



Built to Last

Building a Resilient and Sustainable Scotland



Foreword

Scotland stands at a pivotal moment. Faced with the twin challenges of climate change and economic transition, the need for resilient, sustainable, and inclusive infrastructure has never been greater. Civil engineers are the quiet custodians of Scotland's future – from the roads we travel, to the water we drink, to the flood defenses that protect our homes.

The next Scottish Parliament is critical for the country's progress towards its long-term strategic objectives. Infrastructure has a vital role to play in meeting those goals. The correct infrastructure systems are needed to unlock economic growth, overcome the challenges posed by climate change, manage demographic change, and improve the lives of citizens.

The next government will be responsible for meeting some important milestones towards those longer-term targets. The next parliament is also the last opportunity to make significant progress towards the 2030 Sustainable Development Goals. This prospectus sets out the ICE Scotland priorities for how the next Scottish Government can strengthen the country's infrastructure planning and delivery framework to achieve those outcomes at the required pace and scale.

Executive Summary

The Institution of Civil Engineers (ICE) is the independent voice on infrastructure and the leading source of expertise in infrastructure and engineering policy. Founded in 1818, the ICE was the world's first professional engineering body and over the years, has offered trusted impartial advice to politicians and decision makers on how to build more sustainable infrastructure. ICE Scotland represents over 8,500 members, drawn from across the public, private and academic sectors. Our members design, build, operate and maintain Scotland's critical transport, water, flooding, energy and waste infrastructure. However, we are not a trade body. Our Royal Charter requires that we act in the public interest and the following comments have been developed in this way.

Infrastructure is a valuable and efficient economic stimulus. Drawing on the unparalleled expertise of our membership, this prospectus sets out our thinking on how to maximise the role of infrastructure development to support Scotland's socio economic and environmental ambitions and targets.

Our infrastructure assets, however, are not just economic enablers; they are societal assets. We also consider requirements to ensure infrastructure's social benefits are 'locked-in' and appropriately future-proofed and adapted to meet the challenges of the climate emergency. Fundamentally, we believe:

- *Any new Scottish Government should appoint a Cabinet Secretary for Infrastructure to drive coherent, joined-up leadership and faster policy and project delivery to support economic growth, mitigate the climate emergency and drive connectivity, and productivity whilst ensuring accountability.*
- *A national strategic 'resiliency audit' will inform a National 'Repair, Maintain, and Enhance' programme ensuring a better quality of life, economic stimulus whilst ensuring the futureproofing and adaption of Scotland's infrastructure to mitigate the climate emergency.*
- *Any new Scottish Government should commit to working to remove barriers for industry, hampering the ability of the infrastructure sector to fully contribute to Scotland's socio-economic and environmental resilience.*

Decisive action on the necessary infrastructure investment, combined with careful stewardship of our infrastructure landscape, and joint working between industry and government, can benefit Scotland's economy and deliver wider social and environmental value – ensuring our infrastructure is built to last.



1. Build a Resilient and Sustainable Scotland

Scotland's infrastructure is facing pressures from climate change that, for the most part, it was not designed to withstand. Without adaptation and improved emergency response to build greater resilience, Scotland's infrastructure will lose value, repairing damage will be more costly and increasingly frequent, and the public will face higher levels of disruption. Climate-resilient infrastructure, clean energy, and inclusive development will ensure our towns, cities and regions can thrive.

Our Ask:

Conduct a national strategic 'resiliency audit': Bringing together experts from across the public, private and academic sectors to map out areas of pressing challenge and the interventions which can deliver the most socio-economic and environmental benefit across our transport, energy, water, flood defense and digital infrastructure.

Our Priorities

- **Invest in adaptation:** Strengthen flood risk management, coastal protection, and climate-resilient water systems to protect communities.
- **Prioritise public engagement and behavioral change:** To reduce carbon emissions and mitigate the risk of relying on unproven technologies to achieve net zero.
- **Collaborate with the UK Government:** To adopt a mandatory reporting approach to the Adaptation Reporting Power (ARP) of the UK Climate Change Act for all infrastructure owners and operators in Scotland delivering the information required to address the most pressing infrastructure needs first.
- **Establish a Scottish Centre of Excellence for Sustainable Infrastructure:** To support civil engineering innovation in delivering sustainable infrastructure.



2. Infrastructure for Inclusive Growth

Income inequality is continuing to widen in Scotland. The Scottish Government is actively pursuing a "wellbeing economy" strategy, aiming to reshape the country's economic system to prioritise the collective wellbeing of its people and the environment. This involves transitioning to an economy that is fair, sustainable, and growing, ensuring prosperity for all. The National Strategy for Economic Transformation (NSET) is the key 10-year plan guiding this transition. Within the strategy, it has missed the opportunity to align infrastructure as a key driver of regional equity.

ICE Key Ask:

Recognise infrastructure as a driver of wellbeing and regional equity.

Our Priorities

- **Deliver equitable infrastructure:** Target investment in underserved rural, island, and post-industrial communities.
- **Expand transport connectivity:** Ensure all communities have access to safe public transport, resilient road, rail and ferry infrastructure
- **Empower local authorities:** Provide long-term funding and technical support for councils to maintain and improve local infrastructure.



3. Boost Engineering Skills and Diversity

Scotland faces several pressing civil engineering skills issues that impact the delivery of vital infrastructure and sustainable development goals. These issues are driven by demographic trends, education gaps, industry demands, and regional disparities. This lack of a skilled workforce is only exacerbated by both women and people from ethnic minority backgrounds facing barriers to the profession and whilst the situation is improving, they remain underrepresented in civil engineering.

ICE Key Ask:

ICE Scotland in partnership with Scottish Government to lead the development of a national Civil Engineering Skills Action Plan to address critical workforce shortages, accelerate net-zero infrastructure, and ensure a resilient pipeline of talent across Scotland.

Our Priorities

- **Identify skills shortages:** ICE Scotland in partnership with Scottish Government and its agencies to lead a review of skills gaps and shortages in civil engineering developing an action plan to resolve
- **Champion STEM education:** Invest in school and college-level STEM pathways that lead to careers in civil engineering and infrastructure.
- **Back apprenticeships and reskilling:** Support upskilling in digital (AI), environmental, and systems-based engineering skills.
- **Increase diversity in engineering:** Support initiatives and funding that bring more women and underrepresented groups into the civil engineering profession.
- **Encourage flexible work patterns** to attract and retain underrepresented groups.

4. Reform Procurement

Public procurement is not working effectively. Smaller contractors are often disadvantaged, local supply chains under-utilised and transactional contract models are not sustainable.

Procurement of projects is too often focused on the lowest capital cost. Whole-life costs, which factor in operation, maintenance, renewal and disposal costs alongside construction costs, are now more important than just the upfront costs in a world of tighter budgets. In general, more weight should also be attached to the whole-life benefits of projects and programmes – be they economic, social or environmental – and the role of improved interconnectivity through enhanced infrastructure investment.

Reforming the procurement of infrastructure will further support inclusive growth and sustainable public services while ensuring the next generation of infrastructure is built efficiently, inclusively, and transparently.

ICE Key Ask:

Establish a partnership-based procurement ecosystem to drive collaboration between public and private entities to deliver infrastructure projects and leverage private sector expertise and funding to address public infrastructure needs.

Our Priorities

- **Make sustainability a core procurement criterion:** Ensure public contracts reward environmental performance and lifecycle value.
- **Support innovation and modern methods of construction (MMC):** Embrace digital design, modular construction, and smart asset management.
- **Enable collaboration:** Foster integrated project delivery that reduces cost, delays, and waste.
- **Unlock private investment:** To accelerate investment in decarbonisation initiatives while exploring new solutions.
- **Simplify and Streamline Procurement for SMEs:** Reduce complexity and compliance burdens in public contracts.





5. Plan for the Long-Term

Infrastructure is a key driver of socio-economic benefits and opportunities as well as integral to building a more sustainable Scotland. Likewise, infrastructure improves the quality of life and opportunity for citizens and increases regional equity between rural and urban Scotland.

Infrastructure planning, investment and purposeful prioritisation is a long-term obligation and must move beyond short-term political cycles and be founded on a shared vision underpinned across Government and by cross-party commitment.

It has been over a decade since the Scottish Government had a Cabinet Secretary for Infrastructure despite infrastructure underpinning the current Governments key priorities of tackling the climate emergency, ensuring high quality and sustainable public services and growing the economy. This is an opportunity missed for Scotland to bring cross portfolio co-ordination on infrastructure across net zero, transport, economy and finance and communities ensuring coherent policy development and a systems thinking approach to better achieve the key objectives of the Scottish Government.

ICE Key Ask:

Appoint a Cabinet Secretary for Infrastructure within the new Scottish Government to drive coherent, joined-up leadership and faster policy and infrastructure delivery to support economic growth, connectivity, and productivity whilst ensuring accountability.

Our Priorities

- **Continued support of an Independent Scottish Infrastructure Commission:** To advise on long-term priorities across transport, water, waste, energy and digital sectors.
- **Introduce a National Infrastructure Plan for 2050:** With clear, measurable milestones aligned to net-zero, economic growth, and wellbeing.
- **Strengthen the Cross-Party Group on Infrastructure** in the Scottish Parliament: To increase the understanding and role of infrastructure in Scotland by working with ICE members and other partners

6. Empower Engineers as Public Servants

ICE members are highly skilled professionals who have met and continue to meet exacting standards to become and remain ICE members. Their expertise in planning, designing, building, maintaining and managing our infrastructure needs to be recognised in policy development, delivery, and procurement.

Civil Engineers have always worked to benefit the public. With decisive action, collaborative working and sound stewardship of our infrastructure assets, Scotland can deliver economic and social value through infrastructure that is fit for the future by involving civil engineers in shaping public policy and infrastructure decisions.

ICE Key Ask:

Recognise the role of civil engineers as trusted voices to further involve civil engineers in shaping public policy and infrastructure decisions

Our Commitments

- **Recognise the role of engineers in governance:** Involve civil engineers in shaping local and national policy decisions.
- **Promote ethical engineering:** Uphold high standards of safety, sustainability, and integrity across all publicly funded projects.
- **Galvanise chartered engineers and strengthen their status:** Recognise professional competence in public procurement, planning, and project oversight.



