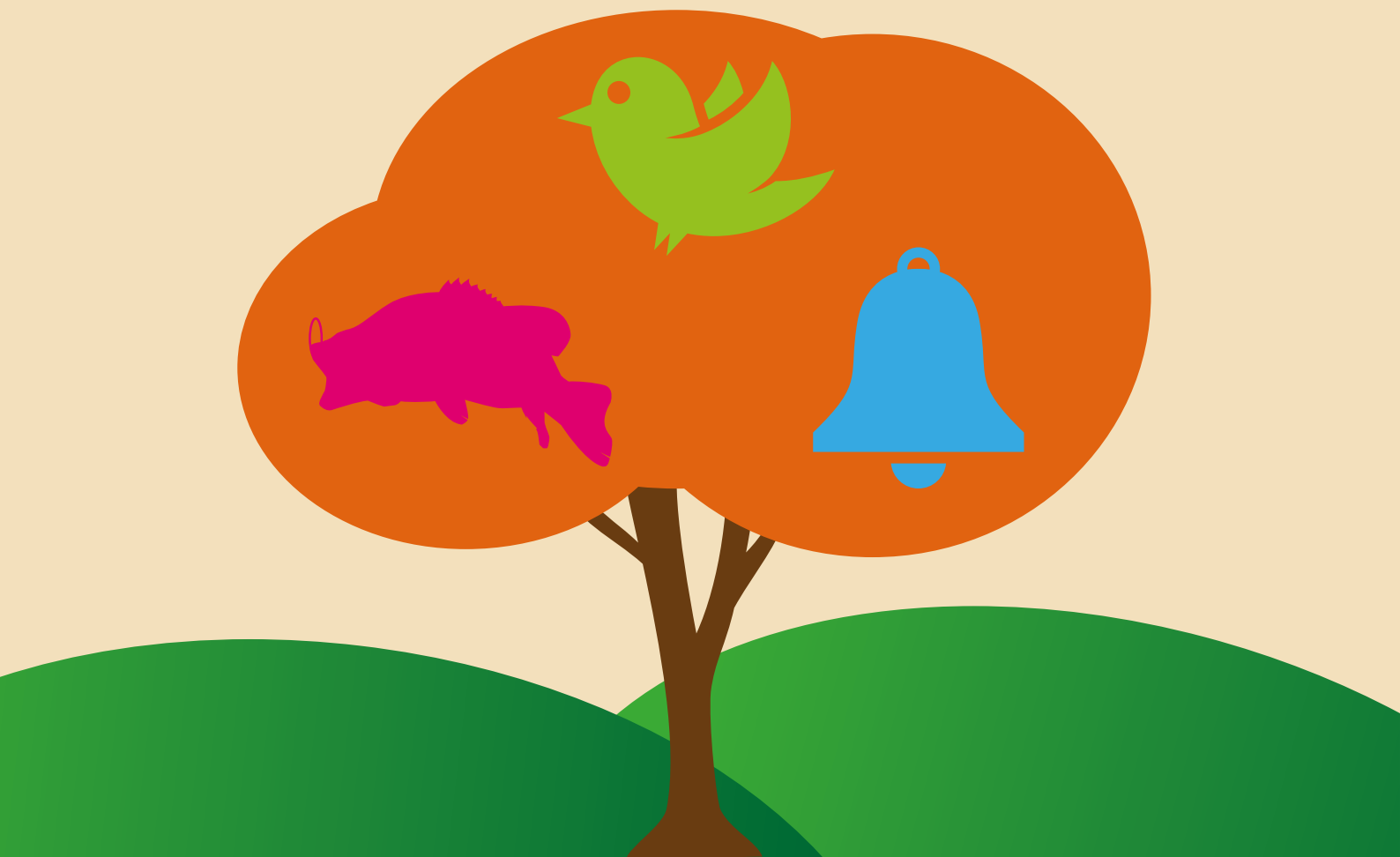




GLASGOW GREEN DEAL

Our roadmap and call for ideas



towards equitable, net zero carbon,
climate resilient living by 2030



 [The recent IPCC report] is a code red for humanity. The alarm bells are deafening, and the evidence is irrefutable: greenhouse gas emissions from fossil-fuel burning and deforestation are choking our planet and putting billions of people at immediate risk. Global heating is affecting every region on Earth, with many of the changes becoming irreversible. 

Antonio Guterres, UN Secretary General

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Foreword



Councillor Susan Aitken
Leader of the Council

I'm delighted to be sharing this roadmap for the Glasgow Green Deal – our 9-year mission to transform Glasgow's economy to tackle the climate emergency. I know Glaswegians are concerned about climate change - but they are also concerned about the near term – about their jobs, and the prospect of recovery from COVID-19.

The **Glasgow City Region Economic Recovery plan** committed to building a resilient, innovative and green future. But the step change in action required by the climate crisis must also address the existing vulnerability and fragility of people and our economy exposed by COVID-19 - addressing emissions and climate risk alongside poverty and inequality, creating high quality green jobs and opportunity in a redefined notion of what prosperity looks like in the 21st Century.

Therefore, the Glasgow Green Deal offers an integrated approach to solving these crises. Building on the substantial work already underway, it takes the City Council significantly beyond its comfort zone, raising our delivery ambitions in line with the science and committing to:

- placing a significant degree of control over that change in the hands of citizens and business most at risk from climate change;
- put in place the frameworks and certainty needed to bring forward the solutions at scale;
- deliver significant changes and innovation in our systems, institutions, processes, policies and investment choices; and
- scale investment in climate action into the billions needed, both directly by the City, and in partnership with Governments and business.

In doing so, the Green Deal seeks to deliver sweeping, structural change, in partnership with business, Government and communities. Whilst the challenge is daunting, we would do well to remember Glasgow has met similar challenges head on before. When 4,000 people died from Cholera in 1849, John Fredrick Bateman of the Glasgow Corporation Water Works constructed the aqueducts from Loch Katrine - a transformative response, which we have built on ever since, right up to the recent Smart Canal in Sighthill. Similarly, we should our take inspiration from culturally led regeneration. A response to post-industrial decline, the 1988 Glasgow Garden Festival, gave birth to the European Capital of Culture in 1990, Gallery Of Modern Art, the Commonwealth Games, the European Championships and most recently Channel 4's creative hub. The City is now a regular feature of major Hollywood blockbusters - a testament to decades of visionary thinking of civic renewal.

The scale of change towards a net zero carbon and climate resilient economy is orders of magnitude greater than the challenges our 'Glasgow Fathers' faced. Addressing the scale of the challenge at the same time as delivering economic restructuring and recovery requires us to innovate and collaborate like never before; to tap into and harness that same, visionary, aspirational and transformative spirit which has seen Glasgow prosper successfully over hundreds of years.

This will not be easy – and indeed no city has all the answers about what a new economic model looks like. But, acknowledging it is needed and beginning the journey is the hardest part. So, I hope this document gives you hope – hope that, along with others we can meet the defining challenge of the generation, and that Glasgow City Council is committed to playing its part. I look forward to hearing your thoughts on how we make it happen.



**Leader of the Council and
City Convener for Inclusive Economic Growth**



2 The need for a Glasgow Green Deal

Glasgow's economy, like all others, is operating beyond planetary boundaries which provide a safe space for citizens to thrive, with climate change the most significant and growing risk to our economy and our way of life. The need to decarbonise and build resilience is more urgent than we thought – with emissions having to halve globally by 2030 to achieve the goal to limit warming to 1.5°C. Glasgow has reduced its emissions by nearly half since 2005, but climate risks from global emissions are increasing and are projected to have impacts of 2.5% of the City's regional GDP per year by the 2070.

At the same time, the rules and norms guiding our economy are increasingly unfit for purpose, having widened inequality, and increased the insecurity of many over the last decade. The shock of COVID-19 has meant 80,000 people are at risk of unemployment at the end of furlough, with a disproportionate impact on young people and women – those most at risk of the climate crisis.



Efforts so far to solve these challenges have been done in isolation from each other and have been incremental. But the urgency of the science and situation mean the City, businesses and communities must now deliver a step change in the pace and scale of action. This must be at the system level, and deep rooted, tackling the links between emissions and climate risk, poverty, health, equity and justice, and our economic model.

This will not happen by chance. It needs concrete, coordinated action across public, private and third sectors, and all levels of Government, within a framework which creates the conditions for a transformation across the City which:

- **guides, scales up and accelerates public, third sector and private investments;**
- **spurs research and innovation in the City and beyond;**
- **provides the right signals to markets and creates new ones;**
- **enables locally led solutions from communities and businesses;**
- **supports citizens and communities in a just and equitable transition; and**
- **nurtures leadership and agency at all levels, reshaping our culture, institutions, governance and power relations.**

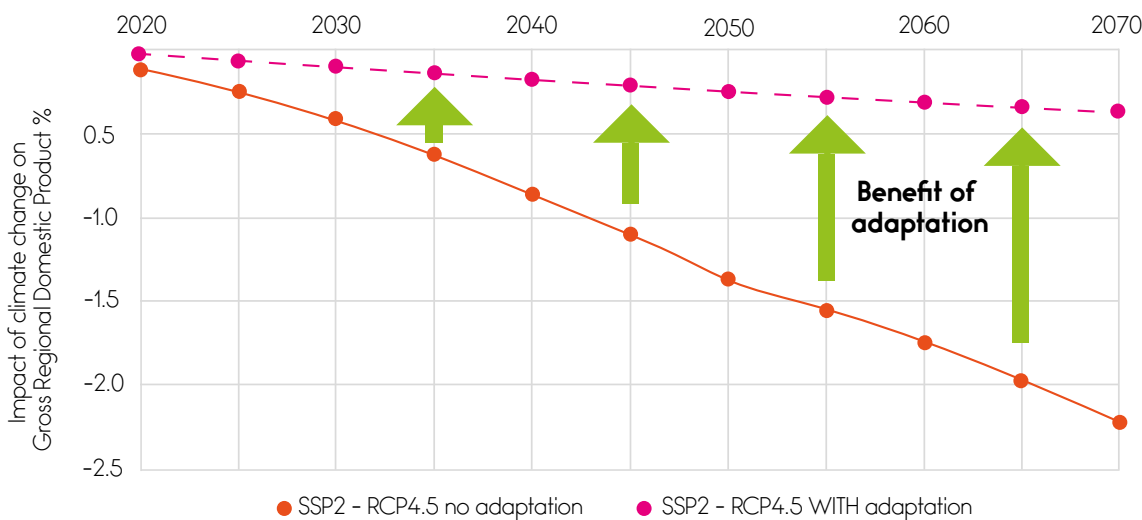
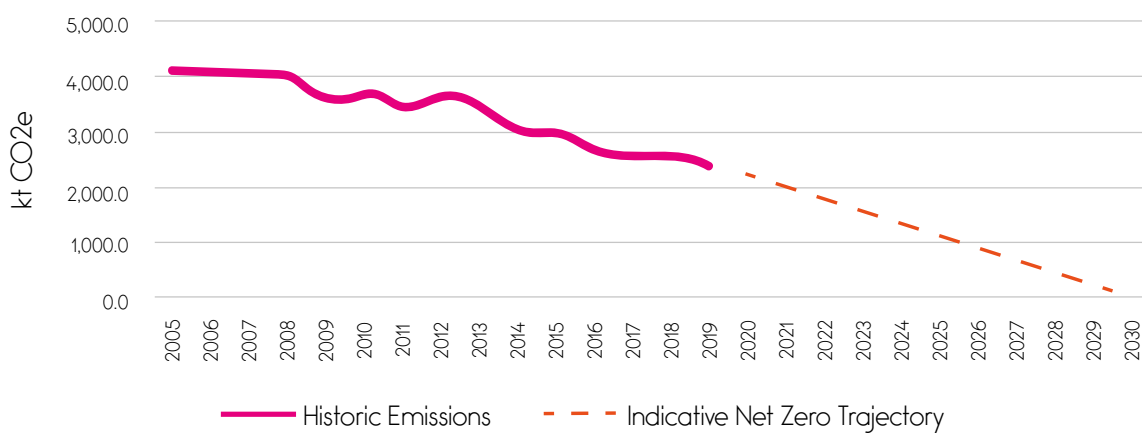


Fig 1: Historic Emissions and indicative net zero trajectory for Glasgow (top) and impacts of climate change on regional GDP and the benefit of adaptation (bottom). Sources: Climate Ready Clyde, COACCH, BEIS Local Authority territorial CO2 emissions estimates.

3 Purpose of the Roadmap and call for ideas

This document is aimed at a wide audience of citizens and communities, small and large businesses, trade unions, sector bodies, the public sector, and Governments. The purpose of this document is to:

- **Outline the Glasgow Green Deal initiative, and how it will benefit communities, citizens and businesses;**
- **Gain early feedback on how to maximise the effectiveness of the Glasgow Green Deal, generating the biggest economic, and social benefits from addressing the climate crisis;**
- **Hear ideas from our citizens, communities and businesses that could feature;**
- **Inspire communities, businesses at all levels of engagement to get involved in the mission for equitable, net zero carbon, climate resilient living for all by 2030.**





4 The Glasgow Green Deal

The Glasgow Green Deal a nine-year mission to transform the economy to tackle the climate and ecological emergencies. It aims to increase the pace, scale, and impacts of efforts to decarbonise and build resilience to climate change, in a way which creates jobs, prosperity and high-quality places, and tackles poverty. **It is not a new plan or strategy – but the way of delivering systemic transformation which bridges the gap between ambition and implementation.**

4.1. Policy context

The Green Deal was a key commitment of the City’s Climate Action Plan. The city already has a well-established policy framework and targets around climate action, poverty reduction and economic development. Although a non-exhaustive list, these include the following:

UK/National	Regional	Local
<ul style="list-style-type: none"> • The Climate Change Plan • Heat in Buildings Strategy • Scottish Climate Change Adaptation Programme • National Planning Framework 4 • National Strategy for Economic Transformation • Infrastructure Investment Plan • Inward Investment Plan • National Just Transition Planning framework 	<ul style="list-style-type: none"> • Glasgow City Region Economic Strategy • Regional Economic Recovery Plan • Regional Adaptation Strategy and Action Plan • Indicative Regional Spatial Strategy • Regional Transport Strategy 	<ul style="list-style-type: none"> • Glasgow Climate Plan • City Development Plan and Strategic Development Frameworks • Circular Economy Routemap • Glasgow Economic Strategy • Local Transport Plan • Local Heat and Energy Efficiency Strategy • Glasgow Community Plan (Local Outcome Improvement Plan)

These links between climate change and economic development are well acknowledged. Most recently, the Glasgow City Region Economic Strategy identified the climate emergency as one of three 'grand challenges' – alongside inclusive growth and productivity.

However, there is an implementation gap between these aspirations and the level of action required to meet them. The Green Deal aims to bridge this gap, by using a mission-based approach, and employing new approaches, new thinking, new tools and techniques to create new pathways for transformation which turn these ambitions into reality.

4.2 The mission of the Glasgow Green Deal

Through the Green Deal, the City is proposing a 9-year mission with citizens, communities, businesses and Scottish and UK Government to create:

equitable, net zero
carbon, climate-resilient
living by 2030





The mission provides an ambitious, but realistic, clear, common goal which inspires others to participate, and encourage cross disciplinary, cross sectoral and cross actor innovation, generating multiple, bottom up solutions. The mission ties together the City's existing activity, and complements it with the development of new projects, programmes, investment, innovation and capabilities to:

- **Inspire and engage businesses and citizens to participate in the Green Deal;**
- **Scale up and accelerate deployment of solutions and delivering systemic innovation in a way which addresses these three objectives; and**
- **Revise and reshape existing programmes and projects activity to align with the objectives of the Green Deal and the scale of change demanded by climate science.**

To guide the mission, we are proposing the following:

Objectives

Three interlinked objectives around climate action, jobs and high-quality places, and poverty and inclusion, which act as guardrails for the mission and Green Deal activity.

Focus areas

Systems where action is already underway but where significant acceleration in the pace and scale of delivery is needed. The domains also take place in the context of place-based action, where the need for action in many of these domains combine.

An enabling framework

A set of levers of change - areas of work that have the potential to deliver wide-ranging positive change beyond their immediate focus⁸. Used successfully, these levers can enable activity in each of the focus areas to make them happen.

An overview of this framework is set out below and expanded in subsequent pages.

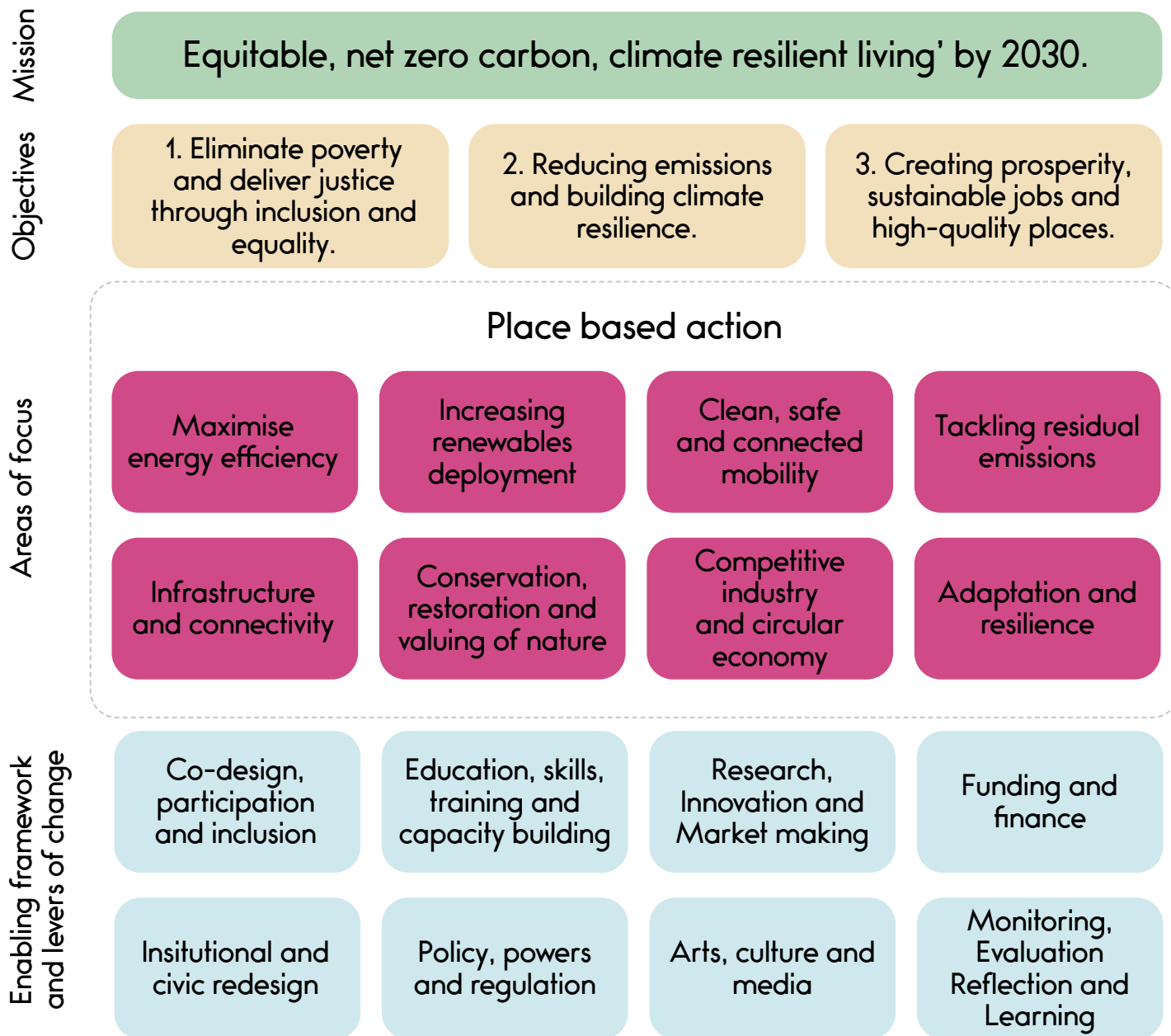


Fig 2. The mission, objectives, areas of focus and enabling framework of the Glasgow Green Deal.



4.3 Objectives

Rather than our planet and people being the price for progress, we will use investment, policy and regulation to direct our economy to protect and build the things people care about – wellbeing, fairness, community, security, opportunity and the next generation.

We will also broaden our measures of what an economy is for moving beyond Gross Domestic Product (GDP) and Gross Value Added (GVA) to a wellbeing approach. Therefore, it is suggested that the Glasgow Green Deal contains three, interlinked objectives:

- **Reducing emissions and building climate resilience**
- **Creating prosperity, sustainable jobs and high-quality places**
- **Eliminate poverty and deliver justice through inclusion and equality**



Fig 3: The proposed interlinked objectives of the Glasgow Green Deal.



4.4 Scope of the Glasgow Green Deal

It is proposed that the Glasgow Green Deal will have 8 areas of focus. The focus areas are where public sector, businesses and communities are already taking action to transform our economy, but where the Council will increase its support to other actors, innovate or intervene directly to resolve key issues and barriers to scaling and accelerating progress and realising the associated benefits. Short descriptions of each area, along with case studies which show example action are outlined below:

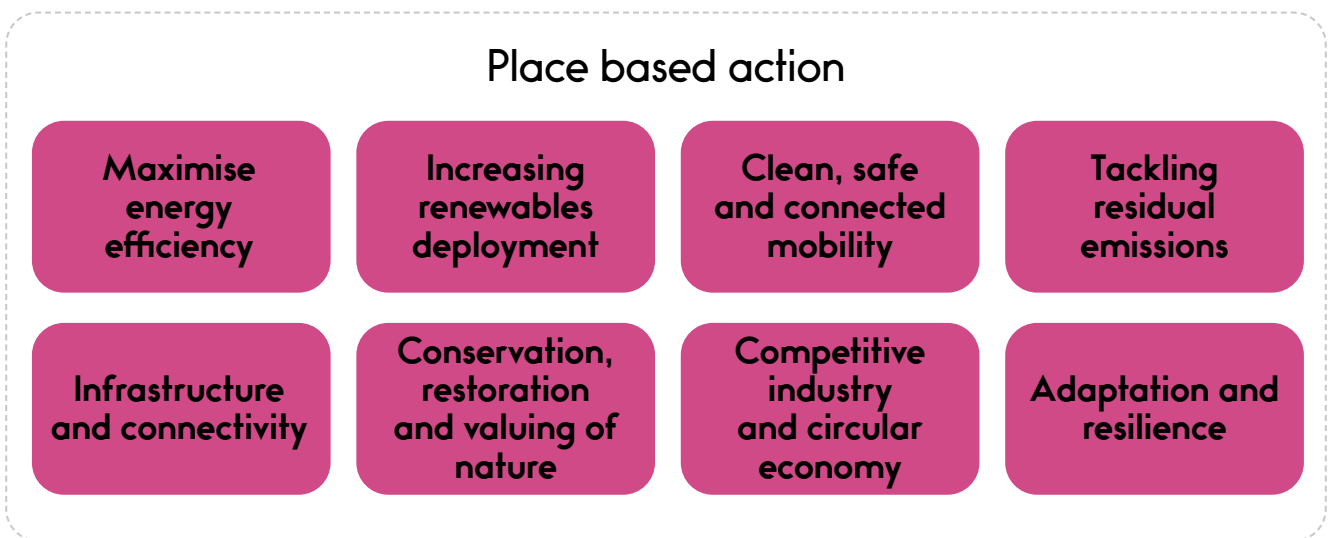


Fig 4. Areas of focus for the Glasgow Green Deal.

Area 1: Maximising energy efficiency

Our homes, business and industry make up the largest chunk of emissions, and so maximising energy efficiency is key. We must decarbonise and adapt our housing stock in a way which supports those people most vulnerable to climate impacts and to fuel poverty. We must also work with businesses and industry, supporting energy efficiency in industrial and business processes and improvements to non-domestic and public buildings. Supporting our SME base is a key priority given their lower capacity and significant make-up of the City economy.

Case Study: Glasgow City Region Housing Retrofit

Glasgow City Region has begun work to develop an approach to retrofit all homes in the City Region to the 'C' Standard on an Energy Performance Certificate. The recently concluded feasibility study identified potential pathways for the 428,000 properties below this standard, and further steps for a further 886,156 properties in the region. The work identified a range of priority areas to support, including creating market demand, supply chain development, skills and training, data, and governance.

Area 2: Increasing renewables deployment

Deployment of large scale renewables and local energy generation must increase to support grid decarbonisation, electrification of heat, increased demand from electric transport, and creation of green hydrogen, and doing so will create large benefits for people, neighbourhoods and communities.

Case Study: Castlemilk and Carmunock Community Wind Turbine

In partnership with SSE and the Castlemilk and Carmunock Community Wind Park Trust (CCCWT), Glasgow City Council developed a 3MW wind turbine on the Cathkin Braes. The £5m project was jointly funded by GCC and SSE, with each contributing £2.5M. The project provides an annual community benefit to the CCCWT to support the trust and action on fuel poverty, providing £500,000 over the next 25 years. Glasgow City Council's £250,000 contribution was front loaded, paying the community £50,000 a year in the first five years.

Area 3: Providing clean, safe and connected mobility

Glasgow must provide a sustainable transport system for people and for goods, which is affordable and inclusive, accessible and easy to use, low carbon, clean and safe, integrated and reliable.

Case Study: Glasgow Metro

Metro is an umbrella term to describe new transport provision, potentially a mixture of rail-based and modern bus rapid transit, it will improve connectivity within Glasgow and the wider City Region. The current Metro Feasibility Study aims to spotlight the environmental, sustainable and economic benefits, greater social inclusion and equality that an integrated Transport Solution can bring. The Metro provides an opportunity to offer a step change in life chances for communities stymied by the greatest inequality challenges caused by unaffordable, unreliable and poorly connected local public transport. Metro will be targeted at improving connectivity whilst contributing to the City Region's ambitions to improve the health and wellbeing of its people by delivering an inclusive, net zero and climate resilient economy.

Metro will focus on accessibility with the development of integrated ticketing and interchange points for all passengers' ease of use. Likewise, it will aim to increase the number of stops and cycle paths and provide better facilities such as bike stations and onboarding bikes on trains. There is also an opportunity to use the network infrastructure to catalyse sustainable activity beyond the footprint of the Metro itself. This could be in the form of integrated systems and buildings, connecting infrastructure or encouraging wider sustainability projects.

Area 4: Ensuring competitive industry and circular economy

Our current economic model is extractive, using significant amounts of natural resources, resulting in degradation of ecosystems within and beyond the City Region. Therefore, we must transform our economic model to be more circular, with products kept in use for as long as possible, through repair, reuse and remanufacture.

Case Study: Mackie Automatic and Manual Transmissions

Mackie Automatic & Manual Transmissions is the sole UK supplier of remanufactured transmissions for Subaru, Isuzu, Hyundai, Nissan and Chevrolet for warranty repairs. The company can provide remanufactured transmissions from stock with a warranty to cover the remainder of the original warranty period. This work makes up about 45% of their business.

Mackie employ over 25 highly skilled engineers, the majority of which have over 20 years' service. Their reputation in the automotive industry is well established and they know their products and workmanship are regarded as the equal of the original but they are also aware that perceptions still endure of second hand being second and they offer an open invitation to anybody wishing to see their facility and procedures to reassure their customers.

Area 5: Infrastructure and connectivity

Glasgow needs clean, efficient, and affordable heat and power infrastructure to support businesses and communities' lives, and to support the convergence of sectors such as energy and mobility.

Case Study: RUGGEDISED

RUGGEDISED is a €19.6 million Horizon 2020 project comprising six European cities and thirty-four partners. It brings together three lighthouse cities: Rotterdam, Glasgow and Umeå and three fellow cities: Brno, Gdansk and Parma.

The project tests how to combine ICT, e-mobility and energy solutions to spur innovation, boost market uptake of smart solutions with higher energy and environmental standards and thereby reduce energy consumption, noise, CO2 and pollutant emissions. The project will create an electric vehicle charging hub, with a solar canopy on the roof of the multi-storey car park at Duke Street, with battery storage. Construction is in progress and should be completed at the start of 2022.

Area 6: Conservation, restoration and valuing of nature

The climate and ecological crisis are deeply interconnected, with human pressures on the biosphere worsening its ability to absorb CO2 and protect us from the impacts of climate change through land degradation or ocean acidification. Therefore, conserving nature and restoring ecosystems – both directly here in the City, but also globally through the wider footprint of the economy, citizens and key systems such as food and the built environment is crucial for our long-term survival and prosperity.

Case Study: Trees as Infrastructure (Trees AI)

Glasgow City Council (GCC) is partnering with NatureScot, the Scottish Government and Dark Matters Labs to develop TreesAI, an open source platform to map, value and finance urban forests. The initiative strives to establish nature as a critical part of urban infrastructure, alongside bridges, roads and rail, enabling investment, profitability and sustainability. The partnership, between Glasgow City Council and TreesAI, is exploring how to address the challenge of how the city of Glasgow will cope both with the upfront capital and, more importantly, the ongoing maintenance costs for sustaining trees in the future, by addressing barriers related to data, private funding, prices for ecosystem services, processes and skills. Doing so will help improve the quality of planting and maintenance to sustain trees and generate real environmental, social and economic benefits, helping the City finance the green transition and reach our climate targets.

Area 7: Tackling residual emissions

The City has committed to minimising its emissions, but it is likely that a chunk will remain, which will need to be addressed by carbon capture, usage and storage (CCUS), or through offsetting. The total amount of offsets needed will reduce over time, but we will need to ensure that as much of the benefits created through addressing remaining emissions are realised within the City Region.

Case Study: Clyde Climate Forest

The Clyde Climate Forest is a collaboration between Glasgow City Region, Scottish Forestry and several environmental NGOs which aims to plant 18 million trees across the region in the next decade as a response to the climate and ecological emergencies. In doing so the region's tree cover will increase by 3% and be a sink for carbon emissions and will be in-line with Scottish Government's Climate Change Plan.

In addition, the project will be a focus for mobilising citizen action to increase urban tree canopy cover and thereby make vulnerable urban communities more resilient to the impacts of climate change.

Area 8: Adaptation and resilience

Regardless of how quickly we eliminate emissions, Glasgow will see climate change continue to impact. Even if the Paris Goals are achieved, the next twenty years of warming are already locked in, and the City will need to adapt. Therefore, we must implement the Regional Adaptation Strategy in its entirety, building the resilience of the region's systems and places to the impacts of climate change.

Case Study: Glasgow's Smart Canal

This innovative, and award winning, project in the north of Glasgow, delivered by GCC, Scottish Canals and Scottish Water, uses the 250-year-old Forth & Clyde Canal and smart technology to reduce the impacts of climate change, and unlock 110 hectares across the north of the city for investment, regeneration and development.

The system uses weather data to predict heavy rain, and proactively lower a section of the canal by as much as 10cm ahead of the rainfall. Using the canal as a 'sponge' for runoff has allowed 2,500 new homes in locations by providing new drainage network capacity. The system is computer controlled and functions autonomously, 24hrs a day, with Scottish Canals and the council monitoring and managing the system remotely.

The smart canal also integrates with extensive blue-green infrastructure improvements at the Claypits Nature Reserve and new SuDS within each development site, providing green corridors for active travel and biodiversity, all within 20 minutes' walk of the city centre.

5 Our enabling framework

Delivering the Glasgow Green Deal will require the City to make the jump from incremental to transformational change. Programmes and initiatives in the focus areas above will need to engineer in the three linked objectives of the Mission into their design and delivery. To make this happen, we have identified an enabling framework of eight levers of change we think are needed. **Each of the areas of focus above requires use of a different mix of levers of change to achieve the mission.** To illustrate how they're already being applied in different contexts, we have set out some case studies in the next 2 pages:

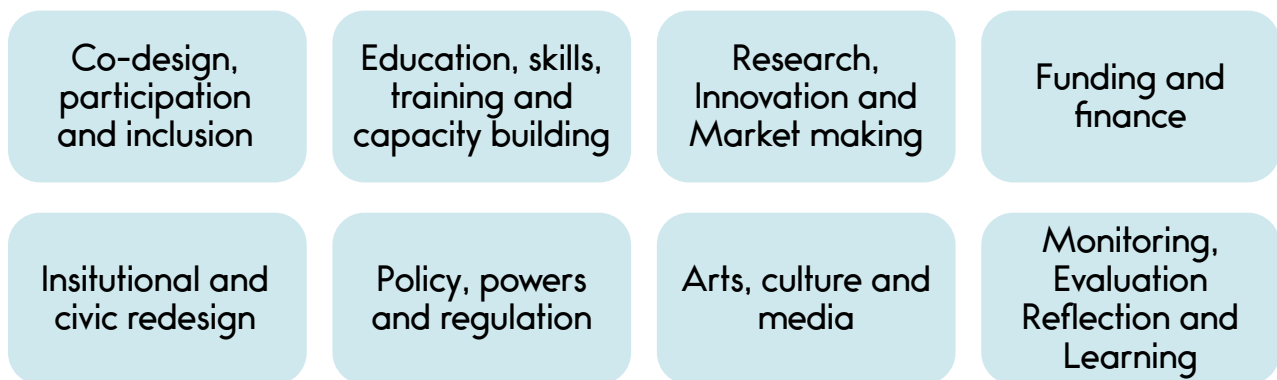


Fig 5. Levers of change for the Glasgow Green Deal

CO-DESIGN, PARTICIPATION AND INCLUSION

Case Study: COP26 Citizens Assembly

The Glasgow Climate Assembly was an opportunity for a representative sample of Glasgow residents to learn, deliberate and discuss a range of environmental issues effecting both them and their communities, including the green economy, home energy, green jobs and skills and food and diet. The Assembly has generated several recommendations which will help ensure Glasgow can benefit from the COP26 legacy and there can be a just transition towards net zero carbon.

EDUCATION, SKILLS, TRAINING AND CAPACITY BUILDING

Case Study: Just Transition Skills Action Plan

In line with the Scottish Government's response to the Just Transition Commission, Glasgow City Council and Skills Development Scotland are working together on the creation of a Just Transition Skills Action Plan. The action plan will identify priorities to ensure the skills system equips people with the skills needed for the green economy, with a strong focus on those whose jobs are at risk from the impacts of climate change and the transition to a low carbon economy, including the most disadvantaged and the unemployed.

RESEARCH, INNOVATION, AND MARKET MAKING

Case Study: climate smart forest economy programme

Glasgow City Region is working with EIT Climate-KIC on the Climate Smart Forest Economy Programme to maximise the carbon and economic benefits of planned woodland expansion in the region by increasing the proportion of wood in construction both within the City Region and beyond. It has worked with specialist carbon consultancy BeZero Carbon to assess the potential additional carbon storage such timber expansion could create, and has worked with local stakeholders to identify the market making activity needed to create new employment opportunities and secure the supply chain, with less dependence on import and new income streams from exports.

FUNDING AND FINANCE

Case Study: Developing Green finance in Glasgow City Region

Glasgow City Council has developed a new £30bn Greenprint for Investment, to connect City projects with impact or Environmental, Social and Governance, investors, helping align financial flows in the City with the Paris Agreement.

Glasgow Credit Union is also working in this way, developing a range of green financial products and services, in partnership with Glasgow City Council and other organisations, to mobilise some of its £200m+ of assets in support of the Green Deal. It is developing new energy efficiency loans and mortgages for its members with different interest and term options, enabling a more holistic approach to be taken by its partners as they consider solutions for multiple tenures and blocks of tenements with mixed tenure. It is also developing options to allow its members to contribute to Council-run environmental projects, with a longer-term aspiration of being able to invest directly in public sector activity in the City, in alignment with its underlying ethos.

ARTS, CULTURE AND MEDIA

Case study: Glasgow Green Year

In 2015 Glasgow held a Green Year to promote its drive to become one of the most sustainable cities in Europe. While Glasgow narrowly missed out on becoming European Green Capital, the city chose to celebrate its journey from industrial powerhouse to sustainable city.

With the emphasis on fun, inclusive yet educational activities, Green Year 2015 showcased the innovation and creativity of our Dear Green Place. Each month had a green theme linked to a programme of public events and school's education programme. Glasgow City Council worked with local environmental organisations, artists and community groups to encourage more people to get involved in sustainability projects and help make Glasgow a global leader in sustainability. The year delivered over 160 public events, along with internal events, conferences and workshops.

One of the key successes was the role of art in actively engaging the Glasgow community with features such as; the Museum of Water, Youth Film Festival, Sustainable Development Goals workshop in collaboration with Creative Carbon Scotland, It's My Greener Glasgow school's art competition, and the Art in Climate Change initiative held at Glasgow Art School.

The team also welcomed an artist in residence to support community and staff engagement throughout the year.

6 The benefits of the Glasgow Green Deal

Whilst the scale of investment needed for a Green Deal is a step change in existing investment approaches, delivered correctly it will create transformational benefits for citizens and the economy.

- **Ensuring a fairer and more equal economy:** If thinking on equity is embedded from the outset, climate action can play a strong role in reducing social and economic inequality – reducing energy costs, and the health and financial impacts of extreme weather on the most vulnerable.
- **Supporting regeneration:** Many of the measures, such as building retrofit, district heating, or sustainable drainage systems and green infrastructure also support wider regeneration of town centres and communities, improving the attractiveness of places to live and work.
- **Improving infrastructure performance and reliability:** Decarbonising our existing infrastructure, and building its resilience to climate change, increases its efficiency and reliability. It also helps provide low cost, robust infrastructure for residents and businesses. New green infrastructure, including nature-based solutions can add significant added value to the Region's economy.
- **Improving economic and business competitiveness:** Proper assessment and action by companies in the City Region of their physical and transition risks will benefit their competitiveness. Improving energy efficiency, eliminating emissions and building resilience of businesses (e.g. in business processes or supply chains) can reduce overall costs and improves productivity, profitability and reputation.
- **Increasing inward investment:** Businesses are increasingly factoring in the transition risks and physical risks from climate change into decisions about where to invest and locate. Climate action and policy certainty can ensure the Region remains and globally attractive place to invest and do business. In addition, significant investment is need for the net zero transition, which can also deliver major local benefits.
- **Job creation:** Much of the activity needed to decarbonise and build resilience of the City's economy is labour intensive and create many extra jobs in the supply chain. What's more, enabling activities such as green financing and Research and Development will also provide major opportunities to grow a more inclusive and productive economy.

Accelerating climate action towards the 2030 target has the potential to create over 14,500 extra jobs for the City Region. This assessment is based on a UK-wide investment of £48bn, suggesting the actual figures of job creation for Glasgow are likely to be much higher.

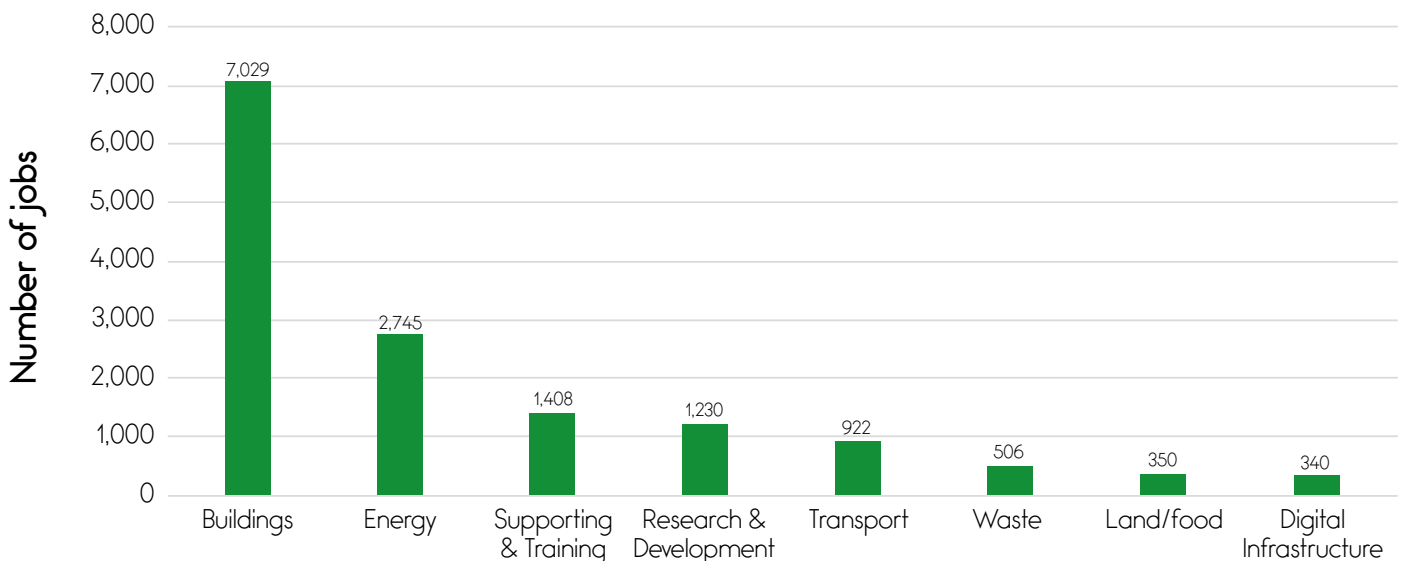


Fig 6. Job creation estimates for Glasgow City Region of an accelerated shift towards net zero by 2030. Source: Green New Deal UK (www.greennewdealuk.org/local-data-methodology/). Figures based on a UK investment of £48bn.



7 Paying for the Glasgow Green Deal

The shift to a net zero carbon and climate resilient economy has been shown to be affordable in broad economic terms. The Committee on Climate Change also highlights that much of the costs of the transition will be met by private finance. In the UK, there is currently £9.4 trillion under asset management.

Whilst further work is planned to develop an agreed, costed plan for the Glasgow Green Deal, a snapshot of public investment needs in the areas outlined above based on a stocktake existing plans places this in the order of £30bn and is shown below. Whilst a large financial expenditure, this is only 15% of Glasgow's GVA over a ten-year period.

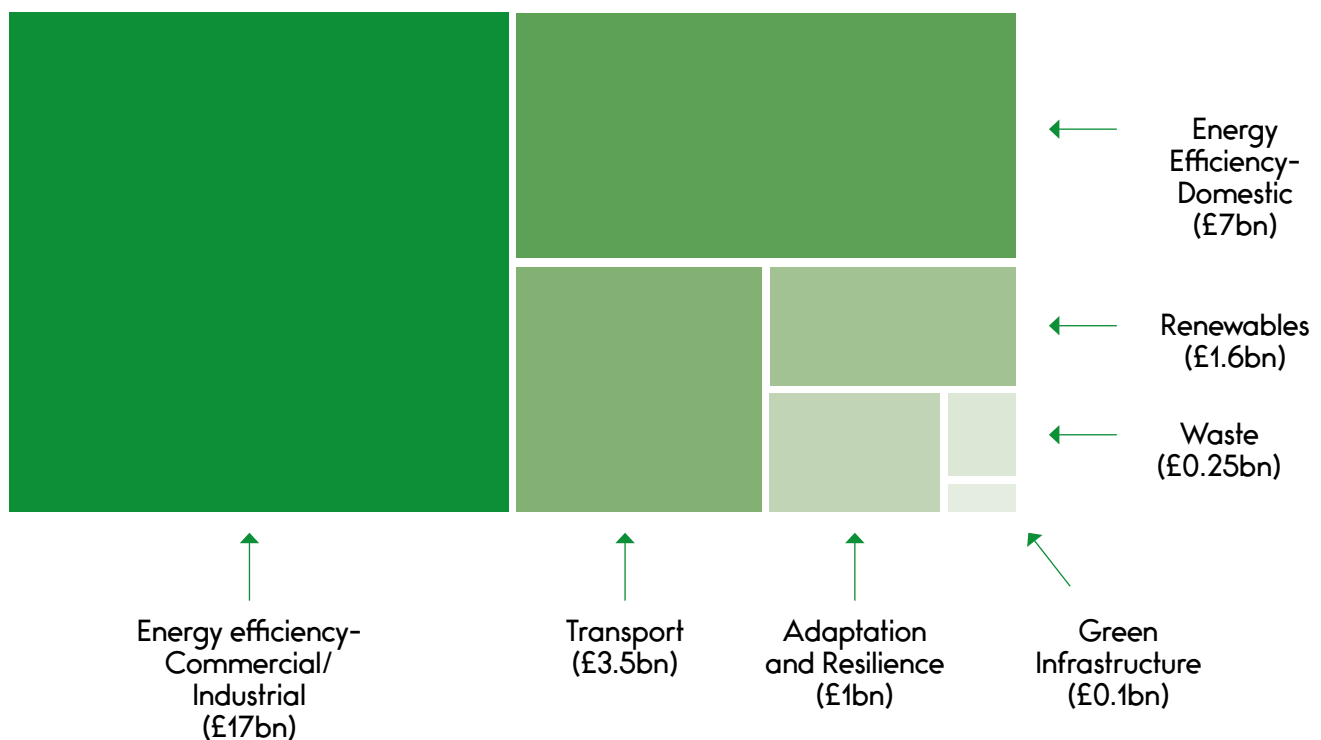


Fig 7. Indicative Investment Needs for the mission in Glasgow, £Bn (Sources: Internal analysis, and Eunomia, BwB for UK Cities Climate Investment Commission, forthcoming). Generated from existing City plans and strategies. Upper estimates used. Adaptation and resilience figures assume 3.5% uplift on net zero spend.

Economic benefit

This scale of investment will generate a significant economic benefit, in terms of overall societal benefits (economic growth, health co-benefits) and benefits for the public finances (through VAT receipts, income taxes from job creation).

Investments in mitigation and adaptation have benefits that far outweigh their costs. These are much higher than traditional investments – up to £9 of economic return for £1 spent.

Furthermore, there will be wider spill over benefits which create longer term gains. Structured properly, similar investments have been shown to pay for themselves in economic terms over a number of years. Therefore, whilst further work is needed to demonstrate the returns to the City of a specific set of interventions, it is highly likely that designed appropriately, the Glasgow Green Deal will create significant short-run and long term economic value for the City and wider region.

Financing the Green Deal

Whilst in economic terms the Green Deal is likely to pay for itself, there are a significant number of challenges in the day to day financing of such investments. These have been well documented including market failures, misalignment of costs and benefits, etc. and these necessitate intervention by the public sector to solve, including policy development to encourage private finance flows.

Therefore, in addition to a strong economic case, a detailed set of strategies will be needed to create the enabling environment. We think these will need to include:

- 1 Assessing the barriers to investments, identifying the case for intervention, and appraising the best approach to address these;**
- 2 Improving public sector coordination and collaboration to help better align financial costs and co-benefits;**
- 3 Adopting an investment mindset, and using returns from revenue-generating projects along with public investment to subsidise public goods, like adaptation;**
- 4 Adopting blended finance approaches to share costs and benefits;**
- 5 Using investment to leverage wider private sector action; and**
- 6 Setting wider environmental conditions to stewarding broader city financial flows.**

Going forward, a specific priority will be to develop the economic and financial cases further to provide a robust underpinning to the overall Green Deal. How this will be taken forward is outlined in section 8.

8 Implementing the Green Deal

8.1 Citywide participation in the mission

Communities, citizens, businesses, sector bodies and trade unions must be at the heart of achieving the mission. Therefore, our approach needs to ensure they feel empowered and supported to take on the mission in a way which fits their own unique contexts, that there are numerous opportunities to participate in citywide action, and that their participation adds value to them. A key activity by the City will be to facilitate this process.

Even at this early stage, we have included a dedicated call to action for people and businesses to express their interest to participate in the mission.

8.2 Approach to external governance

The day to day arrangements of how the Glasgow Green Deal is delivered and governed will make a significant difference to whether it succeeds or fails in practice.

Glasgow already has a diverse range of partnerships and institutions designed to govern and facilitate different aspects of economic development, climate action, poverty and social justice. However, we are also keen to hear how appropriate existing governance mechanisms are to deliver the ambitions of the mission, and how they could be reformed or improved to ensure they are more effective, meaningfully involving a wider range of groups and actors to champion action and ensure we achieve the mission.

Possible options for delivery could include one or more of the following:

- **Using the existing institutions, partnerships and delivery structures in the city to implement the mission;**
- **Reforming existing partnerships and structures – changing their scope, competencies or terms of reference; and**
- **Forming new institutions and governance – for example some cities have set up Green New Deal commissions, Climate Commissions or Just Transition commissions, working groups on city climate finance, or entirely new institutions.**

We will review the submissions on governance in light of the overall feedback on the call for views and the emerging tranche of institutions, including recently announced plans by Scottish Government for a National Energy Agency and the emerging UK Investment Bank.

8.3 Mission orchestration and support

To guide and support implementation of the Glasgow Green Deal, we are seeking views on establishing a Green Deal unit. Drawing on expertise resources from across the Council and wider city institutions and adding new capacity, the unit's purpose would be to orchestrate the mission by involving citizens, communities, businesses, public organisations and Governments.

It would also bring ongoing activity under the umbrella and guiding objectives of the Green Deal, develop underpinning evidence and resources to support the mission, and build the capacity and capabilities of organisations and individuals to lead the change. The programme area and indicative activities are set out below, some of which are linked to existing activity in the Climate Plan:

Programme area and purpose	Indicative activities
<p>Co-designing the future Glaswegians want - co-designing pathways for the transition to secure societal consent for the Green Deal, inspire citizens and business to take part in its delivery, and ensure it provides a Just Transition and Just Resilience for all Glaswegians, so no-one is left behind.</p>	<ul style="list-style-type: none"> • Culturally led citizen, community and business engagement to understand how the Green Deal can work for them and identify bottom-up solutions. • Working with businesses and communities on solutions to specific challenges and barriers to action. • Codesign a full technical route map for Net Zero Carbon, aligned to Scotland's indicative Nationally Determined Contribution (NDC) in consultation with citizens and business, considering the trade-offs between mitigation and adaptation. • Developing relationships and activities with Arts, Media and Cultural organisations to help proactively communicate and shape the city's ambitions.
<p>Innovation, market-making and skills - make Glasgow a hub for Scotland in developing new solutions, to establish new markets where needed, and ensure the City has the appropriate skills and capabilities.</p>	<ul style="list-style-type: none"> • Running Innovation calls to stimulate businesses and communities to develop systemic solutions to City Challenges. • Evaluating and removing barriers to scaling mitigation and adaptation activity. • Just transition - Developing strategies to support industries and individuals at risk from the economic transition and impacts of climate change.
<p>Financing the Glasgow Green Deal - strengthening the economic case for the Glasgow Green Deal and ensuring enough appropriate funding and finance is available for its delivery.</p>	<ul style="list-style-type: none"> • Developing the economic case for the Glasgow Green Deal, including valuation of benefits and distributional and generational impacts. • Development of a Resource Mobilisation Plan. • Reviewing and developing options to raise finance, secure external funding and investment. • Creation of a Glasgow Green Deal blended finance fund. • To consider how to Paris-Align the existing City budget and economic development plans. • Aligning Citywide financial flows with the Paris Agreement.
<p>Mission orchestration - supporting, enabling and inspiring citizens businesses, and communities to participate in the mission, and to coordinate activity to create an ecosystem of change and innovation</p>	<ul style="list-style-type: none"> • Convening and involving public and private sector and communities to activate them in service of the Green Deal. • Identifying, developing and coordinating business cases. • Communication, engagement and cultural change. • Enabling delivery and scaling of projects and programmes – both directly and in collaboration with key partners, and the private sector. • Reforming existing programmes and processes. • Training and recruitment to ensure the Council has the right skills, knowledge and experience. • Providing the enabling conditions and policy certainty by aligning relevant policies and plan and influencing national and UK plans and strategies. • Communicating and disseminating performance, updates on the development and implementation, and learning. • Engaging with Scottish and UK Governments on regulatory and legislative reform. • Ensuring effective monitoring, reflection, evaluation and learning.

9 Call for views, ideas and participation

Delivering the Glasgow Green Deal is one of the biggest challenges the City has faced. It is achievable, but it will rely on everyone – all citizens, businesses and public sector organisations - bringing your skills, expertise, capacity and resources to bear. Therefore, we are calling for citizens, businesses and community groups to get involved.

Help us shape our approach to the Glasgow Green Deal

What follows is initial thinking, information and case studies on what a Green Deal could look like in Glasgow. A more detailed, technical version of the document for professionals and practitioners is available on the website.

Therefore, we are calling for citizens, businesses and community groups to get involved:

- 1** Does the Green Deal and its mission reflect the direction Glasgow should be working towards?
- 2** How can we ensure the mission creates a just transition - prioritising those most at risk of the transition, or the impacts of climate change?
- 3** Are the areas of focus for the mission right for the City? Do we have the balance right? What more could or should we be looking at?
- 4** Have we identified the appropriate levers of change to support the mission? Are there any that should be changed or that we have missed and why?
- 5** How should we govern the Green Deal? Are new institutions and structures needed to support implementation at this scale? If so, what are they, and why are they needed?
- 6** Are we adopting the right implementation approach? Would you suggest any changes, and if so, why?
- 7** Are there particular policies, regulations or investments the City (or others) should consider bringing forward as part of the Green Deal?
- 8** Are there particular policies and regulations that could be changed which could help deliver the mission? What could we (or others) change to make it happen?

Tell us your ideas for Glasgow Green Deal projects - We are keen to hear your ideas about what other initiatives we should pursue under the Green Deal, and what support you might need from the City to implement it. You can submit your ideas using the Call for Ideas form on the website.

Help us deliver the Glasgow Green Deal - Your community, organisation or business can help deliver the Green Deal by developing programmes and initiatives in the focus areas, aligned to the goals of the mission. You can tell us about them, along with what help and support you need to make it a reality. We can't guarantee we'll support all of them, but understanding need will help us prioritise and respond more effectively.

Raise awareness of the Glasgow Green Deal - You can raise awareness of the Glasgow Green Deal in your organisation, your community, including promoting it on social media, running events to discuss how to make it happen in your area.



References

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Incremental changes tend to focus on delivering marginal improvements within current systems and trends and in some cases reinforcing the status quo.

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Net-Zero' means the City is not a net contributor of Greenhouse Gas emissions. Instead any emissions created balanced by an amount removed from the atmosphere, for example by being stored in trees, or captured and stored.

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For any further information, or to get in touch about collaborating, please email the Glasgow Green Deal team at glasgowgreendeal@glasgow.gov.uk.

Glasgow City Council
City Chambers
George Square
Glasgow G2 1DU

www.glasgow.gov.uk

