avoid a narrow regulatory lens dominating the broader systems-thinking role of the planner. The planning function must have the authority and duty to integrate water planning with land use, housing, energy, flood risk management, and transport strategies across government, to prevent any continuation of siloed infrastructure decisions.

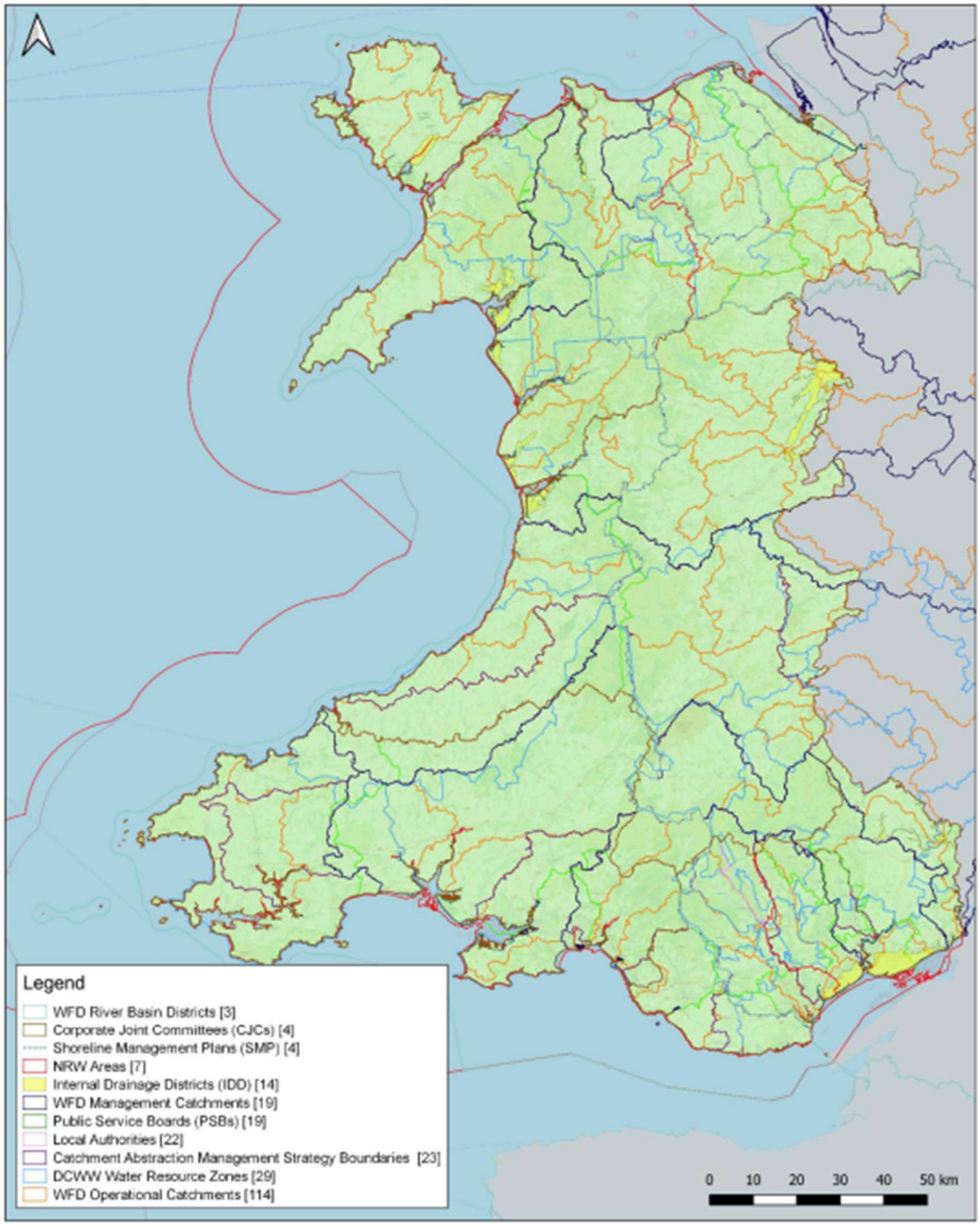

Figure 2-3 - Spatial boundaries of plans, forums and strategies across Wales

Source: https://nationalinfrastructurecommission.wales/wp-content/uploads/2024/08/NICW-Flooding-Workstream-2-Report-Strategic-and-Spatial-Responses.pdf

By ensuring statutory cross-sector planning duties and a clear delineation of roles, Wales can capture the opportunities of integrated infrastructure sequencing, coordinating investments in water with other sectors for maximum societal benefit, while maintaining a lean governance architecture that avoids adding unnecessary complexity. In summary, a well-designed national system planner within a strong regulatory body (but shielded from short-term political or commercial pressures) would greatly assist Wales in uniting various stakeholders under a shared long-term plan for water.

Integrated system and catchment-based regulation is a core NICW priority. Key positions include:

- Integrated catchment management must be a condition of sign-off for all company plans
- Regulation must occur at catchment scale, not company boundary
- Cross-border issues (e.g., Severn, Dee) must be explicitly managed
- The regulator must have a statutory duty to coordinate with planning, energy, agriculture, transport, housing and climate policy
- The regulator must require companies to demonstrate cross-sector integration; for example, influencing building regulations to incorporate rainwater harvesting in new developments.

Question 5: How should water industry investment planning cycles balance affordability, resilience, and environmental priorities?

Wales's water industry faces a convergence of challenges: our Water Infrastructure Assessment found that many critical water and wastewater assets are ageing out just as climate-driven pressures (more extreme floods, droughts, and changing weather patterns) are escalating.

Meeting these challenges will require significant investment to upgrade infrastructure, reduce pollution, and enhance resilience, all while keeping water services affordable for customers. It is a difficult balance that demands long-term planning horizons and innovative funding approaches. We consider that a 25-year strategic planning cycle for water, broken into clear 10-year programmes and 5-year review checkpoints is the most appropriate system.

This would allow Wales to phase in critical resilience and environmental investments gradually (serving as a bill-smoothing mechanism to avoid sudden, sharp rises in customer bills) while still maintaining regular opportunities to adjust plans as new data emerges or circumstances change.

Within this framework, maintaining affordability, especially for the most vulnerable households, must remain a core principle. We note the Green Paper explicitly acknowledges that the investment needed for environmental improvements and resilience may exceed traditional affordability thresholds, which underscores the need for innovation in funding sources and regulatory approaches.

Potential measures include exploring intergenerational financing (so that the costs of long-lived assets are spread fairly between current and future beneficiaries) and enhanced targeted support for low-income customers. At the same time, delaying or deferring essential investments in resilience would likely lead to higher long-run costs and greater risk to communities and the environment. Therefore, investment planning should prioritise early action in high-risk areas even as it sequences less urgent interventions over multiple price-review periods.

Finally, we encourage the water industry and regulators to pursue cost-effective innovations, such as nature-based solutions, where these can deliver environmental and resilience benefits at lower long-term cost than traditional "grey" infrastructure, thus helping to reconcile the demands of resilience with the goal of affordability.

Question 6: What do you see as the added value a system planning approach could bring? What would your priorities be for implementing it in Wales?

A system planning approach to water would treat the water environment as an interconnected whole, rather than a collection of isolated, company/organisational-specific responsibilities. NICW's work, particularly our flooding resilience studies, has demonstrated how deeply land use, drainage, water quality, biodiversity, and community resilience are intertwined, and how fragmented governance, along with the complex landscape, can undermine effective action.

A national system planning function would enable Wales to sequence and target investments for maximum cumulative benefit, ensuring that challenges like flooding, drought, pollution, and ecological degradation are addressed together rather than in silos. The added value of this approach is a holistic, catchment-based strategy that optimises outcomes across multiple objectives: environmental health, climate resilience, and reliable service delivery. For example, treating upland catchment restoration, flood management, and water quality improvement as integrated tasks could yield compounded benefits for communities and nature.

Our priorities for implementing system planning in Wales follow many of our previous recommendations on flooding resilience and would include:

- **Developing comprehensive catchment-based plans** that integrate water quality, flood risk management, water resources, and land use, ensuring every catchment in Wales has a joined-up strategy.
- **Establishing clear environmental and resilience baseline standards** (minimum outcomes for river health, flood protection, drought preparedness, etc.), which can guide all actors in the system toward common goals.
- **Building robust national data and modelling platforms**, so that decisions are driven by shared evidence – for instance, real-time monitoring of river flows, water quality, and infrastructure performance – allowing all stakeholders to plan using the same information base.
- **Formalising cross-sector collaboration** from the outset, informed be clearly defined scope and boundaries of the system. Effective system planning must actively involve not just water companies and regulators, but also the agriculture sector, land-use planners, local authorities, energy and transport planners, and community representatives. Early engagement with these sectors will help break down historic silos and ensure that solutions (such as nature-based interventions, land management changes, or sustainable drainage in new developments) are implemented through partnerships beyond the water industry itself.
- **Prevention as the first duty,** stopping pollution at source and requiring investment in source control (PFAS, nutrients, urban runoff, agricultural pollution).
- **Ensuring Welsh water bodies undertake the same chemical monitoring standards as England,** including ubiquitous, persistent, bioaccumulative and toxic (uPBT) substances like PFAS and mercury.
- **Companies must prioritise nature-based solutions** unless a stronger case exists for hard engineering and must maintain biodiversity and ecosystem resilience duties in all plans.

By pursuing these priorities, Wales's system planning approach can become a leading example of integrated water management – one that delivers the greatest environmental and social value from each pound invested, and that reflects the forward-looking, collaborative ethos of Wales's well-being and environmental legislation. This approach strongly aligns with the integrated, long-term thinking that NICW has consistently advocated in its recommendations.

Question 7: How should cross-border relationships with England be managed?

Many of Wales's major water resources straddle the border with England, making effective cross-border collaboration essential. To manage these relationships, Wales should seek formalised governance arrangements with the UK government and English regulators that embed Welsh priorities into all shared decision-making.

This could include structured agreements or Memoranda of Understanding ensuring that Welsh objectives are not diluted in joint projects or shared water bodies.

Joint system planning should be underpinned by shared data and monitoring platforms with common metrics and transparency, so that river health, nutrient loads, and infrastructure risks are assessed consistently across the border. Where assets or catchments serve both nations, planning must accommodate differing legislative and regulatory frameworks, but Wales should insist that its environmental or resilience standards are recognised in any cross-border solutions.

In short, we believe collaborative, transparent relationships formalised by clear governance structures will be key. This will help eliminate regulatory ambiguity and coordination gaps during the transition to a new system, which we identify as a significant risk if left unaddressed. Proactive cross-border cooperation will provide certainty for all parties, protect shared resources, and ensure that Wales's interests are upheld as water governance evolves.

Cross-border issues such as the Severn and Dee catchments must be explicitly named and managed within the governance framework. Commissioners stress that any ambiguity in regulatory authority during the transition could undermine investor confidence and slow essential improvements.

Question 8: Do you agree the current water legislative framework for Wales requires amendment? Which areas should be prioritised?

Yes. NICW agrees that the existing water legislative framework in Wales requires substantial modernisation. Both our 2024 Flooding Report and the 2026 Infrastructure Assessment identified gaps and outdated provisions in the current system that hinder long-term resilience, environmental protection, and transparent governance. We see an urgent need to update legislation to embed clear environmental duties for all water service providers, strengthen the accountability of water companies for performance and infrastructure investment, and modernise regulations around persistent problems like drainage, storm overflows, and sludge management.

Critically, the legislation should give statutory weight to the new system planning and long-term resilience duties, ensuring that infrastructure decisions, environmental improvements, and coordination with land-use or other sectors are not left to voluntary or ad-hoc arrangements.

In NICW's view, failing to reform the legislative framework would mean that Wales continues to operate under rules designed for a past era, one that did not anticipate today's climate and environmental challenges. Modernised water legislation is therefore necessary to reflect current and future realities, embedding resilience and environmental standards for 2050 and beyond, requiring integrated planning, and enhancing accountability so that the water governance system is fit for purpose in the face of climate change and rising public expectations.

The regulator must operate under a long-term statutory strategy (minimum 25 years) and have statutory independence similar to Audit Wales. Legislative reform is the essential vehicle for embedding these requirements permanently.

Question 9: Should public health outcomes and nature-based solutions be incorporated into future water legislation?

Yes. NICW strongly supports incorporating public health outcomes and nature-based solutions into future water legislation. Our 2024 flooding analysis illustrated how contaminated floodwaters can pose serious public health risks, and how inadequate wastewater performance (e.g. sewer overflows or septic leakage) can exacerbate those risks during flood events. Ensuring that water legislation explicitly accounts for public health means that issues like drinking water safety, pathogen management in sewage, and floodwater sanitation are given priority in regulatory standards and enforcement.

Likewise, both NICW's recent studies underscore the effectiveness of nature-based solutions as essential tools for improving water quality, reducing flood risk, and restoring ecosystems in a cost-effective, sustainable way. By embedding support for nature-based approaches in law, Welsh Government can ensure that these solutions have parity with traditional "grey" infrastructure. This legislative backing would drive a shift towards preventative, nature-led measures rather than relying solely on after-the-fact mitigation.

Such an approach aligns with the ambitions of the Well-being of Future Generations Act, promoting long-term thinking and environmental sustainability in line with Wales's unique legislative commitments.

Question 10: What innovations or enforcement approaches could strengthen compliance for wastewater and drainage?

Our assessments point to several innovations and modern enforcement tools that would strengthen compliance in wastewater and drainage management.

Real-time digital monitoring of wastewater networks and storm overflows should be accelerated. Deploying advanced sensors and telemetry across sewers, treatment works, and overflow points would enable continuous tracking of performance and receiving water quality. This technology allows for early detection of emerging problems and provides regulators and the public with timely, transparent data on system performance.

Modern enforcement should be more outcomes-focused. Regulators should align penalties and incentives with environmental and service outcomes, meaning water companies are rewarded for excellence in reducing pollution and improving service resilience, and conversely face meaningful sanctions if they persistently fall short of required outcomes. Penalty fines should be directly linked to the environmental harm caused, with proceeds ring-fenced for remediation projects, thereby turning sanctions into opportunities for environmental gain.

Adaptive permitting is a promising approach: permits could be dynamically adjusted based on real-world performance and risk. In practice, this could mean tighter controls or more frequent oversight in high-risk catchments or for operators with a history of non-compliance, and more flexible, trust-based regulation for those demonstrating sustained high performance.

Additionally, catchment nutrient modelling and risk-based regulation should inform where to focus compliance efforts, ensuring that the worst problem areas (for instance, nutrient-sensitive river basins or frequently overflowing sewer networks) receive the strictest oversight. By embracing digital innovation and a smarter, risk-based enforcement philosophy, Welsh regulators can significantly improve compliance outcomes and, importantly, help restore public confidence in the wastewater and drainage system.

Many of the dominant current sources of pollution are unregulated, with urban and rural runoff being major causes of WFD failure. Effective enforcement reform must extend beyond regulated industries to encompass these diffuse sources.

Question 11: Do you agree with the proposal to establish a new, stand-alone economic regulator for water in Wales?

Yes. NICW supports the establishment of a stand-alone Welsh economic regulator for water. Our 2026 assessment of water infrastructure and regulation found that the current regulatory framework, in which Welsh interests are embedded within wider Ofwat/England-and-Wales structures, does not fully reflect Wales's distinct priorities, legislative context, and environmental ambitions.

A dedicated Welsh water regulator would enable a more coherent approach to economic regulation that is tailored to Wales's needs – aligning investment oversight with our national objectives for resilience, environmental protection, and social fairness. Crucially, a Wales-specific regulator could provide clearer accountability and a predictable, transparent environment for investment in Welsh water infrastructure. This clarity would send positive signals to investors that Wales is committed to long-term stability and sustainable investment, which is vital for funding the substantial upgrades and innovative projects our water system requires.

We note that the Green Paper envisions having the new regulator operational by ~2030 to lead the PR34 price review cycle. Achieving this timeline is ambitious, and we urge Welsh Government to ensure sufficient resources are in place to ensure delivery. However, delays or uncertainty in setting up the regulator would risk causing infrastructure planning uncertainty and investor hesitancy during the transition period.

To that end, we urge Welsh Government to devote the necessary resources and early planning to this endeavour. Learning from past experiences (for example, the slow progress in implementing NICW's Flooding recommendations) suggests that meeting a 2030 target will require strong political will and efficient action.

The new regulator must have statutory independence similar to Audit Wales. Key design requirements include:

- Operating under a long-term statutory strategy of at least 25 years
- Publishing binding multi-year guidance for price reviews
- Maintaining regulatory continuity during transitions (PR29 and PR34)
- Retaining fines and ODIs in Wales for reinvestment into water or environmental improvements.

Question 12: What governance principles should underpin the design of a Welsh economic regulator, and how should its supervisory approach balance oversight with flexibility for innovation?

NICW believes the new Welsh water regulator must be underpinned by the core principles of independence, transparency, accountability, and evidence-led decision-making. The regulator should have a clear statutory mandate to act in the long-term public interest, making use of robust data and forward-looking analysis to guide its decisions – a practice consistently emphasised in NICW's work.

Transparency in how decisions are made and how performance is monitored will be essential to build public trust. Collaboration should also be embedded in the governance

framework: the regulator should be required to work closely with environmental and public health authorities, consumer bodies, and other sectors, ensuring that regulatory decisions integrate environmental, social, and economic considerations rather than viewing affordability, resilience, and environmental goals in isolation.

At the same time, the regulator's approach must allow room for innovation. We recommend a proportionate, risk-based regulatory approach that rewards companies for pursuing innovative solutions, such as advanced digital monitoring, nature-based interventions, or novel financing models, so long as they can demonstrate these approaches will deliver tangible benefits and meet outcome targets. This could mean piloting regulatory sandboxes or offering greater flexibility in how companies meet objectives, provided clear performance metrics are in place. There may be an opportunity to learn about innovation in different sectors eg via Transport for Wales' Innovation Lab.

The supervisory regime should thus strike a balance: firm and independent in enforcing standards and protections, yet adaptable enough to encourage creative solutions to the complex challenges facing the water sector. Finally, as the institutional landscape evolves (with new planning and regulatory bodies), it will be vital to maintain a clear delineation of roles and a lean governance architecture, avoiding the pitfall of excessive institutional complexity that could slow decision-making. In short, the Welsh water regulator should exemplify good governance: objective, inclusive, and forward-thinking, with a regime that ensures accountability while enabling the sector to innovate for the future.

Question 13: If enabling powers were not conferred by the UK Government, what changes to the plans proposed by Welsh Government would be required?

If the UK Government does not confer the necessary enabling powers for Wales to establish its planned regulatory and governance reforms, the Welsh Government would need to adjust its approach to safeguard Welsh interests within the existing framework. NICW's findings emphasise that strong Welsh influence over water resource planning, environmental standards, and investment decisions is essential for achieving Wales's long-term goals.

Without a Wales-specific regulator, it becomes critical to formalise other mechanisms to ensure Welsh priorities are not overridden. This could include securing statutory guarantees of Welsh representation and decision-making power in any cross-border regulatory forums or joint bodies and establishing clear protocols so that Welsh environmental objectives are upheld in all regulatory decisions affecting Wales.

The Welsh Government might also need to pursue secondary legislation or amendments to existing laws to implement parts of the Water Strategy that do not depend on new UK-level powers, for instance, strengthening requirements on water companies via Welsh regulations in areas like environmental performance, transparency, or collaboration with other sectors.

A lack of clarity in regulatory authority during the transition could lead to regulatory ambiguity and misalignment with England, which could undermine investor confidence and slow down essential infrastructure improvements. Thus, if UK enabling powers are delayed or denied, Wales should proactively establish interim arrangements that replicate the intended benefits of these reforms as much as possible.

This might involve enhanced roles for existing Welsh institutions (like Natural Resources Wales or the Drinking Water Inspectorate in Wales), and formal cross-border agreements to protect Welsh interests until full devolution of powers can be achieved. Ultimately, any adjustments must ensure that the coherence and integrity of Wales's long-term water strategy are not compromised by intergovernmental delays.

Wales should continue to push for the tools it needs to implement a truly Welsh-focused water governance system; in the meantime, creative solutions and robust negotiation will be required to work within current constraints without losing momentum on critical reforms.

Question 14: Which changes to performance commitments and outcome delivery incentives should be prioritised?

NICW's assessments clearly indicate that performance commitments for water companies must be reoriented to reflect Wales's pressing environmental and resilience challenges.

First and foremost, river health and water quality outcomes need stronger commitments – for example, targets for measurable reductions in nutrient pollution and significant decreases in harmful storm overflow discharges, to drive tangible improvements in ecological status of water bodies. Resilience metrics should also be embedded: companies must be held to outcomes that demonstrate improved resilience to both flooding and drought conditions, given the escalating climate risks detailed in NICW's studies.

This could include commitments around maintaining water services during extreme weather events, reducing customers at risk of supply interruptions, and implementing natural flood management projects.

In addition, asset health indicators should feature prominently in performance frameworks. Our 2026 assessment identified a substantial maintenance and renewal backlog on ageing infrastructure; therefore, measures such as sewer network condition indices, treatment works reliability, and rates of mains renewal or leakage reduction should be part of the incentive regime. Prioritising asset health and long-term reliability will help ensure that short-term operational performance is not achieved at the expense of future service sustainability.

Finally, performance commitments must support customer affordability and fairness. As investment requirements increase to meet environmental and resilience goals, regulators and companies must include metrics that track outcomes for vulnerable households; for instance, measures of water poverty reduction and the accessibility of services for those least able to pay. Rising investment ambition should not translate into deteriorating equity of access.

By prioritising these changes, Wales can drive water companies to deliver the outcomes that matter most: cleaner rivers and coasts, better resilience against climate extremes, well-maintained infrastructure, and services that remain accessible and affordable for all.

Question 15: How can digital enforcement and monitoring be implemented affordably for Welsh customers, and what steps could strengthen operator self-monitoring while maintaining confidence in compliance?

As mentioned above, NICW's infrastructure assessment found that digital monitoring can be highly cost-effective when deployed strategically, delivering significant benefits in transparency and performance improvement that ultimately save money in the long run.

To implement modern digital enforcement affordably, Welsh Government and regulators should consider creating a shared digital monitoring framework for the nation's water industry. By investing in common platforms for sensors, data collection, and reporting, Welsh water companies could achieve economies of scale and reduce duplication of effort. For example, standardised real-time water quality sensors and overflow monitors, feeding

into a national data platform, would spread costs and allow smaller or not-for-profit companies to access cutting-edge technology without bearing the full expense individually.

To strengthen operator self-monitoring while maintaining compliance confidence, NICW advocates a risk-based verification regime. Under this approach, companies with exemplary performance and robust internal controls could be subject to lighter-touch external oversight, thereby reducing regulatory costs that ultimately flow to customers.

Conversely, operators with a history of compliance issues or poor performance would receive more frequent inspections and audits. This creates an incentive for companies to invest in high-quality self-monitoring and management systems: if they can demonstrate reliable performance data and quick response to issues, they earn regulatory trust and possibly reduced scrutiny.

Confidence in compliance can be further bolstered by maximum transparency, for instance, publishing key environmental and operational data (overflow events, pollution incidents, drinking water quality measures) in near-real time for public and independent scrutiny.

This aligns with our emphasis on strengthening public trust: when customers and stakeholders can see the data for themselves, they are more likely to trust that issues are being identified and addressed promptly. Robust community engagement mechanisms could support engagement in monitoring and accountability and encourage personal responsibility for water efficiency and re-use, similar to our Flooding report recommendation for household level measures.[1]

Question 16: How should civil sanctions and enforcement powers be applied proportionately?

Proportionate enforcement of environmental regulations means calibrating civil sanctions to the severity of the offence, the harm caused, and the operator's history, in a way that deters non-compliance and drives improvement without being unjust or counterproductive. We support a risk- and impact-based approach in line with modern regulatory best practice.

For significant or repeat breaches sanctions should be stringent enough to have a real financial and reputational impact on the operator. Minor or first-time infractions with minimal impact, should take a more educative or corrective approach

This gives operators the opportunity to fix problems and learn lessons without disproportionate punishment, while still making clear that standards must be met.

Importantly, this calibrated approach must be underpinned by clear criteria so that all stakeholders understand how decisions are made. In practice, this means Welsh regulators should avail themselves of the full range of civil sanctions (warnings, fines, undertakings, prosecutions where needed) and apply them in a transparent, consistent manner that focuses on improving outcomes for the environment and communities.

Question 21: What measures would strengthen governance standards and senior accountability in Welsh water companies?

[1] RECOMMENDATION 13: Welsh Government to provide subsidies to private homeowners who are in receipt of benefits to build flood resilience at the property level including:

- incentives for installing flood resilience measures in homes and businesses (e.g. discounts on insurance premiums, VAT-free schemes, group-purchase discounts in Business Improvement Districts).
- NEST-type scheme for flood resilience modifications, such as installing air vent covers, doorway barriers and water butts in homes, targeted at private rented and socially rented homes, and/or those on low incomes in high-risk zones.

NICW considers that stronger governance and accountability within water companies are crucial for meeting Wales's environmental and resilience objectives. We believe that company boards and executives should be held directly accountable for outcomes in environmental performance and infrastructure resilience, not just financial or customer-service metrics. This could be achieved by incorporating explicit legal duties for directors.

Executive remuneration and bonus structures should be tightly linked to performance on environmental, customer service, and resilience indicators. If leadership compensation is directly tied to measurable improvements (such as reduced pollution incidents, enhanced customer satisfaction, or progress on leakage reduction and asset upgrades), it will incentivise a corporate culture that prioritises long-term public-interest goals.

Transparency is another key measure: requiring water companies to regularly publish data on asset condition, investment plans, and environmental impacts will subject company management to greater public and regulatory scrutiny, thereby strengthening accountability. This could include, for example, annual public reports on the state of critical assets, and clear justifications for major investment decisions or dividend policies in light of service performance. Given the ongoing issues with lack of public trust in water companies across the UK, much work is needed to rebuild trust through robust transparency.

Given the unique not-for-profit status of Dŵr Cymru (Welsh Water), the governance frameworks should ensure that its member governance model is effective in representing customer and community interests, and that similar accountability expectations apply as would to any company. In summary, by embedding environmental and social responsibilities at the governance level, linking leadership incentives to public outcomes, and improving transparency, Welsh water companies can be driven to higher standards of performance and earn the trust of the public they serve.

NICW has been advocating for Nature itself to be represented on the Boards of all public sector bodies in Wales. Nowhere would this be more appropriate than at the decision-making level of water-based organisations. Commissioners believe these positions should be made mandatory to enhance governance standards and give nature a genuine voice.

Community voice, involvement and cultural alignment are also priority concerns for Commissioners:

- Companies should be required to demonstrate authentic community co-design
- Lived experience must be valued alongside technical evidence
- Welsh-language access and cultural considerations should be embedded
- Community-led catchment restoration programmes should be supported.

Question 22: How can financial resilience requirements support sustainability, and what principles should guide alternative ownership models?

Strengthening financial resilience is integral to ensuring companies can invest in future infrastructure and withstand shocks.

Regarding alternative ownership models, whether a company is investor-owned, not-for-profit (as with Dŵr Cymru), mutual, community-owned, or a hybrid, the key question is how the model drives behaviour. The ideal ownership or governance structure is one that reinvests profits into system improvements, prioritises long-term asset management over short-term returns, and is accountable to the people of Wales.

Innovative funding mechanisms should also be explored, as recommended in our Flooding report.[2]

Ultimately, any ownership model should be judged on whether it delivers the necessary investment in resilience and sustainability and whether it upholds Welsh values of social equity and environmental sustainability over the long term.

Question 23: What outcome-based resilience standards would be most appropriate for Wales, and how can asset health mapping and forward-looking metrics be strengthened without disproportionate costs?

Outcome-based resilience standards for Wales should directly address the most critical risks to our water infrastructure and water environments, in line with the varied challenges faced by different catchments and communities.

Strengthening asset health mapping and forward-looking metrics is vital to meet those resilience standards. We advocate developing unified digital tools and common data standards across all water companies for asset mapping.

This would entail creating national databases of asset condition and predictive models of asset deterioration that are shared or at least standardised, helping pinpoint where failures are likely if investments are not made. Modern analytical techniques, such as AI-driven predictive maintenance and climate-impact modelling, can be harnessed to forecast which assets are most at risk under future conditions.

These forward-looking metrics can be strengthened without disproportionate cost by leveraging collaborative platforms: a shared national system for monitoring and modelling means companies and regulators can pool resources to develop it, rather than each company doing it independently. Moreover, focusing on outcome-based metrics will help justify the costs by tying monitoring improvements to real-world benefits.

NICW also stresses that we must embed future climate projections into today's asset standards. By investing smartly in improved mapping and metrics now, Wales can guide its water companies to invest in "the right assets at the right time", thereby boosting resilience in a cost-effective manner over the long term.

To make this credible, the regulator must embed statutory asset health baselines, forward-looking condition metrics, and mandatory mapping and renewal plans as minimum requirements, not voluntary best practice. Without these foundations, outcome-based standards risk becoming aspirational rather than enforceable, and Wales will lack the shared evidence base needed to direct investment where it is most needed.

Question 24: What steps should improve supply chain and workforce capacity for future infrastructure delivery?

Delivering the scale of infrastructure renewal and enhancement envisioned in Wales's water strategy will require a skilled workforce and a resilient supply chain. NICW's assessments

[2] RECOMMENDATION 11: Explore and diversify funding sources by 2030 to offer an alternative to conventional funding streams:

- Pilot crowdsourcing and philanthropic funding, aligning with local levies, to supercharge long-term capital investment in flood resilience measures.
- Develop a business case for investment in flood risk management through Corporate Social Responsibility (CSR) and Environmental Social and Governance (ESG) initiatives.
- Introduce the concept of Nature Finance (biodiversity/carbon) credits to support flood resilience efforts. Explore a potential role for the Development Bank for Wales in funding and supporting flood resilience and related projects.
- Collaborate with the insurance sector to explore flood risk mitigation funding for the most vulnerable communities.

indicate that capacity constraints in skills or supply chains could otherwise undermine the pace and cost-effectiveness of the reforms.

To improve workforce capacity, we recommend bolstering training and development programmes in relevant fields, including civil and environmental engineering, hydrology, data science for digital water management, and the growing field of nature-based solutions design. This might involve partnerships between government, industry, and educational institutions to expand apprenticeships and specialized training courses, ensuring that Wales produces and attracts the talent needed for water infrastructure projects.

On the supply chain side, providing the sector with long-term certainty and clear demand signals is critical. Suppliers and contractors are more likely to invest in expanding their capacity if they see a pipeline of work and stable funding. Thus, Welsh Government and the new regulator should communicate a clear multi-year investment programme (aligned with the 5-10-25 year planning cycle) so the market can prepare.

Addressing supply chain and workforce issues is not just about the water sector in isolation; it benefits from a cross-sector perspective. Many of the skills and supply chain elements overlap with other infrastructure sectors. A coordinated approach across sectors could therefore yield efficiencies – ensuring that Wales's broader infrastructure plans complement each other in developing Welsh workforce skills and do not all peak at the same time in competition for resources.

Question 25: What should be the key priorities in the Welsh Government's transition plan for water sector reform to provide clarity and stability?

A well-structured transition plan is crucial for maintaining stability and confidence throughout the reform process. The transition to a new governance and regulatory system (through to 2030 and beyond) must be managed carefully to avoid any loss of momentum or dip in performance. Key priorities should include:

- **A clearly defined timeline and roadmap** for all major steps in the reform. This should lay out when legislative changes will be passed, when the new regulator and National System Planner will be established, and how the interim period will be managed. Given that the new economic regulator is envisioned to be operational by 2030, the roadmap should detail milestones between now and 2030 to keep this on track. Any ambiguity or delay in establishing the new structures would create uncertainty for the industry and investors, so the plan must include an explicit transition governance framework to guide the sector in the meantime.

- **Continuity of regulatory oversight and service delivery**. The plan should ensure that during the transition, there is no lapse in environmental monitoring, enforcement, or customer service standards. This could mean retaining certain oversight functions in the short term or gradually phasing responsibilities to new institutions with overlap periods. Customers and the environment should see seamless protection – reforms must not become a reason for companies to delay needed investments or improvements.

- **Investment in enabling systems**, such as digital monitoring infrastructure and data management, early in the transition. Doing so will equip the new regulatory framework with the tools it needs from day one (for instance, an integrated data platform for water company performance and environmental conditions). Early wins in setting up these systems can also signal to stakeholders that the reform is yielding tangible improvements in transparency and capability even before the structural

changes are fully in place.

- **Cross-border coordination mechanisms**. Since Wales's water system is intertwined with England's, the transition plan must ensure that new Welsh institutions engage effectively with UK regulators and agencies throughout the reform period. There should be agreed protocols for information sharing and decision-making on cross-border issues during the transition to avoid any regulatory fragmentation or conflicts that could jeopardise shared water resources.

By prioritising a transparent timeline, maintaining strong oversight, building necessary capabilities early, and coordinating with neighbouring systems, the Welsh Government can provide the water industry and the public with the clarity and stability needed during this significant transition. NICW would underscore that clarity in the transition plan not only reduces risk but also builds confidence among stakeholders, from investors and communities, that the reforms will be delivered smoothly and successfully.

Question 26: How can governance and advisory mechanisms ensure effective stakeholder engagement during the transition period, and would independent oversight add value?

Our recent work on Climate Adaptation and community engagement has revealed that effective governance during the transition will require meaningful engagement with a broad range of stakeholders, including communities to ensure the reform process benefits from wide input and maintains public confidence.

NICW recommends establishing a national water reform stakeholder forum that meets regularly throughout the transition. This forum should provide transparent updates on reform progress, surface any concerns or issues emerging from the field, and allow stakeholders to offer feedback and expertise on implementation challenges. Such a body, if well-designed, can act as a mirror to the reform process, ensuring that on-the-ground perspectives are heard and that public communication is clear and responsive.

We also see significant value in independent oversight of the transition. An independent transition oversight panel or commission – operating at arm's length from both government and industry – could be tasked with monitoring the delivery of the reform milestones, auditing the performance of transitional arrangements, and reporting publicly on progress. This would add an extra layer of accountability, helping to reassure both the public and stakeholders that the reform is on track and that any emerging risks are identified early and addressed. The independent body could, for example, issue periodic progress reports, flag if timelines are slipping or if certain critical actions (like capacity-building or legislative steps) need acceleration, and recommend corrective measures as needed.

NICW also notes that it is well placed to provide a supportive role in this area. As an independent advisory body with a mandate to take a long-term, cross-sector view, NICW could assist by convening stakeholders in a collaborative setting and offering impartial advice during the transition.

We stand ready to help bring together different sectors and communities to discuss challenges and solutions, ensuring the reform remains inclusive and that best practices are shared across sectors.

NICW thanks the Welsh Government for the opportunity to contribute to this consultation, and we commend the ambition shown in the Green Paper. We believe these reforms are timely and necessary to deliver the climate-resilient, well-governed, and affordable water

services that the people and environment of Wales deserve. We are firmly of the view that by embracing long-term, integrated thinking now, Wales can set a new standard for water governance that not only tackles today's issues but also builds a foundation capable of meeting the challenges of the next half-century and beyond.

We are confident that with strong leadership, clear vision, and continued engagement, Wales can create a water system that is sustainable, resilient, and accountable. NICW looks forward to continuing to work closely with the Welsh Government and all stakeholders to turn this vision into reality.

Yours faithfully,

Dr David Clubb
NICW Chair

Dr Eurgain Powell
Lead Commissioner