

# Net Zero Strategy

## Ro-innleachd Neoni Lom





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# Foreword

## Facal-toisich



Climate Change is the greatest challenge of our lifetime. Severe weather and climate impacts are already affecting communities across the Highlands and service delivery provided by the Council. In addition to significant losses in biodiversity, the Highlands is experiencing an increased frequency and severity of flooding, landslides, and wildfire events.

This Strategy sets out the Council's approach to addressing the climate emergency and contributing towards Scotland's national legally binding target to become Net Zero by 2045. Highland Council will adopt the Scottish Government's Net Zero by 2045 target, aiming to achieve this sooner. The route map to Net Zero included in this Strategy also sets key interim targets to reduce emissions by at least 75% by 2030 and by at least 90% by 2040.

The Strategy focuses on Council operations. It provides a framework for reducing corporate emissions and preparing for the unavoidable impacts of climate change. The need for sustainability and a just transition will be at the very heart of everything we do in our commitment to delivering Net Zero by 2045.

We are three years into a critical decade for tackling climate change. Highland Council declared a climate and ecological emergency in 2019. Whilst good progress has been made towards our climate change ambitions, we will not achieve the targets outlined in our route map to Net Zero through taking a 'Business as Usual' approach.

Transformational change is required across the Council to integrate climate change mitigation, adaptation, and sustainability measures into all operations and service delivery. All staff and elected members will have a role to play in adapting the Council to climate change and delivering Net Zero. Embedding climate change into everyday decision-making will be critical. We will need to make complex and challenging decisions, particularly regarding funding, to ensure we understand the course of action we must take in tackling the climate issues we all face.

The journey to net zero will be challenging, but we know climate action can deliver more comprehensive economic, environmental, social and health benefits. We must embrace the potential of the 'green economy' and nurture the development of new industries that create jobs and wealth. The Council's "Future Highland" Programme sets out a vision of Highland, a centre for global renewable energy, by capitalising on our areas of immense natural capital to deliver alternative energy solutions including developing solar, hydrogen, Hydro, wind and wave solutions.

We recognise we have a leadership role and aim to become an exemplar in delivering ambitious, transformative action to tackle climate change. The Council's sphere of influence includes over 6,000 suppliers through our procurement of goods and services. As a major employer, we also have a fantastic opportunity to deliver climate action throughout the Highlands inspiring our collective workforce to adopt positive low carbon behaviour.

**Karl Rosie**  
Chair of Climate Change Committee

**Derek Brown**  
Chief Executive

**Raymond Bremner**  
The Leader of The Highland Council



# Executive Summary

## Geàrr-chunntas Gnìomhach

Climate Change is the greatest challenge of our lifetime. Severe weather and climate impacts are already affecting communities across the Highlands and service delivery provided by the Council. In addition to significant losses in biodiversity, the Highlands is experiencing an increased frequency and severity of flooding, landslides, and wildfire events.

In recognition of the serious and accelerating changes to the world caused by climate change, Highland Council declared a climate and ecological emergency in May 2019.

This Strategy sets out the Council's approach to addressing the climate emergency and contributing towards Scotland's national legally binding target to become Net Zero by 2045.

### Targets

We will achieve **net zero** corporate carbon emissions **by 2045** at the latest with key interim targets:



To meet the **2030 target** of at least **75% below baseline**, an annual decrease of **8.5%** is required. This equates to:

**an average reduction of 2,000 tCO<sub>2e</sub> per year.**

Photos by The Highland Council and dimitrisvelisikas969 for Pivaboy.

The Strategy focuses on Council operations. It provides a framework for reducing corporate emissions and preparing for the unavoidable impacts of climate change.

### Key areas of focus include:

- Improving energy efficiency across our estate
- Transitioning our property portfolio to Net Zero (social housing and non-domestic)
- Identifying and developing opportunities arising from renewable energy generation
- Rationalising our fleet and replacing vehicles with low emission alternatives
- Developing infrastructure to enable and encourage staff to choose active travel
- Enhancing biodiversity and carbon sequestration across our estate
- Reducing waste
- Embedding a circular economy into the Council's operations
- Developing a Community Wealth Building Strategy and Action Plan
- Embedding climate change in procurement
- Developing a Strategy and Action Plan to safeguard the Council against the effects of climate change and to ensure continuity of services
- Embedding climate change into decision-making processes
- Delivering a Communications and Engagement Strategy to support the delivery of the Net Zero Strategy
- Delivering Climate Change training to all members of staff

An action plan will be developed by December 2023 outlining a clear framework of workstreams to be implemented to contribute towards the delivery of the Council's Net Zero targets.

Climate change is an ever-evolving issue, so the strategy and action plan are intended to be living documents. The strategy and action plan will be regularly reviewed and updated to reflect developments and consider changing market conditions, innovations, and approaches to climate change challenges.

# Introduction Ro-ràdh

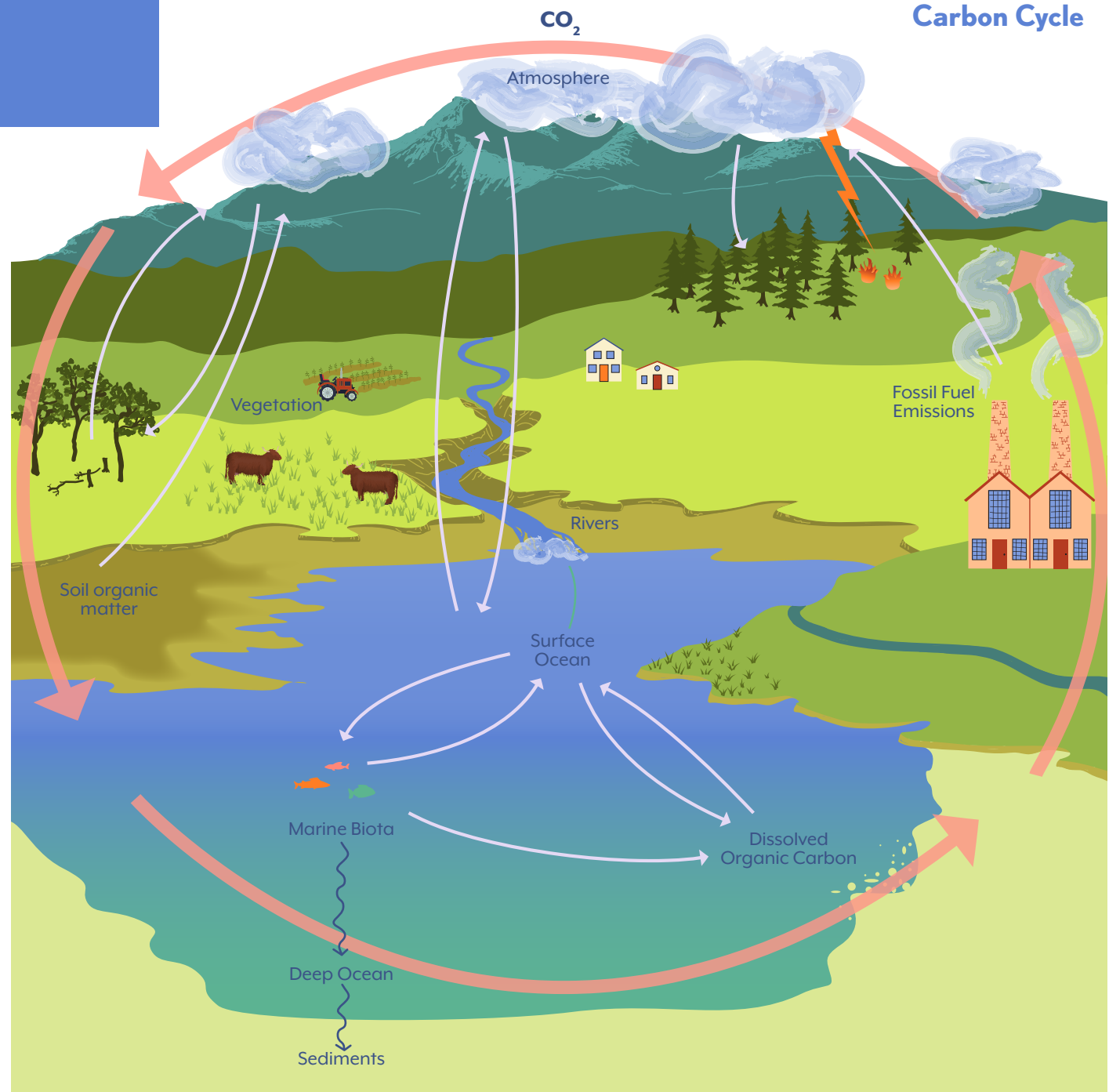
## What is Climate Change?

Climate change refers to long-term shifts in the Earth's weather patterns and average temperatures, driven by increased concentrations of greenhouse gases (GHGs) in the atmosphere.

In the natural cycle, sunlight enters the Earth's atmosphere with some of this energy absorbed at the surface by the land, the rest re-radiated as heat back into the atmosphere. GHGs such as Carbon Dioxide (CO<sub>2</sub>) exist naturally within the atmosphere, and these gases trap the heat and distribute it across the planet. This natural process is called the 'Greenhouse Effect'.

GHGs are crucial to keeping our planet at a suitable temperature for humans, animals, and plants to exist. Without the natural greenhouse effect, the heat emitted by the Earth would simply pass outwards from the Earth's surface into space and the Earth would have an average temperature of about - 20°C.

Plants and the ocean play a significant role in the natural balance of GHGs as plants and trees intake CO<sub>2</sub> during their life cycle and oceans also absorb a lot of the excess CO<sub>2</sub> in the air.



Since the mid-1800's, and the onset of industrialisation and large-scale burning of fossil fuels, human activities have been changing the Earth's natural Greenhouse Effect. Burning fossil fuels such as coal, gas and oil for heat and power generation, has released millions of tonnes of additional GHGs such as carbon dioxide, methane, and nitrous oxide into the atmosphere. Too many GHGs now exist in the atmosphere, enhancing the greenhouse effect, causing the temperature of the Earth to rise.

CO2 levels in the atmosphere are now reaching 50% higher than pre-industrial times.<sup>1</sup> The Intergovernmental Panel on Climate Change (IPCC), which is the United Nations body for assessing the science related to climate change, has stated that human activities are estimated to have caused approximately an average 1.1°C of warming globally above pre-industrial levels. The world is not warming evenly, with the temperature increase higher in some parts of the world with the strongest warming happening in the Arctic and along the equator.

### Source in the atmosphere of other greenhouse gases





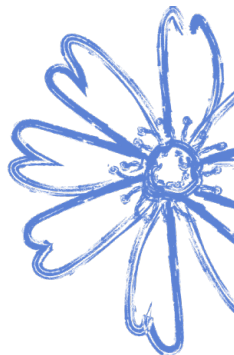
Greenhouse Gas	Source
 <b>Carbon Dioxide</b>	Primary GHG that mainly comes from burning organic materials such as fossil fuels: coal, oil, gas, wood, and solid waste.
 <b>Methane</b>	Mainly released from landfills, natural gas and petroleum industries and agriculture – most specifically digestive systems of grazing animals.
 <b>Nitrous Oxide</b>	Mainly agriculture and livestock as well as burning fossil fuels.
 <b>Industrial Gases</b>	Fluorinated gases that are used in refrigerants, solvents and in manufacturing. Unlike other GHGs, these gases have no natural sources and only come from human-related activities.

Table data sourced from NASA



<sup>1</sup>Carbon Brief: [www.carbonbrief.org/met-office-atmospheric-co2-now-hitting-50-higher-than-pre-industrial-levels](http://www.carbonbrief.org/met-office-atmospheric-co2-now-hitting-50-higher-than-pre-industrial-levels)



The IPCC global climate change report published in August 2021 has been dubbed a “code red for humanity”. The report makes it clear that human activities have unequivocally caused observed increases in greenhouse gas emissions and that we are perilously close to hitting the internationally agreed threshold of 1.5°C of warming, beyond which the impacts of climate change and the measures required to adapt become significantly more challenging. View here:

[www.bit.ly/IPCC-6thAssessmentReport](http://www.bit.ly/IPCC-6thAssessmentReport)

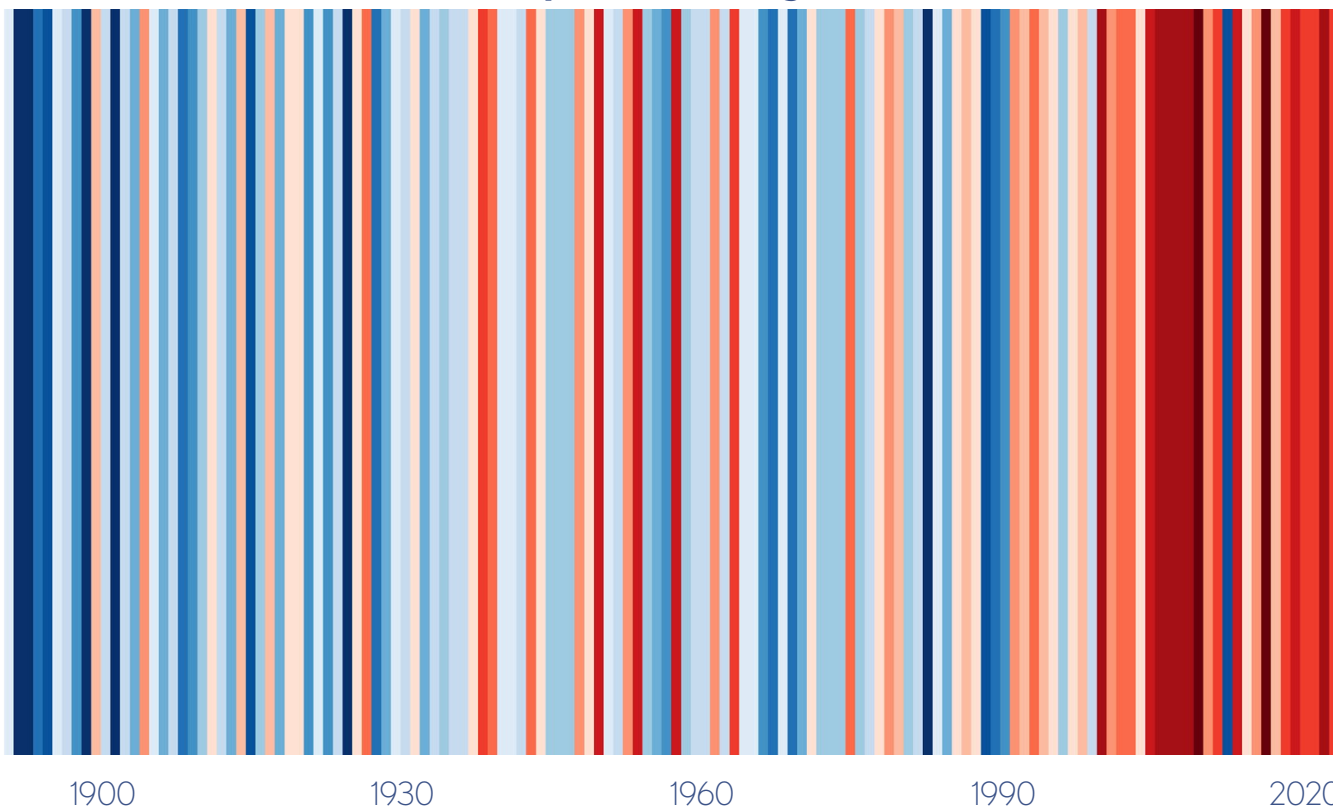
The Sixth Assessment Report from the IPCC published in March 2023 reported that global average temperatures are estimated to reach 1.5°C above pre-industrial levels as early as the “first half of the 2030s”. View here:

[www.ipcc.ch/report/ar6/syr](http://www.ipcc.ch/report/ar6/syr)

The warming stripes for Highland (to the right) are based on Met Office data for Inverness. Each stripe represents the average temperature for a single year, relative to the average temperature over the period as a whole. Shades of blue indicate cooler-than-average years, while red shows years that were hotter than average. The stark band of deep red stripes on the right-hand side of the graphic show the rapid heating in recent decades.



## Annual Temperature Change since 1884



Warming stripes graphics and lead scientist: Ed Hawkins, University of Reading. Data: Met Office (Inverness). Sourced from Carbon Copy's website: [www.carboncopy.eco/local-climate-action/highland](http://www.carboncopy.eco/local-climate-action/highland)

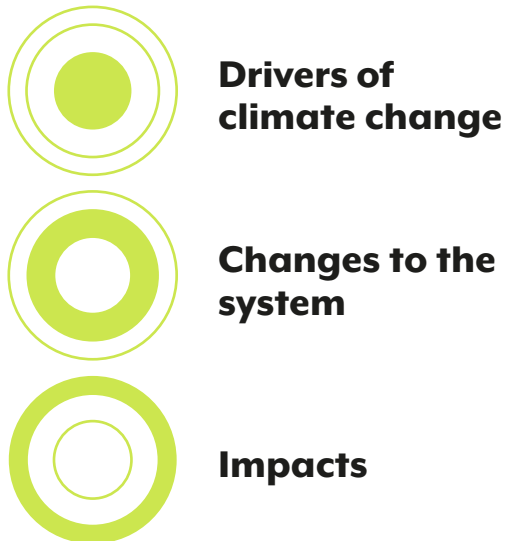


## The Impacts of Climate Change

Many people think climate change means mainly warmer weather. However, the temperature rise is only the beginning of the story. Because the Earth is a system where everything is connected, changes in one area can influence changes in all others.

The consequences of climate change include, among others, intense droughts, water scarcity, severe fires, rising sea levels, flooding, melting polar ice, catastrophic storms, and declining biodiversity.

The level of climate change we will see depends on how quickly we cut emissions. If greenhouse gas emissions are reduced early and rapidly, the extent and impact of climate change can be mitigated to some degree. However, regardless of how much we manage to reduce our emissions, many of its effects are now “locked in” due to the historical and ongoing emissions at a global scale; therefore, adapting to climate change will be essential.

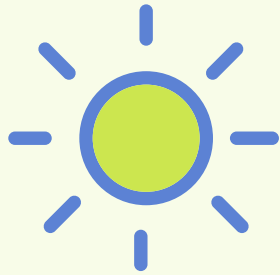


This diagram illustrates some of the drivers of climate change and the impacts they could have on the climate system.

Sourced from The Met Office

## Climate Observations and Projections

Over the last few decades Scotland has experienced a warming trend, shifting rainfall patterns, and rising sea levels:

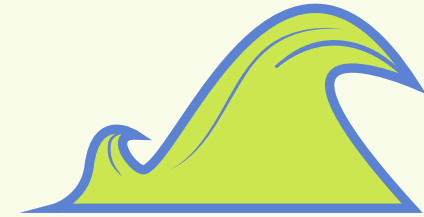


Scotland's **10 warmest years** on record have all occurred since 1997. The average temperature in the last decade (2010-2019) was **0.69 °C warmer** than the 1961-1990 average, and the warmest year on record was 2014



There has been an **increase in rainfall** over Scotland in the past few decades (with an increasing proportion of rainfall coming from heavy rainfall events). The annual average rainfall in the past decade (2010-2019) was **9% wetter** than the 1961-1990 average, with winters 19% wetter

Mean **sea level** around the UK has risen by approximately **1.4mm/year** from the start of the 20<sup>th</sup> century



The UK Climate Projections (UKCPI8) indicate that the changes in climate we are already experiencing are projected to continue and intensify:



Average temperatures will increase across all seasons



Typical summers will be warmer and drier



Typical winters will be milder and wetter



Intense, heavy rainfall events will increase in both winter and summer



Sea levels will rise



Reduced frost and snowfall



Weather will remain variable and may become more variable

Further information on the UK Climate Projections can be found here:

[www.metoffice.gov.uk/research/approach/collaboration/ukcp](http://www.metoffice.gov.uk/research/approach/collaboration/ukcp)

## Impact of Climate Change in the Highlands

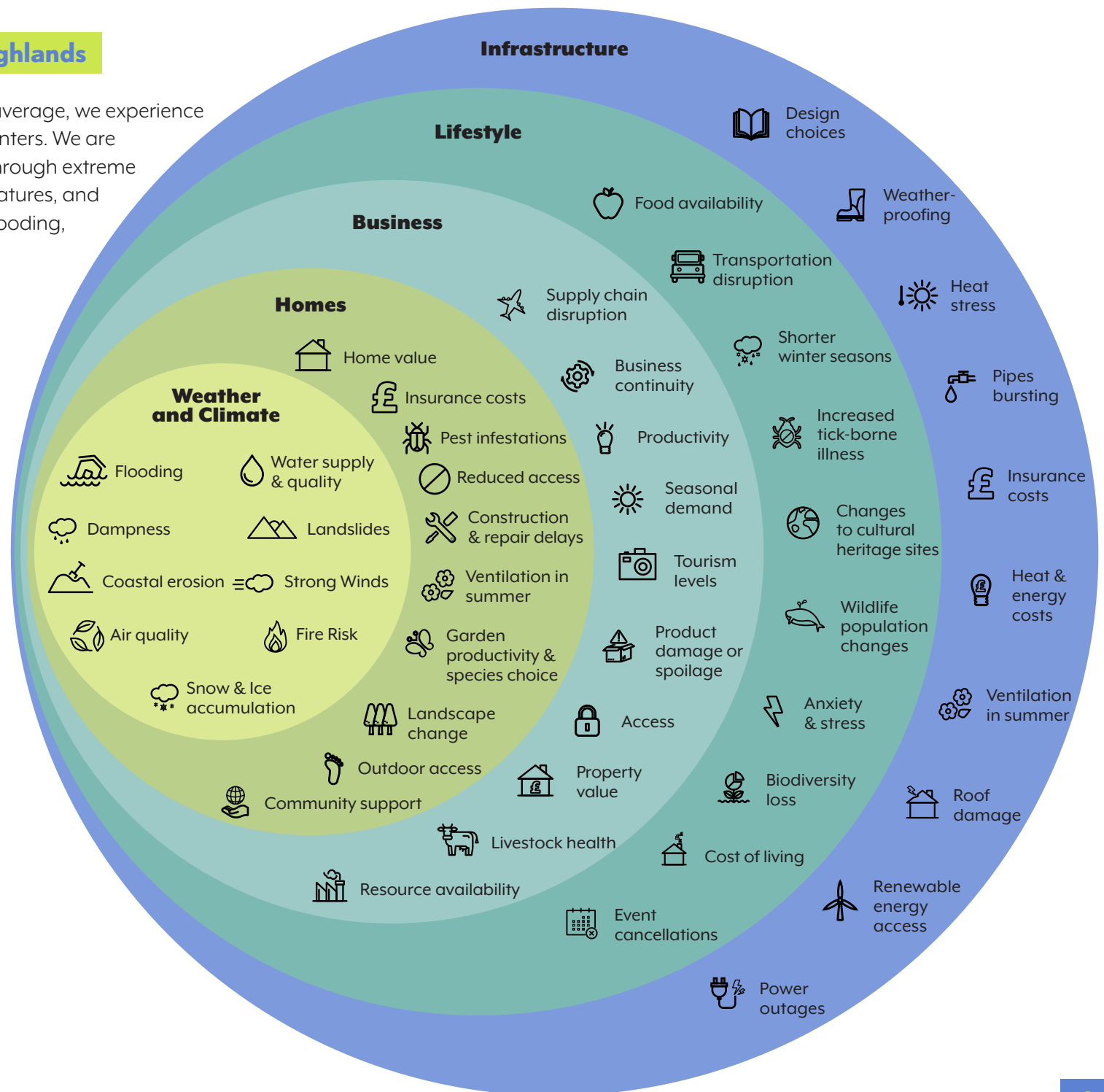
The climate in the Highlands is changing. On average, we experience warmer, drier summers and warmer, wetter winters. We are already seeing the effects of climate change through extreme weather events such as storms, higher temperatures, and more intense rainfall, causing more frequent flooding, wildfires, and landslips.

Adverse weather is becoming more frequent and intense, causing more extensive damage to critical infrastructure, service delivery, and people's health and well-being. The most vulnerable members of our Highland communities will likely experience the most significant impacts of climate change.

Highland Adapts is currently undertaking the first Highland Climate Risk and Opportunity Assessment and has highlighted the following impacts of climate change in the Highlands.

Further work on Highland Adapts can be found here:

[www.highlandadapts.scot](http://www.highlandadapts.scot)



## Adaptation

Alongside the Council's actions to reduce emissions and transition to a sustainable net zero future, we also need to take a proactive approach to plan, adapt and build resilience to the impacts of climate change. We will build resilience into internal service plans, policies, and procedures, as well as our assets, infrastructure, and services.

The following priority actions have been identified:

Outcomes	Priorities will include:
Develop business continuity plans to account for climate change	<ul style="list-style-type: none"> <li>Undertake a Council-wide Climate Risk and Opportunity Assessment.</li> </ul>
A Resilient Highland Council which is prepared for the impacts of climate change and exploits any opportunities	<ul style="list-style-type: none"> <li>Develop and implement a Climate Change Adaptation Strategy and Action Plan.</li> </ul>



## Co-benefits of acting on climate change

The scientific evidence presented in this Strategy describes why we must take urgent action to reduce our carbon emissions and to adapt to climate change. However, there is also much to be gained with climate action delivering a range of economic, environmental, and social benefits as outlined in the table below:

### Economic

Clean and inclusive growth in the local economy	Increased energy security
Low carbon technologies	Reduced imported fuels and materials
High quality employment	Reduced congestion
Improved productivity	Reduced costs from floods & extreme weather events
Diversification to more sustainable markets	Reduced waste
Reduced heat & energy costs	A circular economy

### Social

Improved air quality	Fewer work & school days missed
Lower living costs	Warmer, healthier homes
More active, outdoor lifestyles	Quieter, safer streets
Healthier diets	Improved community cohesion
Fuel poverty alleviated	Better work/life balance
Less demand on health services	Less waste
Improved mental health	

### Environmental

Reduced flood risk	Carbon sequestration in all habitats
Improved access to greenspace and nature	Less risk of heatwaves and extreme weather events
Improved & enhanced biodiversity and habitats	Less waste/less resource use
Improved land management	Reduced/reversed species decline
Cleaner air	
Greater water security	



## Policy Drivers

Several international, national, and local policy commitments are relevant to this Strategy. Overarching policies which cut across the strategy are listed below, whereas policies specific to individual themes are listed within their respective section of the Strategy.



## Global Framework

### The Paris Agreement

There is a legally binding international treaty on climate change in place, adopted by 196 Parties (including the UK) at the United Nations (UN)'s Climate Change Conference, COP21, in Paris in 2015. Known as The Paris Agreement it entered into force in November 2016. Its goal is to keep the rise in the global average temperature to well below 2°C above pre-industrial levels; and to pursue efforts to limit the increase to 1.5°C.

### UN Sustainable Development Goals

The United Nations has set a series of global Sustainable Development Goals (SDGs) that are part of an internationally agreed performance framework. All countries are aiming to achieve these goals by 2030. They address the significant global challenges of poverty, inequality, climate, environmental degradation, prosperity, peace and justice.

This Strategy will strive to adhere to the delivery of these goals at a local level.

## SUSTAINABLE DEVELOPMENT GOALS



Sustainable Development Goals by the United Nations



## National

While the Paris Agreement sets a global objective, action to achieve that objective is driven at a national level.

### Climate Change legislation

The Climate Change (Scotland) Act 2009 is a statutory framework for greenhouse gas (GHG) emissions reductions in Scotland. Included within the Act are the following requirements for public bodies in the exercising of their functions:

- **Act in the way best calculated to contribute to delivery of the Act's emissions reduction targets.**
- **Act in the way best calculated to deliver Scotland's statutory adaptation programme; and**
- **Act in a way that it considers the most sustainable.**

The Climate Change (Emissions Reductions Targets) (Scotland) Act 2019 is one of the most ambitious legislative frameworks on climate change in the world, increasing the ambition of Scotland's emissions reduction targets (from the Climate Change (Scotland) Act 2009) in response to the global climate emergency and UN Paris Agreement.

The 2019 Act sets a target for a Net Zero Scotland by 2045 with key targets along the way:



To ensure and monitor compliance with these revised targets, the Climate Change (Duties of Public Bodies: Reporting Requirements) (Scotland Amendment Order 2020 ("the Order") came into force in November 2020. This order requires public bodies to include the following information in their annual reports, for reporting periods commencing **on or after 1st April 2021**:

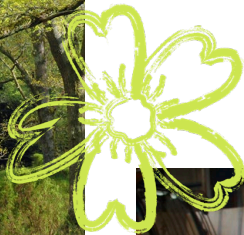
- **Where applicable, a target date for achieving zero direct emissions of greenhouse gases or other targets that demonstrate how the body is contributing to Scotland achieving its emissions reduction targets.**
- **Where applicable, any targets for reducing indirect emissions of greenhouse gases.**
- **How the body aligns its spending plans and use of resources to contribute to reducing emissions and delivering its emissions reduction targets.**
- **How the body will publish, or otherwise make available, its progress towards achieving its emissions reduction targets; and**
- **How the body is contributing to Scotland's Adaptation Programme.**

## Scotland's Climate Change Plan

The Plan outlines Scottish Government's approach to reaching Net Zero targets. It states Scotland's public sector bodies have a strong leadership role to play in the transition to net zero.

### Climate Change Adaptation Programme

The Scottish Government published the statutory Climate Change Adaptation Programme in September 2019. Covering five years, it is designed to address climate risks for the country, with actions centred around communities, climate justice, infrastructure, and the environment.



Photos by The Highland Council.

## What is Net Zero?

The term net zero means achieving an overall balance between greenhouse gas emissions produced and emissions taken out of the atmosphere. This balance – or net zero – will happen when the emissions we add to the atmosphere are no more than the amount removed.

To reach net zero, we must reduce emissions relating to fleet, waste, and energy use across our estate (which will reduce the emissions put into the atmosphere). However, cutting emissions altogether in some areas will not be possible.

These 'residual' emissions will need to be removed from the atmosphere: either by changing how we use our land so it can absorb more carbon dioxide, or by extracting directly through technologies known as carbon capture, usage, and storage.

### Offsetting

Most sectors, including the public sector, will need to reduce emissions close to zero without offsetting for Scotland to meet its national climate change goals.

The Scottish Government has stated that public bodies should prioritise reducing emissions over using emission offsets; ultimately, offsets should only be used for areas where emissions are not avoidable due to a lack of technical alternatives.





# Our journey to Net Zero Ar Slighe gu Neoni Lom

## Strategy Development

In alignment with national targets, in December 2021, the Council agreed to the development of a Council-wide Net Zero Strategy. Members agreed that a cross-service Net Zero Strategy Group comprising senior officers should be established to lead on developing a Net Zero Strategy and Action Plan for the Council.

Eight thematic groups have been established to take forward workstreams, with each thematic group developing the evidence base within their respective domain. This has included the following:

- **Review of progress to date, including reductions to date against our carbon baseline**
- **Identifying actions needed to minimise emissions and build resilience within each thematic area**
- **Identifying key challenges and opportunities**
- **Review of the broader policy and legal context**
- **Assessing good practice from other Local Authorities**
- **Alignment with guidance produced by the Scottish Government and the Sustainable Scotland Network**
- **Consideration of the findings and recommendations of key briefings and reports from Audit Scotland and the Scottish Parliament's Net Zero, Energy and Transport Committee**
- **Input from our Elected Members, including a series of Member workshops.**

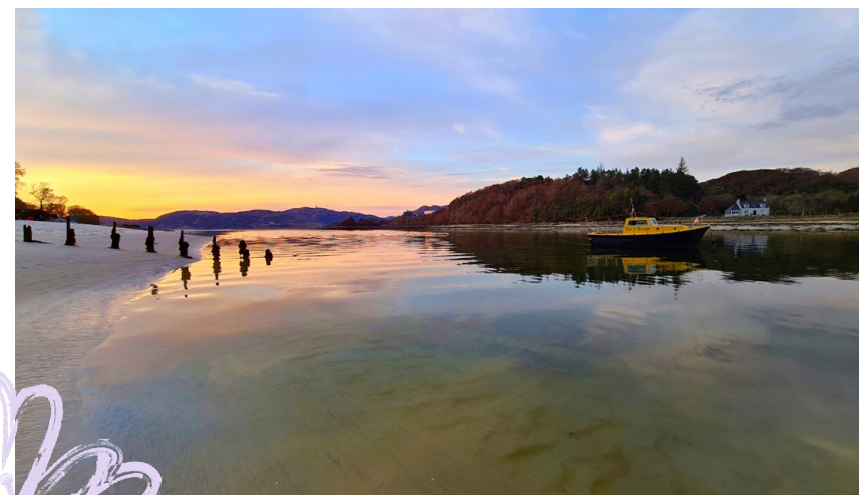


Photo by Eileen Ferguson



## Themes

The Council has identified the following themes which form the basis of the Strategy:

- **Built Estate & Energy**
- **Social Housing & HRA**
- **Transport**
- **Land Use & Environment**
- **Development Plan & Place-Based Approach**
- **Waste**
- **Circular Economy**
- **Procurement & Community Wealth Building.**

The themes are grouped under the headings of **Place**, **Economy**, and **People** to align with the themes of the Council's Corporate Plan.



Photos by The Highland Council, Ewen Weatherspoon and Bran Sweeney / Shutterstock

## Built Estate & Energy

The Built Estate is a critical area where rapid change is needed to achieve our emission reduction targets and become more climate-ready. The Council's energy use across our estate accounts for 76% of our corporate emissions. We will continue to take action to improve energy efficiency across our estate and work towards the transition of all properties to Net Zero carbon emissions. We will also look at opportunities to increase renewable energy generation.

## Social Housing & HRA

Whilst carbon emissions from social housing are beyond the scope of reporting for the Council, we have influence over and responsibility for the fabric efficiency of 14,800 properties throughout Highland. Additionally, we can ensure our domestic property stock is better adapted to the impacts of a changing climate.

## Transport

The Council's fleet and staff travel emissions represent 21% of our corporate emissions, while the Council operated Corran Ferry accounts for a further 3% of emissions.

The Council will develop and deliver a new Sustainable Business Travel Strategy focusing on decarbonising fleet vehicles and providing EV charging and grid infrastructure. Wider staff travel will also be a key area for action with the Council encouraging active travel through walking, cycling and public transport.





## Land Use & Environment

Climate change and biodiversity are inextricably linked. Our changing climate is accelerating the rate of biodiversity loss, and a decline in biodiversity is exacerbating the climate crisis.

Environmental interventions such as soil management, tree planting, and peatland restoration can improve carbon sequestration from the atmosphere and reduce emissions. Effective use of natural infrastructure can improve climate change mitigation or adaptation. The Council is involved in several projects to build resilience including setting aside land for biodiversity and investing in nature-based solutions.

## Development Plan and Place Based Approach

Local authorities have a range of powers and responsibilities linked to planning and development, which will contribute to the transition to net zero and create a climate-ready Highland.

## Waste

Whilst emissions from internal waste represent less than 3% of our corporate emissions, the cost of dealing with our waste has significantly increased to over **£1 million per year**.

Action to reduce waste is essential in addressing the climate emergency. Additionally, to ensure the continuity of service, the Council must build resilience into plans and operations.

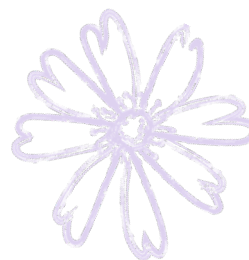
## Circular Economy

Scottish Government aims to make Scotland a zero-waste society with a circular economy. Highland Council will develop a vision and strategy to embed a circular economy into the Council's operations.

## Procurement & Community Wealth Building

A comprehensive analysis of supply chain emissions is underway, allowing the Council to work in collaboration with prioritised suppliers and contractors to identify ongoing emissions reduction.

At the time of developing the Council's Net Zero Strategy, Scottish Government is consulting views on a legislative proposal for advancing an ambitious new Community Wealth Building duty.



Photos by The Highland Council & The Peatlands Partnership

## Just Transition

Common throughout all themes is the recognition that our work and activities are undertaken in such a way as to ensure the benefits of climate change action are shared widely, while the costs do not unfairly burden those least able to pay, or whose livelihoods are directly or indirectly at risk as the economy shifts and changes.



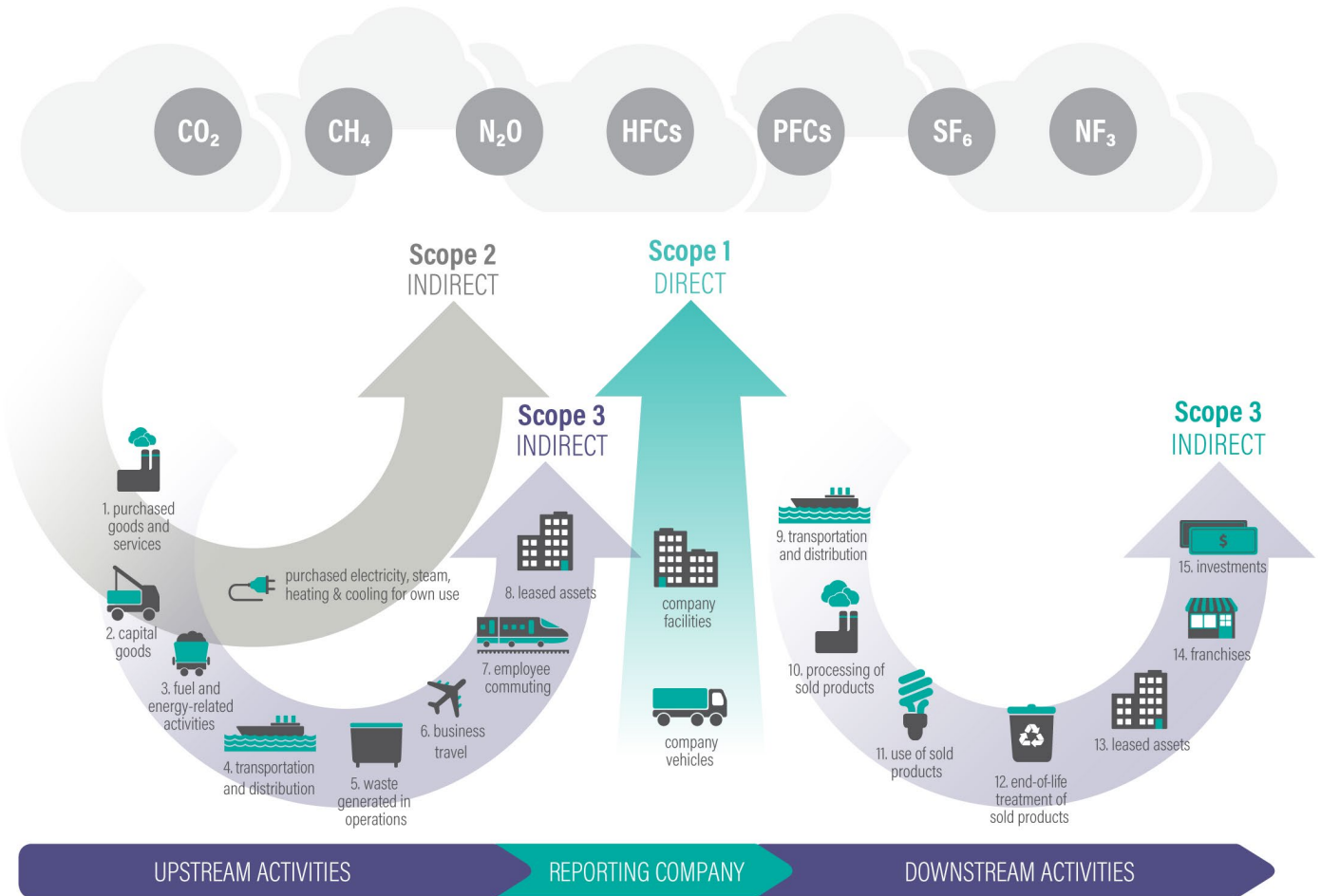
## Data & Progress to Date

The Council is required to report scope 1, 2 and 3 emissions arising from the Council's assets and activities annually as part of the Public Bodies Climate Change Duties (PBCCD).

### Scope 1, 2, 3

The Council has adopted and will maintain a calculation of emissions based on Carbon Dioxide equivalent (CO<sub>2e</sub>) rather than CO<sub>2</sub> emissions. The carbon dioxide equivalent allows different greenhouse gases to be compared on a like-for-like basis relative to one unit of CO<sub>2</sub>.

CO<sub>2e</sub> is calculated by multiplying the emissions of each of the six greenhouse gases by its 100-year global warming potential (GWP). By reporting in terms of CO<sub>2e</sub>, the Highland Council will capture Greenhouse Gases (GHG) emitted: Carbon dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), Nitrous oxide (N<sub>2</sub>O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs) and Sulphur hexafluoride (SF<sub>6</sub>). Emission data will be based on the most up-to-date Business, Energy and Industrial Strategy (BEIS) conversion factors.



Graphic by GHG Protocol – [www.ghgprotocol.org/blog/you-too-can-master-value-chain-emissions](http://www.ghgprotocol.org/blog/you-too-can-master-value-chain-emissions)

#### Scope 1 - direct

GHG emissions from sources owned or controlled by the Council (e.g. gas boilers within buildings, fleet vehicles).

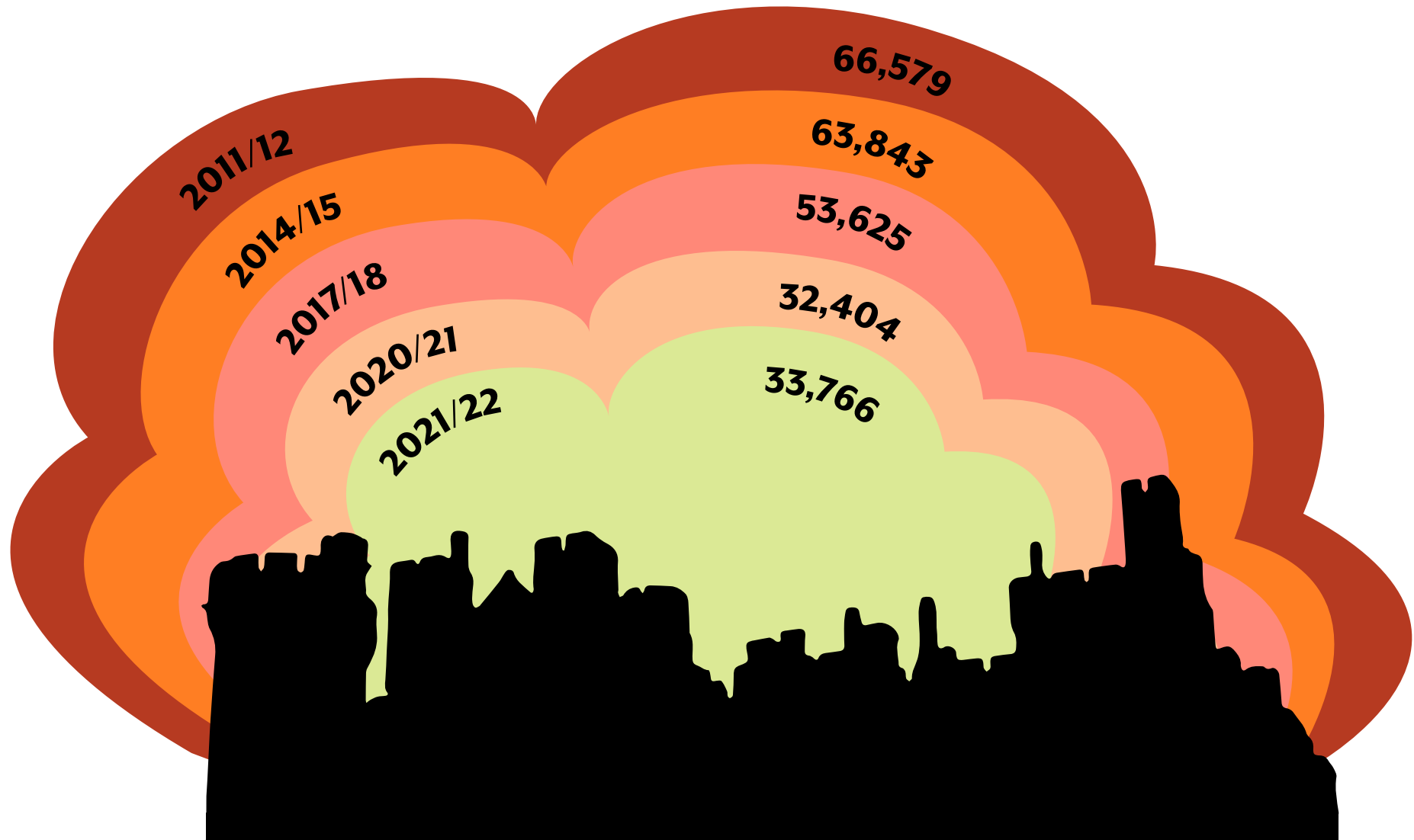
#### Scope 2 – indirect

Emissions from generating purchased energy the Council uses, e.g. electricity. The Council has control over the use of this energy but the emissions generated from its production are created elsewhere.

#### Scope 3 – indirect other

Emissions that occur due to the Council's activities/products/services, but from assets not owned or controlled by the Council (e.g. commuting, travel for work in employee-owned vehicles or public transport, purchased goods and services).

From the base year of 2011/12 to 2021/22, Highland Council reduced its emissions by nearly 50%:

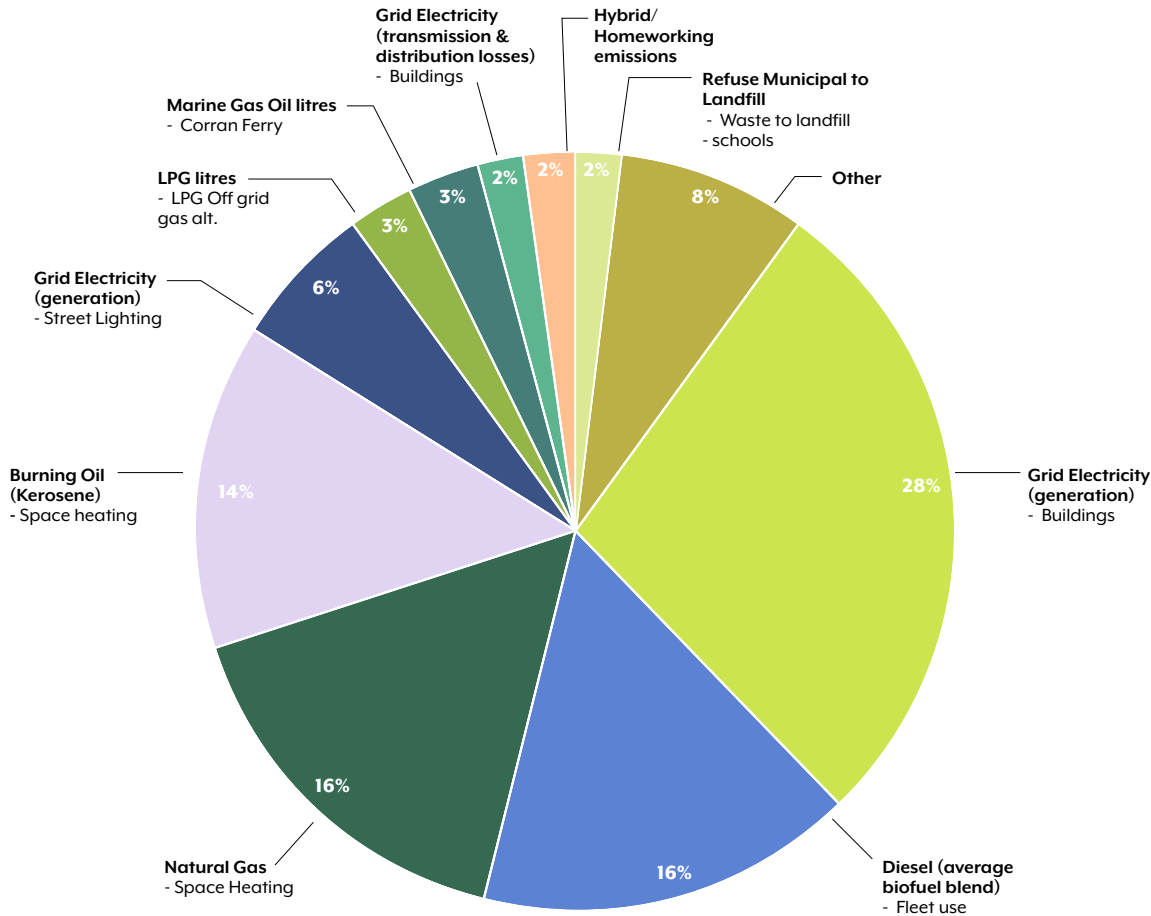




## Our Reported Emissions

Corporate carbon emissions reported for 2021/22 are summarised in the figures below:

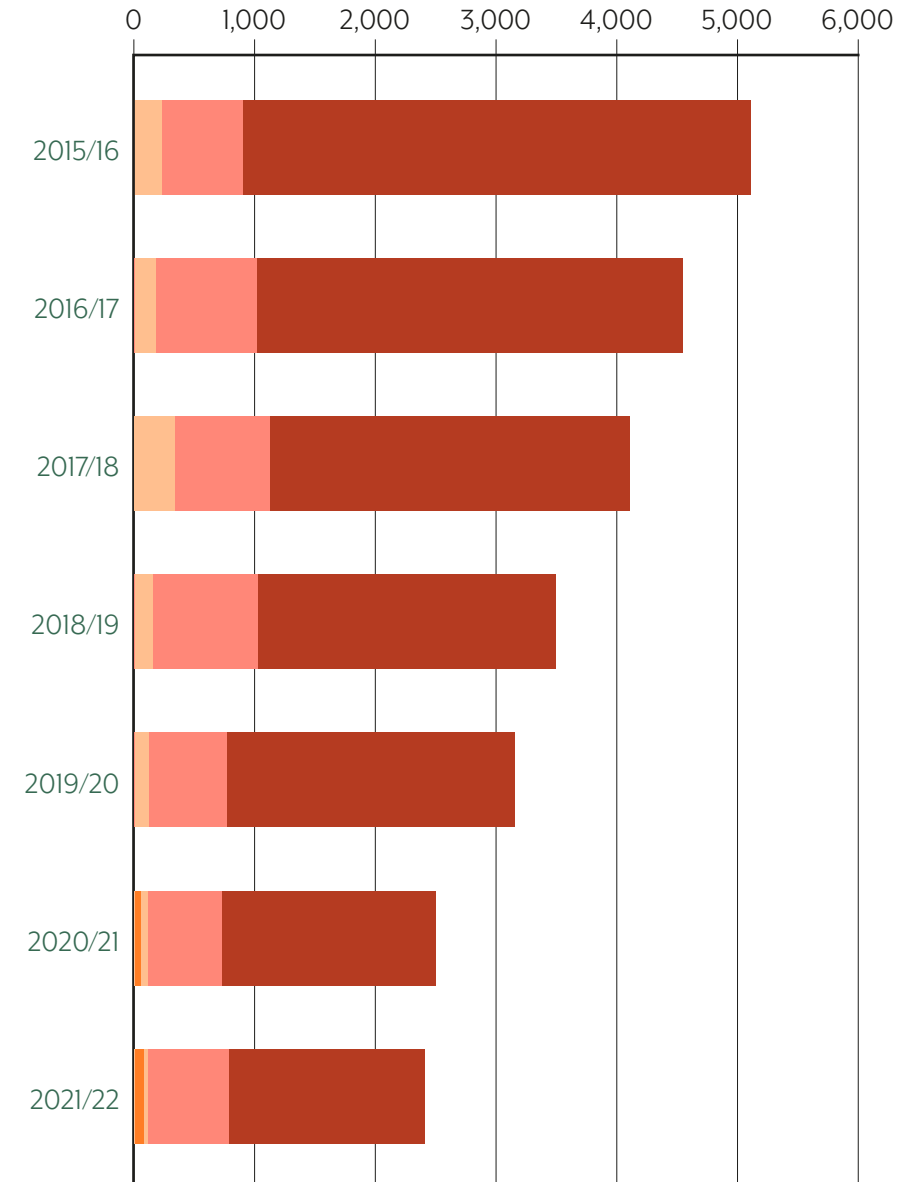
### Emissions by Source - 2021/22



Breaking down the Council's emissions into parts highlights there are several areas where the bulk of our corporate emissions come from:

- Electricity consumed in our buildings
- Heating of our facilities; and
- Fleet and staff travel

### Emissions tCO<sub>2</sub>e



## Considerations

Due to advances in technology, data collection methods used, and changes within the operation of the Council, there are variances in historic baseline reporting and our current understanding of emissions profiling. The 2011/12 baseline provides an indicative figure. It offers limited possibility in the review of elements we wish to include in the future. As we advance, we will include as much data as feasible to provide an accurate reflection on emissions and embrace changes which makes reporting as inclusive as possible. For new areas of analysis, these should be baselined and aligned with the encompassing percentage reduction detailed within the strategy.

The table below outlines areas of emissions within the scope of the strategy:

Area of Emissions	Net Zero Scope	Included in Baseline	Area of Emissions	Net Zero Scope	Included in Baseline
Car - hybrid (average) miles - car club	✓	✗	Natural Gas - Space Heating	✓	✓
Car - petrol (average) - Car hire mileage	✓	✓	Biomass (wood chips) - Space heating	✓	✓
Car - petrol (average) - Grey fleet mileage	✓	✓	Burning Oil (Kerosene) - Space heating	✓	✓
Staff Travel - Flights (average passenger)	✓	✓	LPG litres - LPG Off grid gas alt	✓	✓
Bus - staff travel	✓	✓	Water - Treatment - Water out of all buildings	✓	✓
Taxi (regular) - Staff travel	✓	✓	Water - Supply - Water to all buildings	✓	✓
Ferry (average passenger) - staff travel	✓	✓	Refuse Municipal to Landfill - waste to landfill - non-schools	✓	✓
Rail (National rail) - staff travel	✓	✓	Refuse Municipal to Landfill - waste to landfill - schools	✓	✓
Hybrid/Homeworking emissions	✓	✓	Organic Garden Waste Composting - Composting - schools	✓	✓
Petrol (average biofuel blend) - Fleet use	✓	✓	Organic Garden Waste Composting - Mixed composting - non schools	✓	✓
Diesel (average biofuel blend)	✓	✓	Organic Food & Drink Composting - organic food waste - non-schools	✓	✓
Gas Oil litre - Winter gritting fleet	✓	✓	Organic Food & Drink Composting - organic food waste - schools	✓	✓
Marine Gas Oil litres - Corran Ferry - Public RORO and passenger service	✓	✗	Mixed recycling - recycling - non-schools	✓	✓
Grid Electricity (generation) - Buildings	✓	✓	Mixed recycling - recycling - schools	✓	✓
Grid Electricity (generation) - Street Lighting	✓	✓	Supply Chain Emissions (procurement)	⌚	✗
Grid Electricity (transmission & distribution losses) - Buildings	✓	✗			
Grid Electricity (transmission & distribution losses) - Street lighting	✓	✗			
Energy used by PPP buildings	⌚	✓			
Social Housing - Energy Used	⌚	✗			

✓ Included      ✗ Not Included      ⌚ Under Review / To be added when data available

We must collect, store, manage, and use data effectively to achieve our objectives. We will develop governance surrounding data collection and handling newly developed data sources such as supply chain emissions.

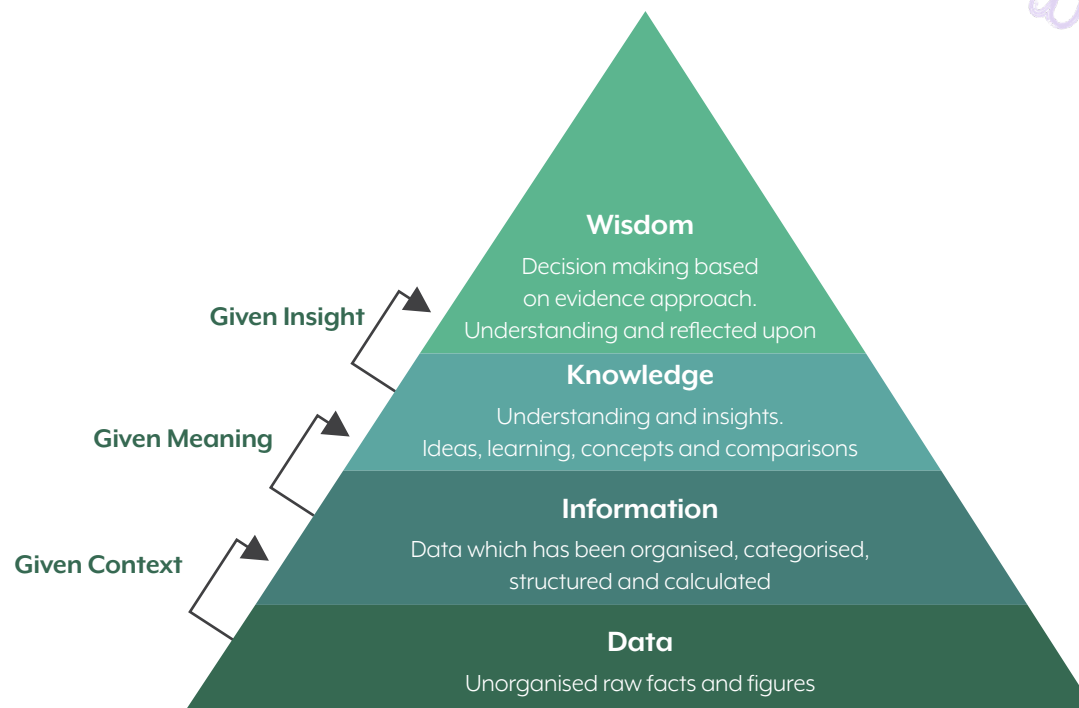
The Council will take an evidence-based approach to addressing emissions within our control.

## Purpose of a Data Driven Approach

- **Alignment of the Council's activities to satisfy statutory measures. Reporting on progress.**
- **Internal review throughout to review current and past projects and actions to strive towards these measures.**
- **Cost vs Benefit approach to ensure both value for money, and wherever possible, savings based on whole life cost projections. Energy and fuel efficiency can bring about direct financial savings to the Council and lead to cost avoidance as the unit price of electricity, gas, oil, and fuel rises.**
- **To provide relevant information to stakeholders so that appropriate decisions can be made.**
- **To develop on work already conducted through data and build upon this to identify and address any gaps due to continuous technological and system advances.**
- **To become pro-active in managing our emissions through trend analysis and forecasting.**
- **To forecast and proactively address trends in data through regular reporting.**

## Area Wide Emissions Reporting

Although area wide emissions are out of scope of the Strategy, it is important to keep these under review allowing the Council to develop a stronger understanding of the regional challenge. This will enable us to identify areas where we can provide recommendations and influence in areas such as farming, tourism, retail, and households within the Highlands.



# Route Map to Net Zero Mapa Slighe gu Neoni Lom

Scotland-wide Targets

- June 2023 – High Level Strategy and Route map signed off.
- December 2023 – Circular Economy and Community Wealth Building embedded into Procurement process.
- December 2023 – Detailed and costed Action Plan from each thematic group signed off.
- December 2023 – LHEES Strategy and 5-Year Delivery Plan signed off.
- All new homes consented from 2024 to use net zero emission heating.
- 18,000 hectares of woodlands to be created annually.

2030

- Reduce emissions by at least 75%.
- Phase out the need for new petrol and diesel heavy fleet vehicles.
- Reduce car kilometres by 20%.
- 50% total energy to be generated by renewables.
- 250,000 hectares of peatland restored.
- Halt Biodiversity loss and become a Nature Positive Scotland.
- 30% of land to be Protected Areas.
- Every Local Authority to have a Nature Network.

Scotland's combined supply of thermal energy by heat networks to reach 2.6 TWh of output by 2027.

Social Housing to achieve EPC B by 2032.



All publicly owned buildings to achieve zero direct emissions by 2038.

2040



- Reduce emissions by at least 90%.



2025

- Phase out the need for new petrol and diesel light fleet vehicles.
- End landfilling of biodegradable municipal waste.
- Reduce the percentage of all waste sent to landfill to 5%.
- 70% of all waste to be recycled.
- 15% Reduction in total waste.
- Food waste reduced by 33%.

2035

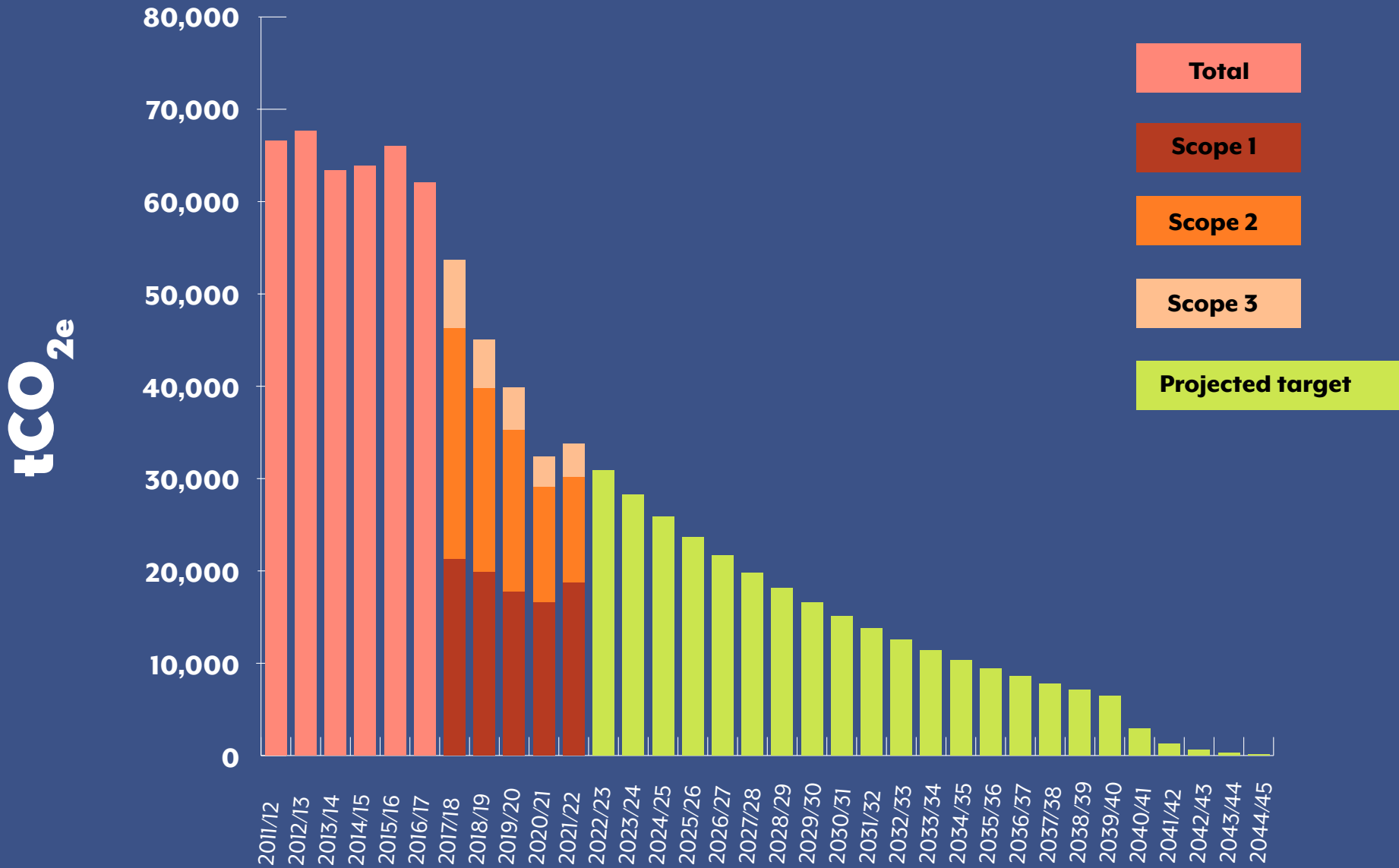


- Scotland's rail service to be decarbonised.
- Low-carbon district heat networks in Scotland should provide a minimum of 22% of heat demand.

2045

- Scotland is Net Zero.
- Scotland has restored and regenerated biodiversity across our land, freshwater and seas.

To align with the route map it is vital to consider annual reductions to set targets and gauge progress.  
**The Highland Council Total Emissions (tonnes CO<sub>2e</sub>):**



Since the 2011/12 baseline, emissions have fallen from **66,579 tCO<sub>2e</sub>** to **33,766 tCO<sub>2e</sub>**.  
**A total reduction of nearly 50%.**



To meet the 2030 target of at least 75% below baseline, an annual decrease of **8.5% is required.**



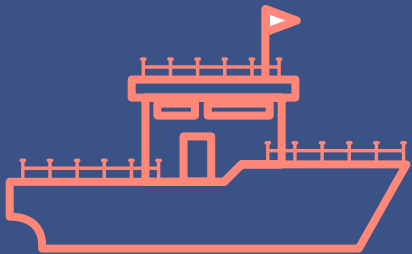
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average reduction of  
**2,000 tCO<sub>2e</sub>**  
per year.

This equates to:



Operating **40** primary schools for a year



Nearly **2.5** years of running the Corran Ferry on Marine Gas Oil

**537** of our diesel fuelled vans travelling 10,000 miles per annum



**14,112** cars travelling the NC500 route

## Built Estate & Energy

### Drivers

<b>National</b>	Heat in Buildings Strategy, 2021.
	The Heat Networks (Scotland) Act 2021 aims to accelerate the deployment of district heating through the introduction of a regulatory system aimed at boosting consumer and investor confidence.
	The Future of Energy in Scotland: Energy Strategy, 2017.

### Emerging / On the horizon

- Area-based Local Heat and Energy Efficiency Strategy (LHEES) to be developed by 2024.
- Learning for Sustainability – School Estate

### National Targets

All publicly owned buildings to achieve zero direct emissions by 2038.



## Corporate Plan 'Our Future Highlands'



### Outcome 2: Resilient and Sustainable Communities

**2.10** Encourage private sector and public sector economic development partners in ensuring that Highland remains a top destination for inward investment.

### Outcome 4: A Sustainable Highland Environment and Global Centre for Renewable Energy

**4.7** Invest in commercial renewable energy opportunities to generate new income streams for the Council

**4.8** Achieve our Net Zero Target

**4.9** Identify and commit to renewable energy investments to reduce the overall energy costs for the Council

**4.10** Capitalise on our areas of immense natural capital to deliver alternative energy solutions including development of solar, hydrogen, Hydro, and wind solutions.

### Current Context

The Council's energy use across our estate (consumption of electricity, gas, oil, Liquefied Petroleum Gas (LPG), biomass and water) accounts for 76% of our corporate emissions.

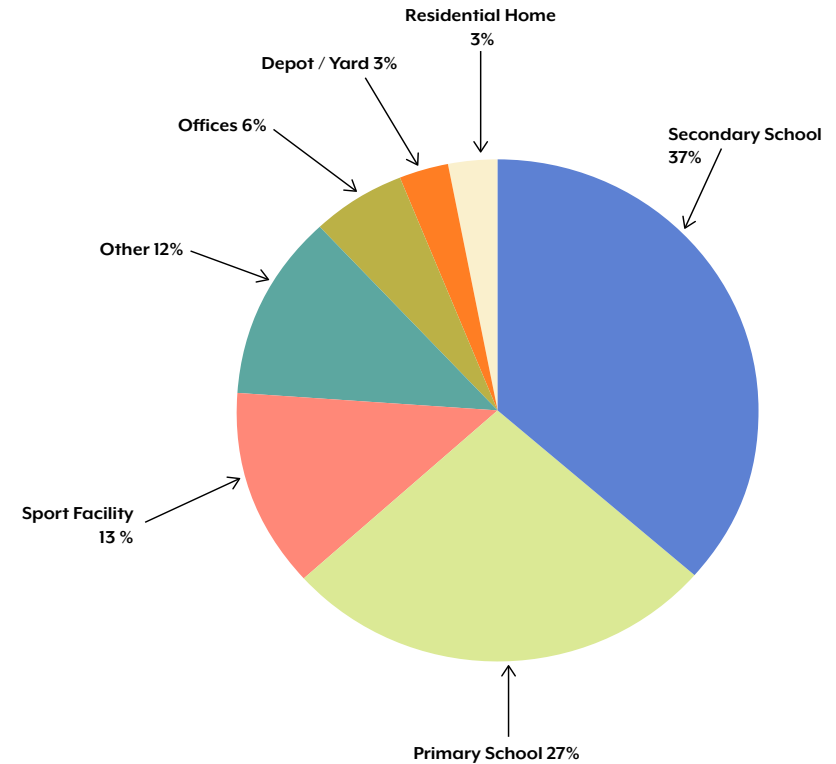
Our non-domestic property portfolio covers more than 1,000 sites with utility supplies. This includes:

- **Primary & Secondary Schools (950 buildings over 200 sites including High Life Highland Buildings, Public Private Partnership Schools & Wick Campus)**
- **Council Offices (195 buildings over 45 sites)**
- **Social Work Facilities**
- **Depots (109 buildings over 38 sites).**

For financial year 2021-22, carbon emissions from the built estate amounted to 25,582 tCO<sub>2e</sub>.

Utility	Carbon Emissions (tCO <sub>2e</sub> )	Carbon Emissions (%)
Electricity	10,699	42%
Gas	6,984	27%
Oil	6,072	24%
LPG	921	4%
Biomass	710	3%
Water	193	1%
<b>Total</b>	<b>25,582</b>	<b>100%</b>

Apportioned to property types:



Recent years have seen a significant uplift in utility related prices, as demonstrated in the following table:

Utility	19-20	20-21	21-22	22-23	23-24 Predicted	24-25 Forecast
Electricity	£9,511,234	£8,067,112	£8,468,684	£10,658,868	£17,512,687	£20,107,675
Biomass	£2,585,751	£2,783,706	£2,728,293	£3,879,526	£4,805,320	£5,005,974
Water	£1,783,791	£1,746,381	£1,779,979	£1,898,094	£2,087,903	£2,087,903
Oil	£904,179	£606,398	£1,112,046	£1,382,309	£1,382,342	£1,382,342
Gas	£978,174	£835,562	£738,543	£2,280,402	£1,566,924	£2,029,929
Propane	£171,713	£169,685	£222,257	£367,873	£361,996	£361,996
<b>Total</b>	<b>£15,934,843</b>	<b>£14,208,844</b>	<b>£15,049,802</b>	<b>£20,467,072</b>	<b>£27,717,172</b>	<b>£30,975,820</b>

## Challenges

The Council recognises the challenges in decarbonising our estate. These include:

- **Ageing built estate.**
- **Funding pressures on the Council's Capital programme.**
- **Inflation impact on capital investment (costs increase of around 30% seen so far).**
- **Reduction in the Council's Property maintenance budgets.**
- **Transition from fossil fuels to renewables, technically and financially.**
- **The construction industry is suffering from world-wide pressures on equipment and material availability which contributes to ongoing cost increases.**



Photo by The Highland Council

## Self-Generation

The Highland Council were early adopters of self-generation, deploying a variety of renewable technologies including Solar PV, Biomass, and heat pumps alongside more innovative developments like Hydro Ness.

There is recognition that continued development of a well-managed and maintained suite of energy assets will continue across the Council estate, continuing the move towards a greater proportion of locally generated renewable energy.

The identification of potential sites for renewable energy technologies will help the Council understand what can be achieved both internally and more widely across the region. It is acknowledged that significant investment will be required for some technologies and that innovative funding mechanisms like the Salix Recycling Fund will be essential in delivering greater energy and environmental security and our commitment to Net Zero.

## Areas of Focus

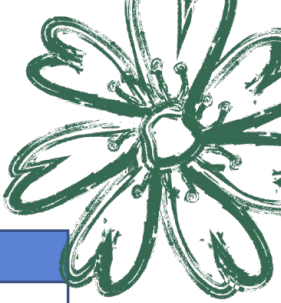
The primary focus for the Built Estate & Energy theme will be on reducing carbon emissions and improving the energy performance (and utility operating costs) of the Council's property estate.

The Built Estate is a critical area where rapid change is needed to achieve our emission reduction targets and become more climate-ready. The what, where, when and how of achieving this transition needs to be defined.

Assessment and information collation is required for all notable Council properties. This will require appropriately skilled and resourced staff to undertake technical site surveys and determine feasible solutions on how individual properties can achieve Net Zero, including aspects such as heating systems, lighting, on-site renewable generation, vehicle charging, recycling arrangements, and occupant behaviour.

The resultant reporting, information and, costings would subsequently be utilised within the asset management considerations, funding applications, capital programmes, and maintenance.

A number of priority actions have been identified for this theme:



Outcomes	Priorities will include:
<p><b>Raise awareness and affect positive behavioural change across the Council's workforce and schools</b></p>	<ul style="list-style-type: none"> <li>• Identifying educational and training needs to embed behavioural change across services and schools.</li> <li>• Delivering awareness raising campaigns to encourage staff and pupils to reduce energy consumption and carbon emissions.</li> <li>• Develop, adopt, and apply Corporate Heating Policy to all non-domestic buildings.</li> </ul>
<p><b>Minimise carbon emissions from construction and operation of new facilities</b></p>	<ul style="list-style-type: none"> <li>• Define and adopt zero carbon operational standards for all new buildings and major refurbishments.</li> <li>• Develop and adopt design standard for sustainable construction and maintenance.</li> <li>• Align Capital Investment Programme with Net Zero targets and aspirations.</li> </ul>
<p><b>Define transition pathway to Net Zero for all buildings. To include ongoing progression and implementation of carbon and cost reduction opportunities</b></p>	<ul style="list-style-type: none"> <li>• Improving utilisation of data to proactively identify and address energy deficiencies and opportunities within our estate.</li> <li>• Convert all fossil-fuel based building heating systems to low or zero carbon alternatives.</li> <li>• Integration and application of the Non Domestic Energy Efficiency (NDEE) investment programme for major refurbishment works.</li> <li>• Identify, develop, and implement energy reduction projects to the property estate, supported by the Salix fund.</li> <li>• Develop appropriate technical standards, specifications, and guidance to support and embed Net Zero goals and aspirations for all work undertaken on the property estate.</li> <li>• Contribute and participate in the Local Heat &amp; Energy Efficiency Strategy, establishing a framework for wider heat decarbonisation.</li> </ul>
<p><b>Rationalise and condense Council property portfolio where practical and appropriate to do so</b></p>	<ul style="list-style-type: none"> <li>• Estate Rationalisation (including schools) to include carbon assessments.</li> <li>• Development of shared co-location facilities for all community areas (e.g. business, volunteers, leisure).</li> </ul>
<p><b>Maximise the financial and environmental opportunities arising from renewable energy generation</b></p>	<ul style="list-style-type: none"> <li>• Identify and develop opportunities through to business case submission. Progress implementation of approved and funded projects.</li> </ul>





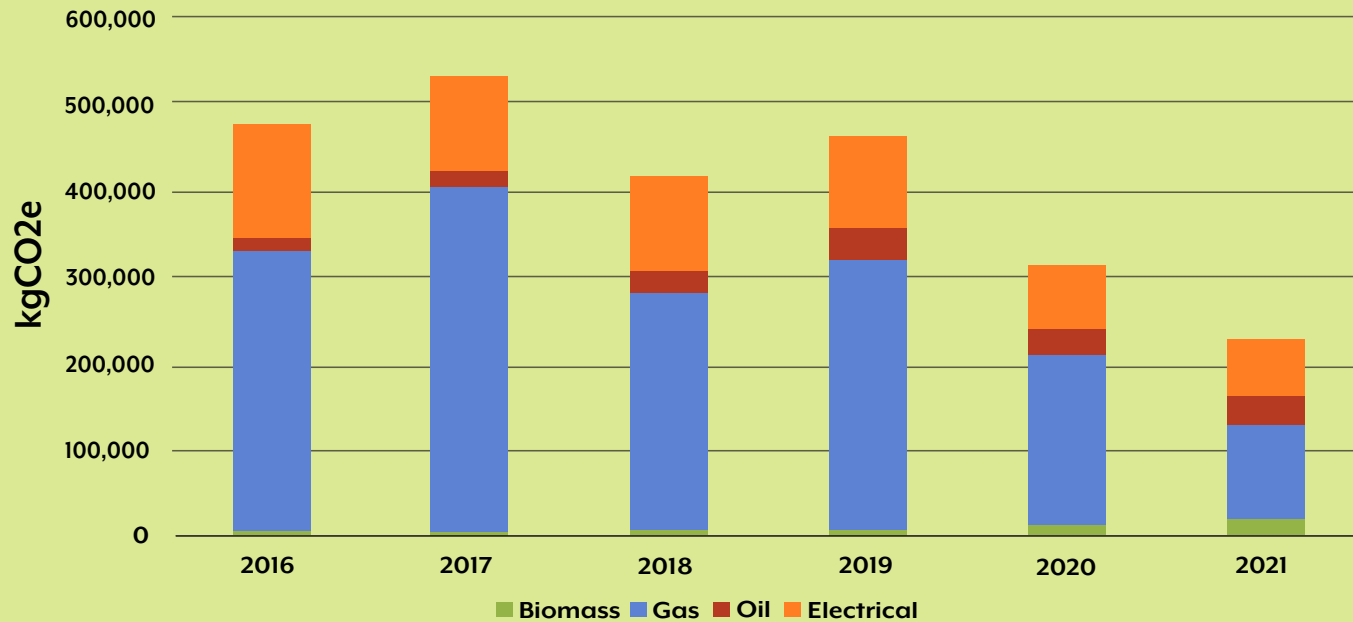
### Inverness High School

The figure below highlights the overall carbon emissions profile for Inverness High School and the significant reduction in emissions achieved by replacing the majority of onsite gas consumption with biomass. Overall emissions have dropped from **533,523 kgCO<sub>2e</sub> in 2017** to **228,276 kgCO<sub>2e</sub> in 2021** which is equivalent to a **57% reduction**.

### Acharacle Primary School

Acharacle is a small and remote community on the south-west tip of Loch Shiel, some 40 miles west of Fort William. The Primary School is a pioneering eco-friendly timber school and is proud of its title as “Scotland’s first wholly sustainable school”. Built at a cost of £6.5 million, the school incorporates many special features such as high insulation levels, lots of natural light and minimal mechanical and electrical engineering to ensure a very low energy use. In June 2018, a new Building Management System and air source heat pumps were installed which have shown further energy improvements.

**Inverness High School - Annual Emissions**



Photos by Chris Humpherys and The Highland Council

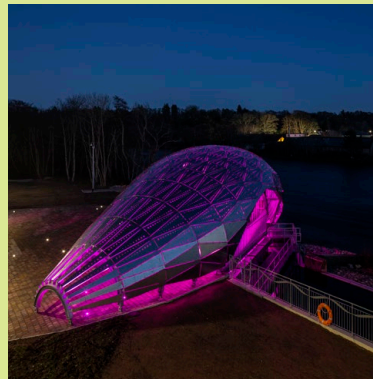
## Hydro Ness

The Council's Hydro Ness is an award-winning hydroelectric scheme, situated on the banks of the River Ness in Inverness. The flagship project utilises historical infrastructure from a disused hydro scheme dating back to the 1920's. The 92kW Archimedes screw uses the natural flow of the River Ness to generate electricity to power approximately 50% of Inverness Leisure Centre's electricity consumption.

The scheme is expected to generate over 500,000 kWh of renewable energy each year, resulting in both financial and carbon savings for the Council.

Hydro Ness provides an interactive visitor experience and attraction for visitors to the area, allowing people of all ages to see up close how green electricity is generated. The site also acts as a hub for Science, Technology, Engineering, and Mathematics (STEM) learning with resources developed by the Science Skills Academy (SSA).

In addition to the SSA, the project has been delivered in partnership with High Life Highland, Visit Inverness, Inverness Loch Ness, University of the Highlands and Islands, SSE Renewables, Highlands & Islands Enterprise (HIE), Zero Waste Scotland and Salix Finance Ltd. The project has generated significant interest from the community with pupils from primary schools across Highland participating in a competition to design a poster and choose a name for the scheme.



Photos by The Highland Council

<b>National</b>	The Housing (Scotland) Act 2001 places a duty on local authorities to prepare a Local Housing Strategy (LHS) supported by an assessment of housing in need and demand.	Energy Efficiency Standard for Social Housing (ESSH2) – social housing to meet an energy efficiency Band B by December 2032.
	The Heat Networks (Scotland) Act 2021 aims to accelerate the deployment of district heating through the introduction of a regulatory system aimed at boosting consumer and investor confidence.	Fuel Poverty (Targets, Definitions and Strategy) (Scotland) Act 2019.
	The Future of Energy in Scotland: Energy Strategy, 2017.	Heat in Buildings Strategy, 2021.
	Housing to 2040 Strategy.	
<b>Regional</b>		
<b>Local</b>	Highland Local Housing Strategy 2023-2028.	

### Emerging / On the horizon

- Spring 2023 - Passage of New Build Heat Standard Regulations through Scottish Parliament which will require all new homes consented from 2024 to use net zero emission heating
- Area-based Local Heat and Energy Efficiency Strategy (LHEES) to be developed by 2024.
- A review is currently underway by Scottish Government to strengthen and realign the ESSH2 standard with the target for net zero heat in houses from 2040.

### Corporate Plan 'Our Future Highlands'



#### Outcome 3: Accessible and Sustainable Highland Homes

- 3.1** Build quality, affordable, accessible houses
- 3.2** Provide warm and energy efficient homes (% of Council dwellings that are energy efficient)

### Current Context

The built environment is one of the areas where rapid change is most needed in order to achieve the 2030, 2040 and 2045 emission reduction targets and become more climate-ready.

The Highland Council has a stock of over 14,800 social properties. Whilst carbon emissions from social housing are beyond the scope of reporting for the Council, we have influence over and responsibility for the fabric efficiency of these properties. Additionally, we can ensure our domestic property stock is better adapted to the impacts of a changing climate.

The Energy Efficiency Standard for Social Housing (ESSH and ESSH2) aims to improve the energy efficiency of social housing in Scotland to help reduce energy consumption, fuel poverty and the emission of greenhouse gases.

The following table summarises the energy efficiency (EE) banding and energy efficiency rating.

**Table 1:**

**EE banding and EE rating**

EE band	EE rating
A	92+
B	81-91
C	69-80
D	55-68
E	39-54
F	21-38
G	1-20

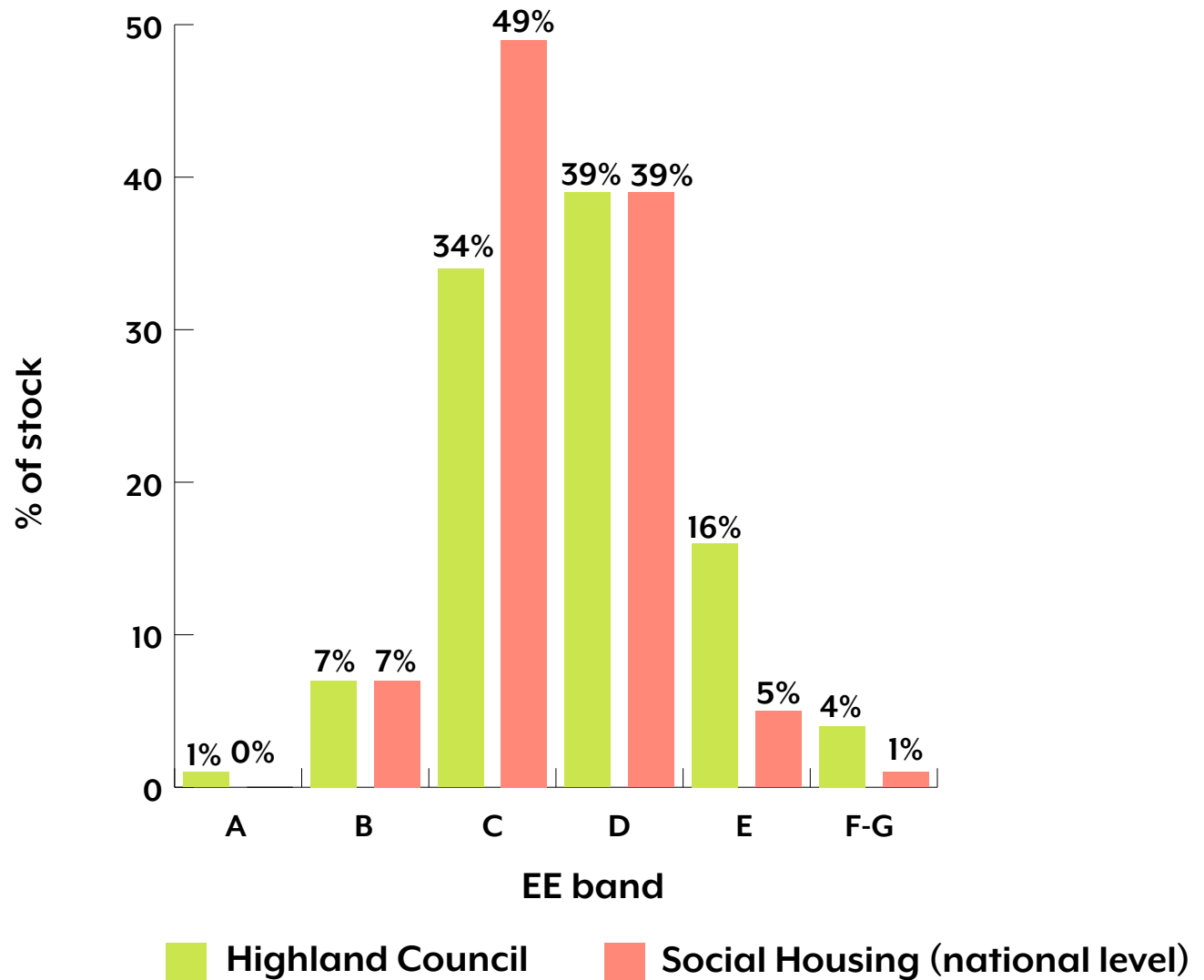
Most of the Council properties are in the energy efficiency bands C (4,918 properties, 34%) and D (5,615 properties, 39%). 20% of properties (2,883) are in the lower bands of E to G. 7% of properties are in band B and only a small percent of properties in band A.

The current average energy efficiency rating is 64 across the entire stock, which is slightly lower than the Scottish average for Housing Association properties of 67. This reflects the challenges faced by most rural local authorities with an older stock and with a significant number of off-gas properties.

**Table 2:**

summarises the spread in EE band of the Council's properties compared to that of Scotland's social housing.

**EE band of The Highland Council and Scotland's social housing**





## Energy Efficiency Standard for Social Housing (ESSH & ESSH2) Milestones

The ESSH standard requires properties to reach a specific energy efficiency rating depending on the type of property and main heating fuel, varying from 47 for an oil heated property to 69 for mains gas heated flats and houses. The Highland Council is 74.6% compliant with the ESSH standard with 5.9% of stock exempt due to either technical or social reasons.

By December 2032, social rented housing must meet an EE band of B, with a minimum EE rating of 81 under the ESSH2 standard.

The Highland Council has 1,067 properties (7%) which meet the energy rating of B-81 required for ESSH2 compliance. Highland Council stock is in line with national levels, which estimate that 7% of all Scottish social housing meets ESSH2.

Analysis of the Council's housing stock has been undertaken to determine compliance with ESSH2 standards and to identify what measures would be required to reach or work towards the 2032 target. The Council aims to prioritise a 'fabric first' approach (measures to improve thermal efficiency and heat loss, and any associated ventilation required), followed by heating upgrades, and solar measures. The list of all technically feasible measures is listed below:

- **Wall insulation measures for 1,230 properties (9%)**
- **High efficiency glazing for 8,006 properties (60%)**
- **Floor insulation measures for 10,852 properties (81%)**
- **Heating upgrades for 7,224 properties (54%)**
- **Solar thermal for 4,011 properties (30%)**
- **Solar PV for 6,543 properties (49%)**



House on the left shows External Wall Insulation (EWI). House on the right shows house without EWI. Photos by The Highland Council.

Analysis of the Council's housing stock has identified that installing all applicable modelled improvements would increase the proportion of housing stock meeting the ESSH2 requirements from 7% to 49%. It is estimated that 7,162 would reach ESSH2 and 7,321 properties would not meet the EE rating of 81 after exhausting all applicable measures. Energy efficiency works are currently prioritised based on the poorest performing properties. This includes properties that will not reach ESSH2 standards but will still provide considerable benefit to the tenants in terms of improving the properties involved.

Whilst installing the measures identified by the ESSH2 modelling should lower the carbon emissions of the Council's domestic stock, meeting ESSH2 standard is not enough to ensure properties are fully 'carbon neutral'.

## Costs

It is estimated that £261m of investment is required to carry out all the technically feasible energy works in Council stock. This equates to approximately £20,000 per property and does not include funding for other major component replacement investments such as kitchens, bathrooms, roofing, and rewiring.

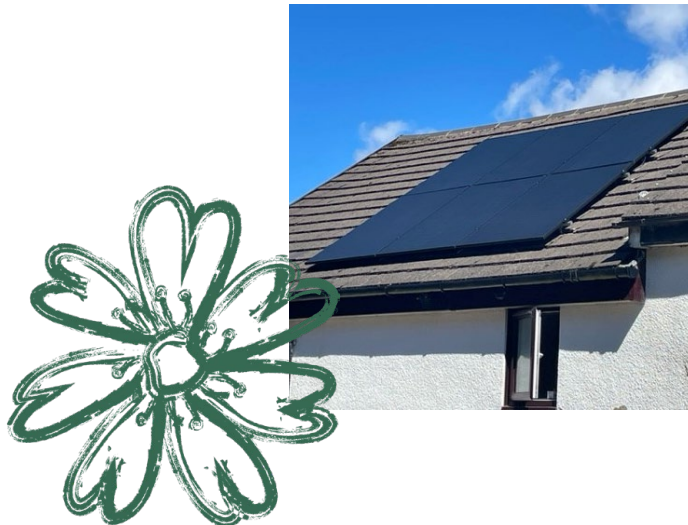
The current Housing Revenue Account Capital Plan has budgeted for £88.6m over the period 2022-2027. Approximately £50.1m of this has been allocated to energy efficiency works.

The level of funding to undertake the proposed £261m of energy investment is not achievable through the current Housing Revenue Account model whereby rents remain as affordable as possible to the Council tenants and over 40% of existing annual expenditure contributes towards paying for loan charges.

## Challenges

The Council recognises the challenges in meeting EESSH2, delivering net zero and becoming more climate-ready. These include:

- **Lack of contractor labour resource and skillset.**
- **Material shortages and longer lead-in times.**
- **Affordability - significant external funding will be required as tenant rental income that funds the Housing Revenue Account is not sufficient to meet the funding needs.**
- **The current decision-making process within the Council focuses on area capital budgets and may need to be adapted to maximise current available funding streams e.g. Energy Company Obligation (ECO) funding for a single improvement provides up to 25%, whereas funding of up to 85% could be available for a whole house approach.**
- **Practical issues around retrofit: retrofitting older housing stock at scale will be necessary to meet our net zero targets.**
- **Step change from current retrofit practice (current practice and PAS 2035).**
- **The need to explore new technologies.**



All registered social landlords have expressed the technical challenges of meeting energy targets. The affordability of such a scale of energy efficiency investment in both Highland and national housing is currently not possible without massive external funding and a review of how housing revenue accounts operate at continued low rent levels.



Photos by The Highland Council & Peter Stevens on Flickr



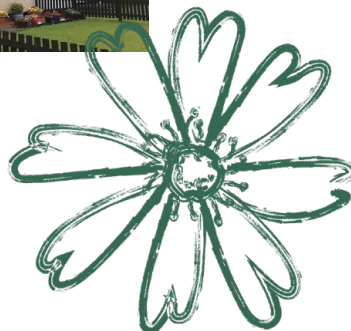


The areas of focus for the Social Housing & HRA theme are to:

- Adopt a fabric first approach to reduce overall energy demand and therefore help to make the installation of some zero emissions heating systems more technically viable. This approach will ensure that the transition to net zero heating does not lead to a significant increase in fuel costs for tenants and, by extension, fuel poverty.
- Embed zero carbon standard for both new build and retrofit initiatives.
- Incorporate “green” and “blue” infrastructure as standard design principles for new development.
- Develop and implement a Local Heat & Energy Efficiency Strategy, to establish a framework for heat decarbonisation and reduce energy demand, tackle fuel poverty, and contribute to net zero targets, by identifying area-based solutions, as well as identifying zones suitable for the development of heat networks.
- Investigate the potential to scale up investment opportunities and identify funding sources.
- Pursue a more collaborative approach to retrofitting across the housing sector in Highland by sharing innovation and jointly developing projects to secure procurement benefits. For example, whilst funding from the Scottish Government for the Energy Efficient Scotland: Area Based Scheme (EES:ABS) cannot be used to fund installations to Council properties, the Council could achieve better economies of scale and attempt to reduce contractor rates by aligning with the programme.
- Ensure that new social housing is future-proof and climate resilient and that there is an up-to-date Business Continuity Plan for Social Housing and HRA.
- Raise awareness of low carbon behaviours at home.
- Housing & Property Committee to consider a revised Housing Revenue Account Capital Plan in 2023/24. This will include proposals to:
  - Assess the affordability of capital investment given borrowing demands on tenant rents
  - Increase the allocation of energy funding within the current Capital Plan, and
  - Target the least energy efficiency properties in the bands E-G.
  - It may also be necessary to review area-based funding allocations to ensure that funding is directed to the rural and off-gas properties within these bands and whose tenants are most likely to be in fuel poverty.

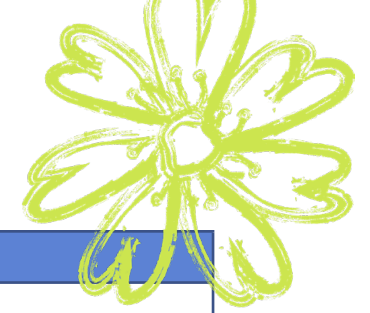


Photos by The Highland Council.



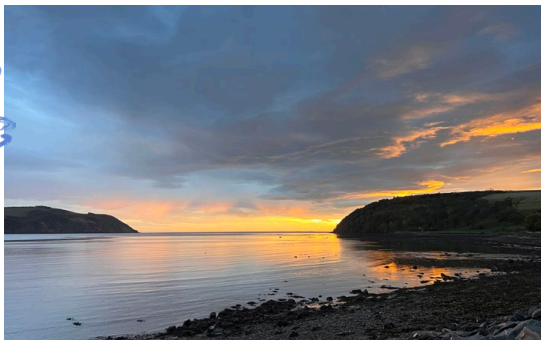


A number of priority actions have been identified for this theme:



Outcomes	Priorities will include:
<p><b>Embed zero carbon standard for both new build and retrofit initiatives, increasing efficiency of our housing stock and alleviating fuel poverty</b></p>	<ul style="list-style-type: none"> <li>• <b>Develop approach to working towards the Net Zero Standard.</b></li> <li>• <b>Assessment of the estate to understand what measures need to be undertaken to achieve Net Zero Standard (over and above works identified in the Changeworks report to bring properties up to EESSH2 standards).</b></li> </ul>
<p><b>Optimise funding opportunities to maximise the benefit in efficiency improvements to the estate</b></p>	<ul style="list-style-type: none"> <li>• <b>Identify and utilise external funding sources such as ECO.</b></li> <li>• <b>Review existing governance to ensure alignment with all available funding is explored.</b></li> </ul>
<p><b>Decarbonise the Council's housing stock and buildings, improve energy efficiency and remove poor energy efficiency as a driver of fuel poverty</b></p>	<ul style="list-style-type: none"> <li>• <b>Contribute towards the successful delivery of Highland and Scotland's net zero objectives and programmes such as the EES: ABS and EESSH2.</b></li> <li>• <b>Explore heat network potential within our local authority area where heat networks present a potential decarbonisation option.</b></li> <li>• <b>Support local supply chain and skills development.</b></li> <li>• <b>Support local development and community wealth building.</b></li> </ul>

## Case Study



Photos by The Highland Council.

### Ross-Shire Whole House Retrofit

The Highland Council is seeking match funding to enable full house retrofit works to 80 houses in Ross-shire which are currently rated low in terms of energy efficiency.

Funding of £1.926m has been allocated from the Council's Housing Capital Programme towards works which include external wall insulation, new energy efficient heating, solar panels, and battery storage as identified from site surveys.

The low carbon technology combination will replace a range of inefficient heating systems including electric storage heaters, reducing the risk of fuel poverty within the communities, and improving householder comfort.



## Transport

### Drivers

<b>National</b>	National Transport Strategy	Transport (Scotland) Act 2001, updated in 2019
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### Emerging / On the horizon

- Sustainable Business Travel Strategy will be considered by Communities & Place Committee in August 2023.
- Local Transport Strategy - The Council is currently drafting the Local Transport Strategy which will be out for consultation late Summer/early Autumn 2023.
- HITRANS Regional Transport Strategy will be out for consultation late Summer/early Autumn 2023.

## Corporate Plan 'Our Future Highlands'



### Outcome 1: Fair and Caring Highland

- 1.5** Encourage a diverse range of traditional and emerging sporting activities and active lifestyles.

### Outcome 2: Resilient and Sustainable Communities

- 2.1** Develop affordable and reliable public transport.
- 2.9** Work with the Scottish Government on the delivery of improved infrastructure throughout the Highlands.

### Outcome 4: A Sustainable Highland Environment and Global Centre for Renewable Energy

- 4.1** Promote active travel infrastructure across Highland.
- 4.2** Promote greener transport including low carbon public transport and the development of hydrogen hubs throughout the area.
- 4.7** Achieve Net Zero Targets.

## National Targets

### Transport - National Targets

Phase out the need for new petrol and diesel cars and light commercial vehicles in public bodies' procurement **2025**

**2030** Phase out the need for all new petrol and diesel vehicles in Scotland's public sector fleet

Reduction of **20%** in car km **2030**

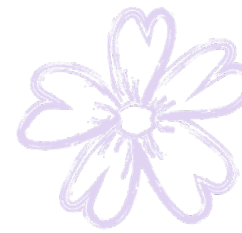
## Current Context

Transport emissions are Scotland's largest emission source. Progress has historically been very slow in comparison to other sectors. The Council's fleet and staff travel emissions represent 21% of corporate carbon emissions, whilst the Council operated public ferry route, Corran Ferry, accounts for a further 3% of emissions. Emissions relating to the in-house bus pilot project will be reported for the first time as part of the 2022/23 Public Bodies Climate Change Duties annual report. Tackling these transport emissions and adapting is critical to meet climate targets, reduce costs, and to demonstrate that the Council is taking steps to be an exemplar organisation.

Highland Council serves a third of the land areas of Scotland, including the most remote and sparsely populated parts of the United Kingdom. Our largely rural land mass masks the fact that most people (75%) live in some form of settlement. Travel throughout the region is vital for Council employees, Highland residents, businesses, and our visitors.

The Council is currently developing a new Local Transport Strategy. The strategy sets the context for Highland as a whole, with Active and Sustainable Travel a key part of the strategy. The strategy, once adopted, will set the policy for how the Council maintains, improves, and manages the transport network. This will comprise both policy and delivery plans. The new Local Transport Strategy will cover a 5-year period from the date of adoption but will look at a 20-year horizon of change and for delivering policies.

- Our fleet of more than 1,100 vehicles includes cars, small, medium and large vans, minibuses, lorries, tipper trucks, refuse collection and street cleaning vehicles.
- The Corran Ferry service is operated by the Council.
- The Council is currently operating a pilot project to run a number of in-house bus services. In 2022, we invested in 12 buses, including 6 double-deckers, to deliver passenger and school transport services at a lower cost than commercial contractors.



Vehicle Type	No. Vehicles	No. ULEV (EV/ hybrid)	Annual mileage (miles)	Annual Emissions (tCO <sub>2e</sub> )	Composition of Fleet		
					% of Vehicles	% Mileage	% Emissions
Car	108	78	787,100	151	9%	7%	2%
Grey Fleet *	1325 <sup>^</sup>	unknown	1,647,931	455	(n/a)	14%	6%
Light Fleet	585	21	5,566,800	2,335	49%	46%	32%
Car Club *	52	33	600,972	126	4%	5%	2%
Minibus/MPV <14 seats	27	4	238,600	102	2%	2%	1%
Refuse Collection Vehicles	81	0	1,027,400	1,526	7%	9%	21%
Heavy Fleet	237	0	1,921,200	2,398	20%	16%	32%
Other Plant/Specialist	108	0	213,200	320	9%	2%	4%
<b>Total</b>	<b>1,198</b>	<b>136</b>	<b>12,003,203</b>	<b>7,412</b>			

Data does not include short/long term hired vehicles with exception of those hired through Car Club

\* Does not include High Life Highland

<sup>^</sup> Number of employees claiming mileage reimbursement. Excluded from total and vehicle percentage splits.

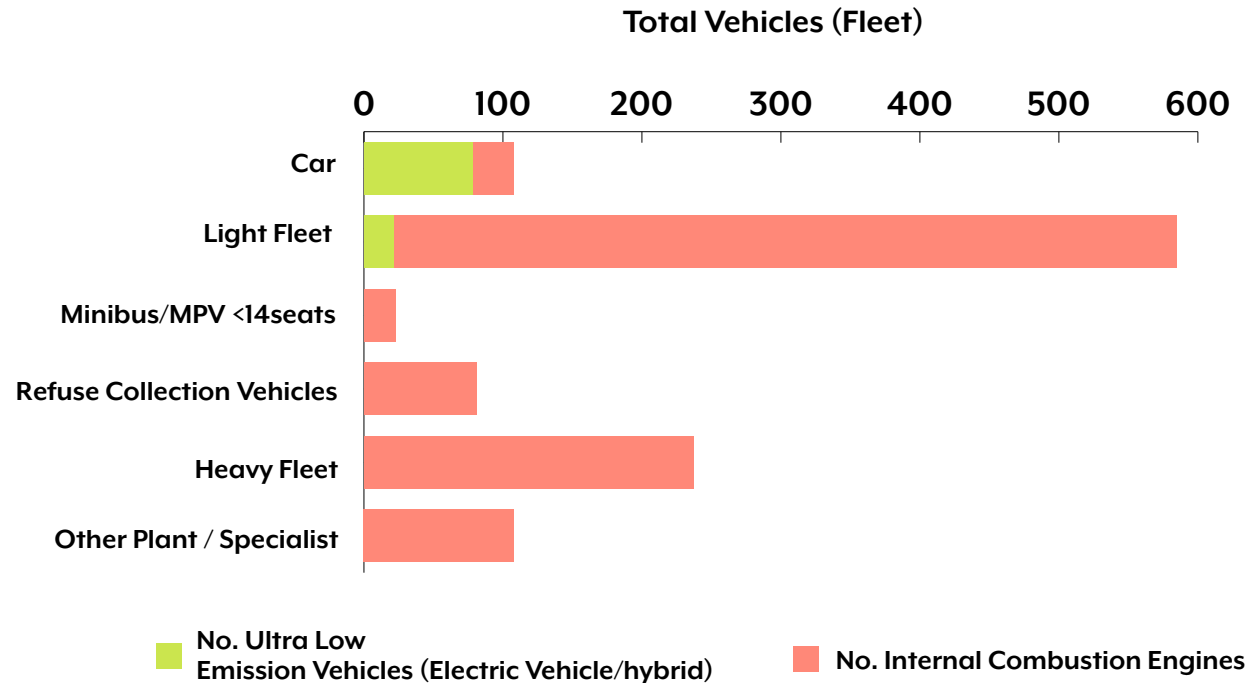
## Progress to Date

The Council has already made significant progress in decarbonising our fleet. We have introduced low emission vehicles to our light commercial fleet, including 55 electric vehicles and 48 hybrid vehicles. To re-charge these vehicles, there are 21 dedicated fleet EV charge points installed at Council properties with an additional 6 scheduled for installation during 2023/24.



Photo by The Highland Council

The Council has also installed 91 public access EV charging points across the Highlands since 2012. Funding of £3m from Transport Scotland has enabled the Council to develop the public EV network across the Highlands, accelerating the transition to low carbon transport for the Council and our communities. The development of the EV public charging network has further encouraged visitors to travel to the region, providing confidence to those who regularly travel long distances via the A9, whilst also providing opportunities for the local economy to benefit.



Car club was introduced in June 2018 with vehicles located at various offices and on street throughout the Highlands for use by employees and Members. Car club offers a flexible base to book and access vehicles replacing the use of private vehicles for business purposes (grey fleet). The car club fleet comprises mainly Ultra Low Emission Vehicles (ULEV).

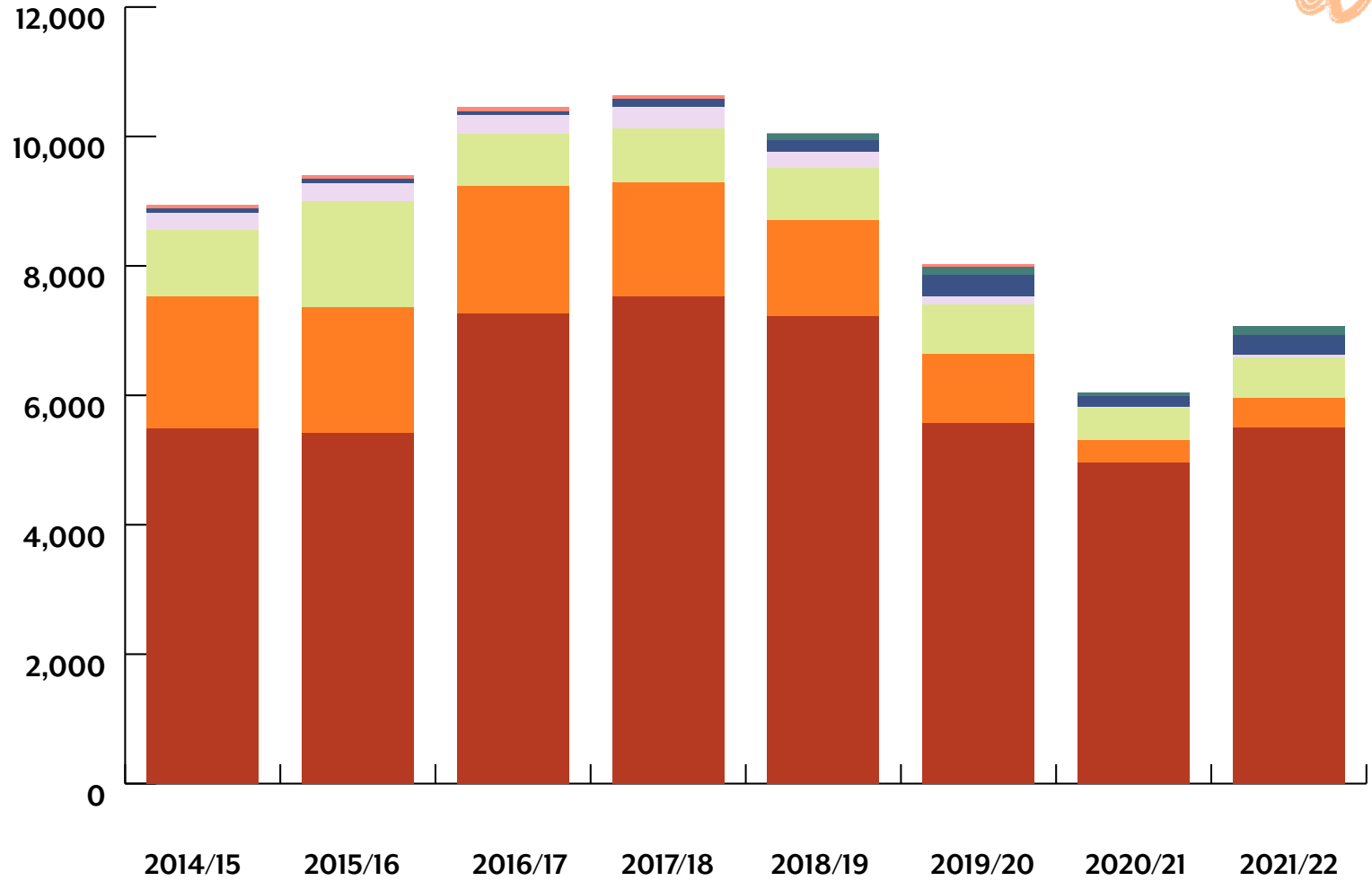
Travel was considerably reduced during the COVID-19 pandemic, with technology enabling the Council to adapt to how it delivers a number of services. The pandemic forced changes in the behaviour of the organisation and accelerated the journey to adopt new ways of working.

Analysis of emissions originating from Fleet and Staff Travel show that whilst there was a significant decrease in travel during the pandemic, levels are now similar to those reported prior to the outbreak. Returning to pre-pandemic travel levels, without any reflection or change, is not realistic or desirable. We are committed to learning from this period and will continue to review working practices across the Council to ensure that travel is avoided where possible.

# Emissions (tCO<sub>2e</sub>) - Fleet & Staff Travel



- Diesel (average biofuel blend)
- Average Car – Grey Fleet
- Gas Oil
- Average Car – Car Hire
- Petrol (average biofuel blend)
- Car – CarClub
- Other



## OTHER - Fleet and Staff Travel Emissions (tCO<sub>2e</sub>)

	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
<b>Rail</b>	29.09	23.40	25.71	26.21	14.34	25.40	1.11	2.71
<b>Short-haul flights</b>	19.64	35.40	39.17	15.87	5.89	7.20	5.23	1.27
<b>Bus</b>	3.23	1.20	0.11	6.46	1.28	2.70	0.58	1.65
<b>Ferry</b>	0.92	0.70	0.49	0.48	0.23	0.44	0.26	0.46
<b>Taxi</b>	0.22	0.10	0.00	0.03	0.03	0.00	0.00	0.00

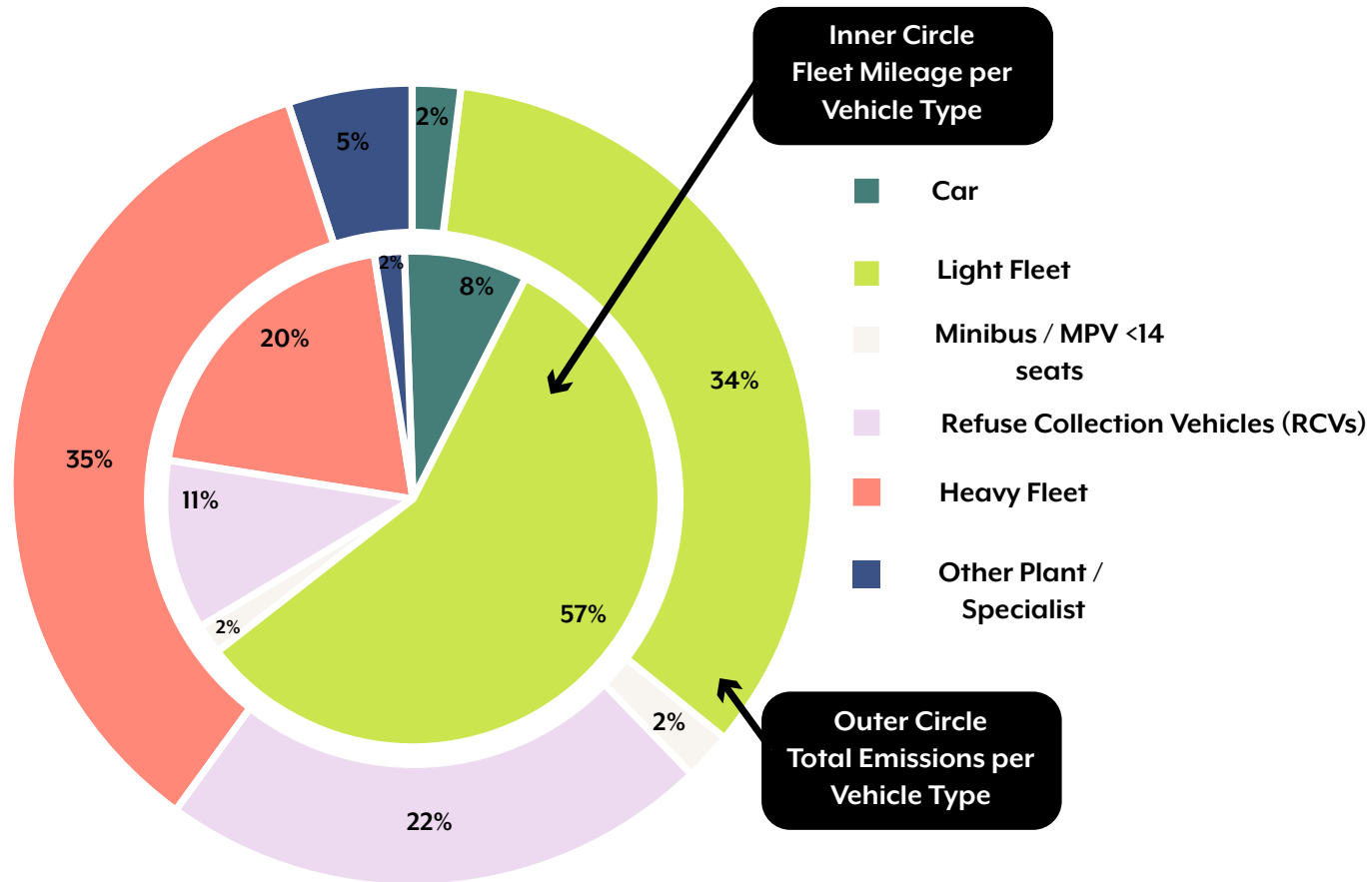


Photos by Willie Urquhart and The Highland Council



Although Heavy Fleet (vehicles over 3.5 tonnes) account for only 20% of the total mileage, they account for 35% of emissions resulting from fleet. Similarly with refuse collection vehicles, they account for 11% of total fleet mileage, however 22% of emissions.

## Annual Mileages vs Emissions





The following challenges have been identified:

- **Affordability**
  - **Initial cost of most zero emission vehicles is significantly higher in comparison to Internal Combustion Engine (ICE) (petrol and diesel) vehicles.**
  - **Adequate provision of EV charging infrastructure is required to enable a smooth transition to EVs. This includes the provision of home chargers for on-call staff who are required to take vehicles home at night.**
  - **Highland Council workshops will need to be adapted accordingly with new equipment purchased to service vehicles with alternative fuel and rapidly advancing technology.**
  - **Training/qualifications required to upskill mechanics to service vehicles.**
  - **Significant investment is required against a backdrop of no known external grant funding.**
- **Availability of fleet**
  - **The manufacturing and availability of ULEV large vehicles is still at a very early stage and industry experts do not expect widespread availability until after 2030 at the earliest.**
- **Geographical constraints, including the mileage range of ULEVs.**
- **Fuel availability and grid capacity to withstand the increased electricity demand.**
- **Lack of safe, segregated cycling infrastructure on most of our fastest, busiest road network to support shift to non-motorised business activities.**

Whilst a gradual switch to greener vehicles (electric, hybrid and hydrogen) will result in lower emissions and running costs, this will not solely be relied on to realise full benefits. In the first instance, we will act to reduce miles travelled across all vehicle types and reduce the number of vehicles in our fleet.

Behaviour change will be key to reducing transport emissions. We need to create a modal shift moving away from driving as the first choice in delivering services to establishing sustainable travel as people's preferred choice. The National Transport Strategy's Sustainable Travel Hierarchy (diagram below) summarises the approach Local Authorities need to take, using active travel (walking, wheeling, and cycling) for short journeys, and public transport for longer distance trips.

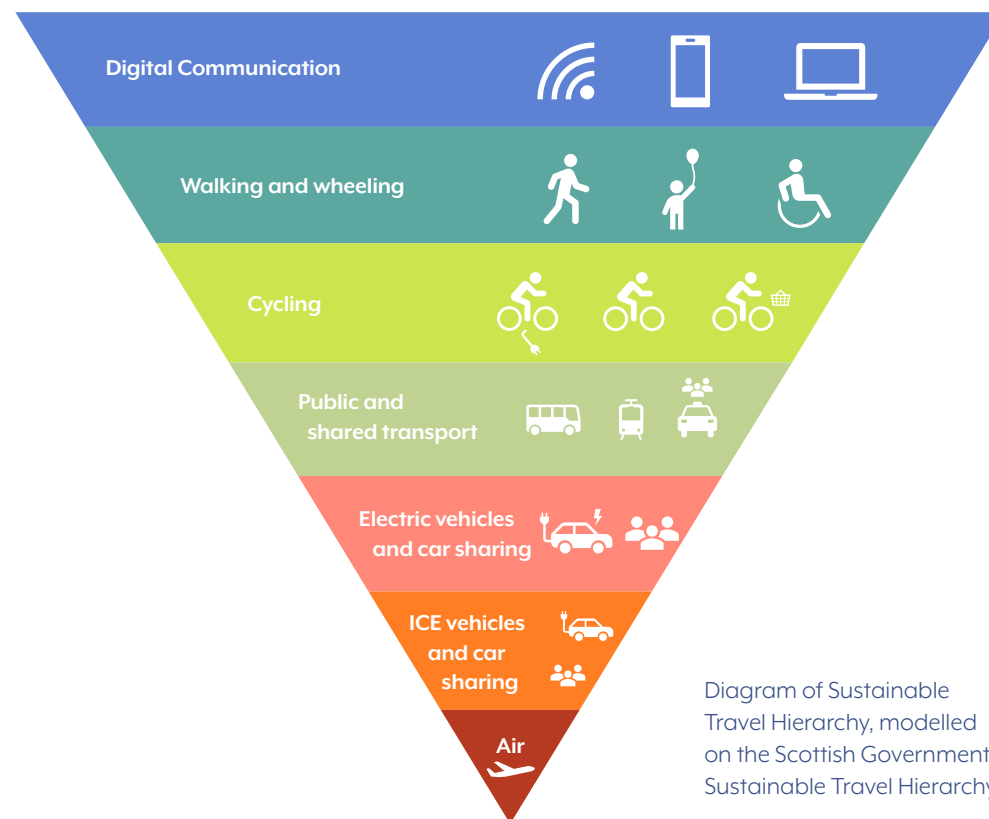


Diagram of Sustainable Travel Hierarchy, modelled on the Scottish Government's Sustainable Travel Hierarchy.

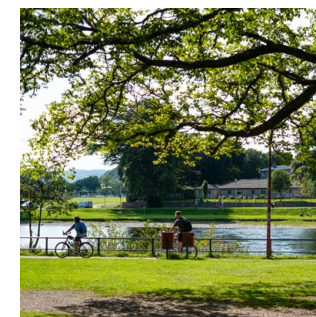
We do, however, recognise that in delivering a multitude of services to communities across the Highlands, there will be a requirement to travel – for example, refuse collection, winter maintenance, property maintenance, and cleaning. We have adopted several initiatives to develop more sustainable forms of fleet operations. These include: the use of telematics and route optimisation software; driver behaviour monitoring and driver training.

The Council will develop and deliver a new Sustainable Business Travel Strategy focusing on decarbonising fleet vehicles and providing EV charging and grid infrastructure. We will work with the private sector and other public organisations to encourage installations that will facilitate prospective EV drivers in the most rural locations to convert to low-carbon travel, and support a Just Transition for the region.

The Council manages and maintains a multitude of active travel routes, public transport, a network of EV chargers and almost 7,000km of roads. Building resilience into travel is essential to safeguard the continuity of service across the Highlands. We will take proactive steps to ensure the continuity of this critical travel network in response to the changing climate.



Photos by The Highland Council, Ewen Weatherspoon and Brian Sweeney / Sustrans.



A number of priority actions have been identified for this theme:

Outcomes	Priorities will include:
<p><b>Operate within the principles of the new Local Transport Strategy</b></p>	<ul style="list-style-type: none"> <li>• <b>Adopt, promote, and provide infrastructure to enable and encourage staff to choose active travel.</b></li> </ul>
<p><b>Deliver and build on programme of work outlined in the Our Future Highland Programme 2022-27</b></p>	<ul style="list-style-type: none"> <li>• <b>Work with the Scottish Government on the delivery of improved transport infrastructure throughout the Highlands. This includes completing the next stages of the Corran Ferry replacement project. A business case has been developed to replace the aging diesel ferries with new electric vessels. The Council will continue to seek funding to progress this.</b></li> <li>• <b>Work to ensure accessible transport networks are integrated into future housing developments for access to work and services.</b></li> <li>• <b>Promote green transport including low carbon public transport and the development of hydrogen hubs throughout the area. This includes accessing funding for the decarbonisation of the Council's bus fleet and supporting bus service providers within the region to decarbonise their fleet.</b></li> <li>• <b>Delivery of Active Travel infrastructure through the Inverness City Active Travel Network project, Wick High Street redevelopment and other projects, which enable more sustainable travel choices to be made.</b></li> </ul>
<p><b>Develop and deliver the Sustainable Business Travel Strategy</b></p>	<ul style="list-style-type: none"> <li>• <b>Reduce travel through behaviour change.</b></li> <li>• <b>Promote sustainable travel.</b></li> <li>• <b>Rationalise the fleet and replace vehicles with low emission alternatives.</b></li> <li>• <b>Reduce the use of grey fleet (using private vehicles for work purposes).</b></li> </ul>
<p><b>Investment in EV infrastructure</b></p>	<ul style="list-style-type: none"> <li>• <b>Explore alternative delivery models for public and fleet EV infrastructure through the Pathfinder Project in collaboration with Aberdeen City Council and Aberdeenshire Council:</b> <ul style="list-style-type: none"> <li>• The project will identify future charge point requirements across the region and the preferred delivery model to attract private sector investment.</li> <li>• It is anticipated that a commercial partnership will be formed to develop and operate EV infrastructure in the region, and that the existing Council EV infrastructure and future fleet charging requirements could be incorporated within this agreement.</li> </ul> </li> </ul>
<p><b>Build resilience into the Council's travel projects, guidance, and policies</b></p>	<ul style="list-style-type: none"> <li>• <b>This work will be considered as part of the development of an adaptation strategy and action plan for the Council.</b></li> </ul>



### E-Cargo Bikes

There are multiple co-benefits to reducing transport emissions, including improved public health and wellbeing, decreased congestion, and reduced air pollution and noise.

Encouraging a modal shift to walking, wheeling, and cycling is one of the most cost effective ways of reducing transport emissions.

The Council is taking part in an E-Cargo bike pilot scheme for business travel from April 2023. The project aims to reduce fleet emissions by offsetting vehicle usage with low-emission E-cargo bike travel, reduce car miles travelled and offer fuel savings, and provide health and wellbeing benefits for Council employees.

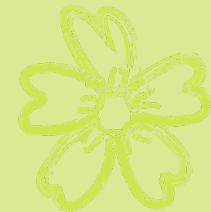
Three teams have volunteered to take part in the 12-month scheme:

- **Inverness Amenities Team: for litter picking and maintenance at Bught Park area**
- **Inverness Roads Team: for local road inspections**
- **Fort William Child Health Team: for local health visits.**

An evaluation will be undertaken to understand the benefits of using the E-cargo bikes with a view to developing a business case to secure investment to replace more traditional forms of business travel with the use of E-cargo bikes across the workforce.



Photos by The Highland Council





## Drivers

<b>National</b>	National Planning Framework (NPF)	Environment Act 2021
	Nature Conservation (Scotland) Act 2004	Draft Scottish Biodiversity Strategy
	Forestry and Land (Scotland) Act 2018	Pollinator Strategy for Scotland: 2017 – 2027
	Land Reform Act	Natural Environment Bill
	Flood Risk Management (Scotland) Act 2009	Community Empowerment (Scotland) Act 2015
	Edinburgh Declaration	Glasgow Food and Climate Declaration
	National Park consultation	Good Food Nation Act
<b>Regional</b>	Highland Nature Biodiversity Action Plan 2021-2026	
<b>Local</b>	<ul style="list-style-type: none"> <li>Highland Forest and Woodland Strategy, 2018</li> <li>Growing Our Future – Community Food Growing Strategy</li> <li>Inner Moray Firth – Developing with Nature</li> <li>Highland and Argyll Local Flood Risk Management Plan, 2022- 2028</li> <li>Findhorn, Nairn and Speyside Local Flood Risk Management Plan, 2022-2028 (Moray Council).</li> </ul>	

## Emerging / On the horizon

- Amended Tree Management Strategy which includes policies for the management of trees and woodland owned by the Council to be considered by Economy & Infrastructure Committee in August 2023
- Draft Developing with Nature Policies in response to requirement in NPF to protect biodiversity, reverse biodiversity loss, deliver positive effects from development and strengthen nature networks
- Proposed World Heritage Site – inception and associated policies
- Highly Protected Marine Areas – Scottish Government consultation underway.

## Corporate Plan 'Our Future Highlands'

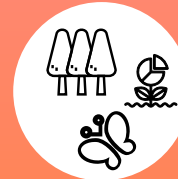


### Outcome 4: A Sustainable Highland Environment and Global Centre for Renewable Energy

- 4.4** Value and protect Highland's natural environment
- 4.5** Encourage greater use of land and seas being well managed for nature and adaptation including blue economy, carbon sequestration, and peatland restoration
- 4.11** Promote a "Just Transition" by moving to a more environmentally sustainable economy in a way that's fair to everyone.

## National Targets

### Scotland's Land Use Targets



**2025** 18,000 hectares of new woodlands created annually

**2030** Restoration of 250,000 hectares of degraded peatland

**2030** Designate **30%** of Scotland for nature

Reverse biodiversity loss **2045**

## Current Context

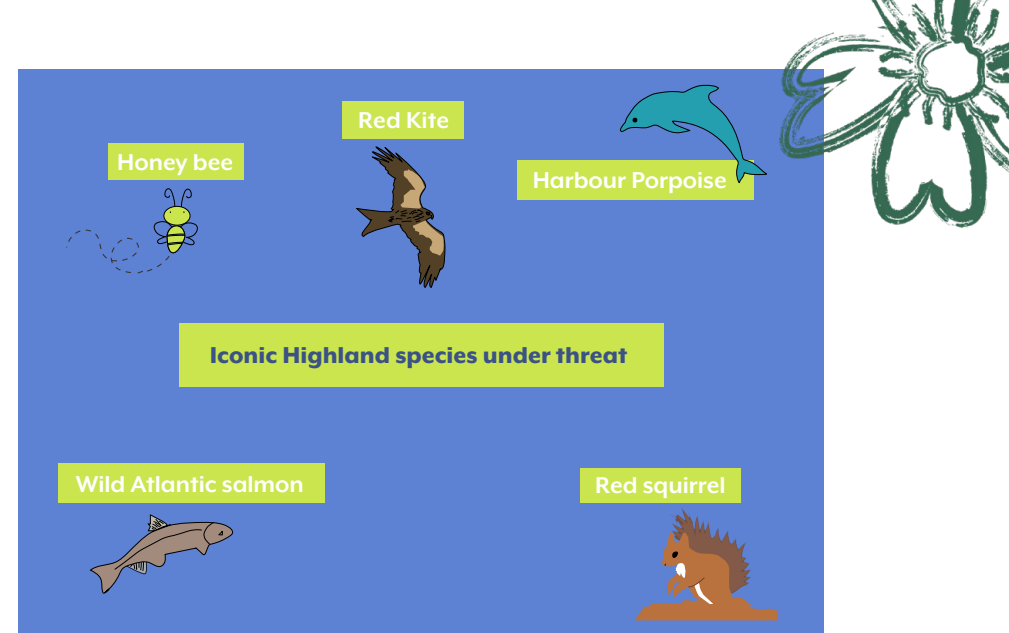
Biodiversity is vital for everyone – for our economic success, society, health and wellbeing, and way of life. Biodiversity enables businesses and society to operate effectively, for example, through pollination by insects, resilient fishing stocks and productive seas which our fishing and aquaculture industries depend on; it prevents soil erosion, purifies water, and helps prevent flooding; and it contributes to our wellbeing, providing recreation, relaxation, and a sense of place. Critically, biodiversity is central to our survival as a species.

In Highland, the environment is truly unique with ecology not found anywhere else in the world. Highland is home to Europe's largest and most intact expanse of blanket bog, the largest single expanse of woolly fringe-moss heath and over 20% of Scotland's coastline.

Alongside climate change, tackling biodiversity loss is now recognised as one of the most significant issues and challenges of our time. In November 2022, the Council signed the Edinburgh Declaration acknowledging the importance of biodiversity and commitment to tackling biodiversity loss, both in its own right and as part of the reinforcing twin climate and ecological crisis. This aligns with the Council's own declaration of a Climate and Ecological Emergency.

As is the case globally, Highland is in the midst of an ecological emergency and witnessing a dramatic biodiversity decline. Since 1970, 49% of Scottish species have decreased in abundance and 11% are under threat of extinction, including many iconic Highland species.

The natural environment is key to addressing the climate crisis. Environmental interventions such as soil management, tree planting, and peatland restoration can improve carbon sequestration (storage) from the atmosphere and reduce emissions. Effective use of natural infrastructure can improve climate change mitigation (e.g., preventing or sequestering emissions) or adaptation (e.g., minimising its effect and helping communities adapt to the effects of climate change).



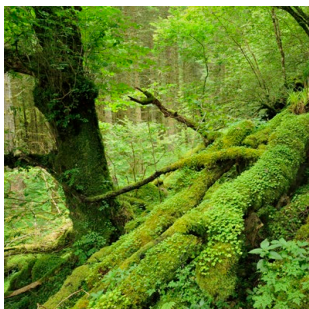
A decline in biodiversity will exacerbate the climate crisis, and a changing climate will accelerate the rate of biodiversity loss; the two crises are reinforcing and interlinked. Positive measures to tackle biodiversity loss will positively influence the climate crisis, and vice versa.

Scotland has one of the lowest biodiversity intactness indexes in the world, and this undermines our ability to rely on our natural environment to hold onto its carbon stocks and sequester greenhouse gas emissions. How we use our land can generate and sequester carbon from the atmosphere. Peatland captures and stores carbon when in a pristine condition. However, the recently published Draft Scotland's Biodiversity Strategy highlights peatlands are in such poor condition that they are emitting, instead of storing carbon and are consequently responsible for 20% of Scotland's total emissions.

Scottish Government guidance states that the main focus of climate change mitigation action for Scottish public bodies should be action within Scotland to reduce greenhouse gas emissions and increase nature-based carbon sinks. Public bodies with landholdings should maximise opportunities for nature-based insetting projects on their own land. Investment in insetting projects should be prioritised ahead of the purchase of carbon offsets. Whilst the Council does not own large areas of land, we manage many small parcels that cumulatively can make a big difference.

The Council maintains over 8 million metres squared of grass, including meadows. We also own a significant area of tree cover from individual trees through to woodlands. Most of these trees are on land which is open to the public, and many sites are subject to intensive usage all year round. Trees and woodlands are valuable assets which provide many benefits, including environmental (biodiversity, air quality, screening & noise abatement); economic (aesthetic value, improve quality of developments & timber value); social (recreation & education); and health benefits (improve mental health & decrease stress). Most people enjoy seeing or being amongst trees, and there is increasing evidence of the mental health benefits from visiting woodlands. The Tree Management Strategy sets out how the Council will manage this tree and woodland resource now and for the future.

Adapting our natural environment and land use practices is critical to safeguard the vital services ecosystems provide for free. Increasing natural habitats within the Council's greenspaces improves biodiversity and has well documented benefits for communities. Healthy ecosystems contribute to better air quality, water quality, flood prevention and pollination, and access to nature has benefits for mental and physical health.



Photos by The Highland Council



## Areas of Focus

The areas of focus for the Land Use & Environment theme are to:

- **Develop and enhance green/nature networks across Council owned greenspace and land.**
  - A greenspace mapping and management plan project was undertaken in 2020/21, funded by the Nature Restoration Fund. The project sought to identify, map and plan management for all land owned or managed by the Council and recommended positive future measures to improve biodiversity, create diverse habitats, and sequester carbon.
  - In May 2022, the Council received its second allocation of Nature Restoration Funding from the Scottish Government to support a wide range of projects that will deliver positive effects for biodiversity and enhance local ecosystems; and address the climate emergency and its impacts through mitigation and adaptation and by promoting nature-based solutions.
  - The Council will build on the findings and opportunities for biodiversity enhancement identified by the mapping project by working up, fully costed and viable projects on Council owned and/or managed land. The output will be a suite of costed sites/spaces that may be suitable for additional tree planting, community food growing and/or set aside areas to deliver a range of biodiversity/carbon benefits.
  - The Council will utilise areas as set-aside areas, only cutting paths through larger greenspaces, reducing verge cutting, and creating wildflower and wildlife corridors between green spaces and wildflower roundabouts. Not only does this create important habitat, but it also reduces emissions from mowers and maintenance costs for the organisation.
- **Develop a Strategy to address the ecological emergency.**

- **Map Highland carbon resource**

- We will calculate and quantify the carbon sequestration of Highland Council's land holdings, for insetting purposes.
- Mapping the extent of Highland's carbon resource will be essential to reaching net zero and increasing the proportion of habitat in good condition in the region. This will be created and published in collaboration with the University of the Highlands and Islands (UHI).
- In mapping the extent of Highland's carbon resource, the Council has held several meetings to avoid duplication of efforts and multiply benefits. This has brought together key partners from forestry, agriculture, conservation, and other land management backgrounds. There is appetite to form a Partnership, chaired by the Highland Council, to support sustainable carbon management benefits from nature restoration across Highland.
- The Partnership will solidify critical public, private, third sector and community relationships in Highland, aiming to aggregate financial and environmental opportunities and benefits from carbon management in the Highlands. NatureScot, UHI and RSPB Scotland have expressed an interest and support the need for a Partnership.

- **Maximise opportunities to secure Green Finance**

- This includes the creation of a Scottish Charitable Incorporated Organisation (SCIO) for attracting private finance into peatland restoration through the Flow Country Green Finance Initiative.

- **Explore the opportunity to create Local Nature Conservation Sites**

- Local Nature Conservation Sites are important local designations for key natural spaces which do not meet the criteria of more stringent designations such as Sites of Special Specific Interest (SSSIs) or Special Areas of Conservation (SACs).



- **Continue to work through actions in the Local Flood Risk Management Plans**

- Analysis undertaken by the Scottish Environmental Protection Agency (SEPA) estimates that around 15,000 homes and businesses are at risk from flooding within the Highland and Argyll Local Plan District, which may increase to 23,000 homes and businesses by the 2080s due to climate change.
- The Highland Council is the Lead Local Authority of the Highland and Argyll Local Plan District. Moray Council is the lead Local Authority for the Findhorn, Nairn, and Speyside Local District Area. The Local Plans target areas at most significant risk of flooding and set out plans to adapt to future flood risks and ensure we are resilient to flooding.

- **Continue to work through the actions in the Community Food Growing Strategy**

- Community food-growing provides various benefits to people and wildlife. These include benefits to physical health, provision of healthy food to families on lower incomes, grant-spending on community projects and community engagement. Aside from benefiting people, food-growing can also boost biodiversity, by providing habitats and food sources to a variety of wildlife. Food growing also enables a climate-resilient food system that promotes health, sustainability, and food security.

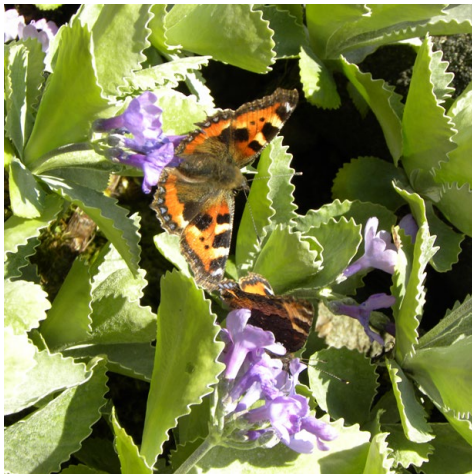


Photo by The Highland Council

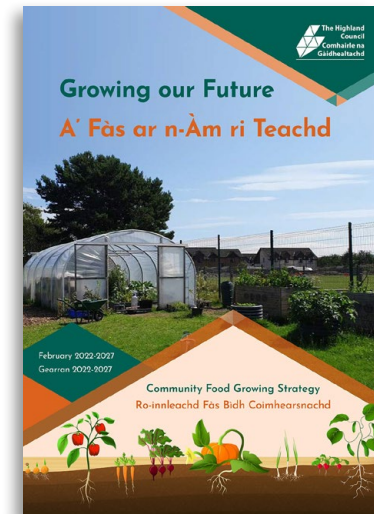
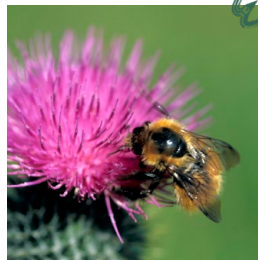


A number of priority actions have been identified for this theme:

Outcomes	Priorities will include:
<p><b>Enhance biodiversity and carbon sequestration</b></p>	<ul style="list-style-type: none"> <li>• <b>Delivery of Council and community biodiversity projects through the Nature Restoration Fund.</b></li> <li>• <b>Identify opportunities to develop and enhance green/nature networks across Council owned greenspace and land.</b></li> <li>• <b>Development of an Ecological Strategy.</b></li> <li>• <b>Development of various strategies to reverse the decline of, and enhance, biodiversity including Verge Management Strategy, Pollinator Strategy and Integrated Weed Control Strategy and Action Plan.</b></li> <li>• <b>Mapping of Highland carbon resource.</b></li> <li>• <b>Establishment of the Carbon Management in Highland Partnership.</b></li> <li>• <b>Maximise opportunities to secure Green Finance.</b></li> </ul>
<p><b>Build climate resilience into our natural environment and land use practices</b></p>	<ul style="list-style-type: none"> <li>• <b>Develop a Strategy for Local Nature Conservation sites.</b></li> <li>• <b>Continue to work through actions in the Local Flood Risk Management Plans.</b></li> <li>• <b>Continue to work through the actions in the Community Food Growing Strategy.</b></li> </ul>



Photos by The Highland Council







## Climate Action Coastlines

The Highland coastline is the longest of any local authority area in the UK. Coastal erosion and flooding are growing risks across Highland, due to climate change related increases in sea levels and storm frequency and severity. Climate Action Coastlines (CAC) is a pathfinder project, which ran from 2021-2023, seeking to identify appropriate natural coastal adaptation solutions, including tree planting, peatland restoration, sand dune strengthening, saltmarsh restoration, and floodplain development.

While CAC was unsuccessful in accessing the Scottish Government's Green Growth Accelerator (GGA) funding, alternative funding from the Scottish Marine Environmental Enhancement Fund (SMEEF) has recently been awarded for further research into saltmarsh habitats in Loch Fleet, which could help to support future habitat restoration.

At the onset of CAC, the Highland Council, as the lead partner in this project, procured the services of an environmental consultant, who produced a business case for review by the Scottish Government. The process of developing the business case included bringing together key stakeholders, including strong community representation, and leading experts in geomorphology, landscape architecture, blue carbon habitats and coastal adaptation.

The important lessons learned from our involvement in the GGA pathfinder process were further embellished by the Design Council, who selected CAC as one of its case study projects for its Design Differently initiative. Design Differently gave the CAC team access to expert natural and urban design advice, as well as community engagement support and networking activities.



Photos by Dynamic Coast

## Drivers

<b>National</b>	National Planning Framework 4	Planning (Scotland) Act 2019	Flood Risk Management (Scotland) Act 2009
<b>Regional</b>	Indicative Spatial Plan	Highland-wide Local Development Plan (HwLDP)	
<b>Local</b>	Inner Moray Firth Local Development Plan	Caithness and Sutherland Local Development Plan	West Highlands and Islands Local Development Plan

### Emerging / On the horizon

- New Highland Local Development Plan - When adopted, the HLDP will replace our HwLDP and our three individual 'area' LDPs.

## Corporate Plan 'Our Future Highlands'



### Outcome 2: Resilient and Sustainable Communities

- 2.4** Develop place-based plans that focus on quality neighbourhoods and direct local funding opportunities towards local priorities.

### Outcome 4: A Sustainable Highland Environment and Global Centre for Renewable Energy

- 4.3** Work with communities to find local solutions and lever funding.

### Outcome 5: A Resilient and Sustainable Council

- 5.5** Work together with communities and partners to produce local plans which meet communities' needs.
- 5.6** Develop place-based partnership strategies to coordinate investment and rural repopulation.

## Current Context

The Climate Change (Scotland) Act 2009 places duties on all public bodies to use the range of their functions to address climate change. Local authorities have a range of powers and responsibilities linked to planning and development, which will contribute to the transition to net zero and create a climate-ready Highland.

## The Current Development Plan for Highland

The Development Plan is a set of documents that guide where and how new building and development can occur across the Highland Council area.

These documents currently include Local Development Plans (LDPs) that set out policies and site allocations and Supplementary Guidance (SG) containing more detail on specific issues or places. Planning applications for all types of development are assessed against these documents.

The Highland Council's current Development Plan consists of four local development plans (LDPs): the Highland-wide LDP (HwLDP), the Inner Moray Firth LDP (IMFDP), the Caithness and Sutherland LDP (CaSPiA), and the West Highlands and Islands LDP (WestPlan) – together with a suite of Supplementary Guidance documents.

The HwLDP, adopted in 2012, is our vision for the whole Highland Council area (excluding the area covered by the Cairngorms National Park which has its own plan) and sets out the general policies which any planning application will be assessed against.

The three individual LDPs – IMFDP, CaSPiA, and WestPlan – focus on the region and settlement strategies for the Inner Moray Firth; Caithness and Sutherland; and West Highlands and Islands, respectively, including the identification of specific site allocations.

## Scotland's Reformed Planning System

Scotland's planning system is being reformed following the implementation of the Planning (Scotland) Act 2019. It will be several years before all of the reforms take full effect. Once they have, the Development plan in Highland will comprise two documents: National Planning Framework 4 (NPF4) (prepared by Scottish Government) and a new Highland Local Development Plan (HLDP).

When adopted, the HLDP will replace our HwLDP and our three individual 'area' LDPs. Under the new system, Highland Council will lead the formal preparation of a Regional Spatial Strategy. The Scottish Government has introduced Local Place Plans so that communities can have a more direct role in the decisions that influence their local community. Community-led groups will be invited to create and submit their local Place Plans by end-January 2024. The Council will keep a register of Local Place Plans that have been created and submitted by communities in Highland. Once registered, the Council has a legal responsibility to take Local Place Plans into account while preparing the Local Development Plan.

NPF4 is a long-term spatial strategy for Scotland to 2050. It brings together policies and programmes to enable sustainable and inclusive growth across the country. The NPF will be part of the statutory Development Plan for the first time.

## Addressing the Climate Emergency

NPF4 places an increased emphasis on climate change, aiming to put the journey to net zero, together with the biodiversity crisis, at the heart of planning policy. The Regional Spatial Strategy and the Local Development Plan, which the Council is required to prepare, must be well aligned with the new Framework.

Infrastructure decisions made today will substantially determine the achievement of the statutory climate goals in years to come. Climate change will intensify in the coming decades. Even as we transition to net zero, we must find a way to live with the impacts. The planning system has a critical role in shaping the places we live, now and in the future.

## Place-based Approach

Strategic planning is also an opportunity for the Council to embed the principle of place-based decision-making in our approach to Highland's transition to net zero and a climate-ready Highland. A place-based approach is where issues such as renewable energy, public transport and active travel, and waste disposal and recycling are considered not in silos but holistically, looking at how they can be linked within a geographical space to create synergies, reduce costs, and maximise the benefit.

## Priority Actions and Outcomes

A number of priority actions have been identified for this theme:

Outcomes	Priorities will include:
<b>Finalise and implement the Inner Moray Firth Local Development Plan policies</b>	<ul style="list-style-type: none"> <li><b>To be finalised and adopted.</b></li> </ul>
<b>Develop a new Highland-wide Development Plan that aligns with and reinforces NPF4 (Indicative Regional Spatial Plan)</b>	<ul style="list-style-type: none"> <li><b>Updates on progress and next steps will be submitted to the Economy &amp; Infrastructure Committee accordingly.</b></li> </ul>
<b>Empower communities to prepare Local Place Plans that lead local delivery of Net Zero and climate resilience</b>	<ul style="list-style-type: none"> <li><b>Coordinate the delivery of net zero through Place Based Plans for Highland's sub-regions.</b></li> <li><b>Implementation through Development Briefs and other partner and corporate projects.</b></li> </ul>
<b>Develop Adaptation Strategy</b>	<ul style="list-style-type: none"> <li><b>Continue to work with Planners to ensure inappropriate development in flood risk areas does not occur.</b></li> </ul>

## Waste

### Drivers

<b>National</b>	Delivering Scotland's Circular Economy - A Route Map to 2025 and Beyond	The Scottish Household Waste Recycling Charter and Code of Practice
	Food Waste: <ul style="list-style-type: none"> <li>Food Waste Reduction Action Plan, 2019</li> <li>Scottish Government Urban Rural Classification 2020</li> </ul>	Packaging Extended Producer Responsibility (EPR)
	The Waste (Scotland) Regulations 2012	Scotland's biodegradable municipal waste landfill ban, 1st January 2026

### Emerging / On the horizon

- Scotland's National Deposit Return Scheme
- Circular Economy Bill

### Corporate Plan 'Our Future Highlands'

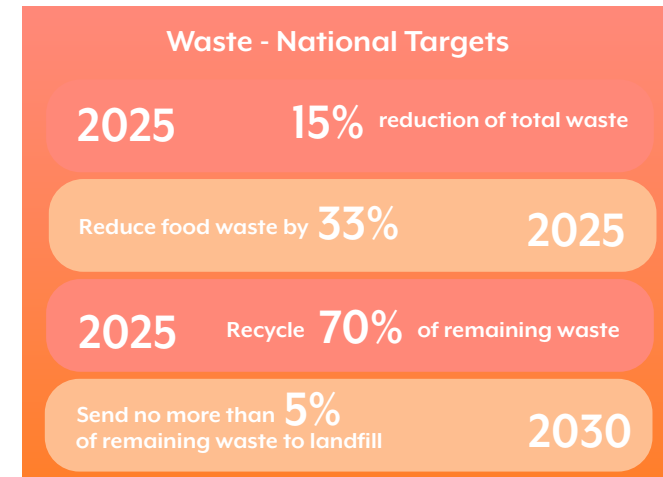


#### Outcome 4: A Sustainable Highland Environment and Global Centre for Renewable Energy

4.6 Reduce residual waste and increase re-use, repair, recycling and upcycling.



## National Targets



### Current Context

The Council has over 300 premises where waste is generated, including offices, schools, care homes, depots, piers, harbours, cemeteries and store rooms. The amount and type of waste generated at each site varies depending on the building's purpose and use.

The Waste (Scotland) Regulations require that all organisations in Scotland present the following materials for recycling:

- **Glass (including drinks bottles & rinsed empty food jars);**
- **Metal (including cans, tins);**
- **Plastic (including, drinks bottles & rinsed empty food containers);**
- **Paper;**
- **Cardboard;**
- **Most urban food businesses need to separate food waste for collection.**

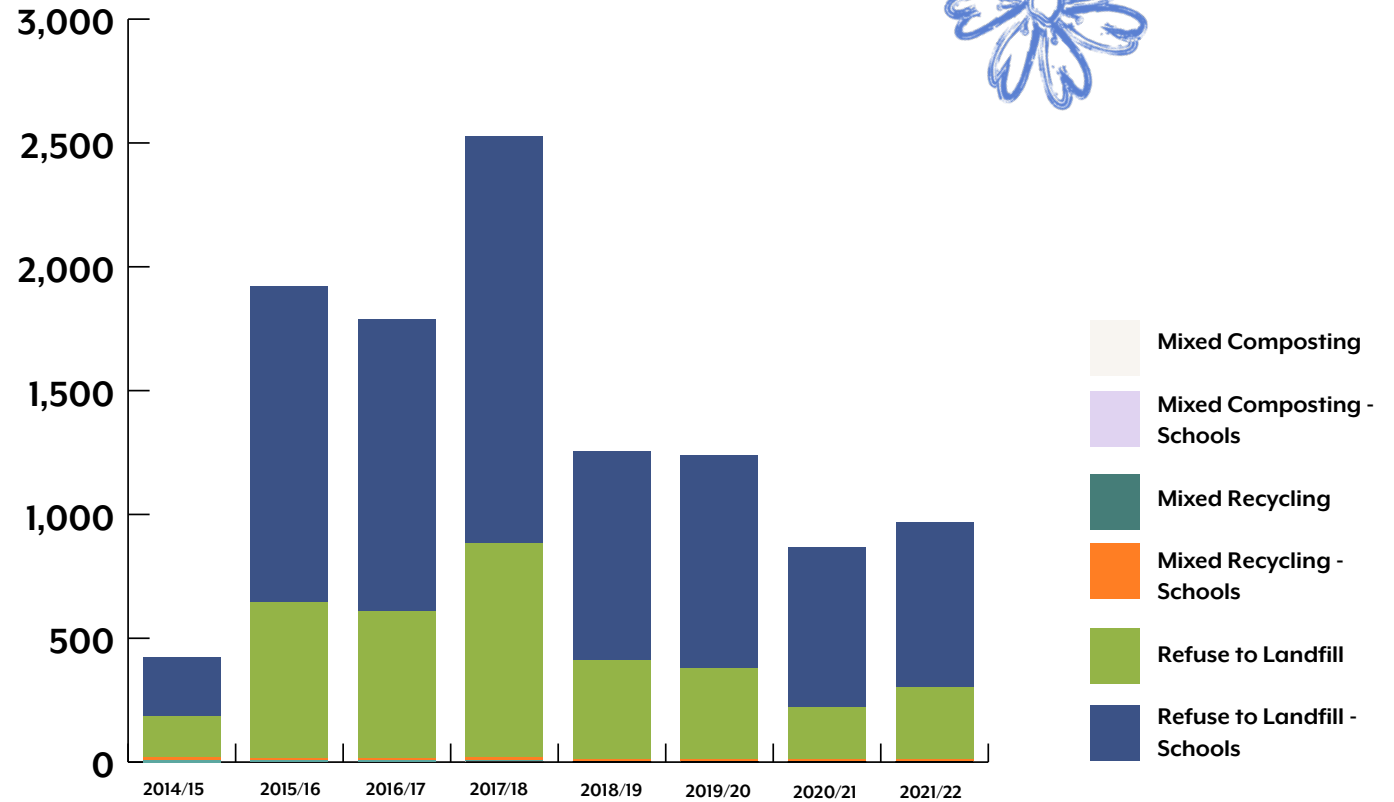
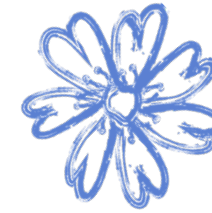
The Council is required to meet the above regulations. As the largest employer in the region we should strive to demonstrate best environmental practice and lead by example.

Emissions from internal waste represent less than 3% (969 CO<sub>2e</sub> tonnes) of corporate carbon emissions. Whilst the Council has made progress in reducing waste emissions from the baseline year figure of 1,262 CO<sub>2e</sub> tonnes (2011/12), the cost of dealing with our waste has significantly increased to over £1 million per year.

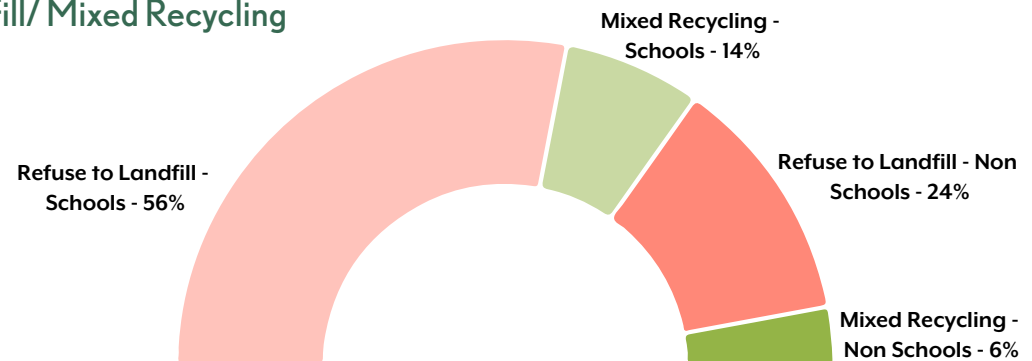
Waste from schools accounts for the majority of waste produced internally (approximately 70%), with food waste being a major component.

Action to reduce waste is essential in addressing the climate emergency. Additionally, to ensure the continuity of service, the Council must build resilience into plans and operations.

## Emissions (tCO<sub>2e</sub>) - Waste



## Council Estate Waste (non-domestic) Refuse to Landfill/ Mixed Recycling





Highland Council has secured funding of £6.5 million from the Scottish Government's Recycling Improvement Fund (RIF) to implement significant kerbside waste and recycling service improvements across all of Highland.

Funding will enable the Council to accelerate progress towards meeting local and national recycling targets, by increasing the amount of waste diverted from landfill to recycling and to reduce carbon emissions associated with landfilling waste.

Twin-stream recycling will be introduced to all areas of Highland with the existing green general waste bin converted to collect mixed containers (plastic bottles, pots, tubs, trays, cans, tins, foil, cartons, and potentially soft plastics). The existing blue bin currently used for mixed recycling will be converted to collect paper and card.

The weekly food waste recycling service will be expanded beyond Inverness to cover Nairn, Fort William and the towns in Easter Ross. Expanding the food waste recycling service will reduce food waste either sent to landfill or energy recovery. The expansion of the food waste recycling service will allow food waste to be collected from Council premises in Nairn, Fort William, and the towns in Easter Ross.

A strategic approach to reducing waste and increasing recycling will support the Council in continuing to improve its environmental performance as well as delivering financial savings.



Photos by Ewen Weatherspoon

The following challenges have been identified:

- **Lack of internal facilities to promote and achieve good recycling performance.**
- **Lack of funding for internal infrastructure (funding from the RIF application will not cover this).**
- **Managing waste from schools is complex. There are many factors at play including procurement, design of buildings, catering, and school policies.**
- **Gaps in data relating to waste – several services across the Council currently have waste collected in skips provided by external contractors. The total cost of this service and the associated emissions are not currently known.**
- **Due to current budgetary arrangements, the Council's Waste Service absorbs all costs of collecting, disposing, and treating of waste from all services across the Council. This is not the best model to incentivise any behaviour change to reduce waste or increase recycling.**
- **Issues with engagement/buy-in from services across the Council resulting in varying levels of compliance with waste regulations and management of resources.**

The steps to reduce waste should be based on the waste hierarchy which gives top priority to preventing waste in the first place. When waste is created, it gives priority to preparing it for re-use, then recycling, then recovery (e.g., energy), and last of all disposal. A circular economy should always endeavour to keep materials in use as high up the waste hierarchy and for as long as possible.

### Waste Prevention - preventing waste from arising in the first place

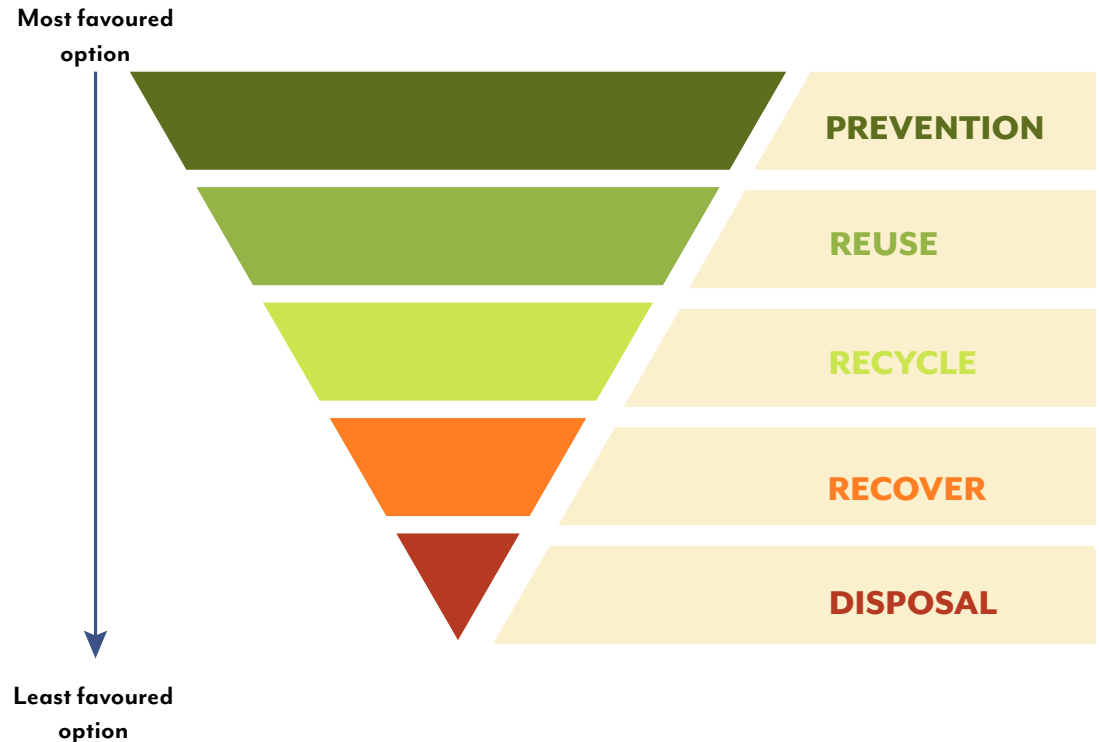
Actions include:

- **Exploring supply chain management and sustainable procurement opportunities to maximise resource efficiency, cost savings, and environmental benefits.**
- **Designing new school buildings with water fountains/access to water as standard to avoid water bottle consumption.**

### Reuse Opportunities - preparing for reuse

Raw materials, resources and funds are more and more limited. With the need for a more circular economy to preserve resources, the Council needs to extend the lifetime of assets through redistribution and/or repair. Now more than ever, it is important to limit procurement within the organisation, where possible, in favour of reuse.

Specific actions are likely to be identified as part of the review of the Local Authority Circular Economy Framework.



### Recycling Opportunities

Actions include:

- **Review current recycling collection points across premises to ensure they are in convenient locations for staff and pupils to use in order to maximise recycling.**
- **Clearly define who is responsible for collecting and emptying bins within premises.**
- **Develop a benchmarking system, for schools and offices to help drive improvement in recycling rates.**

## Communications - to encourage behaviour change

The Council has a dedicated Waste Awareness Team responsible for engagement, education, and awareness with residents, pupils, businesses, and communities across the region with the aim to reduce waste and increase recycling.

Engagement and culture change will be an on-going priority to reduce unnecessary waste and improve the quality of recycling across the Council. Transformational change to embed the waste hierarchy requires significant positive behavioural change and educated and informed staff and pupils.

Funding has been approved as part of Our Future Highland, Budget Strategy 2023 – 2024, for a communications package to support the implementation of the RIF project. This includes an internal campaign that reaches all staff and pupils to raise awareness of ways in which we can all reduce all types of waste; recycle and reuse more; and to help reinforce the environmental/economic reasons and benefits.



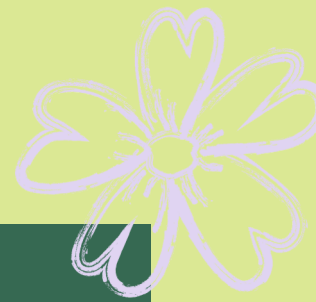
### Priority Actions and Outcomes

A number of priority actions have been identified for this theme:

Outcomes	Priorities will include:
Embed behavioural change across the Council's workforce and schools	<ul style="list-style-type: none"> <li>Identifying educational and training needs to embed behavioural change across services and schools.</li> <li>Delivering awareness raising campaigns to encourage staff and pupils to reduce, re-use and recycle.</li> </ul>
An increase in the quantity and quality of recycling across the Council estate	<ul style="list-style-type: none"> <li>Improving recycling infrastructure across the Council estate (subject to the availability of funds).</li> </ul>
A reduction in residual waste generated from Council buildings and operations, including offices, schools, care homes, depots, piers, harbours, and stores	<ul style="list-style-type: none"> <li>Transitioning to Digital by Default and paperless working across all viable services to reduce paper consumption and waste.</li> <li>Expanding food waste collections in Schools and other Council premises.</li> </ul>
A reduced carbon footprint from our catering in schools	<ul style="list-style-type: none"> <li>Strengthening partnership working between catering and education staff in schools to reduce food waste.</li> </ul>



Photos by The Highland Council, pupils from Cradlehall Primary School.



## Food Waste in Schools

Following analysis of waste being taken to landfill, it has been identified that there is potential to reduce the food waste being collected from schools across the estate.

Food waste is a global problem. It has been estimated that if food waste was a country, it would be the third highest emitter of greenhouse gases after the US and China, according to the Food and Agriculture Organisation (FAO) of the United Nations.

Food waste sent to landfill is particularly problematic as it releases methane, a greenhouse gas many times more potent than carbon dioxide. In 2021, Zero Waste Scotland research revealed that sending just a single kilogram of food waste to landfill produces the same carbon emissions as landfilling a staggering 25,000 500ml plastic bottles.

When we waste food, we also waste all the energy and resources that went into producing, processing, transporting, and cooking it.

Reducing the amount of food waste going to landfill will cut greenhouse gas emissions and combat the causes of climate change.

The project will also deliver a budget saving, both in terms of the cost of waste disposal and also by reducing the cost of food production.



Photos by The Highland Council



# Economy Eaconamaidh

## Circular Economy

### Drivers

**National** Delivering Scotland's Circular Economy - A Route Map to 2025 and Beyond

#### Emerging / On the horizon

- Circular Economy Bill

#### Corporate Plan 'Our Future Highlands'



#### Outcome 4: A Sustainable Highland Environment and Global Centre for Renewable Energy

4.6 Reduce residual waste and increase re-use, repair, recycling and upcycling



## Current Context

Scottish Government aims to make Scotland a zero waste society with a circular economy.

In our existing economy, we “take, make and dispose”. We take resources from the ground, air, and water; we make them into products and structures; then we dispose of them. The production and consumption of products and materials accounts for roughly fourth fifths of Scotland’s carbon footprint, which includes the heat and energy required to grow, make, process, transport and provide them. It is reported that 90% of global biodiversity loss and water stress is caused by resource extraction and processing.

We need to move to a circular economy where we reduce the demand for raw material in products; encourage reuse and repairs through responsible production; and recycle waste and energy to maximise the value of any waste that is generated. By keeping products and materials in circulation in a high value state of use for as long as possible, organisations can grow and diversify while mitigating the risks of the climate emergency.

The circular economy represents a fundamental shift in our economic system and the way we manufacture, use and view materials and products. It requires new business models, new ways of working and changes in how we live our lives in order to:

1. **Design out waste (DoW) and pollution**
2. **Keep products and materials in use**
3. **Regenerate natural systems.**

The concept of the circular economy is often associated with waste and resource management, and while these are important elements, circular economy is more holistic – a cross-cutting, whole system approach.



The circular economy represents an enormous economic and industrial opportunity for Scotland and can improve productivity and open up new markets, while also benefiting workers and communities by providing local employment and lower priced goods.

The Local Authority Circular Economy Framework was published by Zero Waste Scotland in April 2023. The framework has been produced to help local authorities embed circular economy into their own operations, their wider cities / districts / regions and to deliver circular opportunities and benefits. It is intended to provide guidance and inspiration, but deliberately does not provide a standardised system of integration or a series of steps to embed circular economy since each situation is nuanced and requires a bespoke solution.



## Priority Actions and Outcomes

A number of priority actions have been identified for this theme:

Outcomes	Priorities will include:
Develop a vision and strategy to embed circular economy into the Council's operations	<ul style="list-style-type: none"> <li>Establish a working group to consider the Local Authority Circular Economy Framework.</li> </ul>
Embed circular economy principles into the procurement process	<ul style="list-style-type: none"> <li>An approach to implementing circular economy into the procurement process will be considered as part of the review of the Local Authority Circular Economy Framework.</li> </ul>



An illustration of a Circular Economy diagram created by Circular Flanders. Photo by The Highland Council.

<b>National</b>	Procurement Reform (Scotland) Act 2014 - Sustainable Procurement Duty
	Procurement (Scotland) Regulations 2016

### Emerging / On the horizon

- Refreshed Joint Procurement Strategy for Aberdeen City, Aberdeenshire, Highland Council covering 2023 – 2026 in development and consultation underway, meets mandatory requirements within legislation including how the Council(s) will meet the Sustainable Procurement Duty but included are additional themes around Climate Change, Commercialisation and Community Wealth Building (Spend Pillar).
- The Council will develop a Community Wealth Building Strategy and Action Plan for consideration in March 2024.

## Corporate Plan 'Our Future Highlands'



### Outcome 2: Resilient and Sustainable Communities

#### 2.11 Work with partners to develop a community wealth building strategy.

Develop a community wealth building strategy.

Develop a strategy to map funding opportunities aimed at community energy projects following July 2023 development of Regional Renewable Fund.

% of Procurement Spend on Local Enterprise.

The Procurement Reform (Scotland) Act 2014 introduced the Sustainable Procurement Duty. It requires public bodies to consider and act on opportunities to achieve socio-economic and environmental benefits during their procurements.

In compliance with the Sustainable Procurement Duty, Highland Council is required to:

- **Demonstrate in our Annual Procurement Strategy how we will prioritise and take account of climate and circular economy in our procurement activity**
- **Report progress in our Annual Procurement Report**
- **Report how our procurement policies and procurement activity contribute to compliance with climate change duties annually in our Public Bodies Climate Change Duties (PBCCD) report.**

## Supply Chain Emissions

Reporting has previously focused mainly on Scope 1 direct operational emissions arising from sources owned or controlled by the Council e.g., emissions from boilers and fleet vehicles and Scope 2 indirect emissions from the generation of purchased energy used by the Council e.g., electricity. The Council has control over the use of this energy, but the emissions generated from its production are created elsewhere.

From 1<sup>st</sup> April 2021, public bodies must report in their PBCCD Annual Report, where applicable, targets for their indirect emissions. This covers Scope 2 emissions from purchased electricity and heat and all other indirect Scope 3 emissions in the organisation's value chain.

Carbon emissions related to goods and services procured by councils identify as Scope 3 emissions. Work is underway to determine carbon emissions arising from our procurement; however, approximately 80% of Highland Council's carbon footprint relate to Scope 3 emissions. The Council's emissions baseline and reported emissions data will be updated to include supply chain emissions (procurement) once this information is available.

Utilising artificial intelligence software, a comprehensive analysis of supply chain emissions at a granular level will identify carbon 'hotspots' for Highland Council, Aberdeen City Council and Aberdeenshire Council. The evidence base created will help the local authorities focus effort on critical deliverable outcomes including working in collaboration with prioritised suppliers and contractors to identify ongoing emissions reduction.

A pilot project is also underway to test the ability of ESG (Environmental, Social & Governance) and sustainability data reporting software. This is built across four key pillars: Responsible Procurement, Environmental Management, People, Health & Diversity and Community Engagement & Partnering. Highland Council has identified a construction contract and waste project that will use the platform to record emissions data and actions against the social value and sustainability clauses in the Council's community benefits plan.



Photos by Lugg, MOO Food and The Highland Council

## Community Wealth Building

Community Wealth Building (CWB) is an approach designed to tackle long-standing economic challenges and transform Scotland's local and regional economies by considering how the public sector, in partnership with the private, third and community sectors, can ensure more wealth is generated, circulated, and retained in communities and localities.

At the time of developing the Council's Net Zero Strategy, Scottish Government is consulting views on a legislative proposal for advancing the CWB approach through an ambitious new CWB duty.

The proposed Community Wealth Building Bill will encourage diverse and inclusive local economies, finance, land, and ownership models. It will include the following:

- **Working within and developing procurement practices to support local economies, including Small and Medium sized Enterprises (SMEs) and micro-businesses, and improved access to training and labour markets for disadvantaged communities and individuals.**
- **Encouraging public kitchens, including school canteens, to source more food produced by local businesses and organic producers.**
- **Where possible, to base public sector capital and revenue funding decisions on targeted social, economic, and environmental outcomes.**





Transitioning to a sustainable, net-zero society by 2045 will create demand for a wide range of jobs with new skills and long-term career prospects. The scale and pace of change required across all sectors requires realignment with education, training, and work-based learning towards green jobs.

The Scottish Parliament's Net Zero, Energy and Transport Committee inquiry on the role of local Government and its cross-sectoral partners in financing and delivering a net-zero Scotland highlights that Local Authorities will be heavily reliant on contractors, particularly concerning the decarbonisation of the built environment. It is widely recognised that there are shortages in the availability of contractors with the necessary skills and qualifications required. View here:

[www.bit.ly/SP-NetZero-Energy-Transport\\_Committee](http://www.bit.ly/SP-NetZero-Energy-Transport_Committee)



Current tight conditions in the general labour market exacerbate this. In areas such as the installation of heating systems, tradespersons are being kept busy with “traditional” work. For many there is yet to be the imperative to switch to more net-zero-compatible types of working. Trades bodies are looking for signalling from local authorities (and others) that there is a forthcoming pipeline of net zero work, to give them the confidence to invest in re-skilling their members.

The Highland Council will work with the University of the Highlands & Islands, training providers, and businesses to ensure that courses, apprenticeships, and training opportunities are available to ensure every person can reskill and upskill to participate in a just transition to a net-zero and climate-ready Highland.



Photos by The Highland Council

# People Daoine

People are the greatest asset and resource the Highland Council has to achieve net zero and become climate-ready. By increasing climate change awareness, knowledge and developing our people, we will embed climate considerations into not only individual choices, but also into planning and decision making. This will influence the Council's service delivery and operations, ensuring our approach is holistic, systemic, and practical.

Our People Strategy outlines how the Council develops people to ensure that they thrive in a safe and healthy workplace and use their knowledge, skills and abilities to shape the organisation's future. View here:

[www.bit.ly/HC-PeopleStrategy](http://www.bit.ly/HC-PeopleStrategy)

Guidance and policy documents will be reviewed and updated where necessary to ensure the safety of our employees concerning climate impacts, e.g., travelling in adverse weather.

Action will be taken to safeguard the Council against the effects of climate change. People need to work in climate-ready buildings; our infrastructure and facilities are reviewed regularly to implement energy efficiency measures which ensures that we are better prepared for the impacts of climate change.



## Inspiring action and embedding change

We are fortunate to have around 10,680 members of staff across an area of 26,484km<sup>2</sup> to empower on our journey in mitigating against, and adapting to, the impacts of climate change. While it may present a challenge to inspire action amongst such a widespread organisation, it also offers a fantastic opportunity to deliver climate action on a large scale.

All employees and Elected Members will have a role to play in adapting the Council to climate change and delivering net zero. "Over 60% of the measures needed for Scotland to reach net zero emissions will require some degree of behavioural or societal change."<sup>2</sup> This will be particularly important in achieving our built estate and energy, transport, and waste ambitions.

Through effective communication, engagement, and training, we aim to incorporate climate conscious behaviours, decisions, and actions across the Council to engrain sustainability throughout Council culture and operations.

During the COVID19 pandemic, the Council successfully reduced emissions across services through increased home working, less travel, and minimal waste products in offices. The Council must continue to reduce emissions across services now that usual business activities have resumed. Through promoting a culture of low carbon and sustainable behaviour throughout the Council, we aim to empower our workforce to propose and implement new working practices.

## Communications and Engagement

An internal Communications and Engagement Strategy is in development to support the delivery of the Net Zero Strategy. This aims to increase staff, and Members' awareness and commitment to necessary action to help deliver our emission reduction targets and become climate-ready.

<sup>2</sup> Estimated by the Climate Change Committee (CCC), Scottish Government Net Zero Nation Public Engagement Strategy. View here: [www.bit.ly/41VNXrg](http://www.bit.ly/41VNXrg)



## Eco Officer Network

A network of internal climate ambassadors (the Eco Officer Network) was launched in January 2018 to support and implement low carbon behaviour change initiatives throughout the organisation.

The network was active before the COVID pandemic with campaigns running each quarter focusing on a different theme regarding energy, waste, water, and travel. Volunteers were asked to commit up to two hours per month to undertake various actions to support positive behaviour change and help colleagues understand the positive impact they could make individually throughout the organisation.

The network supported an annual programme of events and campaigns focused on climate change including, Highland Climate Change Conferences, Earth Hour, Cycle to Work Week, Climate Conversations with staff, initiatives on energy saving, waste and transport through the Highland Council's Green Impact and Energy Sparks programmes while tapping into national campaigns such as Climate Week.

Relaunching the network will be critical in facilitating the delivery of key messaging, awareness raising and supporting engagement initiatives throughout the organisation.



Photos by The Peatlands Partnership



## Training and Literacy

To inspire and embed positive climate action across all levels of the Council, it is essential that people are fully aware of the causes and impacts of climate change, understand the importance of mitigation and adaptation, and recognise the benefits and opportunities of addressing the climate emergency. To achieve this, the Council will develop a series of training options that are accessible, engaging, and informative.

To facilitate the development of our people, mandatory Climate Change training will be delivered to all members of staff. Elected Members will be strongly encouraged to fully participate in training. This will supply the necessary skills and knowledge to comply with Council initiatives to minimise emissions. This will be the foundation of our journey to meet our carbon reduction targets and contribute towards the Scottish Government target to end Scotland's contribution to climate change no later than 2045.

Climate Change training will equip individuals with the skills, knowledge, and experience to make decisions in their work and personal lives that incorporate consideration of their impact on the climate, as well as providing them with the ability to communicate the message and inspire action in others, thereby fostering emissions reductions at a scale more extensive than that of Council operations.

**“An awareness of the carbon dioxide costs and impacts of everyday activities, and the ability and motivation to reduce emissions, on an individual, community and organisational basis.”**

– Carbon Literacy definition from Carbon Literacy Project.

### Benefits for the Council

- Reduced Carbon Emissions
- Reduced costs
- Improved employee morale, satisfaction, and productivity
- Enhanced image and credibility
- Up-to-date knowledge and information for staff
- Adherence to Climate Change Strategy and low carbon initiatives
- Sustainability embedded in workplace culture
- Increased innovation and participation
- Increased resilience of Council operations, buildings and workforce



### Benefits for Individuals

- Health and wellbeing
- Personal skills development
- Financial savings
- Empowered to make informed low carbon choices
- Increased resilience to the impacts of Climate Change





## Skills gaps

The Scottish Parliament's Net Zero, Energy and Transport Committee inquiry on the role of local Government and its cross-sectoral partners in financing and delivering a net-zero Scotland highlighted concerns that Councils need to develop the skills base required for the journey to net zero. This includes areas such as spatial planning; procurement; building standards; environmental assessment and management and more broadly any role in any Council department that requires specialist data gathering on, or assessment of, greenhouse gas emissions. View here:

[www.bit.ly/SP-NetZero-Energy-Transport\\_Committee](http://www.bit.ly/SP-NetZero-Energy-Transport_Committee)

A capability and capacity assessment and gap analysis will determine areas where skills development is required.

## Education

Across the Highlands we have 199 schools, including 29 secondary schools, consisting of 30,650 pupils. Younger people have been at the forefront of demanding faster action on climate change and have a crucial role in contributing towards the Council's and Scotland's climate change ambitions.

The Council is committed to increasing climate change knowledge and awareness from an early age. We will work with schools to ensure climate change is embedded in the curriculum. Educating children on climate change can also be effective in creating a more sustainable future, with children taking the message home to influence behaviour in their wider family.

Planning the transition from today's workforce to the future, needs development. We will work with schools, UHI, education and training providers, and businesses, to ensure that courses, training opportunities, and apprenticeships, exist in green industries. This will ensure every young person has the opportunity to participate in a just transition to a net zero and climate-ready Highland.



Photos by Iain Ferguson



## Hydrogen Challenge

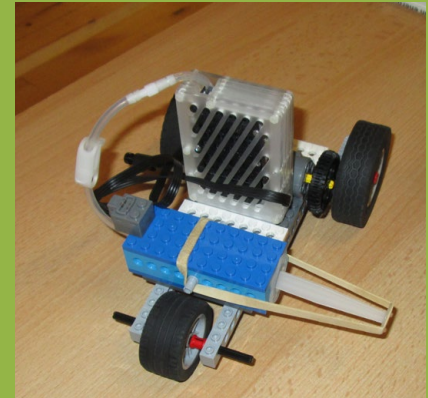
For the past two academic years, secondary schools across the Highlands have participated in the Scottish Schools Hydrogen Challenge.

The initiative introduces participants to the potential for hydrogen to help move away from dependency on fossil fuels and aims to inspire the next generation of renewable energy engineers.

The Hydrogen Challenge is a hands-on “design, build, race, repeat” team exercise in which participants are tasked with designing and constructing a green hydrogen-powered car using LEGO kits and miniature fuel cells.

Teams take part in regional heats, competing to see which vehicle travels the furthest on the zero-emission fuel, followed by a national final to discover which team across Scotland has the most efficient design.

More than 4,000 students from secondary schools across Scotland took place in the 2021/22 Challenge with Glen Urquhart Highland School winning first place and Plockton High School coming second. Nine schools from Highland participated in the 22/23 competition with Inverness Royal Academy, Inverness High School, and Farr High School (Thurso) making it through to the final stages.



Photos by Ballard UK



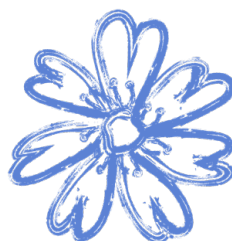
# Delivering the Strategy

## A' Libhrigeadh na Ro-innleachd

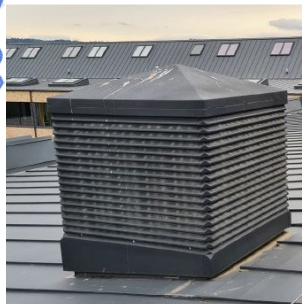
### Action Plan

An action plan will be developed outlining a clear framework of workstreams each thematic group will manage and implement to contribute towards the delivery of the targets set in the Strategy. The plan will set out the ways in which the Council can lower emissions from its operations and make its services more resilient to the effects of climate change. The thematic groups will establish:

- **Detailed targets, Key Performance Indicators (KPIs) for all actions and timelines**
- **Resources and budget requirements**
- **Commercial and funding opportunities**
- **Technology and innovation options.**



Solar PV panels and natural ventilation. Photos by The Highland Council



### Decision-making

Audit Scotland's publication Addressing Climate Change highlights national recommendations for the public sector on climate change. One of the key themes is the need for climate change to be at the heart of decision-making at all levels of the public sector. View here:

[www.bit.ly/AddressingCC](http://www.bit.ly/AddressingCC)

Audit Scotland prepared a briefing for the Accounts Commission on Scotland's councils' approach to climate change. The briefing acknowledges that integrating climate change into decision-making across all areas of council activity will take time and present challenges and opportunities. View here:

[www.bit.ly/AuditScot-AddressingCC](http://www.bit.ly/AuditScot-AddressingCC)

The following challenges have been identified for building climate change into decision-making:

- **Financial constraints – Councils may need to prioritise options that save money in the long term but which will cost more in the short term to meet climate targets.**
- **Access to data – Councils do not always have access to the data needed to support decision-making processes. This may be due to gaps in their data collection and management systems but is often because it is impossible to accurately quantify information.**
- **Skills and capacity – Councils do not always have the ability, resources or people with the relevant skills to make well-informed climate change decisions or to implement the necessary actions.**

**“Embedding climate change in decision-making is complex. However, the urgency of the climate crisis makes this a priority and councils need to act now to put effective processes and mechanisms in place to inform the decisions they make.”<sup>3</sup>**

<sup>3</sup> Audit Scotland, Scotland's councils' approach to addressing climate change. View here: [www.bit.ly/3pUUcxP](http://www.bit.ly/3pUUcxP)



## Priority Actions and Outcomes

The following priority actions have been identified:

Outcomes	Priorities will include:
<p><b>Net zero/climate change is embedded into decision-making processes</b></p>	<ul style="list-style-type: none"> <li>• <b>Adopt carbon budgeting across the organisation and introduce service-level targets.</b></li> <li>• <b>Introduce Climate Change Impact Assessment tool into the decision-making process.</b></li> <li>• <b>Review structure and governance of the Capital Programme.</b></li> <li>• <b>Strategic allocation of resources that help secure a net zero and climate-resilient Council.</b></li> <li>• <b>Align the Scheme of Delegation with the actions set out within this Strategy.</b></li> </ul>
<p><b>Develop knowledge and capability within the Council to enable the transition to net zero and a climate-ready Highland Council</b></p>	<ul style="list-style-type: none"> <li>• <b>Carbon Literacy Training will be delivered to the Executive Leadership Team and the Senior Leadership Team in the first instance, to allow for assessment of training requirements for other staff.</b></li> <li>• <b>Elected Members will be strongly advised to fully participate in Carbon Literacy Training.</b></li> <li>• <b>Capability and capacity assessment and gap analysis to be undertaken to determine areas where skills development is required.</b></li> </ul>
<p><b>Data driven insights inform strategic decision making</b></p>	<ul style="list-style-type: none"> <li>• <b>Develop governance surrounding data collection and handling newly developed data sources such as supply chain emissions.</b></li> <li>• <b>Undertake improvements to data sets to allow for greater accuracy in emission calculations.</b></li> <li>• <b>Organise and analyse data to help determine actionable insights.</b></li> <li>• <b>Introduce sustainability software which will include live data on carbon emissions.</b></li> <li>• <b>Continue to develop the evidence base to ensure that the scale and pace of action is sufficient to meet our targets.</b></li> </ul>



## Political Governance

The Council will be the governing body for the strategy and action plan. The Climate Change Committee is responsible for the oversight of the strategy, action plan and programme, including setting and scrutiny of performance targets.

## Programme Board

The Council's Executive Chief Officers will sit on the Programme Board chaired by the Depute Chief Executive. The Board is the strategic decision-making body at officer level, providing general direction and support to the Strategy Group. The Board will oversee progress and direction of climate and ecological emergency actions, managing risks and opportunities iteratively.

## Net Zero Strategy Group

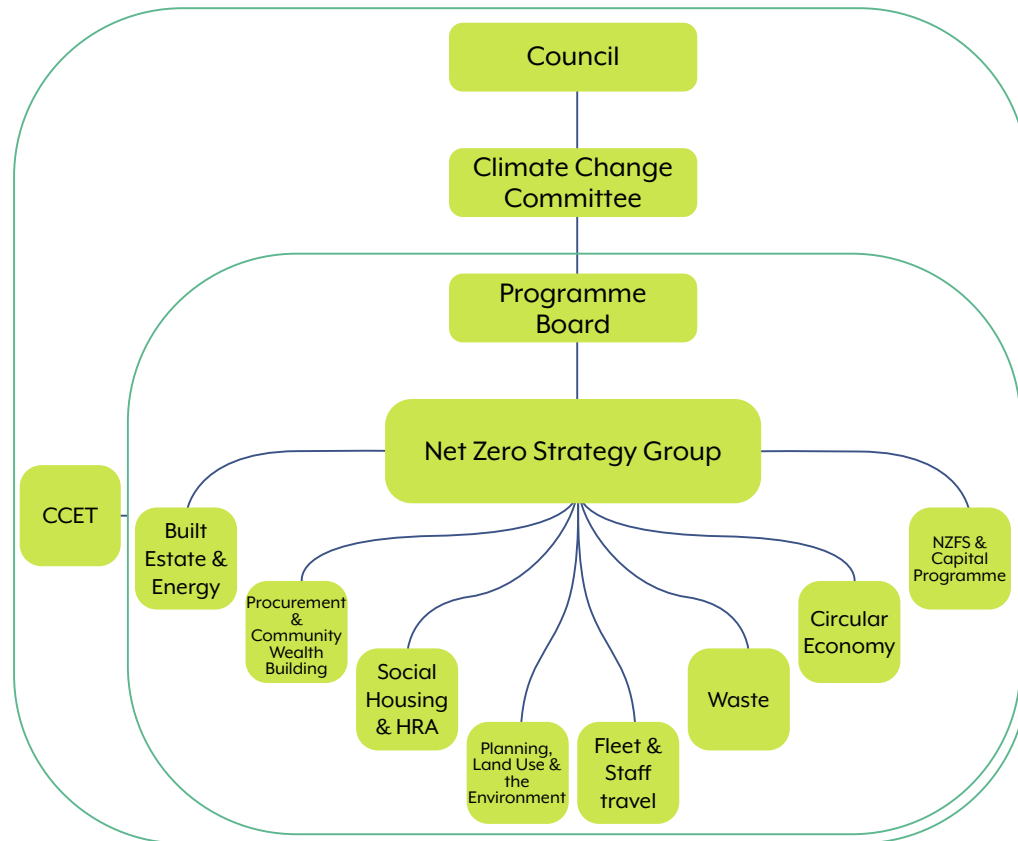
The Net Zero Strategy Group, comprising senior managers working across Council services, will be accountable for developing a detailed, costed action plan by December 2023. The Strategy Group will be responsible for operational delivery and will oversee and steer the strategy and action plan implementation across all services. This Group will measure progress by each thematic group/service and ensure targets are met. The Strategy Group sets the aims and domain of each of the thematic groups. Thematic Group leads sit on the Strategy group thus ensuring a two-way flow of information.

## Thematic Group

There are eight thematic groups with each Group fulfilling a set function, of which details are set by the Net Zero Strategy Group covering: Built Estate & Energy; Procurement & Community Wealth Building; Social Housing/HRA; Planning, Land Use & Environment; Waste; Fleet & Staff Travel; Circular Economy; and Net Zero Funding Strategy and Capital Programme. Each thematic group will be responsible for developing and delivering a detailed action plan within their respective domain.

## Support

The Climate Change & Energy Team will support the Programme Board, the Net Zero Strategy Group, and the thematic groups.



## Monitoring & Reporting

Climate change is an ever-evolving issue, so the strategy and action plan are intended to be living documents. The strategy and action plan will be regularly reviewed and updated to ensure that they reflect developments and consider changing market conditions, innovations, and approaches to the climate change challenge.

Given the scale of the climate emergency and the speed at which action is required, an annual review of actions will be undertaken and reported to Council to ensure that the actions identified are the most effective options. To ensure that progress on climate action is monitored more frequently, quarterly progress updates will be provided to the Climate Change Committee.

As outlined in guidance published by the Scottish Government and the Sustainable Scotland Network (SSN), where one or more interim targets still need to be met, the Council will be expected to produce a catch-up plan to ensure that performance gets back on track. The catch-up plan should include:

- **A full review of emissions.**
- **Analysis of why the targets have been missed.**
- **Corrective actions to address areas of underperformance.**
- **Senior sponsor within the organisation who is accountable for delivery of actions; and**
- **Learnings should be shared with other public bodies to help maintain strong performance across the sector.**

The following priority actions have been identified:

Outcomes	Priorities will include:
<p><b>Monitor and report progress</b></p>	<ul style="list-style-type: none"> <li>• <b>Develop detailed targets, costings, milestones, and Key Performance Indicators (KPIs) for all actions and implement a system for monitoring and reporting progress.</b></li> <li>• <b>Produce quarterly and annual progress reports and action plan updates.</b></li> <li>• <b>Produce and deliver against a catch up plan in respect of any missed targets.</b></li> <li>• <b>Undertake an annual audit to review progress against the strategy and action plan.</b></li> <li>• <b>Assess progress and plan adaptation work using the Adaptation Scotland Benchmarking Tool.</b></li> <li>• <b>Adopt Zero Waste Scotland's Climate Change Assessment Tool to establish an annual self-assessment of our performance to date and to ensure we comply with the Climate Change (Scotland) Act 2009 to meet carbon emissions reduction targets and report to the Scottish Government.</b></li> </ul>

## Funding

The financial implications of reaching our climate change ambitions must be addressed and identified for the organisation. A detailed and costed action plan will be developed for consideration by the end of December 2023.

**“Transitioning to net zero has been described as a new industrial revolution, requiring a fundamental change to many technologies, systems and delivery models that enable our working and domestic lives. This change comes at a price – the upfront cost of a more sustainable and affordable future.”<sup>4</sup>**

The long-term gains of taking a climate first approach often come with high additional upfront costs. All councils must align their investments with the decarbonisation of infrastructure, fleet, heat technology and buildings and help with skills and project development to keep pace with the net zero agenda.

<sup>4</sup> Net Zero, Energy and Transport Committee, The role of local government and its cross-sectoral partners in financing and delivering a net-zero Scotland. View here: [www.bit.ly/3ANSIHt](http://www.bit.ly/3ANSIHt)

Failure to invest now will result in the Council facing far greater additional costs in the future. The Economics of Climate Change: The Stern Review concluded

**“the benefits of strong and early action far outweigh the economic costs of not acting.”**

View here:

[www.bit.ly/LSE-EconomicsofCC](http://www.bit.ly/LSE-EconomicsofCC)

Many interventions required to reach net zero will have positive financial benefits for the Council in the longer term. Work to reduce waste, reduce unnecessary travel and cut energy use will bring both service efficiencies and reduced costs.

Several public and private funding streams are contingent on a just transition to a net zero economy; therefore, there is significant potential for the Council to leverage public and private investment to meet our climate change ambitions.

The Council is now legally required to report annually on how we will align our spending plans and use of resources to contribute to reducing emissions and delivering our emissions reduction targets. Guidance from the Scottish Government states,

**“Climate change must be integrated into financial planning and reporting, and finance teams should be engaged.”**

View here:

[www.bit.ly/3ANDuE](http://www.bit.ly/3ANDuE)

The guidance suggests organisations may wish to align with external guidance, such as Accounting for Sustainability, a Net Zero Practical Guide for Finance Teams:

[www.bit.ly/A4S-NetZero](http://www.bit.ly/A4S-NetZero)

The following priority actions have been identified:

Outcomes	Priorities will include:
<p><b>Embed net zero/ climate change targets into decision-making processes, including annual budget-setting and the Council's Capital Programme</b></p>	<ul style="list-style-type: none"> <li>• <b>Highland Council to align with external guidance, such as Accounting for Sustainability, a Net Zero Practical Guide for Finance Teams.</b></li> <li>• <b>Any investment should consider the whole-life approach rather than the initial outlay alone.</b></li> </ul>
<p><b>Maximise funding opportunities</b></p>	<ul style="list-style-type: none"> <li>• <b>Develop a funding strategy focused on maximising the Council's capacity to secure external funding, and to dovetail with the development of the Council's budget and spending plans.</b></li> <li>• <b>Seek to develop a funding stream for research and development projects.</b></li> <li>• <b>Develop a pipeline of investment-ready projects to accelerate investment in net zero/climate change projects.</b></li> <li>• <b>Collaborate with partners and investors to attract inward investment and look to optimise spending opportunities to the benefit of the region.</b></li> </ul>
<p><b>Work with other Local Authorities to ensure learning and best practice is shared across the sector</b></p>	<ul style="list-style-type: none"> <li>• <b>Continue to work with the Scottish Sustainable Network (SSN) and Scottish Cities Alliance.</b></li> <li>• <b>Participate in peer review on the 2022/23 PBCCD report with Scottish Borders Council.</b></li> </ul>

### Salix Recycling Fund

The Salix Recycling Fund has already supported many energy efficient projects across the Council's estate, including the Hydro Ness and street lighting conversion to LED, and remains the preferred route to support ongoing investment in energy and carbon reduction projects.

Salix Finance Ltd are a non-departmental public body, owned wholly by government, who provide interest-free loans to the public sector for energy efficiency projects. In 2019, the Council secured a £3.5m interest free loan from Salix, match funded against Council investments in solar and hydro. This was the largest award made in Scotland and the largest made to a local authority in the UK.

The Recycling Fund aims to increase long-term investment in energy efficient technologies across the public sector by enabling clients to reinvest savings from previous projects to finance further energy reduction schemes. The loan fund is ring-fenced for investment in projects that will reduce the Council's energy spend and carbon emissions.

The total value of works commissioned to date is approximately £10M, resulting in total savings to date of over 7M kWh equating to estimated annual savings of over 1,800,000 kgCO<sub>2e</sub> and total lifetime CO2 savings of over 42,000,000 kgCO<sub>2e</sub>.

**Current RF value: £12m**

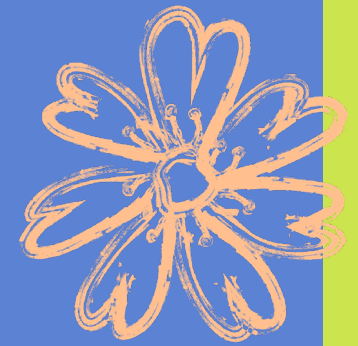
**THC contribution: £4.75m**

**Salix contribution: £7.25m (interest free)**

**Confirmed funding 23/24: £765k**

**Pipeline forecast 23/24: £800k**

**Additional available funds once forecast spend committed 23/24: £1.875M**



#### **LED Phase 1, 2 & 3:**

£5.7 million has been invested in improving the lighting condition of buildings throughout the Council's estate. Replacing older bulbs with new energy efficient bulbs is expected to save over 4 million kWh of energy annually which equates to an estimated carbon saving of approximately 1,800,000 kgCO<sub>2e</sub> each year.

#### **Renewable Energy:**

Around £3.2 million has been invested in renewable energy (Hydro Ness and Solar PV) displacing a reliance on grid supplied electricity and the associated costs. These installations are expected to save over 1.8 million kWh annually, resulting in yearly carbon savings of around 480,000 kgCO<sub>2e</sub>.

**Street Lighting:** The Recycling Fund has invested £1,000,000 across the Highlands to date. Replacing older bulbs with new energy efficient bulbs is expected to save over 1 million kWh of energy annually which equates to an estimated carbon saving of around 238,000 kgCO<sub>2e</sub>.



# Glossary

## Clàr-mìneachaidh

**Active travel** – Making journeys in physically active ways, such as walking, wheeling, cycling, or scootering.

**Adaptation Scotland** – The Adaptation Scotland Programme provides help and advice to organisations, businesses, and communities to prepare for and build resilience to climate change impacts.

**Audit Scotland** – An independent public body responsible for auditing most of Scotland's public organisations.

**Biodiversity** – The variety of all living things and their interactions.

**Blue Carbon** – Carbon stored in Coastal and Marine ecosystems.

**Blue economy** – Sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of the ocean ecosystem.

**Blue Infrastructure** – Relates to urban water infrastructure such as ponds, lakes, streams, wetlands, floodplains, rivers, canals etc.

**Carbon Audit** – Identifies the quantity and source of an organisation's greenhouse gas emissions.

**Carbon Baseline** – The amount of emissions from the organisation prior to emissions reductions projects beginning.

**Carbon Budget** – The amount of carbon dioxide emissions permitted over a period of time to keep within a certain temperature threshold.

**Carbon Dioxide (CO<sub>2</sub>)** – A colourless, odourless gas which is produced both naturally as people and animals exhale CO<sub>2</sub>, and through human activities, such as burning fossil fuels and wood. In the Earth's atmosphere CO<sub>2</sub> acts as a greenhouse gas and plays a major role in global warming and climate change.

**Carbon Dioxide equivalent** – A standard unit for measuring carbon impact and includes the other major greenhouse gases in one unit.

**Carbon Emissions** – The release of carbon dioxide into the atmosphere over a specified area and period of time.

**Carbon Footprint** – A measure of the amount of carbon dioxide released into the atmosphere as a result of the activities of a particular individual, organisation, or community.

**Carbon Insetting** – Refers to actions taken by an organisation within its own value chain to sequester carbon from the atmosphere.

**Carbon Literacy** – An awareness of the carbon dioxide costs and impacts of everyday activities, and the ability and motivation to reduce emissions, on an individual, community and organisational basis.

**Carbon Management** – Monitoring and measuring an organisation's carbon emissions and developing initiatives to reduce them through agreed action plans.

**Carbon Offsetting** – Refers to actions external to an organisation to sequester carbon from the atmosphere, e.g. through purchasing carbon credits.

**Carbon Sequestration** – The process of capturing and storing atmospheric carbon dioxide.

**Carbon Sinks** – A forest, ocean, or other natural environment viewed in terms of its ability to absorb carbon dioxide from the atmosphere.

**Circular Economy** – A model of production and consumption which involves sharing, leasing, reusing, repairing, refurbishing, and recycling existing materials and products indefinitely. This involves extending the life cycle of products as far as possible and tackles global challenges such as climate change, biodiversity loss, waste, material acquisition and pollution.

**Climate** – The weather conditions prevailing in an area over a period of time.

**Climate Change** - Climate Change refers to long-term shifts in temperature and weather patterns. These can occur naturally, such as through variations in the solar cycle. In recent years, however, extensive, and rapid Climate Change has been occurring due to greenhouse gas emissions produced by human activity, with changes forecast to increase in the future unless action is taken.

**Climate Change Adaptation** – Changing processes, practices and structures to moderate potential damages from expected changes in climate.

**Climate Change Mitigation** - Mitigation is the act of reducing the severity of climate change. This is done primarily by reducing the release of greenhouse gas emissions into the atmosphere and extracting emissions from the atmosphere.

**Climate Change Resilience** – The capacity to prepare for, respond to, and recover from the impacts of hazardous climatic events while incurring minimal damage to society, the economy and the environment.

**Climate Conscious (behaviours)** – Actions or behaviours that include consideration of the contribution it will have to climate change (and negate this).

**Climate Emergency** - The Climate Emergency is the situation in which urgent action is required to reduce or halt climate change and avoid potential irreversible environmental damage resulting from it.

**Climate Ready** – Minimising one's own emissions and building resilience to the impacts of climate change.

**Climate Week** – An annual event to raise awareness of the global climate emergency and encourages climate action across the country.

**Community Wealth Building** – A progressive approach that redirects wealth back into the local economy thereby creating a resilient and inclusive economy for the benefit of the local area.

**Decarbonisation** – The reduction of carbon emissions from an entity or process.

**Eco Officer** – Members of staff across the Highland Council that help to deliver carbon savings and raise awareness.

**Eco Schools** – An international programme that engages children and young people in key issues including the environment, sustainability, global citizenship, and the value of a low carbon future.

**Ecological Emergency** – A recognition of the severity of degradation of the natural environment and loss of wildlife, the consequences of this, and the urgent need to take action to restore nature.

**Ecology** – The relationships between living organisms and their physical environment.

**Ecosystems** – A geographic area where plants, animals and other organisms, as well as weather and landscape, work together to form a bubble of life.

**Edinburgh Declaration** – A declaration that calls on parties to recognise the vital role of sub-national governments, cities and local authorities in delivering for biodiversity and implementing actions to meet the goals and targets.

**EESH (The Energy Efficiency Standard for Social Housing)** – Aims to improve the energy efficiency of social housing in Scotland to help reduce energy consumption, fuel poverty and the emission of greenhouse gases.

**Energy Efficiency** – A goal to reduce the amount of energy required to provide products and services.

**Energy Sparks** – Supports primary and secondary pupils, staff, and the wider school community to reduce their school's carbon emissions by giving Highland Schools access to an online energy analysis tool and energy education programme.

**EV** – Electric Vehicle

**Fabric First Approach** – Maximising the performance of the components and materials that make up the building fabric itself.

**Fuel poverty** – When a household needs to spend more than 10 percent of its income on energy to keep their home at a satisfactory temperature. Fuel poverty is driven by a number of factors including the cost of energy, the energy performance of the home, household income, and how energy use is managed.

**Green Infrastructure** – A term used to describe the network of natural spaces and corridors in a given area which are designed and managed to deliver a wide range of ecosystem services and benefit biodiversity, for example open spaces such as parks, gardens, woodlands, fields, etc.

**Green jobs** – Jobs that comprise activities aimed at substantially preserving or restoring environmental quality.

**Green recovery** – A series of economic measures to recover from economic crises, like the COVID-19 pandemic, that are aligned with achieving long-term climate change and sustainability objectives, to move towards a sustainable economic model for the planet, which is both more resilient and inclusive.

**Green Skills** – The knowledge, abilities, values and attitudes needed to live in, develop and support a sustainable and resource-efficient society.

**Greenhouse gases** - Greenhouse gases are those that trap heat in the atmosphere and cause Climate Change, these include gases such as carbon dioxide, methane, nitrous oxide and fluorinated gases and are released by a range of human activity such as industry, transport, waste, and agriculture.

**Greenhouse effect** – The increase in global temperatures in response to increased concentration of Greenhouse gases in the atmosphere.

**Highland Adapts** - Highland Adapts is an umbrella partnership initiative, focused on helping the Highlands prepare for the impacts of climate change. It comprises many Highland-based organisations, including the Highland Council, NHS Highland, NatureScot, Changeworks, Highlands & Islands Enterprise, Forestry & Land Scotland and Zero Waste Scotland.

**HITRANS (The Highlands and Islands Transport Partnership)** – The local statutory regional transport partnership.

**Intergovernmental Panel on Climate Change (IPCC)** – The United Nations body for assessing the science related to climate change.

**Just Transition** – Moving to a sustainable economy in a way that is fair and inclusive and allows everyone to share in the substantial benefits.

**LHEES (Local Heat and Energy Efficiency Strategy)** – Local strategies which underpin an area-based approach to heat and energy efficiency planning and delivery.

**Low Emission Vehicles** – Electric, hybrid and hydrogen vehicles.

**LULUC** – Land use, Land use change. Emissions and removal of greenhouse gases resulting from direct human-induced land use such as settlements and commercial uses, land-use change and forestry activities.

**National Planning Framework** – The spatial strategy for Scotland that sets out spatial principles, regional priorities, national developments, and national planning policy.

**Nature Restoration Fund** – A fund, managed by NatureScot, for projects that restore wildlife and habitats on land and sea and address the twin crises of biodiversity loss and climate change.

**Nature-based solutions** – Solutions that involve working with nature to address societal challenges, providing benefits for both human well-being and biodiversity.

**Net Zero** - The term net zero means achieving an overall balance between greenhouse gas emissions produced and emissions taken out of the atmosphere. This balance – or net zero – will happen when the emissions we add to the atmosphere are no more than the amount removed.

**Place-based approach** – An approach that targets the specific circumstances of a place and engages with local communities and organisations as active participants in its development and implementation.

**Public Sector Climate Change Duties** – A legal obligation for the public sector under the Climate Change (Scotland) Act to produce annual reports on efforts to reduce emissions and adapt to climate change impacts.

**Recycling Improvement Fund** – Capital funding grants for local authorities to improve recycling infrastructure and services across Scotland.

**Renewable Energy** – Energy derived from natural sources that emit little to no greenhouse gases, are readily available, and are replenished at a higher rate than they are consumed.

**Resource efficiency** – Maximising the use of money, materials, staff and other assets to function effectively with minimum waste. It means using the Earth's limited resources in a sustainable way while minimising environmental impact.

**Retrofit** – To install new or modified parts or equipment in something previously manufactured or constructed.

**SALIX** – A non-departmental public body, owned by UK Government. They provide interest-free loans to the public sector for energy efficiency projects.

**Scope 1 Emissions** – Emissions from sources that an organisation owns or controls directly, such as burning fuel in fleet of vehicles.

**Scope 2 Emissions** – Emissions that an organisation causes indirectly when the energy it purchases and uses is produced, such as by the generation of energy used in their buildings.

**Scope 3 Emissions** – All indirect emissions (not included in scope 2) that occur in the value chain of an organisation, including both upstream and downstream emissions.

**Sustainable** – Meeting the needs of the present without compromising the needs of the future.

**Sustainable Development Goals** – 17 Integrated goals adopted by the United Nations to act as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.

**Sustainable Scotland Network (SSN)** – Scotland's public sector network on sustainability and climate change.

**Sustainable Transport** - Defined as walking, wheeling, cycling, public transport, shared transport and on-demand transport.

**The Climate Change Committee** – An independent, statutory body whose purpose is to advise the UK and devolved governments on emissions targets and to report to Parliament on progress made in reducing greenhouse gas emissions and adapting to climate change.

**Travel Hierarchy** - A ranking system used for the different travel options according to which is the best for the environment.

**ULEV** – Ultra Low Emission Vehicles

**Waste Hierarchy** – A ranking system used for the different waste management options according to which is the best for the environment.

**Zero Waste Scotland** – Zero Waste Scotland is a not-for-profit environmental organisation that exists to lead Scotland to use products and resources responsibly, focusing on where we can have the greatest impact on climate change.





