



Infrastructure
Commission
for Scotland 

Phase 2: Delivery Findings Report

A blueprint for Scotland

JULY 2020

Foreword

We published our Phase 1 Report earlier this year, with inclusive economic growth and net zero carbon emissions, an inclusive net zero carbon economy, at the core of our 30-year vision for infrastructure in Scotland. Now at publication of our Phase 2 report only six months later, we find ourselves in a very different world. The Covid-19 pandemic has had a profound social and economic impact in the UK and across the world.

However, the pandemic has not stimulated or exposed fundamental issues with infrastructure assets themselves. The infrastructure of Scotland has, in the main, shown great resilience and adaptability despite the extreme fluctuations of demand, particularly in the transport sector.

Prioritisation and investment in our infrastructure that delivers an inclusive net zero carbon economy remains the key focus for the Commission. Our Phase 1 Report investigated the “why and what” of our future infrastructure needs and we have moved onto the “how” of infrastructure delivery for this Phase 2 Report. Infrastructure delivery is a very broad area to cover, and we have therefore chosen to focus on a number of specific aspects of that delivery landscape, which we believe will have the greatest impact. These areas are the adoption of a long term approach to prioritising an inclusive net zero carbon economy, how to optimise the impact of infrastructure in enabling sustainable places and delivering a thriving construction sector through an improved interface between the public sector and industry. We believe the implementation of our recommendations for these areas combined with those

established during our Phase 1 work is vital to deliver the future infrastructure needs of Scotland over the long-term.

Much of the evidence that informs this report pre-dates the Covid-19 pandemic. However, we have also been engaging widely in recent months, as the pandemic has developed. The Commission’s work continues to be focused on a longer-term vision for Scotland’s infrastructure, and is not aimed at the immediate recovery activity that is being addressed by others. We have nevertheless considered the evidence we have received in relation to the short term impacts of the Covid-19 pandemic and have reflected on the impacts that the pandemic may have on the infrastructure needs, usage and delivery in Scotland over the long term.

What has become clear during that process of reflection is that the pandemic has served to reinforce many of the drivers and conclusions we highlighted in our Phase 1 Report and to amplify the need for urgent action and change: the importance of an inclusive net zero carbon economy; the need for an integrated cross-infrastructure approach to prioritisation and



Our Phase 1 Report investigated the “why and what” of Infrastructure and we have moved onto the “how” of infrastructure delivery for this Phase 2 Report.



The Infrastructure sectors covered in the Phase 1 Report included: Energy, Digital, Transport, Housing, Natural Capital, Water & Wastewater, Flood Management, Waste Management, Education, Health, Emergency Services and Justice.

investment; the importance of continuous broadly-based engagement with all of the people who develop, construct, manage and use infrastructure, particularly through places where we live and work; the need to make better use of existing assets and resources; the need to engage and reflect in an informed way with the public; and the importance of strategic long term, independent advice.

As Commissioners, we would like to express our sincerest thanks and gratitude to the many hundreds of organisations and individuals who have taken the time to contribute to our work, and have actively engaged with us over the last 18 months to shape, inform and guide our findings.

Commissioners also thank the Secretariat for their intensive and extensive work during this period, working with us to draw the evidence together and produce our two reports.

To ensure that future infrastructure prioritisation, investment and delivery can fully contribute to the delivery of an inclusive net zero carbon economy for Scotland, it is now incumbent on all of us who plan, build, invest in, own, operate, regulate and use Scotland’s infrastructure to embrace the challenges as well as to grasp the opportunities that lie ahead. The recommendations from the Commission’s work over the last 18 months are designed to galvanise and accelerate action.

The Infrastructure Commission for Scotland

Ian Russell CBE (Chair), Professor Iain Docherty, Ken Gillespie, Benny Higgins, Mary Pitcaithly OBE, Rachel Skinner, Grahame Smith, Sara Thiam, John Trower, Professor Janette Webb

Executive Summary

The Infrastructure Commission for Scotland was established in early 2019 to provide independent advice to the Scottish Ministers on a 30-year vision (the “why and what”) of infrastructure for Scotland, and to consider options for delivery (the “how”). The Phase 1 Report, published in January 2020, focused on the “why and what” of these challenges. This Phase 2 Report focuses on the “how”.

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The findings of the Phase 1 Report were framed around a long term vision for inclusive economic growth and net zero carbon emissions, an inclusive net zero carbon economy for Scotland, and it focused on identifying actions to ensure that the future prioritisation of investment in infrastructure aims to achieve those outcomes. Since publication, the Phase 1 Report key findings and recommendations, have resonated well and generated the support of many of those who plan, build, invest in, own, operate, regulate, and use the infrastructure of Scotland.

However, whilst ultimately it is for Ministers to decide how to implement those Phase 1 recommendations, the Commission has assumed for the purposes of the Phase 2 Report, that they will be implemented in full. In other words, the Phase 2 Report should not be read as a separate, standalone document, but as the next chapter in the story to plan, develop, deliver and subsequently operate Scotland’s infrastructure over the next 30 years.

Since publication of our Phase 1 Report, we have also been confronted with the Covid-19 pandemic. The Commission has considered how it should address the impact of the pandemic as part of its Phase 2 work and has concluded that our work should not be aimed at addressing the immediate recovery from the pandemic; there are already many organisations in the public, private and third sector devoting considerable amounts of thought and energy to that.

Rather, we have been engaging with many stakeholders over the last few months and have taken into consideration the longer-term impact and implications of some of those more immediate lessons and experiences that have emerged because of the pandemic. Reflecting on

those experiences has also reinforced many of the findings of our Phase 1 work and, if anything, has emphasised the need to ensure they are implemented.

In focusing on the “how” of infrastructure during Phase 2, the Commission has sought to address some of the key elements of the infrastructure lifecycle as illustrated in the diagram on the next page. This is described in more detail in the Introduction (pages 14-22).

The Commission recognised early in this second phase of activity that it would not be possible to address the delivery aspects of each stage of the infrastructure lifecycle across all the dimensions identified in the time available. Commissioners were also keen that the Phase 2 work was able to build on the Phase 1 findings to identify and address the challenges to the implementation of those findings.

In order to achieve that objective, three particular areas were identified for further detailed investigation during Phase 2, namely:

- > **Prioritising an inclusive net zero carbon economy** and a long-term approach to infrastructure strategy,
- > How best to optimise the impact of infrastructure in **enabling sustainable places**; and
- > **Delivering a thriving construction sector** through enhancing the interaction between the public sector and industry

In combination these areas are essential to ensuring that the vision established during our Phase 1 work can be effectively implemented over the long term to meet the future infrastructure needs of Scotland, and also help to inform considerations around the creation of a **Scottish National Infrastructure Company**, as set out in the remit for the Commission.

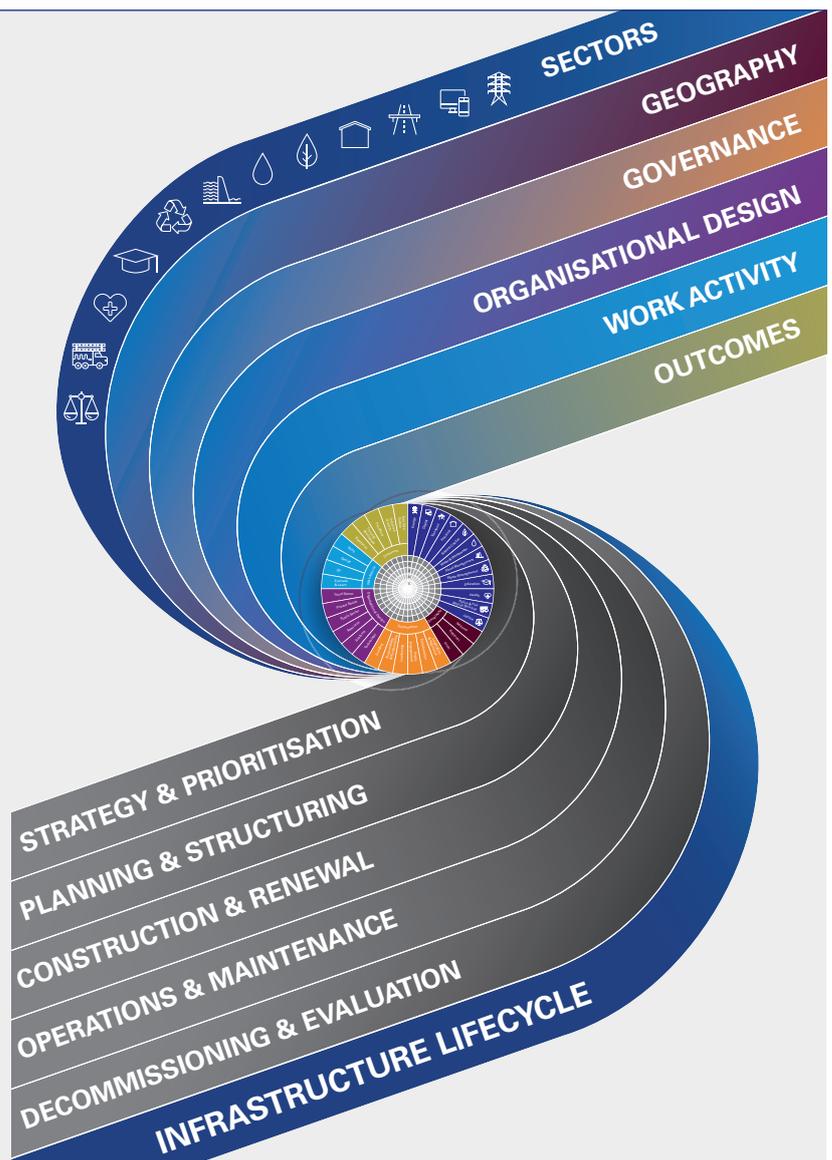
We have set out below a series of recommendations across the areas highlighted above that we believe, in conjunction with the recommendations from Phase 1, can set the infrastructure foundations for an inclusive net zero carbon economy for Scotland.

Infrastructure delivery lifecycle



For the purposes of the Commission's work in looking at Infrastructure delivery, we have identified five stages of the infrastructure delivery lifecycle that move from first prioritising the right infrastructure, through second planning and structuring, third construction and renewal, then fourth maintaining and operating that infrastructure, and fifth and finally to decommissioning and completing evaluation. The latter is intended to ensure continuous monitoring and review in order to establish whether, over its life, the infrastructure contributed to the outcomes originally anticipated.

Looking at infrastructure from that lifecycle perspective is a useful basis for reviewing any issue or situation. In looking across that lifecycle, there are also a number of ways in which that can be further investigated, and in order to provide a framework for the Commission's work, we have represented this as six areas of interest or dimensions, namely: sectors, geography, governance, organisational design, work activity and outcomes.





Summary of Recommendations



↓ 01

Prioritising an Inclusive Net Zero Carbon Economy

Prioritising inclusive economic growth and net zero carbon emissions were the key messages from the Commission's Phase 1 Report. To achieve an inclusive net zero carbon economy, the Commission made recommendations for a fundamental change to the infrastructure appraisal methodology and framework, as well as the development of an integrated infrastructure needs assessment, supported by the establishment of independent long-term advice.

The Covid-19 pandemic has only served to re-enforce the importance of implementing these recommendations. To build on those Phase 1 recommendations, the Commission has further developed its thinking on **how** they should be implemented during Phase 2.

The Commission has concluded that, to achieve the Phase 1 recommendations, the independent long-term advice organisation will need to sit outside the political decision making system. This will enable it to operate in an arms-length and transparent way which builds confidence for public and private sectors as well as civic society and the public.

Ultimately, investment decision making is the responsibility of the Government, and the Commission recognises that the Scottish Government is central to developing the detailed plans to enable a long-term infrastructure vision to be delivered and maintained. However, we have identified the need for Scottish Government, government agencies and local authorities, to undertake infrastructure planning, prioritisation and investment decision making on a system wide, cross government, portfolio and sector basis; focused principally on an outcome-based approach. This would enable the independent long-term advice and the Scottish Government's decision-making approach to complement and mirror each other, supporting and enhancing effective decision making focused on an inclusive net zero carbon economy.



Recommendation

Independent long-term advice

1. By 2021, to enable prioritisation of an inclusive net zero carbon economy in infrastructure planning over a 30-year period, an independent, specialist body should be given the following responsibilities by the Scottish Government:
 - > Develop a 30-year infrastructure needs assessment and strategy, refreshed every 5-years for all public and private infrastructure;
 - > Undertake regular strategic public engagement to inform the long term strategy;
 - > Provide strategic challenge to the Government of the day; and
 - > Undertake one-off strategic reviews and research.

Prioritisation and decision making

2. To support infrastructure decision making that will prioritise an inclusive net zero carbon economy, the Scottish Government should:
 - > Ensure, and where possible accelerate, implementation of our Phase 1 Report recommendations 2 (Assessment Framework and Methodology), 3 (Needs Assessment), 4 (Infrastructure Investment Plan) and 5 (Place Based Housing and Industry Assessment); and
 - > By the end of 2021, introduce an outcome-led, integrated cross-infrastructure prioritisation approach that incorporates and balances spatial and sector needs; the output would inform affordability assessment and budget allocation of infrastructure funding.

↓ 02

Enabling Sustainable Places

Places are at the intersection between the ambition of an inclusive net zero carbon economy and the right infrastructure. Understanding and responding to the needs of places is therefore central to achieving the Commission's vision as seen in Phase 1.

The language and objectives of place continue to be widely accepted and the Place Principle provides an effective model to design places well. However, the good practice approaches are often in pockets and too dependent on good-will; therefore alongside methodologies such as the Place Standard tool, there is a need to more firmly embed these principles in practice.

Each place is unique and dynamic, with a range of legacy infrastructures and stakeholders, whether public, private, third sector or communities. Collaboration is therefore essential, yet there are often barriers to this collaboration, undermining the delivery of better places. Obstacles to collaboration include issues such as the challenges of upfront investment by developers and utility companies; insufficient alignment of objectives within the public sector, undermining a more cohesive "one public sector" approach; and creating barriers to the necessary culture of trust and reciprocity across all parts of the industry, whether public, private or community.

There are, however, opportunities to overcome system issues, including National Planning Framework 4 ("NPF4") and the process to develop the framework. Other themes include the need for a robust evidence base, supported by the use and standardisation of digital data, to understand, develop and re-develop our places more efficiently. Finally, there are a broad range of skills that can be drawn upon to build better places; however, where there are gaps these need to be addressed. Reflecting these key findings, our recommendations cover the three inter-linked areas of Systems & Behaviours, Enabling Digital Technology, and Resources.



Recommendation

Systems & Behaviours

3. Scottish Government should enshrine the use of the Place Principle within planning practice, by end of 2021, through guidance, legislation or regulation as appropriate.
4. Building on Phase 1 needs-based recommendations, in the development of National Planning Framework 4, Scottish Government should establish a cross-portfolio, and robust evidence-based, land use appraisal and prioritisation approach by end of 2021, which vertically aligns national, regional and local needs. This involves co-produced industrial, settlement (including housing) and labour & skill strategies for each spatial level, which manage the difficult trade-offs and maximise the potential of an inclusive net zero carbon Scotland. This systematic appraisal and prioritisation approach should:
 - > Consider the fullest interpretation of an inclusive net zero carbon economy, including economic growth which reflects fair work, access to the labour market and equity, including spatial equity¹.
 - > Support a working agreement on land use priorities, including vacant and derelict land sites; and
 - > Facilitate market certainty to unlock significant sites, with coordination and clarity of the funding, financing and delivery of enabling infrastructure; including,
 - > A cohesive approach to planning obligations, to overcome issues of first-mover risk, transparency around enabling infrastructure and other disincentives to investment.

5. A “one public sector” outcome-based approach should be developed for our places by the end of 2021. This would build on changes within the Planning Scotland Act (2019), establishing a clear duty to co-produce and co-deliver existing and proposed spatial plans and includes the necessary shared accountability measures. How this effectively complements and learns from Community Planning Partnerships, Local Area Improvement Plans, Locality Plans and Local Place Plans should be reviewed, to make as efficient and streamlined as possible, while ensuring collaboration becomes a required practice.
6. Scottish Government should co-ordinate national upfront utility investment via changes to guidance, legislation or regulation by end of 2021.

Enabling Digital Technology

7. Recognising the critical and increasing importance of high-quality data to infrastructure assets of all types, Scottish Government should establish a digital data co-ordination, standards and facilitation role, by the end of 2021, to support the efficient and innovative development and use of data for the infrastructure sector.
 - > This should include a review of existing data development and management roles, to ensure the competency is located and resourced in the most efficient way.

- > The function should support and drive the development of activities such as digital twins, where the sharing of asset data information facilitates better use of existing assets and informs future investments; and
 - > identify skill and training requirements and, with partners, establish an effective strategic response.
8. A centrally held data resource is developed by the end of 2021, to provide open-source data that will inform place need and demand, including effective asset development, refurbishment and use, for an inclusive net zero carbon economy.

Resources

9. Scottish Government, in partnership with the private sector, third sector and communities, by the end of 2021, should further develop and harness the essential skills to develop and improve our places. This should include establishing and directly supporting an appropriately experienced and co-ordinated skill resource for the prioritisation, planning and delivery of infrastructure, which is available to all local authority stakeholders, across spatial levels.

↓ 03

Delivering a Thriving Construction Sector

Our Phase 1 Report made a number of recommendations relating to Scotland's infrastructure requirements over the next 30 years in order to deliver an inclusive net zero carbon economy. To achieve this, significant investment in our infrastructure will be required and major programmes of work developed. If this is to be delivered successfully, we need to ensure we have an effective, modern and fair interface in place that works for the mutual benefit of both client and contractor.

There is, of course, work already underway to drive positive outcomes that aims to increase productivity, raise capability, improve resilience, restore public and political confidence in public sector construction procurement and increase the reputation of the construction sector. This includes, for example, wider implementation of framework contracts, ensuring less focus on lowest cost bids by eliminating unsustainable pricing, developing and implementing more collaborative approaches between client and contractor and encouraging the use of local workforces, subcontractors and suppliers. While this provides a strong foundation to build on, we have concluded that further work is required and there is a window of opportunity for the public and construction sectors to reset and strengthen their future relationship in order to prepare for the delivery challenges we face over the next 30 years to ensure that Scotland's infrastructure supports an inclusive net zero carbon economy.



Recommendation

10. By building on its work to date, the Scottish Government and Construction Scotland Leadership Group should, by Quarter 1 2021, jointly lead, develop, resource and implement a "Construction Accord" between all Scottish public bodies and the whole of the construction sector. Its purpose is to set out an inclusive, shared vision for, and commitment to create, the market interface conditions to support a high performing construction sector for the benefit of all Scotland, that contributes to the achievement of an inclusive net-zero carbon economy and underpins the delivery of the National Infrastructure Mission.

11. This should include measures:

- > to improve the capacity, capability and diversity of the workforce (at all levels) for both client & contractor, including the development of skills relevant to modern methods of construction and the application of new technologies;
- > to develop a more coherent and less fragmented approach to skills development and training in Scotland which is more sharply focussed on the needs of the construction sector – both in the immediate and longer terms;
- > to monitor numbers and competency within the industry, consideration should be given to the development of an appropriate registration scheme for all apprenticeships in Scotland which will also raise the profile of construction careers as well as helping to promote and support the delivery of quality in the sector;
- > to ensure those working in the construction sector are employed under the principles and conditions of Fair Work in order that they enjoy safe, secure and rewarding careers;
- > to enable the development of improved programme pipeline forecasting and management that demonstrate longevity and a reasonable degree of certainty and that allow the experience gained on previous projects to be utilised to enhance the delivery of subsequent projects;
- > that will enable a move away from transactional, cost driven procurement of individual assets, through the development and introduction of value driven, collaborative procurement methods (appropriate for Scottish needs) that can deliver investment programmes designed to secure national outcomes.

↓ 04

Scottish National Infrastructure Company

The Commission's overarching approach has been to ensure its conclusions and recommendations have been developed in response to the emerging problems and issues it has identified or evidence it has received. In addition, its recommendations are based on an aspiration that the delivery of Scotland's infrastructure is achieved through a coordinated, whole system approach designed to ensure that the public and construction sectors work together in a strong collaborative partnership that contributes to an inclusive net zero carbon economy.

After careful consideration, the Commission has concluded from its work that none of the outcomes of its recommendations would be enhanced by creation of a Scottish National Infrastructure Company. However, it also recognises that going forward, the situations and the problems we need to respond to are not constant and can change very quickly – the Covid-19 pandemic and its implications for society and the economy serve to illustrate that point. Any future consideration of a Scottish National Infrastructure Company will need to draw on the evidence of how successfully the Commission's recommendations have been implemented, and their impact, as well as the context prevailing at the time.





Next Steps

With the publication of this Phase 2 Report and submission of further advice to Scottish Ministers, the Infrastructure Commission for Scotland has concluded its work, and we thank the many hundreds of organisations and individuals who have engaged with us, to help inform and guide our work.

We are clear in our view that infrastructure has and will continue to have a crucial role if we are to realise the significant social, economic and environmental benefits of an inclusive net zero carbon economy.

We are also clear that the implementation of all of the recommendations made in both our Phase 1 and Phase 2 Reports - some of which we acknowledge will necessitate a fundamentally different way to prioritise, plan and deliver infrastructure investment - will make a significant contribution to the successful delivery of that inclusive net zero carbon economy. We call on Scottish Ministers to act on and engage widely to address these challenges and opportunities.