



STIRLING COUNCIL  
**CLIMATE & NATURE  
EMERGENCY PLAN**  
2021-2045

Lead  
Enable  
Inspire



**Thriving Stirling**





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# Foreword:

## Scott Farmer, Leader of the Council



Global debate on issues affecting the future of our daily lives has arguably never been more intense or polarising.

Whether it's constitutional, cultural or even about Council tax, everyone has a voice in 2021 and many are now more vocal in using it than ever before. The world is actively engaged in daily discourse.

However, amidst this cacophony of conversation, there's one thread of commonality weaving its way through all of it where the outcome is not up for debate, no matter which side of whatever fence you fall on, and that is Climate Change.

The world is getting warmer and, in very simple terms, that's having a negative impact on the delicately balanced ecosystems we know as life around us.

Stirling Council recognised this and declared a Climate and Nature Emergency in October 2019.

While the world has subsequently been turned upside down by the more immediate global crisis of Covid-19, our officers and Councillors have been hard at work coming up with a plan to tackle the climate crisis head on. Despite the undoubtedly trauma and ongoing difficulties the pandemic has created for people across the globe, the post-Covid world provides a unique opportunity to build back better and maximise the benefits of the more positive changes we've had to make to our lifestyles.

Lead, Enable, Inspire is the outcome of that and it's the first major step on the road to protecting the place where we all work, live and love: Stirling.

The three words which underpin Stirling Council's Climate and Nature Emergency Plan encapsulate our pledge to the community we serve.

We have already made significant strides to reduce our carbon footprint and embed green energy into our infrastructure, but climate change is not just a Council issue.

Delivery of this plan will require action from everyone – the Council, wider public sector businesses, third sector, residents and visitors to the area.

And while the challenge is great, the rewards are even greater.

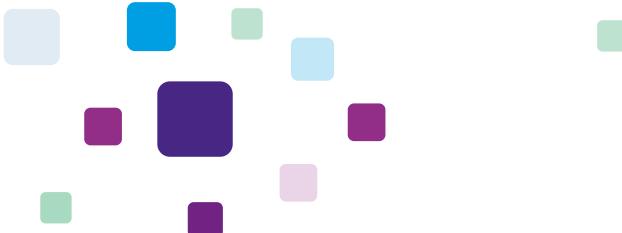
We can all help preserve the beauty of our region by cutting carbon and building resilience to the effects of our changing climate. This will improve our lives, reduce costs and create jobs for the future.

Now is the time to rise to the challenge of transforming our area to become a place fit for the 21st Century and beyond.

We need you to help us Lead, Enable and Inspire a response to the Climate and Nature Emergency and this document is our blueprint for achieving that.

*Scott T. Farmer.*





## Our Plan on a Page

### What is climate change?

Emissions of greenhouse gases, predominantly from burning diesel, petrol, gas and coal and from land use changes, are heating the planet. Green spaces and peat bogs help lock up some of these emissions, but not at the rate we're releasing them into the atmosphere.

### Why do we need to take action?

Increasing amounts of greenhouse gases are causing extreme weather and, without action, this will get worse. Taking action today is better than dealing with the effects of flooding, sea level rise and wildlife loss in the future. It also gives us the opportunity to build back better, to create new jobs and skills, and to preserve the wonderful nature that exists in our area today.

### A clear vision

Stirling leads the just transition to a **fossil fuel-free, climate-ready** area by 2045. This transition improves our residents' lives, helps Stirling's economy to thrive, and improves nature.

#### Delivered through **five Objectives**

1. Transform our energy systems and help deliver zero-carbon, affordable energy for all.
2. Develop a modern transport system that minimises carbon emissions, improves affordability, and provides choice for all.
3. Improve resource efficiency by cutting consumption and reducing waste.
4. Optimise biodiversity and increase the carbon storage potential of nature.
5. Plan and prepare for the impacts of climate change.

#### And each objective itself implemented in three ways

1. **LEAD** in our Council activities - the buildings we own, the things we buy, how we travel, and the open spaces we maintain
2. **ENABLE** the delivery of this vision through the policies and decisions we take as a Council
3. **INSPIRE** all residents, businesses, other organisations and visitors to get involved and take action.

We're excited about the ambition, breadth and opportunities our Plan will deliver and look forward to working with all in the Stirling area to deliver our vision.



## Our five Objectives

1. Transform our energy systems and help **deliver zero-carbon, affordable energy** for all.
2. Develop a **modern transport system** that minimises carbon emissions, improves affordability, and provides choice for all.
3. Improve **resource efficiency** by **cutting consumption** and **reducing waste**.
4. Optimise **biodiversity** and **increase the carbon storage potential** of nature.
5. **Plan and prepare** for the **impacts of climate change**.

# Climate Change in Stirling

Our reliance on oil, gas, and coal and major changes in land use have increased global levels of carbon dioxide in the air, and the levels are increasing every year. The traditional so-called ‘fossil fuels’ are used for energy across Stirling and deliver the power to heat our homes, propel our cars, power our industries and generate much of the electricity we use in Scotland today.

The world has already warmed by an average of around 1.2°C over the past 150 years. This may not sound much, but this extra heat causes more variable and extreme weather events, ranging from heavier downpours and flash flooding to extended droughts, stronger winds, and rising sea levels. In addition to direct weather impacts, climate change also acts as a ‘risk multiplier’, interacting with other trends to make it even more difficult to address poverty, disease, and food insecurity. If we carry on as we are these impacts will get much worse and global issues - like food scarcity - will become more challenging.

This is the background that led Stirling Council to recognise the Climate and Nature Emergency in 2019 and why Scotland has committed to become a “Net Zero” greenhouse gas economy by 2045. This involves cutting emissions of carbon dioxide, locking up climate changing gases in the natural environment, and preparing for the increasingly severe effects of climate change.

Without a radical transformation in our use of energy, land and materials, the food we produce, and the way we move around we face an increasingly uncertain future that not only threatens our social and economic systems but also the planetary systems on which we all depend. We must take rapid, urgent action to respond to the Emergency while we have the time.

## Going “Net Zero”

Net Zero means reducing greenhouse gas emissions to nearly zero. This includes emissions from our buildings, travel, industry, resource use and purchases. We want to lock up the remaining balance through nature and mechanical carbon capture and storage schemes so the balance of our emissions becomes ‘net’ zero.





## Why climate matters in Stirling Council

Country Milestones	
3rd October 2019	Stirling Council recognised the Climate and Nature Emergency
November 2021	The eyes of the world are on Scotland, as Glasgow hosts the United Nations' 26th summit on climate change (COP 26)
2030	Scotland's target to cut greenhouse gas emissions by 75% against 1990 levels. The Stirling Council area needs to be in line with this target
2045	The year Scotland has committed to be a Net Zero carbon economy. Stirling Council area also needs to be net zero by 2045, if not before

We know urgent action is needed and this will involve major changes, but there are many positive reasons for taking action:

**Cutting costs, living better:** From warmer, energy efficient homes to less polluting electric public transport, the lower carbon option can often be less expensive.

**Creating jobs:** Scotland's commitment to tackle the climate and nature emergency will need many new skills, providing tremendous opportunities for our people and businesses.

**Improving understanding:** Becoming more carbon aware and understanding the reasons for taking action will help to encourage changes in behaviour, bringing communities together.

**Protecting and restoring nature:** Action to tackle the Emergency will help to protect and enhance Stirling's stunning beauty and environment – something we're all proud of.

**Taking action for local people:** Nine out of 10 residents who responded to our 2020 Climate Survey agreed that reducing emissions and adapting to the effects of climate change should be Council priorities.



## Local people's attitudes

Stirling Council residents strongly support action. Our 2020 Climate Survey, which asked for views on the climate and nature emergency, was completed by 1,090 respondents, one of our highest ever returns to a Council survey. The findings revealed some striking thoughts on areas of importance:

**Around 90% of respondents agreed that the priority areas for action should be:**

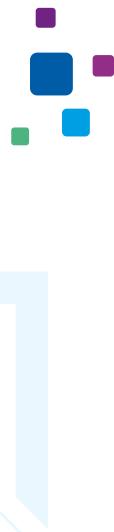
-  reducing emissions that cause climate change
-  adapting to be better prepared for the effects of climate change
-  tackling the decline of animal and plant species

“Climate change should be at the top of the agenda when decision-making. Many changes are beneficial economically too”

“Make Stirling a great place to live”

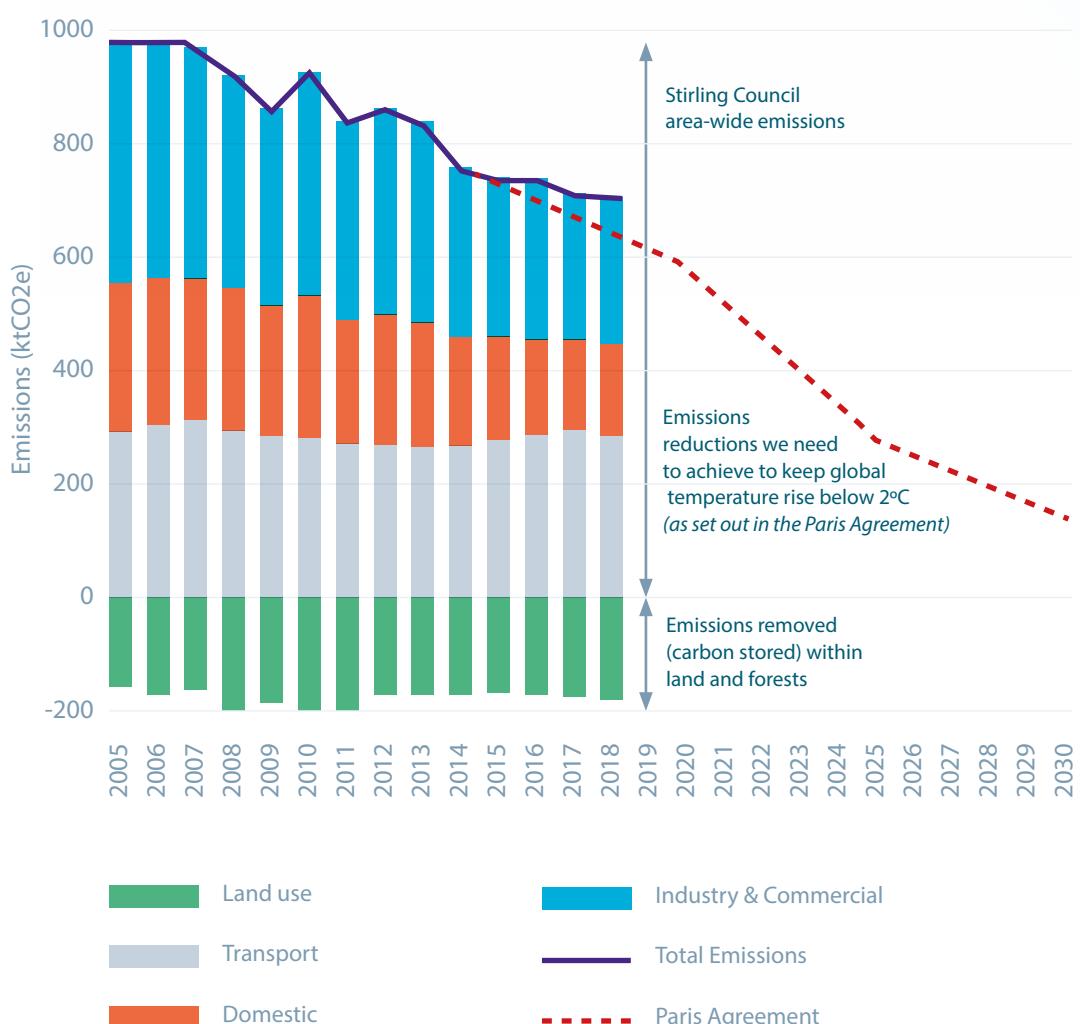
“Stirling Council should be bold in the face of climate change. Individuals need to change the way they live by making smarter choices to reduce waste, improve their health, and care for the environment. Our people must be given opportunities to shape a sustainable future.”

“More imagination, more action, more people involved...Innovation. Take more risks, lead people...we have already done loads...but let's do more, together!”



## Reducing our area-wide emissions

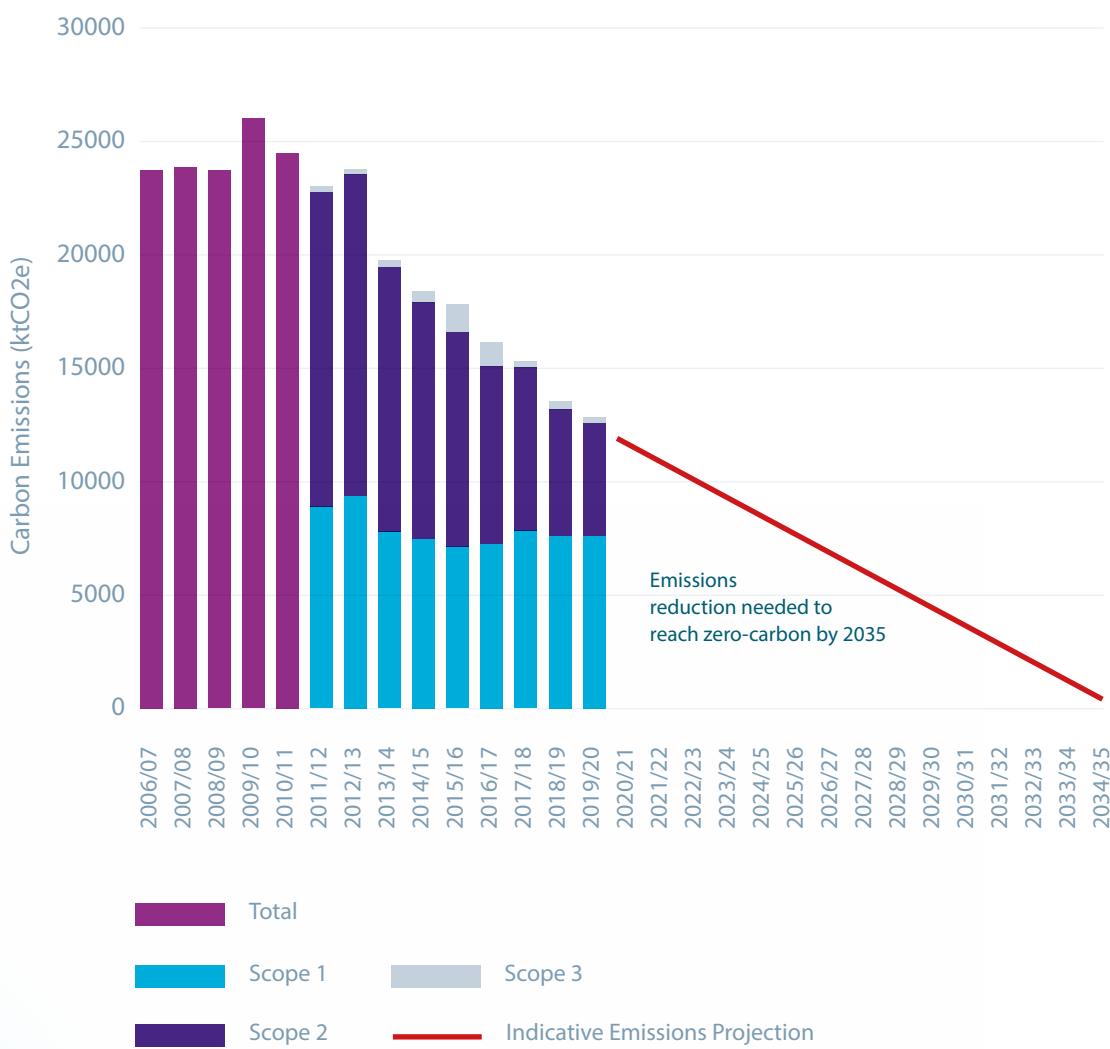
Stirling Council area-wide greenhouse gas emissions reduced by a third between 2005 and 2018. Data from UK Department for Business, Energy & Industrial Strategy, published 2 years behind present.



We all need to make faster progress and reduce our emissions by at least a half in the next 10 years to meet 'net zero' emissions (balance of the emissions produced with those removed).

## Stirling Council's progress

While the Council's own direct emissions account for only around 2% of the area's total, we have been taking action ourselves and Council produced greenhouse gas emissions have reduced by over 40% since 2006.



Data taken from the Council's annual Public Bodies' Climate Change Duties Reports. Emissions data collection from 2006-2011 was not divided into the scopes.

**Scope 1** = direct emissions from Council-owned and operated plant, vehicles and machinery such as air conditioning, boilers, fleet vehicles and generators;

**Scope 2** = indirect emissions from the consumption of purchased electricity, heat, steam and cooling; and

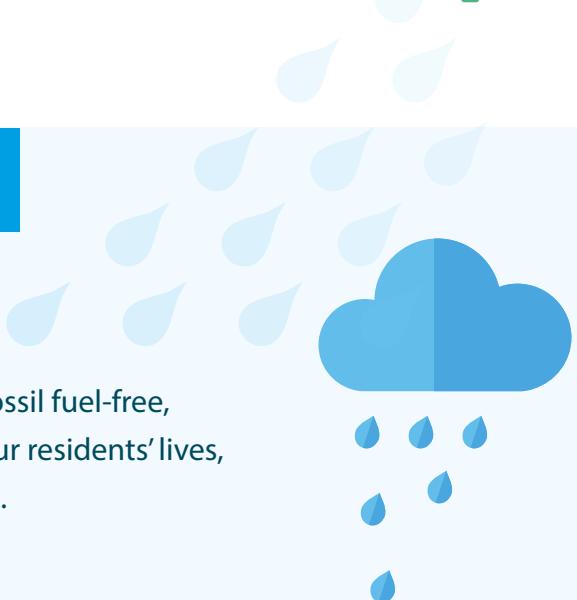
**Scope 3** = other indirect emissions, such as transport-related activities in vehicles not owned by the Council, and from waste disposal.



# Our Plan for Urgent Action

## 1. A CLEAR VISION

Our vision is that Stirling leads the just transition to a fossil fuel-free, climate-ready area by 2045. This transition improves our residents' lives, helps Stirling's economy to thrive, and improves nature.



The following targets will help us achieve this vision:

- Stirling Council area will achieve **net zero carbon by 2045**
- Stirling Council will be **carbon neutral** for our own operations by **2035**

## 2. FIVE MAIN OBJECTIVES

### Energy Use and Generation

Transform our energy systems and help deliver zero-carbon, affordable energy for all

### Transport

Develop a modern transport system that minimises carbon emissions, improves affordability, and provides choice for all

### Resource Efficiency

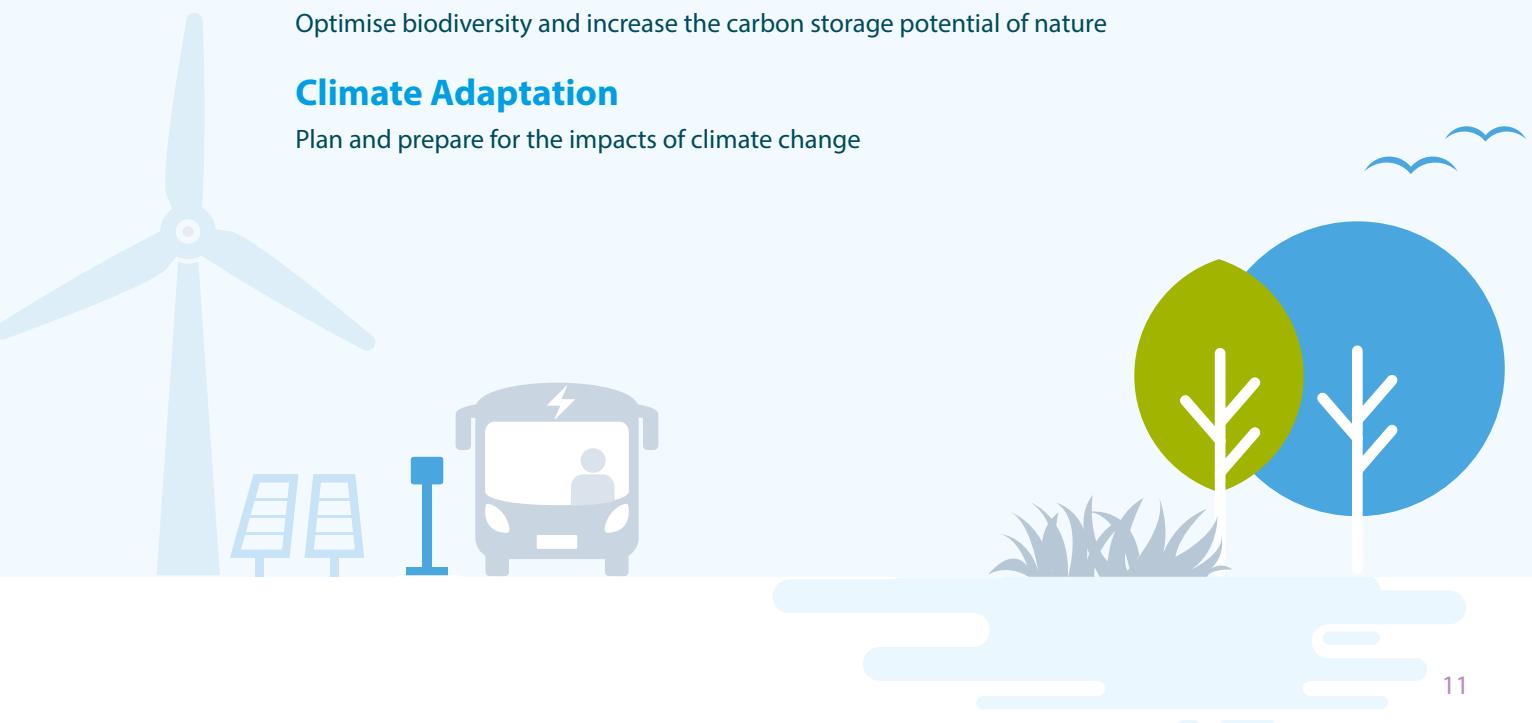
Improve resource efficiency by cutting consumption and reducing waste

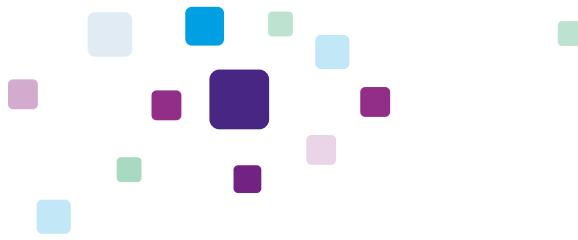
### Nature and Biodiversity

Optimise biodiversity and increase the carbon storage potential of nature

### Climate Adaptation

Plan and prepare for the impacts of climate change





### 3. SOLID ACTIONS, PRINCIPLES AND TARGETS FOR EACH OF OUR 5 OBJECTIVES

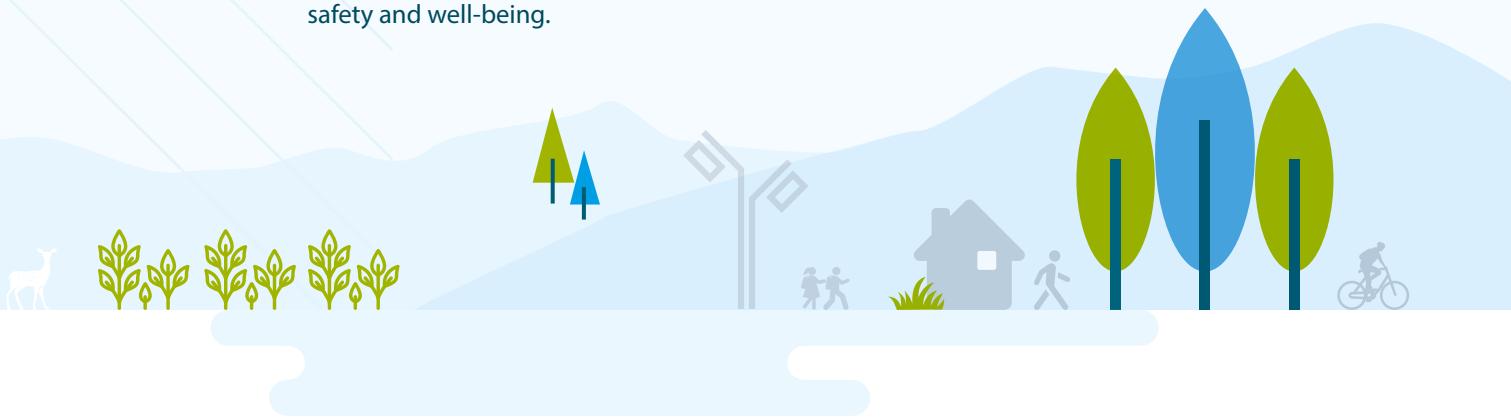
We will deliver these objectives with clear actions and strategies, guided by three principles:

1. **We will LEAD** in our own Council activities – the buildings we own, the things we buy, how we travel and the open spaces we maintain.
2. **We will ENABLE** the delivery of this vision through the policies and decisions that we take as a Council.
3. **We will INSPIRE** all residents, businesses, other organisations and visitors to get involved and take action.

Most importantly, this plan stresses that, while the Council has a lead role in supporting delivery of the vision and objectives, success will depend on everyone across the Stirling area taking action.

#### A just, equitable and ethical transition

Our response to the challenges of the Climate and Nature Emergency brings significant opportunities. If we get it right we'll transform our economy and create highly-skilled, well paid jobs that contribute to everyone's wellbeing. If we don't, we risk doing things in a way that could leave individuals and communities behind and undermine our individual and collective wellbeing. We need to make sure our actions focus on a just transition where the changes we make share any benefits and opportunities so that all forms of poverty are eliminated and a more equal society is created, both at home and abroad. Building fairness and equity into all that we do is also the best way to persuade people to work together for our common safety and well-being.





## Delivered by strong leadership and a decision-making framework

Progress will be delivered through clear accountability and governance, addressing and balancing the three pillars of the economy, environment and inclusion.

This is set out in the Sustainable Development (Stirling) Protocol, an initiative led by Stirling University. The Protocol puts the environment at the heart of sustainable prosperity and inclusion rather than considering the environment and the economy to be opposing forces.

Economy	Environment	Inclusion
<ul style="list-style-type: none"><li>• Deliver prosperity</li><li>• Promote the green &amp; blue economies</li></ul>	<ul style="list-style-type: none"><li>• Conserve &amp; enhance biodiversity &amp; natural resources</li><li>• Progress towards carbonless society</li></ul>	<ul style="list-style-type: none"><li>• Maximise social inclusion</li><li>• Enhance health &amp; wellbeing</li></ul>





# Objectives





# Energy Use and Generation

1

## OBJECTIVE 1

TRANSFORM OUR ENERGY SYSTEMS AND HELP DELIVER  
ZERO-CARBON, AFFORDABLE ENERGY FOR ALL

### Priorities for Objective 1:

- E01 • Continue to **reduce demand for energy** and strive to **remove energy waste**
- E02 • **Maximise energy efficiency** in our homes and buildings
- E03 • Deliver a **zero-carbon energy system for heating, power and transport** while matching local demand with local supply
- E04 • Provide a **resilient and secure energy supply**
- E05 • **Eliminate fuel poverty** through improved energy efficiency and the provision of low cost, low carbon energy

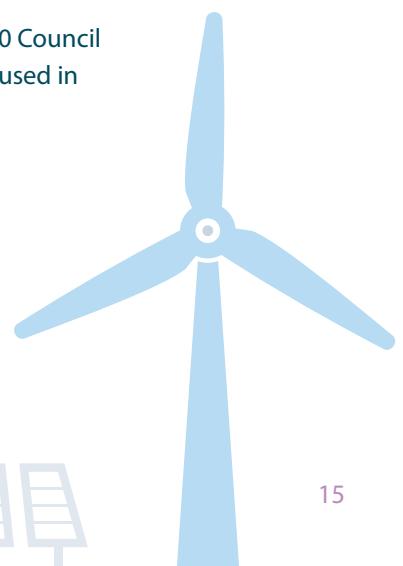
## What we have achieved so far...

**Reduction in national energy demand:** the initial target to reduce demand across Scotland by 12% between 2005 and 2020 was achieved 6 years early (15.4% lower by 2015)

**Carbon Emissions from Energy** (industry, commercial and domestic sectors): across the Council area, emissions dropped from 675kt in 2005 to 409kt in 2018 (a 39% reduction)

**Energy Efficiency:** 91% of Council housing stock had wall insulation and 97% had double or triple glazing in 2019-20.

**Solar panels:** by 2019-20, 37,000 panels had been installed on more than 3,900 Council houses, providing 9.7 GWh a year of low-cost, renewable energy (39% of power used in Council housing)



Targets and measures of progress	Interim Target	2045 Target
<b>National targets translated to the Stirling Council area (using 2005 as the baseline year)</b>		
<b>% reduction in Stirling Council area carbon emissions from energy use</b>	75% by 2030*	Net zero*
<b>% reduction in Stirling Council area residential heat demand</b>	15% by 2032^	25%
<b>% households in fuel poverty in the Stirling Council area (24% in 2019)</b>	Less than 15% by 2030"	Less than 5% by 2040"
<b>% homes at set EPC levels in the Stirling Council area: where technically feasible and cost effective to do so (45% at EPC A-C in 2019)</b>	100% EPC C or better by 2040>	95% EPC A-B by 2045
<b>% of total energy (including transportation) to be generated from renewables (21.1% across Scotland in 2018)</b>	50% by 2030<	95%
<b>% of buildings with zero-carbon heat supplies</b>	94% non-domestic by 2032* 80% domestic by 2032*	95% overall
<b>Council Targets</b>		
<b>Implement measures in Council housing stock to reduce carbon emissions (based on 2019-20 average of 7 tonnes/household)</b>	Reduce to an average of 2 tonnes per household by 2030	
<b>% of public building energy to be generated by renewable or low-carbon energy</b>	100% by 2030	200%

\* Climate Change (Emissions Reduction Targets) (Scotland) Act 2019

^ Scotland's Climate Change Plan 2018-2032 Update

" Fuel Poverty (Targets, Definitions and Strategy) (Scotland) Act 2019

> Energy Efficient Scotland: Decarbonising Scotland

< Scottish Energy Strategy, 2017



# Key Actions to deliver Objective 1

1

## **LEAD** in our own Council Operations

**Develop a net-zero plan for Council operations in 2021. This will include:**

1. robust calculation and management of our corporate carbon footprint;
2. setting a net zero target and aligning with Council spend;
3. developing a challenging action plan
4. implementing an ISO14001-certified system across our operations to manage our environmental impact; and
5. Only installing low carbon and/or renewable heating and power systems in Council buildings and housing stock from 2022 for new build or where we replace the heating system.

## **ENABLE** zero-carbon energy through our Council policies and strategies

### **Council strategies underpinning this objective**

- Local Development Plan
- Local Housing Strategy
- Regional Economic Strategy
- Regional Energy Masterplan

- Produce a costed Regional Energy Masterplan in 2022 which forecasts what energy we'll need across our area, where this will be generated, and the projects which need to be delivered to achieve a net-zero energy system and to implement the recommendations.
- Update our Local Development Plan and Local Housing Strategy to fully support zero-carbon energy and refocus on sustainable development.
- Integrate the economic and jobs opportunities from zero-carbon, energy-efficient activity into our Regional Economic Strategy.
- Require that all new homes consented from 2024 use renewable or low-carbon heating.
- Upgrade and retrofit all Council housing stock to achieve a minimum Energy Performance Certificate of B standard by 2045 (using the Warmer Homes Scotland Scheme, for example).

## **INSPIRE** all to take action

- Work with Scottish Government to develop and deliver robust programmes to support home and business retrofits for zero-carbon heating and energy efficiency.
- Promote the opportunities for jobs and economic prosperity for the Stirling Council area's people and businesses.

# Transport

2

## OBJECTIVE 2

DEVELOP A MODERN TRANSPORT SYSTEM THAT MINIMISES CARBON EMISSIONS, IMPROVES AFFORDABILITY, AND PROVIDES CHOICE FOR ALL

### Priorities for Objective 2:

- T01 • Make every trip in the Stirling area net-zero carbon
- T02 • Make walking and cycling easy, safe, and attractive travel options
- T03 • Help enable an effective, affordable public transport network
- T04 • Maximise sustainable choices for all

### What we have achieved so far...

- Over 50 electric vehicle charging bays have been installed across Stirling.
- In 2020, the Forth Bike e-bike-share project supported 5,770 miles worth of journeys across Stirling.
- The Council has undertaken a review of its fleet and is delivering a rolling programme to replace petrol and diesel vehicles with electric equivalents.
- Stirling Council area has a comprehensive programme of active travel infrastructure projects, including the £10.5m Walk Cycle Live Stirling project.



# 2

<b>Indicator</b> (against a 2019 baseline)	<b>Interim Target</b>	<b>2045 Target</b>
<b>Indicative area-wide targets</b>		
<b>% reduction in carbon emissions from road traffic in the city area</b> <i>(1,608 tCO<sub>2</sub> a year across monitored AADT routes)</i>	More than 40% by 2032 <sup>A</sup>	75% <sup>A</sup>
<b>% of city centre journeys by active travel</b> <i>(against modal cordon count of 15.4%)</i>	At least 20% by 2030 <sup>A</sup>	Increase of 30% <sup>A</sup>
<b>% of Ultra Low Emission Vehicles</b> <i>(2.2% of all vehicles registered in Stirling in 2019)</i>	45% by 2032	100%
<b>% patronage increase in public transport</b> <i>(2.3m boarding 2019-20)</i>	25% by 2030	50%
<b>% reduction in carbon emissions from public transport</b> <i>(3,842 tCO<sub>2</sub> in 2019-20)</i>	25% in 2030	75%
<b>Council Targets</b>		
<b>% of Stirling licensed taxis which are EVs</b> <i>(0% in 2019)</i>	100% of new licenses by 2032	100% of all taxis operating in the area to be EV
<b>% Council vehicle fleet running on 'clean' energy</b> <i>(3.1% in 2019)</i>	Phase out new petrol and diesel light commercial vehicles by 2025*	100% of all fleet clean by 2030*
<b>% reduction in carbon emissions from Council business travel</b> <i>(4,450 tCO<sub>2</sub> in 2006/07 baseline year)</i>	45% by 2030	90%

<sup>A</sup> National Transport Strategy 2

\* Climate Change (Emissions Reduction Targets) (Scotland) Act 2019

# 2

## Key Actions to deliver Objective 2

### **LEAD** in our own Operations

- Transition our own fleet to 100% low-carbon energy: small fleet by 2025, all by 2030
- Continue to develop electric vehicle (EV) solar charging hubs across our car parks

### **ENABLE** zero-carbon travel through our Council policies and strategies

#### **Council strategies underpinning this objective**

- |                             |                              |
|-----------------------------|------------------------------|
| • Local Development Plan    | • Local Transport Strategy   |
| • Active Travel Plan        | • Electric Vehicle Policy    |
| • Public Transport Strategy | • Regional Economic Strategy |

- Review the Local Transport Strategy by 2023 to deliver the commitments set out in National Transport Strategy 2, this Climate and Nature Emergency Plan, and the emerging Regional Transport Strategy.
- Deliver an effective strategy for electric vehicle charging and other clean fuels for the Stirling Council area, in line with the Switched on Scotland Roadmap for adoption of plug-in vehicles.
- Seek powers to require all new homes to be ready for electric vehicles as part of our Local Development Plan.
- Develop and deliver a robust Active Travel Plan and Behaviour Change Strategy to inspire behaviour change and work in partnership to support and enable our communities, third sector and local businesses to succeed in addressing the Climate and Nature Emergency.
- Create a new Access and Core Path Strategy to further support walking and cycling across Stirling.
- Review our Public Transport Strategy, with a focus on low carbon travel.
- Use our buying and licensing powers to roll out clean refuse collection, taxi and bus fleets.
- Develop a business case for a Council-owned low carbon public transport company.
- Integrate the economic and jobs opportunities from zero-carbon transport in our Regional Economic Strategy.
- Transform our park and ride services to be more user-friendly and electric.
- Provide effective alternatives and sustainable choices to single car-use road travel, providing less need for people to drive.
- Introduce additional measures to cut car use by targeted use of parking and EV tariffs, lower speed limits, and car-free days in the city centre.



# Resource Efficiency

3

## OBJECTIVE 3

### IMPROVE RESOURCE EFFICIENCY BY CUTTING CONSUMPTION AND REDUCING WASTE

#### Priorities for Objective 3:

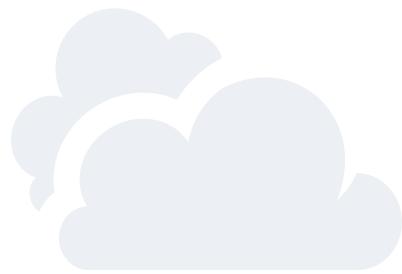
- R01 • Eliminate demand for non-essential single-use and disposable items and reduce demand for non-essential goods and services.
- R02 • Make more effective use of resources by improving our recycling and reuse of materials.
- R03 • Minimise the carbon involved in the products and services we buy.
- R04 • Engage everyone in sustainable waste management.
- R05 • Support development of a sustainable local food economy and minimise the impacts of food choices.

#### What we have achieved so far...

- Our household recycling rate is currently 54%
- We built an energy from waste-water plant at Forthside in Stirling, the first of a kind in the UK for the innovative mix of technologies, including harnessing energy from waste water.
- We have some great volunteering networks supporting the community to reduce waste, such as the Community Fridge, Share and Repair project, and skill-sharing workshops.
- We have introduced a 'Top up Tap' in Stirling City Centre to encourage water refills rather than buying single use plastic bottles.



# 3



<b>Indicator</b> (against a 2019 baseline)	<b>Interim Target</b>	<b>2045 Target</b>
<b>Indicative area-wide targets</b>		
<b>% local authority collected waste sent to landfill</b> <i>(against baseline of 45.7% in 2019)</i>	5% by 2025*	1%
<b>% household waste recycled / composted</b> <i>(against baseline of 54.8% in 2019)</i>	70% by 2025*	90%
<b>Local authority collected waste diverted for re-use</b> <i>(against baseline of 0.5%, 276t, 2019)</i>	2.0% by 2030	4.0%
<b>Household waste generated per person</b> <i>(0.45t in 2019)</i>	20% reduction by 2030	30% reduction
<b>Carbon impact per person</b> <i>(0.92 tCO<sub>2</sub> in 2019)</i>	20% reduction by 2030	30% reduction
<b>Council Targets</b>		
<b>Waste generated from Council operations sent to landfill</b> <i>(892t in 2019)</i>	70% reduction by 2030	95%
<b>Carbon impact of waste from Council operations</b> <i>(89t in 2019)</i>	70% reduction by 2030	95%

\* Scotland's Zero Waste Plan



# 3

## Key Actions to deliver Objective 3

### **LEAD** in our own Operations

- We will reduce the waste from our offices and operations sent to landfill.
- We will continue to reduce the need for single use items.
- We will explore the opportunities for developing local reuse and repair centres and an aggregates and inert waste recycling system.
- We will conduct a full audit of our in-house waste and recycling arrangements and public realm litter bins to maximise recycling, better segregate waste streams, and reduce waste sent to landfill.

### **ENABLE** resource efficiencies through our Council policies and strategies

#### **Council strategies underpinning this objective**

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Local Development Plan</li> <li>• Regional Economic Strategy</li> </ul> | <ul style="list-style-type: none"> <li>• Circular Economy Plan</li> </ul> |
|--|---|

- With support from our partners, we will develop a Circular Economy Plan for the Stirling area in 2021.
- Integrate the economic and jobs opportunities from waste reduction, recycling and the circular economy in our Regional Economic Strategy.

### **INSPIRE** all to take action

- We will work with residents to ensure a smooth transition to our waste services collection (announced in Summer 2020).
- We will work with our business and Sustainable Stirling Partnership partners to develop waste plans that reduce commercial and industrial wastes.
- We will develop a Sustainable Food Plan to increase access to local, affordable healthy food, promote a vibrant sustainable food economy, and reduce the ecological footprint of our food system from Stirling farmers to residents' plates.
- We will support local third sector groups to access funding for projects that tackle waste and resources.
- We will signpost businesses towards the support available from bodies such as Zero Waste Scotland (ZWS) Energy Efficiency Business Support.
- We will work with ZWS in 2021 to develop clear measures of the circular economy.
- We will work tirelessly with our partners to drive down the need for unnecessary use of resources and the needless production of wastes.



# Nature and Biodiversity

## 4

### OBJECTIVE 4

#### OPTIMISE BIODIVERSITY AND INCREASE THE CARBON STORAGE POTENTIAL OF NATURE

##### Priorities for Objective 4:

- B01 • Protect, restore and enhance existing ecosystems, habitats and species.
- B02 • Maximise the carbon absorption potential of our natural environment.
- B03 • Ensure that everyone can access and enjoy nature.
- B04 • Provide opportunities for all stakeholders, including communities and schools, to contribute and deliver action.

#### What we have achieved so far...

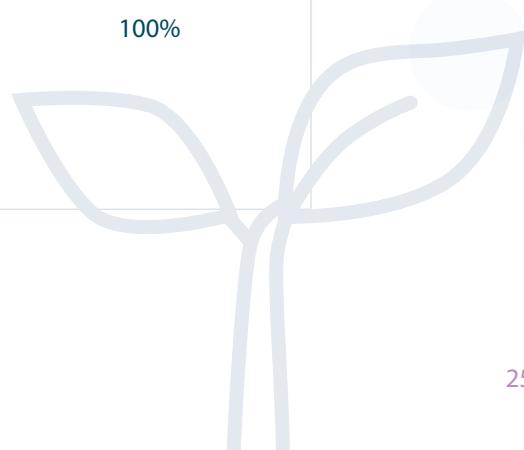
- Raised peat bogs, such as Wester Moss, have locked up thousands of tonnes of carbon. Active management by partners and volunteers is increasing the site's carbon sequestration and biodiversity value.
- The Council is committed to maximising areas of grass managed for biodiversity. Approximately 26% of the 2.5 million sqm of grass open space was managed for biodiversity benefits in 2021.
- The Council has received Green Flag Awards for 3 Urban Parks which all include an element of biodiversity enhancement.
- The Council and its partners have recently agreed a Pollinator Strategy to help improve the management of lands to optimise opportunities for more biodiverse insect life.
- In January 2021, the Council signed the Edinburgh Declaration to meet the challenge of delivering the post-2020 global biodiversity framework.

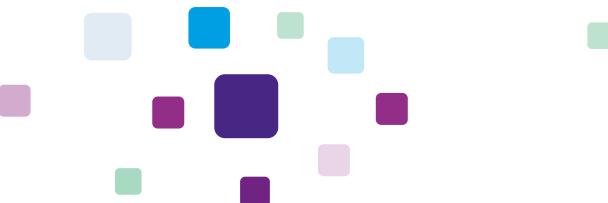




# 4

<b>Indicator</b> (against a 2019 baseline)	<b>Interim Target</b>	<b>2045 Target</b>
<b>Indicative area-wide targets</b>		
<b>Number of new trees planted in the Council area</b>	+80,000 by 2023 +360,000 by 2030	+1,000,000
<b>% of residential properties within 500 m of an accessible semi-natural green space</b> <i>(36% in 2009/10 Open Space Audit)</i>	80% by 2030	100%
<b>Proportion of individuals taking action for biodiversity</b>	3/10 residents by 2030	5/10 residents
<b>% of remaining carbon absorbed by our natural environment to achieve net zero emissions</b>	40% by 2030	100%
<b>Council Targets</b>		
<b>Area of Council open space managed for biodiversity</b> <i>(26% in 2021)</i>	35% by 2035	50%
<b>Number of designated Local Nature Conservation Sites</b> <i>(18 in 2021)</i>	100 by 2030	200
<b>% of school and pre-school children that have regular access to the natural environment as part of their education</b>	75%	100%





# 4

## Key Actions to deliver Objective 4

### LEAD in our own Operations

- We will manage our parks and open spaces to increase their biodiversity value and ability to sequester carbon.
- We will develop a method for measuring the carbon sequestered by the natural environment across the Stirling Council area.

### ENABLE action with our Council strategies and policies

#### Council strategies underpinning this objective

- |                              |                                  |
|------------------------------|----------------------------------|
| • Local Development Plan     | • Alive with Nature Plan         |
| • Regional Economic Strategy | • Forestry and Woodland Strategy |

- Adopt the Alive with Nature Plan, which sets out how we'll protect and support the natural environment across our region.
- Include the provisions of this Emergency Plan and the Alive With Nature Plan in our Local Development Plan and Supplementary Guidance review.
- Continue to work with Stirling University to enhance our understanding of the biodiversity in the area and the progress of active biodiversity schemes.
- Ensure the economic benefits and jobs opportunities from biodiversity and carbon storage are integrated into our Regional Economic Strategy.

### INSPIRE all to take action

- Establish a Landowner Forum to encourage the management of land, including agriculture and forestry, to maximise carbon sequestration and increase biodiversity value.
- Work with partners to deliver woodland creation, peatland enhancement and landscape-scale habitat management to sequester the carbon required to achieve our net-zero target.
- Plant two new trees for every person living in Stirling by end of 2025. These 180,000 trees will be a mix of urban and rural trees. We will work with schools, community groups and others to grow, plant and maintain these trees.
- Make the most of new national policies and programmes to secure biodiversity gains and maximise carbon sequestration.

# 5

## Climate Adaptation



### OBJECTIVE 5

#### PLAN AND PREPARE FOR THE IMPACTS OF CLIMATE CHANGE

##### Priorities for Objective 5:

- CA01 • Maintain a clear understanding of climate change risks.
- CA02 • Ensure the resilience of our buildings and critical infrastructure to local climate impacts.
- CA03 • Implement a prioritised programme of nature-based climate adaptation actions.
- CA04 • Encourage and support community resilience.
- CA05 • Build resilience into supply chains.

#### What we have achieved so far...

- Stirling Council produced its first Climate Adaptation Strategy in 2014 and was the first Scottish signatory to the Covenant of Mayors' Initiative on Adaptation to Climate Change in October 2014.
- While leading development of the Forth District Flood Risk Management Plan (2016-2022), and participating in 3 other Districts, the Council has delivered 3 flood alleviation schemes, 2 flood protection studies, 4 Surface Water Management Plans, ongoing maintenance of schemes, awareness-raising, flood forecasting & warning, and the local emergency response.
- The Council's Resilience team promotes and supports Community Resilience through Community Emergency Plans. Four Community Councils had a live Plan in place in the 2019 baseline year.

# 5



Indicator and measure of progress	Target
<b>Indicative area-wide targets</b>	
<b>Undertake Risk and Opportunities Assessment of Council area</b>	Complete 2021
<b>Review and update Climate Adaptation Strategy for the Council area</b>	Early 2022
<b>Continue development and delivery of Flood Alleviation Schemes outlined in cycle 1 Flood Risk Management Plans</b>	Dependent on funding available
<b>Finalise and publish cycle 2 Local Flood Risk Management Plan</b>	June 2022
<b>Council Targets</b>	
<b>Ensure climate change strategic risk in Council Corporate Risk Register is expressed in terms of climate impacts</b>	Early 2021
<b>Undertake Risk and Opportunities Assessment of Council assets</b>	Complete 2021
<b>Use Adaptation Scotland's Capability Framework to guide action and track improvement</b>	Annual assessment





# 5

## Key Actions to deliver Objective 5

### LEAD in our own Operations

- Formalise partnership arrangements and work with all partners to develop and implement a robust Climate Adaptation Strategy.
- Integrate climate risk into our service delivery and emergency planning; reviewing, testing and updating on a regular basis.

### ENABLE a climate ready region with our Council strategies and policies

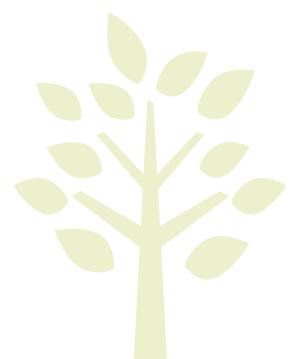
#### Council strategies underpinning this objective

- |                              |   |
|------------------------------|---|
| • Local Development Plan     | • Climate Adaptation Strategy                   |
| • Regional Economic Strategy | • Flood Risk and Surface Water Management Plans |

- Update our Climate Adaptation Strategy for the Stirling Council area and identify a series of priority projects for urgent action.
- Make best use of green spaces as natural adaptation solutions to climate impacts (flooding, drought, overheating) as a major priority in our work.
- Ensure existing Flood Risk and Surface Water Management Plans are delivered, reviewed and updated.
- Ensure the economic benefits and job opportunities of climate preparedness are integrated into the Regional Economic Strategy.
- Integrate climate adaptation and preparedness considerations into all developments, infrastructure projects, and planning.
- Discourage development on the flood plain and integrate climate resilience into the Council's Local Development Plan review and associated Supplementary Guidance.

### INSPIRE all to take action

- Update the Community Resilience Scheme, ensuring it is active, effective and accessible to all.
- Work with businesses so they are ready for climate change impacts.



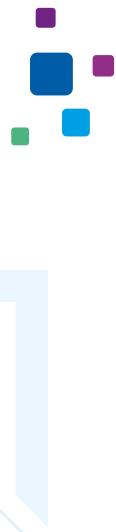
# Key Enabling Actions

**Delivery of our Plan requires action by all, supported by the following key enabling actions.**

## 1. Strong Governance

- Stirling Council will be the lead authority to deliver this Plan and track progress.
- Key to this Plan is improving the carbon and climate literacy and education for behaviour change within the Council and across the wider Stirling area. All our partners, across the public & third sectors, business, industry, commerce and others have a role to play.
- The Sustainable Stirling Partnership will provide a strategic forum for reviewing progress and considering practical actions to deliver continuous improvement. Membership of the Partnership will be drawn from public sector organisations across the Council area.
- We will create community champion forums where community members can be selected to participate in helping to drive forward strategic planning and community action plans, particularly involving the younger generation.
- Within the Council, each priority theme will be led by an accountable officer. These officers will be responsible for developing robust strategies and plans to deliver this Plan's priorities, they will meet regularly and be led by the Chief Operating Officer for Infrastructure and Environment. The Council aims to achieve an ISO14001 corporate standard by 2025.
- The Council will update its decision-making process to include how each decision supports the aims and Key Performance Indicators of this Emergency Plan.





## 2. Planning and skills supporting economic development

- We will comprehensively monitor and review our approach towards planning and development in the context of the Climate and Nature Emergency, encouraging low-carbon developments and resilience.
- We will commit to the preparation and delivery of an action plan to improve practice in implementing the current Local Development Plan, in line with this Climate & Nature Emergency Plan, to meet “the right development in the right place” principle underpinning the plan-led system.
- We will align our next Local Development Plan with National Planning Framework 4 and provide a spatial planning response to enable climate-friendly and resilient development and places to help tackle the Climate and Nature Emergency.
- We will place the jobs and economic opportunities provided by net-zero carbon and the circular economy at the heart of the Regional Economic Strategy, which is currently under development. This will include:
  - Supporting business start-up and entrepreneurship;
  - Helping all businesses understand the opportunities of the green economy, and how to take action; and
  - Positioning Stirling’s beauty, environmental ambitions and climate resilience as key inward investment differentiators.
- We will work with the University, Colleges and adult education providers to deliver skills in climate and sustainability action.
- We will work with our schools to implement Education Scotland’s Learning for Sustainability Action Plan to provide teachers with the skills to teach sustainability in the curriculum, improve our buildings, grounds and policies to support learning for sustainability, and to provide the skills for all young people in our authority.
- We will encourage all Stirling Council staff to develop the knowledge, skills and ambition to include the aims of this Plan in all our work. We will do this by completing a skills map for staff and delivering a training programme from 2021.

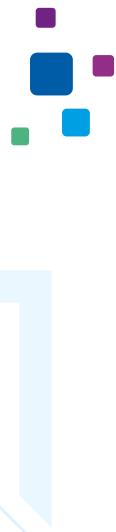


### 3. Data and clear information

A carbon measurement system is being developed to operate across the cities of Scotland, to ensure that the right decisions are taken on the right priorities.

- We will track performance against the Key Performance Indicators and report progress on a regular basis.
- We will create a Sustainable Stirling Partnership website which will share information on key programmes and performance and will let the community share data and their own ideas on climate and sustainability performance. This will be part of a comprehensive communications strategy which we will develop in 2021 to involve residents, business and organisations.
- We will work with partners to gather the necessary data and develop the metrics required to accurately measure and monitor the impact of our actions on our climate and natural environment.
- We will make the best use of technology and citizen science to involve everyone in documenting our journey, monitoring change, delivering action and sharing experiences.





## 4. Finance and Funding

The Council will integrate the objectives of this Plan into the core elements of our service delivery, with decisions around spending taking recognition of the Climate and Nature Emergency. Wherever possible, the Council will collaborate with partners and investors to attract inward investment and look to optimise spending opportunities to the benefit of the Plan.

The Council and its public sector partners are directly responsible for only a small proportion of carbon emissions in the Stirling area: around 2% in the case of the Council. Responsibility for change must therefore be a collective effort of wider society and the choices we all make. Commerce, business and industry all have a major responsibility to develop sustainable products, services and infrastructure to meet future needs. Public utilities also play a significant role in reducing our dependence on fossil fuel derived energy, funded largely by consumers.

The international Climate and Nature Emergency is recognised by the UK and Scottish Governments, both of which are developing national strategies and associated policies to support funding and spending plans around low carbon themes. Government funding is also being considered in the context of attracting external investments to help build the necessary infrastructure of the future.

There is currently no single answer to the funding challenges that lie ahead. However, if we all focus on making low carbon choices in how we move about, the things we buy, and create less waste, we can all improve demand for the lower carbon option and help mainstream the use of sustainable products and activities for the benefit of us all and future generations.

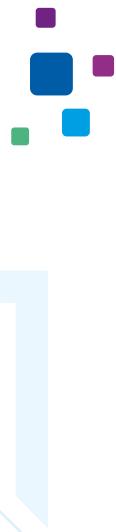


## 5. What we buy

Stirling Council spends over £100m a year on infrastructure projects, goods and services. This spend can act as a catalyst to support delivery of this Plan and our wider Social Value ambitions.

- We will fully integrate the aims and targets of this Plan as part of the update of the Council's Commissioning and Procurement Strategy 2018-2021.
- We will work with members of the Sustainable Stirling Partnership to integrate this Plan's aims into their purchasing strategies.
- The Sustainable Stirling Partnership will work to develop a plan to make it easier for key business organisations and their members in the Forth Valley area to integrate sustainable procurement into their buying decisions.
- Through our Circular Economy Plan we will take steps in 2021 to work with local organisations and residents to illustrate how they can use their spending to support sustainability, cut waste, and save money.





## 6. All of us taking action today

Stirling Council's direct carbon emissions contribute around 2% of the Stirling area's emissions. It is therefore evident that many of the improvements needed sit with industry, commerce, and the residents of the area, as well as our visitors.

Much improvement relies on numerous individual decisions taken around what we buy, how we travel, and how much we waste. We will work with our partners to provide advice on practical actions partners, businesses and individuals can take to reduce their environmental impacts.





## We are getting on with it

The 5-year action plan overleaf will see the production of prioritised strategic plans across each themed area. These will identify our key actions in order to tackle the climate and nature emergency. However, we continue to drive forward priority projects and keep the momentum going on a range of associated activities.

The following list outlines many of the projects and actions the Council is currently delivering to help tackle the climate emergency:

- Further expanding our comprehensive solar and energy storage systems on Council Housing stock alongside improved energy efficiency measures
- Expansion of the Forthside district heating network to add new customers
- Continuing implementation of renewable heating systems and energy efficiency measures on all public buildings and schools
- Continuing implementation of water saving measures on all public buildings and schools
- Investigating further opportunities for renewable energy generation on all public buildings and schools
- Further expanding our public EV charging network across urban and rural areas, recognised as one of the most comprehensive systems in the country
- Completion of the Castleview Low Carbon Hub (integrating renewable energy from solar canopies with battery storage and EV chargers), with increased sustainable travel opportunities
- Developing The Peak Integrated Energy System - replicating the Castleview Low Carbon Hub, using solar canopies and battery storage to supply renewable energy to The Peak Leisure Centre and EV chargers
- Investigating further opportunities for solar canopies and battery storage on all viable Council car parks for renewable energy generation





- Developing Park and Choose sites to becoming low-carbon and more attractive to customers
- Working with Clackmannanshire Council in developing a regional active travel network
- Refreshing plans around public access, helping enable better outdoor access
- Continuing development and delivery of Flood Alleviation Schemes
- Delivering a significant native tree planting programme every year
- Continuing to support biodiversity projects throughout the area, maximising opportunities to develop habitats and help protect nature
- Advanced approaches towards investment in active travel, led by our flagship Walk, Cycle, Live Stirling project. Linking higher educational institutes and the city centre, with a high standard active travel corridor
- Continuing to work with our communities and assist in delivering low carbon community led projects
- Continuing to improve on our recycling standards, with one of the best records in the country



# Action to deliver our Emergency Strategy

Action plans will continue to be refined to 2045





## Progress Reviews

### We will regularly review progress

The Council is excited by the ambition, breadth and opportunities that this Plan will deliver.

We will formally review progress against this Plan every 12 months, using the review opportunity both to increase action where we can and to update our targets in line with good practice, innovation and practical experience.

**For further information and reading visit:**

[Stirling Sustainable Development](#)

[Scottish Government Environment and Climate Change](#)

[The Intergovernmental Panel on Climate Change](#)

[The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services](#)

**Theme areas:**

[Scottish Energy Strategy: The future of energy in Scotland](#)

[Transport Scotland National Transport Strategy](#)

[Making Things Last: a circular economy strategy for Scotland](#)

[Scottish Biodiversity Strategy](#)

[Climate Ready Scotland: a climate change adaptation programme 2019-2024](#)

# Glossary

Term	Description
AADT	Annual Average Daily Traffic
Carbon dioxide (CO <sub>2</sub> )	The main gas that causes global warming, produced mainly from combustion of fossil fuels and clearing land
Carbon footprint	The total volume of climate heating gases released into the atmosphere by an individual, event, organisation, service or product, expressed in terms of carbon dioxide impact
Carbon neutral	For an organisation or activity to be carbon neutral, it removes the same amount of carbon dioxide from the environment as it releases
Carbon sequestration	Process of capturing and storing atmospheric carbon dioxide
Climate Adaptation	Activity to plan and prepare for the impacts of a changing climate
COP 26	26th Conference of the Parties (or countries) that agreed the United Nations Framework Convention on Climate Change (UNFCCC) in 1994.
EPC	Energy Performance Certificate for a building or appliance
EV	Electric Vehicle
Greenhouse gas (GHG)	One of 6 gases that cause global warming / climate change
ISO14001	An environmental management system which sets out a framework that a company or organisation can follow.
kWh and GWh	Units of power consumption per hour (kilowatt or gigawatt)
Net Zero	An ambitious target to reduce all GHG emissions sources, with any remaining sources compensated by certified GHG removal processes
Section 75 powers	Developer contributions towards infrastructure in developments
Sustainable Stirling Partnership (SSP)	A strategic forum drawn from leading organisations across the Council area that considers joint practical activity for delivering more sustainable improvements
ULEV	Ultra Low Emission Vehicles
Zero carbon	Means no carbon emissions





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