EDINBURGH NET-ZERO 2030

2030 CLIMATE STRATEGY

Delivering a Net Zero, Climate Ready Edinburgh

Draft: June 2021

EDINBVRGH
THE CITY OF EDINBURGH COUNCIL

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Foreword

This draft strategy lays out how we will enable, support and deliver action to meet our net zero ambition by working with leading strategic partners in Edinburgh and highlights actions citizens, communities and the wider business community could take to help drive down emissions.

Together we have enormous power and influence over the emissions in the city and we can create a thriving net zero future for the benefit of everyone.

This draft strategy is aimed predominantly at partners within the city who have:

- a duty to transition to net zero.
- a significant city emissions footprint.
- the power and budgets to make impactful change.

However, it also speaks to citizens, communities and the wider business community. We look forward to hearing view from all stakeholders and residents over the summer.

Climate change is the biggest threat facing our planet. That is why the City of Edinburgh Council declared a climate emergency, established an independent Climate Commission and set a target for the city to be net zero by 2030.

2020 has seen the world work together to combat a global pandemic. It has also shone a light on what communities and organisations can achieve in the face of an emergency. As we continue to deal with the pandemic, we need to plan to ensure the city's recovery is both fair and green.

To achieve that goal, we need to improve air quality, protect our thriving green spaces, support active travel and continue to build warm good quality places to live and work to make Edinburgh a healthier and happier place to live.

Young people have been at the forefront of demanding faster action on climate change and our residents have told us they want Edinburgh to become a sustainable, fair and thriving city – but we know this won't be easy.

The challenge we face is clear. We must reduce our transport emissions 12 times faster; emissions from buildings need to be reduced twice as fast year on year and our homes need to be retrofitted 50 times faster.

Our work with Edinburgh Climate Change Institute and the Place-Based Climate Action Network[1], shows that we can get over 65 percent of the way there with actions that pay for themselves within their lifespan. We also know that taking climate action will create opportunities for the city that can offer new and exciting skilled jobs and make Edinburgh a leader in green industries and innovations.

The Council will continue to play a leading role in co-creating a healthy, green, clean, and sustainable future for the city. Our communities, businesses and residents have a strong record of climate action and I know the city will work together to deliver change at the speed and scale needed.

We will launch our strategy just as leaders from across the world come to Scotland for COP26 and we are confident Edinburgh will be alongside the most ambitious cities striving towards a net zero future.

Cllr Adam McVey Leader of City of Edinburgh Council

Cllr Cammy Day Depute Leader of City of Edinburgh Council

[1] A Net-Zero Carbon Roadmap for Edinburgh, Place-Based Climate Action Network, 2020

Summary Overview

Our net zero vision is that by 2030:

- Edinburgh will be a net zero and climate resilient city, with a transformed city centre connected to thriving local neighbourhoods, where our historic, natural and built environments are protected and valued for their significant contribution to people's wellbeing.
- People will live in neighbourhoods with easy access to greenspaces and local services that meet their everyday needs - whether that be for work, family or leisure time and reduce the need to travel.
- All homes will be well-insulated, energy efficient and heated and powered by low-cost, renewable energy, with a higher proportion of energy generated locally.
- Some people will work from home more of the time, or in local hubs, and will have less need to travel to or for work.
- The city will have a network of safe and attractive active travel routes, and an integrated world-class sustainable public transport system, which is affordable for everyone.
- Most citizens will find they no longer need a car to be able to go about their everyday lives. The city will have a network of Electric Vehicle (EV) charging hubs supporting electric commercial vehicles, car clubs and citizens who still need to own a private car.
- The city centre will be re-imagined as a place for people walking, cycling and wheeling, with excellent public transport accessibility and with the needs of the most vulnerable fully catered for, while continuing to provide a thriving economic centre and vibrant cultural hub for the city.
- Edinburgh will be a hub for net zero innovation, driven by data, with a new breed of sustainable local businesses, creating local jobs and skills development opportunities which people from all backgrounds can access though education and retraining. This will ensure everyone can share in the city's economic success.
- Edinburgh will be cleaner and greener, with natural habitats preserved across the city that help improve air quality, increase the variety of plants and wildlife, and protect the city from flooding and other climate change impacts.
- Citizens are using their influence to challenge the public and private sector to go further and faster on tackling climate change and are empowered to make more sustainable choices in their everyday lives.

This strategy lays out how we will enable, support and deliver action to meet our net zero ambition.

We will create conditions for success

The strategy focuses on creating the right policy, regulatory and infrastructure conditions to support net zero behaviour change by committing to:

- Deliver the 2030 City Plan and set the highest standards for net zero development and growth
- Deliver the City Mobility Plan strategic investment in public transport and active travel and consult with citizens and businesses on the place and role of a Workplace Parking Levy
- Develop a plan for the delivery of public service electric charging hubs at strategic points across the city and a pilot for mixed finance infrastructure investment.
- Identify and cost climate impact on the city to unlock collective investment in net zero change
- Create skills development programmes to ensure the city has the workforce needed to transform with a focus on green construction skills and targeting those at greatest risk of poverty.

We will collaborate for speed and impact

No individual partner has the knowledge, skills, capacity or resources to deliver our net zero target. This strategy lays out key areas where collaboration and partnership will be supported to deliver for the city, committing to establish:

- A strategic City Heat and Energy Delivery Partnership and deliver of a Heat and Energy Master Plan.
- A strategic Partnership with SP Energy Network to align grid development investment to the needs of the city.
- An Energy Efficient Public Buildings Partnership to collaborate on retrofit, align investment plans and encourage confidence in, and planning for, the business and skills supply chain needed to deliver.

We will support sustainable communities

A net zero city must be built upon net zero action within communities. This strategy recognises the importance of place, community capacity and action in thriving local neighbourhoods as drivers of more sustainable everyday lives.

That is why this strategy focuses not only on city and strategic enablers, but the importance of progressing 20-minute neighbourhoods. The strategy commits to:

- Ensure 20-minute neighbourhoods support net zero action and explore local energy communities.
- Scope net zero community pilots that could unlock and support grassroots activity.

We will encourage individual commitments

While the strategy lays out a number of collective actions, pilots and partnerships to support change across the city, there will be no substitute for the buy-in and action of individual organisations and citizens. That's why this strategy:

- Supports the Climate Commission's 'Edinburgh Climate Compact' and calls on all organisations and businesses to adopt it as part of their net zero commitments.
- Commits to public campaigns that aim to inform citizens and raise awareness of funding available for net zero action.
- Commits to explore establishing a new Green Innovation Challenge finance scheme to complement the Edinburgh Climate Compact.

The strategy also calls on the Scottish Government to work with us by:

- Ensuring national decisions and powers reinforce and empower the strategy to deliver at speed on planning, transport, regulations, licensing and taxation.
- Sharing the risk of net zero project and programme development alongside enhanced funding packages for delivery by investing in local capacity and expertise.
- Developing place-based funding packages which recognise the system-wide investment needed to reach net zero rather than just policy silos.
- Developing a programme for targeting private owner retrofit and a series of incentives to support citizen and business transition to net zero.

We will innovate and learn

Alongside supporting joint and individual action to happen at speed, the strategy recognizes that we need to do more to share knowledge and skills and innovate. This will help us tackle some of the challenges we face.

That's why the strategy highlights and commits to the following pilots and innovative projects:

- Developing two 'net zero neighbourhood' pilots to support grass roots action on climate change.
- Delivering an ambitious new net zero development at Granton Waterfront and around 200-hectare of enhanced coastal park in north west Edinburgh.

- Delivering ‘Edinburgh Homes Demonstrator', using new materials and on-site building techniques to deliver net zero, energy efficient buildings.
- Testing approaches to retrofit in challenging mixed-tenure and heritage settings, including Edinburgh’s UNESCO World Heritage site.
  Developing a plan for the delivery of public service EV charging hubs at strategic points across the city and a pilot for mixed finance EV infrastructure investment.
- Investigating a new ‘Nature Climate Bond’ to support investment in the city’s natural environment.

A net zero future for Edinburgh

What does "net zero" mean?
Net zero is when any greenhouse gas emissions put into the atmosphere are balanced out by the greenhouse gases removed from the atmosphere, so that the "net" effect is zero emissions. Edinburgh has committed to "net zero" emissions by 2030. To achieve this, we must reduce the emissions we generate close to zero, and by 2030, make sure that we remove the same amount of greenhouse gases that we as a city, put into the air.

How do we define Edinburgh's emissions?
Edinburgh's net zero target boundary is defined by the territorial boundary of the City of Edinburgh Council and five key emission sources:

- Stationary energy (i.e. consumption from industries, non-domestic buildings and homes)
- Transport
- Agriculture, forestry and other land use
- Industrial processes and product use
- Waste

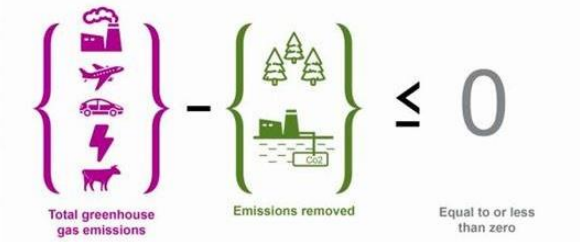


Figure 1: Graphic showing what net zero means. Source: SPICe Briefing- Key Issues for Session 6: COVID, Climate and Constitution

Climate change is impacting our city

The impact of carbon dioxide and other greenhouse gas emissions means that Edinburgh's climate is set to get warmer and drier in summer and milder and wetter in winter. Sea levels are rising and there is an increased likelihood of severe rainfall events (such as torrential downpours or flash flooding) and winter storms occurring more frequently[2].

A changing climate impacts on human health, the natural environment, the economy, livelihoods, property and infrastructure.

Increased flooding, coastal erosion and more severe weather will disrupt business, including the city's cultural events, and cause damage to homes and the city's public and commercial buildings, including Edinburgh's UNESCO World Heritage Site.

In 2018, the Intergovernmental Panel on Climate Change (IPCC) called for worldwide action to prevent global warming above 1.5°C[3], and in 2020, the World Economic Forum Global Risks Report[4] put climate action failure, extreme weather and biodiversity loss as the top three highest risks for the world in terms of likelihood and impact.

Dealing with these impacts comes at a financial cost to the city, diverting resources which could otherwise be invested in helping the city to thrive.

[2] UKCP18 Science Overview Report, Met Office Hadley Centre, 2019.

[3] Global Warming of 1.5 ºC An IPCC Special Report, IPCC

[4] The Global Risks Report, World Economic Forum, 2020

The UK National Audit Office estimates that for every £1 spent on protecting communities from flooding, around £5 in property damages and wider impacts can be avoided.[5]

Vulnerable groups will feel the impacts of climate change the most

Vulnerable groups contribute least to carbon emissions but are disproportionately affected by the impacts of climate change. Low income households will find it harder to deal with the impacts of damage to their homes and property, while those with poorer health will be more affected by reductions in air quality, increased damp, flooding of homes and local areas, and more severe fluctuations in weather such as heatwaves.

We have a responsibility to act now to play our part globally and to protect and improve the city for generations to come. The faster we can reduce greenhouse gas emissions, the more we can reduce the damaging consequences.

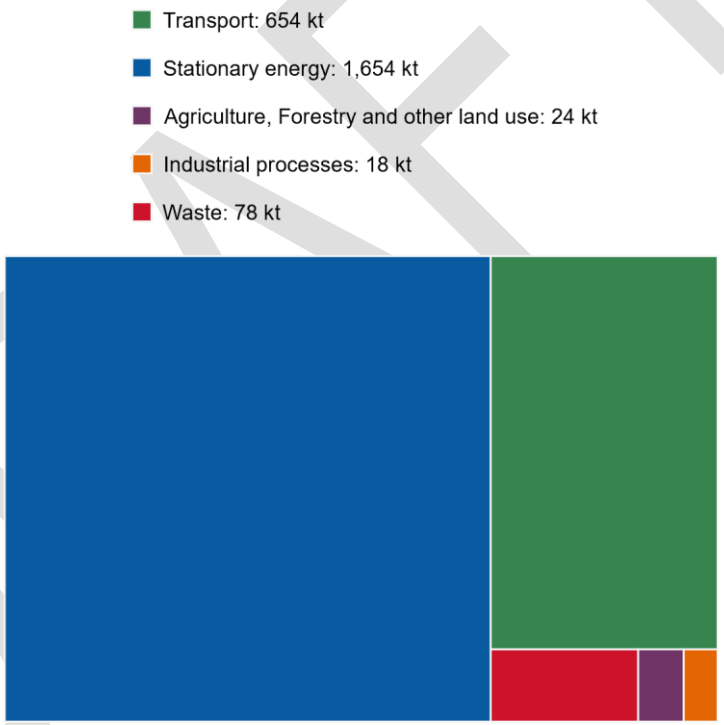
Understanding the challenge

The City of Edinburgh Council declared a Climate Emergency in 2019, setting an ambitious target for the city to become net zero by 2030.

Emissions across the city amount to around 2.5 million tonnes of CO2e[6], and mainly come from the energy used in homes and buildings, followed by transport emissions (*Figure 2*):

- transport: 654kt
- stationary energy 1,654kt
- agriculture, forestry and other land use: 24kt
- industrial processes: 18kt.

Figure 2: Edinburgh's emissions sources



[5] National Flood and Coastal Erosion Risk Management Strategy for England, Environment Agency, 2020

[6] Refer to Glossary

City emissions have fallen by 42 percent from 2000, as a result of increasingly decarbonised electricity supply, structural change in the economy and the gradual adoption of more efficient buildings and business processes.

However, projections (including economic, population growth and improvements in energy and fuel efficiency) are that without a significant acceleration in action, city emissions will only fall a further nine percent (from 2000 levels) by 2030, as shown in *Figure 4 (next page)*.

For the city to meet net zero, a reduction of around 200,000 tonnes of CO2e would be needed year on year. This represents a significant challenge.

Examples of what 200 ktCO2e equates to are given in *Table 1*.

We will need to move at least twice as fast on reducing emissions every year to 2030. Transport emissions, which have been historically difficult to reduce - will need to decrease as much as 12 times the rate than in the last two decades (*Figure 3)*.

Figure 3: Current rate of reduction (average between 2000-2020) and average required rate of reduction to net zero 2030. Note that the figures are indicative of the scale of change required, based on historic and current figures sourced from the PCAN Net Zero Roadmap for Edinburgh.

Table 1: Examples of activity required to reduce 200 ktCO2e, by sector.

Activity	**Carbon reduction activity**	**Activity level required**	**Amount of expected saving (tCO2e)**
Reduction in freight km	5% reduction in HGV and LGV freight km travelled	26,000,000 km taken off the road	9,400
Reduction in personal car use	12.5% reduction in petrol and diesel car km travelled	290,000,000 km taken off the road	49,000
Retrofitting of homes	Reduction of 25% in average household electricity and gad use	50,000 homes	39,000
Retrofitting of commercial/ office space	Reduction of 20% in average electricity and gas use per m2	10,000,000m2	91,000
Decarbonisation of the electricity grid	2% reduction in the average UK grid mix		10,000
		TOTAL	**198,000**

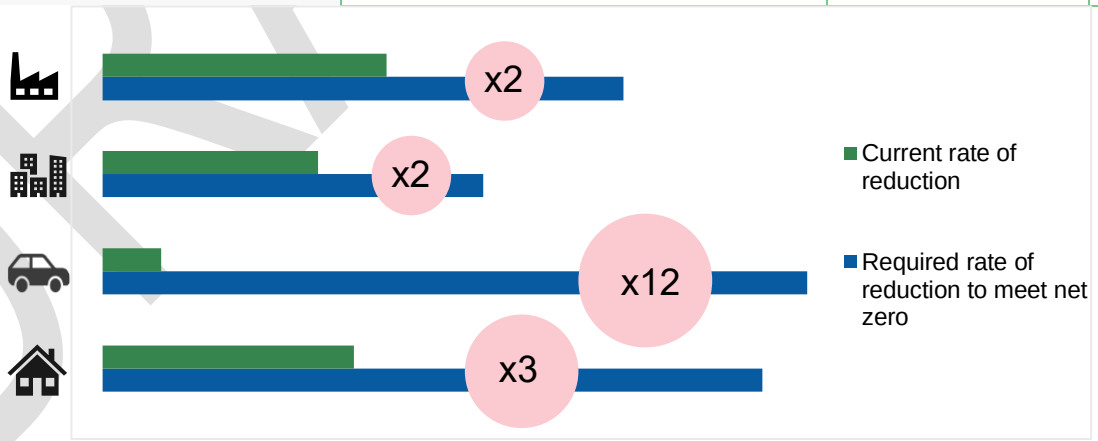


Figure 4: Cumulated emissions reduction potential by scenario. Based on 2050 baseline. A Net-Zero Carbon Roadmap for Edinburgh, Place-Based Climate Action Network

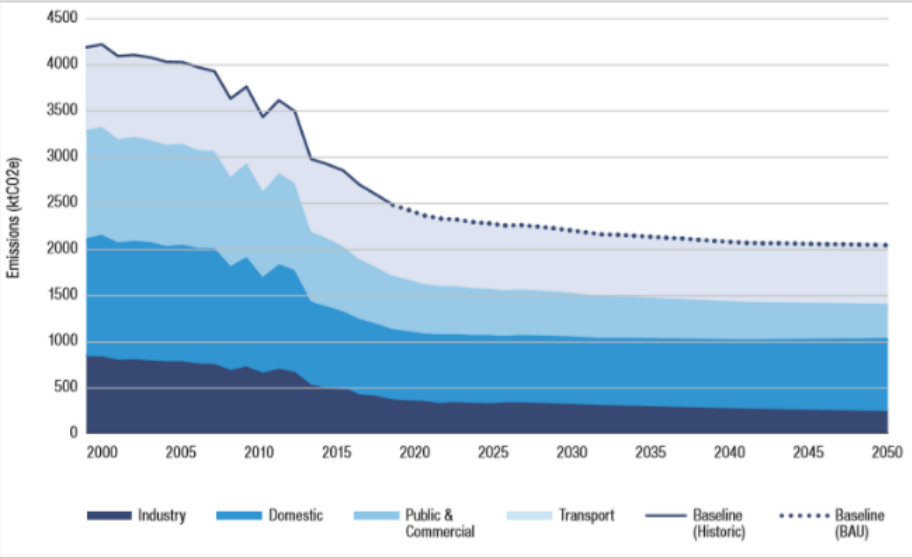


Figure 5: Investment and benefits of net zero. Adapted from A Net-Zero Carbon Roadmap for Edinburgh, Place-Based Climate Action Network

Cost Effective: Net returns over lifetime

Investment

£4.01billion over their lifetime.

Or £401m per year across all Edinburgh organisations and households for the next decade.

Benefits

11,790 years of employment.

Or **596** full time jobs for the next 20 years.

Reduce Edinburgh's total energy bill by £553m p.a. in 2030.

Cost Neutral: Pay for itself over lifetime

Investment

£7.59 billion over their lifetimes

Or

£759m a year for the next decade.

Benefits

18,235 years of employment.

911 full time jobs for the next 20 years.

Nearly **2/3** emission reductions of 2030 levels.

Technically Viable: direct costs are not (at present) covered by the direct benefits

Investment

£8.21billion

Or

£821m a year for the next decade.

Benefits

Saving hundreds of millions of pounds on an annual basis

65% reduction of projected residual emissions at 2030.

Adapting to inevitable change

Reducing emissions is the priority. However, we also need to prepare for and manage the risks posed by a changing climate.

Many actions – such as shortening supply chains or developing local food production – can build climate resilience by reducing emissions and improving climate change adaptation at the same time. Reducing emissions and adapting the city to be resilient to climate change can also deliver social and economic benefits for the city.

The economic benefits of net zero

Economic assessment work has been undertaken through the **Place Based Climate Action Network (PCAN)** to explore the cost benefits and impacts in meeting net zero.

The economic case for the known possible interventions is classified into three categories:

1. Interventions that produce net returns over their lifetime (Cost-Effective)
2. Pay for themselves over their lifetime (Cost-Neutral)
3. Interventions where the direct costs are not (at present) covered by the direct benefits (Technically Viable). (*Table 2)*.

More than half (51 percent) of the emissions reduction required to achieve net zero can be met by cost-effective interventions.

A further 14 percent can be achieved through cost neutral and technically viable interventions. The last 35 percent would need to be met through innovation and or stretch options (i.e. a full transition to net zero buildings, a rapid acceleration of active travel, a reduction in meat and dairy consumption, an increase in green infrastructure).

Not all of these options need new funding, and some could be delivered by spending existing resources differently. In addition, the modelling shows how investment in net zero action will offer significant benefits to the city (*Figure 5, previous page*).

Doing nothing results in costs to the economy and society from having to deal with climate change impacts, such as flooding and outweigh the cost of taking action now[7].

Table 2: Cumulated emissions reduction potential by scenario. Based on 2050 baseline. Place-Based Climate Action Network; Achieving Net Zero report

2030 Reduction on BAU Baseline (2050)	Cost Effective	51%
	Cost Neutral	57%
	Technically Viable	65%

[7] Climate change: Consequences of inaction, OECD, Accessed April 2021 The costs of climate inaction, Nature, 2018. Accessed April 2021

Research indicates that under a 3.7°C global warming scenario, the climate change cost could total $551 trillion (twice as much wealth as is in the world today).[8]

Climate vision and what we want to achieve

Our climate strategy gives us a unique opportunity to think radically and differently about how we live, work, develop and manage the city.

It allows us to shape investment and activity that goes into Edinburgh in a way that meets the net zero target and also delivers better outcomes for the city.

For example:

- Alleviating fuel poverty for residents through improved energy efficiency in housing.
- Stimulating the economy and offer new, local, green jobs through investment in technology and innovation.
  Protecting and improving the physical and mental health of residents through quality green spaces and ecosystem services (flood alleviation, noise regulation, air purification, carbon sequestration).
- Developing community wealth building as a way to drive the systemic change needed, alongside innovative local ownership models and the new financial, governance, and business models required to deliver net zero action.
- Making it easier for people to travel by wheelchair, bike or by foot, helping to address issues such as poverty, health, and wellbeing.

Tackling climate change must be done in a way that leaves no one behind, ensuring a just and fair transition, and access to good green jobs.

Biodiversity loss

Alongside the climate crisis, we must also address biodiversity loss. These are twin crises which are interconnected and that should be tackled together.

While we act to reduce emissions, we also need to change our relationship with nature to ensure we work with it, and making sure we conserve and restore ecosystems, which are critical tools for Edinburgh addressing climate change.

What do we mean by a 'Just Transition'?

A *'just transition'* to a net zero economy is where governments design policies in ways that ensure the benefits of climate change actions are shared widely, and any costs do not unfairly burden those least able to pay.

This vision of a just transition seeks to equip people with the skills and education they need to benefit from the transition to net zero - empowering and invigorating our communities and strengthening local economies.

It means creating positive opportunities for tackling existing inequalities and building a society where climate action improves our collective wellbeing.

Source: Adapted from A National Mission for a Fairer, Greener Scotland; Just Transition Commission; 2020

[8] Risks associated with global warming of 1.5°C or 2°C, University of East Anglia, Tyndall Centre for Climate Change Research, May 2018

Policy context

To meet our net zero ambitions, we need to take a whole system, city wide approach, ensuring we make the most of every sphere of influence, and every opportunity for transformation the city has available to it.

In June 2020, the results of the Edinburgh 2050 City Vision project were published, reporting on a three-year conversation with Edinburgh residents on their ambitions and aspirations for the future of the city. Those results set out a vision of an Edinburgh in 2050 being:

- A **Thriving City** that is clean, green and sustainable.
- A **Welcoming City** that is happy, safe, and healthy.
- A **Pioneering City** built on data, culture, and business.
- A **Fair City** that is inclusive, affordable, and connected.

This Climate Strategy is one of a number of plans and programmes designed to transform Edinburgh over the next decade and meet those long-term ambitions.

Figure 6: Promotion of the 2050 City Vision

This strategy does not stand alone, but is part of wider local, national and international policies and programmes.

Local plans and strategies

Edinburgh Partnership Community Plan provides a framework for collaboration between city stakeholders, with a focus on joint working to reduce poverty and inequality within the city and improve the quality of life for all citizens. This framework incorporates joint action to deliver a more sustainable future for the city, delivery of which will be informed by this Climate Strategy.

Figure7: The three key priorities from the Council Business Plan

Council Business Plan: Our Council, Our Future was published in February 2021 and is built around three priorities to make Edinburgh a sustainable and net zero city by 2030, end poverty by 2030, and ensure wellbeing and equalities are enhanced for all.

This Climate Strategy is a critical part of the delivery programme to meet these ambitions.

Council Emissions Reduction Plan - sets out an initial pathway to net-zero for the City of Edinburgh Council by 2030, targeting the Council's major emissions sources. The plan reflects the Council's commitment as a signatory of the Edinburgh Climate Compact.

City Plan 2030 - will set out the policies and procedures needed to manage the sustainable development of Edinburgh over the next ten years.

Alongside these key plans, delivery of this strategy will also be critical to meeting the city's ambitions for:

- Economic recovery and renewal post pandemic, which will be set out in a new **Edinburgh Economy Strategy** later in 2021.
- A safer and more inclusive carbon neutral transport system described by the **City Mobility Plan.**
- A vibrant and people-focused city centre as described by the **City Centre Transformation Strategy**
- A fairer, more inclusive city as set out in the **End Poverty in Edinburgh** delivery plan

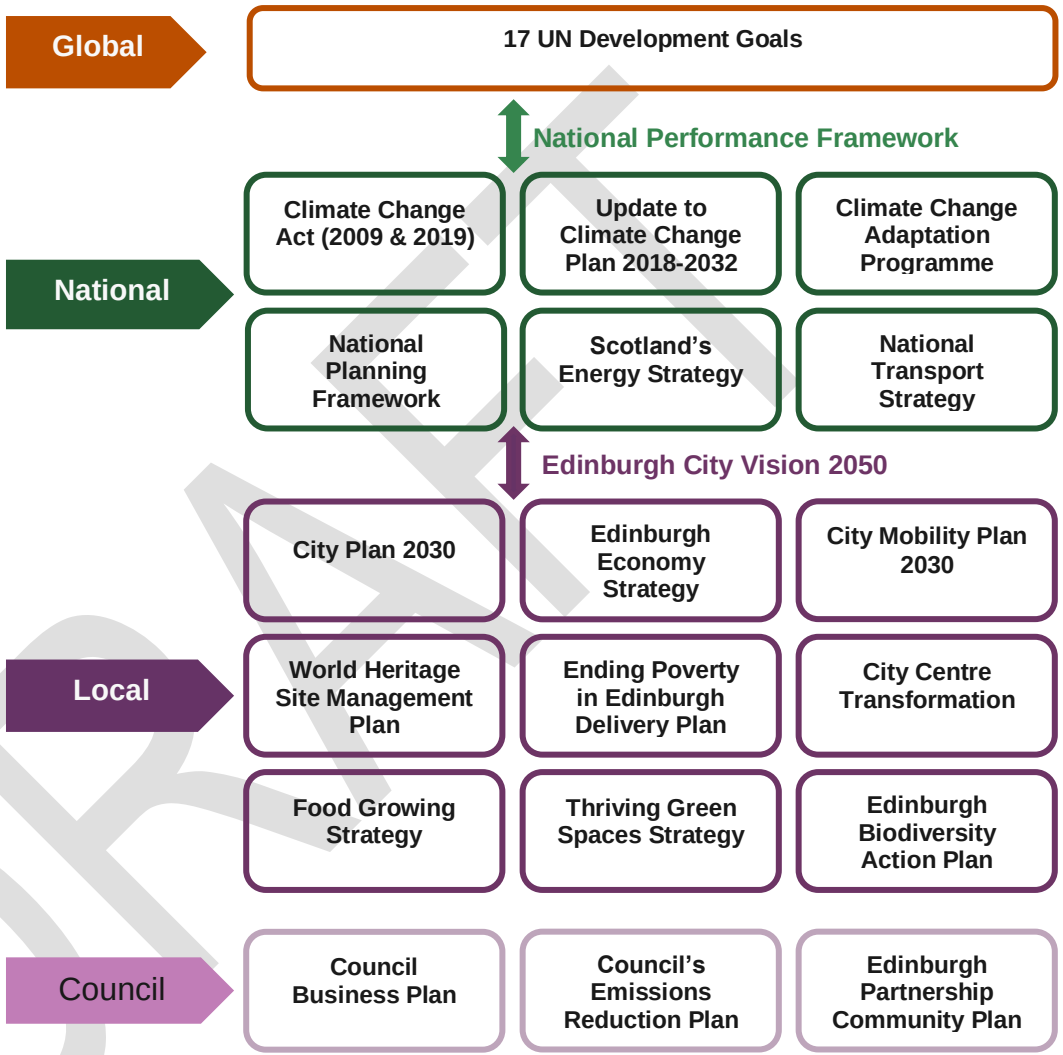


Figure 8: Summary of Policy context to United Nations Sustainable Development Goals

- A thriving, green, biodiverse city through the **Thriving Green Spaces Strategy** and **Edinburgh Biodiversity Action Plan.**
- An outstanding historic cultural city, protected through the **World Heritage Site Management Plan** a vibrant, thriving and sustainable local food economy, as set out in the **Edinburgh Food Growing Strategy**.

National policy context

This strategy is aligned to the national net zero and adaptation programmes and sets actions to deliver net zero ahead of the Scottish target of 2045.

Significant policy frameworks relevant to this strategy include:

- The Climate Change (Scotland) Act 2009.
- Climate Change Plan 2018 – 2023.
- Scottish Climate Change Adaptation Programme 2019 – 2024.
- National Transport Strategy 2020.
- Scotland's Energy Strategy 2017.
- Scotland's 4th National Planning Framework (in development).

UN Sustainable Development Goals

The UN Sustainable Development Goals (SDGs)[9] have been adopted by all member states. They set out an interlinked set of priorities and actions to end poverty, improve health and education, reduce inequality, and spur economic growth, as well as tackle climate change and working to preserve oceans and forests.

Scotland's national performance framework (NPF) sets out how the 17 SDGs have been incorporated into 11 cross-cutting outcomes for Scotland which are reported through national indicators.[10]

This Climate Strategy sets out a range of actions which will also support both Scotland's NPF and the UN SDGs.

[9] Sustainable Development Goals, United Nations, accessed May 2021

[10] National Performance Framework, Scottish Government, accessed May 2021

City partner action to achieve net zero

Climate Action is already underway

Citizens and city partners can, and already do, take action on climate change. Organisations across the city have their own sustainability plans and programmes of activity that are already reducing the cities emissions. If we are to achieve net zero by 2030, we must all go further and faster.

The Council has a key leadership role

The City of Edinburgh Council has a key role to play in providing city leadership on climate change.

The Council is a founding signatory of the Edinburgh Climate Compact and has pledged to reduce its own organisational emissions to net zero by 2030.

It has also committed to using the levers that are within the control or influence of the Council to enable net zero action in the city. These levers include the ability to:

- Build strategic relationships and collaborations for change.
- Deliver high-quality low carbon infrastructure and services.
- Make strategic investments to drive change.
- Lobby for change as the capital of Scotland and a major UK city.

Collaborations

To maximise the Council's levers to influence change, we need to work with partners, using the city networks, and partnerships to promote opportunities to co-produce and implement real change.

Infrastructure and services

The Council has responsibility for manging and investing in key infrastructure, including housing, transport and the built environment, which can help create conditions that will support the city's transition to net zero and climate resilience.

As a major service provider for the city, the Council can also help deliver changes that support net zero. For example, through waste and recycling, providing sustainable public transport and planning frameworks.

Strategic Investments

The Council can use its considerable spending power to promote fair net zero business practices, using community benefit clauses to maximise social and environmental value for the local community.

These benefits include green jobs and training opportunities, a strengthened civil society, improvements to the local environment and mitigation of climate change impacts.

The Council can also influence strategic investment programmes (including its investment in active travel infrastructure, house building and retrofitting operational estate) to create new supply chains and green growth opportunities for the city.

Influencing for change

The Council has significant lobbying power as the capital city of Scotland to work with all levels of government to influencing policy and legislation.

This includes opportunities to advocate for greater investment in tackling climate change and strengthened powers for local government to take net zero action change across the city.

Transforming the city means we all need to change, and that change must accelerate quickly

No single city partner acting alone has all the powers, resources or capacity needed

to achieve net zero. Transforming Edinburgh to become a net zero city by 2030 will mean city partners, citizens and communities working together in new ways.

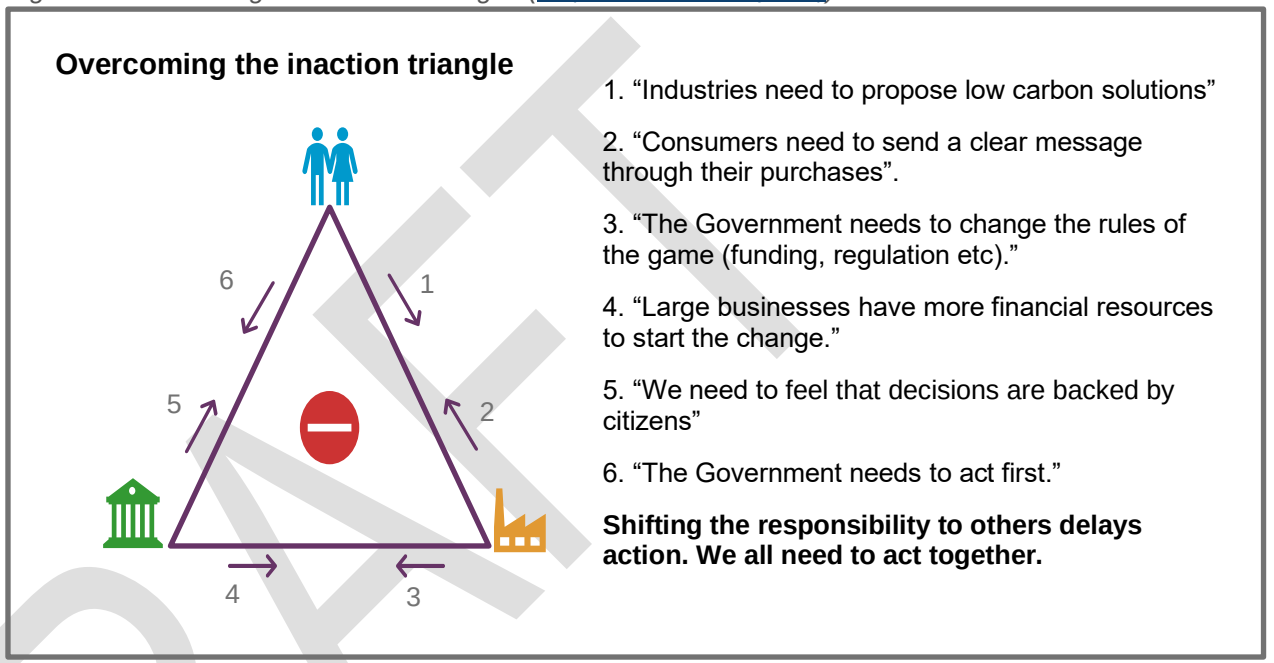
All of us will need to be willing to change the way we do things. Whether that's the choices people make in their everyday lives, the way small businesses operate, or the strategic, policy and spending decisions made by public and private sector organisations.

As part of a strategic city approach, Edinburgh's impact on emissions will be far greater than the sum of its parts. As a result, the Council will convene key city partnerships to collaborate on and deliver this strategy's aims. This collective effort will ensure Edinburgh can make fast progress and be at the forefront of funding opportunities to invest in change.

Asks of city partners

To help drive change we're setting out a number of strategic asks of the key sectors within the city, focused on the actions which will have the most impact; targeting partners with the greatest emissions and the greatest power and resources to make change.

Figure 9: Overcoming the Inaction Triangle. (Adapted from Pierre Peyretou)



We are asking:

All city partners to sign up to the Edinburgh Climate Compact and pledge to reduce their emissions, adopt sustainable business practices and support their staff to make more sustainable choices in their professional and private lives.

Citizens to make more sustainable choices in their everyday lives and use their democratic and purchasing power to support change in others.

Civil Society to support ongoing open dialogue about the transformation which needs to happen in the city and how we can collaborate to take decisions and deliver change together.

Public bodies to join up budgets and work together in a place-based way to create economies of scale and design services and new infrastructure around the needs of communities. Using their purchasing power to encourage markets and green supply chain and skill development.

Edinburgh Climate Commission to challenge the public sector to go faster and further on tackling climate change and call on the private sector to play a greater role in supporting change. The Commission must hold Edinburgh to collective account, while offering expert advice and support for change through initiatives like the Edinburgh Climate Compact.

Investors to invest in and help city partners develop a pipeline of scalable projects to attract capital into the city. For programmes that deliver social, economic and environmental benefits, as well as financial returns.

Developers to make the transition to net zero practices now, moving faster than national regulatory requirements, to ensure Edinburgh can lead the way on net zero development and growth.

Businesses to adopt net zero business models as part of a green and resilient Edinburgh economy. Invest in sustainable practices which also benefit the communities they're a part of.

Edinburgh's universities to turn their academic expertise into support for net zero programmes and projects. Unlock the data, innovation and research city partners need to adopt change with confidence. Target the skills needed to deliver the city's transition.

The Scottish Government to provide a progressive legislative and regulatory framework, which enables local government. This needs to be devolved at the appropriate level to support scale and speed of action in Edinburgh. Lead on communication and information that supports behaviour change alongside the resources needed to help citizens and city partners make them in our homes, communities and places across the city.

Edinburgh Climate Compact

Edinburgh Climate Commission has developed a City Climate Compact which sets organisational climate commitments for Climate Champions to adopt as part of their leadership on climate action.

Signatories to the compact promise to make changes within their own organisation and sector which will support the radical reduction of Edinburgh's greenhouse gas emissions and contribute to a green recovery for the city.

The compact also asks signatories to publish their current emissions and information about their actions to reduce climate impacts, and undertake benchmarking activities.

The compact currently has 12 signatories from across the public and third sectors, as well as from the construction, finance, festivals, energy and higher education sectors.

Strategic approach

This strategy sets out the clear and practical steps Edinburgh will take to tackle the challenge of climate change and achieve our aim of becoming a net zero city by 2030.

Throughout this strategy, the Council and key city partners are focused on putting in place actions we can implement now, using approaches that we know work, and drawing from learning and experiences from other cities.[11]

Principles

In developing this strategy, our approach has been guided by six core principles:

A Just Transition

We will look to maximise the job creation and other co-benefits of the transition to net zero - focusing on fair work, tackling poverty and inequality and ensuring that everyone can share in the city's success

Preventing future emissions and adapting to unavoidable climate change

We will take actions and changes that prevent future emissions, as well as reducing those we currently emit. We will focus on adapting the city to be resilient to the unavoidable impacts of climate change.

Place based, 20-minute neighbourhoods

The creation of sustainable, 20-minute neighbourhoods across Edinburgh is one of the single most fundamental changes we can make to ensure we meet our net zero commitment.

This means finding ways to make sure citizens can access the services and amenities they need within a short trip from home, by wheelchair, walking, cycling or using public transport.

Energy efficiency

Improving the energy efficiency of buildings in Edinburgh is critical to our approach. We will adopt fabric first approaches to new developments in Edinburgh, seeking to reduce energy demand and emissions, whilst also reducing ongoing operational and maintenance costs.

Electrification First

The future needs of the city will create increased demands on the infrastructure supporting our energy supply. We need to ensure the network's capacity can withstand the substantive increases in electricity demand while keeping an open mind to innovation of other energy sources such as green hydrogen.

Progressive Policy

To deliver change we will work with the Scottish Government to develop regulatory frameworks that are progressive and promote innovation and create incentives for citizens and businesses to make practical changes in the way they live and work.

[11] Key city partners who have agreed to support the delivery of actions are named against the relevant actions within each chapter. It is envisioned this list will expand following consultation on this strategy.

Governance

Achieving net zero by 2030 will require city-wide co-operation at a level, depth and pace that will challenge citizens and city partners to hold each other to account for delivery.

Figure 10 sets out proposed governance and delivery arrangements to support the city to deliver on the net zero strategy.

A Climate Delivery Group will bring city partner Chief Executives and senior officers together to:

- Provide operational oversight.
- Align city partners' mainstream programmes and budgets to support net zero.
- Hold delivery mechanisms to account.
- Scrutinise performance, including city emissions reductions.
- Be accountable to their individual organisation for participation and delivery, in-line with their own political or organisational governance arrangements.

The City of Edinburgh Council will provide political leadership through its role as a sphere of government which is accountable to citizens, working with city partners through shared governance structures including the Edinburgh Partnership Board and the City Region Partnership.

Delivery mechanisms will be focussed on harnessing capacity to deliver the strategy's actions. This will include:

- Engaging city partners and securing buy-in.
- Fostering strategic collaboration.
- Developing implementation plans and co-ordinating delivery.
- Securing external knowledge and technical expertise.
- Developing investible proposals and projects.
- Developing and testing innovative finance models.
- Exploring special purpose vehicles, such as community-owned or arm's length energy services companies.

There are many delivery groups, boards and partnerships that have a role to play in delivering the strategy. Examples of existing groups include City Region Partnership, Edinburgh Partnership Board, The City of Edinburgh Council and individual organisational governance.

New structures - Climate Delivery Group, Delivery Partnerships and short life working groups - will be convened to bring together resource and expertise across the city to lead specific strategic action programmes.

It is envisioned that working groups are temporary, that additional working groups will be created as required, and that they will operate on a '*task and finish'* basis – so that the overall structure is agile and focused on delivery.

Edinburgh's independent **Climate Commission** has a remit to influence and provide constructive challenge and expertise to support the delivery of the strategy.

The Commission is co-sponsored by the Council and has a role in acting as a '*critical friend'* to public sector partners. They will challenge them to go further or faster where needed and supporting whole system change by calling on wider city partners, including citizens and businesses, to take action on climate change.

The strategy's delivery will be informed and driven by citizens' views, through the Council's democratic processes, through the work of the Commission, and through direct engagement and collaboration on delivery to co-produce better outcomes for communities.

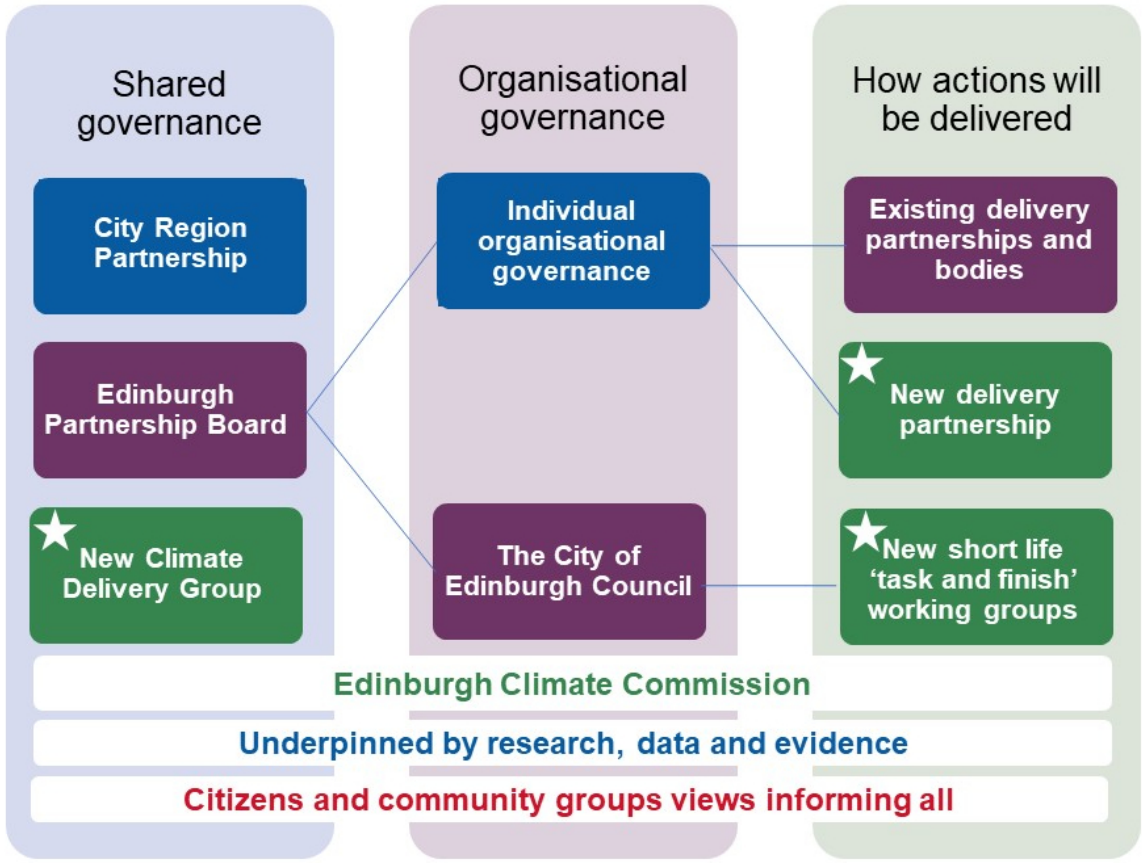


Figure 10: Proposed governance and delivery arrangements for city net zero strategy

Net zero, climate resilient development and growth

The city's needs are growing

Like many cities, Edinburgh is growing, with our population expected to increase by 6 percent to **over 560,000 people by 2030.** This will bring new skills to the city and help our communities thrive. Population growth also creates demand for high-quality, affordable housing and new local services and facilities, with the city estimated to require a minimum of **50,000 new homes by 2045**.

We need to be able to meet those needs in a sustainable way which manages demand for land and the creation of new infrastructure such as roads.

Population:
+13 % between 2017 and 2045
- +43% aged 75 and over
- +26% pensionable age
- +12% working age
- *Stable* children population

Households:
+21% between 2018 and 2045
(~ 49,000 new homes)

Figure 11: Population projections for Edinburgh [NRS Scotland - Population Projections for Scottish Areas (2018-based): Data Tables, Table 3]

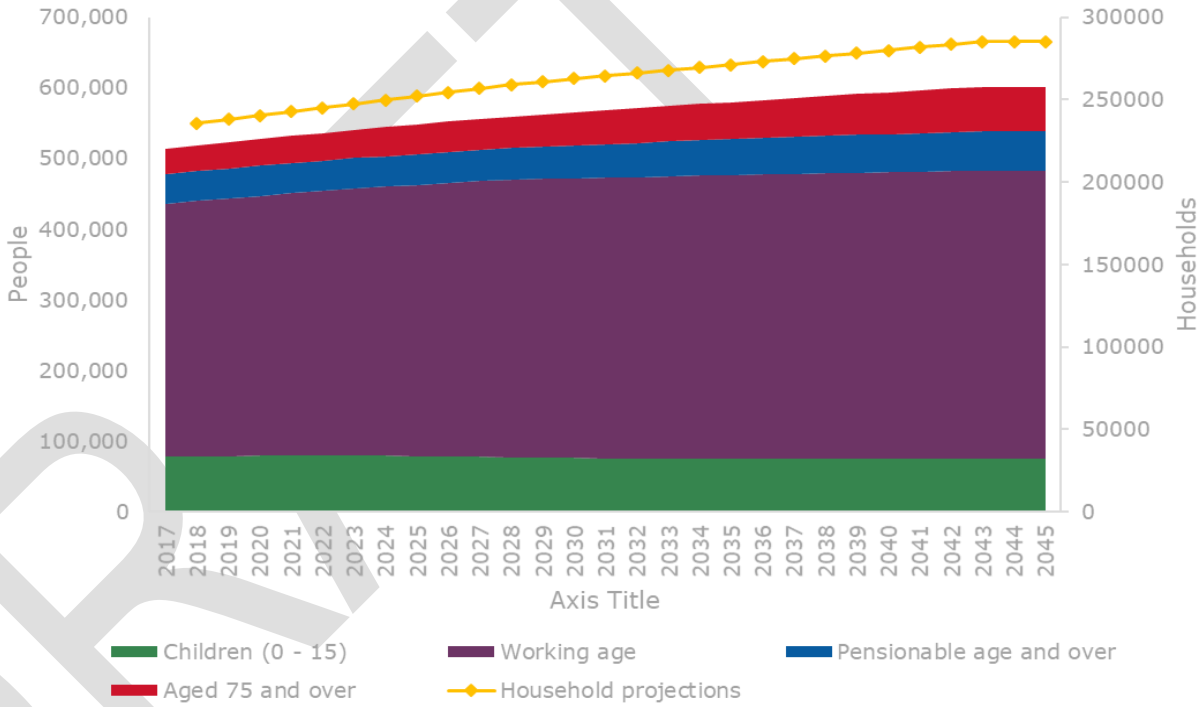


Figure 12: Population projections for Edinburgh by 2045 [NRS Scotland - Population Projections for Scottish Areas (2018-based): Data Tables. Table 3]

We need to adapt our places and communities to be resilient to climate change

Climate change will bring increased flooding, coastal erosion and more frequent severe weather – causing damage to property and disruption for citizens. We need to adapt our communities, economy, natural and built environment to be resilient to the unavoidable impacts of climate change.

Development can secure social climate and economic benefits for the city

In developing the city sustainably, we have an opportunity to ensure investment in infrastructure delivers social, climate and economic benefits. We have choices about where and how this development is delivered, and an opportunity to ensure it creates local jobs and skills opportunities, uses innovative construction methodologies to minimise emissions and re-invigorates the city's urban environments.

Our vision for 2030

We will create resilient places and spaces for low-carbon living

We will provide for Edinburgh's population growth, by re-using land that has already been developed (i.e. brownfield or vacant land). The city will grow sustainably, improving biodiversity across the city and the public health of citizens.

Our residents will live in high-quality net zero affordable homes that are resilient to climate change, in thriving low-traffic neighbourhoods that meet their everyday needs – whether that be for work, family or leisure time and reduce the need to travel to other parts of the city.

New developments will provide new and better spaces for leisure, nature, and community food growing that improve residents' wellbeing and quality of life.

Edinburgh will be cleaner and have more greenspaces and natural habitats that we allow to flood periodically, as a way to help manage increased rainfall. People's gardens will have fewer hard surfaces and more natural space to help rainwater drain and provide habitats for wildlife. Natural habitats will be preserved across the city to help improve air quality, increase the variety of plants and wildlife, and protect the city from flooding and other climate change impacts.

Our strategic approach

To ensure the city is able to grow sustainably, we will set **high development standards** and put in place new planning policies that **enable net zero growth** through a new local development plan – designing in **climate resilience** and **biodiversity enhancement** to deliver a **'climate ready city'**.

We will prioritise **re-using land** that has already been developed to protect the city's greenspaces; test **innovative approaches to resilient net zero development**; and roll out place-based approaches through **20-minute neighbourhoods** which support citizen **wellbeing.**

Understanding the risks climate change presents for the city

We know that climate change will impact on all sectors of the city, but we do not have sufficiently robust and detailed data driving investment decisions.

We will carry out a city-wide climate change risk assessment and economic analysis so that we understand the costs of failing to adapt, and the wider economic and social benefits that adaptation projects can deliver – using this to provide a robust evidence base for investment.

Working in partnership to deliver a whole-city approach to adaptation

City and region partners will work together to tackle regional and cross-border climate impacts, including coastal and river flooding, damage to infrastructure and transport disruption. Where possible, this will prioritise 'nature-based solutions' such

as rain gardens and flood plains – helping to protect and enhance our natural and built environments.

As the next phase of Edinburgh Adapts[12], the Council will convene city and regional partners to collaborate on a long-term 'Climate Ready Edinburgh' plan.

Delivering a transformed city centre

In 2019, the Council set out a ten year 'City Centre Transformation Programme' which will see the heart of the city re-designed to deliver cleaner, greener public spaces which prioritise access for walking, wheeling and cycling, and public transport. The economic recovery of the city centre post-pandemic will be a focus of a refreshed Edinburgh Economy Strategy, incorporating a specific City Centre Recovery Action Plan.

Future city development will ensure social, economic and climate benefits are evenly distributed beyond the city centre, by developing connected and climate resilient net zero neighbourhoods that strengthen local economies and improve people's health and wellbeing.

Case Study: Using blue and green infrastructure to reduce flood risk

Rain gardens significantly reduce flood risk, protect rivers and waterways, and provide wildlife habitats by capturing water and slowing the rate at which it enters the drainage system. The Royal Botanic Garden Edinburgh is using its rain garden to manage flooding across the garden and to study what trees, shrubs, and wildflowers are best suited for rain gardens.

Similar to rain gardens, Edinburgh has a number of green roofs and hollows that provide nature-based solutions to intense rainfall and flooding, and 10,000 Rain gardens for Scotland mapping these sites.

Source: Royal Botanic Garden Edinburgh (RBGE)

Ensuring our buildings, homes and infrastructure are climate resilient

We will lay new planning policy foundations in the City Plan 2030.[13]

We will work with property owners, developers and the construction sector to improve design and the quality of buildings, to support climate resilient place-based approaches to development and infrastructure. This will include utilising green and blue infrastructure (such as green roofs and urban ponds) and permeable surfaces to reduce flood risk and improve air and water quality.

Working with Edinburgh World Heritage and Historic Environment Scotland, we will develop a plan to adapt Edinburgh's UNESCO World Heritage site to be resilient to climate change in a way that protects its heritage values.

Investing in housing

The Council plans to spend £2.8 billion of capital investment over ten years to deliver 10,000 new sustainable and affordable homes by 2027, and to modernise existing Council-owned homes to be energy efficient

Source: City of Edinburgh Council Budget 2022/23

[12] Edinburgh Adapts (2016-2020) was Edinburgh's first vision and action plan to adapt and prepare the city for the impacts of unavoidable climate change.

[13] Local Development Plans are prepared through a statutory process. Edinburgh's City Plan 2030 due to be submitted to the Scottish Government for examination in 2022 and adopted in 2023.

A new approach to urban living

Through the City Plan 2030, the Council will work with developers, investors and landowners to deliver climate resilient net zero development in the city – ensuring that wherever possible housing demand and other development needs are met by re-using land that has already been developed, helping to manage pressure on greenfield land.

This means that more new developments will be higher density and mixed use, in sustainable locations, with easy access to jobs and services.

Neighbourhoods like these will help cut emissions by reducing the need to travel and will create markets for new local businesses, helping to create more local jobs and strong local economies that build community wealth.

Low carbon affordable housing

Through a 10-year strategic housing investment plan, the Council will lead the way in ensuring all major new Council-housing is constructed to a new net zero design brief, which includes use of low and zero carbon technologies as an alternative to gas boilers. This will be ahead of the Scottish Government 2024 deadline for new builds to have zero emissions heating systems.[14].

We will work with national and local partners, to deliver an Edinburgh Homes Demonstrator that tests off-site construction methodologies and will roll out success across city region partners' housing pipelines.

Making the most of nature

The Council is committed to improving our parks, food growing sites and urban forests, and has secured £4.5 million of capital investment in 2022/21 to support this.

Source: The City of Edinburgh Council Budget 2022/23

Prioritising water management and nature-based solutions to climate impacts

We will prioritise nature-based solutions to water management, carrying out a Strategic Flood Risk Assessment to understand the risk to the city's homes and delivering a long term and sustainable approach to water management across the city.

We will create a 'green and blue network' of connected waterways, greenspaces, and active travel routes that will provide enhanced environments for citizens and protect the city's wildlife.

Innovation in city development

We will **deliver ambitious net zero developments at Granton Waterfront and the BioQuarter,** creating centres of excellence and using green and blue infrastructure, like living roofs, ponds and rain gardens, which enhance the city's natural habitat and build communities that are resilient to flooding and other impacts of climate change.

City partners will work with the development sector and research and innovation partners to test and develop innovative approaches to construction, energy generation, and community wealth-building.

This network will be complemented by an Ecological Coherence Plan and Edinburgh Million Tree City initiative to provide nature-based solutions to flooding, improving air quality and reducing the

[14] New Build Heat Standard: scoping consultation, Scottish Government, December 2020

urban heat effect through shading and cooling.

We will deliver development frameworks that adapt the city's coast to be resilient to climate change. We will begin with the delivery of a **new coastal park** as part of the **redevelopment of Edinburgh's Waterfront** that will create jobs and provide high-quality greenspaces, supporting biodiversity and providing outdoor recreation space.

Building resilient communities by re-designing services to localise support

By joining up services and thinking differently about how buildings are used, we can free up resources to invest in our best buildings to make them more energy efficient and develop them as 'community hubs' where people can access a wider range of services locally.

We will work with public, community and voluntary sector partners over the next 10 years to radically re-design services across local hubs in line with the 20-minute neighbourhood model (*see Figure 13*).

This will deliver improved services to areas experiencing inequalities; focus on natural town centres; and ensure more rural communities can access services with minimal travel.

Figure 13: Features of a 20-minute neighbourhood

Net Zero Development and Growth

Outcomes

- People can access the support they need in the places they live and work and local neighbourhoods are resilient to the impacts of climate change.
- City development and investment deliver net zero growth and economic opportunities that protect and enhance the environment.
- The city's wildlife is thriving, and biodiversity is enhanced, protecting the city's ecosystem and helping absorb carbon.

Action	Next steps and Indicative delivery timeframe	Partners
1. **Long term planning on climate risk and cost**	• The City of Edinburgh Council will convene city and region partners to collaborate on a long-term '*Climate Ready Edinburgh'* plan. *2021-2022* • Undertake a city-wide climate change risk assessment and cost analysis. *2021-2022*	National and Regional planning partners, Edinburgh Adapts Steering Group, Edinburgh Climate Change Institute, Adaptation Scotland
2. Laying the policy foundations	• Set new planning policy and guidance within the City Plan 2030 • Work with developers, investors and landowners to deliver net zero development of the city. *2021-2023*	City partners, The City of Edinburgh Council, Edinburgh Biodiversity Partnership, The Scottish Government, private sector developers, construction industry, Edinburgh Living Landscape Partnership
3. Re-designing services to meet citizen's needs locally	• Re-design services and amenities to deliver sustainable 20-minute neighbourhoods across hub locations	NHS, higher education sector, voluntary sector organisations, Police, Fire
4. Leading the way on net zero development	• All new Council-led housing developments with the 10-year sustainable housing investment plan will be net zero. *2020-2030* • Deliver an off-site net-zero construction methodology demonstrator project. *2021 - 2023*	The Scottish Government, Scottish Futures Trust, Construction Scotland Innovation Centre, Edinburgh Napier University, and Offsite Solutions Scotland

5. Using blue and green spaces to protect communities from climate change	• Deliver a network of green and blue spaces across the city which help protect our communities from climate change impacts, provide active travel routes, and protect and enhance the city's natural environment and biodiversity. *Strategic Flood Risk Assessment 2021, Green/Blue Network 2021–2023*	The City of Edinburgh Council, Lothian Strategic Draining Partnership, Edinburgh Living Landscape Partnership
6. Meeting adaptation challenges with nature-based solutions	• Deliver nature-based solutions to the impacts of climate change, beginning with the Edinburgh Million Tree City initiative. *2022-2030* • Develop an Ecological Coherence Plan for the city. *2021*	The City of Edinburgh Council, Edinburgh Biodiversity Partnership, Edinburgh Living Landscape Partnership
7. Develop a long-term and sustainable approach to water management across the city	• Deliver a Water Management Vision and Strategy identifying the risks and co-ordinating actions to alleviate impacts from all sources of flooding in the city. *2021– 2030* • Integrate design for water and flooding within the urban landscape using blue-green infrastructure. *2021– 2030*	Edinburgh and Lothians Drainage Partnership (The City of Edinburgh Council, SEPA, Scottish Water)
8. Protecting the City's coast	• Adapt the city's coast to be resilient to climate change, beginning with delivering around 200 hectares of new and enhanced coastal park in north west Edinburgh. *2024 - 2030*	The development sector, The City of Edinburgh Council, University of Glasgow, Transport for Edinburgh
9. Delivering rapid whole-system change	• Call on the Scottish Government to use the lessons from responding to Covid to enable accelerated local action and decision making on tackling the climate emergency. *2021–2023*	The City of Edinburgh Council, The Scottish Government
10. Shared risk-taking to develop innovative solution	• Call on the Scottish Government to collaborate with the City of Edinburgh Council on shared risk-taking to develop innovative solutions to tackling climate change - for example by exploring regulatory 'sandboxes' for key demonstration projects to support the testing of new approaches within more permissive and flexible frameworks. *2021 - 2030*	The City of Edinburgh Council, The Scottish Government
11. Embed net zero requirements	• Call on the Scottish Government to embed net zero requirements into new and existing policy, legislation, regulations and statutory guidance. *2021*	The City of Edinburgh Council, The Scottish Government

Net Zero Energy Generation and Energy Efficient Buildings

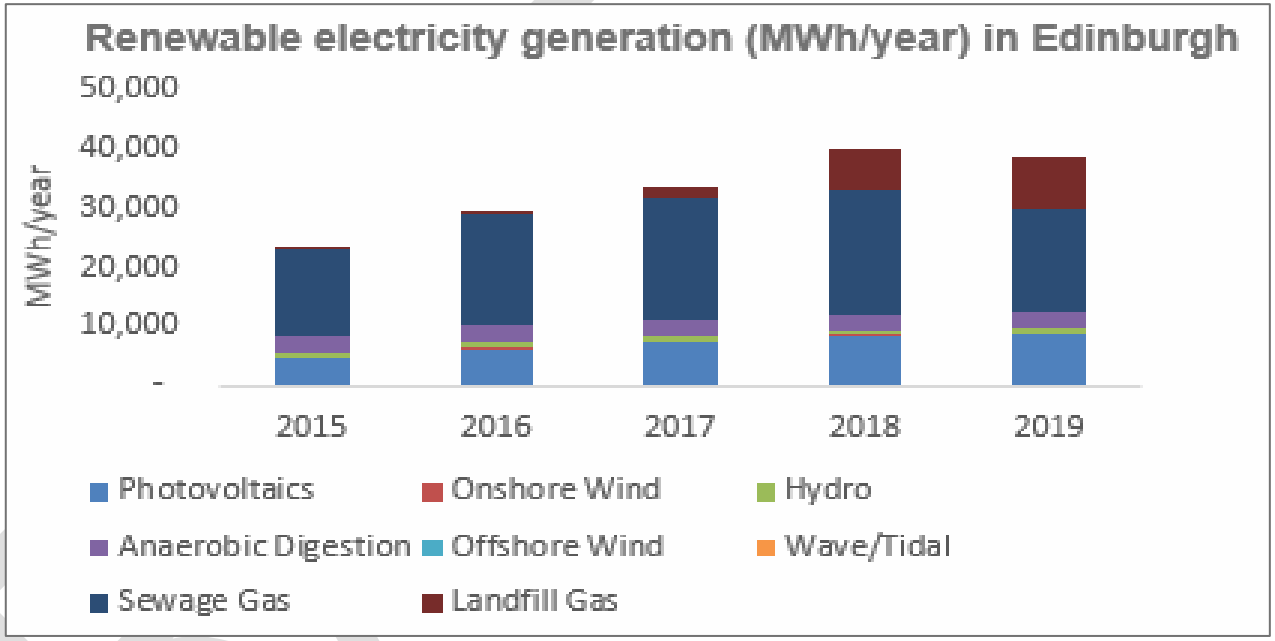
Energy to heat and power Edinburgh's buildings is one of the biggest sources of greenhouse gas emissions in the city.

Energy accounts for 68 percent of the city's emissions, with around half of this coming from domestic homes. Natural gas accounts for 35 percent of the city's emissions, with around two thirds of domestic energy, and around 40 percent of non-domestic, currently provided by gas.

Local renewable energy generation levels are low

The cost of electricity in comparison to gas is currently high, and Edinburgh has relatively low levels of local renewable electricity generation (currently only two percent of the city's total electricity consumption).

Figure 14: Renewable electricity generation (MWh/year) in Edinburgh. (Source: Department for Business, Energy and Industrial Strategy (BEIS) - Renewable electricity by local authority, September 2020)



The city is growing, and energy demand is set to increase

The city is growing, with more people, new developments and more buildings across the public, private, commercial and domestic sectors driving the need for city-wide heat and energy generation and distribution solutions.

This will create increased demands on the infrastructure supporting our energy supply, with peak demand across the UK estimated to increase between 33 percent and 58 percent by 2050.[15]

The city's energy networks and supporting infrastructure need to change at speed

Local heat and energy generation and distribution (including heat networks) is largely considered on a development-by-development basis. This means as a city we need to make decisions in a more strategic way, and position Edinburgh to maximise the commercial, carbon reduction, energy savings and resilience benefits potentially available.

Green hydrogen may be able to offer future solutions, but the technology is still being developed and tested, and future requirements for hydrogen-ready appliances and a gas grid supporting it are not yet clear and still being piloted through innovative projects like H100 Fife or Hy4Heat.[16]. While maintaining watch on this innovation, the city will take an electricity first approach to meeting the city's needs.

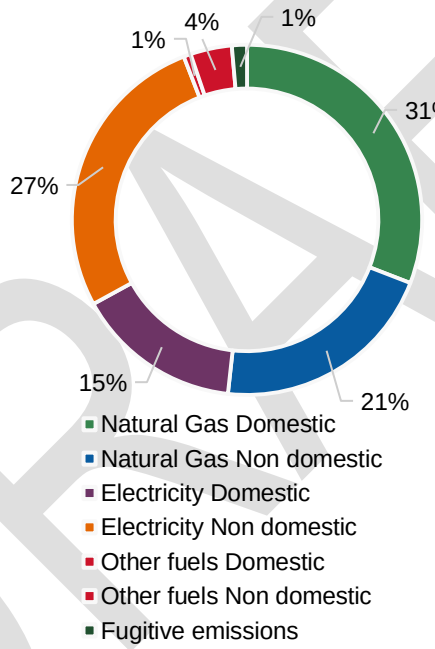


Figure 15: Energy consumption by fuel source: (Source: Edinburgh Carbon Scenario Tool, based on Department of Business, Energy and Industrial Strategy (BEIS) datasets (2017/18 data)

The city has a high proportion of older buildings which need adapted to be energy efficient and resilient to the impacts of climate change.

Edinburgh has a rich mix of heritage buildings and buildings in conservation areas which are an asset to the city's cultural wealth. These buildings make a major cultural, social and economic contribution to the city. While these buildings require a lot of energy to heat and a bespoke approach to their adaptation, keeping them well conserved and maintained can improve their energy efficiency. Edinburgh's Old and New Town is an UNESCO World Heritage Site and is already feeling the impacts of climate change. As well as its historic and cultural importance, it is a place where people live, work and study.

Around 48 percent of Edinburgh's homes were built pre-1945, with many requiring essential maintenance repairs and upgrading ('retrofitting') to become more resilient to future climate change and energy efficient.

Forty-two percent of homes have energy performance certificate ratings of D or lower and regulations proposed by the Scottish Government in the national draft Heat in Buildings Strategy would mean

[15] Future Energy Scenarios, National Grid, July 2020

[16] H100 Fife, SGN, accessed June 2021; hy4heat, accessed June 2020

that by 2035, all domestic properties will need to have an EPC rating of C or higher. For Edinburgh, this could be as many as 100,000 homes in Edinburgh that will require retrofitting.

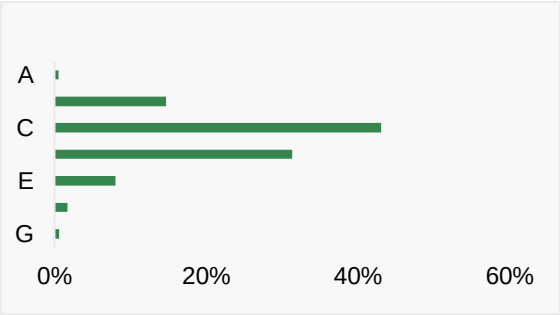


Figure 16: Scottish domestic building energy performance based on EPC rating. *Source: Scottish Government data (Data available for 4,905 properties only out of 238,269 households)*

Only 15 percent of homes in the city are owned by the local authority or housing associations[17]. This means the city is dependent on businesses, owner-occupiers and private landlords investing in their buildings if we are to reduce the city's emissions and ensure buildings are climate resilient, with communal spaces and mixed-tenure buildings requiring owners to co-operate on organising retrofit works.

Many of Edinburgh's residents will need financial support to be able to meet the costs of retrofitting their homes to the required standards, and to reduce energy demand to a level where non-gas heating systems are affordable to run.

The costs of upgrading the city's public buildings are significant

Public sector partners also own large amounts of operational estate across the city, with the Council alone owning over 600 buildings – around 40 percent of which were built within the last 50 years, with 30 percent being over 100 years old. Other city partners, such as Edinburgh's universities and the NHS, face similar estate challenges.

The age, range, and complexity of the city's operational estate means the costs of retrofitting large operational buildings to become net zero is significant, and current financing models for resourcing retrofit have limited commercial return, making it difficult to lever the external investment needed.

Retrofitting large operational buildings takes a long time and comes with significant disruption to services given the number and size of buildings.

Ensuring action on energy delivers wider social and economic benefits

We have an opportunity to make investing in energy infrastructure and retrofitting the city's buildings an investment in Edinburgh's economic recovery.

Heat and energy development offer opportunities for public and private investment at scale, and with confidence in revenue-generating infrastructure. Improving the energy standards of our buildings and developing new energy infrastructure presents opportunities to generate new markets, creating local jobs and skills development opportunities, delivering financial returns to be re-invested locally, which supports community wealth-building and a just transition to net zero.

Our vision

Our vision is that by 2030, citizens and businesses will be heated and powered by clean energy, and we will all live in homes that are warmer and healthier to live in.

[17] : Scottish House Condition Survey: Local Authority Analysis 2017-2019, Scottish Government, February 2021

Better-insulated, energy efficient buildings will have significantly **reduced energy demand, helping to lower costs,** and will be heated and powered by **clean energy** – including more locally generated or community-owned renewable energy – helping to reduce the risks of energy insecurity.

Financial assistance will be available for citizens on lower incomes to help meet the costs of retrofitting their homes – **reducing running costs**, which in turn will help tackle fuel poverty.

Public services will be collocated in a smaller number of **high-quality energy efficient buildings,** that make better use of what we retain, to offer **joined up local services** that better meet our resident's needs, and deliver savings to the public sector that can be re-invested in services.

We will have preserved our UNESCO World Heritage site and historic buildings, taking an 'Outstanding Universal Value' approach, and protecting the embodied carbon they hold. The rest of our homes and city buildings will be fully adapted to our changing climate and will have heating and cooling systems that are able to deal with wetter winters and hotter summers

The scale of the work required to improve Edinburgh's buildings and energy infrastructure means we will create local jobs and skills development opportunities – allowing us to support local businesses and **build community wealth**.

Our strategic approach

We will lay the foundations for change by **understanding energy demand** across the city and setting **progressive planning policies** that support change.

We will bring partners together to create an **energy masterplan** for the city and collaborate on **exemplar retrofit pilots**, using the learning to develop **joint city retrofit plans** that secure economies of scale.

We will **align city investment** in public buildings and energy infrastructure to support **20-minute neighbourhoods**, and we will **support citizens and businesses to invest** in their buildings. We will target this work to ensure it supports **community wealth building** and a **just transition** to a resilient net zero city.

Energy efficient new buildings

National requirements for new domestic buildings are set to change, with no new developments being permitted to connect to the gas grid from 2024. If we are to meet our ambition for Edinburgh, we need to **go faster on low carbon heat**.

'City Plan 2030' will set high **energy standards** in new developments and require the use of **low and zero emissions technologies** to heat and power the city's new buildings.

Planning for a clean energy future

To deliver change to heat and energy over the next 10 years, we will undertake data-led energy mapping across the city to better understand current and future demand, and the opportunities for new local generation and distribution systems,

The Council will enter into a strategic partnership with SP Energy Networks to align investment in the grid and associated infrastructure with the city's future energy needs. This will help ensure the grid is able to meet increased demand and infrastructure is improved at strategic locations which support city development.

We will establish a new City Heat and Energy Partnership with key public and private sector organisations. The partnership will be tasked with co-ordinating investments and supporting the delivery of flagship actions for the city.

The partnership will develop a city-wide heat and energy masterplan which will incorporate a Local Heat and Energy Efficiency Strategy align current and future

grid development to the city's energy needs.

The strategy will also include support for renewable energy, micro grids and measures to lower the cost of electricity and tackle fuel poverty, as well as meeting national requirements[18].

This will include working with Edinburgh and South East City Region Deal partners to develop regional renewable energy solutions. This work will draw on the region's wind, geothermal, hydro and solar assets and will look to learn from the H100 hydrogen pilot.

Investing in energy

To deliver the city energy masterplan, the partnership will work with the Scottish Government and private and public sector partners to develop a long-term shared investment strategy and delivery mechanisms. This work will focus on maximising opportunities for local revenue generation and securing a clean and affordable renewable energy infrastructure for citizens and businesses.

Developing heat networks

The partnership will work with communities and developers to deliver heat networks that meet the needs of key public sector buildings and major new developments across the city (focussing initially on major new developments at Granton Waterfront and the BioQuarter).

The Council will identify heat network zones, in line with emerging regulatory requirements. It will work with developers to further expand heat networks and will ensure all Council-led infrastructure investment plans will seek opportunities to connect to heat networks as they are developed, beginning with the Council's learning estate programme.

Improving the city's public buildings and energy infrastructure to support thriving local neighbourhoods

The city's public buildings need to be energy efficient, meet citizen's needs, and support 20-minute neighbourhood models that ensure easy access to local services and reduce the demand for travel.

We will collaborate with city partners, to strategically and align investment in our estates to ensure it supports **improved service delivery, improved energy efficiency and reduced emissions.**

To achieve this, we will develop a **joint public sector estate retrofit plan** that will create economies of scale, support local companies, and unlock the potential large scale retrofit has to signal future needs to the supply chain, stimulate targeted workforce and skills development, and create new local jobs in the city.

We will work with the Heat and Energy Partnership to develop supporting **place-based energy infrastructure projects** – to ensure joint public sector estate retrofits include consideration of **net zero heat and energy generation solutions, planned to meet neighbourhood's needs**.

Case study: Western General Hospital Heat Network

NHS Lothian has commenced a major programme of energy efficiency works at the Western General Hospital to deliver high

[18] Heat in buildings strategy - achieving net zero emissions: consultation, Scottish Government, February 2021

energy efficiency systems and low carbon technologies.

The works are urgently needed to replace ageing infrastructure, but the overall aim of the programme is to find a pathway to net zero in line with NHS Lothian Carbon Commitments. The pathway is based on replacing the old steam network with a low temperature district heat network (*cont…)* and commissioning a new energy centre for the site.

Phase 1 of the project is complete with part of the site now served by the new Low Temperature Heat Network. The project will be phased over a number of years, with Phase 2 extending the heat network to further buildings on the site.

The Western General Hospital is a major consumer of energy, so the plans for the site have potential to make a contribution to the net zero pathway for the city as a whole and potentially integrate with wider energy systems and heat networks.

Source: NHS Lothian

Warm, comfortable and affordable social housing

Improving the **energy efficiency of Edinburgh's existing homes** is one of the most effective steps we can take to reduce the city's emissions. Achieving this will mean bringing forward a programme to carry out **'fabric first' building upgrades** at pace, to support accelerated uptake of **new smart energy controls and low carbon heating and cooling systems**.

We will deliver an **advanced whole house retrofit programme** across existing Council homes based on the EnerPHit retrofit standard, which can deliver up to an **87 percent reduction in emissions** while also improving **health, comfort and affordability** for tenants.

We will work with Housing Associations and Registered Social Landlords to secure economies of scale and extend the reach of programmes across Edinburgh's **35,000 social rented sector** homes.

Supporting citizens and businesses

Owner occupiers, private landlords and the city's businesses will also need to invest in their buildings if we are to reduce the city's emissions. We will work across the public/private/domestic sectors to develop **exemplar retrofit pilots** which will test innovative finance models to support retrofitting, including in challenging mixed-tenure and heritage settings.

We will share learning from pilots with the Scottish Government and call on them to develop and roll out **new incentivisation models** to support citizens and businesses to invest in improving the energy efficiency of their buildings, targeting financial assistance toward low-income households to help **tackle fuel poverty**.

Case study: Integrating fabric first approaches to achieve wider community benefits in social housing

The City of Edinburgh Council manages approximately 20,000 homes which consists of a significant number of 'hard to treat' non-traditional construction types which can present significant technical retrofit challenges.

The Council is currently developing a Whole House Retrofit approach. This approach will initially assess which advanced whole house retrofit standards (such as EnerPHit) are the most suitable from a technical and financial perspective, across the various Council housing archetypes to align with the Council's long-term net zero carbon targets and to also provide energy savings for tenants.

Whole House Retrofit focuses on fabric first measures, including improved thermal insulation, airtightness and ventilation to significantly reduce energy demand and the need to heat the home. It also helps to ensure homes deliver health, comfort and affordability benefits to tenants.

The wider Whole House Retrofit programme will be a key component of the Council's wider area-based regeneration approach which has the potential to transform neighbourhoods and provide environmental, social and economic opportunities.

Pilot projects will be developed to assess the benefits and practicalities of an advanced whole house retrofit approach across a variety of the Council's most common building archetypes, along with detailed monitoring and evaluation to assess the carbon and energy cost savings.

These pilot projects will inform the longer-term investment and roll out of the whole house retrofit programme.

A new skilled workforce, making Edinburgh a centre for excellence

A large new skilled workforce will be needed to deliver new **energy infrastructure** and **retrofit at scale and pace** across the city's public, private and domestic buildings. The Scottish Government has committed to developing a Climate Emergency Skills Action plan to support market demand for the skills required and national data suggest there could be:

- Between 1,500 and 9,000 jobs over 15+ years in zero carbon energy (including renewables, hydrogen and storage)
- Between 6,000 and 13,000 jobs over 10+ years in decarbonising buildings and broadband
- Between 2,000 and 3,500 jobs over three years in building new social housing.[19] [20]

We will ensure these opportunities deliver economic benefits for citizens and the city by working with the industry and South East Scotland City Region Deal partners on their skills development programmes to ensure the city has the workforce needed to transform with a focus on **green construction skills**.

Case study: Canongate Housing Development Energy Efficiency and Conservation project

In March 2021, Edinburgh World Heritage in partnership with the City of Edinburgh Council undertook an innovative pilot to retrofit a mixed tenure tenement block of post-war B-listed development, designed by Sir Basil Spence in the late 1960s.

Focusing on 10 flats and 2 commercial units, the project aimed to both improve energy efficiency and restore or repair its original features.

Supported by funding from the Scottish Government and Scottish Power Energy Networks' Green Economy Fund, the project developed and tested innovative and replicable delivery models for the retrofit of domestic/non-domestic listed properties considered as hard-to-treat.

Source: Edinburgh World Heritage

[19] Green Jobs in Scotland, STUC, accessed June 2021

[20] Green Jobs in Scotland, STUC, accessed June 2021

Net Zero Energy Generation and Energy Efficient Buildings

Outcomes

- Heat and energy generation and distribution is clean and renewable, and buildings are energy efficient and resilient to climate change.
- The cost of heating and powering the city's homes and other buildings is reduced, helping to tackle fuel poverty.
- Retrofit and energy infrastructure projects are delivering economic and social benefits to businesses and citizens supporting a just transition.

Action	Next steps and Indicative delivery timeframe	Delivery partners
1. Laying the policy foundations	• Set progressive planning policies to increase energy standards in new buildings. *2021–2023* • Require the use of low and zero emissions technologies to heat and power the city's buildings. *2021–2023*	The City of Edinburgh Council, The Scottish Government, developers, Registered Social Landlords
2. Developing a city energy masterplan	• Convene a City Heat and Energy Partnership. *2021–2023* • Develop a city-wide heat and energy masterplan. *2021–2023*	The City of Edinburgh Council, NHS, Edinburgh universities, Scottish Water, Scottish Power Energy Networks, Scottish Gas Network, and other key partners.
3. Grid investment	• Establish a strategic partnership with Scottish Power Energy Networks. *2021* • Align current and future grid development to the city's energy needs. *2022-2030*	The City of Edinburgh Council, SP Energy Networks
4. Energy investment strategy	• Develop a long-term shared investment strategy to deliver the city energy masterplan. *2021–2023* • Agree appropriate delivery mechanisms. *2021–2023*	City Heat and Energy Partnership, The Scottish Government, private sector
5. Developing regional energy solutions	• Develop regional renewable energy solutions which draw on the area's wind, geothermal, hydro and solar assets. *2024-2027* • Learn from the H100 hydrogen pilot. *2024-2027*	City Heat and Energy Partnership
6. Developing heat networks	• Identify heat network zones across the city. *Early 2022* • Ensure all Council-led infrastructure investment plans seek opportunities to connect to heat networks, beginning with our learning estate programme. *2023 - 2027* • Work with communities and developers to deliver heat networks which meet the needs of key public sector buildings and major new developments across the city, beginning with Granton Waterfront and the BioQuarter. *2023 - 2027*	The City of Edinburgh Council City Heat and Energy Partnership
7. Focussing on place-based projects	• Collaborate on place-based joint energy infrastructure projects which maximise opportunities to deliver low-cost, clean, renewable energy to neighbourhoods and communities, with a focus on areas experiencing inequalities. *2024–2027*	City Heat and Energy Partnership

8. Retrofitting the city's social housing and public sector estate	• Develop a plan for retrofitting social housing across the city to the highest energy standards, to reduce energy demand and tackle fuel poverty. *2028-2030* • Collaborate on and identify opportunities for a joint public sector estate retrofit programme. *2023-2027* • Ensure retrofit programmes create green jobs and skills development opportunities for citizens, targeting those at greatest risk of poverty. *2023-2027*	The City of Edinburgh Council, Registered Social Landlords NHS, University of Edinburgh, Heriot Watt University, Scottish Fire, Scottish Power Energy Networks, The City of Edinburgh Council, skills development bodies.
9. Testing innovative approaches for challenging settings	• Scope and test innovative approaches to retrofit in challenging mixed-tenure and heritage settings, to deliver exemplar models and accelerate progress. *2021–2023* • Adapt Edinburgh's World Heritage site to be resilient to climate change. *2021–2023*	EIT Climate-KIC, Edinburgh Climate Change Institute, Changeworks, Edinburgh World Heritage Edinburgh World Heritage, Historic Environment Scotland
10. Supporting owner-occupiers and landlords	• Develop models that support businesses, owner-occupiers and private landlords to invest in energy retrofits. *2024-2027* • Call on the Scottish Government to bring forward at speed schemes to support citizens to fund energy efficiency upgrades and decarbonisation of heat in their homes. *2021* • Call on the Scottish Government to urge the UK Government to ensure its future Heat in Buildings Strategy includes action to significantly reduce the cost of electricity, without passing costs on to other areas of households' budgets. *2021*	The City of Edinburgh Council, EIT Climate-KIC, Changeworks, Edinburgh World Heritage The City of Edinburgh Council, The Scottish Government
11. Resourcing net zero public buildings	• Call on the Scottish Government to work with city partners to identify and deploy additional resource to deliver net zero public buildings. *2021–2023*	The City of Edinburgh Council, The Scottish Government, developers, Registered Social Landlords

Net zero emission transport

Emissions from transport are not falling

The way we move people, goods and services around the city accounts for 31 percent of the city's total emissions in 2020. Transport will remain a dominant source of emissions if we continue as we are.[21].

Movement of freight and goods is vital to the economy of Edinburgh but, as with other types of vehicles in the city, the number of goods vehicles continues to rise - between 2007 and 2017 the number of heavy goods vehicles registered in Scotland increased by more than 10 percent, with similar increases in light goods vehicles..

The significant volume of road freight movements in and through the city has implications for road safety, congestion, air quality, noise and placemaking - especially in areas with high concentrations of people and activity. Although freight in Edinburgh can be moved by road, rail, and sea, for some businesses, the use of some vehicles will be inevitable to meet their needs.

The City Mobility Plan prioritises reducing vehicle use in the city. However, we will need to develop plans to fund and deliver the EV charging and grid infrastructure required to enable a transition away from commercial petrol and diesel vehicle use in Edinburgh. [22]

High numbers of people, travel in and around Edinburgh by car

Around 95,000 people travel to work in Edinburgh each day from other council areas. Of those, 63,300 travel into the city by car. A similar number of Edinburgh residents, around 60,000, commute to jobs entirely within Edinburgh by car[23].

This is due to Edinburgh's place as the economic hub of the region and Scotland's most popular cultural destination. While this is a strength of the city, it brings high volumes of tourist and commuter travel and associated traffic.

Edinburgh's position as a national hub also means that people and goods travel to from the city by air. Governments, the science and technology community, and the aviation industry are working to develop low emission technologies to address emissions from flight. However, in 2018 flying accounted for 8 percent of the UK's total greenhouse gas emissions - equivalent to the carbon footprint of approximately 5.5 million UK residents.

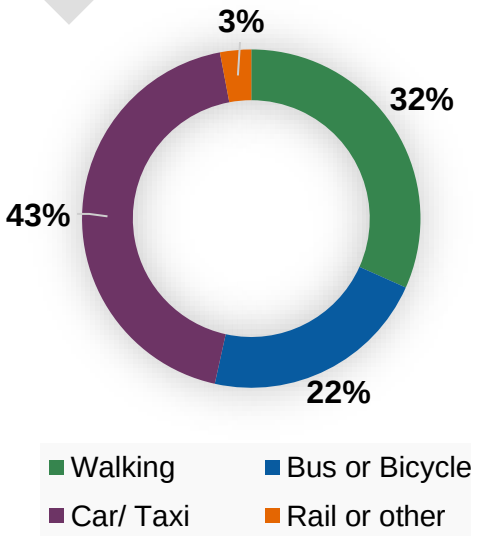


Figure 17: Main mode of travel in Edinburgh, 2019

A Net-Zero Carbon Roadmap for Edinburgh, Place-Based Climate Action Network, 2020

[22] UIIO UK Environmental Accounts 2020, Office for National Statistics, 2020

[23] Census 2011, Office for National Statistics, accessed June 2021

People's travel choices are largely determined by ability, affordability, accessibility, safety, and convenience

Many of the most disadvantaged communities are on the periphery of our city. People who live in these areas often have to travel longer distances to get to work.

Some outer areas in the city are experiencing significant population growth and are also less well-served by public transport. This is in comparison to the high standards of public transport the rest of the city experiences.

Edinburgh's transport also needs to be fully accessible to people of different cultures, needs, ages and abilities. We want to create a city where most people don't need to own a car to move around and where people with mobility issues have access to road and parking space if they need it.

Our challenge as a city is to establish, at speed and scale, sustainable travel as peoples' preferred travel choice and to reduce the total number of miles travelled. This supporting a 'sustainable transport hierarchy' where people use active travel (walking, wheeling, and cycling) for short distances, and public transport for longer distance trips (*Figure 18).*

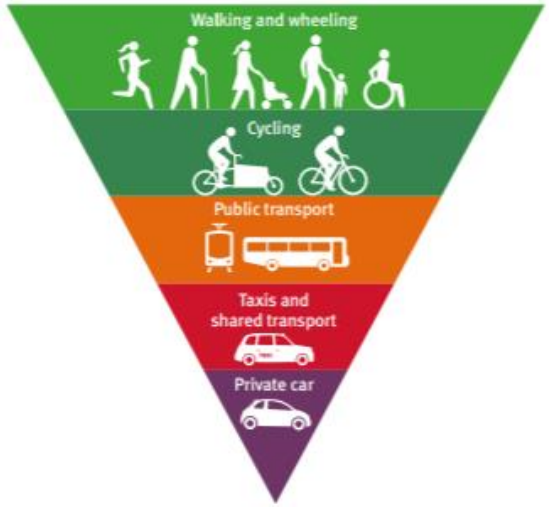


Figure18: Sustainable Transport Hierarchy – City Mobility Plan 2020

Improve public transport to be integrated, net zero and fast

While for many, the city has an excellent public transport system, some areas are less well served, limiting opportunities for those who live there. *Figure 19* shows that in Scotland, around half of 1 and 2 km journeys are taken by car.

There is an opportunity to improve and develop the existing public transport (bus, tram, and rail) network to deliver integrated, net zero public transport for all trip types. This would mean making transitions between decarbonised transport modes easier for people and include improvements to pricing and ticketing, integrated routing, regional connections, and creating a better overall public transport experience.

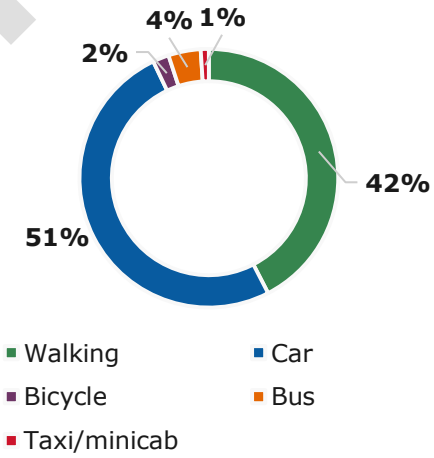


Figure 19: Share of journeys between 1 and 2 kilometres by main mode in Scotland". Adapted from Transport and Travel in Scotland 2019, Results from the Scottish Household Survey: Transport Scotland Statistics

Covid-19 has radically changed travel patterns

Covid-19 has had a substantial impact on travel patterns. Restrictions have resulted

in increases to walking, wheeling and cycling, with more people making local trips and exercising closer to home.

Lockdown restrictions and a shift to home working has resulted in less commuter travel and an increase in travel on foot and by wheel or bike. The pandemic has also facilitated a shift to online shopping, socialising, entertainment, banking, healthcare, adult education, and worship.

While there has been a cost to the city from restrictions, we have also experienced some positive outcomes from lower traffic levels, cleaner air, more walking and cycling, flexible work patterns, and local trip-making.

As the city recovers from the pandemic, we have an opportunity to capture these benefits of our changed behaviours for the long-term.

Improving air pollution and congestion

Making Edinburgh a city with better, more attractive public transport and active travel choices can reduce road congestion and pollution on our streets and improve public health.

Improving the operation of the road network offers the city economic benefits through less time spent in congestion and more consistent journey times. Currently these impacts cost the Edinburgh economy an estimated £177 million in 2019.[24]

Improving citizens wellbeing, experience, and use of public spaces

Reducing the dominance of traffic in our city and town centres, and neighbourhoods can improve life for citizens by improving people's safety, experience, and use of streets and public spaces.

Cycling in Edinburgh already takes 22,000 cars off the road every day and helps people to meet their daily activity levels, saving the NHS £1.6 million every year. [25]

We need to continue putting the needs of pedestrians, cyclists and public transport users first when designing streets.

Vision

Thriving urban neighbourhoods that reduce the need to travel

Our vision for 2030 is that residents live in local neighbourhoods with local facilities that provide easy access to work, shops and all services they need, reducing the need to travel long distances.

We will have a transport system that is net zero and has developed sustainably to meet the needs of our growing population.

Public transport will be affordable and flexible, especially for those on lower incomes.

Residents will benefit from greener, safer, more accessible and active choices for getting around the city. More people will be meeting recommended physical activity levels and local air quality will be vastly improved.

Our strategic approach

Our strategic approach will be to build on the strong programme of work set out in the Council's City Mobility Plan.

We will focus on working with citizens and businesses to bring about behaviour change towards sustainable travel models.

We will prioritise investment solutions to support the City Mobility Plan and necessary infrastructure development.

[24] Traffic scorecard, INRIX, 2019

[25] Bike Life Edinburgh, Sustrans, 2019

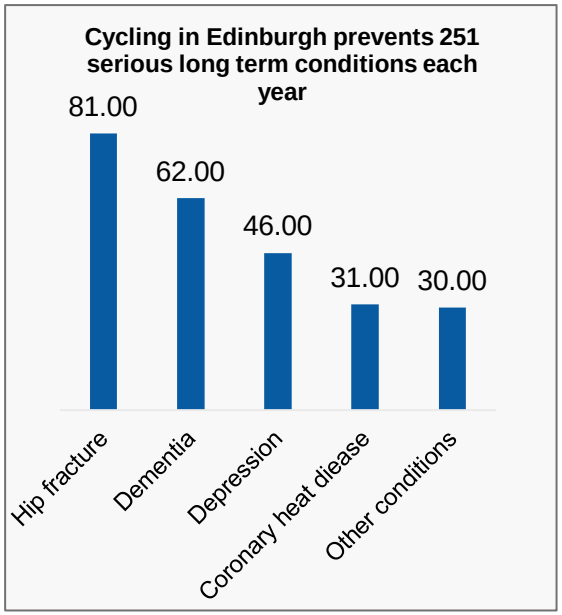


Figure 20: From Bike Life 2019 (Based on Sport England MOVES tool which shows the return on investment for health of sport and physical activity)

Limiting the need to travel

To deliver net zero transport by 2030, we will use the city's 20-minute neighbourhood model which seeks to reconfigure services around existing communities, enabling them to access what they need without needing to travel long distances.

We will develop our strong active travel and public transport systems to better connect city and town centres, and neighbourhoods to better meet local and city needs. Working with city partners as major employers in the city, we will embed the flexible working patterns we have adopted through the Covid- 19 lockdowns.

Invest in active travel infrastructure and decarbonising the city's public transport

We will design our city to enable a fundamental shift to people moving around the city sustainably. Our investment priorities will be to expand active travel infrastructure, connecting communities to services and amenities in their neighbourhoods.

For longer trips, the Council will create local 'mobility hubs' with facilities to ensure sustainable onward travel, supported by a bus network review, as part of a regional rapid transit network.

To ensure the bus sector is decarbonised, Lothian Buses and the Council will work with the Bus Decarbonisation Taskforce and private sector partners to agree a plan to decarbonise the city's bus fleet as part of its next business plan.

From 2022, we will begin to implement Low Emission Zones, reducing the harms from transport emissions in areas of the city with poor local air quality.

Spending in Transport:

Over the next ten years, the Council is committed to spending £68 million to improve road safety and to further develop cycling and active travel infrastructure

Source: Budget 2021/22

Sustainable mobility for goods and services

The Council will collaborate with the private sector to develop sustainable solutions to the transport of goods. This will include developing a city centre operations plan to reduce emissions by improving the way goods and service vehicles move around the city, supporting the use of innovative zero emission solutions for 'last mile' deliveries. The focus will be the city centre initially, with the approach being expanded out to town/local centres over time.

The Council will engage with citizens and businesses on the potential benefits of introducing a Workplace Parking Levy as part of a range of measures to support the delivery of the City Mobility Plan.

Investment in EV infrastructure

Public service organisations will explore opportunities to jointly plan and invest in EV infrastructure for public service and blue light fleet at strategic locations across the city. We will work with the private sector to develop pilot proposals for public EV charging hubs in locations which align with the City Mobility Plan's aims of increasing sustainable travel and avoid adding to city centre congestion.

Emissions from flying

The city's net zero target does not include emissions from flights as these are indirect emissions which occur outside of the territorial boundary, and are not under the direct control of the city. This strategy therefore focuses on the influence we do have and the action we as city partners can take.

We will call on the Scottish Government develop a national plan for managing aviation emissions and develop carbon budgets for the industry; and we will work with Edinburgh Airport as a City Partner to reduce emissions from its ground operations and support sustainable travel to and from the airport.

We will encourage city partners to sign up to the Edinburgh Climate Compact and pledge to reduce their emissions from business travel by integrating the sustainable travel hierarchy into their operations, and supporting staff to make more sustainable transport choices in their professional and personal lives.

Case Study: zero-emissions logistics services

SEStrans and Zedify, working with a trans-national network of city-hubs that promote innovation in city logistics, led a pilot project to deliver a pallet-worth of small packages by cargo bike per week.

The service enables packages coming into Edinburgh from national retailers or via logistics carriers to be re-routed to e-cargo bikes and trikes and consolidated with local business deliveries going to the same areas. This allows each package to be delivered most efficiently, help more businesses keep their goods moving around the city whilst significantly reducing emissions.

As part of the project, SURFLOGH SEStran and Edinburgh Napier University have been jointly researching the role of sustainable urban logistics networks and developing business models that can operate successfully in other real-world settings.

Source: SEStran; SURFLOUGH

Net Zero Emission Transport

Outcomes

- A city where travelling by foot, wheel, or by bike is the easiest and cheapest option.
- The city has a well-connected and sustainable transport and active travel network.
- Investment in neighbourhoods, town and city centres improves citizen health and wellbeing.

Action	Next steps and Indicative delivery timeframe	Delivery partners
1. Investing in active travel	• Prioritise investment in expanding the active travel network, connecting communities to services and amenities in their neighbourhoods. *2021-2030*	The City of Edinburgh Council
2. Developing integrated public transport	• Improve the integration of our public transport system, and review routes and interchanges, within a city and regional context. *2021-2023*	The City of Edinburgh Council, national and regional transport partners, public transport operators
3. Decarbonising buses	• Work with the Bus Decarbonisation Taskforce and private sector partners to develop a plan to decarbonise the city's bus fleet. *2021-2023*	Lothian Buses, The Scottish Government, The City of Edinburgh Council
4. Improving local air quality	• Implement a Low Emissions Zone scheme to reduce harmful emissions from transport and improve air quality. *2021-2023*	The City of Edinburgh Council, The Scottish Government.
5. Better management of the city centre	• Create a city-centre operations plan to reduce emissions by improving the way goods and service vehicles move around the city, supporting the use of innovative zero emission solutions for 'last mile' deliveries. *2024-2027*	Transport sector, businesses, The City of Edinburgh Council
6. Supporting public sector transition to electric vehicles	• Identify opportunities to align to investment in EV infrastructure for public service and blue light fleet at strategic locations across the city, which also delivers 'down-time' availability for citizens and businesses, where possible. *2024-2027*	NHS, Fire, Police, Edinburgh universities
7. Delivering electric vehicle infrastructure	• Develop pilot proposals for public-use EV charging hubs in locations which align with the City Mobility Plan's aims of increasing sustainable travel and avoid adding to city-centre congestion. *2021-2023*	The City of Edinburgh Council, private investment partners
8. **Engaging with citizens**	• Engage with citizens and businesses on the potential benefits of introducing a Workplace Parking Levy as part of a range of measures to deliver the City Mobility Plan. *2021-2023*	Citizens, The City of Edinburgh Council
9. Reducing emissions from flying	• Encourage partner organisations to sign up to the Edinburgh Climate Compact • Work with citizens and city partners to support staff and residents to make more sustainable travel choices in their professional and personal lives. *2021-2030*	Citizens, The City of Edinburgh Council, public and private sector partners

Business and skills in a net zero economy

The pandemic and recovery from recession is the biggest economic challenge faced by Edinburgh for more than a generation

Scotland's economy contracted by 9.5 percent during 2020, with much of this decline driven by sectors – such as tourism and retail – upon which Edinburgh has a strong reliance. In December 2020, **footfall in key retail areas in Edinburgh was almost 50 percent down** on the 2019 levels, while **hotel occupancy rates in the city were down by over 80 percent**.

Estimates from the Scottish Fiscal Commission show that, without intervention or stimulus, **Scotland's economic output will not return to pre-pandemic levels until the beginning of 2024**, and it would be 2026 before the economy recovers all the capacity and potential lost during the past year

The UK Government's furlough scheme has played an important part in limiting the impact of these declines on job numbers – as at end January 2021 almost **39,000 Edinburgh jobs were being supported**

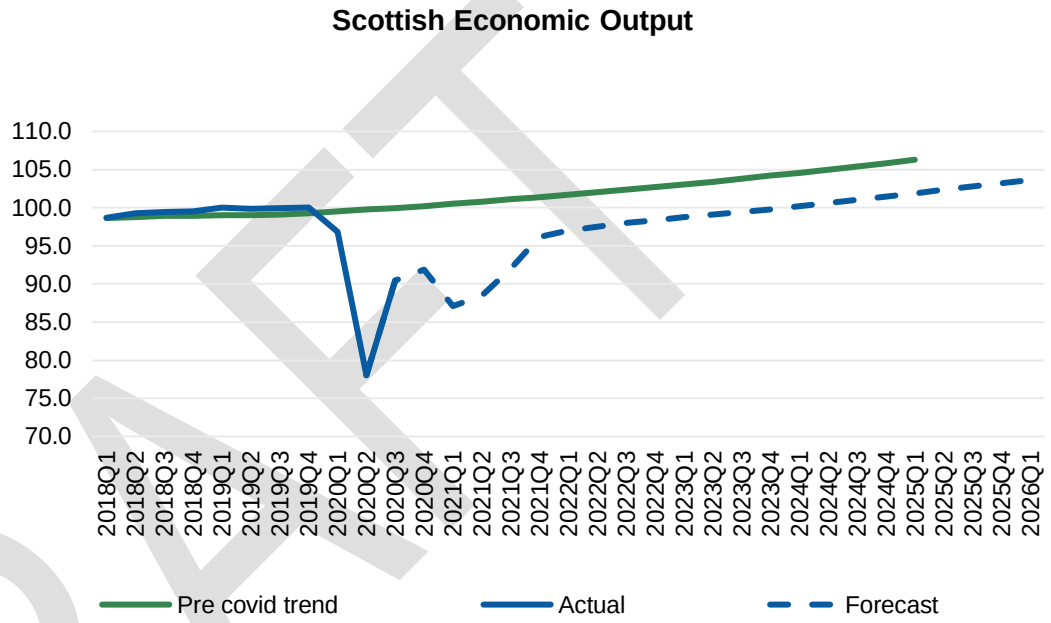


Figure 21: Scottish Fiscal Commission, Scotland's Economic and Fiscal Forecasts January 2021

by furlough – but the city has still experienced a dramatic increase in the number of people forced out of work and into benefits dependency as a result of the pandemic. By Autumn 2020, some **18,000 people in Edinburgh were claiming unemployment related benefits**, almost three times the level recorded pre-pandemic.

A just transition to a net zero economy represents one of the biggest opportunities Edinburgh has to recover from recession and remain Scotland's most vibrant and prosperous economy

Planning for a green recovery offers an opportunity for the city to rebuild on a genuinely sustainable footing – one that meets the climate emergency, as well as increasing Edinburgh's resilience to future economic shocks.

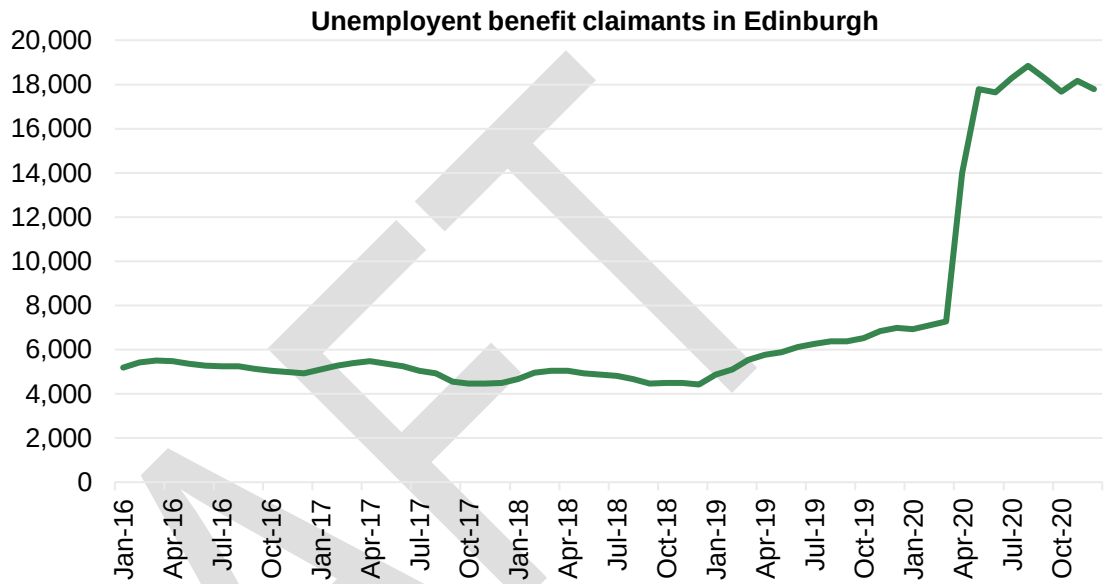


Figure 22: Office for National Statistics, Claimant Count

Many of the city's businesses are already rebuilding and adapting, making a strong contribution to a green recovery. For an individual business, becoming net zero can **mean improved resilience, new markets, lower costs, increased productivity, more engaged staff**, as well as an opportunity to meet growing consumer demands for zero carbon, zero waste options. For the city as a whole, the potential opportunities are even greater.

Our vision for 2030

A vibrant economy that is resilient to future crisis

Our vision is for **businesses of all sectors and sizes to be operating on a net zero basis by 2030** and taking their share in a growing green economy. This means Edinburgh taking the opportunity to be a global leader in green tourism, green finance, and green festivals – establishing a clear advantage over competitor cities and cementing the sustainable future of these key sectors.

More broadly, the value of output from UK low carbon industries is expected to grow to 8 percent of GDP by 2030, up from 2 percent in 2015.[26] A net zero economy also offers an opportunity to meet growing consumer demands for zero carbon/zero waste options, and to ensure that Edinburgh businesses retain their share of the growing green pound. Ethical consumer spending and finance in the UK was estimated at £98bn in 2019, more than double the level recorded in 2010.[27].

Taking steps to meet this demand and transition to a net zero economy is important for recovery and growth in the short term. It is also critical if we are to ensure Edinburgh businesses can be ready and resilient to crises (economic, public health, or climate related) in the future.

Edinburgh Climate Commission 'Forward, Faster Together'

The Edinburgh Climate Commission's July 2020 Report set out recommendations for a green recovery responding to Covid-19 and climate change.

The Commission highlights Covid-19 as showing what can be achieved through a collective and urgent response.

They focus on a green recovery being one 'that **delivers for the long term**; **that catalyses job creation into growth industries, empowers citizens, improves public health and drives innovation** while all the time removing our contribution to the climate crisis'.

[26] UK business opportunities of moving to a low-carbon economy, Climate Change Committee, 2017

[27] UK Ethical Consumer Markets Report, Ethical Consumer, 2020

A circular, wellbeing economy

Our vision is for an economy where businesses and institutions embrace the shift towards circular economy business models – such as reverse logistics, material recovery and re-use, asset leasing, or other ways to make better use of materials and products. Such approaches represent new growth industries for the UK and could create over 200,000 new jobs by 2030.[28]

These changes will be supported by the way the city develops and builds communities, through new approaches to placemaking, promoting wellbeing, and investing in digital infrastructure. By 2030 people in Edinburgh will work more from home, travel less distances to work and use active travel or public transport options whenever they do need to travel.

One key sector through which this change will be demonstrated is in food production and consumption. By 2030, people in Edinburgh will have better access to good quality food from local producers; people will have more opportunity to come together to grow food and share the health and wellbeing benefits its brings; and food waste in Edinburgh will be reduced, with improved, low carbon systems of food production and distribution.

Our vision is for Edinburgh to be a hub for net zero innovation, driven by data, with a new breed of sustainable local businesses thriving among 20-minute neighbourhoods across the city.

Case Study: Circular Edinburgh

Circular Edinburgh, managed by the Edinburgh Chamber of Commerce, is working to support the development of a more circular economy and improve the support offered to business.

Circular Edinburgh champions and supports businesses to find innovative ways to embed circular principles (of reduce, reuse, recycle) into their ways of working. It also works to connect businesses to funding opportunities to support them to explore more circular ways of doing business.

The service provides guidance for specific sectors operating in in Edinburgh, as well as events and webinars sharing information, best practice, and highlighting benefits for businesses.

Source: Circular Edinburgh

Good jobs and new skills

For Edinburgh to make a just transition to a net zero economy, we need this growth in opportunity to benefit all communities in the city.

By 2030 our vision is that Edinburgh's economy will be built around good quality jobs which people from all backgrounds can access through education, skills and retraining. That means firms in Edinburgh creating well paid jobs and fulfilling careers in growing sectors – including clean construction, sustainable transport, low carbon technology, buildings retrofit, and others.

That means schools, colleges, universities, and employers working more closely together to make sure that skills, training and education support is in place to help Edinburgh citizens access those opportunities.

It also means making sure the city's plans for recovery in key established sectors such as tourism, culture, and retail, are built around sustainable, net zero business models. Over the next decade, Edinburgh should aspire to be a global leader in green

[28] Employment and the circular economy: job creation in a more resource efficient Britain, Green Alliance, 2015

tourism, green festivals, with the skills and employment opportunities that implies. These aspirations will be supported by the Edinburgh Tourism Action Plan.

Strategic approach

To meet our net zero vision, we need to move at speed and at scale to connect potential investors with Edinburgh's prospectus of net zero business and development opportunities. We will work with investors, the Scottish Government, and city partners to help key projects move at pace, and provide the right regulatory framework to encourage investment and innovation.

Working with statutory partners across the city we will aim to make sure that all procurement and commissioning expenditure made in Edinburgh is used to actively support this strategy**. This means aiming to secure commitment from all public sector partners to use procurement spending powers in support of the transition to net zero and promote a circular economy.** It also means, where possible and appropriate, all public sector all investment and purchase decisions are net zero by 2030 and that we take strategic decisions to create markets for circular and net zero economy businesses to thrive.

We will work with businesses to increase the number that have made their own net zero commitments, and have signed up to the **Edinburgh Climate Compact, led by the Edinburgh Climate Commission**.

To complement the Edinburgh Climate Compact, we will explore establishing a **new green innovation challenge finance scheme** to stimulate new lead markets, and support Edinburgh businesses to play a full part in a net zero economy and a green recovery.

Alongside funding, support will be available through **business mentoring and partnerships** that help businesses realign their operations to meet net zero.

This will build on the **Circular Edinburgh** programme that the Edinburgh Chamber of Commerce has managed for a number of years and champions and supports businesses to find innovative ways to embed circular principles (of reduce, reuse, recycle) into their ways of working. In addition, the principals of net zero, just transition, and circular economy will be embedded into **Business Gateway** support programmes for new and existing Edinburgh businesses.

We will work with universities, colleges, schools and employers to identify emerging skills gaps, and develop the education, training and workforce development supported needed to make sure people from all backgrounds can aspire to and access rewarding net zero careers. This will build on the work undertaken by the **Edinburgh and South East Scotland City Region Deal** to develop the skills and local supply chains needed to make construction activity in the city sustainable and low carbon.

Case Study: Integrated Regional Employability and Skills (IRES) Programme

Through the Edinburgh and South East Scotland City Region Deal, the £25m IRES programme includes two skills gateways - Housing and Construction Infrastructure (HCI) and Data Driven Innovation (DDI). The gateways operate through the regions' universities and colleges providing skills development in housing, construction, renewables, and digital sectors to support delivery of the latest sustainable energy and construction solutions. IRES also has an Integrated Employer Engagement programme, which creates an enhanced employability and skills service for employers, helping transition those with new skills into work.

HCI gateway's aims include providing 'into work' short courses for 800 residents facing disadvantage in the labour market; mentoring for 400 schoolchildren and industry-led skills improvements for 5,000 residents across the region. Sectors include waste management, electric vehicle charging point installation, renewable technologies, timber construction and engineering knowledge upskilling and environmental technologies.

Source: Edinburgh and South East Scotland City Region Deal

Business and Skills in a Net Zero Economy

Outcomes

- Edinburgh's economy recovers from recession and key sectors are sustainable and resilient to future crises, such as those related to climate change.
- Edinburgh has a vibrant circular economy, improving resource efficiency and enhancing citizen wellbeing.
- Edinburgh's economy is built on good, green jobs which people from all backgrounds can access through education, skills and retraining.

Action	Next steps and Indicative delivery timeframe	Partners
1. Connecting investment to opportunity	• Develop a mechanism for connecting those looking to invest in a net zero city with the businesses and organisations looking to drive change that supports speed and scale of net zero action. *2021-2023*	The City of Edinburgh Council, The Scottish Government, developers and investors
2. Net Zero Procurement	• Ensure that all public sector procurement spend actively supports this strategy so that by 2030 all new investment and purchase decisions are net zero. *2021-2030*	The City of Edinburgh Council, NHS Lothian, Police Scotland and other statutory partners
3. Edinburgh Climate Compact	• Support and encourage city businesses to sign up to the Edinburgh Climate Compact and commit to reduce their emissions. *2021-2023*	Edinburgh Climate Commission, Edinburgh Chamber of Commerce, and The City of Edinburgh Council
4. Explore a green innovation challenge finance scheme	• Explore establishing a finance scheme to complement the Commission Climate Compact, stimulate new lead markets, and support Edinburgh businesses to play a full part in a net zero economy and a green recovery. *2021-2023*	The City of Edinburgh Council and other partners
5. Business Mentoring and support for net zero transition	• Deliver business mentoring and business support programmes to help employers take practical steps to realign their operations towards becoming net zero. *2021-2023*	Edinburgh Chamber of Commerce, Federation of Small Businesses, Scottish Enterprise
6. Circular Edinburgh	• Increase participation in the Circular Edinburgh programme which supports businesses to reduce, re-use and recycle as part of embedding circular economy principles into their ways of working. *2021-2023*	Edinburgh Chamber of Commerce and Zero Waste Scotland
7. Skills and workforce development	• Scope skill needs and align workforce development programmes to meet the needs of net zero businesses, and to promote accessibility of well paid, rewarding career opportunities. *2021-2023*	Further and higher education partners, Skills Development Scotland, and The City of Edinburgh Council

8.	**Enabling powers for local government, business and city partners to respond to climate change**	• Call on the Scottish Government to build coherent and flexible legislative and regulatory frameworks that empower local government, business and city partners, so they can rapidly respond to the climate emergency in an agile and adaptive way. *2021*	The City of Edinburgh Council, The Scottish Government

Engaging and empowering citizens to help tackle climate change

Citizen action is essential to Edinburgh becoming a net zero city

This strategy calls on private, public and community and voluntary sector organisations to sign up to the Edinburgh Climate Compact and pledge to reduce their emissions.

It also sets out the action city partners will take to create the conditions for achieving net zero. But Edinburgh's residents have an equally important role to play.

Individual actions by Edinburgh's citizens are an essential and necessary part of reducing the city's emissions and securing a sustainable city for our young people and for future generations.

At present, over half the city's total emissions come from its residents.

Of this, 32 percent comes from car use, and 61 percent from heating and powering our homes.

We recognise that making the changes needed to address our collective emissions will be easier for some than others.

We believe the Council has an important role in supporting all citizens to be able to make changes and ensure no one is left behind: delivering a **fair and just** transition. Young people and community groups across the city are already taking action on climate change and the Council is committed to supporting all its citizens to realise the **significant power** they have over the future of their city.

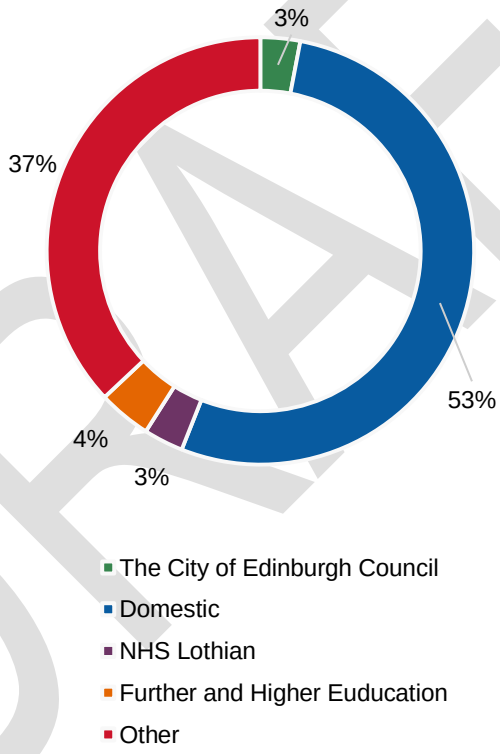


Figure 23: Edinburgh emissions by key organisations 2017/18

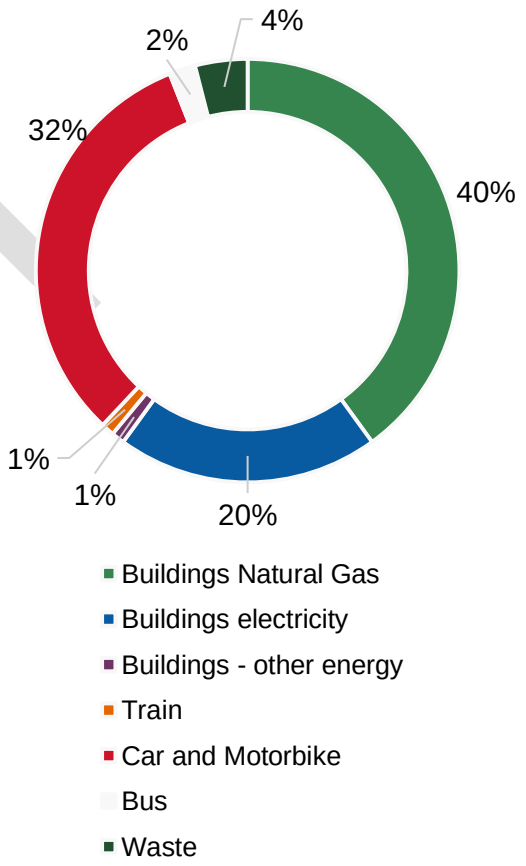


Figure 24: Breakdown of domestic emissions in Edinburgh 2017/18

The Council will encourage and collaborate with citizens to:

- **Demand** change using your power and influence.

Citizens are able to influence an additional 47 percent of the city's emissions coming from the public and private sector.

- **Support** city climate action.

The scale of work to create a resilient and net zero city is significant and will necessitate temporary disruption. This work needs citizen input and support to be delivered successfully and become a reality.

- **Act now** and plan for the future.

Tackling climate change relies on citizens and communities making many everyday choices differently.[29]

Our shared vision for 2030

Our vision is to deliver a city where all citizens are empowered, engaged and able to influence for change across the public and private sector. A city where sustainable choices are easier to make, and a city where a just transition to a net zero future is delivering social and economic benefits for all our communities.

Highlights from engagement

Awareness of the global effects of climate change is very high. Edinburgh residents are very aware of the impact on biodiversity and habitats but only recently has understanding grown of the impact on people.

73 percent **of respondents to the 2018 Scottish Household Survey, believe climate change is an immediate and urgent problem.**

70 percent of participants from Scotland's Climate Assembly said it was a priority that recommendations on tackling the climate emergency needed to…

Take into account the needs of different communities across Scotland, recognising that there is not a 'one size fits all' solution.

Target the highest emitters so that organisations and individuals with the highest carbon footprint must make the biggest changes.

Our strategic approach

We'll focus on creating an **environment** that makes acting sustainably easier and ask citizens to support us in making those changes.

We'll work to **raise awareness** and **accelerate action**, asking people to make more sustainable choices and use their influence to demand change from others.

We'll maintain an ongoing open and frank **dialogue with citizens and communities**, with the aim of designing solutions together and maintaining high levels of support for net zero action.

The ask of citizens

Your choices can achieve big emissions reductions, and you have the power to influence others, from big business to public policy.

Plan for a low carbon future

Some of the changes we need to make will require forward planning. We ask citizens to consider if these options are available to you:

- Residents can make a big difference by investing home energy efficiency

[29] The Committee on Climate Change estimated that, of the overall reductions needed to achieve net zero, 16 percent rely on behaviour change, such as flying or driving less, and a further 43 percent relying on a combination of technology and behaviour change, such as fitting and effective use of more energy-efficient heating systems. Reaching Net Zero in the UK, Climate Change Committee, accessed June 2021

measures such as insultation, secondary glazing or clean energy heating systems. These will save you money in the long run, but may have upfront costs. Look out for Government schemes offering financial and other support which can help make these changes easier.

- Look for the energy efficiency rating when replacing household appliances and buy the most efficient products.
- Consider replacing petrol or diesel cars with electric vehicles and making greater use of public transport, car-share schemes or bikes.
- Find out more. Use online resources to find out more about climate change and other ways you can help tackle it.

Start acting now, use your power and influence

Edinburgh's citizens have huge influence over the city's emissions through their power to collectively demand change from national and local government, the private and public sector, local businesses and each other. Use your democratic voice and purchasing power to be heard on climate issues.

Community groups and voluntary sector organisations are often closest to local issues and opportunities. They will continue to play a vital role advocating for action on climate change and challenging government and public and private sector organisations. Civil society also has a key role to play in stimulating citizen action at the individual and collective level.

Supporting the scale of action needed

Actions set out in this strategy at a city level are significant and will affect the Edinburgh's built environment, transport systems and infrastructure.

To make these changes possible we need the input and **support** of residents so they can be delivered successfully when upgrades cause temporary disruption.

For example, while work is underway to make our public buildings such as schools and medical centres more energy efficient, we will need to make temporary changes to how we access and use these buildings.

Support for citizens

Empower young people

Young people have been at the forefront of raising awareness on climate change and demanding change from those in power.

We will ensure young people are at the centre of decisions that will determine the kind of city they inherit. We will work with children and young people – through schools and in communities – to listen to their views, to ensure young people from all backgrounds are informed and able to have their voice heard.

We will maximise opportunities to focus on climate change across our whole education system, delivering opportunities for community learning and development and working with schools, including Edinburgh's independent schools, to embed a legacy of change from COP26 coming to Scotland.

We will strengthen the focus on climate change within our curriculum and co-design innovative projects and programmes with young people, beginning with piloting a carbon footprinting app and delivering a Hydrogen Education Programme and challenge competition to engage young people in innovating for a net zero future.

Ensure a fair transition to net zero

Vulnerable groups and people with poor health will be more affected by poor air quality, increased damp, and severe fluctuations in weather such as heatwaves. Those on lower-incomes may also find addressing the impacts of climate change harder– for example the costs associated with flood damage to property; or the costs of switching from gas to sustainable heating systems.

We are committed to working with national and local government, public bodies, trades unions, the private sector and citizens and communities to ensure that climate change does not disproportionately impact anyone in our society.

Access to opportunities

It is estimated that Scotland's transition to a low-carbon economy could create up to 367,000 jobs, with Edinburgh being well-placed to secure a substantial share of these. With city partners we will work to align skills development programmes to support Edinburgh residents to access new green jobs.[30]

We will ensure access for people from all backgrounds to employment opportunities created to deliver a net zero city.

Making sustainable choices easier

We know from consultation and engagement that many Edinburgh citizens are not fully aware of their carbon footprint, or all the actions they could take to reduce it.

We will deliver awareness raising campaigns to ensure people have access to information about climate change, how to measure their carbon footprint, and where to access support to reduce their emissions. This will include information about where people can get financial and other help to make changes.

We will call on Scottish Government to improve existing support schemes and develop new approaches to incentivise change – especially in decarbonising homes

Creating net zero communities

Our vision is for all of Edinburgh's neighbourhoods and communities to be net zero.

We will work with Community Councils, Edinburgh's Universities and at least two neighbourhoods to scope and develop funding bids for 2 local pilots to understand what it would take for them to become net zero. The pilot scope will include at least one community with high levels of deprivation and one with high emissions and will link to Local Place Plans.

Building and maintaining consent for change

The change needed to create a sustainable city for present and future generations is likely to cause short term disruption.

We will involve citizens in decisions about the targeting, scope and speed of large-scale change and ask for citizen support on changes which protect the city for future generations.

As the scale and complexity of actions increase, we will facilitate more in-depth engagement approaches, such as citizen juries or similar models, to ensure citizens views are central in decision-making.

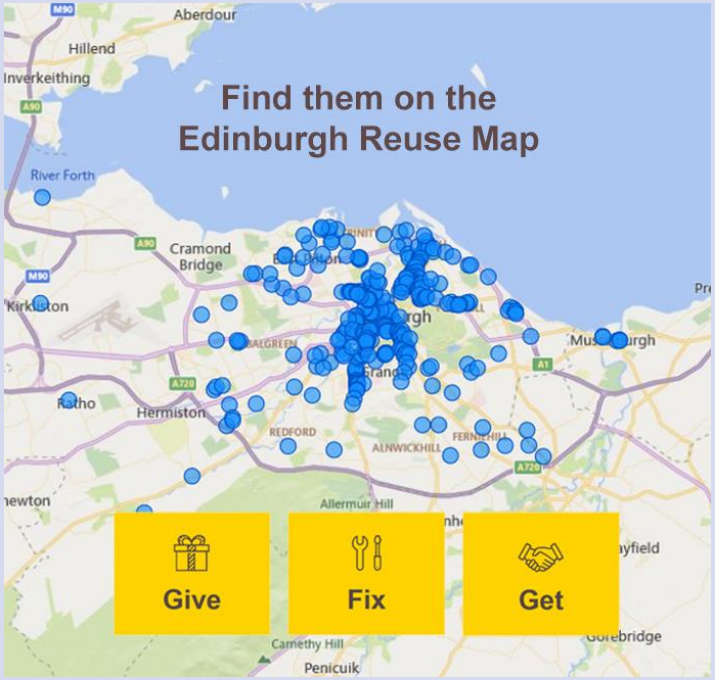
[30] Green Jobs in Scotland, STUC, accessed June 2021

Case Study: Changeworks' Edinburgh reuse map.

Created by Changeworks, in partnership with the City of Edinburgh Council, this online map details facilities for donations of surplus household goods to new homes, as well as eco-friendly recycling and repair services, all contributing to Edinburgh's circular economy.

Citizens can select the type of good they want to give, fix or get, and can search by postcode to find locations in their area that can help.

Source: Changeworks



Engaging and empowering citizens to help tackle climate change

Outcomes

- Citizens are engaged and empowered to respond to the climate emergency.
- Edinburgh is a city where sustainable choices are cheaper and easier to make, and people are taking action to reduce their carbon footprint.
- Citizens are empowered, engaged and acting to influence the public and private sector to go further on tackling climate change.

Action	Next steps and Indicative delivery timeframe	Partners
1. Information about climate change	• Deliver awareness-raising campaigns. *2021 onwards* • Support citizens to measure their carbon footprint. *2021 onwards*	The Scottish Government, The City of Edinburgh Council
2. Citizen engagement and dialogue	• Maintain an ongoing open dialogue with citizens about the transformation that needs to happen in the city and how we can collaborate to take decisions and deliver change together. *2021 onwards* • Call on the Scottish Government to work with Edinburgh on awareness raising campaigns to support a frank discussion on climate change action. *2021*	The City of Edinburgh Council, community councils, community and civil society groups The City of Edinburgh Council, The Scottish Government
3. Supporting and engaging young people	• Maximise opportunities to focus on climate change across our whole education system, including independent schools. *2021 onwards* • Work with young people in schools and in communities, to embed a legacy of change, drawing on COP26 coming to Scotland. *2021 onwards* • Strengthen climate change within our curriculum. *2021 onwards* • Pilot a carbon footprinting app within at least two schools. *2021 onwards* • Deliver a Hydrogen Education Programme and schools challenge. *2021- 2022*	The City of Edinburgh Council, Edinburgh schools, youth and community groups The City of Edinburgh Council, Scottish Cities Alliance
4. Net Zero Communities	• Develop proposals and seek funding for creating '*net zero communities'* in at least two neighbourhoods within the city. *2021-2023*	The City of Edinburgh Council, higher education partners, community councils

Creating a city where sustainable choices are easier

Action	Summary of supporting actions within main strategy and Indicative delivery timeframe	Chapter
5. Transport	• Improve the city's public transport system. 2024–2027 • Prioritise investment in active travel routes to make it easier for people to get around the city without needing a car. 2024–2027	*Net Zero Transport*
6. 20-minute neighbourhoods	• Re-design services and amenities to deliver sustainable 20-minute neighbourhoods across hub locations. 2021 – onwards	*Net Zero Transport; Net Zero Development and Growth*
7. Homes and energy systems	• Develop heat networks and local energy generation solutions to provide clean heat and energy. • Deliver energy efficient affordable housing. • Call on Scottish Government to improve the support available to private owners for switching to low carbon heating solutions. Timescales for all actions: beginning 2022; accelerating from 2024	*Net Zero Energy Generation and Energy Efficient Buildings*
8. Fair work	• Ensure city action on climate change creates new green jobs and fair work. • Develop skills development programmes to support citizens' access to opportunities.	*All chapters*
9. Waste and a net zero economy	• Support local businesses to learn about and implement more sustainable business practices. • Ensure citizens have opportunities to reduce, re-use and recycle to help reduce consumer waste. Timescales: various – see individual chapter	*Net Zero Economy*
10. Embed net zero requirements	• Call on Scottish Government to ensure Scotland's statutory framework supports whole-system change at the speed and scale needed to tackle the climate emergency. 2021–2025	*Scottish Government*

Investing in change

Development of place-based investment programmes and innovative finance models

Edinburgh is the financial capital of Scotland and a leading global economic hub which is one of only 6 European cities rated among the top 20 centres for finance in the world. London is the only other UK city in the top 20 and Edinburgh has been progressing up the index in recent years, driving Scotland's economic growth and playing a leading role on the global stage.[31]

Regulatory changes and consumer pressure in the financial sector mean that investors are increasingly seeking 'impact investment' opportunities - where returns are also measured in terms of social and environmental benefits. This means they are also assessing investment opportunities according to 'ESG investment criteria' (economic, social and governance measures), as well as financial returns, are used to guide investment.

Edinburgh is uniquely placed to accelerate this progress as both the host of one on the most dynamic financial services industries in the world, and as a world leader in research and data innovation.

There are opportunities for Edinburgh to work with Scottish Government to develop **innovative finance models** which lever this private capital and align it with re-configured place-based public sector **investment programmes.** This would ensure risks and rewards are shared more equitably, delivering revenue returns and other co-benefits to communities.

Innovative finance models and investment could prioritise community wealth-building and reduce the financial risks associated with failure to adapt to impacts of climate change, as the costs of not acting far outweigh the costs of acting now.

Managing budget and capacity shortfalls

Cities are experiencing a budget and capacity shortfall crisis, despite access to debt at historically low interest rates. This comes at the same time as the urgent need to decarbonise, and to adapt to the effects of climate change, both of which will require investments of billions of pounds per city. Even with the availability of low-interest finance from the public purse, **the public sector alone will not be able to meet the financial challenge**.

Connecting capital to investible projects

The city faces challenges in raising the level of up-front capital investment urgently required now, to deliver long-term financial returns, significant emissions reductions and wider co-benefits.

We also face challenges in developing 'ready to go' projects and opportunities at the scale needed to attract public and private sector investment into to the city. Institutional investors typically require portfolios worth upwards of fifty million pounds to achieve economies of scale with few sources of finance and funding investing in the research and development of investable projects.

Financial decision-making in the city also often prioritises short-term risk and reward, in a way that limits the city's ability to respond to the long-term investments that are needed, if we are to tackle climate change.

Ensuring investment responds to communities' needs

Organisations and businesses across the city are already investing in climate action through their fleets, their buildings, their

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[31] The Global Financial Centres Index 27, Long Finance, March 2020

energy sources and their work practices. But new investment will still be needed and in particular; investment to support access to upfront capital investment in buildings and infrastructure.

National funding streams often focus on very specific objectives that don't always align with city priorities or support more holistic place-based interventions. This means city partners have to invest significant time and resources in 'weaving together' multiple bids to be able to invest in a 'place' in a way that responds to the systemic challenge of net zero and the full range of that communities' needs.

Our Vision

By 2030, Edinburgh's' transition to net zero will mean the city is benefiting from large-scale and co-ordinated **public and private investment** that is designed around the needs of citizens.

Investment will be deployed in a way that supports **place-based approaches** and a just transition to a net zero city. Citizens have **affordable and easy access** to **low carbon technologies** for insulating, heating, and powering their homes, and **returns from investments** are delivering **benefits for Edinburgh's economy**.

Our strategic approach

We can achieve over 60 percent of our emissions target with technology that currently exists and through investment that would pay for itself over time.

We will align public sector budgets to share risk and maximise efficiency and opportunity in net zero actions.

We will invest in the capacity and expertise needed to develop the city's pipeline of projects and maximise opportunities for attractive joint projects for investment.

We will strengthen the city's partnership approach to infrastructure projects to support net zero, to ensure Edinburgh is well placed to successfully access new national public sector funding streams focused on supporting the transition to net zero.

We will test innovative finance models and use learning from innovations to bring forward net zero investment programmes at scale and pace.

Maximising national funding

By strengthening the city's partnership approach to heat and energy infrastructure; public building retrofit; place based development; active travel and EV charging infrastructure, we will make sure that Edinburgh is well placed to successfully access the funding which will be available over the coming years from UK Government, Scottish Government and other funding bodies such as the National Lottery.

We will focus on accessing funding streams that allow us to meet strategic objectives of:

- Adapting to new post-Covid realities, such as repurposing town centres, and enhancing active travel infrastructure.
- Preparing the city for the development of clean energy heat networks.
- Adapting to the effects of climate change by using ecosystem services and enhancing biodiversity.
- Establishing a Climate Transition Lab with partners that allows us to test new financing models for transformational interventions, including the retrofitting of the privately-owned housing stock across Edinburgh

Fostering Edinburgh's investment potential

As the capital city of Scotland, with world class data and innovation centres, and with a long tradition as a hub for the global financial services industry, we are well placed to be a leader in financing the transition to net zero, and in doing so create opportunities for testing long-term approaches to place-based investments that create community wealth, and support rapid decarbonisation and a climate-ready city.

We will foster the investment potential of Edinburgh by working with partners to develop ambitious and attractive projects

and proposals, test innovative finance models, including blended finance, and new approaches to sharing risk and reward.

One strategy output will be a City Investment Prospectus that will enable us to easily match investors to suitable projects in Edinburgh. These projects include responding to major challenges, such as how to retrofit residential properties across the city, and preparing the city for the effects of climate change through adaptation.

Case study: Nature Climate Bonds

We're working with Abundance Investment to develop a pipeline of nature-based projects, using 'Nature Climate Bonds'. These are an approach to financing climate change and biodiversity loss actions by allowing local citizens to invest directly in nature-based projects in Edinburgh.

Citizens will be able to invest via a crowdfunding platform and earn a return on their investments. The first Nature Climate Bond will be launched in Edinburgh in 2021, and will be the first of its kind in the UK.

Source: The City of Edinburgh Council

Creating innovative demonstration projects

We will identify opportunities for Edinburgh to develop demonstrator projects that can pave the way to solving the biggest challenges on the journey to sustainability.

Demonstrator projects will be explicitly designed with citizens to build local skills capability and capacity, and test new financing structures.

Developing large-scale investment projects

Through wider collaboration with city partners, we will develop a pipeline of large-scale/aggregated investible projects that focus on delivering the major heat and energy, transport, EV, greenspace, and energy efficient housing infrastructure projects that are needed to make the transition to net zero. Collaboration will allow us to use our unique position as an innovative capital.

Case study: Collaborating to access investment

Edinburgh is working alongside other ambitious UK cities, through the Edinburgh Climate Change Institute and as part of the Place-Based Climate Action Network (PCAN), to explore how net-zero and resilience goals can be better connected with sources of finance and investment - aiming to scale up financing within participating cities and regions.

This project aims to better connect place-based climate programmes to the right sources and models for investment. Through this project, we will extend Edinburgh's reach by working as a collective to develop innovative finance models and to engage with large financing bodies.

Source: Edinburgh Climate Change Institute

Unlocking investment

In doing this, we will look to move away from a public sector funding model which has limits to the amount the city can raise and often uses public borrowing to de-risk investments – to a 'city as enabler' model which connects investors to city opportunities, shares risk and reward more equitably, and allows much larger sums of money to be raised through private sector investment.

By working with providers of capital, such as Lothian Pension Fund, we will identify compelling opportunities to match patient finance to large-scale net zero projects which will benefit both investors and citizens.

We will work with UK finance and academic experts to develop strategic approaches to mobilising place-based climate finance. This

includes working with the Place-Based Climate Action Network (PCAN) to explore how place-based net-zero and resilience goals can be connected with sources of finance and investment and aiming to scale up financing within the core PCAN cities including Edinburgh.

By working alongside other ambitious UK cities, and drawing on the academic and other expertise available through PCAN, we will aim to extend Edinburgh's reach and engage with large financing bodies as a collective – including, but not limited to, banks, investors, the Green Finance Institute, Impact Investing Institute, and the new Centre for Greening Finance and Investment.

Case study: Community investment bonds

In 2020, Warrington and West Berkshire councils each raised £1m by issuing Community Municipal Investments, which allowed citizens to directly invest in renewable energy infrastructure, the returns from which are repaid to investors over a 5-year period.

The bonds have already paid out the first round of repayments to investors and are designed to be issued multiple times per year to allow cities to quickly raise finance.

Source: Warrington 2025 and West Berkshire 2025

Investing in change

Outcomes

- City partner budgets are aligned towards net zero place-based investment
- Edinburgh is a centre for global capital investment, supporting the infrastructure projects needed to transition the city
- Investment in Edinburgh is also delivering social and economic benefits for citizens

Action	Next steps and Indicative delivery timeframe	*Partners*
1. Create a pipeline of investible projects	• Increase capacity and resources to develop feasibility studies and business cases that enable the development of a pipeline of investible projects. *2021-2023*	The Scottish Government
2. Providing an evidence base for investment	• Develop Edinburgh's Carbon Scenario Tool and wider shared data, especially around mobility and energy, to drive net zero innovation and provide an evidence base for investment. *2021-2023*	Edinburgh's further and higher education sector
3. Developing innovative finance modes	• Develop innovative finance models that share risk and reward and deliver economic and social benefits for Edinburgh's citizens, beginning with Nature Climate Bonds and exploring, for example, city investment bonds. *2021-2023*	The Scottish Government, Scottish National Investment Bank, The City of Edinburgh Council, private sector partners
4. Funding scalable tests of change	• Seek funding to deliver scalable tests of change which use innovative finance models to deliver place-based net zero projects and build community wealth, beginning with net zero development and community retrofit. *2021-2023*	The City of Edinburgh Council, EIT C-KIC
5. Developing capital investment opportunities	• Bring forward a pipeline of capital investment opportunities at scale, to deliver major heat and energy, transport, EV, greenspace, and energy efficient housing infrastructure projects that support the city's transition to net zero. *2024-2027*.	The City of Edinburgh Council, public and private sector partners
6. Delivering place-based investment at scale	• Call on the Scottish Government to work with public bodies to develop joined-up funding streams to deliver place-based investment at a scale which supports the transition to net zero. *2024-2027*.	The Scottish Government, The City of Edinburgh Council, public sector partners
7. Partnerships for infrastructure investment	• Call on the Scottish Government to work with the City of Edinburgh Council and other public sector partners to invest in and share the risks associated with developing a pipeline of rapid action net zero infrastructure projects. *2021-2023*	The Scottish Government, The City of Edinburgh Council, public sector partners
8. Retaining economic benefits	• Call on the Scottish Government to use existing mechanisms, and consider the development of additional measures, to ensure economic benefits resulting from city partner action on climate change and Covid recovery are shared with the city – helping to fund future action. *2021*	The City of Edinburgh Council, The Scottish Government
9. Working with UK partners	• Develop strategic approaches to mobilising place-based finance.	Place-Based Climate Action Network

Measuring success

Monitoring city emissions

In 2020, Edinburgh, along with almost 1,000 cities, states and regions across the globe, including 33 local authorities in the UK, reported through the Carbon Disclosure Project (CDP) reporting system. CDP is an international non-profit organisation for companies' and cities' environmental reporting. It is the largest climate change focused data collection and assessment programme in the world.

A key element of the disclosure is the submission of emissions inventories which breakdown total emissions by activity. They are essential to help understand where progress has been made, and where efforts need to be accelerated.

Carbon Scenario Tool

The Council has collaborated with the Edinburgh Climate Change Institute (ECCI) to develop an open source quantitative emissions calculation tool. The 'Carbon Scenario Tool' has been designed to inform Council decision making, by giving councillors and officers validated data on emissions impact at project, programme or city level, presented as a dashboard which includes wider sustainability impacts, such as air quality. The tool allows the assessment of a wide range of projects, spanning from housing or transport to renewable energy generation – depending on the range and quality of data available for input. The tool is being further developed to help build capability for embedding climate impact into decision-making across Scotland through working with Scottish Government and the Scottish Cities Alliance.

Tracking and reporting

City emissions will be tracked on an annual basis and progress measured against a target trajectory, as illustrated in *figure 25*.

This trajectory assumes that citizen and partner action will take time to build and will rapidly accelerate from around 2026 as learning from early action, innovation, and investment come together to drive whole-system change at pace.

This trajectory will be reviewed as required to take the forecast residual emissions and the agreed net zero strategy into account.

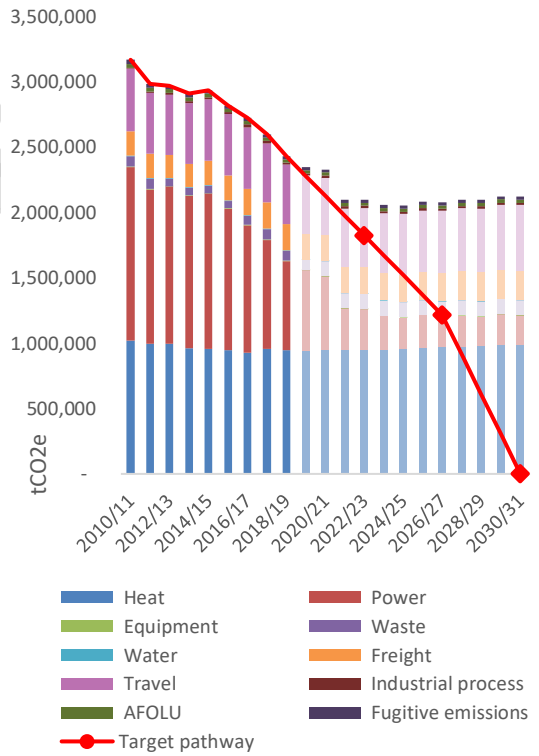


Figure 25: Edinburgh emissions sources and target pathway to 2030 (note: City's emissions based on the new Net Zero boundary. Darker shades represent historic emissions. Lighter shades represent Business as Usual projections)

City and Council emissions will be monitored and disclosed publicly on an annual basis through CDP[32]and the Public Bodies Climate Change Duties Report[33]. Signatories of the Edinburgh Climate Compact have also committed to monitor and disclose their organisational emissions.

Reporting and monitoring will be developed in line with the Strategy's implementation plan to be developed following publication of the strategy in late 2021.

Measuring co-benefits

The reporting priority will be on the achievement of the net zero emissions target by 2030 (both for the Council's operational emissions and the city), but a range of other indicators will also be used to monitor, measure and report progress against wider sustainability objectives.

This will provide a comprehensive view of Edinburgh's wider sustainability progress.

These indicators will be finalised later in 2021 and could include existing measures such as:

- Poverty measures.
- Affordable and energy efficient houses and building.
- The number of parks with a green flag award demonstrating high quality public greenspaces and offering ecosystem services.
- Number of people using active travel as main mode of travel.
- Procurement spend focussing on local and small/medium business.
- Number of signatories to the Climate Commission's Edinburgh Climate Compact.

Reporting through the net zero strategy will not replace existing reporting by the council and city partners.

[32] City of Edinburgh Council Response, Carbon Disclosure Project, accessed June 2021

[33] Public Bodies Climate Change Duties reporting submissions, Sustainable Scotland Network, accessed June 201

Annex 1: Offsetting

The need for offsetting

Even with a radical shift in the way we live to reduce emissions, it is unlikely that we will be able to reach *absolute zero*. It is not practically achievable to avoid all greenhouse gas emissions and some 'residual emissions' will remain. For example from waste management as recycling uses energy, or from electricity (as it is likely the UK grid will not be fully decarbonised by 2030).

To reach net zero, we can:

- directly remove these emissions locally - for example by planting trees within the city, or using 'negative emissions technologies' such as carbon capture and storage (*Figure 27*);

and / or

- purchase offsets from an accredited scheme which removes emissions from anywhere in the world (*Figure 26)*

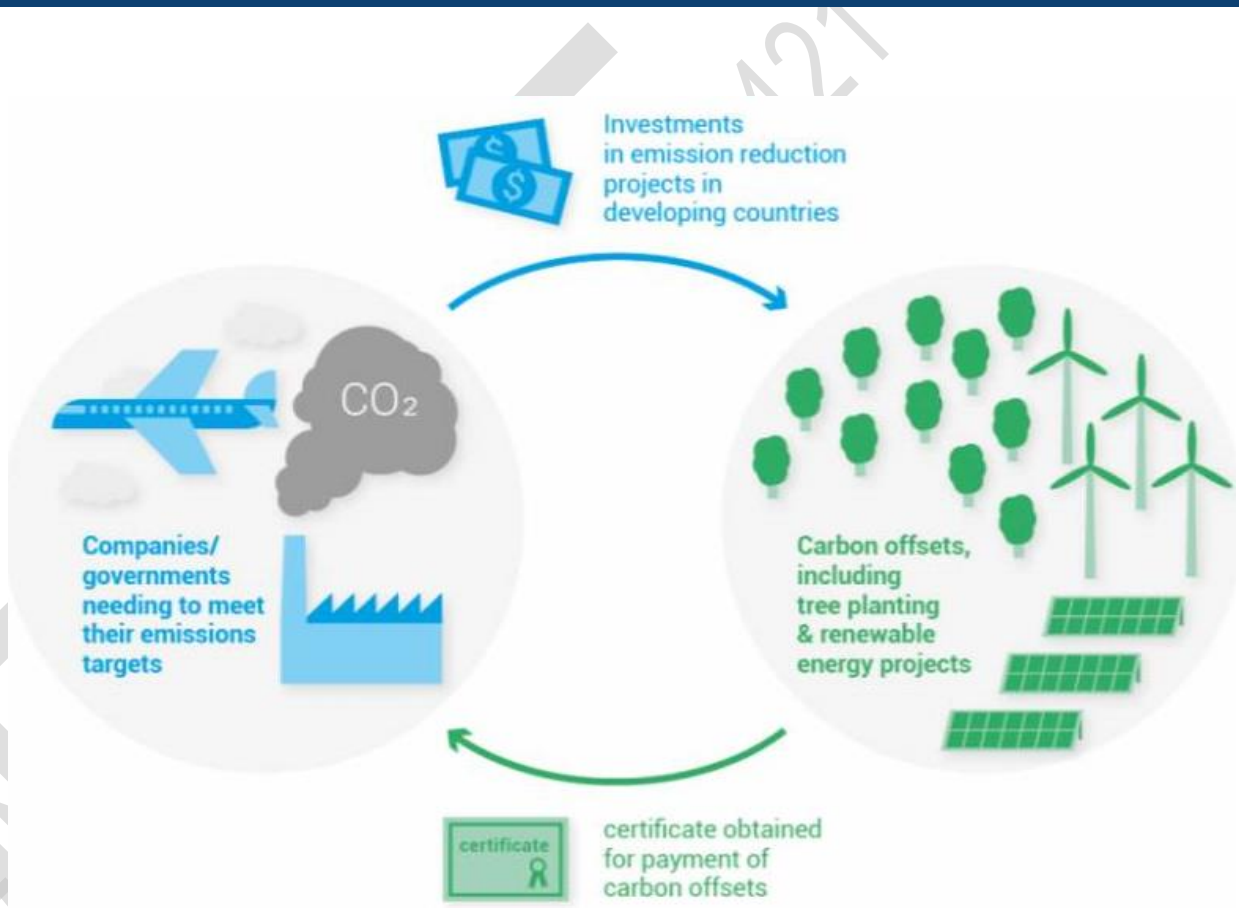


Figure 26: Explainer of carbon offsetting. Source: UN Environment Programme

There is scepticism around offsetting as there is a risk it can be seen as mitigating the need to focus on bringing about transformational change now. However, in almost all emissions scenarios analysed by the Intergovernmental Panel on Climate Change (IPCC), negative emissions technologies like the ones illustrated on *Figure 27* play a role in achieving targets.

In other words, we will have achieved net zero emissions when:

a) The city's **greenhouse gas emissions**, expressed in tonnes of CO_2 equivalent (**CO_2e**), have been **reduced as much as practically achievable.**

b) As a last resort, residual emissions are counterbalanced by removing greenhouse gasses from the atmosphere (either directly within the city's boundary, or through the purchase of offsets), and or capturing and storing at least as much CO_2e as was emitted by the city.

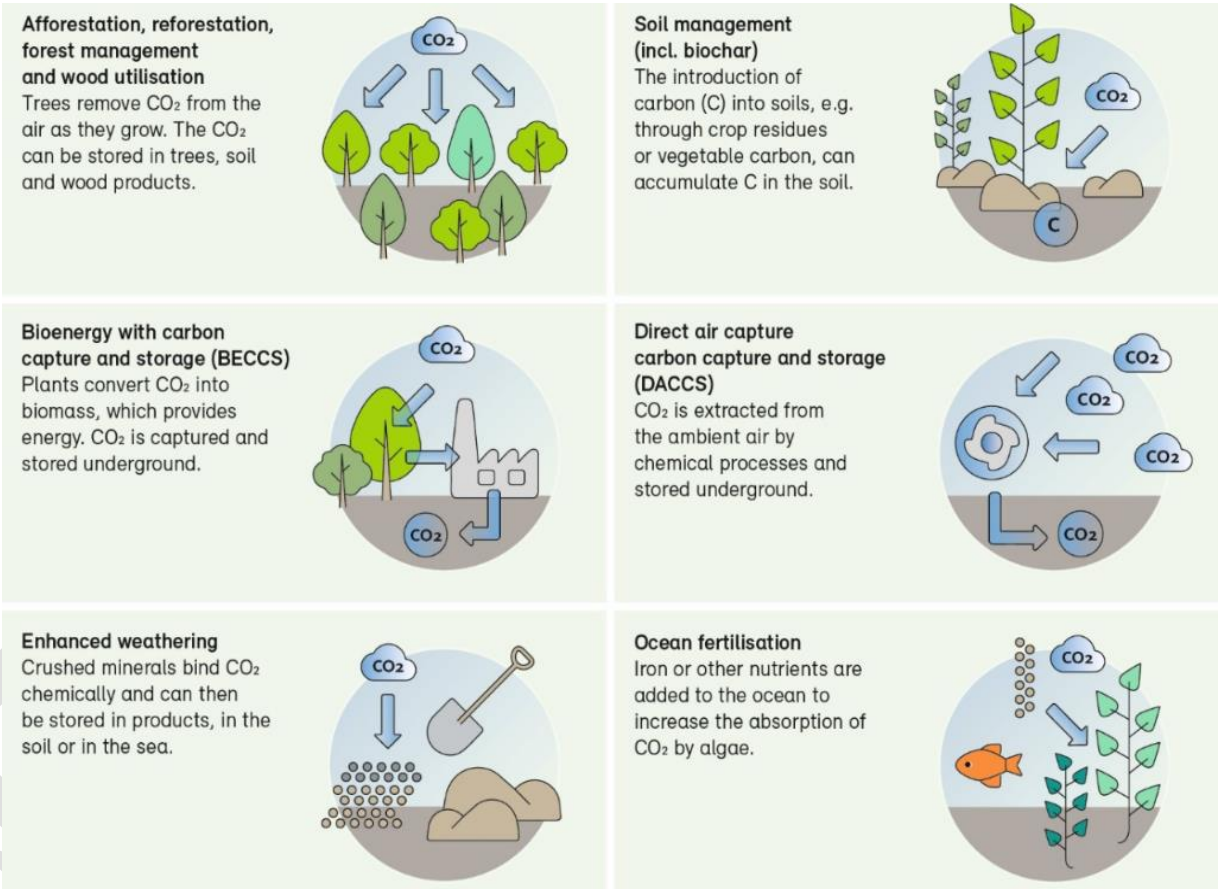


Figure 27: Possible approaches for negative emissions Source : Swiss federal office for the environment

Different ways to remove carbon

Offsetting strategies that rely only on tree planting require a lot of space[34], and in an urban location, are unlikely to be feasible for the Council or city partners. According to the Royal Society, it is best to use a portfolio of approaches.

There are different options as illustrated on *Figure 27.* They range from new technologies like Direct Air Capture and Carbon Storage (DACCS) to innovative agricultural practices with techniques to introduce more carbon into soils, green towers and vertical planting, or intelligent forest management to ensure optimal tree growth.

There are also techniques based on chemical reactions with CO_2, turning carbon from a gas into a solid. All these techniques are referred to as negative emissions technologies (NETs).

Carbon Management hierarchy

Some organisations that have adopted offsetting have also made a policy decision only use off-setting at the point that emissions have been reduced as far as practicable. How organisations choose to define 'as far as is practicably achievable' and 'last resort' may differ, as can how cost is considered - for example, where further emissions reductions would be technically possible, but would come at significant financial cost.

Where organisations do choose to purchase off-sets, many will look to use schemes which have robust and transparent standards of verification and meet accredited quality principles. However, there is currently no universally accepted accredited scheme covering all the different types of offsets.

Local or global?

Scotland's target is a "net zero within boundary" target, meaning that the Scottish Government will not use international offsets to do its fair share to limit global warming. Local or regional offsetting projects ensure the money spent stays locally and can deliver a multitude of co-benefits like habitat provision for wildlife; recreation and wellbeing; flood protection; urban cooling, cleaner air.[35]. However, at the very local level, different areas have different limits on the options available to them – for example, space to plant trees, or availability of underground carbon storage capacity.

A city-wide approach?

Offsetting is technically complicated and requires political and policy decisions, including the definition of quality principles and verification standards. At present, city partners each decide whether to offset and what approach to take, in line with their organisational responsibility for their policies and budgets.

For the city as a whole to be able to demonstrate it has met the net zero target, there will be a need to determine how off-setting should be treated and accounted for. There is a range of possible approaches, with each requiring further consideration and development.

Agreeing a city-wide approach to off-setting would allow city partners to develop a set of principles for off-setting – enabling a common approach to some of the policy issues described in this chapter.

There may also be scope to develop a city scheme for off-setting funds which partners could pay into, enabling local off-setting and the delivery of some of the co-benefits mentioned above. Membership of any scheme could be conditional upon signing up to the Edinburgh Climate Compact, to

[34] For example, A Net-Zero Carbon Roadmap for Edinburgh, Place-Based Climate Action Network research modelled emissions reductions of 65 percent from current levels and concluded that 517 million trees would need to be planted to off-set the remaining emissions. This would need land more than four times the total area of the city. A Net-Zero Carbon Roadmap for Edinburgh, Place-Based Climate Action Network, 2020

[35] Advice on using nature based interventions to reach net zero greenhouse gas emissions by 2050, Natural Capital Committee, 2020

ensure that partners are also taking action to reduce their emissions as a priority.

There may be opportunities to learn from city partners such as universities, who are already thinking about sector-wide approaches, and there could be scope to work at a regional, or even national level - to allow offsetting between Scottish local authority areas based on land availability or other factors.

Getting an approach to offsetting right for the city is an important part of the strategy. We will therefore consult on city off-setting in depth, as part of the broader consultation on this strategy, with a view to working with city partners and potentially other local authorities and Scottish Government over the longer term to consider and agree the best approach.

Annex 2: Glossary

Term	Meaning
20-minute neighbourhood	The '20-minute neighbourhood' model is an approach to designing and locating public services and amenities so that people can meet most of their daily needs within a short trip by foot, cycle, or public transport from where they live. (*Source: Council's business plan 2021-2026*)
Adaptation	Climate change adaptation is the process of adjusting to current or expected climate change and its effects. *(Source: IPCC)*
Active travel	Making journeys by physically active means such as walking, cycling, wheeling, or scooting.
Biodiversity	Biodiversity collectively describes millions of unique living organisms that inhabit earth, and the interactions among them. (*Source: European Environment Agency*)
Carbon Dioxide (CO_2)	A naturally occurring gas and one of the most abundant greenhouse gases in the atmosphere. Carbon dioxide is also a by-product of industrial processes, burning fossil fuels and land use changes.
Carbon Dioxide Equivalent (CO_{2e})	Universal unit of measurement used to compare the relative climate impact of the different greenhouse gases. The CO_{2e} quantity of any greenhouse gas is the amount of carbon dioxide that would produce the equivalent global warming effect.
Carbon neutrality	When CO_2 emissions caused by humans are balanced globally by CO_2 removals over a specified period (*Source: IPCC SR15*). This does not apply to other greenhouse gases.
Carbon Footprint	The sum of all emissions (in CO_2e), which were produced by an individual or organisation in a given time frame. Usually a carbon footprint is calculated for the time period of a year.
CCC	Committee on Climate Change. The Committee on Climate Change is an independent body established under the Climate Change Act (2008) that advises the UK Government on setting and meeting carbon budgets and on preparing for the impacts of climate change.
Circular economy	The principle of designing out waste and pollution, keeping products and materials in use, and regenerating natural systems. *(Source: Ellen MacArthur Foundation)*
City Partners	Public, private, community and voluntary sector organisations who can have an impact on the city's emissions by reducing their own footprints or collaborating to unlock change.

Civil Society	Civil society refers to a wide array of organizations: community groups, non-governmental organizations [NGOs], labour unions, indigenous group organisations, charitable organizations, faith-based organizations, professional associations, and foundations. (*source: The World Bank*)
Clean energy	Energy that comes from renewable, zero emission sources which do not pollute the atmosphere when used
Climate Change	The large-scale, long-term shift in the planet's weather patterns or average temperatures.
Co-benefits	The positive effects that a policy or measure aimed at one objective might have on other objectives. *(Source: IPCC 5th Assessment Report)* Within the context of this strategy, these are the positive benefits related to the reduction of greenhouse gases, and range from improved public health, job creation, ecosystem preservation and biodiversity improvement, noise reduction, to improved access to mobility services, plus others.
Community wealth building (CWB)	Community wealth building (CWB) is a system-changing approach to community economic development that works to produce broadly shared economic prosperity, racial equity, and ecological sustainability through the reconfiguration of institutions and local economies on the basis of greater democratic ownership, participation, and control. (*Source: Community-Wealth.org*)
EnerPhit/ Passivhaus	EnerPHit is the established standard for refurbishment of existing buildings using the PassivHaus basic principles and components. The Passivhaus Standard for new construction is not always achievable for works to existing buildings. For this reason, PHI (Passive House Institute) developed the 'EnerPHit – Quality Approved Energy Retrofit with Passive House Components' certification process for existing buildings. Significant energy savings of between 75 percent and 90 percent can be achieved even in existing buildings The basic 5 principles of the Passivhaus Standard are still used to achieve the EnerPHit Standard; • optimising thermal insulation levels • reduction of thermal bridges • high thermal performance windows • considerably improved airtightness • good indoor air quality maintained by a ventilation with heat recovery system with highly efficient heat recovery levels
Fabric first	An approach to building design which involves maximising the performance of the components and materials that make up the building fabric itself, before considering the use of mechanical or electrical building services systems. (*Source: Carbon Futures)*

Greenhouse gas (GHG)	The collective term for emissions which contribute to the greenhouse effect by trapping heat from the sun. Carbon dioxide is a greenhouse gas, but other gasses such as methane also contribute to the greenhouse effect.
Green recovery	Making sure that a cleaner, greener future is at the heart of plans to rebuild a strong economy after COVID-19.
Green Infrastructure	Green infrastructure is a network of multi-functional green space and other green features, urban and rural, which can deliver quality of life and environmental benefits for communities – for example street trees, green roofs or walls, rain gardens etc. *(Source: Adapted from TCPA)*
Green/grey/brown hydrogen	Hydrogen, in itself, is a clean fuel. Manufacturing hydrogen fuel, however, is energy-intensive and has carbon byproducts. Brown hydrogen is created through coal gasification. Grey hydrogen is created from natural gas and throws off carbon waste. Blue hydrogen uses carbon capture and storage for the greenhouse gases produced in the creation of grey hydrogen. Green hydrogen production is the ultimate clean hydrogen resource and uses renewable energy to create hydrogen fuel *(Source: Utility Analytics Institute)*
Green/ Blue network	A strategic network of woodland and other habitats, active travel routes, greenspace links, watercourses and waterways, providing an enhanced setting for development, connecting and linking habitats and providing improved opportunities for outdoor recreation, well-being and cultural activity.
Greenspace	Any vegetated land or water within an urban area. This includes, parks, gardens, playing fields, children's play areas, woods and other natural areas, grassed areas, cemeteries and allotments. It also includes green corridors like paths, disused railway lines, rivers and canals and derelict, vacant and contaminated land which has the potential to be transformed (Source: *Greenspace Scotland*)
Geothermal	Relating to or produced by the internal heat of the earth.
Grid decarbonisation	Decarbonising the grid means decreasing the emissions per unit of electricity generated. The electricity grid will decarbonise over time thanks to the UK generating an increasing proportion of its energy from wind power and other renewable sources.

Heat network	Heat networks (also known as district heating) supply heat from a central source to consumers, via a network of underground pipes carrying hot water. Heat networks can cover a large area or even an entire city or be fairly local supplying a small cluster of buildings. *(Source: Department for Business, Energy and Industrial Strategy)*
IPCC	Intergovernmental Panel on Climate Change, a research group created by the World Meteorological Organization and the United Nations Environment Programme, responsible for surveying and synthesising scientific work on climate change.
Just transition	A just transition seeks to ensure that the benefits of a transition to a green economy are shared widely, while also ensuring those facing disadvantage are not negatively impacted – be they countries, regions, industries, communities, workers or consumers. (*Source: Adapted from European Bank for Reconstruction and Development)*
Landfill	Disposal of waste material by burying it under layers of earth.
Nature Based solutions	Working with nature to address societal challenges, providing benefits for both human well-being and biodiversity.
Negative emissions technologies (NETs)	NETs are novel processes that aim to remove greenhouse gases from the atmosphere and hold them in long-term storage.
Net-zero emissions	Where any greenhouse gas emissions put into the atmosphere are balanced out by the greenhouse gases removed from the atmosphere, so that the "net" effect is zero emissions. *(source: Scottish Government)*
Offsetting	The process of trying to reduce the damage caused by releasing carbon dioxide into the environment by doing other things that remove carbon dioxide, for example, by planting trees". *(Source: Cambridge Dictionary)*
Rain garden	A rain garden is a garden designed to temporarily hold and soak in rainwater runoff that flows from roofs, driveways, patios or lawns. Compared to a conventional lawn, rain gardens allow for 30 percent more water to soak into the ground. A rain garden is dry most of the time. It typically holds water only during and following a rainfall event. (*Source: Groundwater Foundation*)
Retrofit	Modifications to existing buildings that improve energy efficiency or decrease energy demand and may include installation of low carbon heating systems.
Resilience	Resilience is defined as the capacity to recover quickly from difficulties or shocks.

	Climate resilience is the ability to anticipate, prepare for, and respond to hazardous events, trends, or disturbances related to climate. Improving climate resilience involves assessing how climate change will create new, or alter current, climate-related risks, and taking steps to better cope with these risks. (*Source: Climate Resilience Portal*)

Annex 3: Edinburgh coalition involvement

Building meaningful connections to accelerate climate action

National and global climate networks enable knowledge sharing between members to quickly scale up climate action across the world, raise the voice of local governments and their partners on the global stage, and highlight the role of cities, and their collective power in delivering on the ground carbon reductions.

Edinburgh has joined a number of coalitions and networks:

Edinburgh is one of only 15 European cities to be part of the EIT Climate-KIC Healthy, Clean Cities Deep Demonstrator programme. This allows us to work with the Climate Knowledge Innovation Community and its partners to learn from other European cities and design a series of 'tests of change' to be implemented in the next five years.

In February 2020, the Edinburgh Climate Commission for was launched, co-sponsored by the Council. The Commission brings together city partners from across the private, public, academic and community and voluntary sectors to offer independent advice, expertise and challenge to the city to support accelerated action on tackling climate change.

In December 2020, the Council signed the Edinburgh Climate Compact launched by the Climate Commission, along with nine other signatories representing the health, finance, energy, construction, education, transport, arts and culture sectors. Signatories pledged to deliver key climate commitments.

Edinburgh signed up to the Global Covenant of Mayors initiative in 2011 and to the Mayors Adapt initiative in 2015. Since 2016, both initiatives have merged within the Covenant of Mayors for Climate and Energy - a global coalition of city leaders addressing climate change by pledging to cut greenhouse gas emissions and prepare for the impacts of climate change. In 2020, the City has been awarded with the maximum of six badges recognising its climate mitigation and adaptation efforts.

In 2020, Edinburgh, along with almost 1,000 cities, states and regions across the globe, voluntarily reported through the Carbon Disclosure Project (CDP) reporting system. CDP is an international non-profit organisation for companies' and cities' environmental reporting (*cf monitoring success section*).

The City of Edinburgh Council is also a member of UK100 (and of its ambitious Net Zero Local Leadership Club), a UK network for locally elected leaders who have pledged to do everything within their power to rapidly cut greenhouse gas emissions.

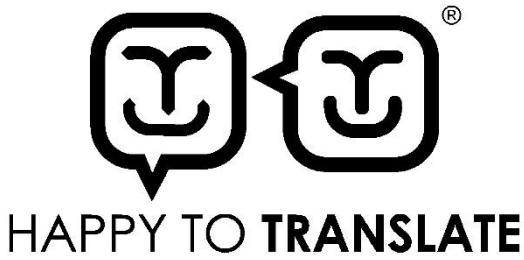
Edinburgh joined Cities CAN-B,[36]a global movement designed to mobilize hundreds of thousands of people (citizens and organizations) to collaborate in pursuit of the UN Sustainable Development Goals. This movement aims promote a cultural change that redefines the way we assume our responsibility and our impact on the cities we build and inhabit.

Building momentum in the run up to COP26 coming to Scotland

COP26 is a major United Nations climate change summit taking place in Glasgow from 1-12 November 2021 under the presidency of the UK government, and is being hosted in Scotland for the very first time. COP26 represents an important opportunity for Edinburgh to demonstrate the steps we are taking as Scotland's capital, to tackle climate change and build the partnerships we need to help deliver a net zero city. Edinburgh has joined three initiatives connected to COP26:

- COP26 Race to Zero is a global campaign to rally leadership and support from businesses, cities, regions, investors for a healthy, resilient, zero carbon recovery that prevents future threats, creates fair work, and unlocks inclusive, sustainable growth.
- UK100 Net Zero Pledge, a public commitment to bring council organisational emissions to Net Zero by 2030 and wider communities' emissions in line with Net Zero as soon as possible (and by 2045 at the latest).
- The establishment of a COP26 Edinburgh Events steering group, with members to include the City of Edinburgh Council, Edinburgh University, Festivals Edinburgh, Edinburgh business and other partners, to maximise opportunities for the city from participation and attendance at COP26 and associated events.

[36] Cities CAN-B, accessed June 2021



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