

Infrastructure Investment Plan 2021-22 to 2025-26

Progress Report for 2022-2023

June 2023

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June 2023

Foreword



Shona Robison MSP
Deputy First Minister and Cabinet Secretary for Finance

I am pleased to publish the second annual progress report for our five-year Infrastructure Investment Plan. The report outlines the progress made during the last year on the Infrastructure Investment Plan's three themes: enabling net zero emissions and environmental sustainability, driving inclusive economic growth, and building resilient and sustainable places. The report also highlights key delivery achievements within the last year and activity planned for the year ahead.

The Scottish Government's prospectus – 'Equality, opportunity, community: New leadership – A fresh start' - which was published in April 2023, sets out our commitment to tackling poverty and protecting people from harm, supporting a fair, green and growing economy and prioritising our public services. The ongoing delivery of the programmes and projects set out in our Infrastructure Investment Plan helps us deliver against these missions.

Programme highlights within the last year which contribute to more than one mission include the Community and Renewable Energy Scheme, which launched the 'Let's Do Net Zero Community Buildings' fund. This provides a rolling programme of support to communities, charities, and faith organisations to decarbonise their buildings and reduce energy bills. The Scottish Central Government Energy Efficiency Grant Fund was relaunched in May 2022 to support multi-year projects and to continue to boost heat decarbonisation and improve energy efficiency across Scotland's public sector. Since relaunching, the scheme has committed £30 million of investment across 32 capital projects to be delivered over the course of three financial years. The Home Energy Scotland Grant and Loan Scheme was launched in December 2022 and offers applicants a grant, interest-free loan or combination of both to support the installation of energy efficiency measures and zero-emissions heating. The Low Carbon Manufacturing Challenge Fund was launched in May 2022 with the goal of developing new products, services or technologies that will reduce emissions, energy consumption, waste production and decrease the use of raw materials in the manufacture, and/or end use, of the existing alternative.

In Scotland, we have one of the broadest definitions of infrastructure anywhere in the world. By including the natural environment as part of our infrastructure definition, we ensure green spaces and biodiversity are considered alongside more traditional forms of infrastructure when we are making our investment decisions. We can then be confident we have a fair, green and growing economy at the centre of decision making when it comes to investing our annual capital budget.

In 2022-23, Forestry and Land Scotland acquired 3,700 hectares of new land at a total cost of around £21 million. Roughly half of this land will be plantable for trees with the remainder being managed for peatland / habitat restoration and/or ecological/recreational outcomes. Peatland restoration continues to be progressed across Scotland and during 2022-23, around 7,500 hectares of degraded peatland were put on the road to recovery. The funicular reinstatement works on Cairngorm Mountain were completed in November 2022 and, following approval of a new control system, the funicular returned to service in January 2023. Visitors are once again able to access the top of the mountain more easily, whether to enjoy snowsports or simply experience the mountain environment across the seasons in Scotland's outstanding natural environment.

Infrastructure plays a vital role in connecting our local communities, businesses and big cities, and delivering the services that we all rely upon.

We provided a record level of funding for Active Travel infrastructure and behavioural change programmes and the ChargePlace Scotland network has grown to over 2,500 public charging assets, making it the fourth largest such network in the UK.

Infrastructure plays an important, if less direct, role in helping us to tackle poverty and keep people safe. Internet access is rapidly becoming a necessity for most people, and our rural communities deserve reliable connectivity to help them be active participants in an ever-digitising world. We have extended the investment and reach of the R100 digital programme this year, and that will enable us to deliver to more premises in some of the most rural parts of Scotland. The vast majority of R100 contract build will be full fibre, capable of delivering download speeds of 1,000 megabits per second (Mbps) – over 30 times faster than our superfast commitment of 30 Mbps. Full fibre is the most future-proofed broadband technology available so this outcome will put rural Scotland ahead of the curve, even compared to many urban areas.

Our accompanying major capital projects reporting shows that during the last year, infrastructure projects worth £221 million completed construction and opened to the public. This includes the A92/A96 Haudagain Junction Improvement project in Aberdeen, the new Inverness Airport Rail Station as well as a new National Treatment Centre in the Highlands, a new Elective Orthopaedic Centre in Fife, and new community custodial units in Glasgow and Dundee. Major projects which commenced construction in 2022-23 included the Dunfermline Learning Campus in Fife and the new National Secure Adolescent Inpatient Service facility for Scotland in North Ayrshire.

The Medium-Term Financial Strategy (MTFS), published on 25 May, highlighted the challenges facing capital budgets in the coming years. Funding for capital grant, provided by the UK Government, is expected to fall by 7% in real terms between 2023-24 and 2027-28, significantly eroding the Scottish Government's spending power.

The challenging and volatile economic conditions of the last two years, coupled with UK Government spending decisions, mean that the trajectory of public capital spending exceeds the capital funding we expect to be available.

To help to address the difference between the capital funding and spending outlook, I have set out plans to publish a reset of the Infrastructure Investment Plan project pipeline, first

set out in 2014, alongside the 2024-25 Budget – providing transparency over which projects may now be delivered over a longer timescale.

To do this, I will undertake a prioritisation exercise to ensure we target the available capital spending to support employment and the economy through the Scottish Government's infrastructure plans, support the achievement of net zero emissions targets and underpin the provision of high-quality public infrastructure and services across Scotland.

I am also pleased to report the progress against the recommendations made by the Infrastructure Commission for Scotland in its Key Findings and Delivery reports. The adoption of National Planning Framework 4 in February 2023 includes a dedicated 'infrastructure first' policy that recognises the importance of putting infrastructure at the heart of place making. This approach aligns with other national plans and strategies.

I look forward to working with all our stakeholders to ensure that collectively we maximise the benefits of infrastructure investment for the people of Scotland.

Overview

Infrastructure Investment Plan 2021-22 to 2025-26

The Scottish Government's [Infrastructure Investment Plan for Scotland 2021-22 to 2025-26](#) was published on 4 February 2021. The Plan covers the five financial years from April 2021 and includes details of around £26 billion of major projects and national programmes.

The Infrastructure Investment Plan (hereafter IIP) sets out how we will deliver the National Infrastructure Mission and sets a long-term vision of infrastructure supporting an inclusive, net zero carbon economy in Scotland. It provides a pipeline of public sector infrastructure delivery, giving confidence to the construction sector and supporting our economic recovery from COVID-19. It shows how we will enhance our approach to choosing the right future investments and introduces a new infrastructure investment hierarchy.

This is the second annual progress report for our five-year IIP and further highlights within the last year included the record level of funding for Active Travel infrastructure and Behavioural change programmes which was provided, including £52 million of grant funding for the Places for Everyone programme to deliver infrastructure projects across Scotland, £35 million across all 32 local authorities for safer walking, wheeling and cycling routes, and a record investment of £10.6 million for the National Cycle Network. We invested over £10 million on behaviour change initiatives in our schools, workplaces and communities to support people to make a modal shift towards safer walking, wheeling and cycling for short everyday journeys.

Further activity which supports the transition to net zero emissions and environmental sustainability include our £70 million Recycling Improvement Fund, which continues to invest in local authority recycling infrastructure. Since it was launched, over £53 million has been awarded to 17 local authorities to increase the quantity and quality of recycling. As one of the biggest investments in recycling in Scotland in a generation, we are funding more frequent recycling services and collections of new materials, the expansion of food and garden waste collections to new areas, boosting Scotland's capacity to recycle soft plastics and films, and local service redesigns to align with Scotland's Household Recycling Charter.

A new £30 million water treatment works has started supplying water to Peebles improving water quality and resilience and the associated works were built using low carbon construction techniques. In addition, in North Lanarkshire, a £11.5 million project to help reduce sewer flooding in Craigneuk was delivered and a £6.4 million investment to help protect homes from sewer flooding in Annan, in Dumfries and Galloway was completed June 2022.

The ChargePlace Scotland network grew to over 2,500 public charging assets, making it the fourth largest such network in the UK and now boasts over 80,000 registered members with around 45,000-50,000 charging sessions taking place each week, compared to 30,000 per week in summer 2021. In the last year, over £600,000 worth of grants were offered to charities, and those living and operating in rural areas, for the installation of EV charging infrastructure at homes and business premises.

Our Reaching 100% (R100) Programme continues to deliver at pace across Scotland and in 2022-23 we extended the investment and reach of the programme which will enable us to deliver to more premises in some of the most rural parts of Scotland. By the end of February 2023, the three R100 contracts for North, South and Central had delivered over 20,000 contracted premises and an additional 5,200 non-contracted “overspill” premises driving inclusive economic growth.

Key major project achievements within the second year included the opening of the A92/A96 Haudagain Junction Improvement project in Aberdeen which will deliver benefits for the local community and road users by reducing congestion, improving journey time reliability, as well as providing a safer route for pedestrians and cyclists. The opening of the new Inverness Airport Rail Station and accompanying wider rail network infrastructure investment will build resilience and additional capacity and will make rail a more attractive option encouraging more people to choose this sustainable transport option as an alternative to the car. Reston Station which forms part of the Reston and East Linton Rail Stations project, became operational - the new fully accessible station will improve access to rail services in the Scottish Borders and allow connectivity options to local public transport services, active travel provision and 70 park and ride car parking spaces, including over 20 electric vehicle charging stations.

Supporting the IIP theme of building resilient and sustainable places, NHS Highland’s new National Treatment Centre and NHS Fife’s new Elective Orthopaedic Centre, both of which form part of the National Treatment Centres Programme, were completed and opened to patients. The new centre in Inverness will transform the experience for patients undergoing a range of orthopaedic and ophthalmology procedures and is equipped with 24 beds, five operating theatres and 13 consulting rooms. The new state of the art centre in Kirkcaldy will make Fife the first NHS region in Scotland to carry out hip and knee replacements as day cases not requiring overnight stays with the centre having 3 theatres, 7 bedded recovery areas, a 34-bedded inpatient ward and a dedicated Orthopaedic Outpatient Department.

Two new community custodial units specifically designed with the needs of women in mind and which continue the Scottish Government vision of managing female offenders in a way that better supports their rehabilitation, opened in Glasgow (Lilias Centre) and Dundee (Bella Centre).

Major projects which commenced construction in 2022-23 included the Dunfermline Learning Campus which will house teaching facilities and learning spaces for students, staff, and business clients and bring together about 4,500 school pupils and college students from Fife College, St Columba’s RC High School, and Woodmill High School. Foxgrove, the new National Secure Adolescent Inpatient Service facility for Scotland in North Ayrshire, commenced construction and the purpose-built facility will mean that children will be cared for nearer to home and will receive appropriate care, treatment, therapies, security, and on-going education.

Progress of projects to March 2023

In total over the course of 2022-23, the following projects worth £221 million completed construction and opened to the public as reported within our six-monthly major capital project updates:

Transport

- A92/A96 Haudagain Junction Improvement (£49.5 million)
- Inverness Airport Station (£41.8 million)

Health

- NHS Highland - National Treatment Centre - Highland (£48.6 million)
- NHS Fife - Elective Orthopaedic Centre (£33.4 million)
- NHS Tayside - Children's Theatre Suite Project including the Multi Storey Plant Room (£12.8 million)

Justice

- Community Custodial Unit E - Lilies Centre, Maryhill (£13.6 million)
- Community Custodial Unit D - Dundee (£12.3 million)
- HMP Barlinnie Programme of Works (£9.0 million)

Project activity through to March 2024

Major infrastructure projects planned to complete construction and open to the public during 2023-24 include:

- Barrhead Rail Enhancement,
- East Linton Rail Station which forms part of the Reston and East Linton Rail Stations project,
- Phase 2 of the Golden Jubilee Hospital Expansion Programme,
- NHS Lothian's Oncology Enabling Projects, Edinburgh Cancer Centre,
- NHS Forth Valley's National Treatment Centre and
- The National Facility for Women Offenders.

Infrastructure Investment Plan Reporting

The IIP includes both programmes and projects. Programmes co-ordinate, direct and oversee the implementation of a set of related projects. Projects have defined start and end points (usually time-constrained and often constrained by funding or deliverables) and are undertaken to meet unique goals and objectives. Projects can be part of a programme but are not always.

The **IIP Major Capital Projects Progress Update** is published on a six-monthly basis. It provides information on the progress of those projects with a capital value of £5 million or more that the Scottish Government has a lead role in funding, and which are at Outline Business Case (or equivalent) approved stage or beyond.

[Annex C](#) of this progress report includes information relating to those projects within the IIP Major Capital Projects Progress Update and their accompanying climate change targets, strategic outcomes and their contribution made to local economic development.

The **IIP Project Pipeline** is updated and published on a six-monthly basis. It includes planned projects with a capital value of £5 million or more for which the Scottish Government has a lead role in funding and where an Outline Business Case (or equivalent) is not yet approved.

The **IIP Programme Pipeline Update** is published on a six-monthly basis. It includes information relating to key major infrastructure programmes with an investment of £20 million or more that the Scottish Government has a lead role in funding.

The latest updated three reports relating to the IIP can be found on the Scottish Government website at [Infrastructure Investment Plan](#).

National Infrastructure Mission

The Scottish Government is firmly committed to infrastructure investment as a key factor in securing inclusive economic growth and our focus is on stimulating growth, protecting and creating jobs and promoting Scotland as a great place to do business. In recognition of the importance of infrastructure investment to the economy, the 2018 Programme for Government set out our commitment to a National Infrastructure Mission to increase annual investment by 1% of 2017 Scottish GDP (Gross Domestic Product) by the end of the next Parliament. The National Infrastructure Mission was introduced to protect and create jobs in the short term and support inclusive economic growth and productivity in the long term.

Our commitment to infrastructure investment was renewed in the 2023 Policy Prospectus, which highlights that we will prioritise capital investment to reach net zero and to maintain high quality public infrastructure and services across Scotland.

The [Medium-Term Financial Strategy](#) published on 25 May 2023, sets out the current economic challenges that are facing the capital programme, including construction supply chain issues, sustained high inflation levels, and labour shortages which have resulted in an increased cost of borrowing and revenue financed investments being more expensive than forecasted. Alongside this, the trajectory for the capital grant allocation from the UK Government (excluding Financial Transactions) is expected to fall by 7% in real terms between 2023-24 and 2027-28, significantly eroding the Scottish Government's spending power. In combination, these issues mean that it is likely to take longer than expected to achieve the National Infrastructure Mission target. We will continue to keep the National Infrastructure Mission under review, looking to maximise the impact of our infrastructure investment.

These challenges also mean that we cannot deliver all of the Scottish Government's capital commitments within the funding available and to the original timescales. To address this, we will publish a refreshed multi-year spending envelopes for capital alongside the 2024-25 Budget and extend the Capital Spending Review and Infrastructure Investment Plan period by one year, to 2026-27. This will allow us to reflect the new economic reality, while prioritising capital spend to support employment and the provision of high-quality public infrastructure as we move towards achieving net zero.

Funding

The Scottish Government has a range of financing options available to fund capital investment in infrastructure including the UK Government capital grant, deployment of Scottish Government capital borrowing powers, innovative financial and revenue finance models, and recycling repayments from earlier Financial Transaction loans.

The Scottish Government is committed to sustainable deployment of revenue financed investment and capital borrowing to ensure there is no undue financial burden on future

policy choices. That is why the Scottish Government has a self-imposed revenue finance investment limit of 5% of the Scottish Government resource budget excluding social security. The latest modelling suggests that over the remaining capital spending review period these costs peak in 2025-26 with planned and committed projects and borrowing costs estimated to be 2.7% of the resource budget excluding social security.

There were no private finance projects taken forward during 2022-23. Details of the estimated annual NPD and PFI unitary payment charges for the services agreed over the length of each ongoing associated contract in Scotland, can be found on the on the Scottish Government website at [NPD and PFI projects](#).

The options appraisal developed by Scottish Futures Trust (SFT) which resulted in the adoption of the Mutual Investment Model, the current model for private finance projects, can be found on SFT's website at [Scottish Futures Trust](#).

Infrastructure Commission for Scotland

We established a short life [Infrastructure Commission for Scotland](#) (ICfS) to provide long-term strategic advice to us on national infrastructure priorities. The Commission advised on our National Infrastructure Mission by identifying key strategic priorities in Scotland to be made to boost economic growth and support public services. [Annex A](#) includes an update on the progress against the broad themes of the Commission's recommendations.

Supply chain and inflation issues

The global supply chain and inflation issues reported within the September 2021 six-monthly Major Capital Projects Progress Update to the Public Audit Committee, have continued through the previous year, resulting in both delays and / or cost increases for a wide range of projects. A full note on the continued impact of the issues around supply chains and the availability of construction materials along with inflation which are affecting the delivery of infrastructure projects and programmes is included at [Annex B](#).

Thematic Progress

The Infrastructure Investment Plan 2021-22 to 2025-26 set out a clear vision for our future infrastructure to enable an inclusive net zero emissions economy and support economic recovery. Underpinning this vision are the following three themes, the basis of which support the First Minister's 'New Leadership - A Fresh Start' policy prospectus published in April 2023:

Enabling net zero emissions and environmental sustainability

As set in the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, Scotland has put in to legislation some of the toughest emissions reductions targets in the world, including a 75% reduction in greenhouse gases by 2030 (compared to 1990) and to achieve net zero emissions by 2045. This will require transformative action across all sectors of the economy and across society. The Scottish Government's investment in publicly-funded infrastructure, set out in the IIP, has a critical role to play in supporting the transition – the commitment to multi-year investments in the IIP sent a clear signal to supply chains to invest in people and technology, to help us deliver the net zero transition.

The IIP established investment in our natural capital as a key aspect of infrastructure investment. Natural areas or systems that are managed to provide multiple benefits for the environment and human wellbeing can be described as 'natural infrastructure'. Scotland's natural capital is fundamental to our economy and our wellbeing. Investment in natural infrastructure creates significant opportunities for improving biodiversity and reducing emissions, while also creating jobs and a wide range of health and wellbeing benefits, including improved urban air quality and protection from flooding. This is why, in the IIP, we adopted an updated definition for infrastructure to include natural infrastructure – the broadest definition of infrastructure in the UK.

Driving inclusive economic growth

Infrastructure is an enabler of sustainable, inclusive economic growth. Internal analysis by the Office of the Chief Economic Advisor has shown that an investment led stimulus has both a short-term demand effect but also a longer term supply effect on economic performance. Investments set out in the IIP will enhance Scotland's productivity, competitiveness, innovation, trade and inward investment by:

- Boosting our international and country-wide digital connectivity and capacity, particularly in rural areas.
- Enhancing our transport infrastructure, focusing on a safe and resilient strategic transport network which also contributes to net zero and inclusive economic growth.
- Supporting construction with a strong pipeline of work and ensure Scottish businesses and supply chains can capitalise on our investment in low carbon.

This approach embeds fairness and inclusion, addressing the drivers of poverty and seeking to ensure no-one is left behind. We will invest in the right strategic projects for every part of Scotland to aid city and regional growth; invest in bus infrastructure and tackle poor energy efficiency.

Building resilient and sustainable places

Delivering on our ambitions for a fairer Scotland starts at the local community level. The IIP supports opportunities in our cities, towns, villages and neighbourhoods to bring together individual investments for greater impact.

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 at the heart of a great place to live and work - the new emphasis on localism, with quality homes in quality places, informed by concepts such as 20-minute neighbourhoods will help to achieve that.

The following section of the report reflects on the progress and key achievements within the last year in relation to the three thematic elements of the IIP and associated subthemes, as well as what activity is planned for the year ahead.

Enabling net zero emissions and environmental sustainability

Decarbonising Transport and Supporting Active Travel

Active Travel

In 2022-23, we provided a record level of funding for Active Travel infrastructure and Behavioural change programmes. This included £52 million of grant funding for the Places for Everyone programme to deliver infrastructure projects across Scotland, £35 million across all 32 local authorities for safer walking, wheeling and cycling routes, and a record investment of £10.6 million for the National Cycle Network. We invested over £10 million on behaviour change initiatives in our schools, workplaces and communities to support people to make a modal shift towards safer walking, wheeling and cycling for short everyday journeys.

Bus Partnership Fund (BPF)

The second round of Bus Partnership Fund awards were made in February 2022, bringing the total number of Partnerships funded to 11 across 28 local authorities. To date, we have awarded up to £26 million of initial funding to local authorities, working in partnership with operators, to identify, develop and deliver bus priority measures.

Rail Services Decarbonisation and Enhancements

In 2022, we progressed our decarbonisation plan for Scotland's passenger rail services with continued work on the electrification of the Glasgow to Barrhead line, due for completion in December 2023. Work also continued on the Levenmouth Reconnected project which will deliver a double tracked railway with two new stations and active travel links by spring 2024. In the Borders, the new Reston station opened in May 2022, with work continuing on a new station at East Linton, which is due to enter service in 2024. We also opened the new Inverness Airport station in January 2023.

Future Transport Fund – capital to support low and zero carbon investment

In 2022-23, the ChargePlace Scotland network has grown to over 2,500 public charging assets, making it the fourth largest such network in the UK. It now boasts over 80,000 registered members with around 45,000-50,000 charging sessions taking place each week, compared to 30,000 per week in summer 2021. In the last year, over £600,000 worth of grants were offered to charities, and those living and operating in rural areas, for the installation of EV charging infrastructure at homes and business premises.

We launched the Electric Vehicle Infrastructure Fund which aims to unlock £60 million of public and private investment towards growing the public Electric Vehicle (EV) charging network across Scotland. To support the delivery of this fund we have also been working with local authorities to develop regional public electric vehicle charging strategies for cars and vans. We have already provided in excess of £10 million of funding to local authorities and public bodies to facilitate and support fleet decarbonisation activity.

The Strategic Timber Transport Scheme was allocated £6.5 million in 2022-23, enabling £10.4 million of work on 22 improvement projects across Scotland. This includes, for example, the development of floating pier infrastructure in Ardnamurchan to move timber directly onto coastal shipping taking timber lorries off minor fragile single-tracked roads. The Strategic Timber Transport Fund also allocated grant towards the initial phase of the electric timber lorry trial for Lockerbie and Inverness, and to the ongoing Timberlink

Service which ships timber from Argyll Forests to timber processors in Ayrshire reducing timber lorry traffic on A83/A82 over the Rest and be Thankful and Loch Lomondside.

In 2022, we launched the £500,000 Zero Emission Bus Market Transition Scheme to support small to medium enterprise bus and coach operators, and community transport providers, to examine potential approaches to decarbonising their fleets. We also launched a new four-year Zero Emission Mobility Innovation Fund providing up to £28 million to support domestic supply chain innovation to meet Mission Zero. The Zero Emission Truck Taskforce, with support from Transport Scotland, completed an information gathering phase in 2022 and are now developing a pathway to decarbonisation for heavy goods vehicles.

In 2022-2023, the Plugged-in Communities scheme continued to help community transport schemes with the purchase of plug-in minibuses, wheelchair accessible vehicles and cars. Community transport offers communities flexible and affordable access to the latest electric vehicles without the financial commitment of car ownership.

Decarbonising Heat and Boosting the Energy Efficiency of Buildings

Domestic Energy Efficiency: Area Based Schemes

The Area Based Schemes (ABS) programme has helped thousands of households across Scotland to improve the energy efficiency of their homes during 2022-23. Delivery of some larger projects will now be extended to more streets and blocks of properties this summer.

In line with our commitments in the Programme for Government, the Scottish Government has maintained its' annual investment in local ABS projects at £64 million in 2023-24. ABS projects will continue to provide more whole house retrofits that include zero/low carbon heating and microgeneration (solar PV (Photovoltaics) etc.), where this is technically feasible and will help to reduce fuel poverty. Every council in Scotland has now received details of their funding allocation for 2023-24 and has been invited to develop proposals for this financial year and beyond.

Domestic Energy Efficiency: Warmer Homes Scotland

The annual budget for 2021-2022 was £50 million and was further increased to £55 million for 2022-2023. Warmer Homes Scotland has helped over 32,000 households since its launch in 2015, and currently households who receive improvements through the scheme are expected to save an average of £160 per year on their energy bills. The contract for Warmer Homes Scotland has been extended to run until September 2023.

Through Warmer Homes Scotland we have made available renewable heat and new insulation measures some of which may be particularly beneficial to rural and remote communities not served by the gas grid. These include ground source heat pumps, micro-wind, micro hydro, micro-CHP (Combined Heat and Power) systems and 'QBot' - an underfloor insulation system installed by a robot. Micro-CHP systems are not suitable for off gas grid areas as these are gas powered. Additional enabling measures introduced under the scheme include extraction of failed cavity wall insulation, asbestos removal and the installation of fuel storage tanks and low energy lighting.

The formal procurement for an enhanced successor scheme to Warmer Homes Scotland is underway, with the new scheme due to go live when the current contract expires. The

new scheme will have a greater focus on decarbonisation of heat, taking a zero emissions first approach to heating installations with a greater intervention cost per household.

Home Energy Scotland (HES) Grant and Loan

The Home Energy Scotland (HES) Grant and Loan Scheme was launched in December 2022 and offers applicants a grant, interest free loan or combination of both to support the installation of energy efficiency measures and zero emissions heating. This scheme offers applicants a straight-forward, flexible and accessible way to access targeted priority measures.

The new scheme is an update of the previous HES loan scheme. The Bute House Agreement, Heat in Buildings Strategy and Programme for Government 2022-23 committed to replacing the previous loan and cashback arrangements with a standalone grant to support the installation of energy efficiency measures and zero emissions heating. The HES Grant and Loan Scheme is delivered through a consumer-led model where the funding is applied for by the consumer directly, who in turn is responsible for sourcing an installer and paying funding to them once works are complete.

Across both iterations of the scheme, a budget of £42 million was allocated for 2022-23, double the level of 2021-22 and the scheme is on track to pay £42 million to households within 2022-23.

Social Housing Net Zero Heat Fund

First launched in August 2020, the Social Housing Net Zero Heat Fund is making £200 million available to registered social landlords to help install zero emission heating systems and improve energy efficiency in social housing until 2026. The fund is for the retrofit or refurbishment of existing housing stock and provides grant funding to help cover the costs of energy efficiency measures and zero emission heating systems, including connections to district heat networks.

Community and Renewable Energy Scheme

The Scottish Government is committed to supporting the growth of community and local energy in Scotland through mechanisms such as its flagship Community and Renewable Energy Scheme (CARES). The scheme, which is delivered by Local Energy Scotland, supports communities to engage, participate and benefit from the energy transition to net zero. The current CARES contract, which commenced 1 April 2021 and will run for a period of 4 years, gives priority to decarbonisation as the driver for community-led action.

In 2022-23 CARES launched the 'Let's Do Net Zero Community Buildings' fund, which provides a rolling programme of support to communities, charities, and faith organisations to decarbonise their buildings and reduce energy bills. This support takes a whole building retrofit approach, covering energy efficiency measures, zero emissions heat installations, and additional small-scale generation where there is a clear benefit to the community organisation in terms of energy bill reduction.

CARES 'Let's Do Net Zero: Off Electricity Grid Communities' fund continues to provide a package of support to some of Scotland's more remote and rural off grid communities to help them upgrade their energy systems and decarbonise their energy supplies, with the aim of making them more resilient and sustainable in the future.

CARES also launched the Community Heat Development Programme in 2022-23. This programme provides community organisations and groups of householders help to develop their own ideas for locally generated, low and zero carbon heat projects utilising support from expert advisors to assess the feasibility of projects and advise on next steps, including potential routes for further funding.

Public Sector Estate: Scottish Central Government Energy Efficiency Grant Fund

The Scottish Central Government Energy Efficiency Grant Fund was launched in June 2021. It offers capital grant funding support to enable the delivery of decarbonisation projects across the public sector, specifically supporting retrofit of existing buildings owned by central government organisations with energy efficiency measures and renewable heat technology to help them reach net zero emissions across their estates. The fund also provides resource support to enable the building of a pipeline of investment-ready projects in 2022-23 and beyond, further accelerating investment in energy efficiency and renewable technology across the public sector.

The fund relaunched in May 2022 to support multi-year projects and to continue to boost heat decarbonisation and improve energy efficiency across Scotland's public sector. Since re-launching in 2022, the scheme has committed £30 million of investment across 32 capital projects to be delivered over the course of three financial years. Since re-launching the fund has also supported 17 pre-capital projects totalling around £750,000 of resource funding. The fund remains open to applicants and will support projects up to the end of this parliamentary term.

Low Carbon Infrastructure Transition Programme

The Low Carbon Infrastructure Transition Programme (LCITP) is now closed to new applications after awarding approximately £73 million to projects that decarbonise heat since it was launched in 2015. In 2021-22, it was announced that the Low Carbon Infrastructure Transition Programme had awarded funding of £8.7 million to low carbon energy projects that support Scotland's Green Recovery, £6.6 million of which were for projects that will decarbonise how buildings are heated. Thirty-six projects have been awarded funding through LCITP, with 21 still currently under construction.

Scotland's Heat Network Fund

Scotland's Heat Network Fund was launched in February 2022 with a budget of £300 million over the course of this parliament to accelerate the deployment of zero and low emissions heat networks that can provide reliable and affordable heat to consumers. A key objective of the Heat Network Fund is to support projects that will result in wider social and economic benefits for Scotland. The Heat Network Support Unit launched in September 2022 to address the challenges in the pre-capital stage of heat network development. It identifies prospective heat network projects; supports the development of heat network projects across Scotland, through advice and grant funding; and builds capacity and expertise across the public (and private) sector in Scotland to develop and run successful heat networks.

Clyde Mission

Work is underway to develop a scheme to distribute funds to support the delivery of zero emissions heat projects along the river Clyde to help to deliver the aims of Clyde Mission to make the Clyde an engine of sustainable and inclusive growth for the city, the region

and for Scotland. An announcement on the detail of that scheme is expected to be made summer 2023.

Royal Botanic Gardens Edinburgh - Edinburgh Biomes

The Edinburgh Biomes is a critical infrastructure replacement / improvement project which will see new energy efficient glasshouses, an energy centre and state of the art front of house facilities installed in the Royal Botanic Gardens Edinburgh (one of Scotland's top visitor attractions), including the Grade A Listed Victorian Palm House. The glasshouse structures and energy centre are essential in order to protect and conserve Scotland's National Living Plant Collection.

In 2022-23, we saw continuation of ground works, including preparations for the decanting of species to temporary storage areas and preparations for works to construct the new low carbon energy centre. Furthermore, we saw the start of a 2-year refurbishment piece of work to the Victorian Palm Houses.

The Edinburgh Biomes is a complex multi-year project with a large number of interconnecting parts involving 'living' species of rare and protected plants. Like a number of large-scale capital infrastructure projects, progress has been impacted by flux in the global construction market, resulting in increased costs, shortage of materials and delays in delivery.

During 2023-24, we will see continued focus on the infrastructure network for the new energy centre, decant glasshouse and ongoing refurbishment work on the Victorian Palm Houses. Project timelines and milestones are being reviewed and adapted on an ongoing basis.

Decarbonising Industry

Scottish Industrial Energy Transformation Fund (SIETF)

Currently 21 projects in receipt of Scottish Industrial Energy Transformation Fund (SIETF) grant offers have commenced activity to decarbonise their industrial processes. This amounts to £12 million of £35 million total investment (including industries' contributions). Of these, 3 deployment projects and 1 study were completed/commissioned in 2022-23.

For year ahead, a third call for projects is at due diligence stage from which a greater number of projects and a higher overall value of grants than previous calls is anticipated. This will boost investor confidence across Scottish sectors to progress projects at manufacturing sites that can reduce carbon intensity and deliver energy productivity gains.

Emerging Energy Technologies Fund (EETF)

The first tranche of the Emerging Energy Technologies Fund (EETF), the £10 million Hydrogen Innovation Scheme, launched in June 2022 with a focus on innovation in renewable hydrogen production, storage and distribution technology. The funding call received a high number of applications demonstrating the strength and breadth of hydrogen activity in Scotland's innovation ecosystem, with grant awards due to be announced in Q1 2023-24. The second tranche of funding, the £90 million Green Hydrogen Fund is due to follow.

Energy Transition Fund (ETF)

All 4 Energy Transition Fund (ETF) projects have been fully in delivery in 2022-23. Progress towards key objectives has been positive, with all projects completing the majority of their envisioned aims for outputs, although both the Energy Transition Zone Ltd and Aberdeen Hydrogen Hub reported underspends against key activities. These underspends have been made available for use in financial year 2023-24. The Global Underwater Hub project managed to achieve one key aim without requiring the full budget, so that underspend was returned to the financial centre.

Key highlights of 2022-23 include: the purchase and refurbishment of a building by ETZ Ltd to create the Floating Offshore Wind Centre of Excellence – a site that will directly support the development and commercialisation of technologies to support large scale floating offshore wind development, and the aims of the Scotwind leasing round; and the delivery of a world first demo by the Net Zero Technology Centre of running a jet turbine on e-methanol - with minimal modifications to the equipment, this alternative fuel source offers the opportunity to drastically reduce carbon emissions in North Sea assets versus operating the turbines on kerosene or diesel.

In 2023-24, the anticipated deliverables include: completion of refurbishment of the W-Zero-1 Offshore Floating Wind Centre of Excellence on the Energy Transition Zone, providing space and testing capability for technology that will support the roll out of floating wind generation, including the sites identified under the ScotWind process; and the creation of operational interim and upgraded Hydrogen refuelling facilities as part of the Aberdeen Hydrogen Hub work – enabling further adoption of Hydrogen as the fuel solution for both public transport and Council fleet vehicles in Aberdeen. Additionally, the Aberdeen Hydrogen hub will form the blueprint for the Hydrogen Hub approach as envisaged by the Hydrogen Action Plan

Low Carbon Manufacturing

During 2021-22, we developed and launched a CivTech challenge that aims to find a technological or software solution to help better inform decisions manufacturers take to decarbonise. At the completion of the CivTech accelerator phase, we signed a Pre-Commercial Agreement with a small Scottish start-up called iSumio to work towards a beta product by the end of 2022.

iSumio have now succeed in producing their beta product named Neoni® as a part of the Agreement and are seeking to test this with industry. We are continuing to work with the company to support this phase with an aim to move towards a full commercial launch of the product later this year.

We launched the Low Carbon Manufacturing Challenge Fund (LCMCF) in May 2022. The goal is the development of new products, services or technologies that will reduce emissions, energy consumption, waste production and decrease the use of raw materials in the manufacture, and/or end use, of the existing alternative. Alternatively, we want to support the development of new business models based on the principles of a circular economy, through, for example, circular supplies, resource recovery, product life extension or use of sharing platforms.

Administered by Scottish Enterprise, LCMCF grants are for a minimum of £150,000 with £3 million made available across 2022-23. The first grant award of £750,000 to NorFrame was announced in December 2022 to support the establishment of a fully renewable energy powered factory to manufacture timber kit frames for homes, schools and commercial buildings. There continues to be a good level of interest in the Fund from industry with a large volume of proposals at various stages of the pipeline.

Supporting a Circular Economy

Waste Sector

The Scottish Government has been amongst the leaders in developing policies for zero waste and the circular economy, and has made significant long-term progress, working with many partners, in increasing recycling and diverting waste from landfill. We know that further action is needed to accelerate progress towards Scotland's ambitious waste prevention and recycling targets, to tackle our throwaway culture and to scale up and mainstream circular economy business models in Scotland. Investment is a key part of this, and has the potential to unlock local reprocessing investments, create jobs and a ready supply of recycled material for new packaging. It is part of building a fully circular economy in Scotland, which will drive materials up the waste hierarchy and keep them in high value use for as long as possible.

The £70 million Recycling Improvement Fund continues to invest in local authority recycling infrastructure. Since it was launched in March 2021, over £53 million has been awarded to 17 local authorities to increase the quantity and quality of recycling. As one of the biggest investments in recycling in Scotland in a generation, we are funding more frequent recycling services and collections of new materials, the expansion of food and garden waste collections to new areas, boosting Scotland's capacity to recycle soft plastics and films, and local service redesigns to align with Scotland's Household Recycling Charter. This landmark investment is making it easier for households to make the right recycling choices, and make an important contribution to meeting Scotland's waste, recycling and climate targets. The projects announced to date have the potential to reduce CO₂e emissions by 49,000 tonnes each year - the equivalent of taking 26,000 cars off the road.

The fund remains open to all local authorities to develop and submit applications for funding, and we will provide further updates on investment in Scotland's recycling infrastructure throughout the lifetime of the fund, which runs until 2025-26. Local authorities across Scotland are encouraged to continue to apply to the fund, to help drive improvements to recycling and better services in their area and across Scotland.

The Scottish Government is working in partnership with COSLA (Convention of Scottish Local Authorities), SOLACE (Scottish Branch of the Society of Local Authority Chief Executives) and Zero Waste Scotland to deliver the fund. More information on the aims, scope and distribution of the fund is available at [Zero Waste Scotland](#).

A summary of responses to the consultation (21 January and 15 April 2022) on plans for the introduction of a mandatory digital waste tracking service in the UK was published on 15 December 2022. Funding has been allocated to support SEPA (Scottish Environment Protection Agency) with implementation of waste tracking in Scotland. The ambition is to provide a step change in the quality and timeliness of data on waste and resource flows, to

support decision-making. By making it easier to identify opportunities to reduce the waste produced and reuse the materials we consume, this will support our transition to a circular economy.

Work to accelerate landfill gas capture in Scotland was a new boosted policy, as outlined in the recent Climate Change Plan update, working with SEPA and key industry partners to scale up the existing landfill gas capture programme to mitigate effects of landfill and environmental impact of closed landfill sites. This is supported by additional funding from the Low Carbon Fund with the aim to harness the energy generated from landfill gas capture and maximise circular economy opportunities. Due to other unavoidable resource implications, including COVID-19 contingency work, progress on this policy outcome was paused. We are reviewing plans and will take this forward in 2023-24.

We know that textile waste and throwaway culture have a disproportionate environmental impact - textile waste makes up just 4% of household waste but 32% of the carbon impacts. We have introduced a new Textile Innovation Fund, to support businesses working in this sector to address issues associated with textile waste and throwaway culture [Circular Textiles Fund | Zero Waste Scotland](#).

Our Deposit Return Scheme (DRS) for single-use drinks containers (which will be implemented from 16 August 2023) and the UK-wide packaging extended producer responsibility reforms (to be implemented from 2024) are designed to increase the quantity and quality of recyclate, creating a significant economic opportunity and providing greater incentives for domestic reprocessing. Through DRS, we expect a number of collection and sorting centres to be established across Scotland and, as part of extended producer responsibility reforms, funding will go from producers to local authorities to fund effective and efficient collection systems for packaging waste.

We are committed to introducing a Circular Economy Bill later in this current parliamentary session. The Circular Economy Bill will establish the legislative framework to support Scotland's transition to a zero waste and circular economy, significantly increase reuse and recycling rates, and modernise and improve waste and recycling services. Alongside the consultation on proposals for a Circular Economy Bill, we also published a consultation on a waste Route Map which sets out how we intend to deliver our system-wide, comprehensive vision for Scotland's circular economy. It outlines the tangible actions the Scottish Government and others must take to accelerate progress, and the tools we will put in place to enable everyone to play their part.

Boosting Resilience and Adaptation

Flood Risk Management

£42 million continues to be spent annually on reducing flood risk to properties and businesses. A number of flood protection schemes are under construction around Scotland. These include a £90 million scheme at Hawick which will reduce the risk of flooding to over 900 properties.

Updated flood risk management plans for Scotland were approved by Scottish Ministers on 22 December 2021. These plans produced by the Scottish Environment Protection Agency (SEPA) in partnership with responsible authorities, identify flood management actions for over 440 priority communities. This work is split into six year

cycles and covers a range of actions including furthering the understanding of climate change impacts, increasing community resilience, and developing and implementing flood protection scheme. Local Flood Risk Management Plans were published at the end of December 2022 and give further details on how the actions set out in the Management Plans published by SEPA will be implemented.

An additional £150 million was allocated to flooding in 2020 and £31 million of this was allocated to local authorities in 2021-2022 and 2022-2023 to take forward work on flood protection schemes. Consideration is being given to how the remaining £119 million will be allocated. The joint Scottish Government/COSLA (Convention of Scottish Local Authorities) Flood Risk Management Working Group, set up in 2021, is considering funding arrangements for flood risk management actions going forward. This group will consider and make recommendations to Ministers on the funding arrangements in 2023.

Coastal change

The Dynamic Coast 2 project, which assessed coastal erosion and accretion rates along our coastline was published in August 2021. It investigates how already increasing erosion rates along soft coasts might be exacerbated by climate change sea level rise and identifies the assets that could be at risk.

Scottish Ministers and COSLA have agreed a methodology to distribute the new capital budget of £11.7 million for coastal change adaptation to coastal local authorities in 2022-23 and 2023-24 based on evidence from the Dynamic Coast 2 project. Further information can be found at [Dynamic Coast](#). The Scottish Government will continue to work with councils and COSLA to agree a distribution methodology for 2024-25 and 2025-26 budgets.

Transport (Road Adaptation)

The programme of Trunk Road Adaptation Schemes to address the impacts of climate change, improve network efficiency, safety and resilience contributing to a low carbon economy, is progressing well. Over the funding period, Transport Scotland aim to deliver an estimated total investment of £60 million to drive inclusive economic growth and build resilient and sustainable places. Budget has been allocated from 2023-24 and will be utilised accordingly. A programme of projects across Scotland has been commenced with several schemes due to be delivered this financial year.

The fund enables significant value multidisciplinary schemes to be progressed, ranging from specific roads schemes to joint schemes that interface with rail, sea and active travel. Schemes contribute to economic development by improving connectivity, journey time reliability and safety of the road network, which includes a number of geotechnical improvements in complex locations across the north of Scotland.

Over the next three years, the fund will contribute to a number of high-profile schemes across Scotland including, concluding the short term mitigation works at the A83 Rest and Be Thankful (summer 2023), the new Lhanbryde Cycleway as well as the A893 Ullapool Harbour and Shore Street upgrades (summer 2023). In addition, there are planned non-motorised unit improvements on the A9 Raigmore Interchange and working with Highland Council. Trunk road widening of key pinch points on the network will be progressed for the A86, A95 and A889. These schemes will provide safety and active travel improvements.

As well as large notable projects, the fund also allows smaller improvements to be made to the network. These often provide significant betterment to existing outdated provisions such as linking cycle paths / footways, review of Vehicle Restraint Systems, and layby upgrading/provision. This contributes to reliability and road safety for transport of goods, general travel and connectivity across Scotland.

Investing in our Natural Capital

New planting and forest expansion

The Forestry and Land Scotland (FLS) Acquisition Strategy sets out the principles under which FLS will use both the £30 million of Scottish Government low carbon funding and the FLS strategic funds to acquire land in order to grow Scotland's national forests and land.

Utilising these funds in 2022-23, FLS acquired 3,700 hectares (ha) of new land at a total cost of just over £20.9 million. Roughly half of this land will be plantable for trees with the remainder being managed for peatland / habitat restoration and/or ecological/recreational outcomes.

Stepped increases in new planting targets remain with the aim of achieving 18,000 ha planting in 2024-25. Annual targets are: 2022-23 15,000 ha, 2023-24 16,500 ha and 2024-25 18,000 ha.

Scottish Forestry have approved claims for 12,800 ha of new woodland creation in 2022-23, however actual planting achieved will not be confirmed until July 2023. It is anticipated that planting will be below the target due to various factors including capacity and skills challenges in the forestry sector and a drop in the quality of applications. However, within this it is expected that 4,000 ha of native woodland planting will be achieved as set out in the Bute House agreement.

In addition to tackling the supply-side capacity constraints, our work on Forestry Grant Scheme (FGS) Enhancements should increase demand for woodland creation, through increased applications for Trees on Farms and riparian plantings and through improved community engagement leading to faster application processing. Although the impact of these improvements is still to be quantified, they should have a positive effect on the pipeline of future projects.

Peatlands

Peatland restoration continues to be progressed across Scotland through the work of our current delivery partners (NatureScot (Peatland Action), Forestry and Land Scotland, Cairngorms National Park, Loch Lomond and Trossachs National Park and Scottish Water). As per latest figures (until February 2023) during 2022-23, around 7,500 hectares of degraded peatland were put on the road to recovery. This number will be confirmed later in 2023 once the required quality assurance is completed.

In October 2021, a new Scottish Government Peatland Programme was established. The Programme will develop and deliver policies which: protect peatlands, limiting negative impacts from extraction and development; restore degraded peatlands to reduce carbon emissions and support restoration of unique peatland habitats and landscapes; and manage peatlands holistically and sustainably within the context of a changing climate.

Within this new programme, we continue to work with our partners to understand and address the structural, operational and resourcing challenges around significantly upscaling rates of restoration.

Working with delivery partners, we will upscale the rate of peatland restoration in 2023-24. The governance structure of the Peatland Programme has expanded to include a Scientific Advisory Technical Group (led by Rural and Environment Science and Analytical Services Division), Horizontal Functions group, and Peatland Skills, Capacity and Training Group. These groups will work to identify and address barriers to peatland restoration including evidence on techniques and monitoring, contractor capacity and skills gaps. Looking ahead, we will also explore a range of funding models including increased private finance, to accelerate delivery of peatland restoration in Scotland.

In addition to the progress on restoring degraded peatland, we are also working to develop a suite of policies that prevent exploitation of peatland through extraction. The National Planning Framework 4 (NPF4) makes clear that proposals for new commercial peat extraction, including extensions to existing sites, are not supported except in very limited circumstances. In our 2021-22 Programme for Government, we set out our commitment to consult on a ban on the sale of peat-related gardening products as part of our wider commitment to phase out the use of peat in horticulture. The consultation on ending the sale of peat in Scotland (consult.gov.scot) was published on 17 February 2023 and will inform ambitious timescales for banning the sale of peat in Scotland.

We have also developed, in partnership with Environmental Systems, a digital portal. This is designed to help project developers, policy makers and researchers to gather information about the condition of peatland across Scotland and support site selection and design of future peatland restoration projects. It is available here: <https://peatscope.com>

Low Carbon Vacant and Derelict Land Investment Programme

The £50 million Low Carbon Vacant and Derelict Land Investment Programme (VDLIP) is a capital programme to help with tackling persistent vacant and derelict land. It is supporting place based approaches to delivering regeneration and sustainable inclusive growth as part of a 'just transition' to net-zero by 2045. It is a competitive fund open to all 32 local authorities and the Clyde Gateway URC (Urban Regeneration Company). Scotland currently has more than 11,000 hectares of registered vacant and derelict land which offers significant potential to be brought back to positive use to the benefit of communities. This fund supports projects that prioritise such sites and protect our existing natural capital. This ensures that future infrastructure investment goes into areas where it is needed the most, stimulating economic growth; creating jobs; promoting environmental justice and supporting communities to flourish and tackle inequalities.

In September 2021, 10 successful projects were announced to receive a total of £5 million from the first round of funding for financial year 2021-22. In May 2022, a further 10 successful projects were announced representing an additional £5 million of funding and in February 2023, a further 15 successful projects were announced for 2023-24 with a total award value of £9.3 million. Successful projects can be viewed at [Low Carbon Fund: Vacant and Derelict Land Investment Programme projects](#)

We will issue an invitation for further applications for round 4 of the fund for the financial year 2024-25 in April 2023. The two-stage application process will take place over the summer and autumn with successful projects being announced in early 2024.

Driving inclusive economic growth

Creating World Class Digital System

Digital Strategy

The Digital Strategy is committed to strengthening digital public services through investment in digital transformation. The use of common platforms, Payments and Identity platforms, and investment in Cloud technology will drive efficiencies across the public sector.

Digital Payments Programme

The Payments programme sits within a recently created division within the Digital Directorate, Cloud and Digital Services Division. This division brings together three programmes (Digital Identity, Scottish Government Payments and Scottish Government Cloud Platform) that are collectively focussed on achieving one of the main strategic outcomes within the 2021 Digital Strategy; *build a suite of common platforms and component technologies* to support increased efficiency in the delivery of public services across the public sector in Scotland.

Following significant technical design and development, testing, and approvals, in December 2021, the Scottish Government Payments Service, successfully processed its very first, one-off payment to recipients of a discretionary fund administered by Independent Living Fund Scotland (ILF Scotland) our first beta partner.

In June 2022, the Minimum Viable Service (MVS) was launched and officially moved the programme into a private beta phase. This beta launch mode saw ILF Scotland process the first of many weekly, regular BACS payment via the Scottish Government payments service. Starting small and allowing our service to scale over time, this regular payment run will consist of weekly payments to between 30 to 50 citizens. Ongoing monitoring, iteration and service improvement will continue as we progress towards the end of beta (April 2024)

The successful private beta launch follows a period of significant technical development and testing, undertaking the necessary assurance assessments, an external cyber security assessment and further rounds of inclusive testing with stakeholders and users.

Since MVS launch in June 2022, the payments service has processed 1,641 payments over 42 consecutive weeks (batches) to the value of £3 million and deployed 11 releases.

From April 2023 onwards, the Student Award Agency Scotland (SAAS) are confirmed as beta partner 2. With development underway and plans for a test student payment scheduled in June 2023 and plans for transition of payments throughout 2023-24 to be agreed.

Platform and Service development will continue throughout 2023-24 with technology partner Scott Logic as the programme continues to build functions and features in line with the technical and product roadmap. Ongoing development of the service management support function will continue as well as build internal capacity and capability within the

Scottish Government. Digital will enable the effective transition of platform ownership from technology partner planned for March 2024.

Digital Identity Programme

The Digital Identity Programme will deliver a digital identity service for users to support access to online public services in Scotland. It continues to work with its partner, Scott Logic, to develop and deliver the digital identity service. The first live trial version (private beta) of the service was launched on 28 February 2023 in partnership with Disclosure Scotland. Users are using the digital identity service to access the results of their Protection of Vulnerable Groups checks. Following the private beta launch, further developments planned for later this year include adding other methods for two-factor authentication and identity verification and work to add the attribute store. The Scottish Government also plan to start on-boarding more public service customers during 2023 onwards.

Cloud First Programme

The Cloud First Programme enables the Scottish public sector to realise the benefits of cloud services by accelerating the adoption of modern cloud technology through the provision of a Scottish Government Cloud Platform Service with a secure architecture in alignment with National Cyber Security Centre principles as well as associated learning and a cloud community. The service will offer Amazon Web Services (AWS) and Azure environments and associated billing, security, cost efficiency and carbon monitoring services for Scottish Government core services and agencies hosting requirements. The programme is currently providing hosting and security services to Digital Strategy priorities Digital Payments & Digital Identity. The programme has also completed the migration from on-premises hosting of existing Digital Connectivity R100 and Digital Data GISaT to the Scottish Government Cloud Platform.

Progress made within the last year in relation to driving inclusive economic growth included the use of cloud services which will bring cost savings, especially when using hyperscale public cloud. The programme secured agreements with the hyperscale cloud providers which allowed for significant discounts. This included the AWS One Government Value Agreement (OGVA) - Crown Commercial Service and AWS which launched a new Memorandum of Understanding (MoU) for cloud computing services. The Azure MoU - Crown Commercial Service and Microsoft Azure agreed new pricing arrangement for public sector.

Each agreement has its own pricing and discount structures (22% AWS, 11% Azure of an organisations hosting bill), along with certain caveats, such as minimum spend, tiered discounts and minimum contract commitments. Initial cost benefit analysis case study was completed indicating favourable outcomes for customers using the Scottish Government Cloud Platform. An Invitation to Tender (ITT) was issued for a support supplier for 12 months whilst the permanent Scottish Government operational team is recruited.

Key achievements within the last year included the completed Release 1.0 (December 2022) – minimum viable product (current offer) – AWS (beta phase) available for live workloads. Azure (alpha phase) – for agreed pilot customers only (completed). AWS and Azure contracts were secured for the environments and Ministerial approval was given for the full business case for the establishment of the Scottish Government Cloud Platform Service. The Cloud Community continued to grow to a current 375 individual members

from across Scotland's public sector representing over 50 organisations/services and in turn this has supported the demand management work. A series of demand management exercise were completed to ascertain what demand is available across the Scottish public sector and 74% of survey responses wanted to know more about the service.

Activity planned for the year ahead include Release 2.0 (May 2023) – AWS live with strategic architecture implemented, including improved and more automated operations; Azure (beta phase) – available for pilot customers with live workloads; Release 3.0 (August 2023) – AWS continues to be live, Azure is live and a new Cloud Platform Adoption Advisory Service and Cloud optimisation service are live; establishment of the permanent Scottish Government operational team; and to Confirm and Onboard an initial annual 20 workloads to the Scottish Government Cloud Platform.

CivTech

CivTech made significant progress in 2022-23. In May 2022, CivTech's 2021-26 Full Business Case (FBC) was approved by Ministers. This outlined a significant expansion of the programme, including an expanded Accelerator system in addition to a number of additional activities. The FBC includes up to £46 million contract funding for the development of innovative products and services for the public sector, with the majority of that funding going to ambitious Small and medium-sized enterprises (SMEs) with a further £13.5 million for the funding of CivTech operations.

The FBC envisaged a significant scaling of the CivTech team in 2022-23, and despite the recruitment constraints limiting this growth, CivTech delivered on all of its planned outputs for 2022-23. 20 Challenges were launched through CivTechs 7 and 8 [starting in June and October respectively]; the GovTech Cluster was brought near to launch with the identification and procurement of a 'cluster driver organisation'; the Challenge Sponsor support system was successfully launched on CivTech 7, and the Business Growth System was expanded to include a post-Accelerator Stage. Major strategic partnerships were launched, including Innovate for Nature, the first of CivTech's Innovate for... initiatives which bring together organisations in Scotland with common themes to work in partnership through the CivTech Innovation Flow; and a robust benefits realisation system reached its second stage of development.

In 2022-23, £5 million contract funding was awarded to CivTech companies, representing a significant increase over previous years. While company Key Performance Indicators (KPIs) for 2022-23 are currently being assembled and therefore cannot be reported at this point, reports clearly indicate that the growth in businesses, jobs created, societal benefits and direct financial benefits to the exchequer from CivTech Alumni companies have continued to grow.

While the spend and recruitment controls in place may constrain certain elements of the CivTech programme in 2023-24, delivery levels will continue to be maximised within those constraints. CivTech 9 will launch in July 2023 with 14–15 Challenges and up to £10 million contract funding available for solutions developed through CivTech.

AI Strategy Delivery Programme

The Scottish Artificial intelligence (AI) Register (<https://scottishairegister.com/>) launched in March 2023. It will make transparent the development and use of AI in the public sector and offer the public a simple and effective platform to have a say in how AI is used to

make decisions and deliver public services. It is designed to help public sector organisations starting out on their AI journey by providing them with structure and guidance to adopt a consistent, ethical and open approach to developing and using AI. The Register includes a public-facing website providing detailed information about AI systems being used or developed in the public sector. This includes information related to the use of data (including personal data when applicable), how the system works, accountability, impact assessment, risk management and human oversight. The Register aims to track the entire life cycle of AI systems, from conception and development to use and retirement.

Throughout the last year we have continued to develop the analytical workbench (AWB) platform. We anticipate the full production version of the AWB to be available to users by the end of spring 2023. Built in the Edinburgh International Data Facility (EIDF), the AWB is creating a capability for the public sector that allows rapid adoption and development of new technologies, access to high-performance compute and the ability to collaborate across organisational boundaries to share resources, code, and ideas. The workbench is a safe, secure, permission-controlled environment that enables analysts to collaborate on data projects across organisational boundaries. The workbench provides easy access to a wide range of common, open-source analytical tools and the platform has the power needed for complex analysis with large datasets. The project has delivered virtual machines suitable for use with differing types of data, a choice of operating systems, easy to use mechanisms to get data securely in and out of the workbench and it also provides facilities for hosting interactive content.

Emergency Services Mobile Communication Programme (ESMCP)

The UK Home Office led programme is undertaking a refresh of the Business Case and Financial Model in April 2023 in order to seek reapproval from the UK Cabinet Office and His Majesty's Treasury, Major Projects Review Group to enter the next phase of delivery.

Going forward, a refreshed feasibility business case for the wider programme and a benefits realisation methodology reporting tool will be developed to highlight Scotland specific delivery. The activation of EE sites being built for Emergency Services Network (ESN) will provide early commercial access for local communities and businesses who otherwise have not had mobile telephony capability, thus playing a part in making the rural economy more attractive to SMEs.

Investment in ESN will mean improvements to 4G network coverage across Scotland. ESN will also enable greater access to the EE network and will complement the Scottish Government's Scottish 4G Infill (S4GI) Programme. Where users have access to other network suppliers, ESN sites will enable wider access to emergency 999 call in some of the most remote and rural parts of Scotland. The emergency services will take priority over all other network traffic even at peak times in busy urban locations. This will mean the emergency services and other first responders will have access to mission critical communications for operations and in addition, use the same secure and prioritised platform for sharing vital data information and expertise quickly and securely from the frontline when it is needed most.

The Home Office is working with their suppliers and their design teams to develop all new technology hardware to incorporate energy reducing measures, innovative product designs, minimise waste, reduce obsolescence and maximise value for money. For

example, the programme is working with its suppliers to ensure technological hardware is compliant with current and future regulatory environmental requirements where appropriate. Going forward, activation of ESN sites will be compliant to environmental regulations and local planning controls. The availability of extended commercial mobile telephone network will also facilitate greater remote communications capability for local communities for personal and business purposes. Planning for solutions to be used for ESN will also continue to exploit the most efficient solutions whilst being developed to ensure the operational capabilities of the emergency services are not compromised in future use of ESN.

Strengthening Connectivity

Reaching 100% (R100)

Our Reaching 100% (R100) Programme, which is over £600 million investment in digital infrastructure, continues to deliver at pace across Scotland. In 2022-23 we extended the investment and reach of the programme which will enable us to deliver to more premises in some of the most rural parts of Scotland.

R100 has three main components: the R100 contracts; R100 Scottish Broadband Voucher Scheme (R100 SBVS); and commercial build.

The vast majority of R100 contract build will be full fibre, capable of delivering download speeds of 1,000 megabits per second (Mbps) – over 30 times faster than our superfast commitment of 30 Mbps. Full fibre is the most future-proofed broadband technology available so this outcome will put rural Scotland ahead of the curve, even compared to many urban areas. However, full fibre (otherwise known as FTTP (Fibre to the Premises)) is more resource intensive than previous Fibre to the Cabinet (FTTC) broadband deployments, which used existing copper cables to connect into people's homes, and therefore takes longer to deploy.

By the end of February 2023, the three R100 contracts for North, South and Central had delivered over 20,000 contracted premises and an additional 5,200 non-contracted "overspill" premises (as at 28 February 2023). Volumes of overspill premises delivered continue to be significantly higher than projected at 25.7% of completed build against an average 8.8% projection. Greater than expected volumes of overspill premises benefits the Scottish Government by increasing Gigabit coverage.

R100 contract changes were agreed with Openreach for the R100 North and South contracts in summer 2022. This resulted in an additional 2,637 premises being added to the R100 North and South contracts. This was announced on 19 August 2022.

The programme delivered on time to lay 16 subsea fibre optic cables by the end of 2022. These cables will enhance Scotland's digital infrastructure resilience and connect 15 Scottish islands.

Since its launch in September 2020, the R100 Scottish Broadband Voucher Scheme has delivered almost 3,000 connections to voucher eligible properties. There are around another 650 connections either in build or going through the approvals process.

Looking forward into 2023-24, contract deployment will continue to deliver across the length and breadth of Scotland. We continue to explore opportunities to further extend the reach of the R100 contract build.

The infrastructure being delivered through the R100 programme will underpin a range of telecoms services, including broadband speeds that go way beyond the original superfast commitment. These engineering works will take time but will ensure that future-proofed and resilient broadband infrastructure reaches some of the most rural areas of Scotland.

S4GI

Through the Scottish 4G Infill (S4GI) programme, the Scottish Government is investing £28.75 million to deliver future-proofed 4G infrastructure and services to 55 so-called mobile “notspots”, providing connectivity in rural and island areas from the Scottish Borders to Orkney and Shetland.

The programme continues to deliver at pace and is expected to complete with 4G service activation across all masts by June 2023.

The programme has been very successful in delivering digital connectivity to enhance the lives of individuals and businesses across rural and island communities in Scotland. It is improving everyday life for these communities, directly supporting wider plans for local tourism and enabling residents to access digital services and stay in touch with families and friends.

Transport (STPR2)

In 2019, Transport Scotland, commenced the second Strategic Transport Projects Review (STPR2), the first review having been published in 2008. Its aim is to help deliver the vision, priorities and outcomes that are set out in the second National Transport Strategy. This review of the strategic transport network’s performance will inform transport investment in Scotland for the next 20 years (2022-2042) by providing evidence-based recommendations on which Scottish Ministers can base future transport investment decisions.

STPR2 considers the transport needs of Scotland’s people and communities, and examines active travel (walking, wheeling, cycling), bus, ferry, rail and motorways and trunk roads as well as passenger and freight access to major ports and airports. These needs are reviewed from national and regional perspectives to reflect their different geographies, travel patterns and demands.

STPR2 provides an overview of transport investment, mainly infrastructure and other behavioural change recommendations, that are required to deliver the National Transport Strategy priorities and objectives of the Review.

The outcomes from STPR2 will: Help make Scotland more accessible for residents, visitors and businesses; Create better connectivity with sustainable, smart and cleaner transport options; and highlight the vital contribution that transport investment can play in enabling and sustaining Scotland’s economic growth.

The final recommendations and suite of reports were published in December 2022 and its Delivery Plan expected to be published in 2023.

Roads

The Scottish Government is committed to completing the dualling of the A9 between Perth and Inverness, one of the biggest transport infrastructure projects in Scotland's history. We have already invested over £430 million delivering the programme. Work is continuing across the A9, with road users already benefiting from the dualled stretch between Kincaig and Dalraddy (operational September 2017) and between Luncarty and the Pass of Birnam, which opened fully to traffic in August 2021.

The section between Tomatin and Moy is in preparation for commencement of a new procurement, with the aim of achieving a contract award before the end of 2023. In 2022-23, we continued to progress design work and the statutory processes for the remaining eight schemes, as well as assessing procurement options. This is a complex exercise which is considering a pipeline of work in a form that can be delivered by the industry, supports the economic recovery post COVID-19 and minimises disruption to users of this lifeline route

When completed, the dualling programme will bring many benefits to local communities, businesses, visitors and road users living, travelling and working along the corridor including reduced journey times, improved journey time reliability, improved road safety and opportunities for active travel.

The Scottish Government is also committed to improving the A96 corridor and will take forward an enhancements programme that improves connectivity between surrounding towns, tackles congestion and addresses safety and environmental issues. The current plan is to fully dual the A96 route between Inverness and Aberdeen; however, we have agreed to conduct a transparent, evidence-based review of the programme which is well underway. We published the Public Consultation and Initial Appraisal reports on the Corridor Review on 22 December 2022 and are now pushing forward with the next phase of further detailed work to inform the remaining stages of the Review. These include a robust appraisal of the 16 retained options alongside a Climate Compatibility Assessment, with outcomes expected to be announced in during 2023 for final public consultation, before a final decision can be reached.

The A96 Inverness to Nairn (including Nairn Bypass) scheme is separate from the wider A96 review process which is currently being undertaken. We continue to progress the preparation stages of this scheme, which runs from Inverness to Hardmuir, to enable the completion of the statutory process.

The Scottish Government is committed to an infrastructure solution to address the A83 Rest and Be Thankful landslip risks. Delivery of a permanent and resilient solution is a priority, and we will continue to seek ways to achieve that as quickly as possible, noting all of the options require complex civil engineering. We will continue to take forward the necessary design and assessment work to identify a preferred option by spring 2023. These options range from traditional roads with localised structural protection, to tunnel and viaduct solutions. The range of engineering structures reflects the challenge of building resilience into the route.

In recognition of the urgency to find a solution we are also progressing work to look at a medium-term resilient route through Glen Croe. Proposals for a medium term resilient route were announced on 23 December 2022. A detailed programme to implement these

improvements is in development, with works anticipated to be carried out on a phased basis starting later in 2023.

We also continue to take forward the detailed development and assessment of the preferred option for improving the A82 between Tarbet and Inverarnan.

Ferries

The Scottish Government will invest at least £700 million in ferries infrastructure over the five years of the Infrastructure Investment Plan (IIP) and this investment will deliver strengthened lifeline ferry services for our island and remote communities and businesses. In 2022-23, this commitment enabled the deployment of the purchased vessel MV Loch Frisa and charter of the MV Arrow; progressed major development and investment in key harbours such as Lochmaddy, Uig and Troon and completion of infrastructure works including a new terminal building at Tarbert (Harris), delivered good progress on the two new Islay vessel builds and enabled a further contract to be awarded for two new additional major vessels for the Little Minch routes. All vessel and harbour projects listed in the IIP are now underway as part of the long-term plan.

In 2023-24, we will continue monitoring and reporting key milestones in the progress of the six major vessels currently under construction. We will continue engagement with CMAL and Ferguson Marine Port Glasgow to confirm delivery dates for Hull 801 (MV Glen Sannox) in 2023-24 and the future programme for delivery of Hull 802. We expect to see completion of key work elements on existing port projects and to see contracts awarded for port improvements on the Islay routes. Work will continue on the business cases for the Small Vessel Replacement Programme and other vessel replacement projects. In addition, we will continue work on the Islands Connectivity Plan, including consultation on the long-term vessels and ports plan.

Inclusion and Growth

City Region / Growth Deals

City Region and Growth Deals are a key tool for the Scottish Government in driving inclusive growth throughout Scotland. This is achieved by working together with local partners to identify and support projects that target and address unique regional needs and concerns. We are committed to implementing Deals covering all of Scotland, allocating £1.9 billion to the programme.

City Region and Growth Deals continue to fund a diverse range of successful projects. Some of the most notable developments in the past year include:

Glasgow City Region Deal

The main span of the new pedestrian and cyclist bridge linking Sighthill with Glasgow City Centre was installed over the M8 and is now open to the public. This new bridge will form an active travel route between Sighthill and the city centre and is part of the £250 million regeneration of Sighthill, the biggest such project in the UK outside of London. The new bridge will also be part of a wider active travel network connecting Sighthill, the city centre and neighbouring communities in North Glasgow.

The £215.7 million City Deal and North Lanarkshire Council funded Pan-Lanarkshire Orbital Transport Corridor Project, focuses on improving orbital and Pan-Lanarkshire connections across the City Region with the aim of realising opportunities for commercial and housing development at the Ravenscraig site, with construction works underway.

The Inchgreen Project in Inverclyde, providing utilities and works at the Inchgreen deep-water quay and the surrounding industrial land, is underway and looking to be completed by the proposed date of December 2023.

Aberdeen City Region Deal

The City Region Deal's projects supports Aberdeen in its ambition to be an energy transition capital. Significant investment in innovation, digital connectivity and infrastructure is helping to diversify and transform the region's economy.

The Net Zero Technology Centre (NZTC) is developing and deploying new technologies to reduce energy emissions and to support an integrated net zero energy system. It has screened over 1,800 technologies, resulting in more than 175 field trials and 33 commercialised technologies, since opening in February 2017.

Another significant area of NZTC's focus is on supporting energy startups through its TechX Clean Energy Accelerator - 12 more startups joined the intensive 15-week programme in February 2023, the previous 45 participants collectively having generated more than £10 million in revenue.

Inverness and Highland City-Region Deal

Since the Deal was signed, 211 affordable homes have been constructed with planning approval for 380 units to date - 11 assisted living Fit Homes are completed, with a further 18 nearing completion. The University of the Highlands and Islands Centre for Health & Life Sciences completed construction in March 2023. The Inverness Castle project also entered delivery and is also progressing on time with construction on site beginning in April 2022 and expected to complete in 2025.

Regional Partners have estimated that the Deal will have the following economic benefits and will: help to rebalance the population with the aim of retaining and/or attracting an additional 1,500 young people in the 18-29 age group over the initial 10 year Deal period; create an additional 1,125 direct jobs as a result of City-Region Deal projects with a further 2,200 additional jobs in the construction sector; help to up-skill the labour market and contribute to moving towards a high skilled high wage economy, improve productivity and real wages which are estimated to increase by an additional 1.3 per cent and bring an additional £100 million per annum to the regional economy; create 6,000 new houses over 20 years of which 1,600 will be affordable homes; and deliver private sector leverage from house building and through opening up land for commercial development, will see an additional return over a 20 year period of around £800 million being invested in the economy of the city and region.

As part of the Inverness and Highland City-Region Deal, we are progressing plans for a single carriageway road, including enhanced facilities for non-motorised users, connecting Inshes and Smithton along with the grade separation of the A9/A82 Longman Roundabout. Activity planned for the year ahead includes continuing the detailed development and assessment work of the preferred option for the A9/A82 Longman Junction scheme along

with continuing to progress the A9/A96 Inshes to Smithton scheme through the statutory process.

Edinburgh and South East Scotland City Region Deal

Good progress has been made on business case development and delivery for projects within the Deal since it was signed. Within the Data Driven Innovation theme, the Bayes Centre and National Robotarium are complete, with the Edinburgh Futures Institute aiming to open to students and the Usher Institute on track to complete in 2023. Business units have been delivered in Fife and the Central Borders to ensure that businesses and communities are fully able to engage in new opportunities. And site clearance for the new Dunard Centre, a concert hall and performance venue being delivered under the Culture theme, began in February 2023.

The City Region's Joint Committee have approved the proposed scheme at Sheriffhall Roundabout, which will provide a grade-separated junction designed to relieve traffic congestion and introduce new active travel facilities for walking, wheeling and cycling. We have progressed the proposed improvements at Sheriffhall through the statutory process with a Public Local Inquiry held between 30 January and 8 February 2023. The Public Local Inquiry Reporter is now considering all evidence presented during the inquiry along with objections received before making recommendations to the Scottish Ministers for consideration.

Stirling and Clackmannanshire City Region Deal

Work has continued to deliver the projects outlined in the signed Deal, including the first phase of Scotland's International Environment Centre at the University of Stirling and the Walk, Cycle Live Stirling active travel routes, with further progress anticipated in the coming year.

The Deal forecasts that 5,000 jobs will be created and £640 million of private investment will be unlocked.

Tay Cities Region Deal

Significant progress has been made since the Deal was signed with business case approval for over £160 million of the total capital investment, of which £78 million had been drawn down by regional partners (to end of 2022).

Work is continuing on projects, including those at the Universities of Dundee and St Andrews, the James Hutton Institute and Pitlochry Festival Theatre, with progress expected to include the opening of Perth Museum, which will host the Stone of Destiny when it returns to the region.

Regional partners have developed a Benefits Realisation Plan to demonstrate the impact of the Deal, including progress towards inclusive growth and net zero, and will fully implement reporting on the benefits of the Deal this year. To the end of reporting year for the Deal at September 2022, 677 jobs have been created and £123 million of investment in the region secured.

Ayrshire Growth Deal

The Scottish Government is a full partner in the £251.5 million Ayrshire Growth Deal, which will see transformational investment in projects across Ayrshire to support long-term

inclusive growth. The Deal is working with Scottish Government to implement a holistic approach to decarbonising projects to ensure that net zero commitments can be achieved. Ayrshire is piloting this for the wider Deals programme.

It is estimated that the Deal will create 7,000 new jobs and unlock an additional £300 million from the private sector. Scottish Government investment includes £40 million for an Economic Infrastructure Programme which includes innovative projects around engineering, manufacturing and digital automation, £30 million for an Aerospace and Space Programme and £18.5 million for tourism and regeneration.

The development of a fully integrated Enterprise and Innovation Hub which will establish an entrepreneurial ecosystem to stimulate innovative business practices between new and established businesses. This ecosystem is intended to encourage the development of new digital and cyber security products and services, responding in particular to the needs of the energy, health and space/aerospace sectors.

HALO Kilmarnock was awarded the Best Regeneration Project at the 2022 Scottish Property Awards. The award in recognition of 'HALO Enterprise and Innovation Centre transforming a deprived urban site through the delivery of a mixed-use property development which has environmentally improved the local area while generating a positive economic and social impact.

Borderlands Growth Deal

Following Deal signing in March 2021, officials continue to work with partners on the development of business cases that will deliver economic inclusive growth across the Borderlands area.

Recognising the economic and social ties between the south of Scotland and north of England and the desire of regional partners to work together on shared challenges and opportunities, the Borderlands Deal is the first cross-border Deal, delivering across five local authority areas with two in the South of Scotland. The Deal's ambition is to unlock the region's potential as an economic hub to encourage new business and job opportunities under the priority themes of Enabling Infrastructure, Improving Places, Supporting Business, Innovation and Skills, and Encouraging Green Growth.

It is estimated that the Deal will benefit 1.1 million residents, deliver an estimated additional 5,500 job opportunities, attract more than four million extra tourists to the area and improve mobile and digital connections, and unlock investment in towns across the area and generate around £1.1 billion of additional GVA (Gross Value Added) for the Borderland's economy.

Moray Growth Deal

Since the Full Deal agreement was signed in December 2021, the Digital Health project (which aims to provide a rural centre of excellence for digital health care innovation) and the bus revolution project (provision of a low-carbon, demand-responsive bus service to improve public transport connectivity in Moray) have entered delivery. Officials continue to work with regional partners to further develop the detail of the remaining Deal projects and to maximise inclusive growth opportunities.

As well as creating high-quality jobs and opportunities across Moray, the Deal will address key growth challenges, including keeping young people in the area to live and work, and addressing gender imbalances in key sectors of the economy to unlock future potential.

The vision for the Deal is built on four pillars; Connections; Business Support, Skills and Employability; Moray the Place/Brand; and Moray's Priority Business Sectors that will unlock investment and drive inclusive and sustainable economic growth across the area.

Regional Partners estimate that economic benefits arising from the Deal will include: directly and indirectly creating over 3,500 jobs associated with the economic benefits accrued from growth deal projects (of these, 450 jobs will be directly created as part of growth deal project delivery); attracting an additional 50,000 tourists; constructing over 300 affordable new homes; supporting 450 businesses to scale up to increase the value of the Moray economy by £82 million; creating new and improve existing facilities for businesses; and creating an enhanced culture and leisure offering for local people to make Moray a more attractive place to live and work.

Argyll and Bute Growth Deal

The Heads of Terms agreement was signed in February 2021 and officials continues to work with the partners to further develop the detail of the projects to be supported through the deal and to maximise inclusive growth opportunities.

The Deal's economic development benefits and targets will be confirmed at the full deal stage. The Deal has however indicated that investment will be targeted across three key drivers: connecting high value business sectors with national and international business markets; attracting additional skills, training and learning opportunities; new residents, visitors and businesses; and growing by doing more of what works; and making more of Argyll and Bute's natural and built resources.

Islands Growth Deal

Since the Full Deal agreement was signed in January 2023, the Islands Centre for Net-Zero project has been approved and officials continue to work with Islands Deal partners to further develop the detail of the remaining Deal projects to maximise inclusive growth opportunities.

The Deal has three broad themes: leading the way to a low carbon future, which will contribute to net-zero commitments by supporting energy transition, delivering port infrastructure, and piloting decarbonisation in an island context; supporting growth and future industries, which will see the development of significant island tourism and cultural assets, and innovation in key Space, Food and Drink and Creative Industries sectors; and building thriving and sustainable communities, which will see the expansion of existing learning facilities, sustainable housing provision, and investment in a skills programme targeting key sectors including decarbonisation and renewable energy.

It sets out a number of collaborative and Island specific proposals designed to address the islands' demographic challenges, as well as supporting business innovation and the move towards net zero.

Regional partners anticipate that the Deal is likely to create up to 1,300 sustainable jobs across the three island groups aimed at retaining and attracting young talent.

Falkirk Growth Deal

Outline business cases are in development for a range of projects to support innovative industry and great places in Falkirk and Grangemouth. This work is expected to progress in the summer of 2023 towards full Deal signing by the end of 2023-24.

Falkirk partners predict that the proposed interventions will generate around £802 million of GVA (Gross Value Added) uplift, approximately deliver an additional 2,000 jobs in the region and attract in excess of £1 billion of private investment.

Additional Transport links alongside City Region Deals

We are progressing a range of infrastructure improvement projects related to the City Deals. In 2023-24, we will continue to progress the A90/A937 Laurencekirk Junction Improvement through the statutory process. The Cross Tay Link Road is the central element of the Perth Transport Futures Project and the biggest infrastructure project ever undertaken by Perth and Kinross Council. It involves the construction of a new 3-span bridge over the River Tay and a six kilometre stretch of new carriageway linking the A9 and the A93 to Blairgowrie and the A94. As at the end of 2022-23, Transport Scotland had contributed £25 million towards the project with a final £15 million earmarked within the 2023-24 budget.

Stornoway Growth Accelerator

In March 2022, the contract for the Stornoway deep water terminal was awarded and since then construction has been underway. The project has been progressing on schedule and on budget and is due to complete in December 2023. Parallel work is ongoing to ensure maximisation of benefits and implementation of any associated island infrastructure developments required to respond to the increased economic activity expected from the new terminal.

Activity planned for the year ahead will focus on delivery of the contract, with the works due to conclude by December 2023. There will be regular reporting to Ministers and work will also be undertaken to ensure maximisation of benefits and implementation of any associated island infrastructure developments required to respond to the increased economic activity expected from the new terminal.

The project has been progressing as planned aside from the discovery of the wreck of SS Portugal which needs to be removed from the seabed as it is a navigational hazard. Stornoway Port Authority's original plan was to cut up the wreck underwater but this approach was abandoned. There are now also environmental concerns about moving the wreck and the Marine Scotland Licensing and Operations Team are currently examining possible viable approaches.

National Islands Plan – Islands Programme

Support for island economy sectors is mainstreamed and so sectoral support lies across many areas - all of which contribute to the Wellbeing Economy. Additionally, the Islands Programme is investing £25.8 million of Infrastructure Investment Plan capital funding over the period of this current Parliament to ensure delivery of the National Islands Plan.

This investment supports projects that encourage population growth and stem population decline; deliver on our net-zero ambitions in a way that no-one is left behind; and support

a green economic recovery from the ongoing impacts of brexit, the COVID-19 pandemic and the socio-economic impacts of the war in Ukraine.

The 2022-23 Islands Programme delivered a £4.45 million funding package to help improve infrastructure on Scotland's islands. This capital investment supported all six island local authorities to fund the improvement, creation or safeguarding of locally developed infrastructure projects that align with the Strategic Objectives of the National Islands Plan.

In 2022-23, as agreed with COSLA (Convention of Scottish Local Authorities), the Islands Programme was run as competitive bid model, with the six local authorities as the lead applicants. Fifteen applications were received in total and individually ranged from £72,000 to £1,500,000. Eleven projects were approved and each of these received a share of the £4.45 million investment.

The totality of investment was spread across 31 islands. Successful applications included projects directly supporting population retention and growth, new facilities to deliver services helping to alleviate child poverty, innovative circular economy solutions, measures to address climate change impacts, development of digital and community hubs, management of tourism impacts, iconic heritage projects, and support for key local services.

In 2023-24, £4 million has been committed to delivery of the Islands Programme. This is being delivered in partnership with local authorities via a streamlined competitive bid model to ensure delivery of the National Islands Plan, by supporting a range of areas, including tourism, infrastructure, innovation, energy transition and skills. The islands Programme was launched on 31 January 2023, with a deadline of 21 April 2023 to allow awards to be made in early summer of 2023.

Boosting Competitiveness

Cairngorm Mountain

Following a range of technical, weather and COVID-19 related challenges which led to the overall project timescale being extended, the funicular reinstatement works were completed in November 2022. A new control system was also installed, and Department of Transport approval was obtained in January 2023, and the funicular immediately returned to service. Additional investment from Highlands and Islands Enterprise (HIE) in a new play park, camper van facility and other improvements to the resort, enabled it to continue to attract visitors whilst the funicular was not running. HIE also supported a major refurbishment of the Ptarmigan building into which funicular passengers alight at the top of the mountain. The Cairngorm masterplan was published in June 2021 and sets out a long term vision and key strategies for the development of Cairngorm estate to benefit the wider economy, protect and enhance the environment and create new educational opportunities amongst other outcomes. A planning application to introduce mountain biking, a masterplan strategy, was recently approved by the national park authority.

Visitors are once again able to easily access the top of the mountain, whether to enjoy winter snowsports or simply experience the mountain environment across the seasons. Delivery of the masterplan will also get underway with the development of mountain biking

the first planned investment. HIE have progressed the planned car park upgrade and will be working with the Cairngorms National Park Authority on active travel plans, visitor management from the Ptarmigan building, decarbonisation opportunities, scoping options for replacement of the Day Lodge, ongoing habitat management and restoration, and improved uplift.

Building resilient and sustainable places

Better Local Places

Digital Planning

The delivery phase of the programme to Transform Digital Planning Services is underway. This includes a replacement system for applications and payments, a data strategy and tools for community engagement including 'Placebuilder' which is available for communities and local authorities to use to develop local level plans. We have now developed a first version of new single payment system for our current live service. We have progressed initial development work on the Planning Gateway and Smart Applications systems to improve payment, document submission, and notification for early adopters. This will deliver substantial efficiencies and enhance user experience. The roll out of the Placebuilder is also underway with licences now available for interested parties.

Land reform

The Scottish Land Fund enables community groups to purchase assets within their own community to support their aspirations for their local community. Whether it is bringing an unused asset back into productive use or ensuring that an existing one continues to be used and developed further, communities taking control of local assets helps to build local community wealth and wellbeing and contributes to the wider economic benefit as a result. Since the current fund opened in 2021, it has awarded a total of £12.8 million. The fund continued to have a budget of £10 million for the year 2022-23 and this will double to £20 million by 2026.

Regeneration

We are delivering the Place-Based Investment Programme backed with an initial £325 million capital over 5 years from 2021-22. The programme aims to make sure that all local investments understand the place in which they are made, how their contribution will help deliver the changes needed, how these will enable people to live well locally and how local communities shape their future.

The programme includes funding that is allocated directly to Scotland's local authorities to accelerate ambitions for place, 20-minute neighbourhoods, town centre action, community led regeneration and community wealth building. Local authorities received £38 million in 2021-22 and a further £33 million for 2022-23. It also includes continued delivery of the Regeneration Capital Grant Fund and support for Clyde Gateway over the 5-year period.

The Regeneration Capital Grant Fund (RCGF) delivered in partnership with COSLA (Convention of Scottish Local Authorities) and local government, supports locally developed place based regeneration projects that involve local communities. This is helping to tackle inequalities and support a wellbeing economy in deprived, disadvantaged and fragile remote communities across Scotland. The RCGF plays a key enabling role in terms of delivering overall ambitions for place, community led regeneration, community wealth building, town centre revitalisation, and 20 minute neighbourhoods.

Since 2014, the RCGF has supported over 220 projects across Scotland. 48 projects in disadvantaged and fragile rural communities received offers of grant for more than £50 million from the Regeneration Capital Grant Fund across 2021-22 and 2022-2023.

Further investment of £25 million is planned for 2023-24 and 23 projects have received offers of grant.

Suitable, Warm, Affordable Homes

Affordable Housing

We are moving forward with the actions and commitments set out in Housing to 2040. Our aim is to deliver high quality, energy efficient, zero carbon affordable housing with access to outdoor space, sustainable transport links, digital connectivity and community services. Having delivered the previous 50,000 affordable homes target one year later than planned due to delays caused by the COVID-19 pandemic and global issues around supply and labour which affected the pace at which homes could be delivered, we have now started to deliver against the 110,000 affordable homes target. To December 2022, a total of 7,493 homes have now been delivered, of which 6,172 (82%) are homes for social rent.

We are committed to delivering 110,000 affordable homes by 2032 of which at least 70% will be available for social rent and 10% will be in our remote, rural island communities. We are making £3.5 billion available in this Parliamentary term towards the delivery of more affordable and social homes, helping to create great places and continuing to ensure the right types of homes in the right places to support Local Housing Strategies and regional development priorities.

Delivering this ambitious 110,000 affordable homes target would support a total investment package of around £18 billion (in 2022 prices) and up to 15,000 full-time equivalent jobs each year in the construction and related sectors in the Scottish economy.

High Quality Social Infrastructure

National Treatment Centres

Since the Infrastructure Investment Plan was published, the investment required to deliver the National Treatment Centres (NTC) has increased to more than £600 million and the network of NTCs has expanded to 10 in total. As set out in the NHS Recovery Plan, published in August 2021, the NTC programme is the single biggest increase in planned care capacity ever created in NHS Scotland.

Three Centres have already opened; the Golden Jubilee Eye Centre in Clydebank opened in December 2020, the NTC Fife in Kirkcaldy opened in March 2023 and the NTC Highland in Inverness opened in April 2023. In addition to these three operational centres, there are two more under construction; the Phase 2 expansion of NHS Golden Jubilee and the NTC Forth Valley, which are both due to open by the end of 2023. The network of NTCs will ultimately include centres in Grampian, Tayside, Ayrshire, Lanarkshire and Lothian, and the replacement of the Edinburgh Eye Pavilion. The business cases for these Centres are currently in development. Once operational, the NTCs will deliver ring-fenced and additional capacity for elective surgeries and procedures.

The Golden Jubilee Eye Centre and the National Treatment Centres in NHS Highland and NHS Fife are already providing additional ophthalmology and orthopaedic capacity to support the NHS Scotland recovery plan. These centres provide access to patients across Scotland and not only aim to deliver treatment to a greater number of patients, but also to provide excellent quality care and patient experience and will be fundamental to the longer

term sustainability and resilience of our health service. The programme has also taken cognisance of the pressure that COVID-19 put on elective care and the need to have protected and resilient capacity to maintain access to key services.

The projects within the NTC programme are being designed and constructed to all current sustainability criteria and will play an important role in NHS Scotland's transition to Net Zero Carbon to combat Climate Change and address the wellbeing of all who work in and are treated in them. The Green Theatres principles are being adopted across the NTC programme including opportunities to introduce products and process' which contribute to greater circularity.

Fife College – Dunfermline Learning Campus

The Fife College element of the Dunfermline Learning Campus has been approved to progress to the construction and the new campus is expected to open in academic year 2024-25. The new college campus will provide a modern learning facility that is located in the centre of an area that is the fastest population growth in Scotland. The Full Business Case is for a new campus for West Fife as part of the wider Dunfermline Learning Campus development, working in partnership with Fife Council. The new state-of-the-art campus has been planned to deliver against the needs of the local community and priority national skills needs and will contribute to the economy of the region as a whole. The proposed adoption of a Hybrid plus solution will enable the college to implement a range of energy saving measures, in particular to the building elements during construction, which would otherwise be unavailable once the building is completed and in use.

Learning Estate Investment Programme

In line with the Infrastructure Investment Plan (IIP) themes, the Learning Estate Investment Programme (LEIP) is seeking to enable the transition to net zero with ambitious operational energy targets across the programme and to support inclusive economic growth through the creation of jobs to deliver new or refurbished learning facilities. LEIP is also seeking to build resilient and sustainable places by delivering high quality facilities which are well designed and constructed; incentivising long-term maintenance in the condition of the learning estate; using Infrastructure Technology to support optimum use of these facilities through their lifecycle; future proofing facilities through high quality digital connectivity; and considering co-location of community facilities and public services in line with the place principle.

During 2021-22, the first LEIP projects started construction and the other announced projects progressed through their respective development phases. In 2022-23, further LEIP projects started construction and the first project opened to pupils, staff, and the wider community. The projects that will form the third phase of the programme will be announced in 2023-24. This collective programme activity will continue to contribute to and align with the IIP themes.

HMP Highland

Replacement of the current HMP (His Majesty's Prison) Inverness will expand provision of custodial services available within local community and reduce reliance on accommodation in other locations (principally Central Belt). The prison will be located near Inverness Retail Park and will have excellent transport connections. Its completion will allow the Scottish Prison Service (SPS) to better serve the local community, meet the needs of people in our care and support staff.

Enabling work commenced on site in 2021-2022 and further advance works have been carried out during 2022-23 and are to continue into 2023-24. Work has commenced on site with the archaeologists finding significant evidence of roundhouses. Site clearing and ground work has taken place and drilling is underway to prepare for the ground source heat pumps. A number of advance contracts have been awarded to secure the perimeter concrete panels and modular cells.

SPS continues to work with the contractor and their design team to finalise the design of the new facility which incorporates energy reducing measures, utilising a range of available low carbon energy sources and to facilitate future substitution with zero carbon energy sources. The design incorporates ground source heat pumps, vertical wind turbines and solar voltaic panels as well as improving the passive thermal efficiency of the building. The design will now be finalised in early 2023-24.

SPS and Balfour Beatty (the contractor) community benefits team continue to nurture strong relationships with our supply chain and community agencies. In particular they have been working in partnership with Barnardo's to support the local Construction Industry Training Board (CITB) funded 'Scottish Academy for Construction Opportunities' programme (SACO). A result of this work, there has been 2 work placements for 16+ candidates on mechanical and electrical with G&A Barnie group. The team also supported local school visits to the site, which allowed students to see some of the artefacts and witness the archaeological excavations. The project has also been working with Baker Hicks who have just started a University of Highlands and Islands (UHI) student on a 14-week industrial placement, student studying Architectural & technology.

The design has been developed to allow the future deployment of in-cell Information Technology (IT) services. The digital infrastructure proposed will assist SPS in advancing the digital transformation of its Estate and business and provide wider access to digital services for those in our care and their families.

It is intended that the main construction contract will be awarded in summer 2023 with construction complete in spring 2025. The design will be finalised, and work will continue on ensuring community benefits in 2023-24 and throughout the construction stage.

HMP Glasgow

The replacement of HMP Barlinnie with HMP Glasgow will significantly reduce carbon emissions with a 'NetZero' target for the new facility. It is currently calculated that this will reduce emissions by 3,722 tCO₂e tonnes of carbon dioxide equivalent) with emissions of 1,081 in HMP Glasgow in comparison to 4,803 in HMP Barlinnie in 2021-22.

SPS and the appointed contractor, who is providing pre-construction services including design, are working closely with the Scottish Futures Trust (SFT) to ensure that all the objectives set by their Net Zero Public Sector Buildings Standard are met and evidenced. This includes agreeing strategies and setting specific targets for achieving net zero carbon, reducing embodied carbon in the construction, measuring and reducing operational energy use, whole-life considerations in design and materials, indoor environmental quality and consideration of wider environmental aspects. Work with the pre-construction contractor will inform the Outline Business Case (OBC).

The pre-construction services contract requires the implementation and delivery of a Community Benefits Plan which will also continue throughout the construction stage. The SPS Project Delivery Team is working with the contractor to develop this plan and a number of the proposals identified in the contractor's tender submission have already been implemented. These include supporting employment workshops and programmes in HMP Barlinnie, engagement with a number of local community groups to identify specific needs and means of support and the setting up of processes to implement a Social Value Community Fund which will provide direct financial assistance to appropriate community groups.

The design of the new HMP Glasgow will incorporate a Community Café which will facilitate accessible drop-in supportive services and activities for the local community, support social enterprise and incorporate social spaces and resources which can be accessed by local community individuals and groups. The development will also deliver improvements to local cycling infrastructure and connectivity.

HMP Glasgow will help deliver the organisation's Digital Infrastructure aspirations, incorporating proposed benefits for internal user experience through in-cell digital engagement, improve access to digital systems for staff, partners and other service providers, benefits for visitors and local communities, and innovative digital inclusion opportunities. During 2023-24, community benefits will continue to be delivered as part of the pre-construction services and into the construction stage.

HMP & YOI Stirling (National Facility for Women Offenders)

The design of the new facility incorporated low carbon energy sources (ground source heating and PV (photovoltaic) arrays and energy use reduction measures which were installed in as part of the construction of the prison. The construction is due to complete in May 2023 with environmental benefits starting to be realised. HMP & YOI (Young Offender Institution) Cornton Vale is in the process of being decommissioned, which will further reduce energy use.

At contract award, Morrison's the construction contractor, anticipated that approximately 90% of the contract value would be spent within Scotland. Morrison's have worked with Stirling Council and their existing supply-chain to develop the local economic benefits by using suppliers within a 50-mile radius of the project. A major sub-contract (£13.3 million) for electrical and mechanical activity was awarded to Forth Engineering Service (FES) in Stirling and a further £16 million of sub-contracts have also been let to date to Scottish SMEs (Small and medium-sized enterprises).

The digital infrastructure installed will assist SPS in advancing the digital transformation of its Estate and business and provide wider access to digital services for those in our care and their families. To enhance digital inclusion, this will include having the digital infrastructure to enable the people in our care to access future digital services as they are enabled. Such services are being developed within SPS's Digital Strategy.

Morrison Construction Community Benefits Team continues to liaise with SPS on a monthly basis to implement their 'pathways to employment' programme in partnership with Wise Group to facilitate the women of Cornton Vale into employment. The contractor continues to make direct contributions to local community groups. Throughout 2022-23, the contractor continued to liaise directly with the women accommodated in the existing

HMP Cornton Vale, to develop proposals for therapeutic gardens and landscaping which the women will themselves implement in the new establishment on completion.

During 2023-24, community benefits delivery will continue throughout Phase 2 of the project.

Dundee Community Custody Unit- 'The Bella Centre'

The design of the new facility incorporated low carbon energy sources (PV (photovoltaic) arrays) and energy use reduction measures. These were installed as part of the construction of the facility which concluded in May 2022. The facility opened in August 2022 with the environmental benefits starting to be realised. Innovative service provision with a number of local organisations and partners that provides greater integration into the community for people in custody has commenced.

The digital infrastructure installed will assist SPS in advancing the digital transformation of its Estate and business and provide wider access to digital services for those in our care and their families. To enhance digital inclusion, this includes having the digital infrastructure to enable the people in our care to access future digital services as they are enabled. Such services are being developed within SPS's Digital Strategy.

Throughout the construction of the facility, there has been very good liaison between the contractor, Ogilvie Construction Limited and Dundee City Council. The council has been proactive in providing details of local suppliers who could be used, promoting use of the Dundee City Council "skills bank" which matches individuals to project job requirements / vacancies and also the Dundee "shared apprentices" scheme. The contractor also employed the services of a locally based architectural company to develop the design of the facility

The development supports sustainable and resilient places by allowing delivery of custodial and support services at a local level, rather than reliance on remote or regional service provision, and provide access to community-based work and training opportunities. The Bella operational team will continue to develop close liaison and partnerships with the local community and local service providers.

Glasgow Community Custody Unit – The Liliac Centre

The design of the new facility incorporated low carbon energy sources (PV (photovoltaic) arrays) and energy use reduction measures. These were installed as part of the construction of the facility which concluded in August 2022. The facility opened in October 2022 with the environmental benefits starting to be realised. Innovative service provision with a number of local organisations and partners that provides greater integration into the community for people in custody has commenced.

The digital infrastructure installed will assist SPS in advancing the digital transformation of its Estate and business and provide wider access to digital services for those in our care and their families. To enhance digital inclusion, this includes having the digital infrastructure to enable the people in our care to access future digital services as they are enabled. Such services are being developed within SPS's Digital Strategy.

During 2022-23 the contractor continued to engage in the delivery of community benefits and liaison with local community groups. The development supports sustainable and

resilient places by allowing delivery of custodial and support services at a local level, rather than reliance on remote or regional service provision, and provide access to community-based work and training opportunities. The Liliias operational team will continue to develop close liaison and partnerships with the local community and local service providers.

Scottish Water

In the second year of the charge control period 2021-27, Scottish Water had invested around £673 million by the end of December 2022 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. Scottish Water estimates it will deliver up to £880 million of investment by year-end.

Net zero journey

Scottish Water has made progress on its net zero journey and projects were delivered that reduced energy consumption, increased renewable energy generation, and started the transition of 800 of its diesel van fleet to EVs (electric vehicles). Monitors were installed at two sites in Glasgow to gain a better understanding of process emissions from waste water, and innovative technology is being tested at these sites to see if these emissions can be reduced. Progress is being made with Scottish Water's investment partners to reduce the use of high emissions construction materials or to substitute them with lower emission alternatives.

To address its residual emissions, Scottish Water has been working to gain a better understanding of the condition of peat on its land with the aim of restoring all peat found to be in poor condition. At two sites surveyed the peat was found to be in better condition than expected and did not require restoration. Scottish Water will continue to monitor peat condition and will address any deterioration. In collaboration with Forestry and Land Scotland, a 10-year land management plan for Scottish Water's Loch Katrine estate has been developed. This proposes the creation of some 4,600 hectares of woodland. The plan has been submitted to Scottish Forestry for approval.

Looking forward, Scottish Water will continue to develop, appraise and deliver opportunities particularly in energy efficiency, renewable energy and its vehicle fleet so that it can build momentum in reducing operational emissions in future years. The programme to monitor process emissions will be extended to more sites.

Scottish Water will also continue to build its understanding of the emissions driven by the investment and with its supply chain partners will trial alternative low carbon designs and materials to reduce these emissions.

Scottish Water will progress its work to increase carbon capture with further peatland restoration and woodland creation. As well as progressing its emissions reduction activities, Scottish Water is undertaking a climate change risk assessment to understand the impacts that climate change will have on its services in the future. This work will be used in the development of its Climate Change Adaptation Plan which is planned to be published later this year.

Development Services

Over the last year, Scottish Water has been working with developers and developing its plans for new network capacity and investing in water and wastewater assets to enable new housing and other economic development across the country. In 2022-23 the newly formed Development Delivery Team have seen the first projects completed on site since Scottish Water began to deliver strategic part 3 infrastructure on behalf of the development community. The first 3 projects, which were completed at a cost of £5.2 million, facilitate economic growth in these areas and have provided capacity for 5,647 new houses to be built in the future. As the programme gathers pace a larger number of projects will start on site in 2023-24 providing additional capacity for new build homes in targeted areas to match housing demand.

Surface Water management

Scottish Water's ambition to transform the management of surface water will continue to require long-term planning and cross-sector partnership working. The scale of opportunity and challenge around adapting our cities to the impacts of climate change was highlighted at the 'Creating Water Resilient Places' summit in September 2022, bringing together Chief Executives and senior leaders from Scotland's eight cities, Scottish Environment Protection Agency (SEPA), Scottish Water and the Scottish Government. The summit proposed that a Water Resilient Places theme should be included under the Scottish Cities Alliance climate change work, sitting alongside the Transition to Net Zero Action Plan, with key workstreams for incentivisation and financing of the management of surface water, as it is widely recognised that this will require action and funding from both the public and private sector.

An approach to city-scale planning of surface water has been developed under a Sustainable Growth Agreement between Scottish Water and SEPA, and in partnership with Aberdeen City Council, with agreement needed over the next year on the next steps and scale of ambition for the city to reduce the risk of sewer and surface water flooding and create multi-functional blue-green spaces. Collaboration has been ongoing with local authority partners in key areas of Edinburgh and Dundee, with a view to scaling the development and delivery of place-led, integrated drainage and surface water management plans at a city wide level over the next 2 years. The current project areas are focusing on developing and testing the practical implementation and policy approaches that could be utilised to support delivery on the ground on both retrofit of surface water management interventions at scale and creation of multi-beneficial blue-green places in new developments within the cities.

At a tactical level, Scottish Water has set out a commitment that every sewer network project is actively seeking to identify interventions that manage surface water as part of the project optioneering activities. Development of technical and planning guidance is ongoing to support these programmes of work, and collaboration with Local Authorities will be key to enable these solutions.

Projects completed within 2022-23, include flood prevention projects. An increase in flooding due to extreme weather events is one of the major challenges Scottish Water is currently facing and to address this it is delivering a number of flooding projects across Scotland. The £6.4 million investment to help protect homes from sewer flooding in Annan, in Dumfries and Galloway, was completed June 2022, with praise from residents for the project delivery team.

In North Lanarkshire, a £11.5 million project to help reduce sewer flooding in Craigneuk has been delivered. The giant underground storm tank measuring 25 metres across and 19 metres deep, has been installed in Craigneuk Park to help provide extra storage capacity for stormwater water during heavy rainfall.

A new £30 million water treatment works has started supplying water to Peebles to improve water quality and resilience. The works on Bonnington Road, Peebles, was built using low carbon construction techniques and can supply up to 4 million litres of fresh, clean drinking water each day thanks to the latest treatment technology.

The construction of a new Water Treatment Works at Loch Ness has finished and around 1,250 customers in the villages of Fort Augustus and Glenmoriston are now receiving their water from a single supply taken from Loch Ness.

Our £4.6 million investment in Oban's water network was completed in July 2022. The final part of the project saw nearly 2 miles of new pipes being laid - an operation which saw a tunnel bored under an important railway line.

Annex A: Infrastructure Commission for Scotland - update on the progress against the broad themes of the Commission's recommendations.

The following information relates to the latest progress in implementing the recommendations made by the Infrastructure Commission for Scotland (ICfS) in its Phase 1 & 2 reports.

Phase 1 Recommendations

Leadership

Recommendations under this theme include the introduction of a transparent infrastructure prioritisation framework, a 30-year infrastructure needs assessment and that these should inform the next Infrastructure Investment Plan (IIP).

The IIP prioritises the pipeline of investments against three themes, including enabling net zero emissions and environmental sustainability, driving inclusive economic growth, and building resilient and sustainable places. It sets out a five-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.

Work is ongoing and remains on track to deliver in time for the next IIP. In particular, progress has been made on scenario development to underpin the Needs Assessment, in conjunction with Scottish Future's Trust (SFT) and external consultants.

The ICfS recommended a long-term, independent infrastructure advisory body in both its Phase 1 and Phase 2 reports. At the time of publishing the IIP, the Scottish Government committed to considering the recommendation further. Following the publication of the Resource Spending Review and the commitment to agreeing the optimal public body landscape for achieving improved outcomes, we do not expect to set up a new, independent body at this time. We will, of course, continue to work to improve the way infrastructure advice is provided to ministers, and to harness and best deploy existing public sector expertise in infrastructure.

Place

Recommendations under this theme include the introduction of National Planning Framework 4 (NPF4), a coordinated and appropriately resourced Infrastructure First approach to the planning system to ensure the effective delivery of a Scotland wide, integrated and coherent outcome-based approach to planning spatial land use.

The ICfS called for the development of a place-based assessment of long term housing supply and demand across Scotland by 2021, supported by the development of a coherent strategy for the labour market and business opportunities arising from an inclusive net zero carbon economy. NPF4 was adopted on 13 February 2023, becoming part of the statutory development plan and being directly relevant to planning applications across Scotland. As part of a dedicated 'Quality Homes' policy, Minimum All-Tenure Housing

Land Requirements (MATHLR) are provided for each planning authority in Scotland. This is the minimum amount of land, by reference to the number of housing units, that is to be provided by each authority for a 10-year period. The amount is expected to be exceeded locally in Local Development Plans (LDPs). With NPF4 now in place, we are currently finalising regulations and guidance to inform preparation of new style LDPs. Regulations are expected to come into force and guidance is to be published in spring 2023.

The ICfS recommended that the Scottish Government support the implementation of NPF4 and the new system of development plans, a co-ordinated and appropriately resourced IF approach to the planning system should be introduced by 2021. As stated, NPF4 was adopted in February 2023, and is now part of the statutory development plan and directly influences planning decisions across the country. It includes a dedicated Infrastructure First policy that recognises the importance of putting infrastructure at the heart of place making. The IF approach aligns with other national plans and strategies. Alongside NPF4 we published the first iteration of a delivery programme setting out arrangements for governance, funding and monitoring.

Making the most of existing assets

Recommendations under this theme include maintaining existing infrastructure over new infrastructure and to favour shared facilities over construction of new, single purpose assets. The development of guidance for relevant authorities to infrastructure maintenance and prioritisation; to establish a route map for the implementation of a system of resource use, reduction, collection, treatment and repurposing; and to develop a clear implementation plan, to address critical natural and built infrastructure climate resilience and adaptation need.

There were also recommendations around making the most of our existing assets. We responded to this in the Infrastructure Investment Plan 2021-22 to 2025-26 and the Scottish Government Infrastructure Hierarchy, and this remains a cornerstone of our investment decision making. Our colleagues at SFT have also published a Public Sector Asset Strategy and we continue to work see this embedded across the public sector.¹

The Scottish Government continues to implement the Scottish Climate Change Adaptation Plan 2 (SCCAP2) programme, with annual progress reporting to the Scottish Parliament. Following publication of updated Climate Change Risk Assessment evidence in June 2021, the Scottish Government commissioned the Climate Change Committee (CCC) to prepare its first statutory independent assessment of the SCCAP2 programme - which was published in March 2022.

Alongside delivering SCCAP2, we are now also developing the next statutory adaptation programme for publication by autumn 2024. This programme will respond to the updated UK-wide Climate Change Risk Assessment (finalised in January 2022) and will be informed by the CCC's independent assessment of SCCAP2, as well as other sources of evidence and advice. Discussions within the Scottish Government on further approaches in this space are ongoing. Additionally, Scottish Government is developing a route map to reduce waste to meet our waste and recycling targets for 2025. A consultation on the

¹ [Layout 1 \(scottishfuturetrust.org.uk\)](https://scottishfuturetrust.org.uk)

Scottish Government waste route map was published in May 2022.² The final route map will be published later in 2023.

Heat and Transport

Recommendations under this theme include the implementation of incentives, support mechanisms and standards for energy efficient, net zero carbon buildings across Scotland and to establish a route map for the transition to net zero carbon. Transport policy is to work to fully reflect the need to deliver an inclusive net zero carbon economy and consider infrastructure use as part of a holistic system, and to enable a managed transition to an inclusive net zero carbon economy road infrastructure.

ICfS recommended that the Scottish Government set out proposals to substantially accelerate the development and implementation of incentives, support mechanisms and standards for energy efficient, net zero carbon buildings across Scotland. In 2021, we published a Heat in Buildings Strategy setting out our ambition to decarbonise one million homes and the equivalent of 50,000 non-domestic buildings by 2030, with an update provided in 2022. In 2020, The Net Zero Carbon Public Sector Buildings Standard was approved by ministers – with supporting documentation made available in 2021 – and we continue to roll this out, ensuring new public buildings are net zero ready.³ Furthermore, we have published a draft Energy Strategy and Just Transition Plan for consultation January 2023. The consultation was extended and closed on 9 May 2023.

The Hydrogen Action Plan was published in December 2022; policy officials are now working to take forward the commitments it contains. The Climate Change Plan update shows how Scotland will drive down emissions to meet its climate targets up to the year 2032. A draft of the next Climate Change Plan, covering 2024-2040, is due to be laid in Parliament in November 2023. In addition, The Bute House Agreement includes a commitment to invest at least £1.8 billion over the course of this Parliament. This includes the following allocations:

- at least £465 million to support those least able to pay, delivered through our Warmer Homes Scotland and area-based schemes.
- £300 million for Scotland's Heat Network Fund.
- £200 million Social Housing Net Zero Heat Fund, investing in a sector already leading the way in the heat transition.
- £200 million Scottish Green Public Sector Estate Scheme, supporting leadership for energy efficiency and heat decarbonisation right across the public sector.

On transport, there were recommendations that Scottish Government and Transport Scotland should ensure that it's new National Transport Strategy and Strategic Transport Projects Review 2 fully reflects an inclusive net zero carbon economy and consider the infrastructure and the use of it as a holistic system. The second National Transport Strategy (NTS2) fully reflects our need to deliver our ambitious net zero targets, with the Sustainable Travel Hierarchy and Sustainable Investment Hierarchy at its core. The NTS2 Delivery Plan reflects the transport element of the Climate Change Plan Update, including our commitment to reduce car kilometres by 20% by 2030. It also includes a new policy to

² <https://consult.gov.scot/environment-forestry/scotlands-circular-economy-routemap/>

³ [Net Zero Public Sector Buildings Standard - Scottish Futures Trust](#)

encourage people back on to public transport, post-COVID-19, when it is safe and appropriate to do so.

The Scottish Government are developing the transport appraisal guidance and decision-making processes. This will include considering changes to the approach to assessing emissions impacts associated with infrastructure projects. We will assess future transport investment decisions through the second Strategic Transport Projects Review; embedding the NTS2 priorities and outcomes and the Sustainable Investment Hierarchy. 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 discussions with UK Government on these issues.

Additionally, the 45 Strategic Transport Projects Review 2 (STPR2) draft recommendations for future transport investment were published on the 20 January 2022. Following a 12-week consultation and subsequent review of the 400 plus responses, the final set of recommendations were published on the 8 December 2022. Work continues on the delivery plan with the intention that this will be published in 2023.

Furthermore, to enable a managed transition to an inclusive net zero carbon economy road infrastructure, the Scottish Government committed in the 20% car kilometre reduction route map to commission research exploring a range of equitable options for demand management to discourage car use, including pricing. The research, which we will publish in the coming months, will allow the Scottish Government to build the evidence base on demand management options and inform our position on the wider reform of reserved motoring taxes. We will continue to press the UK Government for urgent dialogue on its plans for structural reform of motoring taxation, ensuring all areas of the UK are represented – particularly for Scotland's island and rural communities. The UK Government's own Net Zero Review highlighted that revenues from existing motoring taxes will decline sharply this decade, but it has so far failed to set out how it will address this. The UK needs a comprehensive approach to vehicle and road taxation that offers practical solutions to achieving our climate change ambitions.

Finally, there were recommendations that Scottish Government and Transport Scotland develop a new investment appraisal and decision-making process, incorporating necessary changes to the current Scottish Transport Appraisal Guidance (STAG) and Investment Decision Making Guidance. Investment Decision Making (IDM) is being considered as part of the ongoing work on the STPR2 Delivery Plan. The intention is that an IDM Guidance Update will follow thereafter.

Regulation

Recommendations under this theme include that Scottish and UK governments should work together in the development of an appropriately devolved regulatory and pricing framework that enables energy and telecoms infrastructure investment to be planned and delivered to meet the future needs of Scotland. Scottish Government are to consider options for longer term implementation and regulatory coherence across water provision and flood management and resilience.

We continue to work with the UK Government and Ofcom on an underpinning framework in telecoms that is responsive to Scottish needs and to ensure any barriers to telecoms deployment in Scotland are understood and acted upon.

Where powers are available, the Scottish Government have taken action to facilitate improved investment in digital infrastructure - such as through 100% non-domestic rates relief for laid and lit fibre - now extended to 2034 and continuing to offer the most extended period of rates relief in the UK. Further, policy development work is in train in 2023 to support a multi-agency collaborative approach to surface water management and drive forward the use of strategic scale blue green infrastructure.

There were also recommendations regarding formal regulation around water provision and flood management. Both the Water Resilient Places Policy Framework published February 2021 and the new flooding strategy for Scotland, currently under development, focus on bringing water industry and flooding objectives together to deliver climate resilient places, consistent with these recommendations. Work on the Water Resilient Places Policy Framework and the Flood Resilience Strategy continues to increase the collaboration between water industry, local authorities and other relevant stakeholders. The recommendations of the Water Resilient Places Policy Framework are being considered with a view to making legislative proposals for drainage and surface water management. The 2022-2023 Programme for Government requirement to consult on the flood resilience strategy for Scotland is being progressed. Close collaboration between the two workstreams continues.

Digital and Technology

Recommendations under this theme include the delivery of a full fibre network and to enable the transition to 5G across the whole of Scotland. The Scottish Government are to increase Scotland's international presence and connectivity resilience. Furthermore, the Scottish Government are to consider the future data requirements and data potential for all new publicly funded infrastructure as well as the potential for the use of digital services associated with the assets.

The ICfS recommended the Scottish Government provide leadership to ensure the delivery of a full-fibre network by 2027 to enable the transition to 5G. Our Reaching 100% (R100) Programme, which is over £600 million investment in digital infrastructure, continues to deliver at pace across Scotland. In 2022-23 we extended the investment and reach of the programme that will enable us to deliver to more premises in some of the most rural parts of Scotland.

The vast majority of R100 contract build will be full fibre, capable of delivering download speeds of 1,000 megabits per second (Mbps) – over 30 times faster than our superfast commitment of 30 Mbps. Full fibre is the most future-proofed broadband technology available so this outcome will put rural Scotland ahead of the curve, even compared to many urban areas. The programme delivered on time to lay 16 subsea fibre optic cables by the end of 2022. These cables will enhance Scotland's digital infrastructure resilience and connect 15 Scottish islands.

Furthermore, ICfS recommended that to ensure Scotland's place in the world and increase its international presence and connectivity resilience, the Scottish Government should

prioritise support for an indigenous data centre market and investment in direct international fibre optic cables. Since the Green Datacentres and Digital Connectivity Vision and Action Plan was published, Scottish Enterprise (SE) has undergone a review of its approach to cluster building and strengthening – their main recommendation being to focus on outcome based procurement and not core funding of Cluster Management Organisations (CMOs).

The focus of attention is now on commencing ecosystem and supply chain strengthening activity to support the Scottish datacentre industry rather than setting up a specific and separate organisation. SE has allocated a Project Manager and Senior Responsible Owner to this activity and it is expected the internal SE approval process will be complete by June 2023, with ecosystem strengthening activity commencing in July 2023. As part of the Vision and Action Plan we are currently engaging with Network Rail Telecom (NRT), Transport Scotland and Scottish Water to explore opportunities to exploit existing infrastructure owned and operated by the various agencies.

The Scottish Government are currently refreshing the Datacentre site selection reports which have identified suitable sites spanning the country which are located close sources of renewable power generation and serviced by appropriate levels of fibre connectivity. These reports will be actively promoted to industry, both nationally and internationally, upon completion in summer 2023. These reports are a step-change over previous iterations with increased transparency over the scoring criteria used and how they are applied.

Lastly, the ICfS was keen for Scottish Government to consider the future data requirements and data potential for all new publicly funded infrastructure, as well as the potential for the use of digital services associated with the assets. A Data Standards and Open Data Community of Practice has been established to collaborate and drive the adoption of standards. We are incorporating our Standards and Data Maturity offers into the Scottish Government's Digital Program, along with other measures to ensure these offers extend into major new data infrastructure projects.

The role of the public

Recommendations under this theme include the development of an informed approach to public engagement and participation, to ensure that short- and long-term outcome trade-offs are effectively debated, understood and taken into consideration.

The Scottish Government are working with SFT to develop a public and stakeholder engagement process to improve the way we engage on infrastructure improvement work. This has strong links to the [Open Government Action Plan 2021-25](#), which has fiscal openness and transparency as one of its five core commitments. As part of this, the Scottish Government has committed to build on previous engagement and best practice to develop a multi-stakeholder approach to the next Infrastructure Investment Plan. We continue to work, in conjunction with colleagues at the Scottish Future's Trust, to develop a comprehensive multi-stakeholder engagement approach. We are engaging internally to understand best practice and are active participants in the Scottish Government Open Government Working Group, to help embed best practice into our thinking.

Phase 2 Recommendations

Prioritisation and Decision Making

Recommendations under this theme include prioritising an inclusive net zero carbon economy in infrastructure decision making by ensuring implementation of phase 1 recommendations, and the introduction of a prioritisation approach that incorporates and balances spatial and sector needs, assesses affordability and budget allocation of infrastructure funding.

As outlined above, Scottish Government continue to implement and report updates on these phase 1 recommendations.

Systems and Behaviours

Recommendations under this theme include a need to implement the use of the Place Principle; establish a cross-portfolio approach, which vertically aligns national, regional and local needs; implement the "one public sector" approach, to co-produce and co-deliver on spatial plans; to co-ordinate national upfront utility investment via changes to guidance, legislation or regulations.

ICfS recommended that Scottish Government should enshrine the use of the Place Principle within planning practice, through guidance, legislation or regulation as appropriate. As stated, NPF4 was established in February 2023 and is now part of the statutory development plan and directly influences planning decisions across Scotland. NPF4 embeds the Place Principle within planning and states that Local Development Plans should be place based and created in line with it and put at the heart of our local living and 20-minute neighbourhood policy.

Additionally, ICfS were keen for Scottish Government to build on Phase 1 needs-based recommendations, in the development of National Planning Framework 4, and 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 will involve co-produced industrial, settlement (including housing) and labour & skill strategies for each spatial level, which will manage the difficult trade-offs and maximise the potential of an inclusive net zero carbon Scotland. NPF4 was adopted on 13 February 2023. We will shortly be establishing a new cross-cutting external advisory group focusing on the relationships between planning, infrastructure and place (PIPAG). Research was undertaken on planning obligations and has now been published.⁴

Furthermore, ICfS recommended that the "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 compliments 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.

⁴ <https://www.gov.scot/publications/value-incidence-impact-developer-contributions-scotland/>

The Planning (Scotland) Act 2019 (Commencement No. 12 and Saving and Transitional Provisions) Regulations 2023 have been laid in the Scottish Parliament, coming into force in May 2023.⁵ This includes activating legislation requiring local place plans to be taken into account in the preparation of local development plans.

Enabling Digital Technology

Recommendations under this theme include to establish a digital data system to support the efficient and innovative development and use of data for the infrastructure sector; and to develop a centrally held data resource that will meet the needs for an inclusive net zero carbon economy.

There were recommendations for Scottish Government to 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. Rather than taking this role into Scottish Government, we have put in place a number of initiatives that together meet these needs, including the establishment of Research Data Scotland (RDS) in late 2021. RDS will provide a new way of organising data for research and making it discoverable and ensure access to this, whilst maintaining public confidence in appropriate use of that data and making access quicker by providing a clear service for researchers who want to access data. RDS is also transforming how public sector data in Scotland is curated, accessed and explored, so it can deliver its full potential for policymakers. RDS can harness wider resources than Scottish Government alone and secure the momentum for a wider partnership between public sector and academia, building on and developing further existing data infrastructure, and Scotland's reputation for how we manage and use data and trustworthiness in what we do.

Furthermore, ICfS were keen for a centrally held data resource to be 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. The Data Strategy for planning commenced in December 2022 and will complete in spring 2023. The strategy will provide a full analysis of the current data landscape for planning and building standards related data along with a delivery roadmap to implement data standards and governance.

Resources

The ICfS recommended 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. We continue to work with Partners in Planning to take forward the actions from the Research into Skills in Planning. Later this spring we will publish a consultation on statutory elected member training in planning.

⁵ <https://www.legislation.gov.uk/ssi/2023/100/contents/made>

Delivering a Thriving Construction Sector

Recommendations under this theme include to develop, resource and implement a "Construction Accord" between all Scottish public bodies and the whole of the construction sector. This should include measures that improve the capacity, capability and diversity of the workforce and ensure those working in the construction sector are employed under the principles and conditions of Fair Work.

ICfS recommended that 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. The Construction Accord was launched in October 2022 and encompasses commitments to all of the measures in the recommendation. More information can be found on the Construction Leadership Forum website. Work is now underway to co design a Transformation Plan with the sector to deliver on those commitments by June 2023.

We are thankful to the Commission for their work and their recommendations and, as set out above, we continue to work to implement the recommendations. We will update on progress in this report annually, as well as at other appropriate times in the year.

Annex B: Supply chain and inflation issues affecting infrastructure delivery.

The following note highlights the continued impact of the issues around supply chains and the availability of construction materials along with inflation which are affecting the delivery of infrastructure projects.

Purpose

The purpose of this note is to highlight the continued impact of the issues around supply chains and the availability of construction materials, which are affecting the delivery of infrastructure projects.

Summary

There remain unprecedented increases in the cost of materials and delivery times for some materials continue to be prolonged. There is a greater risk of late projects and the quality of materials being reduced to maintain budgets or programmes and financial disputes along with a risk that public and private sector employers will reconsider when and how to bring construction contracts to the market.

In the last two quarters, the trading conditions for businesses within the construction sector has marginally improved and this is evidenced through:

- Industry sentiment that material availability and pricing has improved but volatility still exists.
- Market assessments for UK Tender Price Inflation assessments for 2023 have improved with marginal reductions to tender price inflation.
- UK consumer price index inflation has fallen to 8.7%.

However, the underlying challenges within the construction sector remain as set out within this paper. Experian published their spring 2023 forecasts for the construction sector in May 2023 and identified construction output is set to decline by 1.3% in 2023 as weakness in the housing sector, both in terms of new work and repair, maintenance and improvement, dampen the outlook. While headwinds in the form of elevated inflationary pressures, a cost-of-living crisis, rising interest rates and economic uncertainty continue to collectively weigh on construction going forward, the UK backdrop has brightened compared with the previous forecast and it is largely the fate of the residential sector which is hampering prospects. As the UK economic landscape continues to improve and the housing market recovers towards the end of the year there is a return to construction output growth for the UK of 1.0% and 2.6% in 2024 and 2025 respectively.

Background

There has been an upsurge in construction sector activity following a global drive to stimulate economic recovery from COVID-19 and demand for some resources is greater than their supply or the rate at which they can be supplied. The availability of materials is being constrained by reduced productivity due to the COVID effects and mitigations, which has affected global supply chain logistics. In addition, within the United Kingdom, leaving the European Union (EU) has generated supplementary procedures for goods and materials inbound to the UK from the EU.

The war in Ukraine is having an impact on global trade, particularly on commodities. There are reports of nickel prices doubling since the conflict began (Russia was a major supplier

before sanctions hit), which affects the price of stainless steel. The prices of copper, steel, and aluminium have also increased. Alongside a shortage of supply from major neon producers in Odessa and Mariupol and existing Covid-related bottlenecks for microchips and semiconductors from Asia, the electro technical sector is now experiencing inflation on products above 20% as well as price rises between 10-20%. Recent increases in the price of oil will likely affect both fuel and plastics.

Another concern is the rate at which increased energy and raw material costs are driving up prices, particularly for steel, cement, glass and other energy-intensive products. The CLC report in April noted that the previous three months had seen price inflation of 10-15%, on top of price increases introduced at the end of last year. The impact of this will be felt most severely by small and medium sized enterprises (SME's).

Generally there has been an improvement in market conditions for business operating in the sector with reduced volatility noted by industry. A [CLC Product Availability Statement](#) *“While there has been a slight decline in construction activity, the industry overall is performing better than forecasted six months ago. With demand lower than at this time last year, there is also less pressure on prices. As a result, early indications suggest prices for many products appear to be stabilising and in isolated cases even declining from recent highs, though volatility persists.”*

Materials / Imported Materials

There have been significant cost increases on the common construction materials utilised on construction projects. According to the UK BEIS (Department for Business, Energy and Industrial Strategy) Monthly Statistics of Building Materials and Components commentary of April 2022, the material price index for 'All Work' increased by 24.5% in March 2022 compared to the same month the previous year. Although cost pressures may have been largely absorbed by contractors so far, the cost of construction materials, including timber and cement had risen by over 20% in the year to January 2022, and the price of fabricated steel rose by 55% over the same period. Since then, steelmakers have been facing additional cost pressures caused by commodity and energy price increases, and British Steel increased prices for fabricated steel by £250 per tonne, an estimated 25% increase. The price of concrete is also reported to be rising quickly.

In order for there to be any reduction in price increases the industry is required to reach a point where supply is no longer being outstripped by demand i.e. stock levels of materials require to rise, however, with the situation around COVID, Brexit, reliance on imported materials and logistic issues, it is unclear when this may occur. There are also reports warning that construction inflation of 5% year-on-year may become the norm and reports continue to circulate stating that further material price increases will continue in the short to medium term. As a consequence, clients bringing projects to market will have to review their available budgets and determine if they should proceed now and accept the increased prices which have occurred or delay projects until such times as the industry supply chain is better able to cope and the fluctuation in prices has settled. It is however unclear when this will occur.

The UK Construction industry imports circa 60% of the products required. As noted in the previous update, imports of construction materials decreased in Q1 2021 by 6% compared to the previous quarter. Initial pre-Brexit concerns saw manufacturers and suppliers building up stock levels during 2019. However, as the pandemic started to take hold and the UK entered into its first lockdown the flow of materials being imported and

manufactured was drastically reduced and, in many cases, had dried up. This resulted in built up stocks being utilised to maintain project delivery of those projects, which were not subject to lockdown conditions. This along with the increase in the demand for materials to support DIY projects has reduced and eliminated stock holding for many construction-related products.

Contractors continue to struggle to procure imported products, especially from China and south east Asia, such as copper and steel. Material supplies have seen a rise in shipping costs as a result of the pandemic and the lack of capacity in Chinese ports. The price of moving a container from the Far East to Europe has dropped as much as 25% from its high at the start of 2022, but many forecasters believe that the elevated costs and volatile delivery schedules caused by the container crisis will nonetheless carry on to mid-2023 and shipping rates are still eight to nine times higher than pre-Covid levels and air cargo rates seven times higher.

ONS (Office for National Statistics) latest results suggest business conditions continue to remain challenging, but estimates show small signs of positive improvement for some measures; examples include a stable proportion of businesses reporting they were able to get materials, goods and services from within the UK, and more businesses reported having fewer concerns for their business

A CLC Product Availability Statement identified that *“For the first time since this group began meeting at the height of the pandemic, there is good availability of the vast majority of building materials across the UK, with increasing reports that availability is back to pre-Covid levels.”* Brick stocks have increased due to a slowdown in the housing market and increased production. There are approximately 8 weeks of bricks in stock and, with new plants in the UK coming on stream over the next 6-12 months, the UK's reliance on more expensive imports to top up stocks will fall rapidly.

Logistic Constraints / Labour and Staff Shortages

36.6% of Construction businesses reported experiencing a shortage of workers in the period 4 April to 17 April 2022. Of those construction businesses experiencing a shortage of workers, 55.5% reported that this has resulted in employees working increased hours and 54.1% reported that they have been unable to meet demands as a result.

The sharp increase in infrastructure works as well as a surge in the house building market has resulted in a skills shortage in some areas. Labour shortages have been exacerbated by a sharp fall in the number of EU construction workers on site. Since January 2021, it has been more difficult for construction workers to come to the UK due to the points-based immigration system, with the associated cost and administration burden. To a certain extent, the lack of labour was also impacted by the furlough scheme. It is currently being reported that labour shortages could possibly last for as long as two years.

Research undertaken has recorded various press reports which highlight that vacancies in construction have risen to the highest level since 2001 and that qualified plumbers, heating engineers, plasterers, joiners and construction workers are all in short supply. A surge in demand for workers is being triggered by the unprecedented levels of infrastructure capital spending in Scotland and across the UK with major projects such as HS2 and Hinkley Point placing significant demands on workforce from across the country.

Product Certification Issues

A particular issue for the construction industry (and others) caused by Brexit has been around product conformity marking. Whilst the UK was in the EU this was undertaken using the European “CE marking” process. The new United Kingdom Conformity Assessment (“UKCA”) marking requires re-certification of many construction products for use in the UK. Industry concerns that testing capacity was insufficient to meet demand saw the UK Government delay the requirement for the new markings from January 2022 to January 2023. There remains significant concern both that UK manufactured products will not be re-certified under the new requirements due to insufficient testing capacity and that overseas suppliers may cease to supply to the UK given the need for separate conformity testing after January 2023. The UK Government is saying that there will be no further extension, and this is the final deadline for businesses to get ready. Therefore, businesses are encouraged to be ready for the new UK goods regime as soon as possible, at the latest before 1 January 2023, after which the new UKCA marking will be required to place goods on the market. Officials are in discussion with UKG officials on solutions but due to the reserved nature of the issue there isn’t much within the Scottish Government’s capacity that can be done.

Steps Taken by the Scottish Government

The Scottish Government are working closely with the construction sector, through the Construction Leadership Forum. As a result of the concerns being raised by industry, the Scottish Government’s Minister for Business, Trade, Tourism and Enterprise established a Construction Materials Shortages Working Group, which ran for twelve weeks with the final meeting on 28 September 2021. The working group had representation from industry and the Minister made contact with several suppliers in an attempt to resolve issues with materials availability. The group’s focus was on short terms issues and was effective in bring issues to the fore.

To assist alleviate issues arising, a [Construction Policy Note 3/2021](#) was issued by the Scottish Government in July 2021. The intention of this was to set out measures for contracting authorities to manage and mitigate market pressures affecting the availability and affordability of construction sector resources. A subsequent request by industry for a directive alleviating the application of liquidated damages for late delivery where the causation factor was material supply logistical difficulties was discussed. Following which, it was agreed that Scottish Government would publish further communications at [Scottish Procurement](#) to promote awareness and enhance the understanding of CPN 3/2021. The Scottish Government acknowledged the ongoing nature of these issues and appropriate mitigations in an open letter to industry in October 2022.

Conclusion

Going forward, labour shortages, materials supply difficulties and material cost increases when combined with available budgets, could result in a reduction of projects coming to market and of those that do, delivery may well take longer than was envisaged.

Annex C: Major capital projects - climate change targets, strategic outcomes and contribution made to economic development.

The following includes information relating to projects within the IIP Major Capital Projects Progress Update for March 2023 and their accompanying climate change targets, strategic outcomes and the contribution made to local economic development.

Sector: Transport

Project: A9 Dualling Tomatin to Moy

How does the project support the Scottish Government's Climate Change Targets:

Every effort is being made to mitigate the environmental impacts of this programme. We value the environment we are working in and place emphasis on striking a balance between delivering projects and respecting the sensitivities of the area. Significant environmental assessment work and consultation has been undertaken to consider environmental impacts for this programme.

Our National Transport Strategy is clear that we will not build infrastructure to cater for forecast unconstrained increases in traffic volumes. The rationale for investment in this project is not based on facilitating increases in road traffic. We will continue to take bold action to reduce both car usage and the emissions of road vehicles. Contract requirements will include a focus on carbon reduction, use of renewable power sources, use of low emission vehicles and construction plant, emphasis on waste reduction and circular economy and exploration of innovative alternative design solutions.

How does the project support the three themes of the Scottish Government's Infrastructure Investment Plan Strategic Themes: The project will drive inclusive economic growth by strengthening connectivity; the dual carriageway reduces journey times and improves journey time reliability along this part of the A9 corridor. This will improve the competitiveness of rural businesses using the A9

The contract will include an emphasis on sustainability; economic growth and building resilient and sustainable places. It will include increased focus on decarbonisation, including increased carbon reduction measures, waste management controls and material reuse (circular economy) proposals, particularly in relation to peat. The contract will also contain a provision for the site accommodation to be a "sustainable power hub," with the main source of energy coming from the national grid (i.e. from renewable sources rather than fossil fuel generators).

The project will include the use of positive Sustainable Drainage Systems (SUDs) to improve the drainage in the area thereby controlling the flow of water released into the existing drainage systems and providing treatment to water runoff. This will support the mitigation of potential flooding, treat water at source and provide ecological benefits.

There will also be an emphasis placed upon opportunities generated for Small and Medium Enterprises and Supported Businesses, to help support economic growth in the region. It will also provide training opportunities, fair working practices and promotion of

equality and wellbeing for all people working on the project. The appointed contractor will also propose a number of community enhancements in and around the project to provide lasting benefits for local communities.

How does the project contribute to Local Economic Development: The contract will include a significant emphasis on community benefits and social value. Such benefits are envisaged to include creation of employment and training opportunities, including an on-site training facility to be shared with communities surrounding the project, supporting small and medium sized enterprises through local subcontract opportunities and maximising opportunities for Supported Businesses and Social Enterprises as well as an emphasis on improving health and wellbeing of workforce.

The project also aims to provide educational benefits to local schools through training initiatives such as Academy 9 programme. It also aims to provide local communities with improved connectivity to public transport with upgrades to approximately 10km of non-motorised user routes to encourage active travel such as walking and cycling.

Project: Reston and East Linton Rail Stations

How does the project support the Scottish Government's Climate Change Targets: The National Transport Strategy 2 (NTS2) was published in February 2020 and outlines the vision for Scotland's transport system over the next 20 years. One of the 4 priorities on NTS2 is taking climate action. The scheme encourages an increase in rail patronage within Reston, East Linton and the each of the surrounding areas and subsequently encourages more sustainable trip making. The project thus contributes towards Net Zero and Environmental Sustainability by enabling modal shift from road to rail.

How does the project support the three themes of the Scottish Government's Infrastructure Investment Plan Strategic Themes: The development supports the SPP (Scottish Planning Policy) overriding goal of achieving sustainable development by providing a high-quality rail connection to strategic locations such as Edinburgh (north) and Berwick-Upon-Tweed (south). This will contribute towards the policy of driving inclusive economic growth.

Reston represents the most rural area within the Scottish Borders. The Scottish Index for Multiple Deprivation 2020 shows that nearby towns such as Eyemouth, Duns and Coldstream have small pockets of relative deprivation within their communities, which suggests that employment and further education opportunities for these communities are limited.

The provision of a station at Reston will improve public transport access times to Edinburgh and open up work and study opportunities for the local population. This will subsequently enhance economic prosperity across Berwickshire and provide an impetus for community regeneration. Therefore, this new station has the potential to support Berwickshire in meeting the strategic priorities set out within NTS2. Each of the new stations will also facilitate new sustainable housing developments at East Linton and Reston, thus contributing the theme of Building Resilient and Sustainable Places.

How does the project contribute to Local Economic Development: The project will be delivered by Network Rail, with BAM Nuttall as the main contractor. Both of these organisations employ graduate trainees and have extensive apprentice training programmes.

Project: East Kilbride Rail Enhancement

How does the project support the Scottish Government's Climate Change Targets: The project aligns with [Scotland's 2018-2032 Climate Change Plan update](#). It also takes climate action; helping to deliver the net-zero target, adapting to the effects of climate change and promoting greener, cleaner choices. Decarbonised corridors will help to deliver the net-zero target.

How does the project support the three themes of the Scottish Government's Infrastructure Investment Plan Strategic Themes: Delivering the East Kilbride project allows decarbonisation in the form of electrification on this region of the network, which will be enabled through the deployment of existing electric rolling stock. As well as delivering the full electrification of the East Kilbride corridor, the project will also deliver enhanced station facilities at East Kilbride and the construction of the new, relocated Hairmyres station with enhanced facilities, which will be transformational in providing a bus interchange, park and ride and active travel hub for passengers along this vital route. Step free access is to be provided at both these stations, and Giffnock station, enhancing accessibility for passengers.

How does the project contribute to Local Economic Development: To be confirmed following FBC approval and Network Rail's engagement with contractors.

Project: Levenmouth Rail project

How does the project support the Scottish Government's Climate Change Targets: The project will contribute to the Transport Scotland's National Transport Strategy target of a reduction in carbon emissions by 75% compared to the baseline by 2030 and decarbonisation by 2035, as well as towards net-zero greenhouse gas emissions by 2045. The project has the opportunity to encourage modal shift from private car to rail, especially for journeys within Levenmouth, contributing to reducing carbon emissions. The project will provide opportunities to increase the sustainable mode share and support a reduction in carbon emissions.

How does the project support the three themes of the Scottish Government's Infrastructure Investment Plan Strategic Themes: New opportunities for travel will be opened up to provide access to additional jobs, educational facilities and connectivity for leisure activities, accessibility and other local attractions. The project will also increase the attractiveness of Leven for increased economic activity and tourism through increased labour market participation and productivity uplift.

How does the project contribute to Local Economic Development: The reinstatement of Levenmouth Rail Line will provide the area with a major boost to economic sustainability

and connectivity. It will deliver opportunities for local people - unlocking access to education, culture, entertainment and employment options, as well attracting new business and investment. This is further enhanced by the £10 million Levenmouth Reconnected Programme which seeks to maximise the economic and social opportunities presented by the new Levenmouth Rail Line.

Project: Inverness Airport Station

How does the project support the Scottish Government's Climate Change

Targets: The project's outputs will enable airport passengers and employees to reach the airport via public transport with lower per capita CO₂ emissions than by travelling to the airport by car.

How does the project support the three themes of the Scottish Government's

Infrastructure Investment Plan Strategic Themes: By providing a greener method for people to travel to Inverness Airport, the project will be helping to enable the transition to Net Zero Emissions and Environmental Sustainability. By helping to bring people to the Inverness Airport Business Park, the project will be driving inclusive economic growth and boosting productivity and competitiveness. By providing a station for the nearby new town of Tornagrain, the project will be contributing to building resilient and sustainable places.

How does the project contribute to Local Economic Development: Network Rail (NR) and BAM, NR's principle contractor for the project, both employ graduate trainees and take on apprentices. Project will help bring people to Inverness Airport Business Park, driving inclusive economic growth and boosting productivity and competitiveness

Project: Barrhead Rail Enhancement

How does the project support the Scottish Government's Climate Change Targets:

The project aligns with [Scotland's 2018-2032 Climate Change Plan update](#). It also takes climate action; helping to deliver the net-zero target, adapting to the effects of climate change and promoting greener, cleaner choices. Decarbonised corridors will help to deliver the net-zero target. Achieving broader transport decarbonisation, through mode shift resulting from increased service frequency between Barrhead and Glasgow, will further help to deliver the net-zero target.

How does the project support the three themes of the Scottish Government's

Infrastructure Investment Plan Strategic Themes: The scheme is going to deliver the following outcomes:

- Decarbonised railway on the Glasgow to Barrhead corridor. Delivery of Glasgow to Barrhead decarbonisation is the first stage of electrification on the GS&W freight trunk route. In addition, the electrification of the Glasgow to Barrhead corridor is required to:
- Deliver on STPR2 commitments
- Act as a key enabler to the wider decarbonisation strategy
- Support East Kilbride route decarbonisation
- Enable interim decarbonisation to Kilmarnock via battery electric trains
- Greener, quieter, comfortable, reliable electric trains
- Increase in passenger capacity via new Strathclyde Fleet (arrives 2026/27)

- Enhanced accessibility opportunity across all stations

How does the project contribute to Local Economic Development: Network Rail's contractors are undertaking community engagement with schools which is ongoing. The contractor is working with Cleeves Primary School to progress requirements and timescale for improving the outdoor play area and trim trails. A contractor has been contacted to supply and install the new playground structures. Volunteers are in the process of being arranged to tidy up vegetation works in playground before new playground structures installed.

Project: Borders Railway Decarbonisation

How does the project support the Scottish Government's Climate Change

Targets: The National Transport Strategy 2 (NTS2) was published in February 2020 and outlines the vision for Scotland's transport system over the next 20 years. One of the 4 priorities on NTS2 is taking climate action. The scheme forms part of the Rail Services Decarbonisation Action Plan, which is the plan to decarbonise rail traction in Scotland. The project thus contributes towards Net Zero and Environmental Sustainability by reducing carbon emissions from rolling stock.

How does the project support the three themes of the Scottish Government's

Infrastructure Investment Plan Strategic Themes: The project is a direct enabler for the transition to Net Zero Emissions and contributes to environmental sustainability, through its contribution to decarbonisation of the rail network. The project supports the SPP (Scottish Planning Policy) overriding goal of achieving sustainable development by providing a high-quality rail connection to strategic locations such as Edinburgh. This will contribute towards the policy of driving inclusive economic growth.

How does the project contribute to Local Economic Development: The project will be delivered by Network Rail which employs graduate trainees and has an extensive apprentice training programme.

Project: Fife Decarbonisation

How does the project support the Scottish Government's Climate Change

Targets: The National Transport Strategy 2 (NTS2) was published in February 2020 and outlines the vision for Scotland's transport system over the next 20 years. One of the 4 priorities on NTS2 is taking climate action. The scheme forms part of the Rail Services Decarbonisation Action Plan, which is the plan to decarbonise rail traction in Scotland. The project thus contributes towards Net Zero and Environmental Sustainability by reducing carbon emissions from rolling stock.

How does the project support the three themes of the Scottish Government's

Infrastructure Investment Plan Strategic Themes: The project is a direct enabler for the transition to Net Zero Emissions and contributes to environmental sustainability through its contribution to decarbonisation of the rail network. The project supports the

SPP (Scottish Planning Policy) overriding goal of achieving sustainable development by providing a high-quality rail connection to strategic locations such as Edinburgh, Perth and Dundee. This will contribute towards the policy of driving inclusive economic growth.

How does the project contribute to Local Economic Development: The project will be delivered by Network Rail which employs graduate trainees and has an extensive apprentice training programme.

Project: Markle Level Crossing Bridge Replacement

How does the project support the Scottish Government's Climate Change

Targets: The National Transport Strategy 2 (NTS2) was published in February 2020 and outlines the vision for Scotland's transport system over the next 20 years. One of the 4 priorities on NTS2 is taking climate action. The scheme is an enabler for East Linton Station and subsequently encourages more sustainable trip making. The project thus contributes towards Net Zero and Environmental Sustainability by enabling modal shift from road to rail.

How does the project support the three themes of the Scottish Government's

Infrastructure Investment Plan Strategic Themes: The development supports the SPP (Scottish Planning Policy) overriding goal of achieving sustainable development by providing a high-quality rail connection to strategic locations such as Edinburgh (north). This will contribute towards the policy of driving inclusive economic growth. The new station will also facilitate new sustainable housing developments at East Linton, thus contributing the theme of Building Resilient and Sustainable Places.

How does the project contribute to Local Economic Development: The project will be delivered by East Lothian Council with Balfour Beatty PLC as the main contractor. Balfour Beatty PLC employs graduate trainees and has an extensive apprentice training programme.

Project: CMAL - Two new 100 metre ferries

How does the project support the Scottish Government's Climate Change

Targets: This project aligns with Scotland's 2018-2032 Climate Change Plan Update. Contributing towards a reduction in carbon emissions by the use of Liquefied Natural Gas (LNG) and bunkering facilities at ports. LNG is a proven technology, utilised by maritime sectors in a number of other countries, including Norway. The LNG facility will be built in line with industry and safety requirements. LNG has a reduced GHG (Greenhouse Gas) emission compared to MGO (Marine Gas Oil) of c.20-25%.

How does the project support the three themes of the Scottish Government's

Infrastructure Investment Plan Strategic Themes: LNG has significant local air quality benefits with shore-powering providing for overnight powering of vessels, with significant local noise and air quality improvements for residents and crew. The project will act as a

key enabler of the wider net-zero vessel strategy and there will be greener, quieter, reliable vessels on Scotland's ferry network

How does the project contribute to Local Economic Development: These new ferries will improve the ferry service provision to island communities. It is anticipated these new ferries will boost economic sustainability through tourism. In addition, they will also maintain and enhance social and cultural wellbeing and the sustainability of these communities. This can also include direct access to jobs and access to services such as health and education.

Sector: Health

Project: NHS Grampian - Aberdeen Baird Family Hospital and ANCHOR Centre

How does the project support the Scottish Government's Climate Change

Targets: The targets for both Thermal and Electrical load for both new buildings have been set at a level which is lower per m² than the buildings which they are replacing. The buildings will be sourcing their heat from a Low and Zero Carbon (LZC) district heating scheme from the campus centrally in the form of a CHP (Combined Heat and Power). Flood risk assessment was undertaken and informed the design. The Board works towards aligning itself with all government legislation and adhering to the targets.

How does the project support the three themes of the Scottish Government's Infrastructure Investment Plan Strategic Themes:

Improvements in energy performance of the new facilities will support the delivery of national emissions reduction targets and the NHS Grampian's Carbon Management Plan. The priority of NHS Grampian to tackle health inequalities has been recognised in the development of this project for example: the use of technology to deliver services in local communities where possible; promoting home or community based treatment, and the creation of Community Maternity Units – in Aberdeen, Inverurie and Peterhead.

How does the project contribute to Local Economic Development: Community benefits recorded as achieved include:

- Number of new jobs supported by project on a Quarterly basis - 6
- Advanced Health and Safety Training - Principal Supply Chain Partners (PSCP) to deliver H&S training to advanced level - 20
- Meet The Buyer Events - Focus on Tier 2 supply chain - 2
- Apprenticeship in employment on project at any level (Existing Apprentices) - 15
- Apprenticeship Completions - whilst working on project - 1
- Graduate Employment - 4
- Employment Opportunities - minimum of 26 weeks and aimed at and filled by New Entrants - 6
- Work Experience Placements - 7
- School visits (primary and secondary) - presentation on careers and project - 102

Project: National Waiting Times Centre Board - Hospital Expansion Programme - Phase 2

How does the project support the Scottish Government's Climate Change

Targets: Project delivered in line with current sustainability guidance, BREEAM 2018. Targets agreed with NSS / HFS (National Services Scotland / Healthcare Frameworks Scotland) as part of key stage reviews.

How does the project support the three themes of the Scottish Government's Infrastructure Investment Plan Strategic Themes:

The building will be energy efficient with energy targets agreed. Economic growth will be driven by use of local supply chain where appropriate - contractor has community benefit criteria to meet in this regard. Phase

2 of the Hospital Expansion Programme will increase capacity and provide better long-term service provision.

How does the project contribute to Local Economic Development: Project will provide opportunities on Employment, Skills & Training, Health Benefit Outcomes, Environmental issues, SME & 3rd Sector Involvement in line with our board policies Better Health Through Employment, Sustainability / Environmental and Procurement Strategy.

Project: NHS Grampian - National Treatment Centre

How does the project support the Scottish Government's Climate Change

Targets: The targets for thermal and electrical load for each building have been set at a level which is lower per m² than the buildings which they are replacing. Flood risk assessment was undertaken and informed the design. The Board works towards aligning itself with all government legislation and adhering to the targets.

How does the project support the three themes of the Scottish Government's Infrastructure Investment Plan Strategic Themes: Improvements in energy performance of the new facilities shall support meeting national emissions reduction targets and the NHS Grampian's Carbon Management Plan. The priority of NHS Grampian to tackle health inequalities has been recognised in the development of this project.

How does the project contribute to Local Economic Development: The development is of a significant scale and local jobs will be secured and new jobs provided as a result.

Project: NHS Lothian - National Treatment Centre

How does the project support the Scottish Government's Climate Change Targets: NHS Lothian fully accept the challenge to design hospitals to achieve net zero greenhouse gas emissions over their lifetime; embracing their construction, operation and eventual end of life and disassembly. The Board's aim is to minimise operational and embodied energy and associated carbon emissions, which then minimises the cost of offsetting the associated carbon through zero carbon generation, zero carbon energy tariffs or recognised energy offsetting schemes. All steps will be taken to ensure the facility is future proofed to accommodate early adoption of appropriate technology and infrastructure.

How does the project support the three themes of the Scottish Government's Infrastructure Investment Plan Strategic Themes: The National Treatment Centre will have a significant positive impact on project stakeholders (NHS Lothian, Regional Boards, patients, staff and partners) and on the wider economy, environment and communities. The identification of benefits contributing to a socially inclusive, 'net zero carbon economy' is key in the decision making process.

The Scottish Government's National Performance Framework has been used to provide a structure to the identification, incorporation and assessment of these wider economic

benefits to demonstrate the benefit of the project to communities and economy of the Lothians.

How does the project contribute to Local Economic Development: The project will provide skilled employment opportunities for the local area through its lifecycle from construction to operation, with Key Performance Indicators (KPIs) as part of the Framework Contract. It will also attract skilled workers to the area further contributing to the development of the local economy.

Project: NHS Lothian - Re-provision of Eye Services

How does the project support the Scottish Government's Climate Change Targets: NHS Lothian fully accept the challenge to design hospitals to achieve net zero greenhouse gas emissions over their lifetime; embracing their construction, operation and eventual end of life and disassembly. The Board's aim is to minimise operational and embodied energy and associated carbon emissions, which then minimises the cost of offsetting the associated carbon through zero carbon generation, zero carbon energy tariffs or recognised energy offsetting schemes. All steps will be taken to ensure the facility is future proofed to accommodate early adoption of appropriate technology and infrastructure.

How does the project support the three themes of the Scottish Government's Infrastructure Investment Plan Strategic Themes: The Re-provision of Eye Services will have a significant positive impact on project stakeholders (NHS Lothian, Regional Boards, patients, staff and partners) and on the wider economy, environment and communities. The identification of benefits contributing to a socially inclusive, net zero carbon economy is key in the decision making process. The Scottish Government's National Performance Framework has been used to provide a structure to the identification, incorporation and assessment of these wider economic benefits to demonstrate the benefit of the project to communities and economy of the Lothians.

How does the project contribute to Local Economic Development: The project will provide skilled employment opportunities for the local area through its lifecycle from construction to operation, with KPIs as part of the Framework Contract. It will also attract skilled workers to the area further contributing to the development of the local economy.

Project: NHS Highland – National Treatment Centre

How does the project support the Scottish Government's Climate Change Targets: The National Treatment Centre (NTC-H) will provide elective surgery to the population of the North of Scotland. This will reduce the number of journeys taken by patients and their families/carers from the North of Scotland to access services in the central belt. The NTC-H will provide an energy efficient building with a Building Management System, which supports effective management of the building. The site supports 'active travel' through provision of secure bicycle shelters and staff changing facilities. The site is designed to allow access for local bus companies, and a bus shelter is included on the Campus. There are Electric Vehicle charging points included for use by staff/patients/visitors.

The NTC-H delivers a significant improvement on current, dated facilities. The NTC-H is targeting a BREEAM 'Very Good' rating, and this was agreed with HFS during the NHS Scotland Design Assessment Process.

How does the project support the three themes of the Scottish Government's

Infrastructure Investment Plan Strategic Themes: Improved energy efficiency will support the drive to reduce carbon consumption, and the site will deliver improved active travel infrastructure and brings public transport virtually to the front door. The new hospital will be far more resilient in terms of internal services, with increased capacity and compliant spaces delivering a more reliable, modern, and dignified setting for patients, which can accommodate new developments in technology.

The NTC-H is located on the Inverness Campus. From the outset, the NTC-H project was developed in collaboration with local partners (Highland and Islands Enterprise (HIE) and University of Highlands and Islands (UHI)) to maximise opportunity for joint investment, innovation, and develop collaborative arrangements for training, education, research & development. This collaborative working aims to contribute to economic and social needs of rural and island areas through improving access for education and training, creating opportunity for research and development companies to work with clinicians and patients, and for the location of the NTC-H to support the aims and objectives of the Inverness Campus developed by HIE.

The NTC-H provides healthcare staff with an opportunity to work with a 'best in class' target operating model within a modern, compliant, and technologically enabled environment which will provide an attractive proposition in recruiting and retaining staff, thus contributing to the sustainability of the Highland region.

How does the project contribute to Local Economic Development: Providing a new National Treatment Centre in Inverness will contribute to recruitment and retention of staff within the Highlands. The construction project has contributed significantly to local business and in particular construction contractors and material suppliers. The contractor building the NTC-H are delivering on their Community Benefits obligations which include:

- Providing opportunities to support local civil engineering students at UHI
- Membership of the Inverness College Industry Advisor Board
- A 5-week virtual work experience for local secondary schools
- Engaging with local Youth Employment Services Group.

Project: NHS Fife - Elective Orthopaedic Centre

How does the project support the Scottish Government's Climate Change

Targets: Project delivered in line with current sustainability guidance - BREEAM 2018. Targets agreed with NSS / HFS (National Services Scotland / Healthcare Frameworks Scotland) as part of key stage reviews.

How does the project support the three themes of the Scottish Government's

Infrastructure Investment Plan Strategic Themes: The building will be energy efficient with energy targets agreed with NSS and HFS as part of the key stage review process. The building makes use of existing energy sources from the retained estate. A wider low

carbon, sustainable masterplan for the retained estate will be pursued as part of the Board's property and asset management strategy.

The new centre is being created to rectify environmental issues with the existing facility and to provide sufficient capacity for the local people of Fife over the longer-term. The new facility may also offer opportunities for Regional partners to make use of any residual capacity providing more orthopaedic resilience within Scotland overall.

How does the project contribute to Local Economic Development: In the short term, the project will support economic growth through construction activity in the local market supporting local supply chains and encouraging development opportunities for the young via schools and colleges. A community benefits register will help to deliver these aims. In the longer-term, the new centre with a third theatre and supporting outpatient and inpatient accommodation will help to drive job growth within orthopaedics.

Project: NHS Forth Valley - National Treatment Centre

How does the project support the Scottish Government's Climate Change Targets: Will align to an existing hospital project agreement and tie into existing infrastructure.

How does the project support the three themes of the Scottish Government's Infrastructure Investment Plan Strategic Themes: Reducing Patient Waiting Times while also localising treatments.

How does the project contribute to Local Economic Development: As a modular building, manufacture will be offsite with enabling work and construction separately as well as car parking construction and amendments. Opportunities for local economic development are to be confirmed with the SPV (Special Purpose Vehicle) and contractors.

Project: NHS Western Isles – Barra and Vatersay Community Campus

How does the project support the Scottish Government's Climate Change Targets: To be confirmed once amended OBC has been approved.

How does the project support the three themes of the Scottish Government's Infrastructure Investment Plan Strategic Themes: To be confirmed once amended OBC has been approved.

How does the project contribute to Local Economic Development: To be confirmed once amended OBC has been approved.

Project: NHS Greater Glasgow and Clyde - North East Hub

How does the project support the Scottish Government's Climate Change Targets: Glasgow City Council introduced a Gold Standard for Planning Applications in 2019 that similarly required net zero carbon developments. The design proposals for North

East hub and accompanying cost plans have been developed to achieve this through rigorous examination of design, specification and construction proposals. The current design will offer a zero-carbon heating by utilising air source heat pumps and utilising electricity generated by photovoltaic panels and green electricity from the grid. The building fabric includes passivhaus principles of high air-tightness requirements and heat recovery from ventilation systems. Triple glazing is used throughout with a presumption towards using natural light and natural ventilation where possible.

How does the project support the three themes of the Scottish Government's Infrastructure Investment Plan Strategic Themes: The success of this investment in enabling service transformation for the benefit of the local community will be demonstrable through delivery of these opportunities and benefits whilst also becoming integral to further regeneration plans for the area, fostering inclusive carbon net zero economic growth, producing an even more resilient community who have a focus on “place making”, becoming a fairer and more equal society, and reducing poverty and inequalities

How does the project contribute to Local Economic Development: A community investment group has been set up to help develop the social value plan for the North East Hub project. Key outcomes to date include:

- 2 new start employment opportunities have been created on site. These were advertised via Jobs and Business Glasgow and the transitional employment programme was utilised
- Education programme launch November 2021, supporting 13 pupils through their Foundation Apprenticeship at SCQF level 4 in Construction
- Helping Hands Initiative Competition launched July 202
- SME local business training, 2 events delivered during Q2 2021 to registered companies

Project: NHS Lothian - Oncology Enabling Projects, Edinburgh Cancer Centre

How does the project support the Scottish Government's Climate Change

Targets: The majority of the projects within the program are refurbishment projects with limited opportunity for implementation of the net zero carbon strategy. For the new build Linacc project the building has been design in line with the 'fabric first' approach achieving standards above Section 6 Building Regulations. Mechanical and Electrical proposals have incorporated energy efficient building services design features.

How does the project support the three themes of the Scottish Government's Infrastructure Investment Plan Strategic Themes: The project reinforces the commitment to a skilled workforce across a range of NHS services on the Western General Hospital. The refurbishment projects will provide a sustainable and resilient service for the local community.

How does the project contribute to Local Economic Development: The project will provide skilled employment opportunities for the local area through its lifecycle from construction to operation, with KPIs as part of the Framework Contract. It will also attract skilled workers to the area further contributing to the development of the local economy.

Project: NHS Ayrshire & Arran - National Secure Adolescent Inpatient Service

How does the project support the Scottish Government's Climate Change

Targets: Foxgrove has been designed to meet Section 6 of the current Scottish Building Regulations, including utilising the "hotbox" of existing boilers to provide a district heating system for Foxgrove. This is classed as an innovative way to reuse waste energy from the existing boilers.

How does the project support the three themes of the Scottish Government's

Infrastructure Investment Plan Strategic Themes: Recycled Waste (% Target to be set). Reduced Waste to Landfill (% of re-use inert material, Target to be set). Carbon Reduction (Car sharing scheme, training and awareness workshops to building users on efficient use of building, deliver cycling proficiency training).

How does the project contribute to Local Economic Development:

- Works Awarded by Value (5% of works awarded to SMEs by value)
- Work Awarded by Tendering Opportunities to SMEs (20%)
- Supplier Development e.g. Number of seminars (winning work, value management, risk management, PQQ bidding, Health and Safety, environmental stewardship etc)
- 1 Meet the Buyers Day
- 15 Training sessions provided to SMEs e.g. Number of seminars (leadership, supervisor, Health and Safety, presentation, BIM, bid training etc)

Project: NHS Tayside - Electrical Infrastructure Zone 2 - Radiotherapy, Maternity and West Ward Block

How does the project support the Scottish Government's Climate Change Targets:

Energy efficient lighting to all new areas covered by the project and the area has been designed to the Scottish Technical Standards in terms of U-values and Air Leakage.

How does the project support the three themes of the Scottish Government's

Infrastructure Investment Plan Strategic Themes: Project incorporates the following within the design (a) Transformers that incorporate amorphous core technology. The Wilson e3 transformers proposed have the lowest combined losses that meet EU Eco-Design requirements (b) Replacement of the existing 50-year-old generator with modern efficient machines (c) Sedum ('Living') roof – Slows down water going to drain and absorbs CO₂. (d) SUDS – Installed over part of the site adjacent to the new generator building.

The Principle Supply Chain Partner (PSCP) has a significant number of SME contractors from the local geographical area throughout the duration of the project. 'PSCP' has provided a number of their own staff for volunteering days to upgrade an existing hospital courtyard for future use by patients and staff. Project is upgrading in part the 50-year-old HV Network along with N+1 resilience providing 100% back up of all electrical services within the zone via the installation of 2 no. 1 MVA generators.

How does the project contribute to Local Economic Development: There a number of community benefits created through this project such as New Employment Opportunity, apprentices, work experience opportunities and local charity fundraisers.

Project: NHS Tayside - Ninewells Electrical Infrastructure Zone 3

How does the project support the Scottish Government's Climate Change Targets: The Design Team are currently preparing high level designs (incorporating lesson from Zone 1 and Zone 2) and technical solutions to take account of the net zero greenhouse gas emissions reduction targets which will in turn confirm final location and scope of the project to inform any contribution to Climate Change Targets.

How does the project support the three themes of the Scottish Government's Infrastructure Investment Plan Strategic Themes: This will be confirmed once a brief has been confirmed for this Zone and designs have commenced.

How does the project contribute to Local Economic Development: As this is a Framework Scotland 3 project, there a number of community benefits created through this project such as New Employment Opportunity, apprentices, work experience opportunities and local charity fundraisers.

Project: NHS Ayrshire & Arran - National Treatment Centre - Ayrshire & Arran

How does the project support the Scottish Government's Climate Change Targets: Net Zero policy added to project brief.

How does the project support the three themes of the Scottish Government's Infrastructure Investment Plan Strategic Themes: Driving Inclusive Growth - NHS Ayrshire & Arran are an anchor institution within the Ayrshire Community Wealth Building strategy. Procurement will target economic opportunities within Ayrshire where possible and incorporation of community benefits. Location adjacent to University Hospital Ayr is consistent and supportive of sustainable places. UHA is proposed to be a centre of elective care under the Caring for Ayrshire strategy.

How does the project contribute to Local Economic Development: This will be developed through the preparation of the FBC.

Project: NHS Greater Glasgow and Clyde - Radionuclide Dispensary

How does the project support the Scottish Government's Climate Change Targets: Achieving net zero greenhouse gas emissions presents a particular challenge to specialist high energy facilities such as the RND (Radionuclide Dacryography) Radionuclide Dispensary. This challenge has been tackled in three areas:

- Consider new production technology and assess if this could offer improved service and support a reduced energy model

- Review environmental conditions set out in the URS to consider where these can be challenged to reduce the energy impact
- Ensure that both the building fabric and services are as energy efficiency as possible

Computer simulation of the energy model is provided by the TM54 methodology for forecasting the operational energy efficiency of a building. The current proposals have been fully modelled and evaluated by a specialist consultancy team. The executive summary to the output report highlights that the proposals would result in a highly efficient building, which offers significant improvements on established benchmarks derived from the UK Green Building Council. The model indicates that the combined whole building of Production areas (hot zone) and support areas (cold zone) offer a 57% improvement over the appropriate benchmark.

How does the project support the three themes of the Scottish Government's Infrastructure Investment Plan Strategic Themes: The project will have no reliance on fossil fuels and will be net zero carbon emission in operation, £20 million construction investment will help support local suppliers and contractors, and building on the Gartnavel site will bring the manufacturing facility onto the site where the product is used locally and close to the motorway network to allow easy transportation to other areas of Scotland.

How does the project contribute to Local Economic Development: The project will deliver several local economic benefits included the use of SMEs (Small and medium-sized enterprises) and local supply chains. The project will also adopt the use of the social value portal to generate and monitor wider community benefits including apprentices and local employment opportunities.

Sector: Further Education

Project: Dunfermline Learning Campus (College element)

How does the project support the Scottish Government's Climate Change Targets:

In December 2022, the Fife College element of the Dunfermline Learning Campus was approved to progress to the construction stage. The new Dunfermline Learning Campus Fife College building will deliver on the Net Zero Public Sector Building Standard - this voluntary Standard supports public bodies to meet their net zero commitments for their new build and major refurbished infrastructure projects.

Adopting the Hybrid plus solution will enable the College to implement a range of energy saving measures, in particular to the building elements during construction, which would otherwise be unavailable once the building is completed and in-use. The college DLC project aims to be an exemplar building for the college sector in Scotland and beyond, setting the standard for future college developments.

By progressing with the Hybrid plus design, it will deliver a highly energy efficient building with low embodied carbon which will enable the College to:

- achieve their net zero emissions target for the campus by 2030
- deliver operational costs of circa 36% less than that being experienced on recently completed college projects and over 32% better than a design to meet current legislation
- allows the College to deliver on the Scottish Government's Heat in Buildings strategy by delivering next zero heat at the Campus by 2030
- delivers upon the Government targets for 2045, setting a sector exemplar model for embodied and operational energy, and deploy
- an all-electric solution adopted will allow the College to take advantage of green energy and avoid the inevitable increased operational costs that gas fuelled buildings will face in the future

How does the project support the three themes of the Scottish Government's Infrastructure Investment Plan Strategic Themes:

Transition to a Net Zero Economy and Environmental Sustainability: Fife College is a pathfinder project for Scottish Government Net Zero Public Sector Building Standard (NZPSB Standard). The College has followed through and produced a Hybrid plus solution (as described under climate change column).

Driving inclusive Economic Growth: The new college campus provides a modern learning facility that is located in the centre of an area that is the fastest population growth in Scotland. The new campus will significantly enhance the degree of collaboration between senior phase school and the College, particularly through the implementation of Learner Pathways which will be delivered jointly by the schools and College and supported by external stakeholders e.g. Skills Development Scotland (SDS), NHS Fife. It will also provide a step change to increase opportunities for employer and industry engagement through spaces offering more flexible, blended and on-line delivery.

The planned digitalisation and innovation spaces will support engagement activities, knowledge transfer and curriculum alignment with industry needs. The new campus will

further enhance the College's ability to engage with university partners in both teaching, innovation and knowledge exchange. In short it will provide Fife College with a transformative and future proofed Place of Lifelong Learning.'

Building Resilient and sustainable places: The FBC is for a new campus for West Fife, as part of the wider DLC campus development, working in partnership with Fife Council. The new state-of-the-art campus has been planned to deliver against the needs of the local community and priority national skills needs and will include:

- Industry-standard workshops for engineering and construction
- Centres of excellence for engineering, construction, the built environment and sport
- A university hub, allowing learners to study to degree level with a range of university partners on campus
- Conference facilities, enabling the College to engage with national, regional and local businesses and provide catered conferencing events
- An innovation and events hub, to cater for College, industry and community events
- A multi-court sports pavilion, allowing the College to expand and diversify provision in sport and wellbeing for students and the local community
- Year-round outdoor learning spaces throughout the campus to be accessible and used by students and locals alike

How does the project contribute to Local Economic Development: The new Fife College campus will contribute to the economy of the Region as a whole by:

- ensuring College is capable of responding to the changing demographics of the region
- providing education and training required at the SCQF levels identified by labour market intelligence as the ones most likely to be in demand for future jobs;
- supporting all of the region's key employment sectors
- providing the region with a platform to greatly enhance its capacity to deliver innovation and product development in key areas, including health and care and STEM (science, technology, engineering and mathematics)

The College has adopted the Scottish Futures Trust's TOMs (Themes, Outcomes and Measures) for managing and delivering social and economic value through the project and they expect to deliver benefits in excess of £15 million.

Sector: Justice

Project: HMP Highland

How does the project support the Scottish Government's Climate Change

Targets: The Scottish Prison Service (SPS) will actively monitor the environmental and greenhouse gas emissions impact of the new facility. Measures are planned for the next design stage to further align HMP Highland with Scotland's Net Zero emissions reduction targets.

How does the project support the three themes of the Scottish Government's

Infrastructure Investment Plan Strategic Themes: SPS is working with the contractor and their design team to develop the design of the new facility to incorporate energy reducing measures, utilising a range of available low carbon energy sources and to facilitate future substitution with zero carbon energy sources.

The digital infrastructure proposed will assist SPS in advancing the digital transformation of its Estate and business and provide wider access to digital services for those in our care and their families. To enhance digital inclusion, this will include having the digital infrastructure to enable the people in our care to access digital services as they are enabled. Such services are being developed within SPS's Digital Strategy.

The replacement of the current HMP Inverness will expand the provision of custodial services available within the local community and reduce reliance on accommodation in other locations (principally Central Belt).

How does the project contribute to Local Economic Development: SPS and Balfour Beatty's (the contractor) community benefits team continue to nurture strong relationships with our supply chain and community agencies. In particular, they have been working in partnership with Barnardo's to support the local CITB (Construction Industry Training Board) funded 'Scottish Academy for Construction Opportunities' programme (SACO). As a result of this work, there has been 2 work placements for 16+ candidates on mechanical and electrical with the G&A Barnie group. The team also supported local school visits to the site, which allowed students to see some of the artefacts and witness the archaeological excavations. The project has also been working with Baker Hicks who have just started a UHI (University of the Highlands and Islands) student on a 14-week industrial placement, studying Architectural & technology.

Project: National Facility for Women Offenders

How does the project support the Scottish Government's Climate Change Targets:

SPS will actively monitor the environmental and greenhouse gas emissions impact of the new facility. The design of the new facility incorporates low carbon energy sources (ground source heating and PV (photovoltaic) arrays) and energy use reduction measures

How does the project support the three themes of the Scottish Government's

Infrastructure Investment Plan Strategic Themes: The digital infrastructure proposed will assist SPS in advancing the digital transformation of its Estate and business and provide wider access to digital services for those in our care and their families. To enhance

digital inclusion, this will include having the digital infrastructure to enable the people in our care to access digital services as they are enabled. Such services are being developed within SPS's Digital Strategy.

The development supports sustainable and resilient places by allowing delivery of custodial and support services at a local level, rather than reliance on remote or regional service provision, and provide access to community based work and training opportunities.

How does the project contribute to Local Economic Development: Following the easing of COVID restrictions, SPS, in conjunction with Morrison Construction, have sought to re-engage the community benefits where possible. Morrison Construction Community Benefits Team continues to liaise with SPS on a monthly basis to implement their 'pathways to employment' programme in partnership with Wise Group to facilitate the women of Cornton Vale into employment. In addition, the contractor has liaised directly with the women currently accommodated in the existing HMP Cornton Vale, to develop proposals for therapeutic gardens and landscaping which the women will themselves implement in the new establishment on completion. The contractor continues to make direct contributions to local community groups, most recently the with the Stirling Interfaith Community Justice Group.

Project: HMP Barlinnie Programme of Works

How does the project support the Scottish Government's Climate Change Targets: HMP Barlinnie Programme of Works primarily consists of internal fit out works.

How does the project support the three themes of the Scottish Government's Infrastructure Investment Plan Strategic Themes: This programme enhances the care available and experience of those in custody within Barlinnie and reduces the issues experienced in Barlinnie due to the ageing infrastructure while its replacement, HMP Glasgow, is developed. The investment is targeted at improvements in healthcare provision and reception processes that can have a major impact on a person's initial contact with a custodial environment and subsequent engagement.

How does the project contribute to Local Economic Development: The appointed contractor has to deliver demonstrable community benefits as part of their building contract and has held workshops with a number of stakeholders and parties. The contractor has engaged with Families Outside (a National charity working with families of those in custody) to provide training in software packages for those that they work with. Further engagement is ongoing.

During Scotland Apprenticeship Week in March 2021, the contractor worked with Developing the Young Workforce and Skills Development Scotland promoting apprenticeships in construction and during Women in Construction Week promoted careers in construction for women and engaged with Job Centre Plus with on-line events. Further engagement is ongoing.

The SPS operational team at HMP Barlinnie has provided additional information to assist the contractor in making further contact with other external stakeholders, not previously identified in their benefits plan, to continue their community engagements.

Sector: Rural and Environment

Project: RBGE - Edinburgh Biomes

How does the project support the Scottish Government's Climate Change

Targets: A core benefit of the programme will be that building and energy systems will contribute to meeting the Scottish Government targets for emissions by reduction of carbon emissions of 17% over the asset life cycle.

How does the project support the three themes of the Scottish Government's

Infrastructure Investment Plan Strategic Themes: The programme will protect and enrich the National Botanical Collections, which are important for global plant conservation and maintaining the discovery science required to better understand and improve sustainability and help tackle the Biodiversity Crisis and Climate Emergency.

The RBGE (Royal Botanic Garden Edinburgh) Biomes will provide world-class displays and facilities that are key in supporting the public's understanding of the need to respond to the Biodiversity Crisis and Climate Emergency and raising associated national and international reputation. The outcomes will deliver economic, circular economy and societal benefit by reducing RBGE's carbon footprint and leading on carbon management and environmental public engagement projects arising from Edinburgh Biomes to encourage wider behaviour change.

Programme will provide fit-for-purpose facilities to ensure that RBGE and Scotland continues to deliver world leading, innovative and high impact plant and conservation research. - Facilities will deliver a legislatively compliant and future adaptive Plant Health Suite (PHS) that enhances and accelerates research into current and near threat plant pests and pathogens and achieves the highest possible standards of biosecurity for Scotland.

A revitalised visitor experience, increasing the diversity, number and experience of community, educational, family, and individual users through improved interpretation and more inclusive facilities. Building and energy systems that will contribute to meeting the Scottish Government targets for emissions by reduction of carbon emissions of 17% over the asset life cycle. Forecast to reduce annual energy consumption costs by £250,000 per annum.

How does the project contribute to Local Economic Development: The project is forecast to make a significant contribution to Scotland's green recovery. The total economic benefit of the project construction is estimated at £150 million. It will also support the growth of regional businesses, with over £50 million to be spent in local supply chain through contracts.

Forecast to create over 100 green jobs per annum, throughout construction, and support sector and locality-based employment, and skills development in collaboration with partners. Planned provision of wider employment opportunities including apprenticeships, internships, S5 and S6 school release and career placements to kick start green/urban upskilling and all associated community benefits for the duration of the project and beyond.



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