



Cumberland Council  
Carbon and Energy Management  
Plan  
2024-2027

DRAFT VERSION 0.5

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# Definitions

## Adaption

Adaptation refers to the adjustments in ecological, social or economic systems in response to actual or expected climatic changes and their effects.

## Carbon neutral

This represents the position where the CO<sub>2</sub> released by an organisation is balanced by an equivalent amount being removed or mitigated.

## Net zero

The organisation has achieved a position where the effects of its activities are such that they release no carbon dioxide emissions into the atmosphere.

## CO<sub>2</sub>e

A quantity that measures the global warming potential (GWP) of any mixture of greenhouse gases using the equivalent amount or concentration of carbon dioxide.

## Decarbonisation

The reduction of the carbon emissions from an energy system.

## Mitigation

Decreasing the amount of GHG emissions released into the atmosphere and reducing the current concentration of carbon dioxide (CO<sub>2</sub>) by enhancing sinks, such as increasing the area of forests.

## GHG Scope 1

Direct GHG emissions from buildings, plant and vehicles owned or controlled by the reporting organisation, e.g. natural gas used in boilers or fuel used company owned vehicles.

## GHG Scope 2

Indirect emissions associated with purchased energy consumed by the reporting organisation, e.g. grid supplied electricity.

## GHG Scope 3

All other indirect emissions that occur in the reporting organisation's supply chain, e.g. business travel, purchased goods and maintenance contracts.

## Residual Emissions

The estimated emissions left after the reduction measures have been implemented.

## Greenhouse Gases (GHG)

There are seven major Greenhouse Gases. These are, together with their respective Greenhouse Warming Potential (GWP):

Carbon dioxide (CO <sub>2</sub> )	GWP 1
Methane (CH <sub>4</sub> )	GWP 23
Nitrous Oxide (N <sub>2</sub> O)	GWP 296
Hydrofluorocarbons (HFC)	GWP 77 to 14,800
Perfluorocarbons (PFC)	GWP 6,500 to 12,200
Sulphur hexafluoride (SF <sub>6</sub> )	GWP 22,200
Nitrogen trifluoride (NF <sub>3</sub> )	GWP 8,000

## Insetting

The reduction of emissions by the implementation of measures such as re-forestation, renewable energy and regenerative agriculture within an organisation's own management scope.

## Offsetting

The purchase of a tradeable unit, representing emissions rights or emissions reductions, to balance the climate impact of an organisation, activity or individual.

## Sequestration

The process of capturing, securing and storing of CO<sub>2</sub> from the atmosphere in either a solid or dissolved form. This can be either by a biological or geological process.

## Zoning (Heat Networks)

Designated zones where heat networks are expected to offer the lowest-cost solution for decarbonising heat.

# Glossary

<b>Acronym</b>	<b>Meaning</b>
AC	Air Conditioning
AHU	Air Handling Unit
ASHP	Air Source Heat Pump
BMS	Building Management System
CAfS	Cumbria Action for Sustainability
CEMP	Carbon and Energy Management Plan
CNS	Climate and Nature Strategy
CLEP	Cumbria Local Enterprise Partnership
DHW	Domestic Hot Water
EV	Electric Vehicle
GHG	Greenhouse Gas
HVAC	Heating, Ventilation and Air Conditioning
HVO	Hydrotreated Vegetable Oil
IPCC	Intergovernmental Panel on Climate Change
PV	Photovoltaic
tCO <sub>2e</sub>	Tonnes of Carbon Dioxide Equivalent
ZCCP	Zero Carbon Cumbria Partnership

## Foreword

As Executive Portfolio Holder for Cumberland Policy and Regulatory Services I am delighted to present our first Carbon and Energy Management Plan. At Cumberland Council we are committed to taking a leading role in tackling the climate emergency and building environmental resilience. As a new unitary authority, we have an opportunity to reset and rebuild putting climate and the natural environment at the forefront of our decision making and in turn benefitting the health and wellbeing of our people, our nation, our planet.

Our world continues to warm despite the current efforts of Nations, Governments, businesses, and individuals to mitigate the causes of global temperature rise. Record temperatures are regularly being reported and the frequency and severity of storms and droughts continues to cause long lasting devastation.

This existential global threat must be tackled. The battle between global warming and the mitigating effects of decarbonisation rages on. Despite current efforts there is increasing doubt that global temperature rise can be held below the recognised target of 1.5°C. This is the battle of our generation and of generations to come, we must double down on our efforts and fight climate change on all fronts.

In Cumberland, the consequences of climate change have been clearly visible through more extreme weather events bringing storms, high winds, flooding, and blurring the lines between seasons. The devastation caused is widespread, impacting our homes, livelihoods, agriculture, and the natural environment.

We cannot sit back and rely on 'others' to decarbonise and reduce the rate of global warming. The challenge is incumbent upon us all. This Plan sets out our ambition for our services, where we can



***Image description: photograph of Executive Portfolio Holder, Councillor Bob Kelly***

directly influence positive change for the long term. As the local authority we will lead by example and will look to empower and support local communities in their own low carbon transition.

The climate and environmental emergency will be at the forefront of our decision making and policy development. We will encourage others to do the same and lead by example in using resources sustainably, looking for low carbon or carbon neutral alternatives in what we buy and how we work. Combining to make a fair and just transition to a more sustainable Council and Cumberland.

# Executive Summary

The Council's Climate and Nature Strategy sets out how we will tackle the climate emergency and build environmental resilience across the whole Council area.

This Carbon and Energy Management Plan forms part of the overarching Climate and Nature Strategy and focuses on reducing the energy and carbon emissions of our Council assets, services and supply chain. It is through this Plan that we will set our Council's targets for emission reduction and the route to Net Zero.

The Council is committed to playing its part in helping the UK reach its targets of Net Zero by 2050 and emissions reductions of 68% by 2030 relative to 1990 levels. To achieve this Cumberland Council will be a partner to government, enabling national infrastructure and delivering interventions that get the *UK back on track*<sup>1</sup>.

We will set interim targets for the decarbonisation of our services in line with the UK Carbon Budget 5-yearly accounting cycles, our first interim targets will be for 2023-2027.

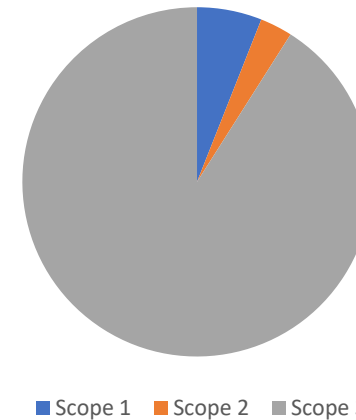
By March 2027 we will reduce our GHG emissions of scope 1 and scope 2 by 18% from the baseline year.

By March 2027 we will reduce our GHG emissions across all scopes (1,2 and 3) by 2% from the baseline year.

The baseline year for the Council is the financial year 2023/24, the Council's inaugural year. The total emissions forecasted for the baseline year are 140,316 tonnes of carbon dioxide equivalent

(tCO<sub>2</sub>e). Of the total emissions calculated, 91% are attributable to the Scope 3 GHG emissions, reflecting the magnitude of the services provided by the Council's supply chain. The remaining emission fall into Scope 1 at 6% and Scope 2 at 3%

Figure 1: Distribution of scope emissions in Cumberland Council Carbon Baseline



The source of emissions across each scope are wide ranging with the most significant sources being:

- Buildings - including offices, care homes and corporate.
- Transport - including staff travel and fuel used in fleet vehicles.
- Supply chain - including emissions from Capital Programme (including highways, suppliers and external care suppliers).

<sup>1</sup> <https://www.theccc.org.uk/2023/10/12/ccc-assessment-of-recent-announcements-and-developments-on-net-zero/>

The Councils approach to energy savings and carbon reduction follows these most significant sources, targeting elements within them to establish emission reduction pathways.

**Buildings** are the largest generator of Scope 1 and 2 emissions for the Council. This includes both the energy used by the building systems, such as lighting and heating, as well as the plant and equipment, and office systems used by the occupants. The measures identified to reduce these emissions follow a hierarchy of activities starting with an asset review to identify buildings to retain, develop, or release. Then local to each building measures include behaviour change, building fabric improvements and energy reduction measures which will involve prudent capital investment and invest-to-save initiatives. Reduction measures include the upgrading of the heating, ventilation and air conditioning (HVAC) systems switching from fossil fuel power to electrically powered alternatives, and a programme to replace the existing lighting with low energy LEDs, and the electrification of our domestic hot water (DHW) generation systems. Where appropriate local solar PV installations and small-scale wind generation may be installed on or around buildings, generating energy at point of use.

The management of emissions from buildings will also be a driver for the Asset Management Plan.

**Transport** will follow two principal strategies for the management of GHG emissions. Firstly, improve management and staff training to ensure that the existing plant and equipment is being used efficiently. Secondly, where possible, implement alternative fuelled vehicles such as electric cars and vans (EVs), and adapt to low carbon fuel replacements such as HVO (a biofuel alternative) for the larger diesel fuelled vehicles. Emerging and developing opportunities such as 'green' hydrogen will also be considered.

The management of emissions from transport and plant will be a driver for the Fleet Strategy.

**The supply chain** accounts for approximately 127,000 tCO<sub>2</sub>e and is the greatest proportion of Council emissions. The strategy recognises that the emissions associated with the delivery of these services are outside of the direct control of the Council but through active engagement and encouragement with the service providers, improvements in emissions can be delivered. The supply chain includes the purchases and contracts required for the operation and delivery of services, in particular delivery of the capital programme (including highways contracts) and the operation of care services.

The strategy for improvements in this area will be developed in 2024/25 and will be a driver for our approach to procurement and commissioning.

**Residual emissions** are those left after the reduction measures have been implemented. The Council will set out a plan for the management of residual emissions in 2024/25. This plan will include options such as: offsetting through Council land or in partnership through an approved code (Sequestration); utilising 'insetting' through development of renewable energy on Council land or in partnership; identifying opportunities for Carbon Capture and Storage.

**Net Zero** - The Council is a partner in the Zero Carbon Cumbria Partnership (ZCCP). The UK has a target of net zero by 2050 but the ZCCP has acknowledged that this isn't going to be fast enough to limit warming to safe levels so has risen to the challenge to accelerate its contribution to reducing greenhouse gases with a commitment to be a net zero county by 2037.

The Council will set out its own approach to Net Zero in 2026. We will continue to work with the ZCCP and others to influence national decision making to accelerate green growth in Cumbria, recognising the partnership target of a carbon neutral county by 2037.

We will deliver this strategy through a combination of **direct control** and **influence** (*Table 1*). Only 3% of greenhouse gas emissions in

the Cumberland area are attributed to the Public Sector<sup>2</sup> (Figure 2) However, it is widely understood that a local authority's place-shaping powers and actions potentially influence around a third<sup>3</sup> of UK emissions. These are principally in the buildings, transport, waste and land-use sectors.

Figure 2: Local authority influence over greenhouse gas emissions in their area (source Local Government Association)

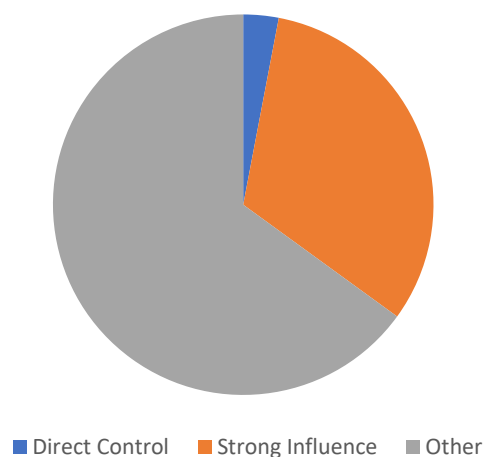


Table 1: Controlling and influencing.

Spheres	Example
Direct Control	Council's Assets and Fleet; Operations; Workforce
Indirect Control	Procurement and commissioning
	Development Control; Local Plan; Transport Planning; Waste strategy

<sup>2</sup> <https://www.gov.uk/government/collections/uk-local-authority-and-regional-greenhouse-gas-emissions-national-statistics>

Influence	Town and Parish Councils; Place and thematic partnerships
	Communications and engagement; consultation responses on national policy

The climate and environmental emergency will be at the forefront of our decision making and policy development. We will encourage others to do the same and lead by example in using resources sustainably, looking for low carbon or carbon neutral alternatives in what we buy and how we work. Combining to make a fair and just transition to a more sustainable Council and Cumberland.

<sup>3</sup> <https://www.local.gov.uk/publications/councillor-workbook-local-path-net-zero>



## Introduction

There can be no doubt that global warming and climate change are drastically and detrimentally affecting the world in which we live. At any given time, there is visible evidence of the impact that the warming effect of greenhouse gas emissions is having on our planet. Global air and sea temperatures are reaching record highs; sea levels are rising; storms and extreme weather events are more frequent and severe; we see widespread flooding in some areas and catastrophic drought in others; our polar ice caps are in decline; and the challenges to our natural world continue to grow.

There is growing consensus that we are now at a tipping point, the point at which some of the damage caused may be irreversible. We need to push harder and faster towards reducing the impact we are having on the planet. By slowing our rate of consumption and reducing energy use and wastage, we can lower carbon emissions. Lowering carbon emissions and ultimately reaching Net Zero emissions will have a major impact on halting global warming and climate change.

Cumberland Council's first Carbon and Energy Management Plan (CEMP) sets out the targets, objectives and measures necessary to mitigate our own contribution to greenhouse gas emissions (carbon emissions) and to climate change.

The CEMP has been developed in alignment with the Cumberland Council Plan; in recognition of our Target Operating Model;

informed by the strategies and actions of partnership work; and the work undertaken by our former district and county councils.

This management plan is driven by the overarching principles of the Council's Climate and Nature Strategy<sup>4</sup>, and brings enhanced focus on the need to minimise our energy consumption, and reduce our carbon emissions.

Since the establishment of the Climate Change Act 2008, and its amendment in 2019, there has been a significant increase in the strength and depth of legislation and policy supporting and driving carbon emissions reduction in the UK. This includes the Carbon Budget Delivery Plan and its series of ambitious Carbon Budgets to drive the UK to its legally binding requirement of Net Zero by 2050.

The Council is committed to playing its part in helping the UK reach its targets of Net Zero by 2050 and emissions reductions of 68% by 2030 relative to 1990 levels. To achieve this Cumberland Council will be a partner to government, enabling national infrastructure and delivering interventions that get the UK back on track.

Alongside our partnering and enabling of government initiatives we will directly address our own environmental impact through focussed energy and carbon reduction interventions. This Carbon and Energy Management Plan focuses on reducing the energy and carbon emissions of our Council assets, services and supply chain. It is through this Plan that we will identify our own emission reduction strategies and our own targets for carbon reduction, and ultimately our own route to Net Zero.

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<sup>4</sup> Add link to Climate and Nature Strategy

## Cumberland Council Plan

The Cumberland Council Plan<sup>5</sup> has the central aim of Improving Health and Wellbeing of the people of Cumberland with 4 key areas of focus:

- Local economies that work for local people
- **Environmental resilience and climate emergency**
- Delivering excellent public services
- Addressing inequalities

Environmental resilience and the climate emergency is a key area of focus, and one that heavily impacts and influences our ability to deliver the other three.



Exploring deeper we have identified some fundamental principles that shape our approach and give a sense of what residents can expect from us:

- Accessible and trusted services
- Listening, involving, and engaging
- Learning and improving
- Prevention and early intervention
- Collaborative work (one council approach)
- Leadership
- Local first
- Driving Change
- **Sustainability**

### Sustainability

Sustainability and resilience will be key challenges for Cumberland and the Council. We will always approach these challenges with the long term in mind. We will not make short term decisions or undertake activity that impacts on our ability or the ability of the area to meet its future needs.

We will manage our finances sustainably and deliver value for money for our residents as we continue to operate in a challenging budget context. Our decisions will be the result of robust processes and have long term benefits whilst improving our financial health.

<sup>5</sup> <https://www.cumberland.gov.uk/Cumberland Council Plan>

**The climate and environmental emergency will be at the forefront of our decision making and policy development. We will encourage others to do the same and set an example in using resources sustainably, looking for low carbon or carbon neutral alternatives in what we buy and how we work. Making a fair and just transition to a more sustainable Council and Cumberland.**

## Target Operating Model (TOM)

The Operating Model aligns staff, partners and other stakeholders behind a transformation programme, providing clarity on roles, responsibilities, direction and purpose.

Through our TOM we will harness technology, data and insight to improve carbon and energy management and reporting. Providing service area decision makers with improved digital solutions will be key to transforming our energy consumption and carbon emissions.

Insights and performance data have already been used to quantify and prioritise our actions and develop mitigation and adaptation measures.

## Climate and Nature Strategy

Cumberland Council's *Climate and Nature Strategy*<sup>6</sup> and action plan sets out how we will tackle the climate emergency and build environmental resilience across the whole Council area. It sets out the objectives (mitigation and adaptation) and main actions that the Council will deliver for climate and nature. The themes in this

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<sup>6</sup> Add link to Climate and Nature Strategy

strategy include matters that are within the Council's control, directly or indirectly, and matters where the Council can use its influence.

This Carbon and Energy Management Plan is a key component of the overarching Climate and Nature Strategy and focuses on reducing energy and carbon emissions of our Council assets, services and supply chain. It is through this Plan that we will set and deliver on our targets for emission reduction and the onward route to Net Zero.

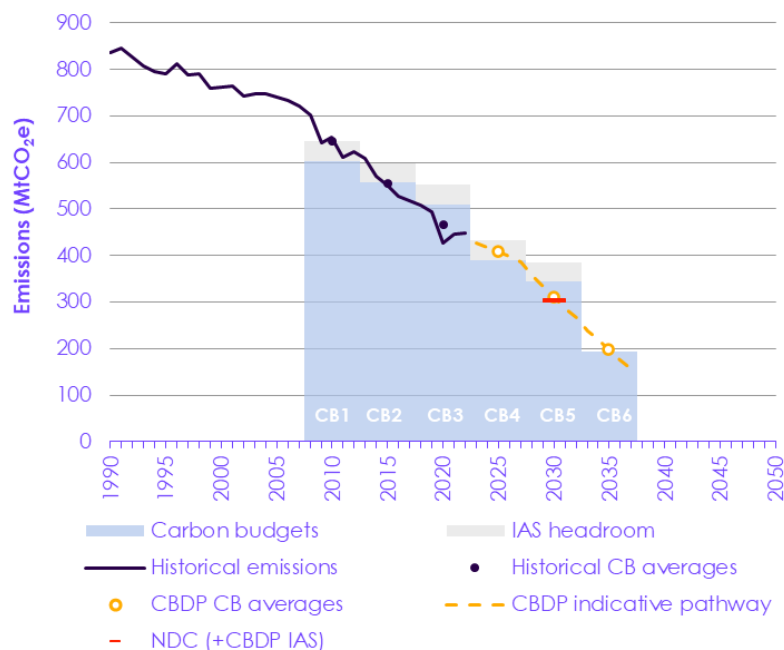
## Council Target

The Climate Change Act 2008<sup>7</sup> is the basis for the UK's approach to tackling climate change and provides an overall framework for climate mitigation and adaptation action across the UK. It requires that emissions of carbon dioxide and other greenhouse gases are reduced and that climate change risks are adapted to.

These requirements are underpinned by legally binding emissions targets set as five yearly carbon budgets, setting a cap on the total GHG emissions in order for the UK to meet its overall Net Zero 2050 commitments.

<sup>7</sup> <https://www.legislation.gov.uk/ukpga/2008/27/contents>

Figure 3: UK historical emissions, the Government's pathway and the UK's targets. [Source: Climate Change Committee 2023 Progress Report to Parliament - June 2023]



Cumberland Council is a new unitary authority established on 1<sup>st</sup> April 2023. Like our predecessors, we are committed to becoming carbon Net Zero and playing our part in helping the UK reach its targets of Net Zero by 2050. To achieve this Cumberland Council will be a partner to government, enabling national infrastructure and delivering interventions that get the UK back on track.<sup>8</sup>

<sup>8</sup> [Progress towards reaching Net Zero in the UK - Climate Change Committee \(theccc.org.uk\)](https://www.theccc.org.uk)

We will work with partners to influence national decision making to accelerate green growth in Cumbria, recognising the partnership target of a carbon neutral county by 2037.

As a new council we recognise the unique opportunity to take stock and review the approach taken towards our own energy consumption and carbon reduction targets. This is particularly pertinent given the current financial pressures experienced by us and many other local authorities across the country.

The Climate Change Act is credited with helping the UK to deliver sustained reductions in greenhouse gas emissions alongside a growing economy. We have therefore set our interim targets for the decarbonisation of our services in line with the UK Carbon Budget 5-yearly accounting cycles.

Our initial targets will be for 2023-2027 cycle and are set out in the Carbon Accounting section of this plan.

Reductions targets for future Carbon Budget cycles will be set in advance following the final mid-year review of that period, as follows:

Table 2: Cumberland Council target setting cycles

UK Carbon Budget cycle	Target setting (mid-year)
2023-2027	April 2024
2027-2032	September 2026
2032-2037	September 2031
2037-2042	September 2036
2042-2047	September 2041
2047-2050	September 2046

# Energy Budget

The Council has budgeted to spend £4.5 million on energy in 2023/24 and this is set to rise to £4.9 million in 2024/25. Future increases in this budget are set at the rate of 10% and form part of the Medium-Term Financial Plan.

Energy is procured corporately; the two main contracts are for electricity and gas. The electricity contract was procured in 2022 and is in place for 5 years. The gas contract is in place until 2025 and will be re-procured in 2024 for a 2025 launch and will be in place 4 years.

Table 3: Energy budget and main supplier

Energy	Budget 2024/25	Main supplier
Fuel for fleet and plant	TBC	Various
Gas	TBC	Corona Gas
Electricity	TBC	Npower

The Medium-Term Financial Plan identifies the need to review and assess the inflationary pressures caused by increasing energy costs and the impact across services and contracts.

These energy costs and the associated inflationary pressures can be reduced with the introduction of renewable energy generation such as solar PV. The Council has installed solar PV in seven property assets with more planned for this and coming years.

Table 4: Renewable generation (solar PV)

Building	Renewable micro-generation	Installed Peak Power	Target Annual Generation
Civic Centre, Carlisle	125 solar panels	31kW	23,000 kWh
Sands Centre, Carlisle	122 solar panels	30kW	22,000 kWh
Cumbria House, Carlisle	161 solar panels	42 kW	30,000 kWh
Blackwell Road, Carlisle	18 solar panels	6 kW	4,000 kWh
Parkhouse, Carlisle	238 solar panels	76 kW	54,000 kWh
Inglewood EPH, Wigton	102 solar panels	27 kW	20,000 kWh
Lillyhall Highways Depot, Workington	128 solar panels	34 kW	24,000 kWh

The seven assets with solar PV installations contribute a total potential for generation of approximately 177,000 kWh per annum, resulting in energy cost savings of in the region of £55,000. (based on unit price of 31p/kWh).

# Carbon Accounting

**The carbon accounting baseline year for the Council is the financial year 2023/24, the Council's inaugural year.**

To support this plan, an annual GHG inventory, resulting from the Council's activities and operations, was required. A significant proportion of this inventory was developed using financial budgets for the baseline year, alongside consumption figures for elements such as vehicle fuels, domestic gas and electricity use in our buildings.

The resulting carbon accounting baseline delivers the greenhouse gas (GHG) emissions of the Council's operations between April 2023 and March 2024 and breaks down this total into Scope 1, 2 and 3 according to the GHG Protocol Reporting Guidelines. For global reporting standardisation, the total GHG emissions are collectively referred to as tonnes of carbon dioxide equivalent (tCO2e).

The three categories of GHG scope emissions used in the carbon baseline study are explained below:

*Table 5: Definitions of Scope GHG emissions*

Category	Description
Scope 1	Direct GHG emissions from buildings, plant and vehicles owned or controlled by the Council e.g.

<sup>9</sup> Forecast emissions are modelled on budgets and 'best fit' factors. The forecasted<sup>9</sup> figures for emissions will be replaced with actual emissions based on metered units and factors for scope 1 and scope 2. Scope 3 will be based on budget figures and 'best fit' factors until the review in 2026.

	natural gas used in boilers or fuel used by council owned vehicles
Scope 2	Indirect emissions associated with purchased energy consumed by the Council e.g. grid supplied electricity
Scope 3	All other indirect emissions that occur in the Council's supply chain e.g. business travel, purchased goods and maintenance contracts

The total emissions forecasted<sup>9</sup> for the baseline year are 140,316 tCO2e. This figure is currently based upon financial budget figures and will be subject to an update in 2024 when the final outturn costs are available. These are spread across the three emissions scopes as noted below.

*Table 6: Forecast tCO2e for baseline year*

Scopes	tCO2e	Proportion
Scope 1 (estimate)	8,634	6.2%
Scope 2 (estimate)	4,353	3.1%
Scope 3	127,328	90.7%
Carbon Baseline (estimate)	<b>140,316</b>	100%

Of the total emissions calculated, 91% of total baseline are attributable to the Scope 3 GHG emissions. This is significantly greater than the combined Scope 1 and Scope 2 emissions and reflects the magnitude of the services provided by the Council's supply chain, many of whom are based in Cumbria. The proportional split of Scope 1, 2 and 3 emissions are reflective of analysis undertaken by bodies such as the Carbon Trust.

The distribution of emissions across each scope type is shown in table 3 and the most significant sources of emissions are:

- **Buildings** - including offices, commercial, health & care and educational.
- **Transport** - including fuel used in fleet and highways, Port of Workington, staff travel, commuting.
- **Supply chain** – procurement, including emissions from Capital Programme (including highways, suppliers and external care suppliers), waste, service providers.

## Interim Targets

As a new council continuing through the transformation of Local Government Reorganisation and with a developing medium term financial plan we have chosen to set interim emissions reduction targets.

The use of interim targets does not preclude the development and deployment of carbon and energy saving initiatives that reduce our baseline and bring us closer to net zero.

By March 2027 we will reduce our GHG emissions from Scope 1 and Scope 2 by 18% from the baseline year.

By March 2027 we will reduce our GHG emissions across all scopes (1,2 and 3) by a total of 2% from the baseline year.

Targets for the period beyond March 2027 will be set in September 2026 at a point where more realistic and suitably ambitious reductions can be established. These will then follow a 5-year review cycle.



## Buildings GHG Emissions

The Council has over 1389 property assets and an additional 4 assets shared with Westmorland & Furness Council.

Table 7: Count of asset type

Asset Type	Number of Assets
Building Only	42
Land & Buildings	477
Land Only	870
<b>Grand Total</b>	<b>1389</b>

Asset Type	Shared Assets
Building Only	3
Land Only	1
<b>Grand Total</b>	<b>4</b>

Cumberland Council owns and occupies a large and diverse property portfolio, with a mix of tenures ranging from small easements through to leasehold and freehold ownership. The land and buildings in the portfolio include:

- Adult Social Care Homes
- Children's Services – schools, homes and centres
- Depots
- Dixons Chimney, Carlisle
- Economic Development
- Industrial sites
- Land

- Libraries
- Museums
- Office buildings
- Registrar's offices
- Waste Management Sites
- Port of Workington

The energy related emissions associated with our buildings total almost 8,500 tCO<sub>2</sub>e, this is the combined figure for gas, fuel oil and electricity consumption. The figure excludes operational fuel use.



## Transport GHG Emissions

There are currently 438 vehicles in the fleet, not counting vehicles operated by Allerdale Waste Services Limited. This includes a mix of vehicles which are fully owned by the Council and some which are on lease / contract hire. A summary of the fleet is provided in table 4, reflecting the diverse range of services provided by the Council.

Most of the vehicles on the Council's fleet are diesel. The electric vehicles on the council fleet tend to be cars or light vans, therefore, the 5% in quantity does not equate to a 5% reduction in fleet related carbon emissions. The Council operates over 100 heavy vehicles (>7.5ton) including a large fleet of refuse and recycling collection vehicles operating in our streets and towns each day. A typical 26ton refuse collection vehicle will return about 4-6mpg.

Table 8: Fleet fuel type

Fuel type	Number	Percentage (%)
Diesel	410	94
Hybrid	2	0.5
Electric	22	5
HVO (fuel trial)	4	1

Table 9: Summary of fleet and plant

Fleet and Plant	Count
Cars including pool cars	52
Minibus / accessible minibus	52
4X4 pick-up / Landrover	20
Gritting vehicle	14
Gully wagon	3
Hook-loader skip vehicle	2
MEWP (Mobile Elevated Work Platform)	9
Pick-up / tipper	97
RCV (Refuse / Recycling Collection Vehicle)	40
Ride-on mowers	8
ATV (All-terrain vehicle)	1
Sweeper (road / pavement)	10
Tele-handler / front-loader / fork-lift	7
Tractor	5
Van (various sizes)	111
Mobile staff welfare unit	6
Mobile library vehicle	1
<b>TOTAL</b>	<b>438</b>

The vehicle fuel related emissions associated with our transport fleet and pool cars total over 5,000 tCO<sub>2</sub>e, this is the combined figure for petrol, red and white diesel consumption. Figure excludes contracted waste service fuel, grey fleet and hire cars.

## Supply Chain GHG Emissions

The Council procures and commissions circa £300M annually on supplies and services for Cumberland.

The main areas of expenditure include waste services, social care, education, community services and ITC/computing.

The emissions relating to supplies and services total 54,000 tCO<sub>2</sub>e. This forms a large proportion of our revenue-based Scope 3 emissions of 89,000 tCO<sub>2</sub>e. Revenue based emissions exclude those from the Capital Programme which total over 37,000 tCO<sub>2</sub>e.

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## Delivering decarbonisation and energy savings

The energy hierarchy is the basis for business strategies in delivering decarbonisation and energy savings. The hierarchy is:

**Prevent** – the need for energy consumption by ensuring that the wastage is avoided or reduced.

**Reduce** – the amount of energy consumed by the upgrade of the current building systems and equipment to equivalent and more efficient systems.

**Recover** – ‘used’ energy and resources and re-use where there is an opportunity.

**Replace** – the energy consumed with renewable energy supply options.

Delivering decarbonisation and energy savings can be **transformational actions** that are ‘invest to save’. These actions will deliver against the first versions of the: **Asset Management Plan, Fleet Strategy, Procurement and Commissioning approach and Workforce Strategy** (as well as fitting with the Target Operating Model).

### Buildings Emissions Management

Buildings are the largest generator of Scope 1 and 2 emissions for the Council. This includes both the energy used by the building

systems, such as lighting and heating, as well as the plant and equipment, such as catering, and office systems used by the occupants.

The Corporate Asset & Fleet Management Group brings together service areas, to address service and corporate property/fleet requirements for Operational Assets. We are also collaborating with all public sector organisations through the One Public Estate programme 2.

A Portfolio Review will be undertaken in 202X to decide which assets the Council will keep, sell and develop. This review will include benchmarking of operational costs, conditions, suitability, and environmental impact and performance.

The Assets Management Strategy<sup>10</sup> will set our 3 categories of property asset:

1. Operational Property - to only use property that sustains and supports service delivery.
2. Economic Development / Regeneration Property – to acquire and hold property to support and deliver economic development.
3. Investment Property - to retain property as part of a diversified investment portfolio to provide increasing revenue income to support service delivery and economic benefit within Cumberland.

As the portfolio review develops, and buildings are assigned a category, appropriate emissions management measures can be implemented. The measures identified to reduce the buildings emissions follow a hierarchy of activities and include behaviour

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<sup>10</sup> Add link to Asset Management Strategy

change, building fabric improvements and energy reduction measures which will involve capital investment. Reduction measures include the upgrading of the heating, ventilation and air conditioning (HVAC) systems through change from fossil fuel to electric heat pumps and a programme to replace the existing lighting with LEDs and domestic hot water (DHW) generation systems. Where appropriate local solar PV installations and small-scale wind generation may be installed on or around buildings.

### **Behaviour change**

- Ongoing delivery of an energy awareness programme in the target properties
- Implementation of an energy use monitoring and targeting programme in the target properties
- Energy surveys to identify low and no cost opportunities and shape improvement programmes

### **Building fabric improvements**

- Fabric review including thermographic survey of the target properties to shape improvement programmes
- Upgrade of windows, external doors, improved loft and wall/cavity insulation in target buildings

### **Energy reduction measures**

- Upgrade of the lighting to LED in target properties
- Replacement of the fossil fuel and electric resistive heating with Air Source Heat Pump or Air Conditioning heating systems in the target buildings.
- Replacement of the fossil fuel and resistive heating of Domestic Hot Water in the target buildings.
- Replacement of the fossil fuel heated catering systems

- with comparable electrically heated systems
- Air Handling Unit fan motor and control upgrade at six locations
- Refit occupancy controllers to the existing split systems
- Integrate a continuous learning module with the existing Building Management System (Smart Buildings) in selected target buildings

### **Renewable energy**

- Installing roof mounted solar PV wherever possible
- Small and medium size wind turbines in suitable locations

***The management emissions from buildings will be a driver for the Asset Management Plan (AMP).***

## **Transport Emissions Management**

There are two principal strategies for the management of the transport emissions:

Firstly, improve management and staff training to ensure that the existing plant and equipment is being used efficiently.

Secondly, where possible, implement alternative fuelled vehicles such as EV cars and vans. Low carbon fuel replacements for the diesel fuelled vehicles include HVO, a biofuel alternative, and when fully developed 'green' hydrogen should be implemented.

It is expected that the conversion of the transport fleet may start quickly but must be planned over a long-term programme to take advantage of the market changes that are expected over the next 15 years.

### Management Process

- Install telematics in all council fleet vehicles
- Introduce route optimisation software to regularly analyse journeys to identify opportunities to reduce business mileage levels
- Minimise the use of grey fleet and business mileage
- Require all staff driving for work and/or claiming business operational budget mileage to complete the e-learning eco-driving module.

### Infrastructure Upgrade

- Installation of EV charging points through the council estate. It is assumed that dependent upon the available power supply infrastructure, a number of charging points will be available at each of the council properties.

### Emissions Reduction Technology

- Transition to biodiesel (e.g, HVO) for vehicles over 7.5 tonnes and diesel fuelled plant equipment. This will lead to a 90% reduction in CO<sub>2</sub>.
- By 2035 all business car travel by battery electric car or similar ultra-low emission vehicles.

- Introduce a new Cycling and Walking Programme to enable active travel.
- Introduction of a pool of electric bikes and e-cargo bikes to encourage active travel where it is safe and appropriate to service delivery

***The management of emissions from transport and plant will be a driver for the Fleet Strategy.***

### One Council, One Fleet (Corporate Fleet Strategy)

(Including plant, machinery, and equipment)

This strategy<sup>11</sup> sets out the Council's approach to fleet management to ensure that staff have access to vehicles that are fit for purpose, provide the lowest whole-life cost, and which help to minimise negative impacts on the local environment.

Fleet vehicles represent a significant financial investment, with significant associated health and safety risks, and therefore it is essential that vehicles are operated responsibly and managed as a single, key corporate asset.

The strategy applies equally to all vehicles, plant and equipment, collectively comprising the Council's municipal fleet. This includes:

- cars, vans, pick-up trucks, tippers, mechanical sweepers
- large trucks, heavy goods vehicles such as refuse collection vehicles, large mechanical sweepers, gritting vehicles
- tractors, loaders, tele-handlers, trailers, ride-on and stand-on grass-cutters, push mowers
- Bicycles, e-cycles / e-trikes

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<sup>11</sup> Add link to One Council One Fleet – Corporate Fleet Strategy

- hand operated equipment, such as strimmers, trimmers, back-pack blowers, chainsaws
- miscellaneous equipment such as generators, pumps, fuel storage tanks, welding / cutting / grinding equipment.
- workshop and depot lifting equipment such as vehicle ramps, pit-lane jacks, fork-lift, platform-lift

This strategy supports the Council's Climate and Nature Strategy and the Carbon and Energy Management Plan. There is little we can do to influence the cost of fuel except to better manage and control our costs and demands across the fleet through:

- Conducting a robust 'fleet challenge' to determine genuine business need to support all fleet decisions; working to increase standardisation and flexibility; and reduce the fleet in size and number
- Being open to alternatives to diesel and petrol for our fleet such as:
  - Electric
  - Hybrid
  - Alternative / renewable fuels
- Procuring and maintaining high performing, fuel efficient vehicles
- Installing rev-limiters and speed limiters to improve fuel efficiency and reduce harmful emissions
- Installing cab-heaters, where cost effective, to improve staff welfare and cut fuel use
- Using bio-fuels and fuel additives to reduce harmful exhaust emissions
- Investing in SAFED training (safe and fuel-efficient driving) or equivalent for drivers
- Providing management information to support the monitoring of fuel use and driver behaviour (telematics) to compare driver performance and actively challenge wasteful

practice, poor driving standards and predict and prevent future incidents through advice, training and intervention

- Making effective use of corporate fleet assets, from procurement to timely replacement, re-allocation, responsible disposal or asset transfer.
- Reviewing pool car use
- Effective route planning and getting things right first time to avoid repeated journeys.
- Providing flexible vehicles to support responsive service delivery and build resilience across the Council.

This fleet strategy will be subject to annual review to ensure that it remains current and forward facing. As the pace of change in vehicle technology quickens, this regular review will ensure that we are able to embrace these changes at the earliest possible opportunity maximising the benefits they provide.

## Supply Chain Emissions Management

The principal focus of this business strategy is the management of the emissions related to the Council's supply chain including the purchases and contracts required for the operation and delivery of services, in particular delivery of the capital programme (including highways contracts) and the operation of care services.

The supply chain accounts for approximately 127,000 tCO<sub>2</sub>e and reflects such items as capital programme spend (including highways contracts, external care provision and school supply chains). The strategy presented recognises that the emissions associated with the delivery of these services are outside of the direct control of the Council but through active engagement and

encouragement with the service providers, improvements in emissions can be delivered.

The greatest proportion of Council emissions is within Scope 3 and are therefore the most challenging to directly mitigate. Scope 3 emissions fall into three categories which have been ordered with respect to the ability of the Council to influence their impact, from Easy to Difficult.

### **Easy**

Those emissions that are directly associated with the day-to-day staff activities, this includes business travel, the use of personal and non-Council vehicles, and water and sewage (utilities) related emissions.

### **Medium**

Outsourced services where the organisation is providing labour, and consumable goods, to manage and deliver a service on behalf of the Council. This includes the following:

- Schools and Adult service transport
- Operation of care homes, schools and day centres
- Roads and grounds maintenance
- Project delivery through the Capital Programme

### **Difficult**

The emissions associated with supply contracts associated with the provision of schools, care homes and corporate food stuffs, and office consumable goods.

The Council will work with the supply chain to identify the carbon emissions associated with the products and services that they

provide and help them to implement improvements to reduce their emissions. The strategy for improvements in this area will be developed in 2024/25 as the procurement and commissioning approach develops.

***The management of supply chain emissions will be a driver for our approach to procurement and commissioning.***

## **Residual Emissions Management**

The Council will set out a plan for the management of residual management in 2024/25. This plan will include options such as:

- Offsetting through Council land or in partnership through an approved code (Sequestration).
- Utilising insetting through development of renewable energy on Council land or in partnership.
- Opportunities for Carbon Capture and Storage.

## **Routes to Net Zero**

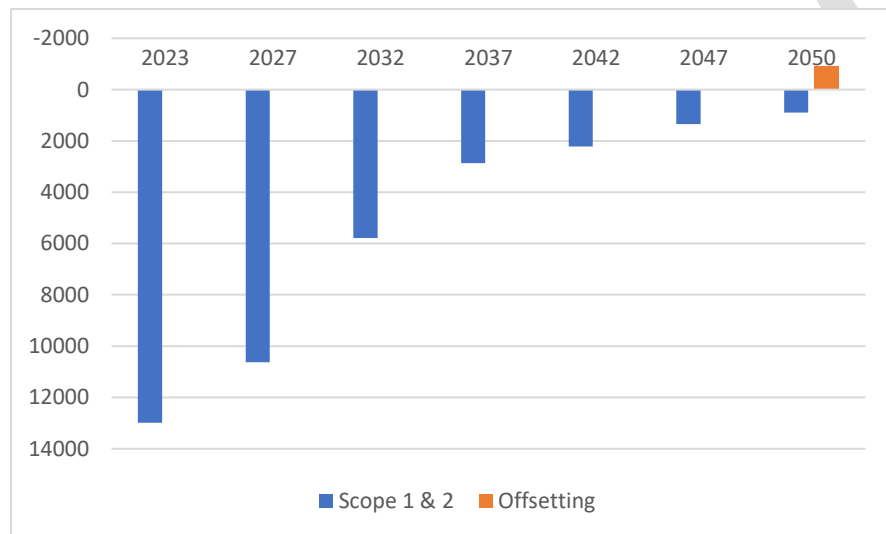
The Glasgow Climate Pact recognised the need for accelerated action to limit global warming to 1.5°C above pre-industrial temperatures. In response the UK has set a target to reduce emissions by 68% by 2030 relative to 1990 levels. This UK '2030 target' is the Nationally Determined Contribution (NDC).



The Council is a partner in the Zero Carbon Cumbria Partnership (ZCCP). The UK has a target of net zero by 2050 but the ZCCP has acknowledged that this isn't going to be fast enough to limit warming to safe levels so has risen to the challenge to accelerate its contribution to reducing greenhouse gases with a commitment to be a net zero county by 2037.

We will continue to work with the ZCCP and others to influence national decision making to accelerate green growth in Cumbria, recognising the partnership target of a carbon neutral county by 2037.

Table 10: Draft route to Net Zero for Scope 1 & 2 (2050)



Our initial carbon reduction targets will be for 2023-2027 cycle and are set out in the Carbon Accounting section of this plan.

Targets for the period beyond March 2027 will be set in September 2026 at a point where more realistic and suitably ambitious reductions can be established. These will then follow a 5-year review cycle. The Council will then set out its own route to Net Zero in 2026.

## Monitoring Strategy

To support the delivery of the measures identified a monitoring programme should be established. The proposed monitoring strategy is:

- Mid-year review of the plan to assess and report on progress of their delivery.
- Annual review and update of the emissions inventory report and spreadsheet.
- Workshops to review progress and identify further measures that could be considered and consider the impact of the national policy and supply changes.

## Key Risks and opportunities

'Do nothing' will not deliver a managed reduction in the Council's emissions, however, the emission reductions that would be delivered by the decarbonisation of the UK electricity grid and engagement of the UK supply chain with the national Net Zero obligation, will deliver reductions in the baseline emissions.



The management of Buildings Emission is supported by the projected decarbonisation of the UK national electricity grid supply. A reduction in the long-term grid emission targets will impact the amount of CO2e savings delivered by the conversion from fossil fuelled to electric heating and DHW systems.

Cost savings, revenue generation and economics and social value are impacted by changes in electricity and natural gas prices. An increase in natural gas price will increase potential savings and improve the economic case for fossil fuel reduction. An increase in the electricity supply price will negatively affect the economics of converting from fossil fuel to electric systems but will support the investment in renewable energy generation systems.

Capital investment will increase and decrease with project complexity; issues include planning restrictions and consents required for building alterations, and there will be specific risks associated with each individual project.

Procurement and Commissioning approach	✓	✓	✓✓✓
Workforce Strategy	✓	✓	✓
Capital Programme			✓✓✓

## Key Corporate Strategies and Plans

Table 11: Links to corporate strategies and plans

Relative importance (High: ✓✓✓, Medium: ✓✓, Low: ✓)			
Corporate Strategies and Plans	Scope 1	Scope 2	Scope 3
Asset Management Strategy and Plans	✓✓✓	✓✓✓	✓✓
Fleet Strategy	✓✓✓	✓✓	✓

# Our Plan on a Page

## The climate and nature challenge

Cumberland is on the frontline of the climate emergency, and we are going to be amongst the hardest hit in the UK. Forewarned is forearmed and we must:

- Accelerate our mitigation, aiming to limit global warming to 1.5°C
- Start adapting to a 2°C rise and assess the risks of a 4°C rise

Mitigation reduces the need to adapt; and alongside we must protect and enhance nature, our greatest ally as we face this challenge.

### Climate and Nature Strategy 2024-2027

Through our Climate and Nature Strategy we will:

**Proactively engage in making Cumbria carbon neutral by 2037 whilst embedding adaption and recovering biodiversity, creating an abundance of thriving plants and wildlife.**

#### Objectives

- *Adapting now to the changes we can expect over our lifetimes*
  - *Giving nature a helping hand*
- *Growing the know-how, skills, opportunities and inspiration for change*

- *Supporting more sustainable places, practices, livelihoods and lifestyles*

#### Our approach

8 Community Panels and Community Networks working towards active, resilient and empowered communities.

Where communities of interest meet communities of place to tackle local priorities.

23 Partnerships working across the climate and nature challenge

23 Programmes for the detail on Council delivery

2 detailed underpinning Management Plans:

#### **Carbon and Energy Management Plan**

Decarbonisation of buildings, fleet and supply chain

Carbon Footprint: 140,316 tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e)

Reduction of Scope 1 & 2 GHG emissions of 18% by March 2027.

Reduction of all our GHG emissions of 2% by March 2027.

Over 50 linked plans and strategies

#### **Biodiversity Management Plan**

*Pending*

*To be adopted in autumn 2024*

EIP 2023 goals and targets  
Local Nature Recovery Strategy  
(Priorities and measures)

Nature Networks  
Biodiversity and Council assets  
Natural Capital and Council assets

Baselining and opportunities for improvement (Nature Recovery Planning)

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