Agenda Item	**4**
Report No	**CCC/9/23**

HIGHLAND COUNCIL

Committee: **Climate Change**

Date: **17 May 2023**

Report Title: **Net Zero Strategy**

Report By: **Depute Chief Executive**

1 Purpose/Executive Summary

1.1 This report accompanies the Council's Net Zero Strategy for consideration by the Climate Change Committee (please refer to **Appendix 1).**

2 Recommendations

2.1 Members are asked to:-

i) **Recommend** to **the full Council** the strategy for approval;
ii) **Note** that should the Climate Change Committee recommend the strategy for approval, this will be presented to Council on 29 June 2023 for ratification; and
iii) **Note** a fully costed action plan will be developed for consideration by the end of December 2023.

3 Implications

3.1 **Resource** – the function of the Net Zero Strategy Group and thematic groups requires significant staff time across all services. Climate Change Committee Members have expressed concern regarding the progress of several workstreams. Committee Members have therefore made several recommendations to ensure effective governance arrangements are in place to build and deliver the Net Zero strategy and action plan (outlined in section 7 of this report).

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.

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.

Investing now will avoid the Council facing far greater additional costs in the future. 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.

3.2 **Legal** – The Council has several requirements in respect of reporting against its climate change obligations, in addition to being required to directly support Scotland's target to end its contribution to climate change no later than 2045.

3.3 **Community (Equality, Poverty, Rural and Island)** – The just transition to a net-zero and climate-ready Highland will require the creation of opportunities to develop resource-efficient and sustainable economic approaches, which help address inequality and poverty.

3.4 **Climate Change / Carbon Clever –** Combatting climate change is the public sector's most complex challenge. The Net Zero Strategy outlines the Council's approach to addressing the climate emergency.

3.5 **Risk** – Failure to proactively address the climate and ecological emergency across all service delivery carries significant reputational risk, particularly considering the political ambition at both local and national level around the climate change agenda. In addition, failure to take a proactive approach to climate change action will necessarily limit opportunities to secure external funding.

As outlined in Audit Scotland's briefing 'Scotland's councils' approach to addressing climate change', action is needed now to make sure that Scotland is resilient enough to deal with the impacts of the changes to the climate that are already happening. If we do not respond quickly and adequately to reduce greenhouse gas emissions and increase our resilience, drastically, severe widespread impacts are expected. This includes extreme disruption to the systems we depend on for food, water, and shelter.

3.6 **Gaelic** – there are no Gaelic implications arising from this report.

4 Background

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

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

4.2 The Climate Change (Scotland) Act 2009 and the subsequent Climate Change (Emissions Reductions Targets) (Scotland) Act 2019 ("the Act") introduced binding targets and legislation to reduce Scotland's greenhouse gases emissions to net-zero by 2045 at the latest with the following interim reduction targets:-

- 75% below the baseline by 2030; and
- 90% below the baseline by 2040

4.3 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 our annual report, 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**

5 Developing the Council's approach to Net Zero

5.1 At the meeting of The Highland Council on 9 December 2021, it was agreed that a cross service collaborative approach is essential if progress is to be made to move the Council forward regarding net zero. Members agreed that a Net Zero Strategy Group comprising officers working across council services should be established to lead on developing a net zero strategy and action plan for the Council.

5.2 Thematic groups are taking forward workstreams, with each thematic team developing the evidence base within their respective domain.

5.3 A series of all-Member workshops were held in February and March 2023 to provide Members with in-depth knowledge of the work being developed across each Net Zero thematic group. The sessions were also intended to ensure Elected Members were fully briefed on the challenges and complexities of delivering net zero within each thematic strand and how they impact on each other in the delivery of the Council's net zero strategies.

6 Highland Council Targets

6.1 A workshop was held on 18th April for Climate Change Committee Members to review the draft Net Zero Strategy and route map. The Senior Leadership Group was also invited to participate in the afternoon session which included the setting of target dates.

6.2 Climate Change Committee Members have recommended the targets detailed within the route map included in the strategy. This includes setting the following key targets for the Council:-

- reduce emissions by **at least** 75% by 2030; and
- reduce emissions by **at least** 90% by 2040

7 Governance and Reporting

7.1 At the Climate Change Committee workshop on 18 April 2023, Members expressed some concern regarding the progress of several workstreams being developed. Members requested the following governance arrangements are put in place, as a matter of priority, to support the development and delivery of the strategy and action plan:

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. *The Programme Board will meet quarterly.*

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 thematic group. Thematic Group leads sit on the Strategy Group thus ensuring a two-way flow of information. *The Net Zero Strategy Group will meet monthly.*

Thematic Groups – Eight thematic groups will fulfil 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. *Thematic Groups will meet monthly.*

Members will note Waste & Circular Economy was initially covered by one thematic group. Whilst waste and resource management are important elements, circular economy is more holistic – a cross-cutting, whole system approach. On this basis, Members have recommended a separate thematic group be explicitly established for Circular Economy.

7.2 Each thematic group will be responsible for developing and delivering a detailed action plan within their respective domains. Clear targets, milestones, and key performance indicators (KPIs) will be set for all actions, and a system will be implemented for monitoring and reporting progress.

7.3 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.

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 steps identified are the most effective options. To ensure that progress on climate action is monitored more frequently, quarterly progress updates will also be provided to the Climate Change Committee.

8 Training and Literacy

8.1 All employees and Elected Members will have a role to play in adapting the Council to climate change and delivering net zero. 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.

8.2 At the Climate Change Committee workshop on 18th April 2023, Members recommended mandatory Climate Change training should be implemented across all levels of the Council, from officers to Elected Members. Item 6, to be considered at this meeting, outlines the proposed approach to delivering a series of training options that are accessible, engaging, and informative.

Designation:	Depute Chief Executive
Date:	21 April 2023
Authors:	Fiona Daschofsky, Project Manager, Climate Change & Energy Team; Neil Osborne, Climate Change & Energy Team Manager
Background Papers:	Appendix 1 – Net Zero Strategy

Net Zero Strategy

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Clàr-innse

Net Zero Strategy

Introduction
Ro-ràdh

Background

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, COP 21, in Paris in 2015. Known as The Paris Agreement it entered into force in November 2016. The goal is to limit global warming to below 2°C, preferably to 1.5°C, compared to pre-industrial levels.

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

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 on 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 (Scotland) Act 2009 and the subsequent Climate Change (Emissions Reductions Targets) (Scotland) Act 2019 ("the Act") introduced binding targets and legislation to reduce Scotland's greenhouse gases emissions to net-zero by 2045 at the latest with the following interim reduction targets:

- 75% below the baseline by 2030
- 90% below the baseline by 2040

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: -

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- 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**

What is Net Zero?

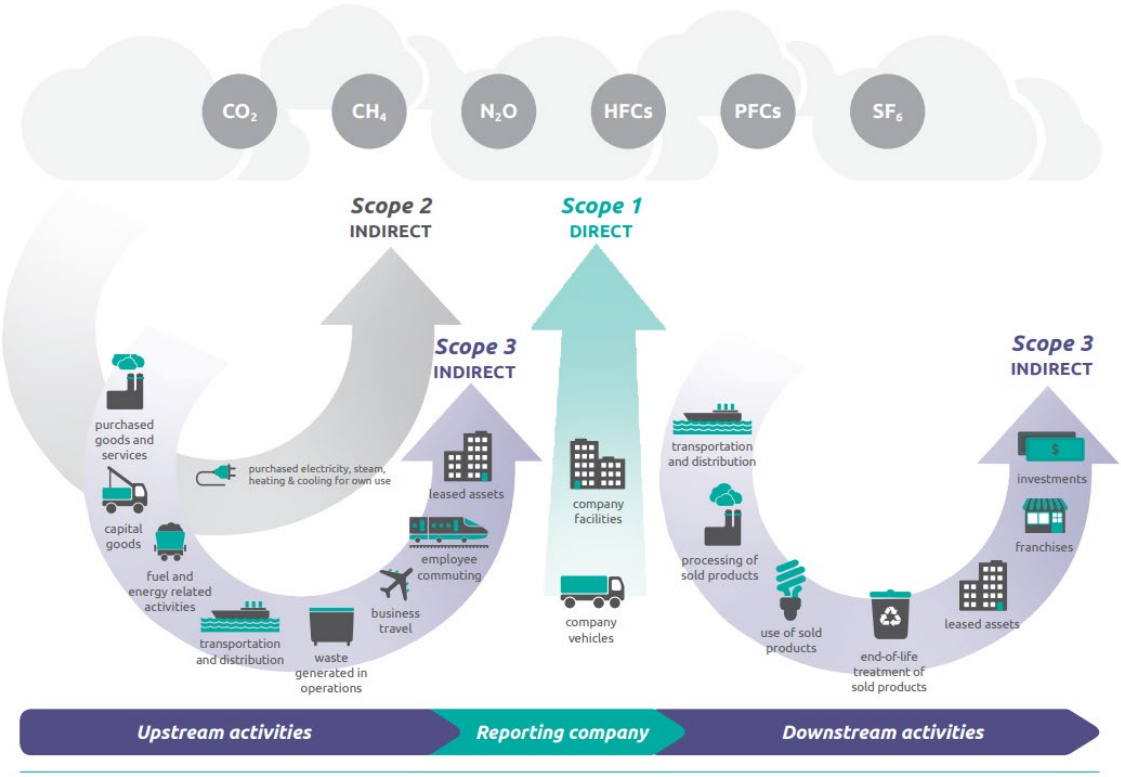
The term net zero means achieving an overall balance between greenhouse gas emissions produced and emissions taken out of the atmosphere. This balance – or net zero – will happen when the emissions we add to the atmosphere are no more than the amount removed.

Net Zero Strategy

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, it will be too complex to cut emissions altogether in some areas.

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.

Scope 1, 2, 3



(Credit to be added for [You, too, can master value chain emissions | GHG Protocol)]

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. 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).

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.

Net Zero Strategy

Adaptation

Alongside the Council's actions to reduce emissions, we also need to adapt and build resilience to the impacts of climate change. 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.

National and Local Drivers

There are several critical drivers for climate change and specifically around climate resilience.

National	National Planning Framework	Climate Change Act (Scotland) 2009	Scottish Climate Change Adaptation Programme
	National Transport Strategy	Flood Risk Management (Scotland) Act 2009	Forestry & Land (Scotland) Act 2018
	Civil Contingencies Act 2004	The Climate Change (Duties of Public Bodies: Reporting Requirements) (Scotland) Amendment Order 2020	Community Empowerment Act (2015)
	Good Food Nation Act	Nature Conservation (Scotland) Act 2004	Environment Act 2021
Regional	Indicative Spatial Plan	Biodiversity Plan	Highland Forest & Woodland Strategy 2018
	Transport Strategy	Community Food Growing Strategy	Highland Adapts
Council	Corporate Plan	Service Plans	Council Programme
Local	Local Development Plans	Local Flood Risk Management Plan	Highlands and Islands Local Resilience Partnership

Climate Observations and Projections

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 which is 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 are likely to experience the greatest impact by climate change.

The UK Climate Projections (UKCP18) show that impacts will become more frequent and intense, including higher average temperatures, increased rainfall, and unpredictable weather patterns. View here:

https://www.metoffice.gov.uk/research/approach/collaboration/ukcp

Climate Risks and Consequences

The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change. The latest IPCC report highlighted the severe inaction to adapt to the impact of climate change. View here: https://www.ipcc.ch/

Net Zero Strategy

The UK Climate Change Risk Assessment 2022 considers sixty-one UK-wide climate risks cutting across multiple sectors of the economy. View here:

https://www.gov.uk/government/publications/uk-climate-change-risk-assessment-2022

Adaptation Scotland has compiled a comprehensive list of fifteen potential effects which will directly or indirectly impact the public sector - Adaptation Scotland: Impacts in Scotland. View here:

https://www.adaptationscotland.org.uk/why-adapt/impacts-scotland

Highland Adapts is currently undertaking the first Highland Climate Risk and Opportunity Assessment and has developed the following table of impacts:

https://highlandadapts.scot/

Weather and Climate Impacts Across Highland	Impacts on your Highland Home	Impacts on your Highland Business	Impacts on your Highland Lifestyle	Impacts on Infrastructure
1. Water supply and quality	1. Home value	1. Supply chain disruption	1. Food availability	1. Design choices
2. Landslides	2. Insurance costs	2. Business continuity	2. Transportation disruption	2. Weather-proofing
3. Strong winds	3. Pest infestations	3. Productivity	3. Shorter winter seasons	3. Heat stress
4. Fire risk	4. Reduced access	4. Seasonal demand	4. Increased tick-borne illness	4. Pipes bursting
5. Snow and ice accumulation	5. Construction and repair delays	5. Tourism levels	5. Changes to cultural heritage sites	5. Insurance costs
6. Coastal erosion	6. Ventilation in summer	6. Product damage or spoilage	6. Wildlife population changes	6. Heat and energy costs
7. Soil erosion	7. Garden productivity and species choice	7. Access	7. Anxiety and stress	7. Ventilation in summer
8. Air quality	8. Landscape change	8. Property value	8. Biodiversity loss	8. Roof damage
9. Dampness	9. Outdoor access	9. Livestock health	9. Cost of living	9. Renewable energy access
10. Flooding	10. Community support	10. Resource availability	10. Event cancellations	10. Power outages

Building resilience and ensuring Business Continuity

The Highland Council will 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.

Net Zero Strategy

Approach / Areas of Focus:

- We will undertake a Council-wide Climate Risk and Opportunity Assessment to identify services with potential vulnerabilities to climate change.
- We will develop and implement a Climate Change Adaptation Strategy and Action Plan. This will align with the Net Zero Strategy.

Net Zero Strategy

Progress to date
Adhartas gu Seo

Infographics to be added to final version – examples included for information

Developing our people

Protecting wildlife and conserving natural resources

In November 2022, the Council signed the Edinburgh Declaration acknowledging the importance of biodiversity and that the Council is committed 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.

Promoting a sustainable waste culture & circular economy

Reducing travel emissions

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.

The Council has also installed 91 public access EV charging points across the Highlands since 2018. 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 Highland 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.

We have already 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.

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 car use for business purposes (grey fleet).

A trial is taking place in Inverness of 2 No. Fully electric walk behind Green-machine footpath/street sweepers with a view to these types of sweeper being rolled out across the Highlands to replace the existing walk behind sweeper fleet.

Planning

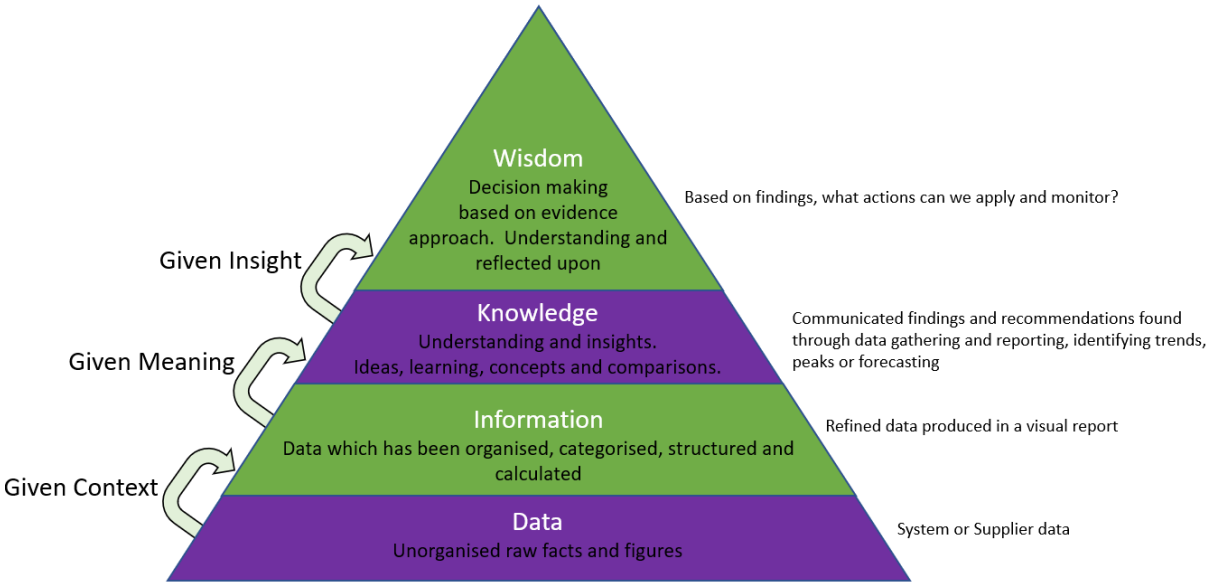
Net Zero Strategy

Data
Dàta

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 continues to rise.
- 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 advances in technology and systems used.
- To become pro-active in the management of our emissions through trend analysis and forecasting.
- To forecast and proactively address trends in data through regular reporting.



Introduction

The council has adopted and will maintain a calculation of emissions as CO2e than just CO2 emissions. Using CO2e (Carbon Dioxide equivalent) captures all the greenhouse gases emitted from an activity, rather than just CO2. The carbon dioxide equivalent allows the different greenhouse gases to be compared on a like-for-like basis relative to one unit of CO2. CO2e 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 CO2e, the Highland Council will capture Greenhouse Gases (GHG) emitted: Carbon dioxide (CO2), Methane (CH4), Nitrous oxide (N2O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs)

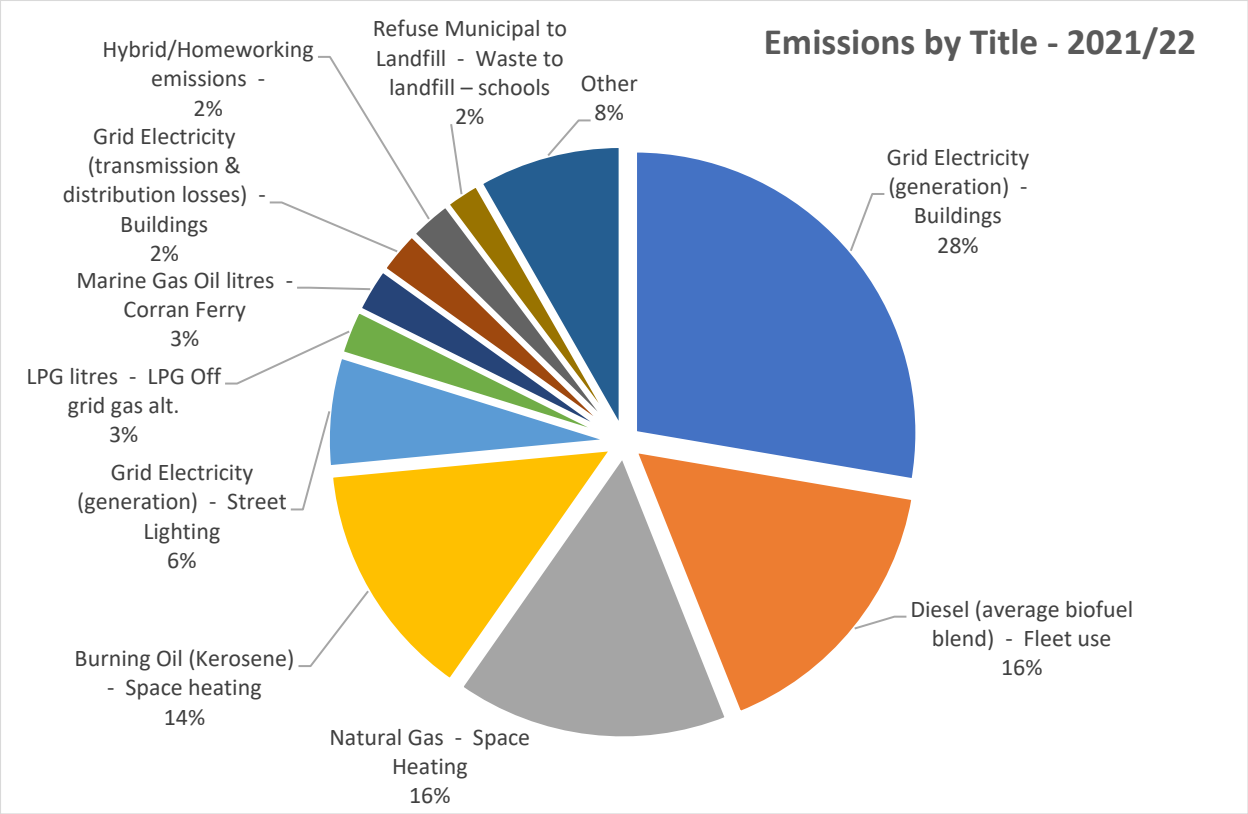
and Sulphur hexafluoride (SF6). Emission data will be based on the most up to date DEFRA conversion factors.

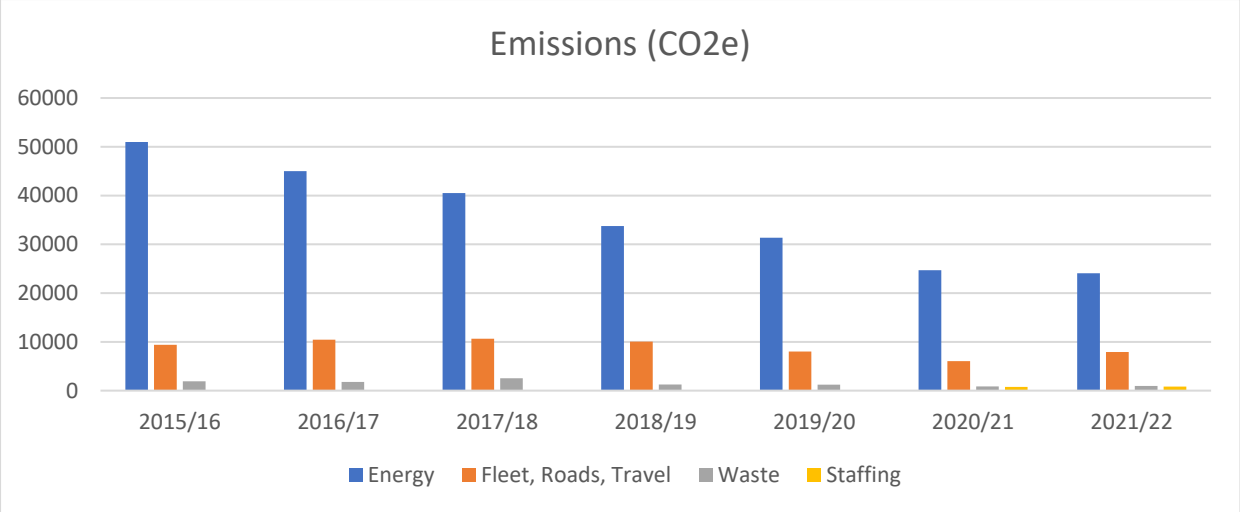
Our story so far

Using data from our 2021/22 Public Bodies Climate Change Duties (PBCCD) report, there are several areas where the bulk of our emissions come from. These are namely;

- Grid Electricity from our buildings
- Fleet and Staff Travel, and
- Heating to our buildings

PBCCD reporting is currently based on our historic baseline. As our understanding of emissions develops we are likely to see more detailed reporting from areas such as procurement.





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. We should include as much data as feasible to provide a true 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 moving forwards.

Area of Emissions	Net Zero Scope	Included in Baseline
Car - hybrid (average) miles - car club	✓	✗
Car - petrol (average) - Car hire mileage	✓	✓
Car - petrol (average) - Grey fleet mileage	✓	✓
Staff Travel - Flights (average passenger)	✓	✓
Bus - staff travel	✓	✓
Taxi (regular) - Staff travel	✓	✓
Ferry (average passenger) - staff travel	✓	✓
Rail (National rail) - staff travel	✓	✓
Hybrid/Homeworking emissions -	✓	✓
Petrol (average biofuel blend) - Fleet use	✓	✓
Diesel (average biofuel blend) -	✓	✓
Gas Oil litre - Winter gritting fleet	✓	✓
Marine Gas Oil litres - Corran Ferry - Public RORO and passenger service	✓	✗
Grid Electricity (generation) - Buildings	✓	✓
Grid Electricity (generation) - Street Lighting	✓	✓
Grid Electricity (transmission & distribution losses) - Buildings	✓	✗

Grid Electricity (transmission & distribution losses) - Street lighting	✓	✗
Energy used by PPP buildings	⏳	✓
Social Housing - Energy Used	⏳	✗
Natural Gas - Space Heating	✓	✓
Biomass (wood chips) - Space heating	✓	✓
Burning Oil (Kerosene) - Space heating	✓	✓
LPG litres - LPG Off grid gas alt.	✓	✓
Water - Treatment - Water out of all buildings.	✓	✓
Water - Supply - Water to all buildings	✓	✓
Refuse Municipal to Landfill - waste to landfill - non-schools	✓	✓
Refuse Municipal to Landfill - waste to landfill - schools	✓	✓
Organic Garden Waste Composting - Composting - schools	✓	✓
Organic Garden Waste Composting - Mixed composting - non schools	✓	✓
Organic Food & Drink Composting - organic food waste - non-schools	✓	✓
Organic Food & Drink Composting - organic food waste - schools	✓	✓
Mixed recycling - recycling - non-schools	✓	✓
Mixed recycling - recycling - schools	✓	✓
Supply Chain Emissions (procurement)	⏳	✗

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

It is important to ensure we collect, store, manage, and use data effectively to achieve our objectives. It is important to develop governance surrounding data collection as well as handling newly developed data sources such as supply chain emissions.

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.

Net Zero Strategy

Route map
Mapa Slighe

A Route map to Net Zero

- 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.

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%.

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

2030

- Social Housing to achieve EPC B by 2032

- 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.

2035

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

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

2040

- Reduce emissions by at least 90%.

2045

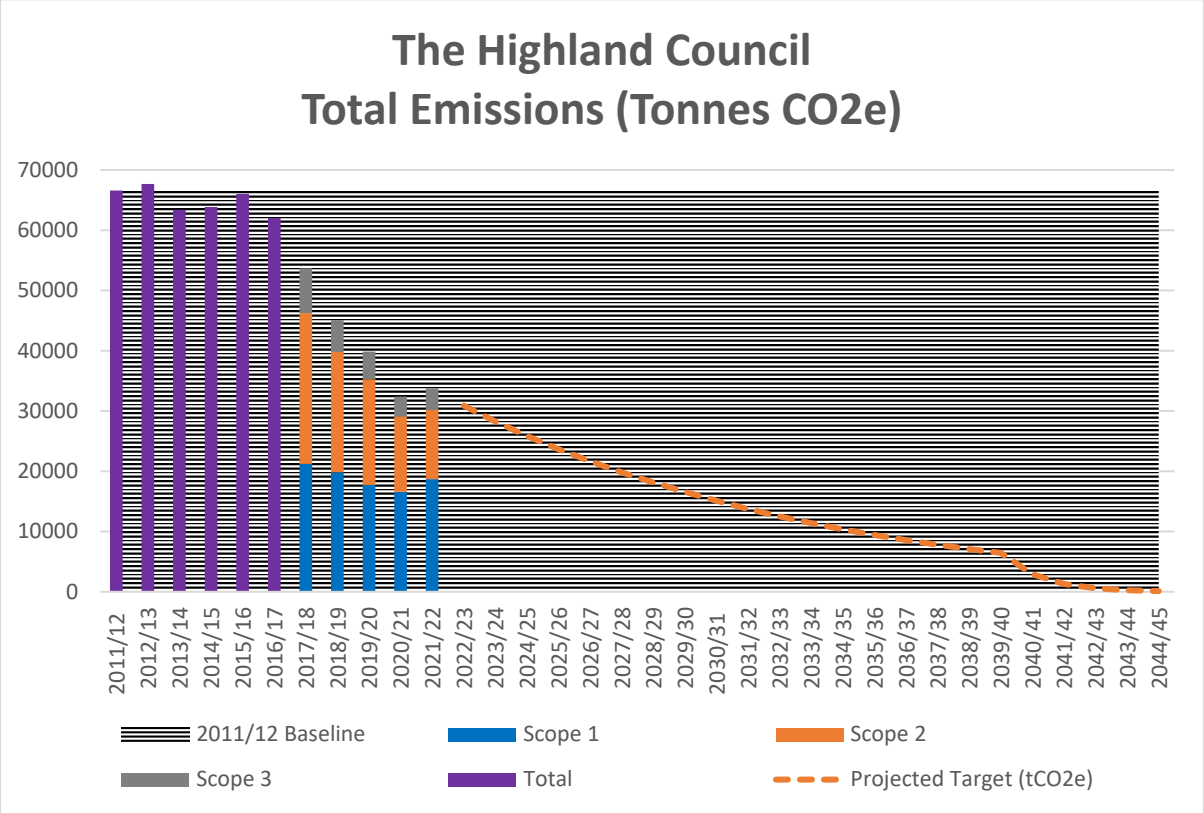
- Scotland is Net Zero.
- Scotland has restored and regenerated biodiversity across our land, freshwater and seas.

The Highland Council
Comhairle na Gàidhealtachd

A Resilient and Sustainable Council…
… A Sustainable Highland Environment

Net Zero Strategy

To align with the route map it is vital to consider annual reductions to set targets and gauge progress.



Since the 2011/12 baseline, emissions have fallen from 66,579 tCO2e to 33,766 tCO2e. A total reduction of nearly 50%.

To meet the 2030 target of at least 75% below baseline and an annual decrease of 8.5% is required. An additional 0.5% will be required between 2030 and 2040 to achieve the target of at least a 90% reduction.

Net Zero Strategy

Built estate & energy

Drivers

National	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	
Regional		
Local		

Emerging / On the horizon

- Draft Energy Strategy and Just Transition Plan consultation period to 9 May 2023
- Area-based Local Heat and Energy Efficiency Strategy (LHEES) to be developed by 2024

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

National Targets
All publicly owned buildings to achieve zero direct emissions by 2038

Current context
The Council's use of energy across its built estate (consumption of electricity, gas, oil, LPG and biomass) accounts for 76% of its total carbon footprint.

THC non-domestic property portfolio covers more than 1,000 sites with utility supplies.

- Includes key functions such as:

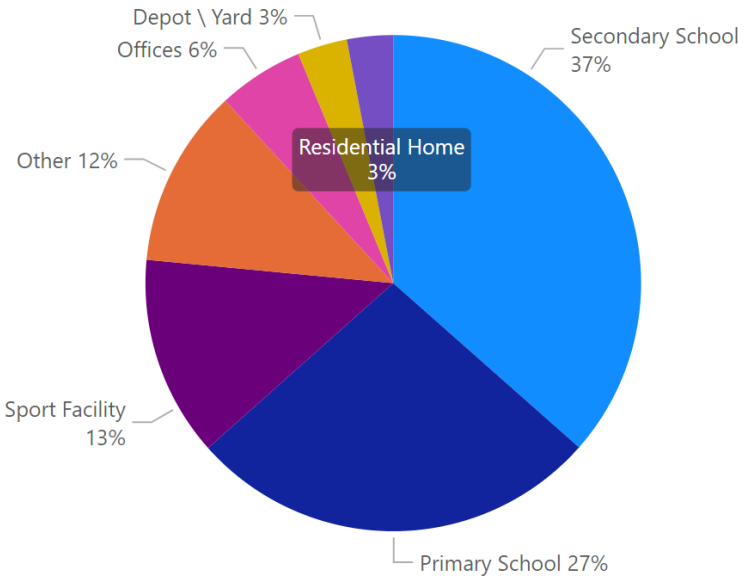
  - Schools – Both Primary & Secondary (950 buildings over 200 sites inc HLH, PPP1, PPP2 & Wick Campus))
  - Council Offices (195 buildings over 45 sites)
  - SW Facilities
  - Depots (109 buildings over 38 sites)
- Ageing Built Estate
- Reduction in Property Maintenance Budget

Data

For the financial year 2021-22 carbon emissions from the built estate amounted to 25,582 tCO2e.

Utility	Carbon Emissions (tCO2e)	Carbon Emissions (%)
Electricity	10,699	42%
Gas	6,984	27%
Oil	6,072	24%
LPG	921	4%
Biomass	710	3%
Water	193	1%
Total	**25,582**	**100%**

And apportioned to main property types



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

Net Zero Strategy

Annual Utility Cost Forecasts

Utility	19-20	20-21	21-22	22-23 Predicted	23-24 Forecast	24-25 Forecast
Electricity	£9,511,234	£8,067,112	£8,468,684	£9,511,572	£13,735,902	£16,004,042
Biomass	£2,585,751	£2,783,706	£2,728,293	£4,198,293	£5,108,397	£5,321,707
Water	£1,783,791	£1,746,381	£1,779,979	£1,854,738	£2,040,212	£2,040,212
Oil	£904,179	£606,398	£1,112,046	£2,091,403	£2,091,403	£2,091,403
Gas	£978,174	£835,562	£738,543	£1,775,412	£1,780,928	£1,949,296
Propane	£171,713	£169,685	£222,257	£344,424	£344,424	£344,424
Total	**£15,934,843**	**£14,208,844**	**£15,049,802**	**£19,775,842**	**£25,101,266**	**£27,751,084**

Challenges

- Ageing built estate
- Capital programme
- Inflation impact on capital investment (costs increase of around 30% seen so far)
- Reduction in property maintenance budget
- Transition from fossil fuels to renewables, technically and financially.
- Construction industry

Self Generation

While reducing energy consumption and improving energy efficiency will continue to play a key part in the Net zero Strategy. Decarbonising our energy supply will contribute the large gains in our carbon reduction.

Highland Council were an early adopter 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 corporately 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 / approach

The groups focus is on reducing carbon emissions and improving the energy performance (and running costs) of the council's property estate

This includes key functions such as:

- Schools – both primary and secondary
- High life highland buildings
- Council offices
- SW facilities
- Depots, etc.,

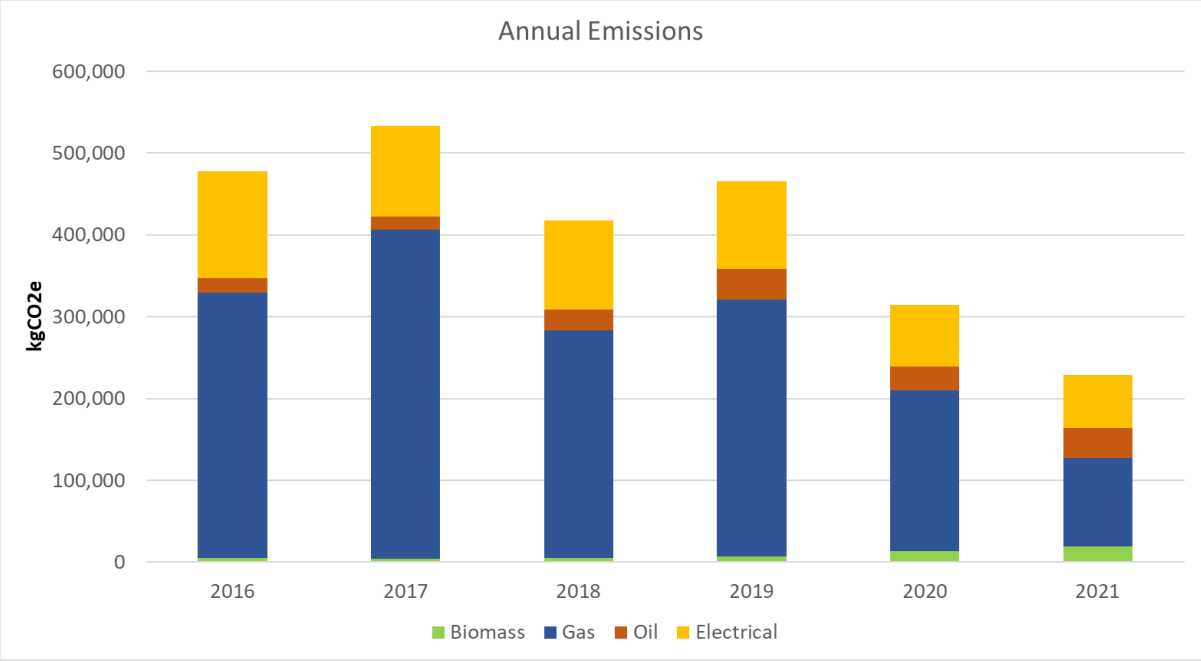
Change Projects:

- Fabric Improvement
- Reducing the number of buildings we occupy
- Improve the energy efficiency of the estate
- Installation of LED lighting
- Installation of renewable energy generation technologies, e.g. photovoltaic panels
- Making use of new technologies, e.g. smart monitoring systems in buildings
- Installation of building management systems
- Installation of Low and Zero Carbon heating systems.
- Heating Policy
- Behaviour Change

Case studies

Inverness High School

Figure 10 highlights the overall carbon emissions profile for Inverness High School. It highlights the significant reduction in emissions by replacing the majority of onsite gas consumption with biomass. Overall emissions have dropped from 533,523 kgCO2e in 2017 to 228,276 kgCO2e in 2021, equivalent to a 57% reduction in emissions.



Net Zero Strategy

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 BMS system and 2off 14kW ASHP were installed which have shown further energy improvements.

Action Plan

- Achieve zero carbon standards for all new buildings
- Increase building user awareness of ways of reducing energy use and saving utility costs
- Convert all fossil-fuel based building heating systems to low or zero carbon alternatives
- Develop and adopt design standard for sustainable construction and maintenance
- Estate Rationalisation (including schools)
- Development of shared co-location facilities for all community areas (e.g. business, volunteers, leisure)
- LHEES reference for strategy and separately for implementation?
- Align Capital Investment Programme with Net Zero targets and aspirations
- Application of the NDEE investment programme
- Identify, develop and implement energy reduction projects to the property estate, supported by the Salix fund
- Develop appropriate technical standards, specifications and guidance to support and embed Net Zero goals and aspirations for all work undertaken on the Property Estate
- Improving utilisation of data to proactively identify and address energy deficiencies and opportunities within our estate

Net Zero Strategy

Social Housing & HRA

Drivers

National	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 (EESSH2) – 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	
Regional		
Local	Highland Local Housing Strategy 2017-2022	

Emerging / On the horizon

- The Highland Council Local Housing Strategy 2023-2028 is currently under review and will be presented to Housing & Property Committee in April
- 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
- Draft Energy Strategy and Just Transition Plan consultation period to 9 May 2023
- 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 EESSH2 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 (EESSH and EESSH2) 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 table below summarises the energy efficiency (EE) banding and energy efficiency rating.

Table 1: EE banding and EE rating

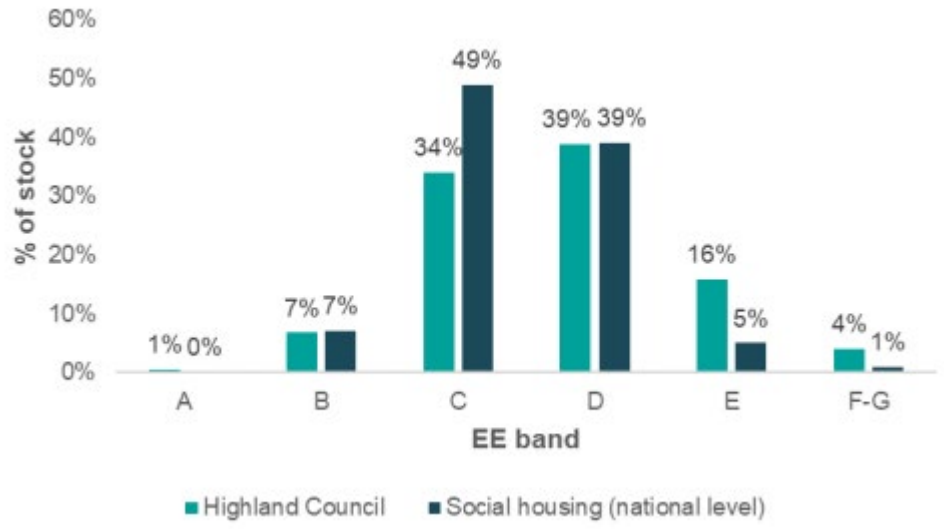
EE band	EE rating
A	92+
B	81 - 91
C	69 - 80
D	55 - 68
E	39 - 54
F	21 - 38
G	1 - 20

Most of the Highland 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 a 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. It should be noted that Highland's Council stock is largely rural/semi-rural and off-gas which impacts adversely on the energy ratings.

Table 2 summarises the spread in EE band of the Council's properties compared to that of Scotland's social housing.

Table 2: EE band of THC and Scotland's social housing



Energy Efficiency Standard for Social Housing (EESSH & EESSH2) Milestones

The EESSH 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 EESSH 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 EESH2 standard.

The Highland Council has 1,067 properties (7%) which meet the energy rating of B-81 required for EESSH2 compliance. Analysis of the Council's housing stock has been undertaken to determine compliance with EESSH2 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%)

Analysis of the Council's housing stock has identified that installing all applicable modelled improvements would increase the proportion of housing stock meeting the EESSH2 requirements from 7% to 49%. It is estimated that 7,162 would reach EESSH2 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 EESSH2 standards but will still provide considerable benefit to the tenants in terms of improving the properties involved.

Whilst installing the measures identified by the EESSH2 modelling should lower the carbon emissions of the Council's domestic stock, it should be noted that meeting EESSH2 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 carry out 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 whereby over 40% of existing annual expenditure contributes towards paying for loan charges.

Net Zero Strategy

Highland has been successful in receiving £1.9m of funding from the Social Housing Net Zero Heat Fund but further funding is essential to deliver the volume of works required.

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.

Areas of focus / approach

- A revised Housing Revenue Account Capital Plan will be submitted to the Council's Housing & Property Committee 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.
- Adopting a fabric first approach is essential 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.

Case study/info re project/funding awarded to HC for whole house retrofit?

(Net Zero Heat Fund, £1.9 – full house retrofit, 80 properties, ?)

Action Plan

- Develop approach to working towards the Net Zero Standard by December 2023
- 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) by July 2023.
    - Priority is to reduce emissions as low as possible. Further measures including solar PV, battery storage would be required to move properties beyond low emission and towards net zero.
- Identify and utilise external funding sources such as ECO.
- Review of existing governance should be undertaken to ensure alignment with all available funding is explored to maximise the benefit in efficiency improvements to the estate.

Net Zero Strategy

Transport

Drivers (National & Local)

National	National Transport Strategy	Transport (Scotland) Act 2001, updated in 2019
Regional		

Emerging/On the Horizon
Sustainable Business Travel Strategy – will be considered by Communities & Place Committee on 24th May 2023.

Local Transport Strategy - The Highland 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
The Scottish Government has set the following targets:

- 2025: The need for new petrol and diesel cars and light commercial vehicles (3.5T and under) in public bodies' procurement is phased out.
- 2030: The need for and for all new petrol and diesel vehicles in Scotland's public sector fleet is phased out (i.e. large goods vehicles over 3.5T).
- 2030: 20% reduction in car km by 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 the corporate carbon footprint, 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.

The 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.

- 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.

(Based on 2021/22 Financial Year) **Vehicle Type**	No. Vehicles	No. ULEV (EV/hybrid)	Annual mileage (miles)	Annual Emissions (tCO2e)	% Number	% Mileage	% Emissions
Car	108	78	787,100	151	9%	7%	2%
Grey Fleet *	1325^	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%
RCVs	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%
Total	**1198**	**136**	**12,003,203**	**7,412**			

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

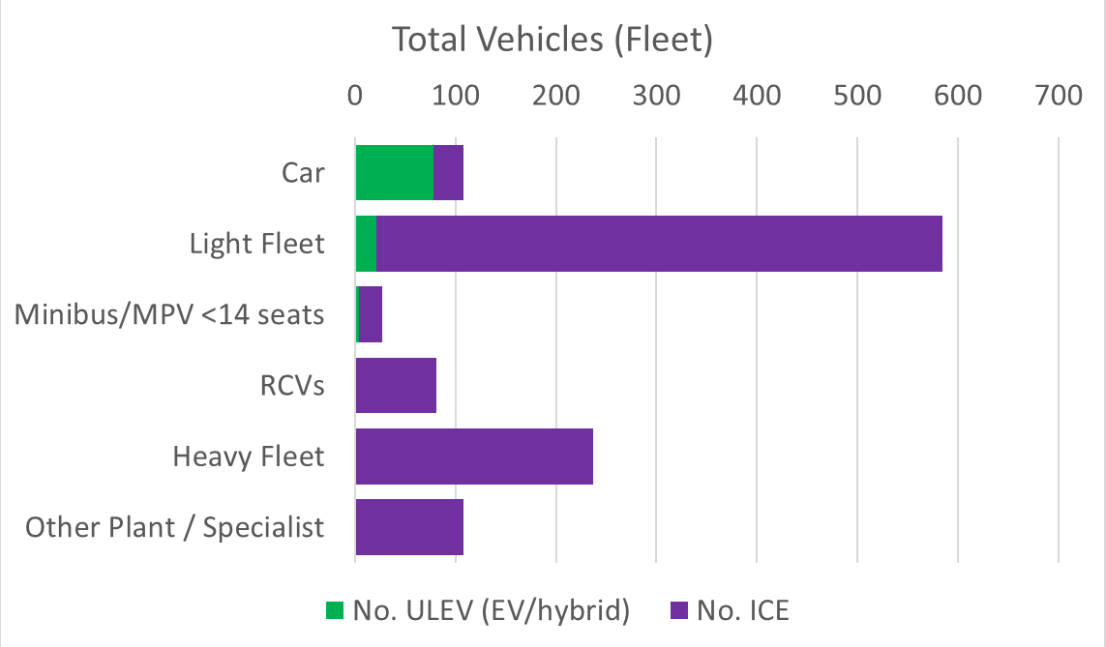
* Does not include Highlife Highland

^ Number of employees claiming mileage reimbursement. Excluded from total and vehicle percentage splits.

Progress to date

The Council has already made significant progress on their fleet decarbonisation. We have already 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.



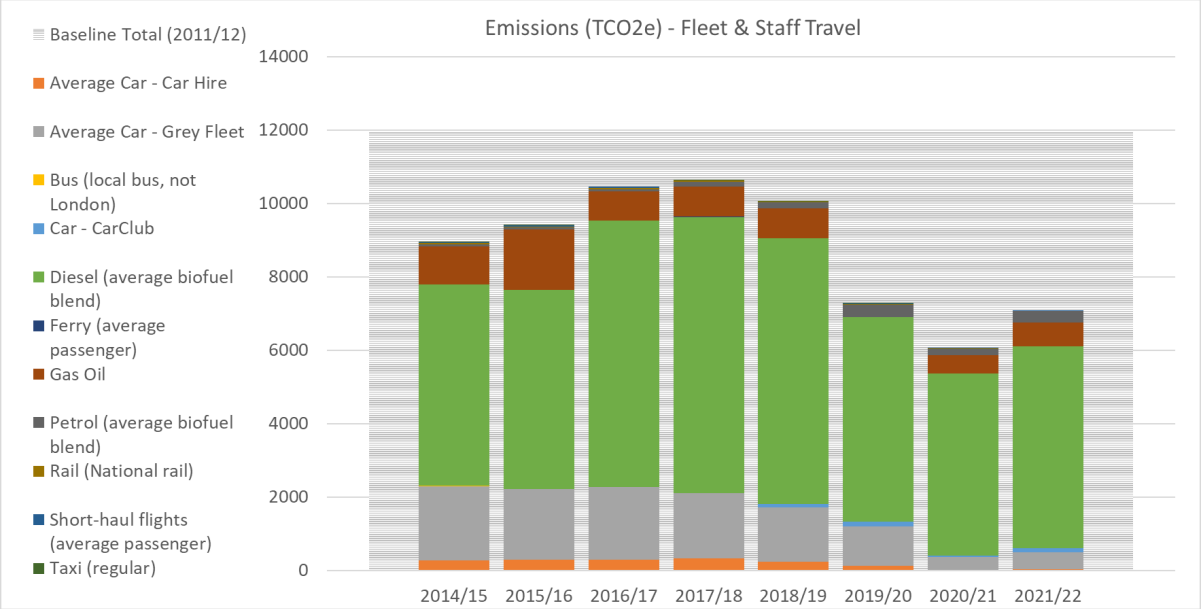
The Council has also installed 91 public access EV charging points across the Highlands since 2012. Funding of £3m from Transport Scotland has enabled the Council to develop the public EV network across the Highlands, accelerating the transition to low carbon transport for the Highland Council and our 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).

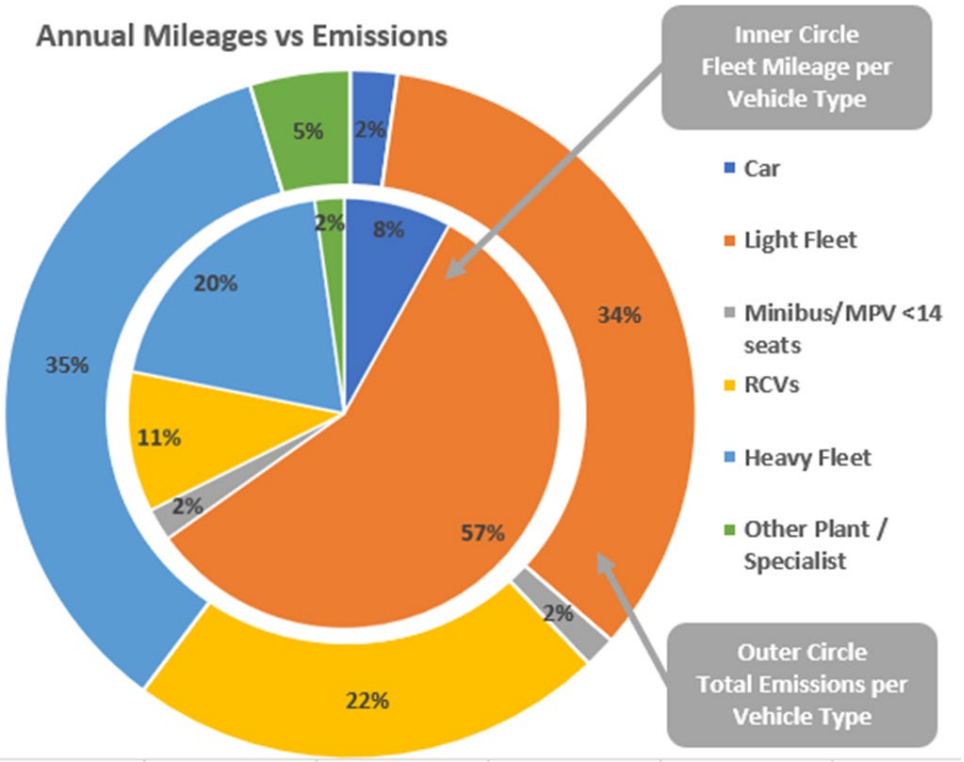
Travel was considerably reduced during the COVID-19 pandemic, with technology enabling the Council to adapt to how it delivers a number of services. The pandemic forced changes in the behaviour of the organisation and accelerated the journey to adopt new ways of working.

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.

Net Zero Strategy



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



Net Zero Strategy

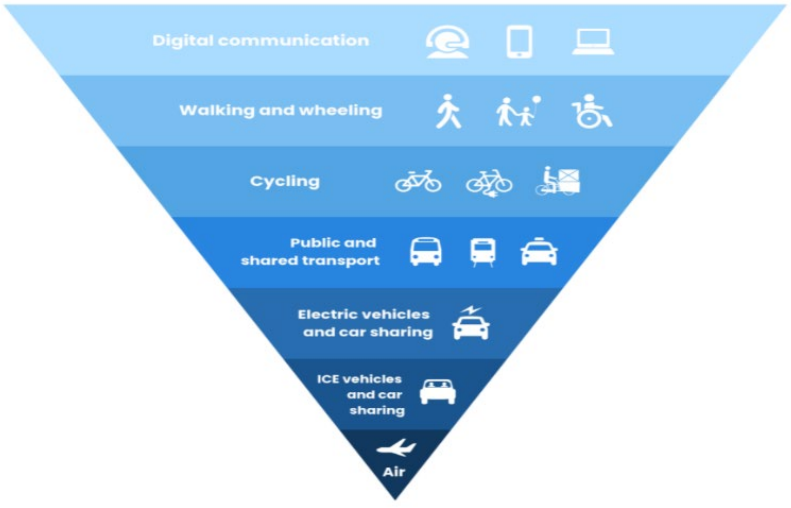
Challenges

- 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.

Approach

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 (Fig. XX) 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.



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.

Outcomes / Priorities

1. Operate within the principles of the new Local Transport Strategy

The Highland 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 framework 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.

Promoting active travel infrastructure is among the aims of the Council's Corporate Plan. As local leaders with a wide sphere of influence, we will look to lead by example in adopting, promoting, and providing infrastructure to enable and encourage staff to choose active travel. We are currently looking to improve active travel options for HQ, Inverness. A site facilities audit has been carried out and we have recently undertaken a staff survey to find out how staff currently travel and the barriers to active travel.

2. Deliver and build on programme of work outlined in the Our Future Highland Programme 2022-27, with particular focus on the following actions:

- 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.
- Work to ensure accessible transport networks are integrated into future housing developments for access to work and services.
- 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.
- Achieve Net Zero Targets. This includes the number of Highland Council and public Electric Vehicle Charger Sites.
- 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.

3. Develop and deliver the Sustainable Business Travel Strategy

This strategy sets out how the Council will move towards a sustainable business travel model when delivering services to the citizens of Highland. At the centre of this is:

- Downsizing the fleet and driving fewer miles.
- Fuel-efficient driving.
- Replacing vehicles with low emission alternatives.
- Reducing the use of grey fleet (using private vehicles for work purposes).

We have identified four strategic themes that will underpin the sustainable travel strategy:

- Theme 1 – Reduce through behaviour change.
- Theme 2 – Rationalise and renew the Light Fleet.
- Theme 3 – Investigate and develop low emission approaches for the Heavy Fleet.
- Theme 4 – Building Resilience into the Council's travel projects, guidance and policies.

4. Investment in EV infrastructure

The Council will continue to develop plans to fund and deliver the EV charging and grid infrastructure required to enable a transition away from commercial petrol and diesel vehicle use.

In collaboration with Aberdeen City Council and Aberdeenshire Council, we are currently undertaking a Pathfinder Project to explore alternative delivery models for public and fleet EV infrastructure. The project will identify future charge point requirements across the region and the preferred delivery model to attract private sector investment. 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.

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.

5. Build resilience into the Council's travel projects, guidance, and policies

The Council must take proactive steps to ensure the continuity of its critical travel network in response to the changing climate. 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.

Case study / Spotlight

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 Highland 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 fleet vehicle travel with low-emission E-cargo bike travel, reduce car miles travelled and offer fuel savings, and provide health and wellbeing benefits for Council employees.

Net Zero Strategy

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.

Net Zero Strategy

Land Use & Environment

Drivers

National	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
Regional	Highland Nature Biodiversity Action Plan 2021 -2026	
Local	• Highland Forest and Woodland Strategy, 2018 • Growing Our Future – Community Food Growing Strategy • Inner Moray Firth – Developing with Nature • Highland and Argyll Local Flood Risk Management Plan, 2022-2028 • Findhorn, Nairn and Speyside Local Flood Risk Management Plan, 2022-2028 (Moray Council)	

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 on 4 May 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

- Tree planting target of 18,000 hectares of new woodland creation every year by 2025.
- National commitment to restore 20,000 hectares of Scottish peatland annually, with a target of 250,000 hectares by 2030.
- The Scottish Government's draft Scottish Biodiversity Strategy has set a target to halt biodiversity loss by 2030 and to reverse biodiversity loss by 2045. There is a

commitment to designate 30% of Scotland for nature by 2030, develop nature networks and designate at least one new National Park.

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. The Council is involved in several projects to build resilience including setting aside land for biodiversity and investing in nature-based solutions.

Approach and priority areas for action:

Outcome 1: Enhancing biodiversity and carbon sequestration

Delivery of Council and community biodiversity projects through the Nature Restoration Fund:

- A greenspace mapping and management plan project was undertaken in 2020/21, funded by the Nature Restoration Fund. The Greenspace mapping project sought to identify, map and plan management for all land owned or managed by the Highland Council and recommend positive future measures to improve biodiversity, create diverse habitats, and sequester carbon.

- In May 2022, the Highland 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.

Identify opportunities to develop and enhance green/nature networks across Council owned greenspace and land:

- Utilise and build on the findings and opportunities for biodiversity enhancement identified by the 2021/22 Greenspace 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.
- Reduction in areas to be maintained through traditional grass-cutting by utilising areas as set-aside areas. Create more 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.

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

Development of an Ecological Strategy:

- The strategy will set a vision, targets and objectives and will identify Council actions and policies to address the ecological emergency.

Development of various strategies to reverse the decline of, and enhance, biodiversity including:

- Verge Management Strategy
- Pollinator Strategy
- Integrated Weed Control Strategy and Action Plan

Mapping of Highland carbon resource:

- Calculate and quantify the carbon sequestration of Highland Council's land holdings, for insetting purposes.
- Mapping the extent of Highland's carbon resource is 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).

Establishment of the Carbon Management in Highland Partnership:

- In mapping the extent of Highland's carbon resource, the Council has held several Carbon Management in Highland 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 an appetite to form a Partnership, chaired by the Highland Council, which will support sustainable carbon management and other ecological and community 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.

Maximise opportunities to secure Green Finance

- This includes the creation of a SCIO for attracting private finance into peatland restoration through the Flow Country Green Finance Initiative.

Outcome 2: Build climate resilience into our natural environment and land use practices

Strategy for 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). The Council will create Highland's first Local Nature Conservation Site in 2023 and use this test case to develop a process for identifying and inscribing new sites.

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 benefitting 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.

Case study - 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 increase in sea levels and storm frequency and severity. Climate Action Coastlines 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. Additional funding has recently been awarded for further research into blue carbon habitats in the area.

Net Zero Strategy

Development Plan and Place Based Approach

Drivers

National	National Planning Framework 4	Planning (Scotland) Act 2019	Flood Risk Management (Scotland) Act 2009
Regional	Indicative Spatial Plan	Highland-wide Local Development Plan (HwLDP)	
Local	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.

Net Zero Strategy

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 (CaSPla), 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 – IMFLDP, CaSPlan, 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

The Scottish Government Fourth National Planning Framework (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.

Net Zero Strategy

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.

Development Plan and Place Based Approach

Key Priority Areas for action:

- Finalise and implement the Inner Moray Firth Local Development Plan policies
- Implementation through Development Briefs and other partner and corporate projects
- Develop a new Highland-wide Development Plan that aligns with and reinforces NPF4 (Indicative Regional Spatial Plan)
- Coordinate the delivery of net zero through Place Based Plans for Highland's sub-regions
- Empower communities to prepare Local Place Plans that lead local delivery of Net Zero and climate resilience
- Continue to work with Planners to ensure inappropriate development in flood risk areas does not occur

Net Zero Strategy

Waste

Drivers (National & Local)

National	Delivering Scotland's Circular Economy - A Route Map to 2025 and Beyond	The Scottish Household Waste Recycling Charter and Code of Practice
	Food Waste: • Food Waste Reduction Action Plan, 2019 • Scottish Government Urban Rural Classification 2020	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
The Scottish Government has set the following targets.
By 2025, Scotland aims to:

- reduce total waste arising in Scotland by 15% against 2011 levels
- reduce food waste by 33% against 2013 levels
- recycle 70% of remaining waste
- send no more than 5% of remaining waste to landfill

Current Context

The Highland 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 any and 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 present food waste separately for collection

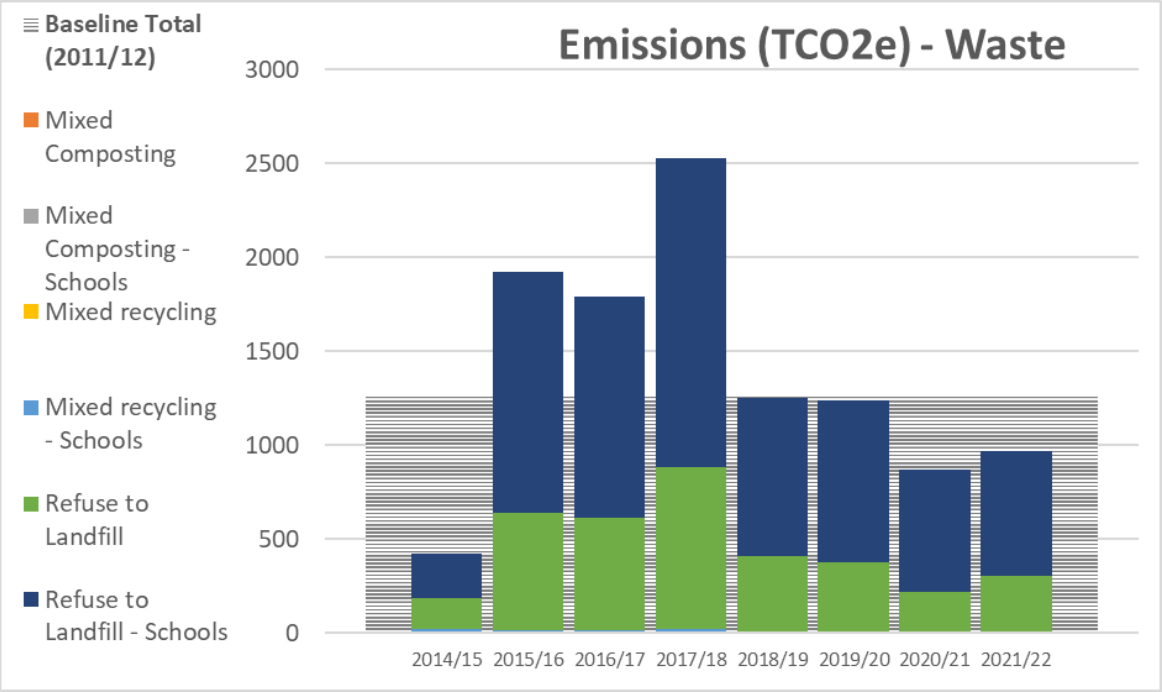
Net Zero Strategy

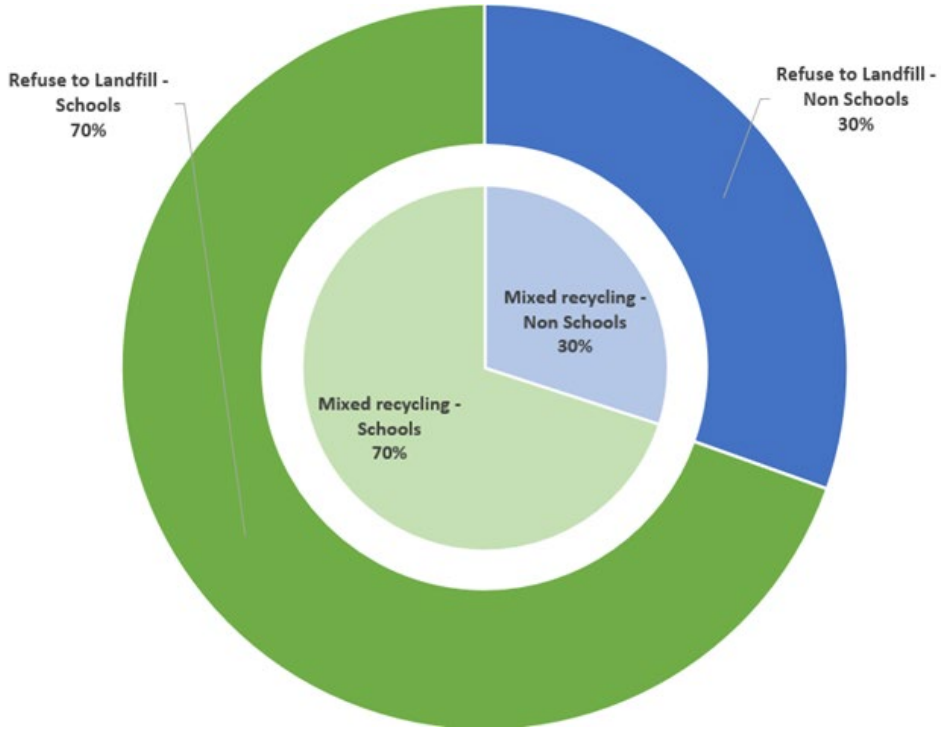
The Council is required to meet the above regulations, as the largest employer in the region we should strive to demonstrate best environmental practice and lead by example.

Emissions from internal waste represent less than 3% (969 CO2e tonnes) of the corporate carbon footprint. Whilst the council has made progress in reducing waste emissions from the baseline year figure of 1,262 CO2e tonnes (2011/12), the cost of dealing with our own 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.





Recycling Improvement Fund

The 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.

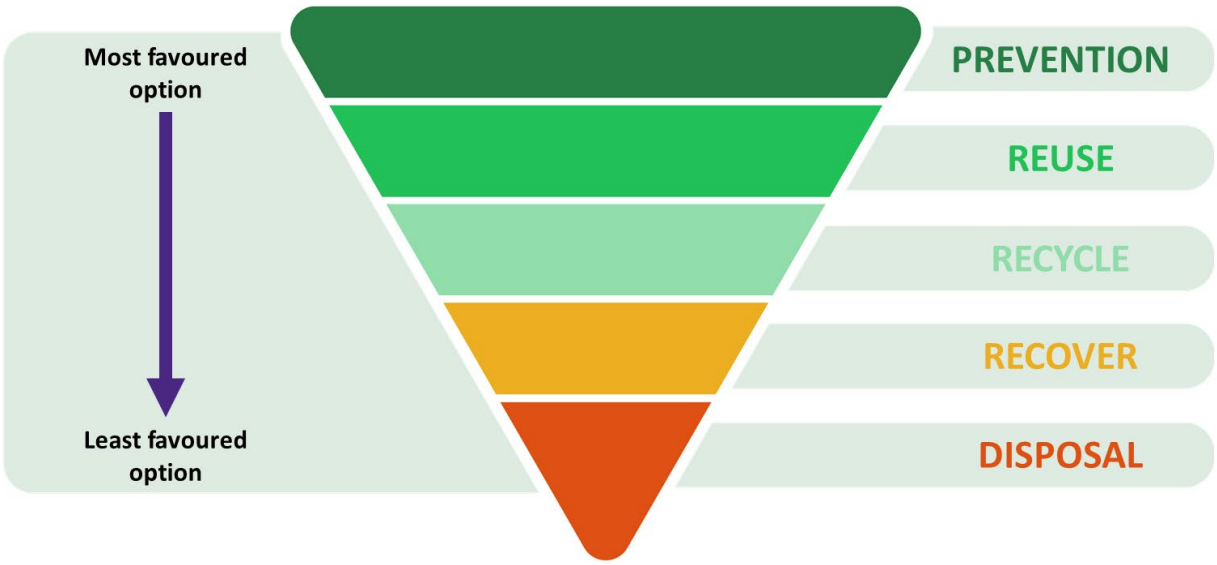
Challenges

- 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.

Approach

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.

Net Zero Strategy

Recycling Opportunities
Actions include:

- Review current recycling collection points across premises to ensure they are in convenient locations for staff 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's Waste Services Team have an experienced and dedicated Waste Awareness Team who are 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 Recycling Improvement Fund 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.

Outcomes

- Embed behavioural change across the Council's workforce and schools
- A reduction in residual waste generated from Council buildings and operations, including offices, schools, care homes, depots, piers, harbours, and stores.
- An increase in the quantity and quality of recycling across the Council estate.
- Expand food waste collections in Schools and other Council premises.
- A reduced carbon footprint from our catering in schools.

Areas of focus / Priorities

- Improve the recycling infrastructure across the Council estate (subject to the availability of funds).
- Identify educational and training needs to embed behavioural change across services and schools.
- Deliver awareness raising campaigns to encourage staff and pupils to reduce, re-use and recycle.
- Strengthen partnership working between catering and education staff in schools to reduce food waste.
- Transition to Digital by Default and paperless working across all viable services to reduce paper consumption and waste.

Net Zero Strategy

Case study / Spotlight
Case study to be developed on food waste in schools project

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.

Net Zero Strategy

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.

Net Zero Strategy

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 draws together our own Scottish experience, knowledge and learning as well as that from other organisations and locations. 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.

The table below provides suggested internal actions for the whole authority:

Table 3 Internal actions

Whole Authority / All Departments

Promoter	Facilitator	Enabler
Using the strategic vision, work with each department or service to understand what the vision means for them, what is their role in delivering the vision and how they can incorporate circular thinking into operations.	Establish working groups to coordinate delivery in different services – involve people at managerial and operational delivery level.	Provide training for all staff on circular economy and how it relates to / can be embedded into the specific activities of each department / team.
Assign a circularity lead for each service or team with responsibility for engaging with the coordination / oversight team. Ensure they are bought-in and empowered.	Work collaboratively to identify the barriers to embedding circular economy into different council activities / departments and identify possible solutions.	Work with service managers to identify the areas where circularity could have the greatest impact and where it could be most easily integrated – start with these.
Review best practice and case studies from other authorities. Embrace opportunities to learn from others and pilot similar projects as well as new innovative approaches.	Identify pilot projects across a range of teams / departments which can be used as demonstrators and scaled up if successful.	Apply a life cycle analysis approach.
Create case studies of your own successful pilots, projects and embedding of activities across council services. Share these internally and externally.	Identify and / or co-design new solutions to close, narrow, and slow the loops, for example digitalising information and data.	Gather data and evaluate success of projects – use the learning to improve future activities.
Promote the internal use of secondary materials and circular, sustainable products.		
Where available, consider procuring service-based solutions instead of "ownership" models		
Prevent waste generation at municipal events and through daily activities (consider how events/ activities are delivered, materials are procured, and what happens to any used materials).		

Approach / Actions

- Establish a working group to consider the Local Authority Circular Economy Framework.
- Develop a vision and strategy to embed circular economy into the Council's operations. This includes embedding circular economy principles into the procurement process.

Net Zero Strategy

Skills

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:

https://sp-bpr-en-prod-cdnep.azureedge.net/published/NZET/2023/1/23/2c9752ff-eb3f-4273-8f78-e726676a3b6e/NZET062023R1.pdf?mc_cid=89c394ac3c&mc_eid=04ad3fef28

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.

Net Zero Strategy

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. 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. View here:

https://www.highland.gov.uk/peopleandtransformation/downloads/file/745/people_strategy_v21

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 26,484km² 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."**[1] 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 Highland 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.

[1] Estimated by the Climate Change Committee (CCC), Scottish Government Net Zero Nation Public Engagement Strategy. **View here:**

https://bit.ly/41VNXrg

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.

Spotlight on 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.

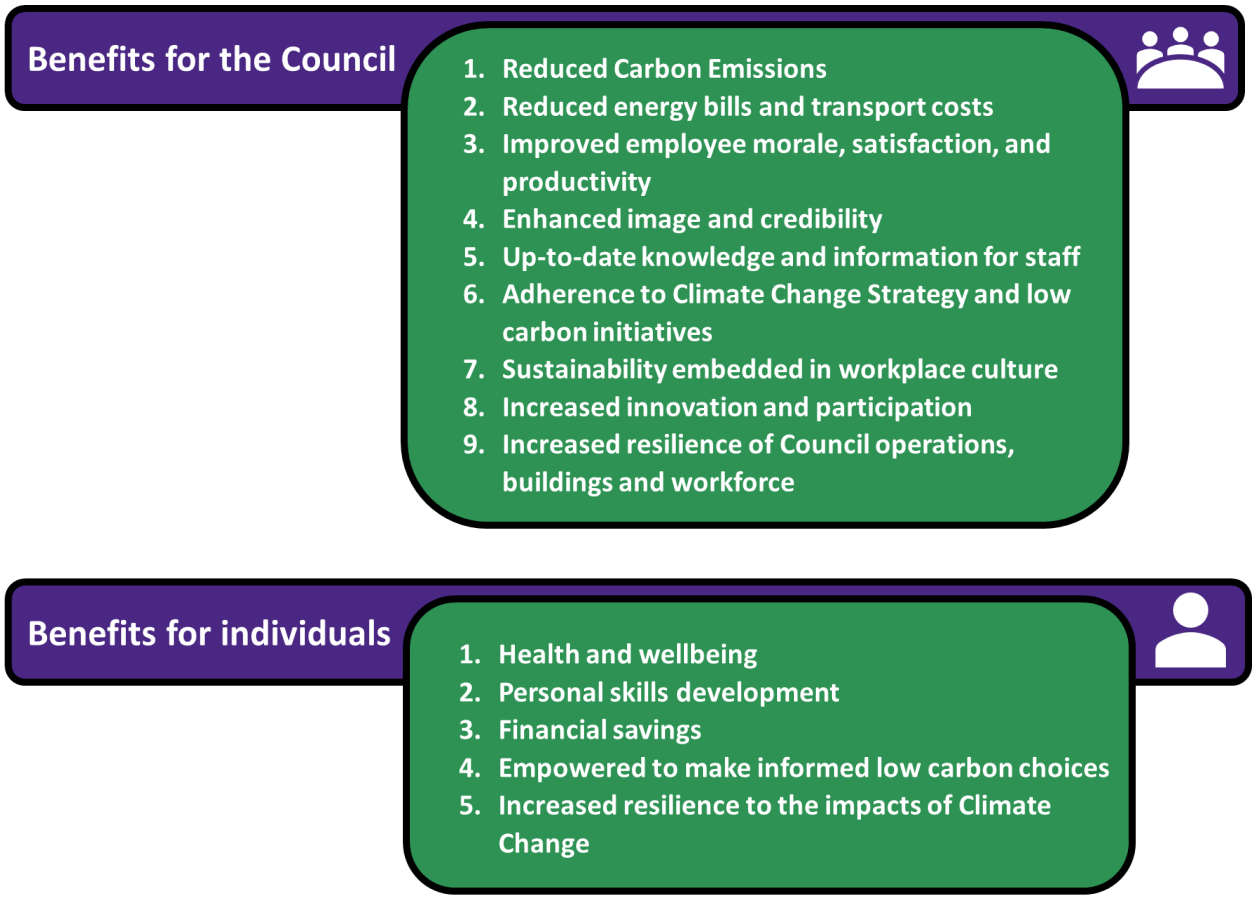
Training and Literacy

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 implemented across all levels of the Council, from officers to elected members. 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



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:

https://sp-bpr-en-prod-cdnep.azureedge.net/published/NZET/2023/1/23/2c9752ff-eb3f-4273-8f78-e726676a3b6e/NZET062023R1.pdf?mc_cid=89c394ac3c&mc_eid=04ad3fef28

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.

Net Zero Strategy

The Highland 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

Case study to be developed – hydrogen schools

Net Zero Strategy

Leadership, governance & procurement
Ceannardas, Riaghlachas & Solar

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:

https://www.audit-scotland.gov.uk/uploads/docs/report/2022/briefing_220301_addressing_climate_change.pdf

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:

https://www.audit-scotland.gov.uk/uploads/docs/report/2022/briefing_220908_climate_change.pdf

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 short term but which will cost more in the long 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."[1]

Approach:

- Annual audit to review progress against the strategy and action plan.
- Adopt carbon budgeting across the organisation and introduce service-level targets.
- Embed net zero/climate change targets into decision-making processes.
- Introduce Climate Change Impact Assessment tool into the decision-making process.
- Assess progress and plan adaptation work using the Adaptation Scotland Benchmarking Tool.
- 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.

- Develop knowledge and capability within the Council to enable the transition to net zero and a climate-ready Highland Council.
- Organise and analyse data to help determine actionable insights for sustainable decision-making.
- Align the Scheme of Delegation with the actions set out within this strategy.
- Strategic allocation of resources that help secure a net zero and climate-resilient Council.

Governance Model

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 domains.

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 also be provided to the Climate Change Committee.

Net Zero Strategy

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:

https://bit.ly/3LMxujB

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.

Approach

- Develop detailed targets, costings, milestones, and Key Performance Indicators (KPIs) for all actions and implement a system for monitoring and reporting progress.
- Produce quarterly and annual progress reports and action plan updates.
- Continue to develop the evidence base to ensure that the scale and pace of action, is sufficient to meet our targets.
- Catch up plan to be produced and delivered against in respect of missed targets.

Procurement and Community Wealth Building

Drivers

National	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).

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

Net Zero Strategy

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 Duty 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., the Council has control over the use of this energy, but the emissions generated from its production are created elsewhere.

From 1st April 2021, public bodies must report in their Public Bodies Climate Change Duties (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.

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.

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.

Net Zero Strategy

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.

[1] Audit Scotland briefing on Scotland's councils' approach to addressing climate change:

https://www.audit-scotland.gov.uk/uploads/docs/report/2022/briefing_220908_climate_change.pdf

Funding
Maoineachadh

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."[2]

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.

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:

https://www.lse.ac.uk/granthaminstitute/publication/the-economics-of-climate-change-the-stern-review/

Many interventions required to reach net zero will have positive financial benefits for the Council in the longer term.

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 Highland 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:

https://bit.ly/3ANDulE

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

https://www.accountingforsustainability.org/content/dam/a4s/corporate/home/KnowledgeHub/Guide-pdf/Net Zero A Practical Guide for Finance Teams.pdf.downloadasset.pdf

[2] 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:

https://bit.ly/3ANSIHt

Net Zero Strategy

Approach:

- Embed net zero/climate change targets into decision-making processes, including annual budget-setting and the Council's Capital Programme.
- Any investment should consider the whole-life approach rather than the initial outlay alone.
- Develop a funding strategy focusing on maximising the Council's capacity to secure external funding, and to dovetail with the development of the Council's budget and spending plans.
- Develop a pipeline of investment-ready projects to accelerate investment in net zero/climate change projects.
- Collaborate with partners and investors to attract inward investment and look to optimise spending opportunities to the benefit of the region.

Case study to be developed – Salix?

Net Zero Strategy

Glossary
Beag-fhaclair

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.

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 (CO2) – A colourless, odourless gas which is produced both naturally as people and animals exhale CO2, and through human activities, such as burning fossil fuels and wood. In the earth's atmosphere CO2 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.

Net Zero Strategy

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 as long as possible. 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 gases emissions into the atmosphere and extracting emissions from the atmosphere.

Climate Change Resilience – The capacity of a system to cope with, and recover from, the impacts of climate change.

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.

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.

Net Zero Strategy

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.

EESSH (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, such as 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.

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.

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

Net Zero Strategy

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 and hybrid 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.

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.

Net Zero Strategy

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 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.