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A NATIONAL MISSION WITH LOCAL IMPACT

Draft Infrastructure Investment Plan
for Scotland 2021-22 to 2025-26



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A handwritten signature in black ink, appearing to read 'Michael Matheson', written in a cursive style.

Michael Matheson
**Cabinet Secretary for Transport,
Infrastructure and Connectivity**

MINISTERIAL FOREWORD

Infrastructure investment touches the lives of every person in Scotland – from the homes we live in and the water, energy and telecommunication we consume, to how we travel to the places we work, shop and learn.

As we tackle the economic, health and social harm arising from COVID-19, infrastructure will have a key role to play in securing a recovery that delivers new, good, green jobs. To address the adversity of the COVID-19 pandemic, compounded by the fast-approaching shock of the UK's exit from the European Union, it is vital that we act now to invest in Scotland's future.

We need the ability to respond quickly and comprehensively to boost the economy in the light of the COVID-19 pandemic. We need to think differently about wider changes to the ways in which we do business and conduct our lives, for example to boost new, high-quality digital services. We must also recognise the role that our infrastructure investment will have in the transition to a net zero emissions economy and ending Scotland's contribution to climate change.

Earlier this year the Infrastructure Commission for Scotland made recommendations about the right future infrastructure priorities for an inclusive, net zero carbon economy in Scotland. In light of COVID-19 and Brexit, the Commission's approach

is even more needed than before. This plan accepts their recommendations. I show here how we will implement them in consultation with industry, delivery partners and the people of Scotland.

Our Infrastructure Investment Plan covers 2021-22 to 2025-26 and delivers our National Infrastructure Mission commitment to boost economic growth by increasing annual investment in infrastructure by 1% of 2017 Scottish GDP by 2025-26. When the First Minister announced the National Infrastructure Mission in 2018, we were the first part of the UK to commit to overcome historically lower levels of UK investment, seeking to reach internationally competitive levels. Supported by a high-level review of the Scottish Government's capital spending, this plan presents how we will deliver, and how our funding and finance is matched to our decisions.

There is now, more than ever, a need for the UK Government to agree increased fiscal flexibilities for the Scottish Government so that we can take advantage of historically low cost borrowing to invest for Scotland's future. In the absence of that certainty, we are setting out our plans ahead of the UK spending review and confirmation of future budgets for Scotland, because we firmly believe action is required now to support our economy and public services.

The National Infrastructure Mission means over £33 billion of Scottish Government investment over the course of the next Parliamentary term. Our Capital Spending Review Framework, published alongside this draft Infrastructure Investment Plan, sets out at a high level the capital investment we intend to make, whether in infrastructure or other areas such as protecting and increasing jobs or through our capitalisation of the Scottish National Investment Bank.

This draft Infrastructure Investment Plan shows where the capital invested in infrastructure will go. It covers projects which Scottish Government or its Agencies and Non-Departmental Public Bodies deliver directly, such as boosting our digital and transport connectivity, reducing the reliance of our homes on fossil fuels, boosting economic growth across our cities and regions, regeneration in our towns and neighbourhoods, or improving our services with better health and educational facilities.

I am delighted that this draft Infrastructure Investment Plan details around £24 billion of major projects and large programmes that are ready to be confirmed now, including those which are revenue funded. Looking ahead, we will show how future projects which have progressed beyond the planning stage and into delivery will join our pipeline.

We launched through this year's Programme for Government our National Mission for Jobs. Infrastructure investment will be key to its success. This Plan offers the market confidence in a robust pipeline of work that will help stimulate our economic recovery. Over the next five years, around 45,000 jobs will be supported through our total capital investment. It is also good for green jobs and stimulating a low carbon recovery.

This draft Infrastructure Investment Plan sets out a clear vision for our future infrastructure – to support and enable an inclusive net zero emissions economy. Underpinning this vision are three themes: enabling net zero emissions and environmental sustainability; driving inclusive economic growth; and building resilient and sustainable places. These also complement the proposed Missions of the Scottish National Investment Bank.

Our vision can provide huge opportunities for Scotland's people. We will drive innovation, ensure access to growing global markets, create good, sustainable jobs, enhance local areas and support a just and fair transition and wellbeing outcomes.

I'm also pleased to introduce a new Scottish Government-wide infrastructure investment hierarchy, founded in the Infrastructure Commission's recommendations.

Our decision-making approach will support efforts to protect the environment by considering how to enhance and re-purpose what we already have before creating new things. It will make our public services more sustainable and deliver better long term outcomes for those who use them. To back this up we aim to work towards doubling our investment in maintenance over the next 5 years.

We will continue to reduce emissions to play our part in the global fight against climate change. But we also need to protect households and businesses from the effects of climate change already underway. We will increase investment in flood risk mitigation and schemes to help us adapt to coastal change.

We want to build a Scotland that harnesses opportunities and is resilient to future challenges. I am consulting on this draft plan, to ensure the right final approach that benefits all of Scotland's people.

EXECUTIVE SUMMARY

Scotland aims to deliver a wellbeing economy. That means ensuring society thrives economically, socially and environmentally, and that we deliver sustainable and inclusive growth for all. Making the right investments in the right places is crucial.

Delivering our National Infrastructure Mission

Analysts¹ have shown that investment in infrastructure can provide a significant boost to the Scottish economy. That is why, in 2018, the First Minister committed to our National Infrastructure Mission to increase annual investment by 1% of 2017 Scottish Gross Domestic Product (GDP) by end of next Parliament.

We are the first part of the UK to commit to such unprecedented growth to meet the level of investment of our international competitors. This will support tens of thousands of jobs and is estimated to simulate the Scottish economy by between £10 and £25 billion over the next 15 years.

Our high level Capital Spending Review Framework², published alongside this draft plan, sets out how we will ensure sufficient investment to deliver the National Infrastructure Mission. The Capital Spending Review Framework and the Infrastructure Investment Plan, once finalised, will provide a strong and coherent framework for directing, analysing, shaping, and prioritising future commitments.

Alongside building and maintaining infrastructure, our capital investment supports the economic growth we want to see by investing directly in businesses to boost innovation and employment, funding research and development, and capitalising the Scottish National Investment Bank.

This draft Infrastructure Investment Plan puts more flesh on the bones and sets out what we are doing with those capital funds spent on infrastructure. It provides a strategic picture of Scottish Government-wide priorities across financial years 2021-22 to 2025-26. It is draft because we are taking the opportunity to consult on some key aspects before the Plan is finalised, later this year.

Building on the Infrastructure Commission for Scotland Recommendations

To support delivery of the National Infrastructure Mission, Scottish Ministers established an independent Infrastructure Commission for Scotland. The Commission started work in 2019 and has reported its findings in two phases: Phase 1 recommendations on the right ambition, vision and strategic priorities, published in January 2020; and Phase 2 advice on how infrastructure is delivered. This advice was published in July 2020 and we will respond formally to those recommendations at a later date.

This plan focusses on adopting and building on the recommendations of the Commission in its Phase 1 report. It sets out our long term vision for Scottish infrastructure, shows how we will choose the right future investments, and sets out a 5 year programme of further improvements in our approach.

Our Infrastructure supports Scotland's resilience and enables inclusive, net zero, and sustainable growth

What we will deliver

In delivering this vision, the draft Infrastructure Investment Plan will focus on three core strategic themes for guiding investment decisions in Scotland:

- **Enabling the transition to net zero emissions and environmental sustainability**
- **Driving inclusive economic growth**
- **Building resilient and sustainable places**

These themes link directly to Scotland's National Performance Framework: our overall purpose and national outcomes to support Scotland's wellbeing. Consistent with our international outlook, they also match the UN Sustainable Development Goals. The Infrastructure Investment Plan offers a strong contribution to the Government's response to the COVID-19 crisis. It is closely linked to the development of the next National Planning Framework – which will support delivery of this Plan by shaping the geographic distribution of development and infrastructure – and the Climate Change Plan, which will be updated later this year to incorporate green recovery proposals.

1 <https://www.gov.scot/publications/exploring-economic-rationale-infrastructure-investment/>

2 <https://www.gov.scot/isbn/9781800040946>

Our draft Plan highlights those investments the Scottish Government delivers itself or through its own agencies and non-departmental public bodies. It does not cover investments by the UK Government or the private sector, nor by Councils, recognising their independence. Some of our key investments include:

Enabling the transition to net zero emissions and environmental sustainability

- Over £500 million will be invested over 5 years in active travel
- Investing £1.6 billion over the next five years to decarbonise heat in buildings, including £55 million new investment in energy efficiency and £95 million programme to decarbonise the public sector estate.
- Investing up to £75 million to improve local authority recycling collection infrastructure, accelerate the landfill gas capture and improve waste data through electronic waste tracking.
- Increasing forest cover, reaching 18,000 hectares of new woodland in 2024-25 as part of a £350 million programme

Driving inclusive economic growth

- Strengthening connectivity through the £600 million Reaching 100% (R100) programme that will ensure people in every part of Scotland have access to superfast broadband by end 2021.
- Doubling investment in bridge and roads maintenance, enhancing safety with a programme of around £1.5 billion over 5 years
- Stimulating innovation and our international attractiveness by concluding our £75 million investment in the National Manufacturing Institute Scotland
- Investing £525 million to deliver the next five years of £5 billion city region and regional growth deals.

- £30 million in delivering the National Islands Plan, supporting a range of areas, including tourism, infrastructure, innovation, energy transition and skills.

Building resilient and sustainable places

- Investing £275 million to support community-led regeneration and town centre revitalisation as part of a new Place Based Investment Programme
- Invest over £2.8 billion in direct capital grant funding, over 5 years, to deliver more affordable and social homes, continuing to ensure the right types of homes in the right places reflecting and supporting Local Housing Strategies and regional development priorities.
- Scottish Water is planning to invest over £4 billion in the next charge control period 2021-27 to maintain and improve services across Scotland, address the challenges of its aging asset base, and make progress towards the achievement of its commitment to net zero emissions by 2040.
- Together with Councils, fund an ambitious £2 billion Learning Estate Improvement Programme, using an outcomes based revenue finance approach.
- Invest over £220 million in the Baird and Anchor project in Aberdeen and deliver a £300 million programme of investment to expedite completion of our elective care centres
- Invest £25 million in the system development required to build on the 50-fold increase in patient use of NearMe digital healthcare services.

Scottish Government defines infrastructure more widely than some parts of the UK, including digital and social infrastructure for example. The Infrastructure Commission worked with this definition in their Phase 1 report and recommended we newly add 'natural infrastructure'. We are consulting in this draft plan on that recommendation.

Infrastructure is:

“The physical and technical facilities and other fundamental systems necessary for the economy to function and to enable, sustain or enhance societal living conditions.

These include the networks, connections and storage relating to the enabling infrastructure of transport, energy, water, telecoms, digital and internet, to permit the ready movement of people, goods and services.

They include the built environment of housing; public infrastructure such as education, health, justice and cultural facilities; safety enhancement such as waste management or flood prevention; and public services such as emergency services and resilience.”



Responding to COVID-19 and long-term trends

Our draft plan responds to the significant near-term challenges presented by the COVID-19 pandemic, recognising the profound impact the virus has had on our whole way of life. This has impacted on all of our communities and people, but particularly those who were most at risk to start with. Infrastructure has a vital role to play in helping businesses and communities to adapt and recover.

Alongside the harmful consequences of COVID-19, we have seen a number of positive shifts as people's lives became home-based, for example towards active travel or to make more use of digital services. Our draft Plan highlights our response, including:

- Investing in digital connectivity to help businesses and users wherever they live and work, and accelerating digital service provision, reducing the need to travel
- Supporting safe active travel and local, accessible public services in vibrant places
- Supporting green and blue spaces to provide access to nature
- Supporting positive social change such as new approaches to rehabilitation, and reduced homelessness
- Whilst not all is infrastructure, we will invest in job-creation to preserve and generate employment to support economic recovery.

Infrastructure investment provides assets for the long term. Consequently, we need to consider in our planning those long term trends that affect the nature of the infrastructure needed, whether due to climate, technological or demographic change. This draft plan sets out the nature of those trends, and highlights the key adjustments in our investment approach that will be required to respond well:

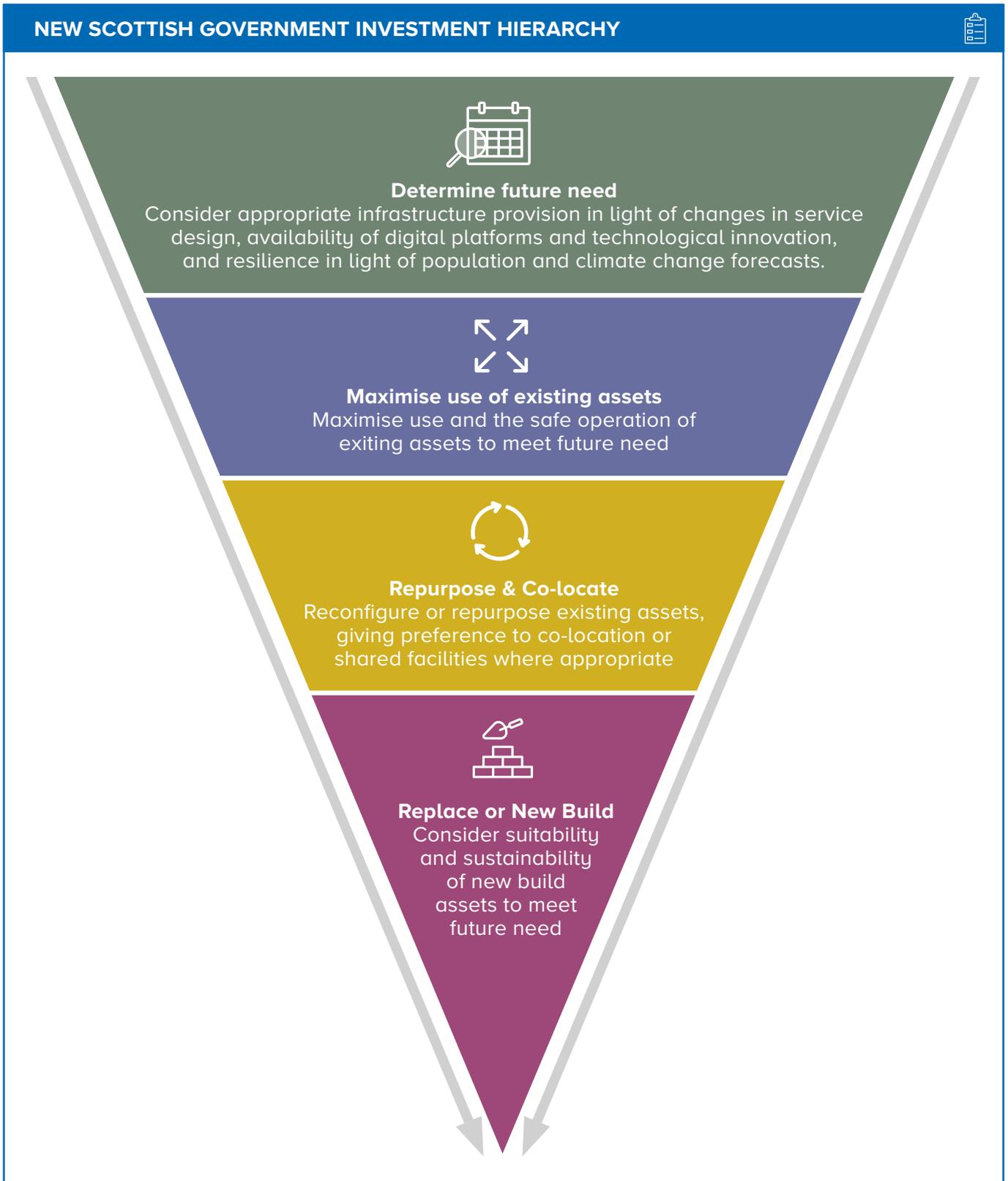
- **Climate** – adapting to climate change as well as mitigating emissions
- **Technology** – enhancing digital services and platforms; and increasing support for data handling and storage
- **Demography** – meeting the needs of a greater share of older people in our population; focusing services and homes where people choose to live; and regenerating areas of working-age population decline.

A new common investment hierarchy

The Scottish Government has also accepted the Infrastructure Commission recommendation to develop an 'investment hierarchy' which prioritises enhancing and maintaining our existing assets over new build. This is needed to protect our environment, and ensure value for money.

We propose a new Scottish Government-wide common hierarchy to aid planning and decision-making. We are consulting on the details in this draft Plan, as the hierarchy will drive future investment choices.

In practice, the hierarchy means that each step would need to be considered, in turn, before deciding the right new approach. For example, something new might only be built if there is still a demonstrable service need for a facility, and an existing asset can't be re-purposed. In future, a higher proportion of investment is likely to be directed towards the initial steps in the hierarchy than in previous years. As part of that we will be addressing backlogs by working towards doubling investment in maintenance and asset enhancement over the next 5 years.



OUR INFRASTRUCTURE INVESTMENT PLAN 2021-22 TO 2025-26 – AT A GLANCE

Vision	Our infrastructure supports Scotland’s resilience and enables inclusive, net zero, and sustainable growth		
Different 	<ul style="list-style-type: none"> • A coherent, strategic plan – based on long-term trends across 3 Themes under a common Vision • Consistent portfolio coverage from 2021-22 to 2025-26 – matching National Infrastructure Mission delivery • A new common investment hierarchy – enhancing and maintaining existing assets ahead of new build • Based on outcomes, not inputs – with a 5 year programme of improvements in our assessment framework • Promoting meaningful public engagement 		
Consult on 	<ul style="list-style-type: none"> • The inclusion of natural infrastructure within the Scottish Government definition of infrastructure • How we should prioritise – the common investment hierarchy approach • How we should prioritise – how we best assess the potential benefits and impact of proposed infrastructure • How we might best assess the carbon impact of future Infrastructure Investment Plans 		
Three themes	Enabling Net Zero Emissions and Environmental Sustainability	Driving Inclusive Economic Growth	Building Resilient and Sustainable Places
More 	<p>Emissions Reduction</p> <ul style="list-style-type: none"> • Decarbonising transport • Supporting Active Travel • Decarbonising heat & boosting the energy efficiency of buildings • Decarbonising industry <p>Supporting a circular economy</p> <p>Boosting Resilience & Adaptation</p> <ul style="list-style-type: none"> • Adapting to change at our coasts • Flood risk management <p>Investing in our Natural Capital</p> <ul style="list-style-type: none"> • Woodland creation • Peatland restoration 	<p>Strengthening Connectivity and digital services</p> <ul style="list-style-type: none"> • Full fibre broadband and 5G • A safe, sustainable, integrated and resilient strategic transport system <p>Boosting Competitiveness</p> <ul style="list-style-type: none"> • Strategic tourism investments • Manufacturing & Innovation <p>Inclusion and Growth</p> <ul style="list-style-type: none"> • City and Regional Growth Deals • Additional transport links alongside the Deals • Improve outcomes for island communities 	<p>Better Local Places:</p> <ul style="list-style-type: none"> • Community-led Regeneration • Town Centres • Digital planning <p>Suitable, Warm, Affordable Homes</p> <p>High Quality Social Infrastructure</p> <ul style="list-style-type: none"> • Digital health • Enhanced local & elective health services, to reduce acute need • Learning Estate Investment Programme • New Justice facilities • Improving our water and waste water infrastructure



Chapter 1

THE INFRASTRUCTURE COMMISSION FOR SCOTLAND



Chair of the Infrastructure Commission for Scotland Ian Russell (left) and Michael Matheson, Cabinet Secretary for Transport, Infrastructure and Connectivity (January 2020)

In 2018, the First Minister announced a National Infrastructure Mission, steadily to increase Scotland's annual infrastructure investment so that it reaches internationally competitive levels by the end of the next Parliament. This will see £1.5 billion higher investment in 2025-26 than in 2019-20, an increase representing a full 1% of GDP at the time the Mission started.³

To support delivery of the National Infrastructure Mission, Scottish Ministers established an independent Infrastructure Commission for Scotland. The Remit and background to the Infrastructure Commission is published in **Annex A**.

The Infrastructure Commission for Scotland started work in 2019 and has reported its findings in two phases:

- Phase 1: recommendations on the vision, ambition and strategic priorities for infrastructure were published in 'A Blueprint for Scotland' in January 2020.⁴
- Phase two involved providing further advice on the delivery of infrastructure. This advice was published in July 2020.⁵

The Infrastructure Commission was asked to work with the Scottish Government's definition of infrastructure, as below. This was developed after reviewing approaches adopted across the UK, and internationally such as in Canada, Australia and the USA. Scotland recognises a wider range of infrastructure than some others, including social and digital infrastructure, for example.

The Infrastructure Commission's Phase 1 report proposed the following vision:

30-year Infrastructure Vision:
To support and enable an inclusive net zero carbon economy

³ For further details on the National Infrastructure Mission, please see our Capital Spending Review Framework at:

<https://www.gov.scot/isbn/9781800040946>

⁴ <https://infrastructurecommission.scot/page/key-findings-report>

⁵ <https://infrastructurecommission.scot/page/delivery-findings-report>

Infrastructure is:

“The physical and technical facilities and other fundamental systems necessary for the economy to function and to enable, sustain or enhance societal living conditions.

These include the networks, connections and storage relating to the enabling infrastructure of transport, energy, water, telecoms, digital and internet, to permit the ready movement of people, goods and services.

They include the built environment of housing; public infrastructure such as education, health, justice and cultural facilities; safety enhancement such as waste management or flood prevention; and public services such as emergency services and resilience.”



In formulating its first report, the Infrastructure Commission engaged widely across Scotland, attracting almost 150 submissions and feedback from over 1,000 members of the public. It sought views from users and future users of infrastructure, including engagement with young people⁶, providing a rich source of information.

Phase 1 Key findings report called on the Scottish Government to tackle the dual challenges of a climate emergency and creating an inclusive growth economy. It identified 8 thematic areas with 23 recommendations aimed at the Scottish public sector, as well as infrastructure regulators, operators and users. Key recommendations relate to:

- Considering expanding our infrastructure definition to include Natural Capital, including ‘green’ and ‘blue’.
- Developing an investment hierarchy for Scotland, which prioritises a greater focus on maintenance of existing assets over new build.
- New methods of appraisal and prioritisation to strengthen the evidence base for infrastructure investment decisions, and ensure they match long-term goals
- Broader public engagement in forward infrastructure plans.

Scottish Ministers agree with the recommendations in the Phase 1 Report. Some forward dates and implementation details may look a little different from Infrastructure Commission aspirations, not least out of necessity given the impact of the COVID-19 pandemic on our work. The Government’s detailed response is set out in the table below, covering 22 out of the 23 recommendations now.

The Infrastructure Commission’s comprehensive second report on the delivery of infrastructure was published in July and the Scottish Government will now take the time needed to consider its findings very carefully. The final Phase 1 report recommendation, number 23, related to statutory long-term, independent advice. Since this concept was explored and developed more fully in the Phase 2 report, a formal response on this recommendation, alongside other Phase 2 findings, will be published in due course.

The Commission recommendations are wide-reaching. This draft Infrastructure Investment Plan builds on the findings, meaning it looks and feels different to its predecessors.

6 https://infrastructurecommission.scot/storage/232/Appendix_I.pdf

PRINCIPLE	DETAILED RECOMMENDATIONS	ACCEPT	SCOTTISH GOVERNMENT RESPONSE
Leadership 	<p>1. The 2020 Infrastructure Investment Plan should be prioritised against available inclusive net zero carbon economy outcomes.</p> <p>2. Scottish Government should, by 2021, develop a new infrastructure assessment framework</p> <p>3. Scottish Government should publish, by 2023, a system-wide Infrastructure Needs Assessment</p> <p>4. A fully updated Infrastructure Investment Plan should be developed for publication by 2025, using the new Needs Assessment and framework.</p>		<p>This draft Infrastructure Investment Plan 2021-22 to 2025-26 prioritises the pipeline of investments against three themes, including enabling net zero emissions and environmental sustainability, and driving inclusive economic growth.</p> <p>It sets out a 5 year programme of improvements to infrastructure planning, ready to support future Infrastructure Investment Plans. This includes the development of a new infrastructure assessment framework and a system-wide Infrastructure Needs Assessment.</p>
Place 	<p>5. There should be Place-based assessment of long term Scottish housing supply and demand by 2021, supported by a coherent strategy for the labour market and business opportunities from an inclusive net-zero economy.</p> <p>6. To support the implementation of National Planning Framework 4 and the new system of development plans, a co-ordinated and appropriately resourced Infrastructure First approach to the planning system should be introduced by the SG by 2021</p>		<p>This draft Plan puts 'Place' at its heart through its third theme focused on building resilient and sustainable places.</p> <p>As part of planning reform we will set out interim housing land required (for consultation and scrutiny) in the draft National Planning Framework, due in 2021, and will frame this within a new spatial strategy that aligns with our investment programme and principles. We will build on this to further adapt our Housing Planning Delivery Framework, to enhance our placed based assessments of long term housing need and demand across Scotland through local housing strategies by 2022.</p>
Making the most of existing assets 	<p>7. By the end of 2020, all public sector infrastructure asset owners should develop asset management strategies</p> <p>8. Scottish Government should issue guidance on a whole-life approach to infrastructure maintenance and prioritisation, which includes both cost and build resources.</p> <p>9. There should be a presumption against like-for-like replacement of assets and construction of new, single purpose ones in favour of shared facilities.</p> <p>10. By 2023, Scottish Government should establish a route map to implement an outcome-focused system of resource use, reduction, collection, treatment & repurposing.</p> <p>11. By 2023, Scottish Government should develop a clear implementation plan to address critical natural and built infrastructure climate resilience and adaptation.</p>		<p>We will develop a programme of work with Scottish Futures Trust to prepare guidance for public organisations when developing asset management strategies, considering whole-life approach including cost and build resources alongside the new investment hierarchy, as well as wider net zero and inclusive growth priorities.</p> <p>Scottish Government is developing a route map to reduce waste and meet our waste targets and recycling targets for 2025.</p> <p>Scottish Government policies set out in Climate Ready Scotland: Second Scottish Climate Change Adaptation Programme⁷ will be embedded across Government. Independent, expert advice from the Adaptation Committee of the Committee on Climate Change will stimulate further progress.</p>
Heat & Transport 	<p>12. By end 2020, accelerate development and implementation of incentives, support mechanisms and standards for energy efficient, net zero buildings.</p> <p>13. By 2022, Scottish Government, local authorities, regulators and industry should establish a route map for decarbonising heat in domestic, commercial and public buildings, as well as surface-based transportation.</p> <p>14. The National Transport Strategy and Strategic Transport Projects Review 2 should fully reflect the need to deliver an inclusive net zero carbon economy.</p> <p>15. By the end of 2021, develop a new Transport investment appraisal and decision-making process, with necessary changes to current guidance.</p> <p>16. Scottish and UK Governments should commit to work together to establish a charging and payment alternative to the existing fuel and road tax-based regime, to give a more stable, long-term regime for road management and maintenance.</p>		<p>This draft Plan sets out programmes and projects to accelerate decarbonisation of heat and transport.</p> <p>The Climate Change Plan⁸ shows how Scotland will drive down emissions to 2032. It will be updated later this year to incorporate green recovery proposals.</p> <p>We have committed to £1.6 billion investment in heat and energy efficiency in our homes and buildings. We are rolling out a Net Zero Carbon Public Sector Buildings Standard, ensuring new public buildings are net zero ready. Future actions will be set out, by the end of 2020, in the Heat Policy Statement and Energy Efficient Scotland Route Map. We will also deliver a Hydrogen Policy Statement and Hydrogen Action Plan as a companion to the Climate Change Plan Update.</p> <p>The National Transport Strategy (NTS) fully reflects our need to deliver our ambitious net-zero targets. We will assess future transport investment decisions through the second Strategic Transport Projects Review; embedding the NTS priorities and outcomes and the Sustainable Investment Hierarchy.</p> <p>Powers relating to Vehicle Excise Duty and Fuel Duty are reserved to UK Government. The Scottish Government has written to the Secretary of State and would welcome constructive discussion with UK Government on these issues.</p>
Regulation 	<p>17. Building on the UK National Infrastructure Commission review of Energy and Telecoms regulation, Scottish and UK Governments should work together to develop, by 2021, an appropriately devolved regulatory & pricing framework to meet future needs.</p> <p>18. Building on existing plans Scottish Government should, by 2021, consider options for delivery and regulatory coherence of water provision and flood management/resilience.</p>		<p>We continue to work with the UK Government and regulators on an underpinning framework in both Energy and Telecoms that is responsive to Scottish needs.⁹</p> <p>Work is in train to increase collaboration between water industry and flood management partners.</p>
Digital & Technology 	<p>19. Scottish Government should provide the leadership required to ensure delivery of a full fibre network for Scotland by 2027, to enable the transition to 5G country-wide.</p> <p>20. To increase Scotland's international presence and connectivity, Scottish Government should support an indigenous data-centre market, and investment in fibre-optic cable.</p> <p>21. From 2020, Scottish Government should consider the future data requirements and data potential for new publicly-funded infrastructure, and digital services.</p>		<p>The Reaching 100% (R100) programme will give people in every part of Scotland access to superfast broadband by end 2021 and will provide a significant number of full fibre connections well in advance of 2027. SG continues to work with UK Government on their commitment to roll out gigabit broadband across the country by 2025.</p> <p>The Scottish Government is working with Scottish Futures Trust and partners on a strategy and action plan with the datacentre and international connectivity industry. This work will identify and map out future digital connectivity investment opportunities.</p> <p>We will continue to work to foster the adoption of open data standards, open data and platform based business models necessary to realise the future data requirements and potential for publicly funded infrastructure.</p>
The role of the public 	<p>22. By 2022, capacity and capability requirements for an informed approach to public engagement and participation are needed, to ensure short and long term trade-offs are effectively debated, understood and taken into account.</p>		<p>The Scottish Government will build on learning across sectors, including Scotland's Climate Assembly, and other countries, to develop an exemplar public engagement approach.</p>
Independent long-term advice 	<p>23. By 2021, a body should be given responsibility to provide independent, long term, evidence-based advice to Ministers on investment decisions for our social, economic and natural infrastructure needs and priorities.</p>		<p>The Scottish Government is considering this recommendation in conjunction with the findings of the Commission's Phase 2 report in order to fully reflect on the statutory implications of taking this forward.</p>

7 <https://www.gov.scot/publications/climate-ready-scotland-second-scottish-climate-change-adaptation-programme-2019-2024/pages/1/>

8 <https://www.gov.scot/publications/scottish-governments-climate-change-plan-third-report-proposals-policies-2018-9781788516488/>

9 https://www.ofcom.org.uk/_data/assets/pdf_file/0028/199216/scottish-government.pdf



Chapter 2

RESPONDING TO COVID-19 AND LONG-TERM TRENDS

The COVID-19 pandemic has had a profound impact on our whole way of life. A clear priority is to reduce the economic, health, and social harm that the virus has brought. Infrastructure can help businesses and communities rebound.

The pandemic is a public health crisis, with unprecedented global economic consequences. Whilst we are starting to see gradual and cautious signs for optimism across the economy, Scottish GDP fell by 19.4% in the second quarter of 2020 – this has been a dramatic shock to our economy.

Over the period of the crisis to June 2020, business turnover in Scotland continued to decrease in almost all sectors as a result of lockdown. That has particularly hit construction, tourism and hospitality, food, arts, entertainment and recreation sectors. Even where sectors have continued to trade, turnover is down, resulting in precarious cash flows. Consumer demand, how we travel, where we work, purchasing habits, and decision-making will have, perhaps, changed forever. Effects are particularly stark in retail and aviation, for example. How we invest in infrastructure can help our recovery.

COVID-19 has had a dramatic impact on all of our communities and people, but particularly those who were most at risk to start with. Our rural and island communities have faced a particular challenge, especially as a result of lockdown and the disruption to tourism and hospitality. Concerns around digital exclusion have become even more acute, and the crisis has shone a light on the increased need for different systems to exchange and make use of information. Coupled with the withdrawal from the EU, we are aware that the recession caused by COVID-19 has the potential to reduce the economic participation and wellbeing of the most disadvantaged in our society.

Alongside the harmful consequences, we have seen a number of positive shifts, for example, growth in community support, reduced commuting and increased cycling, more flexible working arrangements and making more use of digital services. We now have a unique opportunity, not simply to go back to how things were, but to harness the scale and pace of such changes to drive positive outcomes and ensure our investment plans are founded in fairness and dignity, safeguarding equality.

We will build back better by focusing on the following shifts in our capital investment, to seek to address the economic, health and social impacts of COVID-19:

- Investing in digital connectivity to help businesses and users wherever they live and work, and accelerating digital service provision, reducing the need to travel
- Supporting safe active travel and local, accessible public services in vibrant places
- Supporting green and blue spaces to provide access to nature
- Supporting positive social change such as new approaches to rehabilitation, and reduced homelessness
- Whilst not all is infrastructure, we will invest in job-creation to preserve and generate employment to support economic recovery

LONG-TERM TRENDS

Infrastructure, once built, lasts for many years. As such, it is important to try to project ahead to consider likely future community needs and how the places we live in and the way we live might change. Before the pandemic, Scottish Government had considered three key long-term trends which impact the provision of infrastructure:

- Climate change
- Technological developments
- Demographic change

Climate Change

The UK Climate Projections (UKCP18)¹⁰ illustrate a range of future climate scenarios for Scotland until 2100, suggesting that:

- Rainfall is projected to become more seasonal, with an increase in average winter and autumn rainfall (as illustrated in the figure below). Average summer rainfall may decrease.
- Average temperatures will increase in all seasons, with the greatest increase in summer.
- Winter storms with extreme rainfall may become more frequent.
- Sea levels will rise.

Scotland winter precipitation compared to 1981-2000

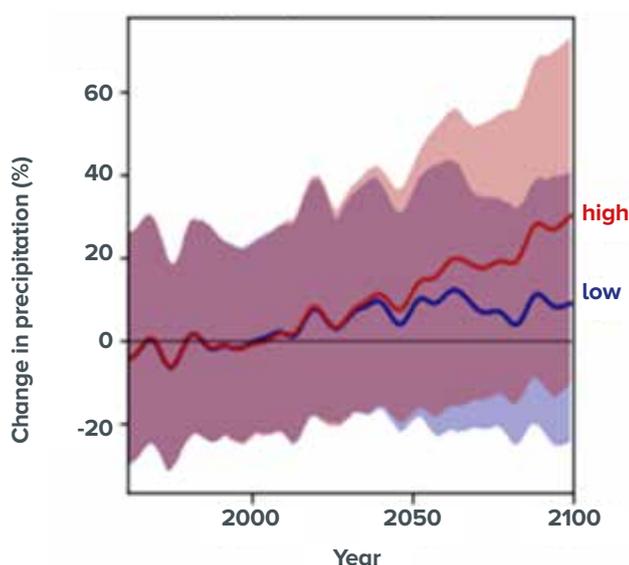


Figure shows projected changes, relative to the 1981-2000 average, in Scottish winter rainfall under high and low global emissions scenarios. The shaded envelopes represent the uncertainty ranges for each scenario.

These changes will lead to a range of impacts, including:

Increased risk of flooding and disruptive storms:

With climate change likely to alter rainfall patterns and bring more heavy downpours, we can expect flood risk to increase in the future, impacting on transport and energy networks and properties.

Change at our coast: With sea level rise set to accelerate, we can expect to see more coastal flooding, erosion and coastline retreat, with consequences for our coastal communities and supporting infrastructure.

Availability and quality of water: As our climate warms and rainfall patterns change, there may be increased competition for water between households, agriculture, industry and the needs of the natural environment.

An increase in the frequency and intensity of weather events is likely to impact infrastructure planning and operation. For example, our energy, transport, water, and ICT networks may face disruptive flooding, landslides, drought and heatwaves. Generating some types of renewable energy is weather-dependent. Climate also impacts on raw water quality which necessitates different and higher levels of treatment to meet drinking water quality standard. We need to adapt current infrastructure and design future assets to be more resilient to the effects of climate change.

10 <https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/research/ukcp/ukcp-headline-findings-v2.pdf>

Technological Change

While technological change has been continuous over time, the size, speed and scope of technological change in recent years is unprecedented. The main trends we are seeing, related to infrastructure, are:¹¹



Digitisation of services, systems and solutions and a clear trend towards automation



Significantly more data creation, requiring common standards and increased cyber security



A need for greater resilience and scale through cloud hosting



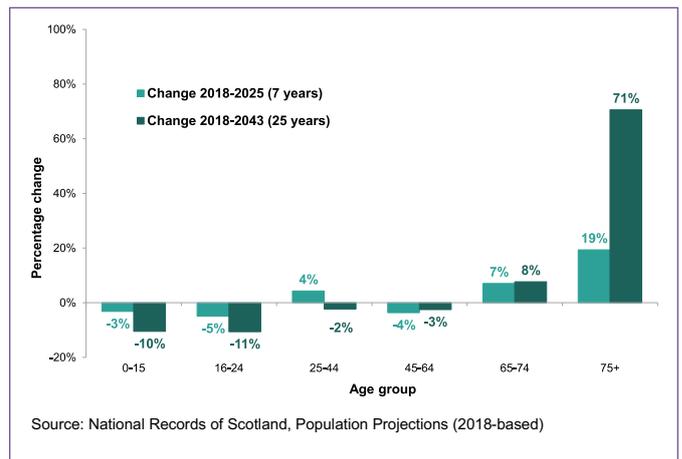
Decentralised models of utility provision (eg energy) and services (tele-health)

This trend toward decentralisation, underpinned by digital services, has been accelerated in response to the COVID-19 crisis, where digital applications have proved their worth – for example, digitisation of some court procedures, greater use of video consultation in primary care, and online learning and teaching in schools and tertiary education. Many businesses have also made greater use of technologies or shifted to digital modes of provision.

Demographic changes

Scotland’s population has increased in past years, and is projected to continue to rise. The largest medium-term trends relate to the significant increase in our older population, and changes in where and in what household size people choose to live.¹²

- All Councils will see an increase in pensioners with implications for services such as health, or the nature of housing required
- The biggest change is a 71% increase in the number of people aged over 75 in the next 25 years.
- There is a trend of predominantly older households in the West and South West areas.
- Migration has been the main driver of population growth, and all the projected future increase is projected to come from migration (both overseas and rest of the UK).
- Numbers of working age population and children are reducing in the West, South West and Islands, and increasing in the East and North East.
- Cities experience most population growth through overseas in-migration, whilst seeing outward migration of Scots to surrounding areas.
- Single adult households are increasing at a much faster rate than all others.
- Dedicated university accommodation has reduced housing pressure in cities.



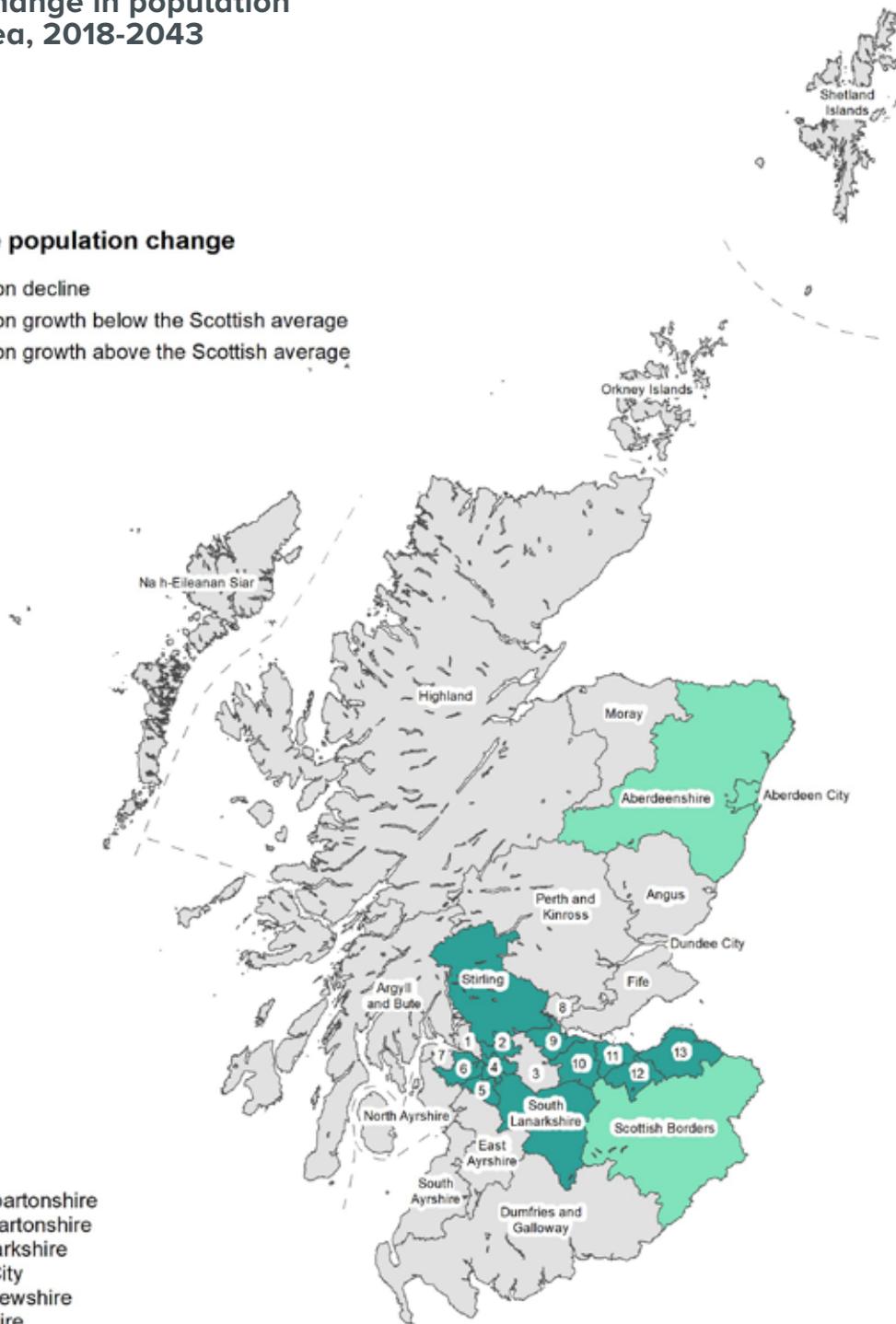
11 <https://www.gov.scot/publications/implications-future-technological-trends-scotlands-infrastructure/>

12 <https://www.nrscotland.gov.uk/files//statistics/consultations/infrastructure-commission-for-scotland-call-for-evidence-may-19.pdf>

Percentage change in population by council area, 2018-2043

Percentage population change

- Population decline
- Population growth below the Scottish average
- Population growth above the Scottish average

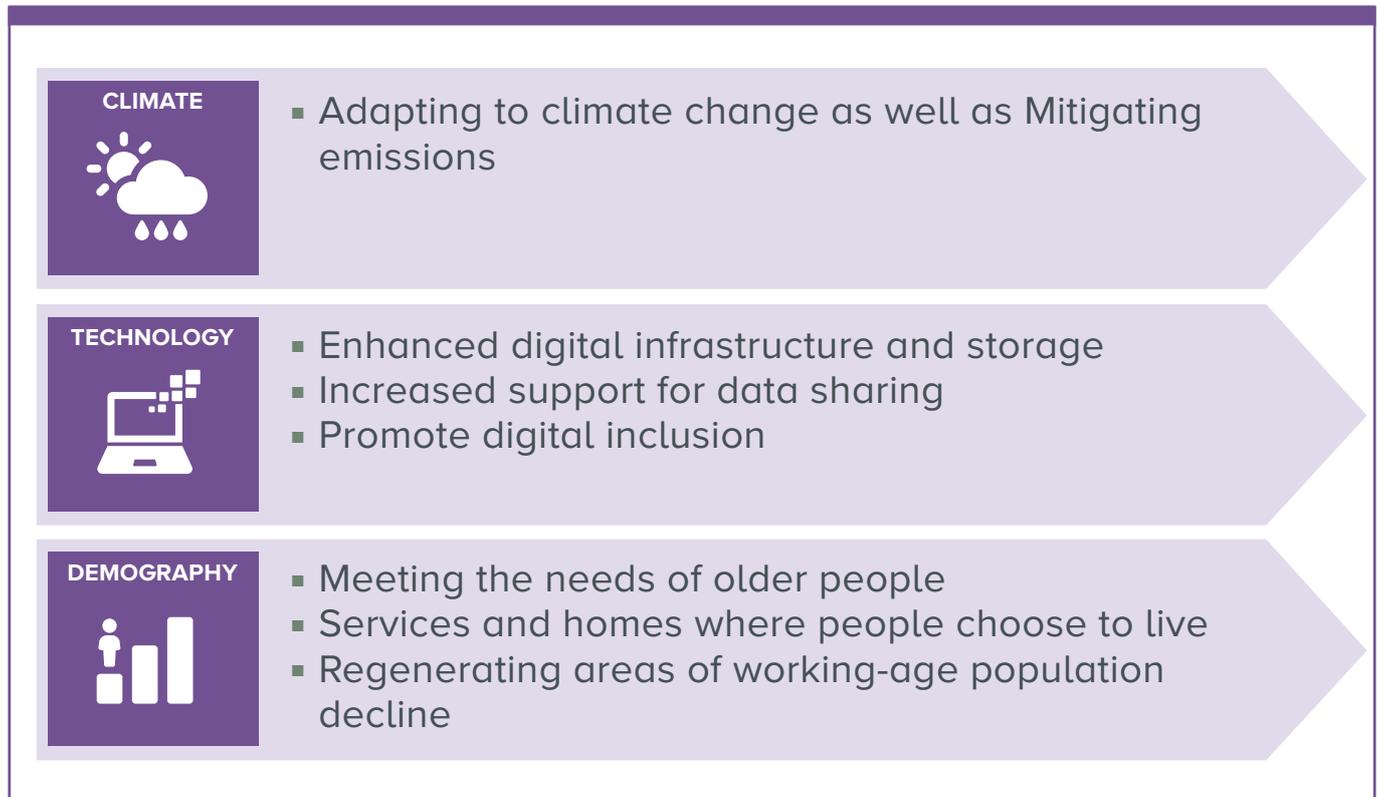


1. West Dunbartonshire
2. East Dunbartonshire
3. North Lanarkshire
4. Glasgow City
5. East Renfrewshire
6. Renfrewshire
7. Inverclyde
8. Clackmannanshire
9. Falkirk
10. West Lothian
11. City of Edinburgh
12. Midlothian
13. East Lothian



Shifting our approach in response

Our approach to infrastructure is shaped by an understanding of the challenges and opportunities these trends bring:

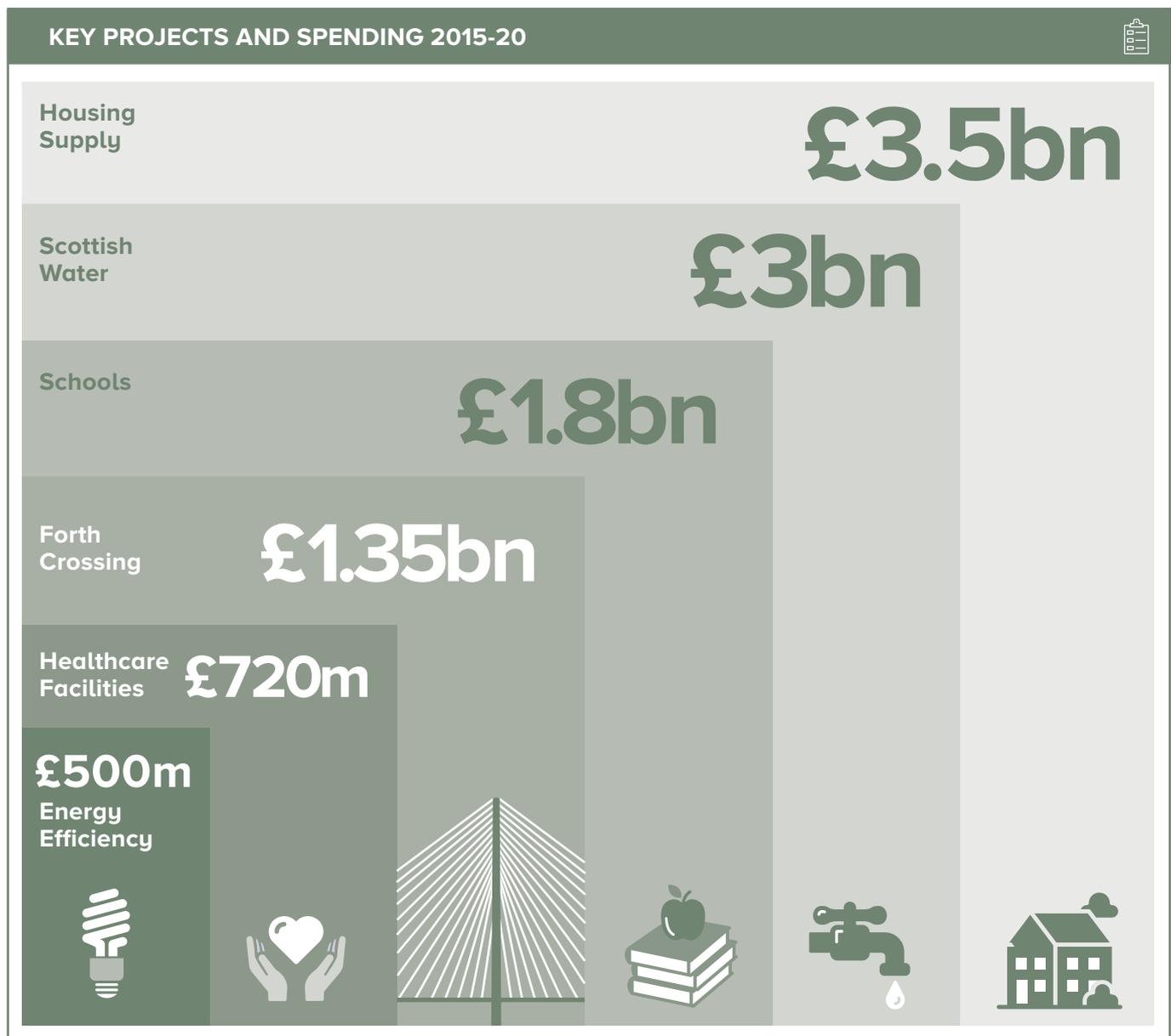




Chapter 3

OUR COHERENT, STRATEGIC INFRASTRUCTURE INVESTMENT PLAN

The last Infrastructure Investment Plan was published in 2015, and its delivery progress has been reported to Parliament twice each year.¹³ In that 5 year period we have completed a number of milestone developments, as below.



¹³ The latest versions of the Infrastructure Investment Plan publications can be found by way of the following link:
<http://www.gov.scot/Topics/Government/Finance/18232/IIP>

This draft Infrastructure Investment Plan provides a coherent and strategic picture of our Scottish Government-wide investment priorities to 2025-26. Investment in infrastructure will be key to Scotland's economic recovery from COVID-19, and also in supporting public services, delivering our transition to net zero, and meeting the needs of people and communities across Scotland.

We are consulting on key aspects of our approach. This will permit finalisation of the Infrastructure Investment Plan to be aligned with the Climate Change Plan update, and likely Budget 2021-22 and the Medium-Term Financial Strategy timings.

The Plan has been developed to implement the Phase 1 recommendations of the Infrastructure Commission. It includes a number of shifts in approach. Notably it:

- Articulates shifts in approach due to COVID-19, and to respond to long-term needs
- Sets out a coherent, strategic plan – rather than portfolio-based, it delivers long-term outcomes across three themes, under a single common Vision
- Sets out plans on a consistent 2021-22 to 2025-26 timeline across all areas, showing how Scottish Ministers will deliver the National Infrastructure Mission
- Introduces a new, common investment hierarchy – enhancing and maintaining existing assets ahead of new build
- Supports market confidence and jobs with a sizeable pipeline of activity
- Establishes a 5-year improvement programme & promotes public engagement

A Coherent, Strategic plan – Three Themes under a Single Vision

A coherent Plan means taking a whole of government approach. We have adopted a single vision for our infrastructure investment choices.

“Our Infrastructure supports Scotland’s resilience and enables inclusive, net zero, and sustainable growth”

In supporting this vision, the Plan focuses on three key themes. These are not necessarily independent. For example, investing in a project which contributes towards net zero emissions could then also improve opportunities and outcomes in the place in which that project is based. Investments also present opportunities for new groups of people to benefit from working in the industry it supports who may not have been previously represented. We will seek to prioritise investments which deliver positive outcomes across more than one theme.



Enabling the transition to Net Zero Emissions and Environmental Sustainability:

Public infrastructure investment has a critical role to play in tackling the twin crises of climate change and biodiversity loss. We will increase spending on low carbon measures, climate resilience, and nature-based solutions.



Driving Inclusive Economic Growth:

We can boost productivity and competitiveness, and create good jobs and green jobs, by enhancing our transport and digital connectivity and capacity in all areas of Scotland, and by stimulating innovation. We will embed fairness and inclusion, seeking to ensure no-one is left behind.



Building Resilient and Sustainable Places:

Delivering on our ambition for a fairer Scotland starts at the local community level. We will invest in our housing and better local delivery of services. With our partners we will meet the diverse economic, social and environmental needs of urban, rural and island areas.

These themes directly link to Scotland's National Performance Framework, which sets out our overall purpose, and the UN Sustainable Development Goals. They align with our recovery and renewal from COVID-19, ensuring that our short term response to the crisis complements the long term drive towards a wellbeing economy; reducing inequality and improving the quality of life of all of our people.

This Plan sets out the investments which Scottish Government makes at its own hand, in its own facilities and assets required for public services (rather than the service itself) and those of its agencies and public bodies. It does not cover UK Government investment in reserved areas.

While we focus on Scottish Government investments here, we recognise that our approach to infrastructure must be a collective endeavour in order to be successful. The Plan does not cover investment choices made by local government, recognising Councils' autonomy, we will continue to work closely with Local Government and other delivery partners to pursue shared priorities. We will also continue to engage with the private sector and the Scottish National Investment Bank about the role of external investment within the overall framework provided by this Plan.



A Consistent Approach to Financial Planning – 2021-22 to 2025-26

This Plan has been developed alongside considering the likely finance available for Scottish Government programmes, as set out in the Capital Spending Review Framework.¹⁴ The last multi-year capital spending review was in 2010, and this year is the first time long-term financial planning has coincided with a new Infrastructure Investment Plan.

This means we have been able to plan and choose the right things to enhance and build, alongside ensuring the funding and finance to pay for them. It gives us confidence to set out a full plan to deliver the National Infrastructure Mission over the next Parliamentary term.

The Scottish Government's final budget envelope for capital investment in future years depends on the outcomes of the forthcoming UK spending review. Scottish Ministers continue to urge the UK Government to prioritise capital stimulus within its own spending plans. The Scottish Government is committed to a number of significant projects, for example including replacing Monkland's hospital. UK allocations will enable us to provide greater certainty on our plans and scheduling for such projects. Detailed capital budget allocations will be confirmed as part of the Budget process.

Such major projects can be updated on after related public consultation has concluded and once the Final Business Case is prepared ready to join the Infrastructure Investment Plan pipeline. The progress of such major projects is reported regularly to Parliament, as set out on page 27 of this Plan.

Including Natural Infrastructure in our Infrastructure Definition

By investing more in nature-based solutions, we recognise the direct and indirect value that our natural environment can bring. Enhancing nature reserves and protected areas can boost biodiversity and recreational and tourism value. Improving landscaping and open space in housing can encourage passive cooling and sustainable drainage. Planting trees and restoring peatland can increase carbon storage. Our natural infrastructure can contribute a great deal to quality of place and wellbeing by supporting sustainable everyday living and strengthening community resilience.

The Commission recognised the role of infrastructure in supporting environmental outcomes and recommended we include natural infrastructure in our definition. Natural infrastructure can be thought of as the environmental resources (e.g. plants, animals, air, water, soils) that combine to yield a flow of benefits to people both now and in the future. Phrases such as 'green' or 'blue' economy can also be used. That latter means the sustainable use of our ocean resources for economic growth, improved livelihoods and jobs, and ocean eco-system health.

¹⁴ <https://www.gov.scot/isbn/9781800040946>

The International Institute for Sustainable Development (IISD) offers the following definition: *“Natural infrastructure is an area or system that is either naturally occurring or naturalised and then intentionally managed to provide multiple benefits for the environment and human wellbeing.”¹⁵*

We propose to change our definition of infrastructure to incorporate natural infrastructure, guided by the IISD definition and in line with our approach to Natural Capital.¹⁶ We are consulting on the following changes (shown in bold):

“The physical and technical facilities, **natural** and other fundamental systems necessary for the economy to function and to enable, sustain or enhance societal living conditions.

These include the networks, connections and storage relating to the enabling infrastructure of transport, energy, water, telecoms, digital and internet, to permit the ready movement of people, goods and services.

They include the built environment of housing; public infrastructure such as education, health, justice and cultural facilities; safety enhancement such as waste management or flood prevention; **natural assets and networks**; and public services such as emergency services and resilience.

Establishing a New Common Investment Hierarchy

The Commission recommended that we place greater emphasis on making the most of existing assets. Addressing the climate emergency, promoting circular economy approaches and increasing sustainability, requires us to prioritise the assets and materials we already have. The Phase 1 report proposed the development of an investment hierarchy which prioritises maintaining and enhancing existing assets over new build.

An investment hierarchy does not preclude new assets. Rather it is an approach to planning and decision making which would consider future needs, including use of digital platforms and technology, and the suitability of existing assets.

Parts of government have already been evolving hierarchies and adopting a formal asset management approach: Scottish Water’s preparation for the next charge control period (2021-27) includes the development of an Asset Information and Management Strategy. The National Transport Strategy includes a Sustainable Investment Hierarchy and Transport Scotland has an Asset Management Policy, Strategy and Plan for Scotland’s trunk road network.

A new common approach across the Scottish Government is proposed that will support the coherence of our whole programme – and, over time, those of public bodies. It is set out in the diagram overleaf.

In considering the rationale of any new investment hierarchy, The Scottish Government Office of the Chief Economic Adviser (OCEA) has established an overview of the economic and distribution benefits of maintenance and enhancement programmes. See **Annex B** for more details.

This evidence suggests considerable economic and distributional benefits arise from such programmes, particularly where the focus is on assets in the poorest condition. They can also offer a wider regional distribution of and a greater potential for Scottish Small and Medium sized Enterprises (SMEs) to engage in this work than is typical in larger construction programmes.

We are already investing over £450 million in maintenance in 2020-21, and will work towards doubling this level over the next 5 years, addressing backlogs. Capital maintenance includes asset enhancement, ensuring asset compliance with regulatory requirements, major equipment and fleet.

¹⁵ <https://www.iisd.org/articles/multiple-benefits-natural-infrastructure>

¹⁶ <https://www.nature.scot/professional-advice/planning-and-development/social-and-economic-benefits-nature/natural-capital-asset-index>

DRAFT INFRASTRUCTURE INVESTMENT HIERARCHY

**Determine future need**

Consider appropriate infrastructure provision in light of changes in service design, availability of digital platforms and technological innovation, and resilience in light of population and climate change forecasts.

**Maximise use of existing assets**

Maximise use and the safe operation of existing assets to meet future need

**Repurpose & Co-locate**

Reconfigure or repurpose existing assets, giving preference to co-location or shared facilities where appropriate

**Replace or New Build**

Consider suitability and sustainability of new build assets to meet future need

Measuring Outcomes and the Potential Benefits of Future Infrastructure

Infrastructure can deliver multiple benefits for individuals and communities – such as new childcare facilities, affordable housing and good public transport links reducing the barriers for job seekers and working parents. The Scottish Government uses its National Performance Framework to seek to examine and capture such outcomes, or benefits, as approaches are designed, or evaluated.

While it recognised that robust evidence based frameworks are in place, the Commission recommended development of a new, overarching assessment framework across all infrastructure types to support system-wide, long-term trade-offs and choices with a focus on the twin objectives of net zero emission and inclusive economic growth. It recognised that this will take time to develop.

For this current Plan, they recommended we use “the most appropriate methodology available” that prioritises, on a “no regrets” basis, the contribution to an inclusive net zero carbon economy. Their work also involved a Fraser of Allander¹⁷ report exploring the relationship between infrastructure and inclusive economic growth, which concluded that a dashboard of indicators would be the best approach.

Scottish Government already prepares business cases considering the likely impact of proposed infrastructure, using the most relevant aspects of the National Performance Framework. Some areas base assessment on the inclusive growth framework, considering participation, population, place, people and productivity. The Scottish National Investment Bank mission-based approach is also outcomes-based.

The diagram overleaf shows the types of indicators that have been considered by the Scottish Government when assessing the potential benefits of infrastructure in this Plan. It offers an illustration, and basis for future work. A key principle will be to ensure that this also supports progress in narrowing gaps in outcomes between disadvantaged and other groups.

Evidence around the difference in economic impact of projects during the construction phase is limited. There is, however, a difference in the impact of how such new facilities are used, and where they are located, and that is where future assessment might best focus.

Promoting Better Engagement with the Public

We encouraged the Infrastructure Commission to engage widely in looking at the right strategic priorities for Scotland. Recognising that infrastructure is with us for a long time, and can be expensive, the Commission has recommended that an informed approach to public engagement and participation is needed, to ensure short and long-term trade-offs are effectively debated, understood and taken into account. We agree, and are committed to openness and transparency.

In developing our exemplar approach, we will build on experiences across sectors and in other countries. For example, The Scottish Government’s Commitment to the Open Government Partnership (OGP)¹⁸ has drawn out good examples of public engagement in the delivery of large infrastructure projects, including the Queensferry Crossing. And Scottish Water’s 25 year Strategic Plan published last summer was co-created with stakeholders and they will establish a new National Engagement Programme. The development of our future approach will learn from Scotland’s Climate Assembly, and will build on the engagement undertaken to inform the National Planning Framework 4.

17 After comparing three different approaches, the FoA report endorses the use of a dashboard (akin to a streamlined version of the National Performance Framework) in measuring the impact of infrastructure investment on Inclusive Growth outcomes. https://infrastructurecommission.scot/storage/234/Appendix_K.pdf

18 <https://www.gov.scot/policies/improving-public-services/open-government-partnership/>

IMPACT ASSESSMENT & PRIORITISATION: Indicative Dashboard

Notes:

- The 15 indicators are shown below mapped against our three themes.
- These are illustrative of the types of indicators we could include in a dashboard assessment framework.
- They are drawn from the National Performance Framework as well as The Scottish Centre for Regional Inclusive Growth Dashboard (available at www.inclusivegrowth.scot).
- The key showing the Sustainable Development Goals and National Performance Framework outcomes is shown overleaf.



Sustainable Development Goal		NPF Outcomes	
	End poverty in all its forms everywhere		Children & Young People – We grow up loved, safe and respected so that we realise our full potential.
	End hunger, achieve food security and improved nutrition and promote sustainable agriculture		Communities – We live in communities that are inclusive, empowered, resilient and safe.
	Ensure healthy lives and promote wellbeing for all at all ages		Culture – We are creative and our vibrant and diverse cultures are expressed and enjoyed widely
	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all		Economy – We have a globally competitive, entrepreneurial, inclusive and sustainable economy.
	Achieve gender equality and empower all women and girls		Education – We are well-educated, skilled and able to contribute to society.
	Ensure availability and sustainable management of water and sanitation for all		Environment – We value, enjoy, protect and enhance our environment
	Ensure access to affordable, reliable, sustainable and modern energy for all		Fair Work & Business – We have thriving and innovative businesses, with quality jobs and fair work for everyone
	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all		Health – We are healthy and active
	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation		Human Rights – We respect, protect and fulfil human rights and live free from discrimination
	Reduce inequality within and among countries		International – We are open, connected and make a positive contribution internationally.
	Make cities and human settlements inclusive, safe, resilient and sustainable		Poverty – We tackle poverty by sharing opportunities, wealth and power more equally
	Ensure sustainable consumption and production patterns		
	Take urgent action to combat climate change and its impacts		
	Conserve and sustainably use the oceans, seas and marine resources for sustainable development		
	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss		
	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels		
	Strengthen the means of implementation and revitalize the global partnership for sustainable development		

The Infrastructure Investment Plan Pipeline, Monitoring and Reporting

There is a well-established suite of monitoring and reporting arrangements, including for the previous 2015 Infrastructure Investment Plan. The Scottish Government supplies the Parliamentary Audit and Post Legislative Scrutiny Committee (PAPLS) with reports twice a year. These include an Annual Progress Report on the Infrastructure Investment Plan itself, and detailed delivery information on all projects and programmes, including timelines and budget.¹⁹

This draft Plan details the projects and programmes whose business cases and procurement plans are sufficiently advanced that they represent firm decisions now. As such, it offers the market confidence in a robust pipeline of work and is good for jobs, green jobs and stimulating low carbon economic recovery.

Arrangements for reporting on this pipeline will continue, as before. We will publish the final Pipeline of major projects and programme for this Plan when it is finalised. Additionally, as new projects and programmes are developed they can be added to the pipeline when they are suitably ready, and consequently reported to Parliament.

We also regularly report to Parliament on the climate change implications of the Capital Budget but we are aware of the limitations in our current approach to carbon reporting and wish to improve it. In passing the 2019 Climate Change (Emissions Reduction) Act in Scotland, the Parliament agreed that we should explore new ways to assess the contribution made by the infrastructure investment plan to the emissions targets. Annex C sets out the range of issues being considered in relation to this and in Chapter 4 we are inviting views on how we develop a new approach. Around 36% of the projects and programmes presented in this draft Plan are in the Low carbon category according to the current methodology. We will present more information on the climate change impact of the final Plan when it is published later this year alongside the recast Climate Change Plan.

Supporting Supply Chains

In order to identify and maximise the local industry benefit from the pipeline, The Scottish Government will work closely with the Construction Leadership Forum²⁰, as they take forward a range of collaborative actions to address the challenges of COVID-19 and the wider transformation of the sector. We are also looking at how best to support local economies to get more value from public sector investment and supports more local businesses to secure contracts.

A 5 Year Improvement Programme

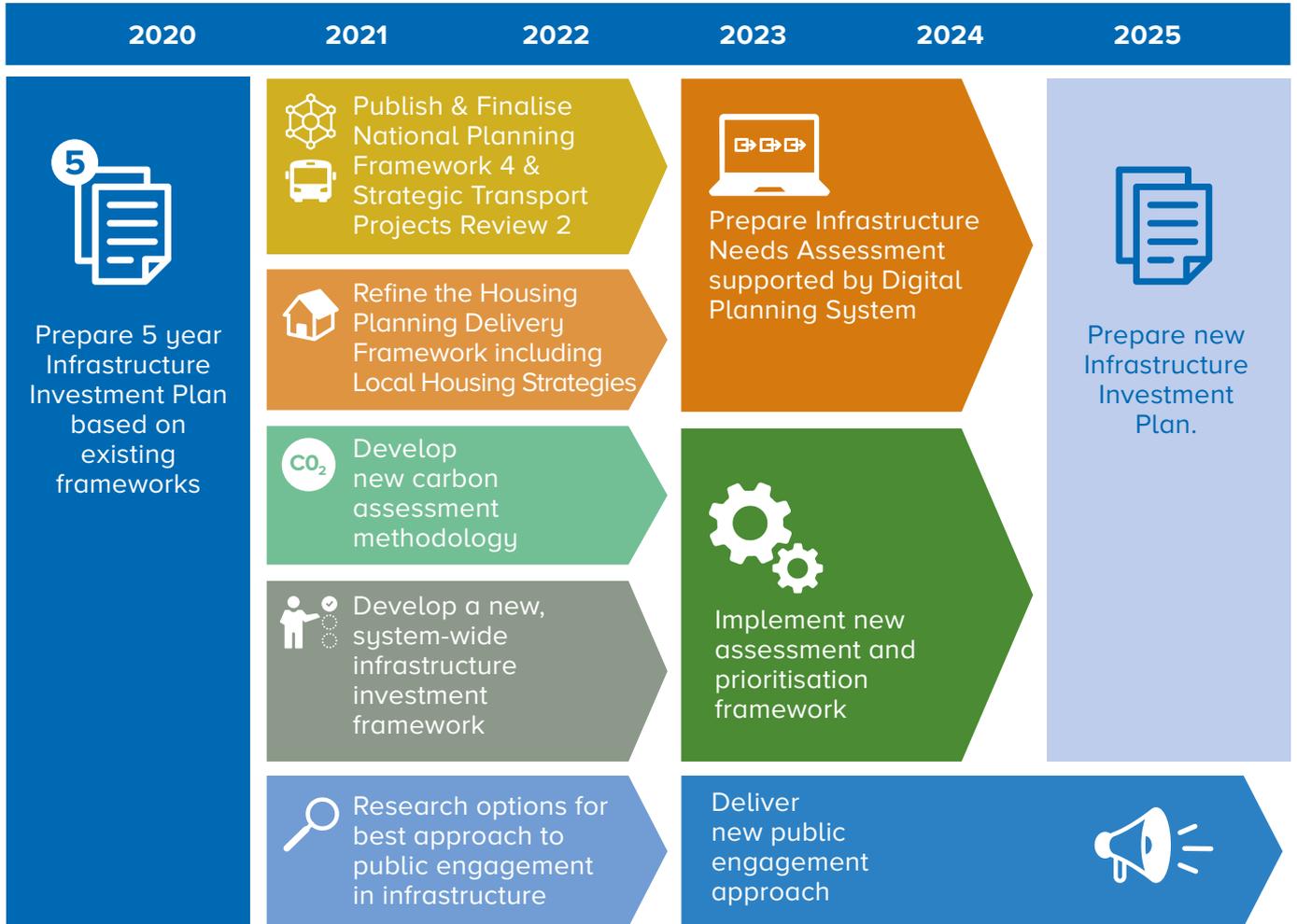
The Commission's Phase 1 report recommended a number of improvements to the Scottish Government's approach to infrastructure. These were intended to be implemented over time, and support development of the next Infrastructure Investment Plan in 2025. The diagram overleaf shows how the Scottish Government intends to take such improvements forward, and the timeline. Taken together, they should ensure better, more consistent, and more transparent future decisions about the right infrastructure to provide.

¹⁹ The latest versions of the Infrastructure Investment Plan publications can be found by way of the following link:

<http://www.gov.scot/Topics/Government/Finance/18232/IIP>

²⁰ <https://www.constructionforum.scot/>

FUTURE ROUTE-MAP FOR INFRASTRUCTURE INVESTMENT DECISION FRAMEWORK





Chapter 4

CONSULTATION QUESTIONS

Why we are consulting

Earlier this year the Infrastructure Commission for Scotland made recommendations about the right future infrastructure priorities for an inclusive, net zero emissions economy in Scotland. This plan accepts their recommendations and shows how they will be implemented.

During the first half of 2019, the Infrastructure Commission undertook widespread engagement on infrastructure priorities. We have already considered the feedback received by the Commission in response to its Call for Evidence. We do not seek to repeat this engagement. The purpose of this consultation is to seek wide-ranging views and feedback on some specific areas around the ways we plan to implement the Commission's recommendations, to ensure the right final approach.

Responding to this Consultation

We are inviting responses to this consultation by 19 November 2020.

Please respond to this consultation using the Scottish Government's consultation hub, Citizen Space (<http://consult.gov.scot>). Access and respond to this consultation online at <https://consult.gov.scot/infrastructure-and-investment-division/draft-infrastructure-investment-plan/>. You can save and return to your responses while the consultation is still open. Please ensure that consultation responses are submitted before the closing date of 19 November 2020.

If you are unable to respond using our consultation hub, please complete the Respondent Information Form (provide at Annex D) and send to:

Email: InfrastructureInvestmentStrategy@gov.scot

By post:

Infrastructure Investment Plan Consultation
3-C North
Victoria Quay
Edinburgh
EH6 6QQ

What happens next?

Following the closing date, all responses will be analysed and considered along with any other available evidence. The Scottish Government will publish responses, where respondents have given permission for their response to be made public, and a report summarising responses will also be made available.

Responses to some questions we have asked will directly inform the final Plan to be published later this year, in particular questions under sections 1, 2 and 4 below. As this is a significant turning point in our approach to infrastructure it will be important to take time to test and implement the right interventions where appropriate. We anticipate that responses to section 3 inform our future programme of improvements. These will be developed with further testing over time, and considered alongside other strategic developments, to ensure they deliver the right outcomes.

1. The inclusion of natural infrastructure in our definition

Our natural environment can play an important role in our infrastructure system and generate benefits to the economy and society – as well as help to tackle climate change and other challenges such as biodiversity loss and poor air quality.

The Government would like to revise its infrastructure definition to include references to natural infrastructure, and offers proposes the following changes (shown in green):

“The physical and technical facilities, **natural** and other fundamental systems necessary for the economy to function and to enable, sustain or enhance societal living conditions.

These include the networks, connections and storage relating to the enabling infrastructure of transport, energy, water, telecoms, digital and internet, to permit the ready movement of people, goods and services.

They include the built environment of housing; public infrastructure such as education, health, justice and cultural facilities; safety enhancement such as waste management or flood prevention; **natural assets and networks**; and public services such as emergency services and resilience.”

These proposed changes will help ensure investment in natural infrastructure can be considered and prioritised equally, alongside other areas, and that progress on our plans to boost natural infrastructure will be equally transparent and can be scrutinised on a consistent basis by Parliament.

1a) Do you support the inclusion of natural infrastructure in our definition of infrastructure?

Yes No Unsure

1b) Do you agree with the wording proposed for the revised definition?

Yes No Unsure

1c) If you do not agree, please provide your suggested changes and additional material to support your answers [200 word limit]:

2. How we should prioritise – a common investment hierarchy

The Scottish Government has accepted the Commission’s suggestion to develop an ‘investment hierarchy’ which prioritises maintaining and enhancing existing assets over new build. On pages 22-23 we propose a new common hierarchy, to aid planning and decision-making and drive future investment choices.

In practice, this means that the following steps would need to be considered, in turn, before deciding the right investment plans.

1. Determine future need.
2. Maximise use of existing assets.
3. Repurpose & Co-locate.
4. Replace or New Build.

For example, something new might only be built if there is still a demonstrable service need for a facility, and an existing asset cannot be re-purposed. In future, this will mean that a higher proportion of investment and resource is likely to be directed towards the initial steps in the hierarchy than in previous years.

2a) Do you agree that the steps proposed in the common investment hierarchy are the right ones?

Yes No Unsure

2b) If you think any adjustments are needed to the proposed investment hierarchy, please provide suggested changes (and evidence, where appropriate) to support your answers:

3. How we best assess the impact of proposed infrastructure

The Infrastructure Commission recommended a new assessment framework is developed, in advance of the next Infrastructure Investment Plan, to inform decisions about future infrastructure investment so that it best achieves desired outcomes.

On page 24 we have set out the challenges in comparing the potential benefits of different types of infrastructure. It is not easy to compare investment in a school, hospital, or new digital public service, for example, because they may all deliver positive outcomes but not necessarily using comparable evidence or over the same timeframe.

We are considering how best to develop our new approach and welcome views about the best way forward. This is likely to take the form of a suite or 'dashboard' of indicators, as shown in the diagram on page 25, to allow for a range of factors to be taken into account in any assessment, balancing potential trade-offs. This approach would be consistent with the National Performance Framework. Responses to questions in this section will inform our work to develop a common assessment framework.

3a) Do you agree that a dashboard of indicators is the best approach to enable informed decisions to be taken about the long-term trade-offs and choices in our infrastructure investments? Please provide the reasons for your response.

3b) What outcomes (and/or indicators) do you think should be included in developing a common assessment framework for prioritising infrastructure investment?

In your response you may wish to consider how any of the suggested factors might:

- **link to the three themes of the Infrastructure Investment Plan (enabling net zero emissions and environmental sustainability; driving inclusive economic growth; and building resilient and sustainable places); and**
- **help address inequality, including for protected characteristic groups, and socioeconomic disadvantage.**

3c) Are there existing tools or methodologies you are aware of which you think the Scottish Government could draw on or adopt in developing its framework? You may wish to draw on examples from other countries in your response.

4. How we assess the greenhouse gas emissions impact of future Plans

The Scottish Government has used broad categories of low, neutral and high carbon (known as a taxonomy approach) to explain the climate impact of its infrastructure investment.

When considering the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, Parliament agreed that a new methodology should be developed to improve assessment of the contribution made by infrastructure investment to Scotland's emissions targets. We have undertaken some research to support this, it is published online at: <https://www.climatexchange.org.uk/research/projects/greenhouse-gas-emissions-and-infrastructure-investment-decisions/>

The research concludes that a new approach will take time to develop, and we wish to ascertain views on the best way forward. The research presents four options that we should consider in developing a new approach, these are:

1. Updated taxonomy.
2. Absolute emissions.
3. Baseline and intervention.
4. Gap analysis.

A summary of the strengths and weaknesses is set out in Annex C and in the full report.

The Scottish Government is minded to explore further the use of Baseline and Intervention and Gap Analysis approaches which we believe will provide a more useful and meaningful assessment than the current taxonomy approach.

The development of the new approach using one of the methods (or a combination of them) is likely to be an iterative process and will require substantial work to establish the new framework and collect the necessary data. This is noted in the Infrastructure Investment Plan forward programme. We would like our measurement to be internationally comparable, practicable, and to give stakeholders useful information.

4a) Do you support the planned approach to developing a new approach to assessing the contribution made by infrastructure investment to Scotland's emissions targets?

Yes No Unsure

4b) Please explain and support your response with evidence [500 word limit].

5. Strategic Environmental Assessment: Environmental Report

Strategic Environmental Assessment (SEA) is the assessment of the likely significant environmental effects that a public plan, programme or strategy will have on the environment if implemented. Where possible, it proposes how negative effects can be avoided or reduced and identifies opportunities for positive effects to be maximised. An Environmental Report has been published alongside the IIP.

5a) What are your views on the accuracy and scope of the environmental baseline set out in the Environmental Report?

Please give details of additional relevant sources alongside your response.

5b) What are your views on the predicted environmental effects of the IIP as set out in the Environmental Report?

5c) What are your views on the proposals for mitigating, enhancing and monitoring the environmental effects set out in the Environmental Report?



Chapter 5

THEME 1: ENABLING THE TRANSITION TO NET ZERO EMISSIONS AND ENVIRONMENTAL SUSTAINABILITY

Some achievements from our 2015 Infrastructure Investment Plan

- **The Low Carbon Infrastructure Transition Programme** has awarded over £52 million of grant funding to low carbon demonstration projects across Scotland which encourage replication and wider uptake of innovative renewable technology.
- £42 million spent annually on **flood protection** to properties and businesses across Scotland including the £1 billion Dundee Waterfront development.

Scotland's world leading legislation – The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 – tightened targets to net zero for domestic greenhouse gas emissions by 2045. Interim targets are set for 2020, 2030 and 2040, for emissions reductions of 56%, 75% and 90% respectively, requiring action in all sectors.

This will require transformative action across all sectors of the economy and across society. The Scottish Government's investment in publicly-funded infrastructure has a critical role to play in supporting the transition – committing to multiyear investments in this Plan sends a clear signal to supply chains to invest in people and technology, and help us deliver the net zero transition. But it is only a share of the effort, and cannot deliver such targets on its own. It also requires UK and international action, such as in reserved policy areas of energy and aviation. Regulation, resource investment, incentives, business and individual behaviour change all have roles to play. The forthcoming update to the Climate Change Plan will set out the full range of actions we are taking to deliver our targets.

We already invest £1.8 billion of capital each year in low carbon policies and programmes. Scottish Ministers have committed to increasing the level of spending by an additional £2 billion over the next 5 years. New schemes have already been announced in the 2020 Programme for Government that will deploy £1.6 billion of this investment.

We know that 1 in 11 homes and 1 in 7 businesses in Scotland are already at risk of flooding and, on average, around 2000 more properties will be at risk every year due to climate change. We have set out how Scottish Government will increase resilience to climate change and invest more in adaptation measures to protect our homes, businesses and places from flood risk. Investing in coastal change adaptation will help protect our natural defences which protect an estimated £10 billion worth of assets

Scotland's natural environment is fundamental to our economy and our wellbeing. It supplies the energy and resources on which many industries depend and is the essence of our global brand. It supports our health and quality of life, providing the essentials we all need to survive and thrive, and protecting our communities from flooding and extreme weather. It plays a vital role in tackling climate change – removing carbon from the atmosphere and securing it in natural habitats. Natural areas or systems that are managed to provide multiple benefits for the environment and human wellbeing can be described as 'natural infrastructure'.

CASE STUDY

Glenrothes – Energy Network

In 2016, the Scottish Government’s Low Carbon Infrastructure Programme, which is co-funded by the European Development Fund provided £8.6 million of support to The Glenrothes Energy Network. The remainder of funding was provided by RWE and Fife Council.

The project is utilising the heat loss from the RWE biomass combined heat and power (CHP) plant based in Markinch in an ambitious district heating network, which includes thermal storage and a back-up energy centre to supply low carbon heat to a wide range of customers in the centre of Glenrothes. The Glenrothes Energy Network was officially opened on the 25th April 2019. It is successfully delivering low carbon heating to Fife House complex, Rothes Halls and the sheltered housing complex at Jubilee Grove.

**Theme 1: What the Infrastructure Investment Plan will deliver: 2021-22 to 2025-26**

Purpose	Plans
Decarbonising transport	<p>We will aid the transformation of our surface-transport systems. We will invest:</p> <ul style="list-style-type: none"> ■ Over £500 million over 5 years in active travel, the large majority of which will be for active travel infrastructure including reallocating road space in favour of walking, wheeling and cycling, encouraging active travel for shorter every day journeys. ■ £495 million towards the Programme for Government commitment to invest over £500 million in improved bus priority infrastructure to tackle the impacts of congestion on bus services, making journey times shorter and services more reliable, encouraging people to leave their cars at home and to take the bus. ■ Continue our investment to support public sector fleet alternatives to petrol and diesel vehicles. ■ Invest over £3.8 billion in the operation, maintenance and sustainable renewal of a high performing rail network for passengers and freight ■ Progress the rail decarbonisation action plan
Decarbonising heat and transforming our buildings through energy efficiency	<p>We will reduce demand for heat through improved energy efficiency measures, removing poor energy efficiency as a driver of fuel poverty and eliminate emissions from space and water heating by 2040-45 through higher standards for new buildings, including a Net Zero Standard for new public buildings, and replacing fossil-fuel systems with renewable and zero-emission sources.</p> <p>We will invest £1.6 billion over the next five years, including:</p> <ul style="list-style-type: none"> ■ At least £95 million in a programme to decarbonise the public sector estate ■ Opening the £50 million Green Recovery Low Carbon Infrastructure Transition Programme (LCITP) ■ Up to £58 million to invest in significant energy efficiency improvements to the Royal Botanic Gardens in Edinburgh ■ £25 million for zero carbon energy infrastructure and heat networks for residential and commercial premises along the river Clyde’s path ■ An additional £55 million to tackle fuel poverty to boost our existing national energy efficiency programme.

Purpose	Plans
Decarbonising industry, including manufacturing	<p>We will support industry and manufacturing to transform, overcoming private sector investment and transition challenges through:</p> <ul style="list-style-type: none"> ■ A £34 million Scottish Industrial Energy Transformation Fund for energy efficiency technologies and decarbonisation studies ■ A £26 million Low Carbon Manufacturing Challenge Fund for innovation in technology, processes and infrastructure. <p>We will support businesses in the energy sectors as they grow and diversify, and help attract private sector investment, including through our £62 million Energy Transition Fund, focused on the North East, and helping the wider energy sector and supply chain.</p> <p>We will continue to support and invest in the development of Carbon Capture, Utilisation and Storage (CCUS) projects in Scotland and develop, by 2022, a £5 million Carbon Capture and Utilisation Challenge Fund</p>
Supporting a circular economy	<p>We wish to re-think how we use and re-use materials and how we handle waste. Alongside development of a route map to reduce waste and meet our waste and recycling targets for 2025, we will invest up to £75 million to improve local authority recycling collection infrastructure, accelerate landfill gas capture and improve waste data through electronic waste tracking.</p>
Boosting resilience and Adaptation	<p>In support of enhanced adaptation and climate resilience as part of a green recovery, we will invest:</p> <ul style="list-style-type: none"> ■ An extra £150 million in flood risk management. This uplift, complements the £42 million provided annually to Councils. ■ Almost £12 million in coastal change adaptation to help us adapt to the threat of sea level rises and protect our assets.
Investing in our natural capital	<p>We will increase forest cover, reaching 18,000 hectares of new woodland in 2024-25. As part of a £350 million programme, we will:</p> <ul style="list-style-type: none"> ■ Invest £100 million extra for new planting. And £30 million for Forestry and Land Scotland to expand national forests and land. ■ Provide £20 million to further increase tree nursery capacity, investing in new and redeveloped facilities. <p>Peatland restoration has a key role in responding to climate emergency and biodiversity challenges. We will increase it by:</p> <ul style="list-style-type: none"> ■ Investing £20 million per year towards our 10-year £250 million commitment to restore 20,000 ha annually, and 250,000 ha by 2030.



Chapter 6

THEME 2: DRIVING INCLUSIVE ECONOMIC GROWTH

Some achievements from our 2015 Infrastructure Investment Plan

- Invested £463 million in the **Digital Scotland Superfast Broadband** programme – over 97.8% of premises are now able to access fibre broadband.
- Completed the £858 million **Edinburgh to Glasgow Improvement Programme**, which comprised a comprehensive programme of improvements to railway infrastructure and rolling stock.

Scottish Ministers have set an ambitious goal to reach the same economic performance as those OECD nations in the top quartile. Not all of that can be delivered through infrastructure, but it has a key role to play.

Boosting our international and country-wide digital connectivity and capacity, particularly in rural areas, can help boost Scotland's productivity and competitiveness. According to the World Economic Forum²¹ the UK ranks 31st in the world for the quality and adoption of its digital networks. While there is no separate data for Scotland, our investment aims to position us amongst the higher ranked.

By World Economic Forum rankings, the UK is 11th in the world for the quality and timeliness of its transport systems. Whilst there is no separate data for Scotland, Scotland has been ranked as being the best connected large region in Europe²² and benefits from strong connectivity across a range of transport modes.

Through enhancing our transport infrastructure, focusing on a safe and resilient strategic transport network which also contributes to net zero and inclusive economic growth, we can boost Scotland's productivity and competitiveness, increase trade and inward investment.

We will stimulate innovation, including in manufacturing, to boost our international competitiveness, support construction with a strong pipeline of work and ensure Scottish businesses and supply chains can capitalise on our investment in low carbon. This can help support the creation of good jobs. Whilst our tourism industry has been hit hard by the COVID-19 pandemic, we will pave the way for it to return even stronger when conditions are more favourable.

We will embed fairness and inclusion, addressing the drivers of poverty and seeking to ensure no-one is left behind. We will do this in a range of ways, for example, by investing in the right strategic projects for every part of Scotland to aid city and regional growth; and through our investment in bus infrastructure, tackling poor energy efficiency, and addressing rural and island digital connectivity.

If we are successful, we would expect this plan to help us make progress towards our ambitious child poverty targets. Our spatial plan, as set out in National Planning Framework 4 next year, informed by emerging Regional Spatial Strategies and taken forward through Local Development Plans, will underpin a fair geographic distribution of investment.

²¹ http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

²² fDi's European Cities and Regions of the Future 2020/21 – Winners <https://www.fdiintelligence.com/article/76767>

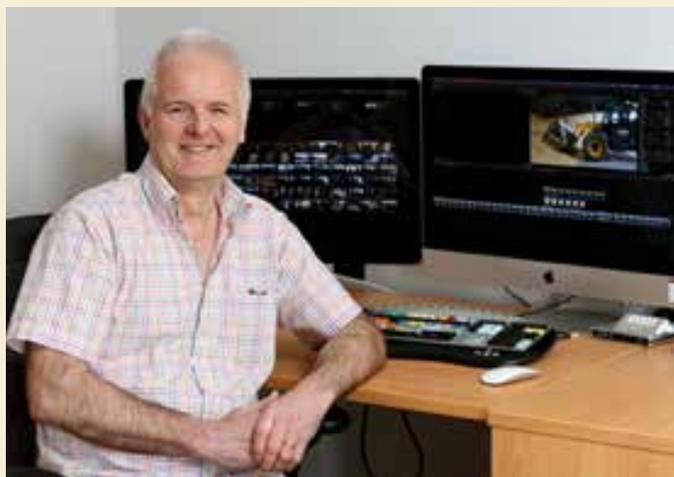
CASE STUDY

Digital Scotland Superfast Broadband programme

Cinecosse is an award winning film and multimedia company based in rural Aberdeenshire. Owner, Graeme Mowat, has described how his business has benefited from faster broadband and a reliable internet connection as a result of the Digital Scotland Superfast Broadband programme.

From previously very low speeds, Cinecosse is now able to access speeds of up to 69.8 download/20.1 Mbps through fibre enabled broadband. This has helped his company to remain relevant with clients across the globe and adapt successfully to client needs.

Improved online access has allowed Cinecosse to promote what they do through their own website. To keep up with the increased demand, Cinecosse has expanded to creating interactive media and offers media training. Day-to-day running of the office has also been made easier with improved online access and a move to digital HR and payroll applications.



CASE STUDY

Science Skills Academy, Inverness and Highland City Region Deal

The Science Skills Academy, funded through the Inverness and Highland City Region Deal, is inspiring children and young people across the Highlands to become engaged with the core STEM subjects, transforming STEM education through a network of Newton Rooms – Scandinavian-style learning hubs.

Newton Rooms in Thurso and Fort William are operational, with plans in place for further hubs in Dingwall and Inverness and pop-up sites across the region, ensuring quality STEM delivery and accessibility across the region, regardless of how remote and rural a school may be.

Since the Academy launched, over 4000 participants have interacted with the project; whilst the focus is to reach primary and secondary school children, they have provided sessions to families and to home educated pupils, trained STEM ambassadors, and have hosted events for local STEM businesses. The Academy is one of five UK Science Centres to have been selected to deliver a new national space programme for families and young people.



Theme 2: What the Infrastructure Investment Plan will deliver: 2021-22 to 2025-26

Purpose	Plans
Strengthening Connectivity	<p>We will ensure the right connections within Scotland and internationally. We will:</p> <ul style="list-style-type: none"> ■ Invest over £500 million in the Reaching 100% (R100) programme that will ensure people in every part of Scotland have access to superfast broadband by end 2021. ■ Double investment in bridge and roads maintenance: a programme of around £1.5 billion over 5 years to boost structural repairs and strengthen the network, improve road safety, deliver a range of improvements to our ITS infrastructure, and enhance key links such as the Tarbert to Inverarnan A82 section. ■ Deliver significantly improved rail services and accessibility to stations between East Kilbride and Glasgow, and Aberdeen to Central Belt, to meet growing demand, drive more usage and decarbonise rail passenger and freight services. ■ Deliver phased dualling of the A9 Perth to Inverness road. ■ Continue design and development work to dual the A96. ■ Complete construction of the A77 Maybole Bypass and improvements to the A92/A96 Haudagain junction. ■ We will produce and maintain a long-term plan and investment programme for new ferries and development at ports to improve resilience, reliability, capacity, and accessibility, increase standardisation, and reduce emissions to meet the needs of island communities, supported by investment of at least £580 million during the next 5 years.
Creating a world-class digital system	<p>We will strengthen digital public services, for example to aid our justice and health systems, including:</p> <ul style="list-style-type: none"> ■ Investment of £25 million in the system development required to build on the 50-fold increase in patient use of NearMe digital healthcare services during COVID-19. ■ Support for the delivery of the new critical national infrastructure for an Emergency Services Network (ESN) to deliver next generation telecommunications for our emergency services and first responder communities. The ESN will also contribute towards the Government's wider policy of enhancing broadband coverage through the Shared Rural Network.
Boosting competitiveness	<p>We will stimulate innovation and our international attractiveness by:</p> <ul style="list-style-type: none"> ■ Concluding our £75 million investment in the National Manufacturing Institute Scotland, to enable greater support for our manufacturing sector to test new processes, modernise their technologies, and de-risk investment

Purpose	Plans
<p>Supporting long-term inclusive and sustainable growth</p>	<p>We will invest for growth that benefits all people, in both rural and urban areas by:</p> <ul style="list-style-type: none"> ■ Investing £525 million, aligned with local authority and UK Government funds, to deliver the next five years of £5 billion city region and regional growth deals. These investments will help drive inclusive growth that will deliver significant and lasting economic benefits for individuals, businesses and communities across Scotland, and benefit Scotland as a whole, creating thousands of jobs and up-skilling local labour markets in: Glasgow City Region; Aberdeen City Region; Inverness and Highland; Edinburgh and South East Scotland; Stirling and Clackmannanshire; Tay Cities; Ayrshire; Borderlands; Moray; Argyll and Bute; Falkirk; and the Islands. ■ The Deals are supplemented by complementary and additional investment in key road sections and links: Sheriffhall junction with the A720 in Edinburgh; cross Tay link road; Laurencekirk junction with the A90, Longman junction with the A9/A82; and the A9/A96 Inshes to Smithton connection, as well as improvements to the rail network between Aberdeen and the Central belt. <p>We will deliver a range of economic, environmental and social measures for the benefit of rural Scotland through £100 million funding for the Scottish Rural Development Programme.</p> <p>We will invest £30 million in delivering the National Islands Plan, supporting a range of areas, including tourism, infrastructure, innovation, energy transition and skills – informed by our learning of how island communities have responded and adapted to COVID-19. This will include specific ringfenced funding for capital projects on islands relating to netzero and green recovery objectives, creating highquality, skilled, green jobs in some of our most remote and vulnerable communities.</p>



Chapter 7

THEME 3: BUILDING RESILIENT AND SUSTAINABLE PLACES

Some achievements from our 2015 Infrastructure Investment Plan

- £3.5 billion made available to support the single biggest investment in, and delivery of, **affordable housing** since devolution.
- Delivered **new healthcare facilities** such as NHS Greater Glasgow and Clyde's Woodside Health Centre, Stirling Care Village, and NHS Orkney New Hospital and Healthcare Facilities.
- £476 million to support the expansion of **Early Learning and Childcare** – investment so that more parents will be able to participate in work, training or study.

Delivering on our ambitions for a fairer Scotland starts at the local community level. Opportunities exist in many of our towns, villages and neighbourhoods to bring together individual investments for greater impact.

The COVID-19 pandemic has required us to rethink how and where we work, opening up new ways to think about our neighbourhoods, towns, cities and rural communities. We must also respond to changes in demography, and in the way in which people wish to access and consume services. Our next National Planning Framework, the Place Standard tool and new Digital Planning System will help us to do that.

Through our Place based Investment Programme, we will implement the Place Principle at pace to ensure that investment is relevant to each place and for the benefit of all the people in that place. This is a collaborative place based approach driven by the needs of communities – collectively getting behind community led changes at the heart of an area.

It is ever more crucial to ensure everyone has a suitable home: one that is safe; warm and affordable; close to services, shopping, work, and green space for recreation. A new emphasis on localism informed by concepts such as 20 minute neighbourhoods will help to achieve that.

We will invest in our housing and better delivery of services locally – be that in adapting our housing stock to better meet peoples' needs, delivering a network of community treatment centres and Near me health services, designing more integrated education facilities to help all learners reach their full potential and modernising our justice facilities and transforming emergency services to adapt to the digital age.

CASE STUDY

Loanhead Centre

Partners seized the opportunity of Schools for the Future investment significantly to shape and modernise previously separate and poorer quality public sector facilities. Through a more holistic approach to service planning, a new combined centres was developed which co-located a primary school, NHS medical centre, and community library and leisure facilities.



The community were consulted from the beginning, ensuring buy in to the new hub and facilities provided. The sense of community ownership of the building has developed trust and ensured that the building is well used. Take-up of services has been higher than before – including a 50% increase in footfall in the library compared to pre-hub figures. The Centre has allowed multiple generations to mix and engage and ultimately be proud of the facility and their place

Theme 3: What the Infrastructure Investment Plan will deliver: 2021-22 to 2025-26

Purpose	Plans
<p>Creating better local places</p>	<p>We will build on our “Place Principle” to promote place-based economic development and cohesion, ensuring all city, town, village and island communities can thrive by establishing a Place Based Investment Programme.</p> <ul style="list-style-type: none"> ■ As part of this programme we will invest £275 million to support community led regeneration and town centre revitalisation, including the repurposing of buildings, maintenance and repairs, reallocating external space and community led land acquisition. This will build on the Regeneration Capital Grant Fund and the ongoing work on Clyde Gateway. <p>We will continue to address the inequalities of land ownership through a 5 year Scottish Land Fund programme of £40 million.</p> <p>We will develop a £35 million new, open-access, digital planning system.</p> <p>We will invest £17 million over the next three years to support the introduction of Low Emission Zones into Scotland’s 4 major cities.</p>

Purpose	Plans
<p>Access to a high-quality sustainable home that is affordable and meets people's needs</p>	<p>Implementing our Housing to 2040 Vision and Principles Route Map later this year, we will create and fund a plan for high quality, energy efficient, zero carbon affordable housing with access to green space, sustainable transport links, digital connectivity and community services:</p> <ul style="list-style-type: none"> ■ We will invest £2.8 billion in capital, over 5 years, to deliver more affordable and social homes reflecting and supporting Local Housing Strategies and regional development priorities, alongside our work to enhance the suitability of our current stock – ensuring the right types of homes in the right places to support demographic need, economic opportunity, and to assist in delivering climate change targets. Further activity will be funded to deliver more affordable and social homes through Financial Transactions and the Transfer of Management of Development Funding budgets, and will be set out in due course. ■ We will invest £58 million in a programme to help Registered Social Landlords deliver adaptations needed to enable tenants to stay in their homes for longer, or permit them a speedy and safe return from hospital care. As part of Programme for Government 2020-21 we will also review the current housing adaptations system and make recommendations on how best to improve and streamline the system and maximise the impact of investment.
<p>High quality social infrastructure</p>	<p>We will boost digitally accessible services, whilst improving the condition of our buildings and enabling the right new facilities.</p> <p>In Health we will:</p> <ul style="list-style-type: none"> ■ Double our annual funding for maintenance over 5 years, investing over £1 billion in enhancing or refurbishing existing facilities, and updating and modernising key equipment. ■ Invest over £220 million in the Baird and Anchor project in Aberdeen which brings together all Maternity, Neonatal, Reproductive Medicine, Breast and Gynaecology services in the Baird Family Hospital and consolidates Haematology, Oncology and Radiotherapy Day and Outpatient services under one roof in the ANCHOR Cancer centre. ■ Reduce the pressure on our acute health facilities, and improve treatment times for patients, through a £300 million programme of investment to expedite completion of our elective care centres in Clydebank, Inverness, Livingston, Aberdeen, Tayside, and Kirkcaldy. ■ Upgrade the Edinburgh Cancer Centre (£20 million), build the new national secure adolescent inpatient service in Irvine (£10 million) and replace the St Brendan's facility in Barra (£18 million) ■ Invest over £50 million to modernise our radiology equipment nationally, and over £100 million to upgrade and replace our ambulance fleet. <p>In Education & Skills we will:</p> <ul style="list-style-type: none"> ■ For Colleges, invest nearly £90 million in the Dunfermline Learning Campus. ■ Together with Councils, fund an ambitious £2 billion Learning Estate Improvement Programme, using an outcomes based revenue finance approach. The first phase of 11 new school projects was announced in September 2019 a second phase of investment will be announced by the end of 2020. <p>In Justice we will:</p> <ul style="list-style-type: none"> ■ Replace HMP Inverness and HMP Barlinnie – an investment of around £470 million. In that time the new Highland establishment should be concluded, and a majority of progress might have been made on the new HMP Glasgow. ■ We will complete investment by 2022 in the construction of the innovative new female custodial estate, including a new national prison and two Community Custody Units in Dundee and Glasgow, tailored to the specific support needs of women. <p>Scottish Water is planning to invest over £4 billion in the next charge control period 2021-27 to maintain and improve services across Scotland, address the challenges of its aging asset base and make progress towards the achievement of its commitment to net zero emissions by 2040.</p>

INFRASTRUCTURE COMMISSION FOR SCOTLAND REMIT

ANNEX A

The Infrastructure Commission for Scotland was established by Scottish Ministers and started work in 2019 to provide independent, informed advice on the vision, ambition and priorities for infrastructure in Scotland to meet our 30-year economic growth and societal needs. Chaired by Ian Russell CBE, the group were further tasked with providing additional advice on the delivery of infrastructure in Scotland. The Infrastructure Commission was asked to work with the Scottish Government definition of infrastructure.

Who

Infrastructure Commission members:

- Ian Russell CBE, Chair
- Professor Iain Docherty, University of Stirling
- Ken Gillespie, Homes for Scotland
- Benny Higgins
- Mary Pitcaithly OBE, Scottish Police Authority
- Rachel Skinner, UK Head of Transport, WSP Global
- Grahame Smith, General Secretary, Scottish Trades Union Congress
- Sara Thiam, Chief Executive, Scottish Council for Development and Industry
- John Trower, Optimity
- Professor Janette Webb, University of Edinburgh

What

The Commission will provide independent, informed advice on the vision, ambition and priorities for a long-term, 30 year strategy for infrastructure in Scotland to meet our future economic growth and societal needs. This will support the Scottish Government's delivery of its National Infrastructure Mission and development of the next Infrastructure Investment Plan for the 5 years ahead. The Commission will advise on the key strategic and early foundation investments to significantly boost economic growth and support delivery of Scotland's low carbon objectives and achievement of our climate change targets.

Following the completion of this report the Commission will be asked to provide advice to Scottish Ministers on the delivery of infrastructure in Scotland, including the possible creation of a Scottish National Infrastructure Company.

When

The Advisory Commission will report on infrastructure ambitions and priorities by the end of 2019, and may make interim recommendations e.g. around guiding principles supporting the evolution of a coherent Infrastructure Investment Plan across sectors.

It is anticipated that a following 6 month period will be required to consider recommendations on delivery models.

The Commission should work in a way which is:

- Engaging and widely consultative across all of Scotland and civic society
- Credible, objective and evidence-based
- Outward looking, forward thinking and innovative

How

The Commission should pay attention to strategic drivers such as: securing Scotland's international competitiveness; the markets and connections Scotland requires for goods, services and people; how to prioritise investment to deliver inclusive economic growth and low carbon objectives; demographic and other social change factors; place-making; technological change and innovation; and considerations around development, ownership and financing of infrastructure, including Fair Work.

The Commission can determine how to progress its work, and may use future-focused scenario planning tools or existing or new research and evidence.

Commissioners will be responsible for:

- Bringing specific skills and experience
- Providing expert, impartial advice
- Engaging widely with stakeholders including industry, expert and interest groups, government, local government and public bodies, civic society and the public

Overarching objectives for the Infrastructure Commission's work

- delivering sustainable inclusive economic growth across Scotland
- managing the transition to a more resource efficient, lower carbon economy
- supporting delivery of efficient, high quality, modern public services
- increasing industry competitiveness, whilst tackling inequality
- enhancing societal living conditions now and in the future
- ensuring alignment with the new National Planning Framework

Infrastructure Commission for Scotland reports.

Phase 1: Key findings report: A blueprint for Scotland²³

Phase 2: Delivery Findings Report: A blueprint for Scotland²⁴

²³ https://infrastructurecommission.scot/storage/281/Phase1_FullReport.pdf

²⁴ https://infrastructurecommission.scot/storage/276/Phase2_Delivery_Findings_Report.pdf

CAPITAL MAINTENANCE: THE ECONOMIC BENEFITS

ANNEX B

Purpose

To assess the evidence around the potential economic impact of capital maintenance as compared to overall infrastructure investment.

How Capital Maintenance Enables Sustainable Economic Growth

In 2018 the Scottish Government published a report²⁵ prepared by OCEA examining the economic rationale for infrastructure investment. The report identified five main channels through which infrastructure enables inclusive and sustainable growth:

- Supporting the Foundations of Economic Activity – infrastructure underpins economic resilience, provision of lifeline services and the effective operation of the economy.
- Demand Side Economy Impacts – the construction phase of infrastructure projects is an important source of employment and can provide wider supply chain benefits that support economic activity across the country in the short to medium term.
- Supply Side Economic Impacts – Infrastructure spending can enhance the productive potential of the economy, if investment is effective, through improving its supply side.
- Market Impacts – Facilitating the development of key sectors and technologies; improving private sector competitiveness; and unlocking private sector capital.
- Social and Environmental Impacts – Reducing regional disparities; reducing emissions and improving environmental quality; and improving health and wellbeing.

Capital maintenance has the potential to support inclusive and sustainable growth through the same channels as identified above. For example, maintaining flood defences to ensure they remain operational supports economic resilience.

However, the relative importance of the different channels is likely to differ for capital maintenance when compared to new build infrastructure and supporting the foundations of economic activity is likely to be relatively more important for capital maintenance. This is because as the condition of any part of the asset stock diminishes, there is greater risk that we will not be able to continue to use its services at current levels. This in turn affects our ability to sustain the existing pattern of economic activity.

The relative importance of the other different channels is likely to vary too for capital maintenance when compared to new build infrastructure. For example, the relative impact of capital maintenance on the supply side of the economy will depend on the current state of the infrastructure. If the infrastructure is in relatively good condition then capital maintenance is unlikely to have a significant impact on the productive potential of the economy. In contrast, if the services that infrastructure is able to provide have become unpredictable, for example electricity outages or road delays, due to a lack of maintenance then investment in capital maintenance would be expected to have a significant impact on the supply side of the economy.

On the demand side impacts, the lower values of projects for capital maintenance as compared to new build infrastructure may enable more SMEs to compete for individual contracts and therefore potentially increase the distribution of the employment benefits across Scotland.

The Extent to Which Capital Maintenance Impacts on Growth

There are a number of studies that have attempted to estimate the impact of infrastructure on economic output, however there is limited evidence exploring the relative impact of capital maintenance.

25 Scottish Government, Exploring the Economic Rationale for Infrastructure Investment, <https://www2.gov.scot/Resource/0054/00544114.pdf>

Both the IMF²⁶ and the National Infrastructure Commission²⁷ highlight a paper²⁸ that suggests maintenance is likely to have high a rate of return. The paper highlights that in the short run infrastructure in bad condition imposes costs on users while in the long run, failure to maintain infrastructure in a timely fashion leads to greater costs of rebuilding. The paper's evidence is mainly drawn from the World Bank and is focused on more developing countries and therefore the empirical results may not be directly comparable to Scotland. However, the paper does suggest that there is an optimal level of expenditure in maintenance that can have a positive impact on growth.

As part of the 2011 National Road Maintenance Review Transport Scotland commissioned the Transport Research Laboratory²⁹ to assess the economic, environmental and social impacts of changes in maintenance spend on roads in Scotland. The study found that pedestrians were most affected by a reduction in road maintenance, for example through impacts on noise, air quality and accidents. It was estimated that for every £1 reduction in road maintenance there is a cost of £1.50 to the wider economy.

At the macro level, modelling by the Scottish Government³⁰ estimated that the National Infrastructure Mission could lead to a sustained boost in Scottish GDP by between 0.5% and 1% by 2025-26, depending on the measure of the economy used.

Over 15 years, this is equivalent to increasing the economy by between £10 billion and £25 billion (2017 prices) depending on the measure of the economy used. This modelling focused on an increase in Gross Fixed Capital Formation (GFCF). GFCF is defined as excluding “ordinary maintenance and repairs” but it does include “improvements to existing fixed assets beyond ordinary maintenance and repairs”³¹. Consequently, the modelled potential economic benefits of capital maintenance would be the same as new build assuming that revenue maintenance captures ordinary maintenance and capital maintenance results in improvements to existing assets beyond this and therefore forms part of GFCF.

Conclusion

There is limited quantitative evidence on the relative economic impact of capital maintenance as compared to building new infrastructure but evidence suggests that capital maintenance does have as high a rate of return. It is expected that spend on capital maintenance has the potential to impact on the economy through the same five channels as identified for overall infrastructure investment, with supporting the foundations of economic activity being particularly important but the relative impact of other channels may vary depending on the current condition of existing infrastructure.

Assuming capital maintenance increases GFCF the economic benefits are expected to be consistent with those modelled for overall infrastructure investment. However, as with overall infrastructure investment, the balance of investment between different sectors and markets will determine the precise level of economic benefits realised from increasing capital maintenance.

26 IMF, Is it time for an infrastructure push? The macroeconomic effects of public investment, 2014, <http://www.imf.org/external/pubs/ft/weo/2014/02/pdf/c3.pdf>

27 National Infrastructure Commission, Economic Growth and Demand for Infrastructure Services, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/595990/2906219_NIC_Technical_Paper_Economic_Driver_v1_OA_WEBACCESSIBLE.PDF

28 Rioja (2013), What is the value of infrastructure maintenance? https://www.lincolnst.edu/sites/default/files/pubfiles/what-is-the-value-of-infrastructure-maintenance_0.pdf

29 Transport Research Laboratory, Economic, Environmental and Social Impacts of Changes in Maintenance Spend on Roads in Scotland, 2012, <https://www.transport.gov.scot/media/29455/j235740.pdf>

30 Scottish Government, Exploring the Economic Rationale for Infrastructure Investment, <https://www2.gov.scot/Resource/0054/00544114.pdf>

31 European System of National and Regional Accounts 2010

CARBON ASSESSMENT OF THE INFRASTRUCTURE INVESTMENT PLAN

ANNEX C

The Scottish Government has used low, neutral and high carbon categories (known as a taxonomy approach), as shown in the table below, to analyse planned infrastructure spend for individual years.

The categorisation was developed and proposed by the Low Carbon Infrastructure Taskforce in 2015³²:

Category	Description	Examples
Low Carbon	Seen as necessary to the low carbon transition	Transport – bus, rail and ferry Energy – all renewable generation and electricity transmission and distribution Rural affairs and the environment – waste Housing – energy efficiency programmes
Neutral	Do not represent substantial carbon efficiency gains in their own right but are consistent with low carbon ambitions	Rural affairs and the environment – all non-waste Housing – all non-energy efficiency Water, Digital, Health, Schools, Justice Culture and heritage Regeneration
High carbon	Relatively carbon intensive	Transport – roads and airports Energy – fossil fuel generation

This analysis estimates that 35% of the Capital Budget in 2020/21 can be classed as Low Carbon³³. However, there are a number of reasons why this approach gives only a partial or crude estimate of the actual savings:

- Does not quantify the overall change in emissions.
- Does not capture all emissions-saving measures, particularly those in the Neutral category.
- Has not been brought into line to match higher emissions targets.

In passing the 2019 Climate Change (Emissions Reduction) Act in Scotland, the Parliament agreed that a new methodology should be developed in order to assess the contribution made by the infrastructure investment plan to the new targets.

In order to respond to this new requirement, and in recognition of the limitations of the current approach, an independent research project was commissioned to explore alternative options. This research was facilitated by ClimatexChange – Scotland's centre for expertise connecting climate research and policy.

³² https://issuu.com/greenallianceuk/docs/the_case_for_low_carbon_infrastruct

³³ https://www.parliament.scot/S5_Finance/General%20Documents/Kate_Forbes_14_February_2020.pdf

The ClimatexChange report recognises that this is a relatively new area of policy and methodological development. It identifies four different types of assessment approach relevant to infrastructure investment decisions:

- Absolute emissions methods,
- Baseline-and-intervention methods,
- Gap analysis, and
- Taxonomies.

A description of each methodology and its strengths and weaknesses is shown below, please see the final research report for more detail.³⁴

Method Description	Strengths	Weaknesses
Taxonomy Categorises types of asset into broad groups to rate the carbon impact.	<ul style="list-style-type: none"> ■ Easy to interpret. ■ Relatively easy to implement using existing tools & guidance. 	<ul style="list-style-type: none"> ■ Blunt tool, limited in detail. ■ Does not quantify the level of emissions reduction ■ Does not capture all emissions-saving measures. ■ Not matched to Scottish targets.
Absolute Emissions Calculates emissions relating to an infrastructure asset throughout its lifetime.	<ul style="list-style-type: none"> ■ Provides a detailed assessment of individual projects. ■ Can capture lifecycle impacts and international emissions effects. 	<ul style="list-style-type: none"> ■ Data heavy and resource intensive – requires a detailed assessment of each project. ■ May not adequately capture the cumulative impacts
Baseline & Intervention Estimates the change in emissions over time compared to a ‘no change’ scenario.	<ul style="list-style-type: none"> ■ Flexible approach – individual projects or combination of programmes. ■ Captures system-wide change. ■ Compatible with current assessment methods. 	<ul style="list-style-type: none"> ■ An assessment of each intervention is required in order to design the modelled scenario. ■ Modelling outputs can be complex to interpret – may be challenging to identify the pure ‘infrastructure’ effects of investment.
Gap Analysis Assesses the difference between planned investment and the target.	<ul style="list-style-type: none"> ■ Allows for analysis of any shortfall in required implementation or investment. 	<ul style="list-style-type: none"> ■ An assessment of each intervention is required ■ Requires a decarbonisation scenario and a detailed understanding of costs or implementation plans.

The Scottish Government plans to consider these research findings carefully. In particular, we note the recommendation to take a phased approach. While the report suggests we could adopt a new version of a carbon taxonomy (such as the EU Sustainable Finance Taxonomy or Climate Bonds Initiative Taxonomy) in the short run, it is not clear that the benefits of doing so are strong. It is therefore considered preferable to maintain the current taxonomy until such time that a more sophisticated and transparent reporting method can be developed.

From the remaining three, the Scottish Government is minded to explore further the use of Baseline and Intervention, and Gap Analysis approaches. The development of the new approach using one of the methods (or a combination of them) is likely to be an iterative process and will require substantial work to establish the new framework and collect the necessary data. This is noted in the Infrastructure Investment Plan forward programme.

³⁴ <https://www.climatexchange.org.uk/research/projects/greenhouse-gas-emissions-and-infrastructure-investment-decisions/>



RESPONDENT FORM

ANNEX D

Please Note this form **must** be completed and returned with your response.

To find out how we handle your personal data, please see our privacy policy:
<https://www.gov.scot/privacy/>

Are you responding as an individual or an organisation?

- Individual
- Organisation

Full name or organisation's name

Phone number

Address

Postcode

Email

The Scottish Government would like your permission to publish your consultation response. Please indicate your publishing preference:

- Publish response with name
- Publish response only (without name)
- Do not publish response

Information for organisations:

The option 'Publish response only (without name)' is available for individual respondents only. If this option is selected, the organisation name will still be published.

If you choose the option 'Do not publish response', your organisation name may still be listed as having responded to the consultation in, for example, the analysis report.

We will share your response internally with other Scottish Government policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so. Are you content for Scottish Government to contact you again in relation to this consultation exercise?

- Yes No



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