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East Dunbartonshire Council

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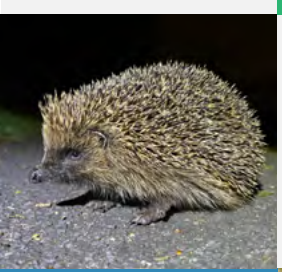
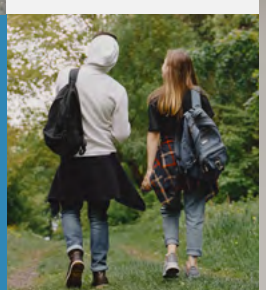
Draft Climate Action Plan





Foreword

Climate change is reshaping the way local authorities serve their communities - now and for generations to come. Rising global temperatures and increasingly frequent extreme weather events are no longer distant projections; they are realities affecting lives, infrastructure, and ecosystems across Scotland and beyond.

East Dunbartonshire is not immune. From flooding and heatwaves to biodiversity loss, the pace and scale of change demands a coordinated and forward-looking response. These impacts also deepen existing social inequalities, with vulnerable and marginalised groups facing the greatest risks. That is why this Climate Action Plan places climate justice at its core - ensuring that our transition is fair, inclusive, and leaves no one behind.

We are building on strong foundations. Since 2012/13, East Dunbartonshire Council has reduced its corporate emissions by over 50%, and we remain among the lowest per capita emitters of all Scottish local authorities. But we know we can and must do more.

With global renewable energy investment records being broken each year, this Plan sets out our commitment to accelerating the shift away from fossil fuels and towards maximising the economic benefits and job creation potential of embracing low and zero carbon technology.

To achieve this transition, the Council must harness the economic potential of clean technologies by pioneering innovative initiatives to accelerate renewable energy generation, collaborate with partners to drive forward the adoption of clean heating systems, cultivate sustainable transport through improved infrastructure, and adopt creative approaches to maximising investment in nature-based solutions that deliver co-benefits for health, wellbeing, and biodiversity.

East Dunbartonshire has a proud history of innovation and resilience. As we face the defining challenge of our time, we are ready to lead with purpose, creativity, and care.

Cllr Low
Leader of the Council

Contents

Glossary

ATS	Active Travel Strategy
BID	Business Improvement District
BIP	Business Improvement Plan
CCC	Climate Change Committee
CMP	Carbon Management Plan
CRC	Climate Ready Clyde
EDS	Economic Development Strategy
EV	Electric Vehicle
HGV	Heavy Goods Vehicle
HGIOS	How Good Is Our Service
IPCC	Intergovernmental Panel on Climate Change
LBAP	Local Biodiversity Action Plan
LDP3	Local Development Plan
LHEES	Local Heat and Energy Efficiency Strategy
LOIP	Local Outcome Improvement Plan
LTS	Local Transport Strategy
LULUCF	Land Use, Land Use Change and Forestry
MaaS	Mobility as a Service
MOG	Member Officer Group
NPF4	National Planning Framework
NZRAP	Net Zero and Resilience Action Plan
SCCF	Sustainability and Climate Change Framework
SCIS	Scottish Climate Intelligence Service
SEPA	Scottish Environmental Protection Agency
SNAP3	Scottish National Adaptation Plan
SPT	Strathclyde Partnership for Transport
SWMP	Surface Water Management plan
T&D	Transmission and Distribution
ULEV	Ultra-low emissions vehicle
WTT	Well to Tank

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Introduction

The United Nations Framework Convention on Climate Change (UNFCCC) Paris Agreement was signed in 2015 with the goal to keep the planet below 2°C of warming and to pursue a limit of 1.5°C. This agreement was adopted into law by the UK Government.

However, current levels of warming are already presenting severe risks to health, livelihoods, water supply, food security, and global economic well-being.[1] Moreover, remaining under 1.5°C is increasingly challenging as current greenhouse gas reduction commitments are insufficient to meet the Paris Agreement targets.[2] A rise of 2°C in global average temperatures would be even more catastrophic, multiplying the intensity of global ecological impacts and crossing potentially irreversible ecological tipping points.[3,4]

Scotland set a target to achieve net zero emissions by 2045[5] through a carbon budget-based process.[6] The Scottish Government's 2020 Climate Change Plan update[7] guides action to meet national budgets which are to be set every 5 years. The updated third Scottish Climate Change Plan is expected to accompany secondary legislation on the carbon budgeting process.

Through the Climate Change Duties public bodies are expected to contribute to three duties:

- reduce emissions (climate change mitigation);
- adapt to climate change; and
- act in the most sustainable way.[8]

This Climate Action Plan (CAP) sets out East Dunbartonshire's pathway to net zero to meet our statutory requirements as a public body and advance the Council's climate resilience in a warming world. The CAP's mission stems from the dual opportunity of climate action - to harness the well-documented economic benefits of the green transition while maintaining a tenacious commitment to advancing climate equity and a just transition.

The CAP sets out a bold ambition to accelerate action at a pace commensurate with the escalating threat of rising global temperatures. At the same time, it is also transparent about the enabling conditions required to take action at the scale and pace necessary to meet the Council's net zero and adaptation targets, including availability of adequate resources and the low running costs of zero emission technologies being passed on to end users.

Mission: "East Dunbartonshire is carbon neutral and climate resilient with a better quality natural and built environment conducive to healthier, more active lifestyles and flourishing biodiversity. Decisive action has achieved a just and inclusive transition that has created high value jobs, investment, and equipped people with the knowledge and skills to thrive in a low-carbon, wellbeing economy."

The CAP identifies 5 objectives to achieve this mission:

- Objective 1 – Prioritise Council spending plans and resource allocation to reduce emissions, support adaptation and deliver on the Council's net zero targets with a presumption against expenditure, investment, and infrastructure that would hinder achievement of net zero and increased climate resilience.
- Objective 2 – Set ambitious, interim targets on the path to net zero emissions for the Council and the East Dunbartonshire area accompanied by a robust framework for transparent monitoring and review, and effective governance.
- Objective 3 – Integrate climate considerations including biodiversity gain into all Council decision-making processes by developing a standardised approach to climate change risk and impact assessments encompassing all council decision making processes, policies, plans and strategies.

[1] IPCC (2023) IPCC_AR6_SYR_SPM.pdf
[2] UNEP (2023) Emissions Gap Report 2023 | UNEP - UN Environment Programme
[3] Reuters (2021) Explainer: What's the difference between 1.5°C and 2°C of global warming? | Reuters
[4] IPCC (2018) Chapter 3 — Global Warming of 1.5 °C
[5] Scottish Government (2019) Climate Change (Emissions Reduction Targets) (Scotland) Act 2019
[6] Scottish Government (2024) Climate Change Bill passed - gov.scot
[7] Scottish Government (2020) Supporting documents - Securing a green recovery on a path to net zero: climate change plan 2018–2032 - update - gov.scot
[8] Scottish Government (2025) Supporting documents - Climate change duties - draft statutory guidance for public bodies: consultation - gov.scot

- Objective 4 – Improve climate change awareness, strengthen community resilience, and encourage behaviour change to promote a just transition and reduced vulnerability.
- Objective 5 – Maximise the social, economic and environmental co-benefits of local climate action including nature-based solutions achieving efficient use of natural resources and improving health and well-being outcomes.

To deliver against these objectives, enhanced Council processes for managing climate change mitigation and adaptation are set out in **Section 3**. This includes a framework with senior leadership accountability for the Council's environmental targets, enhanced community engagement and strategies to align Council spend with net zero and improved climate resilience.

Further details of how the mission and objectives will be achieved are set out in eight overarching themes in **Section 4**.

The CAP mission, objectives, and themes were developed based upon East Dunbartonshire Council's Local Outcome Improvement Plan (LOIP), the Council's Climate Conversation, a comparative analysis of other Council approaches and independent input from an environmental consultant firm.

The Need for A Climate Resilient East Dunbartonshire

East Dunbartonshire is located to the north of the Glasgow City Region and has a population of approximately 109,000. The area covers 77 square miles and is comprised of a mix of urban and rural areas with settlements including Bearsden, Bishopbriggs, Kirkintilloch, Lenzie, Milngavie, Milton of Campsie, Lennoxtown, Torrance and Twechar.

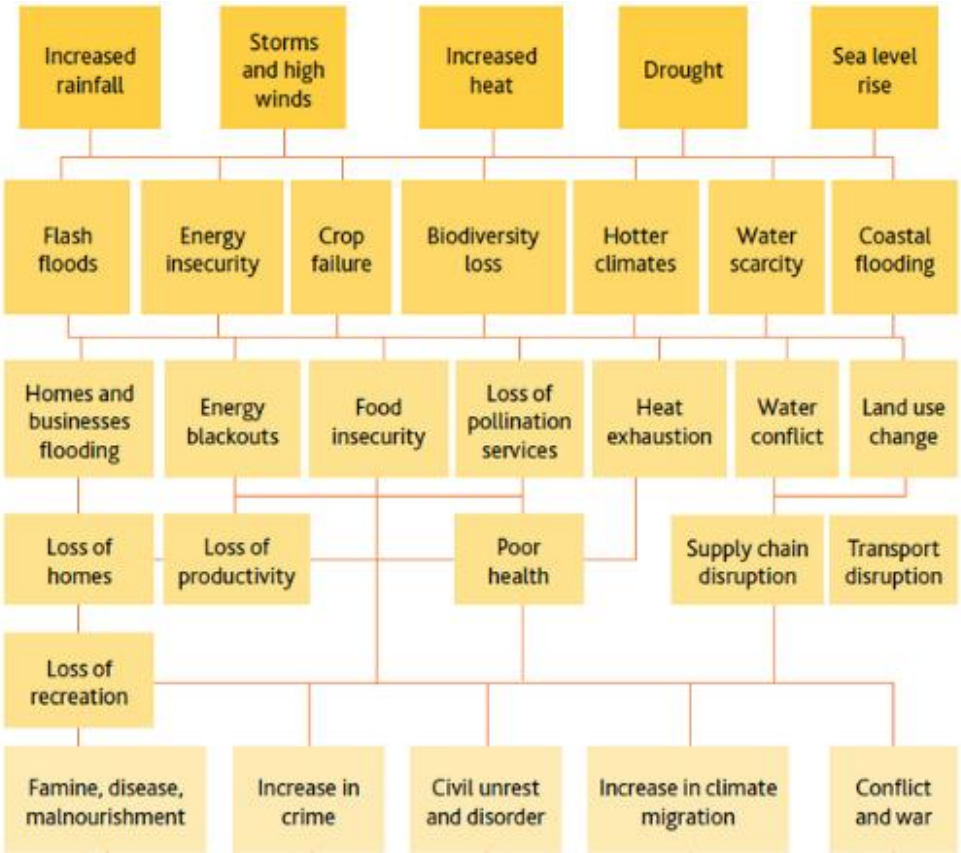
The Council area performs well across resident health, life expectancy, school performance, and scenic quality and East Dunbartonshire is one of the City Region's most affluent and educated areas with high employment rates and earnings above the national average.

However, East Dunbartonshire is still vulnerable to a variety of climate risks. Scotland's ten hottest years have all occurred since 1997[9] and average precipitation has risen by 20%.[10] Climate impacts originally projected over the next three decades are already happening today, creating wetter winters, drier summers and previously "impossible events" of increased frequency and magnitude.[11,12,13] Events like Storm Éowyn underscore the intensity of new climate risks.[14]

The Council's Local Climate Change Impact Profile (LCLIP) identified a total of 126 extreme weather events from 2007 to 2022. These incidents disrupted residents, delayed Council services and caused environmental and infrastructure damage across East Dunbartonshire. The LCLIP also identified that the Council is particularly vulnerable to flooding, which impacted every Council service area.

These impacts increase the number of hazards and exposed communities, contributing to dire ecosystem and social pressures, and resulting in cascading climate risks shown in **Figure 1**.[15]

Figure 1: Cascading Risks from Climate Change[16]



[9] Scottish Government (2019) Appendix B: Environmental Baseline - Scottish climate change adaptation programme 2019-2024: strategic environmental assessment - gov.scot (www.gov.scot)
[10] Scottish Government (2019) Appendix B: Environmental Baseline - Scottish climate change adaptation programme 2019-2024: strategic environmental assessment - gov.scot (www.gov.scot)
[11] Scottish Government (2019) Appendix B: Environmental Baseline - Scottish climate change adaptation programme 2019-2024: strategic environmental assessment - gov.scot (www.gov.scot)
[12] Carbon Brief (2024) Mapped: How climate change affects extreme weather around the world - Carbon Brief
[13] The Guardian (2024) Climate crisis to blame for dozens of 'impossible' heatwaves, studies reveal | Climate crisis | The Guardian
[14] ClimaMeter (2025) ClimaMeter - 2025/01/24 Storm Eowyn
[15] The Guardian (2024) Climate crisis to blame for dozens of 'impossible' heatwaves, studies reveal | Climate crisis | The Guardian
[16] Ministry of Justice (2024) Climate change adaptation strategy 2024: MOJ - GOV.UK (www.gov.uk)

The UK Climate Change Committee highlights that while local authorities only directly contribute to 2% of UK emissions, they can influence a third of total UK emissions. East Dunbartonshire Council has a significant role to play in climate change mitigation and adaptation to reduce our exposure to climate risks. For example, the Council is responsible for planning and building standards, the provision of schools and education, waste collection and recycling, infrastructure development, local transport planning, and economic development amongst other remits. Additionally, the Council owns a large built estate and employs over 4,500 staff, constituting a significant scope to reduce emissions.

By engaging in climate planning that recognises our ecological ceilings and shortfalls in social needs, we can deliver outcomes that provide multiple co-benefits. For example, climate mitigation and adaptation strategies can increase the resiliency of communities through nature-based solutions, improve mobility through public transport access and strengthen public health outcomes as shown in **Figure 2.** These co-benefits increase both near-term community well-being and long-term adaptive capacity to respond to climate hazards.[17]

Figure 2: Doughnut Economics of Social and Planetary Boundaries[18]

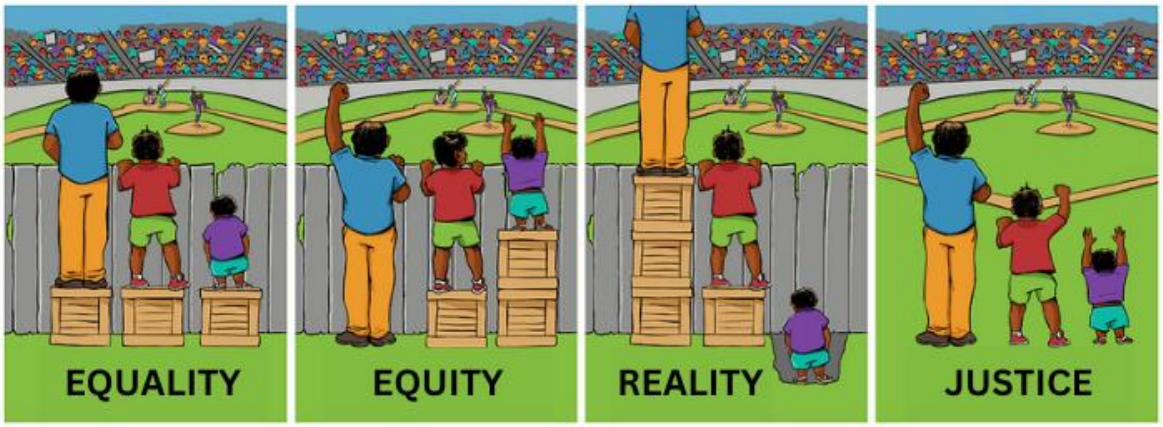
[17] CDP (2020) CDP_Co-benefits_analysis.pdf
[18] Doughnut Economics (2017) About Doughnut Economics

Commitment to Climate Justice

How the co-benefits of climate action are distributed is central to achieving a just transition. The climate crisis exacerbates the impact of existing social inequalities, placing disproportionate burdens on marginalised groups such as low-income households, communities of colour, women, disabled people, youth and seniors. For example, those without access to transportation may be unable to evacuate during a flood and communities without shading from urban green space experience higher temperature extremes during heatwaves. The Council is committed to engaging with these problems to create solutions that address local social disparities.[19]

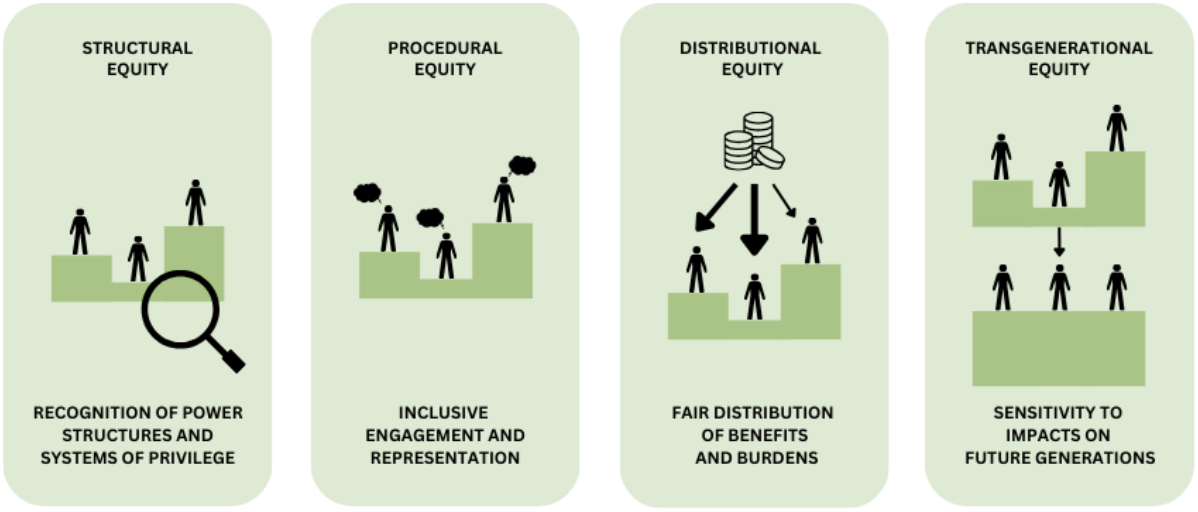
As illustrated in **Figure 3**, today's reality requires us to acknowledge that current economic and social systems benefit specific groups over others.

Figure 3: Illustration of Climate Justice[20]



In practice, East Dunbartonshire can work to achieve climate justice by implementing policy solutions that embody the four key dimensions of equity shown in **Figure 4**.[21]

Figure 4: Key Dimensions of Justice



Structural equity is the acknowledgment of entrenched inequities and systems of privilege that benefit certain groups over others, which this CAP explicitly recognises. Procedural equity focuses on the inclusion of marginalised residents in decision making processes to mend these damages. The Governance structure set out in **Section 3** identifies specific capacity for the inclusion of community members to ensure climate solutions meet local needs. This CAP will then work toward delivering distributional equity and transgenerational equity, which respectively address the redirection of benefits toward frontline communities and protections for future generations.

[19] Grantham Research Institute on Climate Change and the Environment (2022) What is meant by 'climate justice'? - Grantham Research Institute on climate change and the environment
[20] Medium (2021) https://medium.com/collective-power/equity-or-equality-why-it-matters-f0593f5d47c
[21] City of Tucson (2023) assets.tucsonaz.gov/share/gis-docs/caap/TucsonResilientTogether_20230228.pdf

By integrating the dimensions of climate justice within both the governance structure and implementation of CAP actions, East Dunbartonshire is committed to creating solutions that build more resilient communities for all. This approach also firmly supports the recommendations in the Scottish Government's Statutory Guidance to taking an intersectional approach that examines compounding inequalities in climate vulnerability assessment.

Public Mandate for Action

In 2021, East Dunbartonshire Council's 'Climate Conversation' was held to seek local public opinion and the views of Council employees on climate change and related issues.

Key findings are as follows:

- 94% of respondents to the general survey, 100% of Council employee respondents and 89% of business respondents consider that we are facing a climate emergency.
- A clear majority of respondents to the general survey and employee survey were very concerned about:
    - The effects of climate change on future generations (88% and 70% respectively);
    - Loss of biodiversity and wildlife due to factors like habitat loss and climate change (84% and 70% respectively);
    - Increased use of limited resources and increasing levels of waste (80% and 67% respectively).
- Most businesses were also very concerned about effects of climate change on future generations (89%) and increased use of limited resources and increasing levels of waste (67%).

Table 1 shows that slightly over half of respondents thought the Council should be doing more to mitigate climate change, indicating significant public support for measures included in the CAP.

Table 1 – Perceptions of Council's Action on Climate Change from 'Your Budget Priorities' Survey 2023

Do you think the Council could be doing more?		
Yes	600	53%
No	536	47%

Table 2 reflects responses to an additional open question where participants were asked to identify additional climate actions, they feel the Council could take.

Table 2 – Action Points from the Council's Your Budget Priorities' Survey 2023 and Number of Responses

Topic	Number*	Comment
Active travel infrastructure	46	Provision of cycle paths and facilities
Electric vehicle promotion	47	Availability and frequency of charging stations and subsidies to encourage electric vehicle use
Preserving greenspaces and natural biodiversity	20	Protection of existing greenspaces and encouraging biodiversity through natural management
Council plans visibility and climate education	51	Advertisement of existing Council commitments and climate education resources
Recycling and waste reduction	50	Need for improved recycling facilities
Renewable energy use	25	Increased Council renewables use and promotion
Insultation and installation support	17	Council building insulation and homeowner subsidies for energy efficiency
Public transport	32	Improved public transit links to discourage care use

** The total number of responses does not equate to the number of individual respondents as some individuals identified multiple points.*

The input from this process has been instrumental in shaping this draft Climate Action Plan and is heavily reflected throughout, particularly in the vision, objectives and themes. The residents of East Dunbartonshire have made clear that climate action is a priority, and this plan is our path to change.

Section 1: Council Context

Action to Date

A commitment to annual greenhouse gas emission reporting was introduced in East Dunbartonshire's 2015 Carbon Management Plan (CMP), now in its 8th iteration as of December 2024. The CMP focuses on corporate emissions arising from fleet, business travel, waste disposal and the use of electricity, natural gas and other fuels. Further updates on the CMP can be found in the corporate emissions part of the **Baseline Section**.

The Council's 2016 Sustainability and Climate Change Framework (SCCF) sets the context for a strategic, cross-Council approach to sustainability. It contains a wide range of strategic commitments beyond climate change mitigation and adaptation, such as sustainable development and biodiversity targets. The most recent SCCF progress report was approved in January 2024.[22]

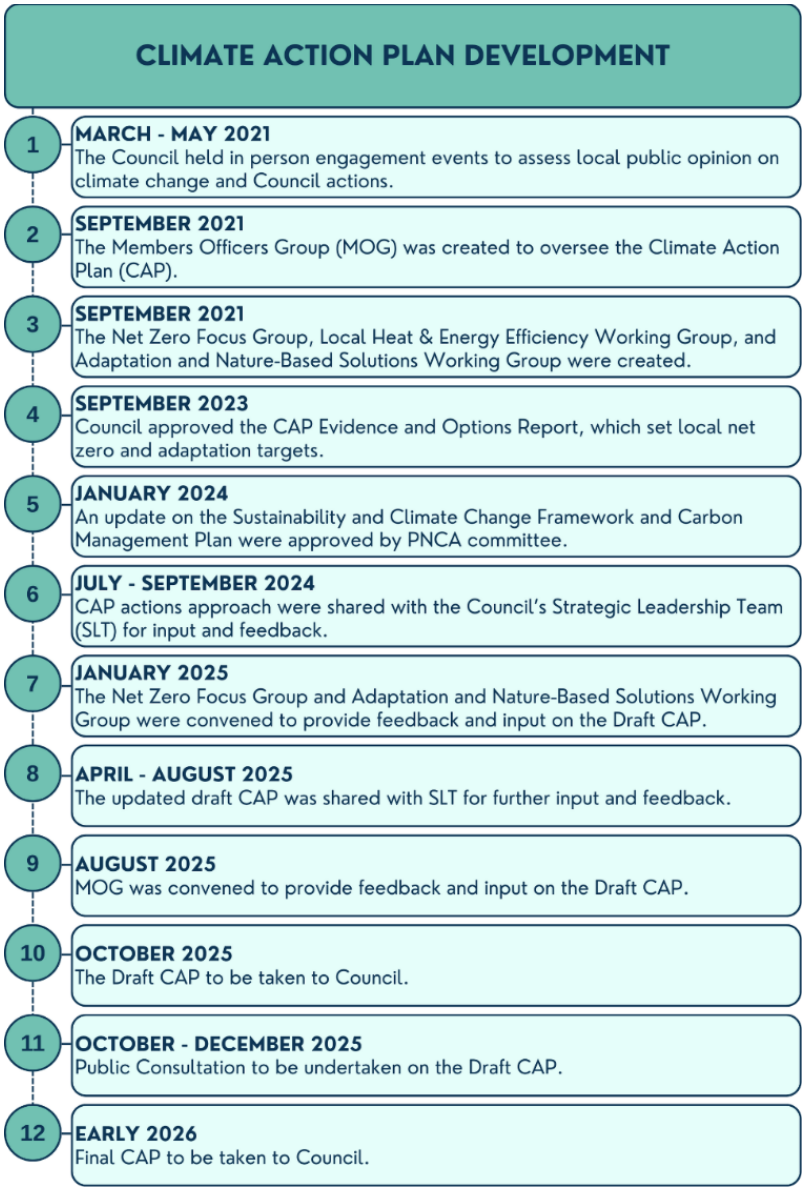
The SCCF will be superseded by the CAP and the Net Zero & Resilience Action Plan (see **Section 3: Net Zero and Resilience Delivery Framework**), which will serve as the programme management tool for the delivery of CAP actions. On-going actions from the SCCF have been integrated into **Section 4: Strategic Themes and Actions** of this CAP or will be transferred to related policy documents such as the Local Biodiversity Action Plan and forthcoming Greenspace Strategy.

The CAP's Evidence and Options Report examined potential future emissions scenarios developed using the independent net zero modelling. Council approved the report in September 2023, adopting a pathway with a net zero target of 2036 for direct emissions and purchased energy in addition to a 2045 target for other indirect and area-wide emissions.

The CAP Evidence and Options Report also set out a suite of adaptation options and delivery actions using evidence from the Council's Local Climate Impact Profile (LCLIP) and two-stage Climate Risk and Opportunity Assessment. The LCLIP identified the frequency and intensity of extreme weather events in East Dunbartonshire and how Council operations and services were impacted during the study period. The assessment established key area-wide and Council climate risks then rated these items in terms of urgency of action and likelihood. The 2021 Glasgow City Region Climate Adaptation Strategy and Action Plan supports the Council's strategic policy position on climate change adaptation (see **Financing Net Zero and Adaptation** section for further details). **Figure 5** shows the Council's planning process to date.

[22] East Dunbartonshire Council (2024) Agenda for Place Neighbourhood & Corporate Assets Committee on Thursday, 25th January, 2024, 5.30 pm (moderngov.co.uk)

Figure 5: Climate Action Plan's Development



Local Policy Landscape

East Dunbartonshire has several concurrent local strategies that align with the CAP to achieve the Council's broader sustainability goals. This list is non-exhaustive. The full set of relevant policies can be found in the **Appendix 3: The Policy, Strategy & Plan Directory**

- Carbon Management Plan
- Local Heat and Energy Efficiency Strategy
- Local Development Plan 2
- Circular Economy Strategy
- Local Transport Strategy
- Active Travel Strategy
- Green Network Strategy
- Local Biodiversity Action Plan
- Local Housing Strategy
- Greenspace Strategy

Councils are additionally subject to the following statutory requirements related to the CAP:

- The Local Heat and Energy Efficiency Strategies (Scotland) Order 2022
- The New Build Heat Standards

- Heat Networks (Scotland) Act 2021
- The Heat Networks (Heat Network Zones and Building Assessment Reports) (Scotland) Regulation 2023
- Circular Economy (Scotland) Act 2024
- Net Zero Nation Public Engagement Strategy
- Heat in Buildings Strategy
- Green Industrial Strategy

There is also relevant non-statutory legislation including the **Scottish National Adaptation Plan 3 (SNAP3)** which sets national actions related to the complex picture of risks, opportunities and dependencies between policies that constitute climate adaptation policy.

Further details on legislation are set out in the Evidence and Options Report.[23]

The UK Climate Change Committee has advised that on a UK level, policy levers are insufficient to meet climate targets, especially in transport, domestic heating, and agriculture.[24] The Scottish Fiscal Commission notes that current climate investments are also incommensurate with Scotland's net zero targets and the next Climate Change Plan will need to quantify the emissions reduction impacts of proposed policies to achieve necessary progress.[25]

The Scottish Government underscores the drastic scale of skills and capacity building needed to drive this transformational societal change and reach national net zero targets through the Climate Emergency Skills Action Plan and Implementation Plan,[26] Scotland's Future Skills Action Plan,[27] and Skills Action Plan Phase 2.[28]

[23] East Dunbartonshire Council (2023) Agenda for Council on Thursday, 28th September, 2023, 5.30 pm
[24] Scottish Government (2023) https://www.gov.scot/publications/environment-strategy-scotland-delivering-environment-strategy-outcome-scotlands-economy-evidence-base-policy-levers/documents/
[25] Scottish Fiscal Commission (2024) Fiscal Sustainability Perspectives: Climate Change – Scottish Fiscal Commission
[26] Skills Development Scotland (2020) climate-emergency-skills-action-plan-2020-2025.pdf (skillsdevelopmentscotland.co.uk)
[27] Skills Development Scotland (2019) Scotland's Future Skills Action Plan (www.gov.scot)
[28] Skills Development Scotland (2021) Scotland's Future Skills Action Plan - Phase Two: Areas for development - Future skills: action plan - gov.scot (www.gov.scot)

Section 2: East Dunbartonshire Net Zero and Adaptation Pathways

Net-zero targets require an emissions baseline to monitor progress against. Baselining, or the process of applying a consistent carbon accounting methodology, is critical to ensure long-term project validity.

The CAP baseline incorporates scope 1, 2, and 3 emission categories as defined by best practice through the Greenhouse Gas Protocol:[29]

- Scope 1: Direct emissions from sources controlled by the organisation.
- Scope 2: Indirect emissions from purchased energy.
- Scope 3: Indirect emissions from all other activities.

The three scopes are a way of categorising different kinds of emissions from an organisation's own operations and its wider value chain, including its suppliers and customers. What is included in each scope will vary depending on the organisation's activities, and for the Council, whether corporate or area-wide emissions are being considered.

Definition of carbon footprints

Corporate emissions: refer to emissions from the Council's direct carbon footprint, such as Council buildings and vehicle use.
Area-wide emissions: refer to emissions in the East Dunbartonshire area as a whole, such as emissions from all buildings and vehicles.

The independent consultants calculated a new set of corporate baseline emissions in the CAP Evidence and Options Report, establishing the 2019/20 financial year as the referenced baseline across corporate and area-wide emissions.

Corporate Net Zero Pathway

The Council has measured its corporate carbon footprint through its Carbon Management Plan since 2012/13 (see **Table 3**). These emissions are based on the Council's use of electricity, natural gas, oil, biomass and transport (fleet and business travel), and waste management activities. The proportion of each area's is highlighted in **Figure 6**.

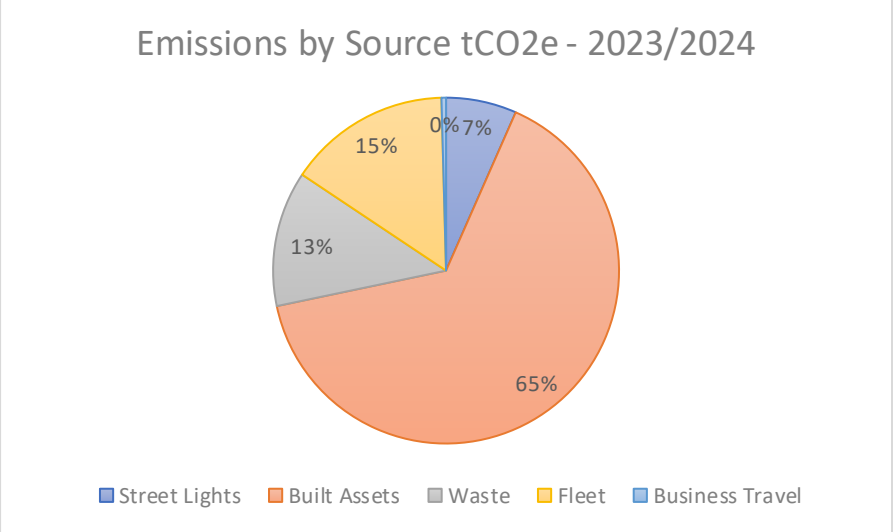
Table 3 – East Dunbartonshire Council's Corporate Emissions (tCO_2e)

Year	Scope 1	Scope 2	Scope 3	Total
2012/13	9,793	12,421	10,206	**32,420**
2013/14	10,574	11,489	7,635	**29,698**
2014/15	9,532	12,861	7,602	**29,995**
2015/16	9,306	10,338	11,778	**31,422**
2016/17	8,291	9,154	11,328	**28,773**
2017/18	9,160	7,959	14,305	**31,424**
2018/19	8,267	6,258	4,498	**19,023**
2019/20	8,800	5,345	4,112	**18,257**
2020/21	7,893	3,955	3,722	**15,570**
2021/22	8,572	4,347	3,668	**16,587**
2022/23	8,278	4,281	2,089	**14,648**
2023/24	8,016	4,397	2,307	**14,720**
2024/25	-	-	-	*14,890**
2025/26	-	-	-	*13,820**

** Refers to targets*

[29] Greenhouse Gas Protocol (2025) Homepage | GHG Protocol

Figure 6: CMP Council Corporate Emissions 2023/24



The CMP is also used to set targets for emissions reductions as illustrated in **Table 3**. While an anticipated increase in the emission intensity of electricity is expected to cancel out Council emissions reduction initiatives in 2024/25, the Council has set highly ambitious targets for the 2025/26 year to reflect progress on actions set out in this CAP.

A ceiling of 13,820 tCO_2e has been set for the Council's corporate carbon footprint for 2025/26, which represents a near quarter reduction from the 2019/20 baseline.

A key requirement to achieve Council's net zero targets that were agreed in the Evidence and Options Report will be measuring and setting out emission reduction actions for new areas that are not currently captured in the CMP, including emissions from the Council's supply chain and employee commuting emissions. **Table 4** demonstrates the inclusion of additional emissions sources within reporting.

Table 4 – Expanded Emissions Baseline and Current CMP Emissions

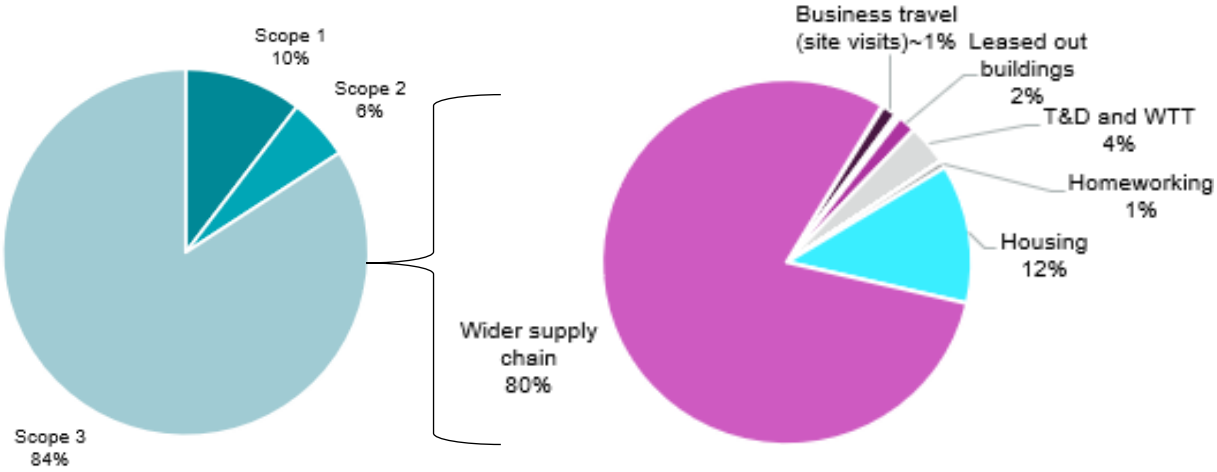
Category	Extended Baseline Emissions tCO_2e/yr	CMP Emissions tCO_2e/yr
Scope 1	10,067	8,800
Scope 2	5,298	5,345
Scope 3	80,467	4,112
Total	**95,833**	**18,257**

While scope 1 and 2 emissions are broadly similar, there is a major change to the Council's corporate scope 3 emissions which reflect new areas that Council will have to estimate emissions for as part of the CMP process and incorporate into its carbon footprint.

As shown in **Table 4**, with new accounting measures, Scope 3 accounts for the majority of the Council's operational emissions with the Council's supply chain making up approximately two-thirds of all emissions and is by far the Council's wider supply chain.[30] This weight emphasises the importance of sustainable procurement and data collection. Further guidance on Scope 3 reporting is forthcoming from the Scottish Government and will be key to accurately decarbonising Council activity.

[30] Energy losses in T&D (transmission and distribution) and WTT (well to tank) systems occur mainly due to resistance in electrical lines, heat dissipation, and inefficiencies in fuel extraction, processing, and transport.

Figure 7: Breakdown of Corporate Scope 3 Emissions 2019/20



The chosen pathway enables the Council to reach net zero for scope 1 and 2 emissions by 2036, and scope 3 by 2045. It is noted that there will be some residual emissions for each of the scopes which would be offset by a range of initiatives, predominantly nature-based solutions.

The main features of this scenario require:

- Scope 1 emissions to substantially reduce by 2036 with a transition to decarbonised buildings, through moderate fabric upgrades, electrification of heat, and low carbon vehicles.
- Scope 2 emissions to substantially reduce by 2036 mainly due to grid decarbonisation. A small proportion of remaining emissions must be mitigated through local renewable generation or green energy procurement.
- Scope 3 to reach net zero by 2045, achieving a 92% reduction from the 2019 baseline. This assumes that 90% of Council suppliers will decarbonise and that supply chain emission reductions are largely delivered without significant cost or long-term intervention from the Council. However, this assumption has a high level of uncertainty and requires further assessment as discussed in **Theme 7 – Supply Chains, Investment and Digital Infrastructure.**

The estimated cost of reaching corporate net zero in this scenario in September 2023 ranged to £326m over the period to 2045. This estimate will have since increased due to inflationary pressures and new modelling inputs.

Area-Wide Net Zero Pathway

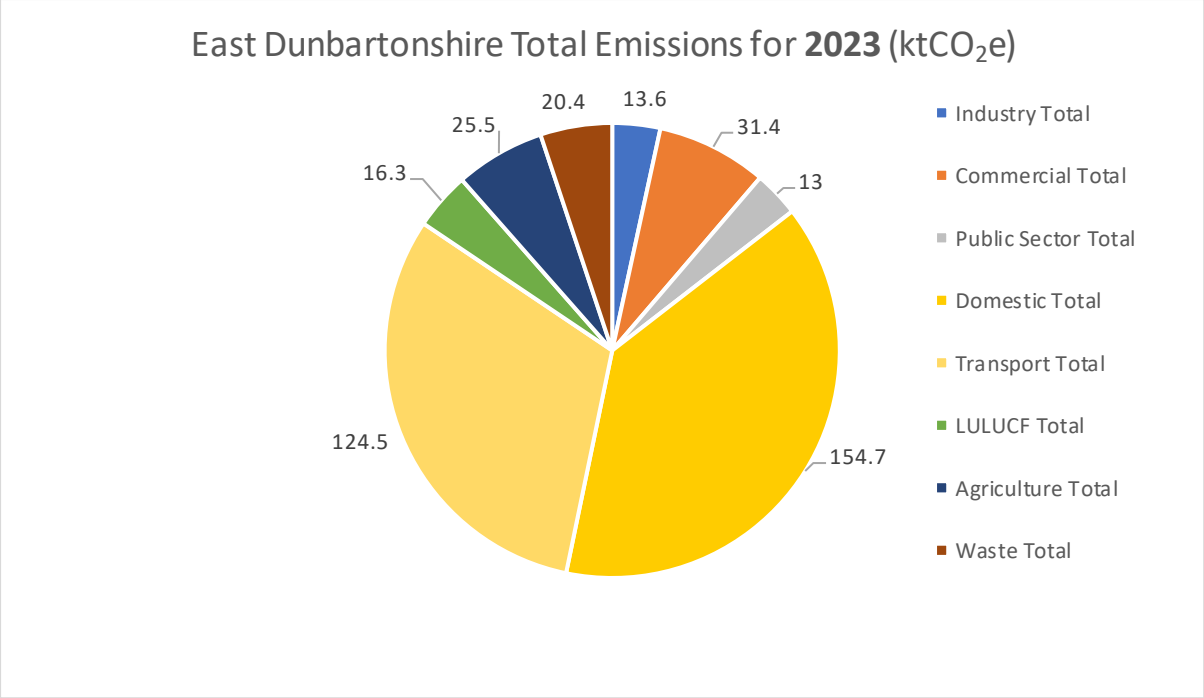
Total area-wide emissions in East Dunbartonshire decreased by approximately 39% between 2005 and 2019. Furthermore, East Dunbartonshire has some of the lower per capita emissions out of all the Councils in Scotland.[31]

Part of this significant emissions decline is through a reduction in fuel consumption linked to improvements in energy efficiency. Similarly, electricity use decreased by around 20% between 2005 and 2019 while the emissions intensity of electricity dropped by 55%, causing an overall 84% decrease in emissions. The progress in decarbonising the electricity grid highlights the case for electrification as a means of decarbonising heat and transport.

A breakdown of East Dunbartonshire's most recent area-wide emissions can be found in **Figure 8**. The area-wide data is largely comprised of emissions from heating systems and transport. The domestic and commercial categories largely reflect emissions from heating buildings.

Figure 8: Breakdown of East Dunbartonshire Area-wide Emissions by Source (2023)

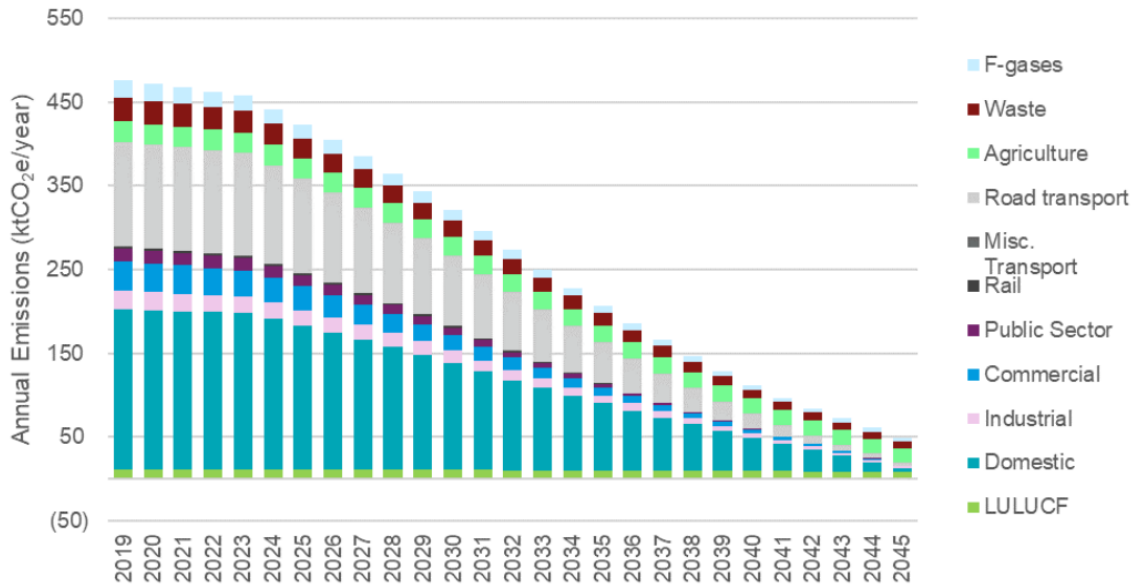
[31] UK Government (2025) UK local authority and regional greenhouse gas emissions statistics, 2005 to 2023 - GOV.UK



The CAP Evidence and Options Report modelling for the Council's elected area-wide net zero targets is based upon the UK Climate Change Committee's 6th carbon budget's 'Balanced Pathway' analysis, with calculation assumptions brought forward by 5 years to reflect Scotland's earlier net zero target. Assumptions have been reviewed against the modelling in the CCC's more recent 7th carbon budget.

As outlined in **Figure 9** the scenario elected by the Council results in East Dunbartonshire achieves a 90% emissions reduction from 2019 levels. This pathway would meet the Scottish national target when accompanied with nature-based solutions to mitigate the substantial residual emissions by 2045. As noted in the Statutory Guidance, residual emissions should only be offset as a last resort if there is no viable alternative.

Figure 9: Council's Area-wide Emissions Targets



The main features of this scenario include reaching area-wide net zero by 2045 across all scopes through:

- Largely decarbonised energy use in buildings with zero carbon heat networks, heat pumps and improved thermal efficiency
- Decarbonisation of the electricity grid
- Massive increases in local deployment of roof-mounted solar technologies
- Near complete electrification of the transport sector with reduced demand for large goods vehicles and heavy good vehicles movements
- Reduced car journeys through increased home working and adoption of sustainable modes of transport
- Decarbonisation of industry
- Reduced emissions from waste
- Reduced emissions from agriculture and land use alongside increased carbon sequestration in the land use and forestry sector
- 10% of remaining residual emissions are offset

The area-wide net zero pathway reflects estimated emissions levels if all proposed mitigation actions are implemented. Accordingly, they pathways will need to have their assumptions tested as more information becomes available.

Given that not all components of the Council's area-wide net zero trajectory are wholly within Council's influence, the Council will use the adjustable Scottish Climate Intelligence Service ClimateView platform as a dynamic and live modelling tool for area-wide emissions monitoring. This will also be used by the Council's sustainability team to identify new actions where corrective action is required to keep Council on track.

Adaptation Pathway

As climate risks continue to intensify, monitoring local impacts and promoting resilience in East Dunbartonshire are becoming increasingly important. Collaborating with national partners will be key to measure changing precipitation patterns, temperature extremes and extreme weather events for long-term resilience planning and the implementation of risk reduction measures.

The Scottish National Adaptation Plan 3 (SNAP3) was published in 2024 and assesses adaptation gaps and sets out actions on how to increase climate resilience at a national level.[32] Councils are expected to use the Capability Framework developed by Adaptation Scotland for the Scottish public sector to report on progress in delivering SNAP3. The Framework outlines four capabilities needed for an organisation's adaptation journey. It describes 42 tasks to develop these capabilities over four stages from 'starting' to 'mature.' The four capabilities are:

- understanding the challenge
- organisational culture and resources
- strategy, implementation and monitoring
- working together

The Council's Sustainability Team will monitor progress against these areas and take forward key recommendations to:

- explore future projected changes in Scotland's climate, for example using the Met Office climate data portal and recent climate.
- Communicate risks and opportunities identified in the Climate Change Risk Assessment (CCRA) national summary report for Scotland.
- Identify weather events that have impacted the Council in the past to help create an understanding of the impacts of these events and consider how such weather events could be different in the future, in terms of their frequency and severity.

These actions include improving resilience to the economic damages of climate change – with the cost of climate change damages to the UK projected to increase from 1.1% of GDP at present to 3.3% by

[32] Scottish Government (2024) Supporting documents - Climate change - national adaptation plan 2024 to 2029: consultation - gov.scot (www.gov.scot)

2050 and 7.4% by 2100, placing the greatest burden on frontline communities who are least able to respond to climate risks.[33]

Glasgow City Region & East Dunbartonshire

Climate Risk and Opportunity Assessment

The Council's climate risk and opportunity assessment used evidence gathered through the Local Climate Change Impact Profile and external sources to perform a systematic review of the climate risks posed to East Dunbartonshire. This tool examined climate risk exposure to design measures that harness co-benefits and safeguard communities from extreme weather events and climate hazards. Findings were published within the CAP Evidence and Option report.

The approval of the Evidence and Options report in September 2023 led to an updated risk on climate change, including both mitigation and adaptation, being added to the Corporate Risk Register by Council in December 2023.

Local Vulnerability Data

In addition to identifying ecological risks, it's critical to understand which communities in East Dunbartonshire are most vulnerable to them. Social and ecological vulnerability in Scotland is primarily mapped through the Scottish Index of Multiple Deprivation (SIMD) and Scottish Environmental Protection Agency (SEPA) Flood Risk Areas Map (shown in **Figure 10** below).[34] These datasets can be combined to identify disadvantaged communities that are the most exposed to climate risks and prioritise these areas for programme implementation.

Figure 10: Flood Risk Areas across East Dunbartonshire

The Glasgow City Region Climate Vulnerability Map combines the SIMD and SEPA maps, in addition to the 4EI Heat Index and available urban tree canopy cover data.[35] The map examined Council-wide data and identified Hillhead, Merkland, Townhead and Lennoxtown as priority areas for flood and heat risk, as shown in red and blue respectively in **Figure 11.**

Figure 11: Climate Vulnerability Map for Flood and Heat Risk

[33] London School of Economics (2022) What will climate change cost the UK? Risks, impacts and mitigation for the net-zero transition - Grantham Research Institute on climate change and the environment (lse.ac.uk)
[34] SEPA (2024) SEPA Flood Maps
[35] ClimateReadyClyde (2024) Climate Vulnerability Map | Climate Ready Clyde


Lennoxtown
Milton of Campsie
B757
Birdston
B822
B8023
Broomhill
A803
Harestanes
Cleddans
Langmuir
Hayston
Kirkintilloch
Torrance
Barleybank
Rosebank
Westermains
Oxgang
Waterside
A807
Back O Loch
Duntiblae
The Greens
Woodilee

Section 3: Net Zero and Resilience Delivery Framework

Framework Approach

Social and Behavioural Change

The CAP's actions are grounded in the understanding that the Council plays a major role in climate action, principally to create communities in which residents and businesses can easily, and ideally effortlessly, engage in climate positive behaviours.

The Climate Change Committee estimates that over 60% of changes needed to reach net zero will require some degree of societal or behavioural change,[36] and the IPCC have projected that demand-side measures can reduce global emissions by 40-70% by 2050.[37] Accordingly, behavioural and societal changes are cornerstones of achieving net zero.

The Council's role in facilitating this shift is illustrated in the Individual, Social and Material Contexts or ISM Model in **Figure 12**. By creating the infrastructure conditions that support sustainable choices, such as bike and bus priority lanes, more residents will see this as a viable option due to improved safety or reduced journey time. These changes can then create a ripple effect, where sustainable living becomes more normal.[38]

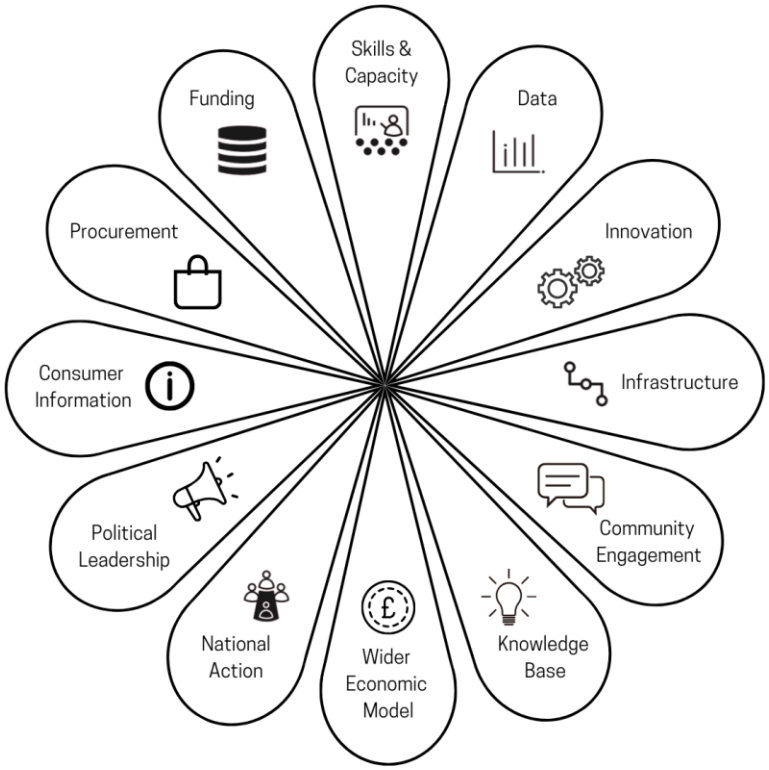
Figure 12: The ISM Model – Individual, Social and Material Contexts

Conditions for Change

There are a range of crosscutting enabling conditions that will be required to deliver net zero, nature positive and circular economy goals at the local level such as skills, research and development, and pursuing well-being focused success metrics as outlined in **Figure 12**.[39][40] As highlighted in the image, many of these factors will rely on the Scottish and UK governments providing the necessary political leadership, resources and funding to disrupt business as usual and to drive effectual climate action.

[36] Climate Change Committee (2019) Net Zero - The UK's contribution to stopping global warming - Climate Change Committee (theccc.org.uk)
[37] IPCC (2022) AR6 Climate Change 2022: Impacts, Adaptation and Vulnerability — IPCC
[38] Westlake, Steve, (2024) http://dx.doi.org/10.2139/ssrn.3283157
[39] Scottish Government (2023) Delivering the Environment Strategy Outcome on Scotland's Economy: Evidence Base and Policy Levers
[40] City of Bristol (2020) one-city-climate-strategy.pdf (bristolonecity.com)

Figure 13: Enabling Conditions for Change



The governance structure below sets out the means of driving changes to these external variables, such as the communications plan to engage external partners, an approach to funding in light of local financial pressures, mechanisms to engage external bodies in the Council's Net Zero Framework and means of using SMART[41] targets in monitoring structures.

Framework Structure

To drive entrenched behavioural change and meet its net zero targets, the Council will require a robust net zero and resilience delivery framework. The Evidence and Options Report identified the need to formalise the following structures within the framework:

- Net zero governance structure, including elected members to champion net zero and climate resilience
- Ongoing monitoring process
- Communications Plan

The following sub-sections address each of these components in turn and discuss how they contribute to the CAP's delivery. The net zero and resilience delivery framework operationalises the CAP mission, themes and objectives. Collectively, they set out how the Council will put net zero and climate resilience at the core of strategic decision-making.

It is important to note that this Net Zero and Resilience Delivery Framework is not static nor final. Changing economies of scale of key zero emission technologies, pricing structures, policy mandates and other factors require the structure to be dynamic enough to exploit new opportunities, revise modelling to reflect updated trends, and take corrective actions where climate action lags against targets.

Moreover, given the accelerating impact of climate change, this structure and proposed actions will need to be developed at pace to adequately address the growing impacts of the climate emergency.

Governance Structure

The draft Climate Action Plan has been developed with input from the Climate Change Member Officers' Group (MOG) comprised of elected members and executive officers, the Council's Strategic Leadership Team, the Council's Net Zero Focus Group, Local Heat and Energy Efficiency Working Group, and

[41] Specific, Measurable, Achievable, Realistic and Time-bound

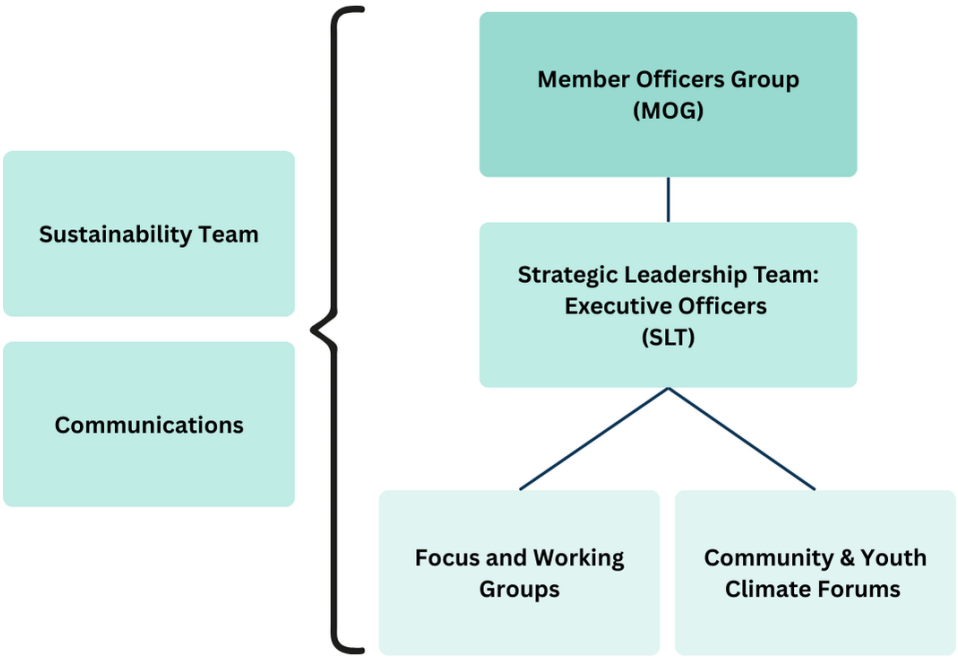
Adaptation & Nature-based Solutions Working Group. Each working group met regularly to ensure that a co-ordinated approach the preparation of the CAP was adopted.

Under the Council's current Sustainability and Climate Change Framework, the Sustainability Team provides advisory input to each Council directorate's annual Business Improvement Plans (BIPs) which report key updates on service priorities, including sustainability and climate goals.

However, there is a need to further integrate climate considerations into every aspect of the Council's operations. As such, the CAP's Evidence and Options Report recommended that the Council's intended governance structure for implementation is updated to ensure key roles and functions are covered, and critically, to ensure that CAP actions are assigned to a member of East Dunbartonshire Council's Strategic Leadership Team. This approach is supported by the robust Governance and Leadership arrangements that are set out in Audit Scotland[42] and the draft Statutory Guidance.[43] The draft Statutory Guidance sets out the vital nature of leadership, governance and commitment within public bodies highlighting that climate actions should be visible and transparent for both internal and external stakeholders and ensuring that leadership and accountability is clear within the organisation.

Collectively, these sources have shaped the final CAP governance structure as shown in **Figure 14**.

Figure 14: Net Zero and Resilience Delivery Framework Governance Structure



Net Zero and Resilience Action Plan

The table of actions in each theme of the draft CAP will be combined to become a stand-alone living Net Zero and Resilience Action Plan (NZRAP). The NZRAP will be the main programme management tool for the Council's governance framework to place delivering on the Council's net zero and climate resilience targets at the heart of decision-making at the Council through Strategic Leadership Team and MOG oversight.

Each action in the NZRAP will be assigned to an Executive Officer or other senior officers who will oversee implementation and report progress against its corresponding completion date. With support from the Council's Sustainability Team, the NZRAP will enable Council services to entrench robust governance arrangements[44] and integrate climate change into decision-making across all areas of Council activity. This direct accountability will be crucial to respond to on-going policy developments, maximise funding opportunities and create new actions where necessary.

[42] Audit Scotland (2022) Addressing climate change in Scotland (audit.scot)
[43] Scottish Government (2025) Consultation on Draft Statutory Guidance for Public Bodies: putting the climate change duties into practice
[44] Audit Scotland (2022) Scotland's councils' approach to addressing climate change (audit.scot)

Means of visualising the area-wide actions are being developed in partnerships with the Scottish Climate Intelligence Service's ClimateView tool. This open reporting system will serve as a key communications tool in addition to a living climate modelling feature that allows the Council to examine progress and identify corrective action where necessary.

Additionally, East Dunbartonshire will need metrics to assess local resiliency and climate equity. The NZRAP can not only track total emissions reduction but also record where climate initiatives are implemented and estimated co-benefits. By exploring methods to assess direct benefits to frontline areas and improvements to local resilience, the NZRAP can measure progress to safeguard communities within East Dunbartonshire that are most in need and advance local climate justice.

As noted previously, the Council does not have direct remit over some actions which are required to achieve East Dunbartonshire area-wide emissions reductions trajectory. As a result, progress on these actions will be monitored and external partnerships will be established as means of progressing them.

Progression of the NZRAP actions will be overseen by the Strategic Leadership Team while MOG will continue to provide overall oversight and be convened in advance of Council and Committee decisions on the NZRAP. Regular input from various working groups and community climate forums will be gathered as described below.

It is recommended that annual progress reports are prepared for Council through the Climate Change Duties Monitoring Report process discussed under monitoring arrangements.

Community Climate Forums

There is a clear desire and need to establish community forums to give communities and young people a voice in local climate action and advance procedural justice. 93% of general survey respondents in the Council's Climate Conversations support the creation of a community forum and 64% of youth survey respondents support the creation of a youth forum. Community interest aligns with Audit Scotland's recommendation for climate change to "become a priority issue that public bodies and their partners engage [on] with local communities" to deliver successful solutions.[45]

The development of a Community Climate Forum and Youth Climate Forum will provide a space for regular dialogue and empower community members to meaningfully shape East Dunbartonshire's NZRAP and broader sustainability work. Community members, particularly young people and marginalised residents, are experts in their own lived experience and should be centred in shaping systems that will directly impact their futures.[46] The Youth Climate Forum also aligns with the United Nations Convention on the Rights of the Child (Incorporation) (Scotland) Act 2024 to ensure young people have a say in protecting their health and wellbeing by integrating climate resilience in their communities.

The two forums will meet on a regular basis to allow residents, community groups and local businesses to:

- shape the NZRAP through critical input;
- share lived experience to ensure that East Dunbartonshire adapts to climate change and creates community climate resilience;
- foster climate justice and discuss local equity concerns;
- inform enhanced biodiversity and improved access to greenspace;
- learn about available funding sources for decarbonisation and other climate action.

The Climate Forums therefore creates strong opportunities to emphasise placed-based action by empowering communities to develop localised solutions to climate change. The Forum's approach will draw upon the Guiding Principles from the Scottish Government's Public Engagement Strategy for Climate Change to encourage inclusive public involvement, collaboration and empowerment.[47]

This will entail key points from the Climate Forum meetings being presented to the Council's Strategic Leadership Team and addressed with direct responses to ensure Climate Forum members can transparently see the impact of their input.

[45] Scottish Audit Officer (2022) Addressing climate change in Scotland (audit.scot)
[46] Transform Scotland (2024) Transport for tomorrow: How do we make transport work best for children and young people? - Transform Scotland
[47] Scottish Government (2021) Net Zero Nation: Public Engagement Strategy for Climate Change (Large Print) (www.gov.scot)

MOG and Working Groups

The MOG will continue to be convened in advance of committee and Council decisions such as on progress reports or reports detailing corrective action required in response to delayed progress, updated modelling, or missed targets. This conforms to Scottish Government Leadership Guidance to ensure that *"where one or more interim targets are not met the organisation [will] produce a catch-up plan to ensure that performance gets back on track."*[48]

The MOG is currently supported by a series of internal working groups:

- Adaptation and Nature-based Solutions Working Group;
- Local Heat and Energy Efficiency Working Group;
- Net Zero Focus Group

Each of the working groups will be formed by Council staff to provide critical input. Primary responsibilities of the working groups are to:

- Identify and advise on the creation of new actions to be escalated to the SLT for consideration.
- Recommend corrective actions for any delayed actions or missed targets.
- Form collaborative relationships between Council services and teams to support programme, policy, and strategy delivery.

Governance Summary

Table 5 summarises the Net Zero Delivery Governance Framework and the roles of each entity to deliver against the actions contained in the NZRAP.

Table 5 – Governance Framework Summary

Body / Programme Management Tool	Purpose
Climate Change MOG	The MOG will continue to be convened in advance of Council and committee decisions on the CAP's net zero targets and climate resilience goals. The role of MOG will include the following: • Oversee the delivery, monitoring and review of climate change and sustainability work and reports as required. • Oversee the NZRAP and ensure that the Council is on track to achieve its net zero targets based upon the Net Zero Monitoring Reports. • Ensure measures are in place for alignment of Council decisions, spend and resources with achieving Council net zero and adaptation measures. • Support new actions and corrective actions where Council falls behind in its emissions reductions and resilience targets. • Drive forward, oversee and champion the communications plan. • Establish a presumption against expenditure, investment, and infrastructure that would hinder achievement of net zero and increased climate resilience. • Drive forward the CAP's objectives to help to achieve the CAP's mission. • Support the establishment of new partnerships to help to achieve area-wide net zero targets and Council resilience targets.
Strategic Leadership Team	SLT will meet regularly to undertake the following: • Drive forward the NZRAP to ensure that the actions progress. • Ensure measures in place to achieve alignment of Council decisions, spend and resources with net zero while establishing a presumption against expenditure, investment, and infrastructure that would hinder net zero and resilience targets. • Ensure delivery against the five objectives set out in the Draft Climate Action Plan.

[48] Scottish Government (2021) 8. Target Setting - Public sector leadership on the global climate emergency: guidance - gov.scot

Body / Programme Management Tool	Purpose
	• Monitor progress towards meeting the Council's net zero targets, interim net zero targets and resilience targets and take corrective action, including taking corrective action by introducing additional emission reduction measures where targets are not met. • Champion the achievement of net zero and adaptation targets across Council activity. • Drive forward alignment of Council strategies, plans and policies with the Council's mitigation and adaptation targets. • identifying opportunities for collaboration with external partners. • Respond to input from the Climate Change Forums to facilitate meaningful engagement with a wide range of partners including young people and marginalised communities.
Net Zero Focus Group	The Net Zero Focus Group will meet regularly to undertake the following: • Drive forward progress towards net zero through the NZRAP, identify opportunities for new actions and the need for corrective action when targets are not being met. • Identify potential funding sources and submit coordinated funding bids to support the achievement of the mitigation strands of the NZRAP and CAP.
Adaptation and Nature-Based Solutions Working Group	The Adaptation and Nature-Based Solutions Working Group will meet regularly to undertake the following: • Support progress towards increased resilience and emissions reductions through nature-based solutions, including from actions within the NZRAP, identify opportunities for new actions and the need for corrective action when targets are not being met. • Driving forward the development and implementation of a Nature Based Investment Study to maximise the removed of emissions through nature-based solutions while delivering meaningful action to preserve and bolster flourishing biodiversity. • Identify potential funding sources and submit coordinated funding bids to support the achievement of the adaptation and nature-based solutions strands of the NZRAP and CAP.
Local Heat and Energy Efficiency Strategy (LHEES) Working Group	The LHEES covers how the domestic and non-domestic building stock needs to change to meet emissions targets and reduce poor energy efficiency as a driver of fuel poverty. It therefore aligns with the CAP work by driving forward emissions reductions through the implementation of the LHEES Delivery Plan. The LHEES Working Group will meet regularly to undertake the following: • Developing joint funding bids on heat decarbonisation. • Driving forward heat networks through feasibility work. • Ensuring the LHEES and Delivery Plan coordinate with related workstreams including the Council's Strategic Housing Investment Plan and Local Development Plan. • Working with partners to ensure a strong skills-base for energy efficiency and zero direct emitting heating systems, including career pathway awareness for young people and their mentors. • Promoting available support for zero direct emitting heating systems and energy efficiency.
Climate Forums	The two separate forums, the Community Climate Forum and Youth Climate Forum will meet regularly to undertake the following: • Forum to provide the public an opportunity to shape climate change mitigation and adaptation targets in the NZRAP. • Minutes will be taken and key points from the forums will be reported to SLT / MOG to maximise the forum's influence.
Climate Change Duties Monitoring Report (previously Carbon Management	• Quantify the Council's corporate and area-wide carbon footprint annually and provide analysis of major development. • Monitor and report progress to net zero on a corporate and area-wide level.

Body / Programme Management Tool	Purpose
Plan) which feeds into Annual carbon footprint reports	• Monitor continuing impacts of climate change and implication for adaptation in East Dunbartonshire
Net Zero and Resilience Action Plan	• Project management tool containing range of actions that Council has agreed to adopt in order to deliver on its net zero and resilience targets • Each target will have an executive officer owner with updates being provided on progress in SLT and to MOG where applicable
Business Improvement Plans (BIPs)	• Provide updates progress on the directorate's CAP actions.
How Good Is Our Service (HGIOS)	• Note progress in CAP Action in line with the team's responsibilities where appropriate
Corporate Risk Management Strategy	• Climate Change risk will be kept under review and where appropriate recommendations for amending it will be made.

Monitoring Arrangements

Climate Change Duties Monitoring Report

The Council's current monitoring system for corporate greenhouse gas emissions, the Carbon Management Plan (CMP), will be enhanced in line with recommendations in the Evidence and Options reports to extend scope 3 reporting, such as measuring new emissions data on employee commuting, the Council's supply chain and reporting on area-wide emissions. It is recommended that the Carbon Management Plan is re-branded into the **Climate Change Duties Monitoring Report** to reflect these changes and the requirements in the Scottish Government' draft statutory guidance to report on adaptation and sustainable development in addition to climate change mitigation.

The Council currently calculates and reports on its carbon footprint through the annual Scottish Public Bodies' Climate Change Duty report.[49] This data then informs the Council's current annual CMP which provides an analysis of trends on internal emissions and sets targets for corporate mitigation.

The newly formed Scottish Climate Intelligence Service (SCIS) will support Councils' carbon reporting by building a standardised approach to area-wide emissions calculations and extending the boundaries of corporate carbon footprints. Established with joint funding from the Scottish Government and local authorities, the SCIS will allow for the incorporation of new areas into the Council's carbon footprint through a shared best practice for public bodies in Scotland. Additionally, a Council travel survey will be required to estimate emissions from corporate commuting and homeworking (see **Theme 1: Transportation**).

The Council will work the SCIS and use tools such as the Met Office's Local Authority Climate Service to explore adopting standardised measures for monitoring climate resilience and local impacts of climate change.

In order to keep the Council on track in terms of mitigation and adaptation targets, the SCIS will be used as a dynamic tool to update existing and identify new actions for both a Council and area-wide perspective.

The Council will continue to use UK Government area-wide emissions data in the interim to progress the CAP actions as prescribed in the Evidence and Options Report. Accordingly, the Council's existing methodology in the CMP will be adapted to incorporate the additional scope areas and move to reporting on progress against area-wide net zero targets in addition to existing corporate benchmarks.

Communication and Engagement Plan

The Evidence and Options Report sets out the need to formalise a Communications Plan to deliver against the Council's net zero and resilience targets by improving coordination, raising awareness of the Council's action on climate change and gathering critical feedback on the targets set out in the CAP.

[49] Sustainable Scotland Network (2024) Reports (sustainablescotlandnetwork.org)

As outlined in **Table 6**, Council found only a quarter of local respondents were aware of the Council's action on climate change, suggesting that significant additional engagement work will be required to raise awareness of Council initiatives.

Table 6 – Results from 'Your Budget Priorities' Survey 2023

Are you aware of the Council's climate actions?		
Yes	**290**	**26%**
No	**846**	**74%**

Transparent communication is widely recognised as a core tenant of the successful implementation of climate strategies across UK local authorities.[50] [51] By including community members as active participants in the CAP and recognising their local expertise, the Council can better design and deliver programmes to meet intersectional needs.

The Communications Plan will include further community consultations to deepen the Council's engagement with residents, businesses and communities and meaningfully include community members in East Dunbartonshire's journey to Net Zero. All future engagements will be designed in alignment with the Net Zero Nation: Public Engagement Strategy and East Dunbartonshire's Consultation and Engagement Strategy.[52]

This engagement is paramount to delivering on the area-wide emissions reduction and climate resilience targets which are not completely within the Council's control and will require significant partnership work.

Table 7 sets out a draft communication plan to transparently deliver on CAP actions.

Table 7 – Draft Communications Plan

Communication / Strategy	Recipient	Purpose
Community Climate Forums	Public	• To provide the public an opportunity to get involved in shaping local climate change mitigation and adaptation targets • Organised in two separate forums: Community Climate Change Forum and Youth Climate Change Forum
Net Zero and Resilience Newsletter (Previously CAP newsletter)	Residents, businesses and subscribers	• Published on Council website to share actions, good news stories, community funding, progress, recent climate trends with subscribers, and ways in which people can get involved
External Press Releases	Public	• Communicate progress, good news stories and best practice examples

Other ad-hoc engagement with communities across East Dunbartonshire will be shaped by the Scottish Government's Public Engagement Strategy and the Guiding Principles of Net Zero Engagement from the Scottish Government's Public Engagement Strategy.

Further details will be added based upon input received during the consultation on the Draft CAP including the frequency and type of engagement that communities would like for updates on the Council's net zero targets.

Financing Net Zero and Adaptation

The costs of climate inaction are significantly higher than the costs of reducing emissions.[53,54,55,56] A seminal study by Germany's Potsdam Institute for Climate Impact Research estimates that the world

[50] APSE Energy (2024) *2024 - apse*
[51] Scottish Government (2021) Climate change - Net Zero Nation: public engagement strategy - gov.scot
[52] East Dunbartonshire Council (2024) Consultation and Engagement Strategy 2024 - 2027 - East Dunbartonshire Council
[53] Stern (2006) https://personal.lse.ac.uk/sternn/128NHS.pdf
[54] UCL (2021) Economic cost of climate change could be six times higher than previously thought | UCL News - UCL – University College London
[55] London School of Economics (2022) How much will it cost to cut global greenhouse gas emissions? - Grantham Research Institute on climate change and the environment (lse.ac.uk)
[56] Kotz et al. (2024) The economic commitment of climate change | Nature

economy is locked into an income reduction of 19% in the next 26 years due to the impacts of climate change.[57] Despite the clear, economic, financial, environmental, and health-based cases for transitioning to net zero, there are significant up-front costs required to realising these benefits.

More specifically, a core challenge to accelerating decarbonisation are the current high up-front and operational costs of low emissions heating systems and vehicles. Paradoxically, renewable energy is significantly cheaper than fossil fuels in the UK and most other countries,[58] but consumers often do not enjoy these savings due to factors including coupled electricity and gas rates, carbon taxes and policy costs.[59]

In response to these funding challenges, a Financing Net Zero Report was prepared[60] and was considered by Council as an appendix to the Evidence and Options Report. The report identified grant funding options available to the Council, expected or near-term funding opportunities, and innovative finance options to mobilise private sector investment. Funding is a keystone of progressing effective climate action and will be driven by **Actions 7.7** and **7.8** to advance projects at pace.

Table 8 – Estimated costs for financing corporate net zero

Costs/savings	Pathway 1a
Total CAPEX to 2045	£429-439m
Fuel cost savings to 2045	£115m
Residual GHG emissions (tCO_2e)	**7,700**
Offsetting cost range for residual emissions (indicative)	**£231k - £2.3m**
Total expenditure by 2045	**£314-326m**

As highlighted in **Table 8**, there is a significant funding gap that must be addressed to deliver on corporate decarbonisation targets.

In a financial climate where pressures on local government include additional demand for Council services, single year funding grants, disproportionate exposure to inflationary pressures and additional legislative responsibilities, the Council cannot meet these costs alone and innovative funding options need to be explored.

Global adaptation efforts are also severely underfunded with estimated global adaptation finance needs being five to ten times greater than current expenditures, creating an investment gap for countries and Councils alike.[61] In Scotland, most major public funding schemes focus on mitigation and the level of available adaptation finance flows are likely insufficient. This gap poses a major threat to the Scottish economy as well as the health and wellbeing of people and ecosystems. While adaptation efforts deliver significant economic benefits, they often lack tangible financial returns, and co-benefits materialise over long-term timescales. [62]

Additionally, adaptation projects are by their nature place-specific, requiring bespoke analysis and planning. Despite its complexities, adaptation has shown clear economic returns in addition to the necessary investment in environmental protections. For example, every £1 spent on protecting communities from flooding, saves approximately £9 in property damages and other avoidable impacts. [63]

[57] Kotz et al. (2024) https://doi.org/10.1038/s41586-024-07219-0
[58] International Energy Agency (2024) Rapid rollout of clean technologies makes energy cheaper, not more costly - News - IEA
[59] Nesta (2023) The electricity-to-gas price ratio explained | Nesta
[60] See https://eastdunbarton.moderngov.co.uk/documents/s4611/Appendix%202%20Financing%20Net%20Zero%20Report.pdf
[61] UNEP (2022) Adapting-to-a-New-Climate.pdf (unepfi.org)
[62] UK Government (2019) https://www.gov.uk/government/speeches/a-different-philosophy-why-our-thinking-on-flooding-needs-to-change-faster-than-the-climate
[63] UK Government (2019) https://www.gov.uk/government/speeches/a-different-philosophy-why-our-thinking-on-flooding-needs-to-change-faster-than-the-climate

Existing funding models can often present barriers to Councils. For example, challenge funding and funding bids require significant time, straining scarce staff resources to chase funding opportunities, often at short notice combined with procurement and resource constraints in Councils.[64]

The largest costs in **Table 8** come from decarbonising buildings and switching Council vehicle fleets to electric and hydrogen. Further refinement of the costs associated with delivery of core actions have been developed through a building decarbonisation strategy for the Learning and Corporate estate and affordable housing stock. The costs to the Council of decarbonising its supply chain are very uncertain and need further analysis in collaboration with national partners. The actual costs of decarbonising the supply chain will be borne by suppliers, but there may be an internal cost to the Council if it results in more expensive procurement bids being favoured over the traditionally cost competitive options. However, this market dynamic is highly speculative and may not materialise in a future where businesses are expected to decarbonise their operations.

The Council will continue to work with the Glasgow City Region Programme Management Office to promote a regional approach to increasing renewable energy generation, leveraging support for climate and LHEES targets, and the development of a regional energy masterplan to explore ways of attracting private finance to support these aims.

Audit Scotland notes that demand management has the potential to raise significant levels of revenue to support the objectives of the local transport strategy and is necessary to achieve modal shift required for net zero targets.[65] Additional actions that will be explored to attract funding include exploring working with the Council's Pension Fund to support net zero targets (see **Theme 7: Supply Chain, Investments and Digital Infrastructure**) and developing a **Nature Based Investment Fund** (see **Theme 4: Natural Environment**). Additional innovative funding mechanisms such as crowdfunding for the public sector remains largely untapped and constitutes a potential funding source.[66]

Recognising the funding challenge, the Glasgow City Region Adaptation Strategy and Action Plan has called for a "revolution in finance" to earmark the funds and resources needed to build transformative climate resilience.[67] An Adaptation Finance Lab was proposed by Climate Ready Clyde with the goal to support innovative adaptation financing models within the Glasgow City Region and develop a pipeline of investable adaptation projects.[68] As a local authority partner, East Dunbartonshire Council agreed to explore timeframes and cost options to design a more detailed business case and recommendations for the Lab's development.

Indicative costs ranges have been assigned to each proposed adaptation and nature-based solutions action in the CAP and NZRAP. Further work will be undertaken to develop and refine the adaptation cost framework through collaborative working with Climate Ready Clyde on the Adaptation Finance Lab.

[64] Catapult (2025) https://es.catapult.org.uk/tools-and-labs/public-sector-decarbonisation-guidance/
[65] Audit Scotland (2025) Sustainable transport: Reducing car use
[66] Davis, M and Cartwright, L (2019) Financing for Society: Assessing the Suitability of Crowdfunding for the Public Sector - White Rose Research Online
[67] Climate Ready Clyde (2021) Adaptation Strategy and Action Plan (climatereadyclyde.org.uk)
[68] Climate Ready Clyde (2021) http://climatereadyclyde.org.uk/wp-content/uploads/2021/09/10-Annex-3-Resource-Mobilisation-Plan.pdf

Section 4 – Strategic Themes and Actions

In approving the CAP Evidence and Options Report, Council agreed to a series of actions that collectively set out pathways to reach net zero emissions for scopes 1 and 2 by 2036 and by 2045 for scope 3.

As the CAP will supersede the SCCF, many of the on-going actions from the SCCF have been amalgamated with actions from the Evidence and Options report while others have been carried over as actions to sit in the NZRAP. Some actions from the SCCF have also been migrated into more appropriate Council strategies such as the Greenspace Strategy, Local Biodiversity Action Plan and Circular Economy Strategy while other have ben marked as complete (see appendix on Superseded Actions).

Thematic Approach

The Climate Action Plan themes were developed as means of categorising the Evidence and Options Report and Sustainability and Climate Change Framework's actions into themes. These themes are based upon areas that have the greatest influence on national, local and individual carbon footprints.

1) **Transport:**
   Switching to walking, cycling and zero carbon public transport modes, making car-free living more viable across East Dunbartonshire and converting remaining Council fleet vehicles to zero carbon fuels.

2) **Buildings and Heat decarbonisation**:
   Retrofitting buildings to become energy efficiency, carbon neutral and resilient to climate change with the Council leading by example on the decarbonisation of its buildings. Maximising local renewable energy generation and increasing system resilience while facilitating the electrification of heat through smart electricity usage.

3) **Sustainable Communities**:
   Ensuring planning and development patterns promote low-carbon lifestyles and local resilience. Ceasing proposals that lead to additional emissions or create dependence on high carbon transport and infrastructure.

4) **Natural Environment:**
   Restoring, protecting and enhancing greenspaces and biodiversity through nature-based solutions to climate change.

5) **Consumption and Waste**:
   Reducing the emission intensity of consumption through responsible goods and services procurement and zero carbon waste management.

6) **Business and the Economy:**
   Supporting businesses to become carbon neutral and climate resilient, capturing job opportunities, bolstering investment to thrive in a low-carbon, wellbeing economy while supporting a just transition to ensure that nobody is left behind.

7) **Supply Chains, Investment and Digital Infrastructure**:
   Advancing carbon neutral supply chains by reducing emissions from the Council's supply chain and investments. Maximizing digital and technological decarbonisation opportunities to reduce East Dunbartonshire's exposure to climatic hostility, hazards and financial vulnerability including stranded assets.

8) **Food and Agriculture:**
   Establishing a resilient sustainable food network, with locally produced goods and enhanced community food growing, in addition to supporting movement to a plant-based diet.

Each of the CAP themes is structured as follows:

- Introduction: which provides general background to ground the importance of each theme and background information to understand its role in reaching net zero within East Dunbartonshire

- Policy Context: which explores relevant statutory requirements at the UK, Scottish, regional, and council levels that apply to climate change action planning.
- Local Context: which details considerations within East Dunbartonshire.
- Community Engagement: which reports findings from community outreach at the Council and Scottish levels.
- List of Interventions: which collates actions from the SCCF and Evidence and Options Report which are assigned to Strategic Leadership Team members in the NZRAP.

The only theme that diverts from this structure is Theme 7 due to the nature of the content.

Each action is labelled to show whether it is to deliver against Council's corporate net zero target, area-wide net zero target, adaptation target or a combination of the three. In line with the recommendations in the Evidence and Options report, an executive officer has been assigned against each action based upon the most relevant directorate(s) and target dates. The current funding status for each of the actions has been reflected using a RAG (Red-Amber-Green) framework, where the red status indicates a high level of confidence that the action is not achievable with current resources, the amber status indicates that the action is partially achievable with existing resources but that a funding gap remains, or that potential funding is identified, and the green status indicates a high level of confidence that the action is achievable with current resources.

The action table at the bottom of each theme provides a snapshot of the actions, owner and delivery date. A more comprehensive programme management process will be established in the NZRAP. Additionally, some actions will need to be over-arching such as skills and capacity building as opposed to sitting within one of the eight specific themes. As such, they have been incorporated into the Council's broader governance framework rather than a specific theme.

Delivering the actions set out in this Plan will require substantial investment and resource commitment. Achieving the target timelines for strategic delivery is contingent on securing adequate funding and operational capacity – including appropriate financial support from the Scottish Government and other relevant partners.

The CAP Policy, Strategy & Plan Directory provides an outline of relevant strategies, plans, and policies for each of the eight themes on an international, UK, Scotland and local level.

Contributions to Sustainable Development

As explained in the Scottish Government's draft statutory guidance on public bodies' climate change duties, the Sustainable Development Goals (SDGs) provide a global framework to achieve a better and more sustainable future for all. More specifically, the third of the climate change duties set out in section 44 of the Climate Change (Scotland) Act 2009 requires public bodies, in exercising their functions, to act in the way that they consider to be most sustainable.

Climate change is at the core of many of the social, economic, and environmental challenges addressed by this framework, and thus aligning SDGs with the CAP themes highlights the broader sustainable development impacts of the CAP. Efforts have been made to maximise to co-benefits of climate change on these indicators of sustainable development where possible.

While the Draft CAP recognises that sustainability challenges are inherently interconnected, each theme has been linked to the SDGs that are most directly connected to its objectives and impacts (see **Figure 15**). Some SDGs such as Gender Equality, Reduced Inequalities and Peace, Justice and Stronger Institutions underpin all themes, and many SDGs will be strengthened through intersectional action outlined by the CAP's themes.

Figure 15: SDGs' Alignment with CAP Themes


Overarching
5 GENDER EQUALITY
10 REDUCED INEQUALITIES
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS
Theme 1
3 GOOD HEALTH AND WELL-BEING
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
13 CLIMATE ACTION
Theme 2
1 NO POVERTY
7 AFFORDABLE AND CLEAN ENERGY
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
11 SUSTAINABLE CITIES AND COMMUNITIES
13 CLIMATE ACTION
Theme 3
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
13 CLIMATE ACTION
Theme 4
3 GOOD HEALTH AND WELL-BEING
6 CLEAN WATER AND SANITATION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
Theme 5
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
Theme 6
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
Theme 7
7 AFFORDABLE AND CLEAN ENERGY
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
Theme 8
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
15 LIFE ON LAND

Theme 1: Transport

Introduction

Contextualising the Impact of Transport

Transport is Scotland's largest sectoral emitter, accounting for 26% of overall Scottish emissions[69] and 24.4% of East Dunbartonshire's emissions in 2021.[70]

Reaching net zero targets is only possible with an increased proportion of journeys using sustainable modes of transport - a process known as modal shift (see **action 1.1**). Guided by the CCC's climate modelling, meeting East Dunbartonshire Council's area-wide net zero targets require the following transitions:

- approximately 22% of area-wide car kilometres being avoided by 2045 through a combination of behavioural measures and technological changes to drive modal shift from private vehicles to active travel and public transport, as well as through increased vehicle occupancy.
- 9% of car journeys are shifted to walking and cycling, translating to a 3% reduction in car mileage.
- 17% of journeys or around 6% of car mileage further are shifted to bus travel.
- and an increase in vehicle occupancy to 1.7 from a baseline value of 1.5 would also lead to a reduction of 6% in car mileage.

Remaining area-wide emissions reductions are anticipated to be achieved by near full uptake of Electric Vehicles by 2045 (CCC Sixth Carbon Budget Report and FES).[71] This is supported by the CCC's 7th Carbon Budget which assumes that electric cars and vans will reach around 95% of new sales by 2030 and 100% by 2035.[72]

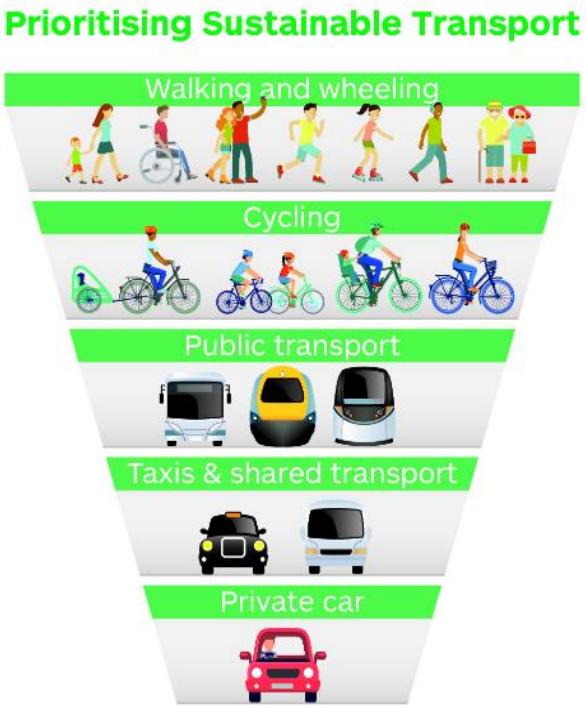
Given the Council's earlier net zero target of 2036 for its own direct emissions, many of the actions for this theme focus on accelerating the decarbonisation of the Council fleet. There is also a focus on reducing commuting emissions in addition to the development of a Council Travel Plan to encourage more sustainable transport.

Making Reduced Car Use More Viable

The sustainable transport hierarchy in **Figure 16** shows the least emission intensive mode of transport at the top and the most intensive at the bottom.[73] Increasing the proportion of journeys on the higher part of the hierarchy is the core strategy for reducing emissions in transportation while achieving a wide-range of co-benefits.

Figure 16: The Sustainable Transport Hierarchy[7]

[69] Scottish Government (2021) https://www.gov.scot/publications/scottish-greenhouse-gas-statistics-2021/
[70] Department of Energy Security and Net Zero (2023) UK greenhouse gas emissions: 2022 provisional figures - Accredited official statistics announcement - GOV.UK (www.gov.uk)
[71] https://www.nationalgrideso.com/future-energy/future-energy-scenarios
[72] Climate Change Committee (2025) The Seventh Carbon Budget https://www.theccc.org.uk/wp-content/uploads/2025/02/The-Seventh-Carbon-Budget.pdf
[73] Scottish Government (2021) https://www.transport.gov.scot/publication/national-transport-strategy-2/



In particular, reducing car use is essential to achieve modal shift and meet Scottish emissions targets.[74] However, continued investment in major road projects increases car use and locks in higher emissions travel choices. [75,76] While electric vehicles have lower emissions than fossil-fuel powered cars and have a key role to play in achieving Council's net zero targets, the emission intensive nature of their manufacturing, their contributions to air pollution from brake and tyre use as well as continued road congestion mean they are weaker environmental options than public transport and active travel.

Accordingly, meeting net zero targets will require East Dunbartonshire Council to reduce car reliance. Audit Scotland's 2025 report on sustainable transport echoes this need to discourage car use with demand management.[77]

Active Travel Benefits

Active travel such as walking, wheeling and cycling have the potential to cut approximately a quarter of car emissions in Scotland while producing significant co-benefits.[78] Road networks currently contribute to urban pollution, ecosystem destruction and more frequent and intense floods and fires.[79] Conversely, active travel provides significant wide-ranging benefits, improving air quality, urban safety, and physical and mental health.[80,81] Active travel also contributes to local economic wellbeing and pedestrianised town centres experience stronger financial outcomes.[82,83]

An analysis on active travel estimates that active transport investment created £262 million in economic benefit for Edinburgh alone. Conversely, physical inactivity costs the NHS £91 million annually and results in approximately 2,500 premature deaths each year in Scotland.[84] Active travel can nearly halve these deaths through the benefits of increased physical activity.[85] As such, barriers to active travel are not only climate challenges but also hamper health and economic outcomes.

[74] Audit Scotland (2022) https://www.audit-scotland.gov.uk/publications/addressing-climate-change-in-scotland
[75] Department for Transport (2018) Latest evidence on induced travel demand: an evidence review (publishing.service.gov.uk)
[76] Scottish Parliament Information Centre (2019) You get what you pay for – 20 years of devolved transport policy – SPICe Spotlight | Solas air SPICe (spice-spotlight.scot)
[77] Audit Scotland (2025) Sustainable transport Reducing car use Sustainable transport: Reducing car use
[78] Sustrans (2023) Why active travel must be part of Scotland's journey to net zero - Sustrans.org.uk
[79] Miner et al. (2024) Car harm: A global review of automobility's harm to people and the environment - ScienceDirect
[80] Department for Transport (2014) DfT publications template - colour (Word 2013) (publishing.service.gov.uk)
[81] Sustrans (2016) 4464.pdf (sustrans.org.uk)
[82] Living Streets (2024) The Pedestrian Pound makes the economic case for investing in better streets for walking and wheeling
[83] Transport for London Walking and cycling: the economic benefits (tfl.gov.uk)
[84] The Scottish Government (2014) A More Active Scotland: Building a Legacy from the Commonwealth Games
[85] Sustrans (2024) Walking and Cycling Index 2023: Scotland (sustrans.org.uk)

Improving Active Travel Access

Safety concerns are consistently cited as the main barrier to active travel. This is particularly prevalent amongst women, seniors, people of colour, disabled people and lower income groups.[86,87] On shared roads, traffic volume and speed impact safety perceptions. Similarly, walking journeys as the main mode of transport have fallen from by 13% from 1970 to 2019 as roadways became more inaccessible.[88]

Proven solutions to increasing active travel include:

- High quality segregated active transport infrastructure around Scotland has successfully achieved modal shift.[89]
- Pedestrian and cycling friendly streets. A study by Cycling Scotland found that over two-thirds of respondents would be more likely to consider walking and cycling options if there were wider pavements and less traffic on roads.[90]
- Reducing speed limits. This low-cost action can make active travel safer and reduce road accidents. In 2022, the Welsh Government introduced a 20mph speed limit in certain communities to achieve an expected reduction of 1,200 to 2,000 injuries and 40% fewer road collisions.[91,92,93] Similar strategies have been successfully adopted to promote inclusive active travel across Scottish Councils.
- Clear pavements. Pavement clutter is another common obstacle that can disincentivise active travel, particularly for walking or wheeling. Utilising kerb buildouts for EV charge points is one method to improve pavement accessibility.

Improving Public Transport Access

Making sustainable transport options easy and accessible is key to promote public use. Specifically, climate justice considerations are core to travel planning. Marginalised communities are disproportionately affected by the lack of available and affordable public transport, which can be more expensive than driving.[94] This results in many households being forced into car ownership or experiencing transport poverty due to lack of affordable public transportation. [95]

Transport poverty is a lack of adequate transport services necessary to access general services and work, or to the inability to pay for these transport services.[96]

For example, across the west of Scotland, there has been a long-term decline in bus patronage, with a reduction of 21% between 2009/10 and 2019/20.[97] This led East Dunbartonshire Council to pass a motion in December 2023 recognising that "*existing bus services in East Dunbartonshire and across the wider region [are] not delivering for passengers or wider society within Strathclyde."* Key challenges cited include:

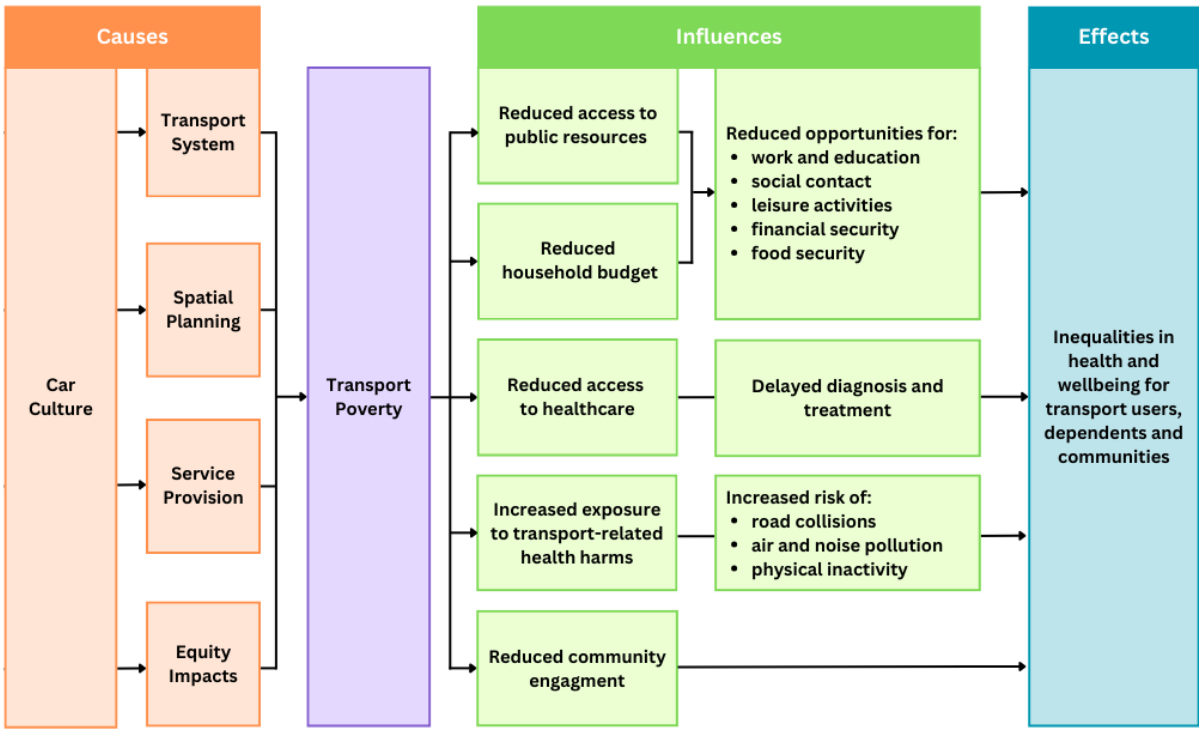
- Above inflation increases to bus fares
- Sustained patronage decline
- Shrinking network coverage
- Congestion induced delays

Addressing these obstacles will be central to reduce private vehicle use and promote public transport. There is a clear financial case for facilitating access to active and sustainable transport across East Dunbartonshire given the increasing costs of car insurance and second-hand vehicles. Transportation costs are a regressive pressure on household income, limiting discretionary spending, access to

[86] Sustrans., ARUP (2020) cycling-for-everyone-a-guide-for-inclusive-cycling-in-cities-and-towns.pdf (arup.com)
[87] Sustrans (2018) *"Are we nearly there yet?"1 Exploring gender and active travel* 2879.pdf (sustrans.org.uk)
[88] Living Streets Scotland (2022) https://www.gcph.co.uk/assets/0000/8957/Getting_Scotland_Walking_-_The_case_for_action.pdf
[89] Cycling Scotland (2024) 30% increases in cycling across Scotland | Cycling Scotland
[90] Cycling Scotland (2022) https://cycling.scot/news-and-blog/article/saving-money-a-key-motivation-for-people-to-consider-cycling-in-2022
[91] Welsh Government (2024) https://www.gov.wales/introducing-20mph-speed-limits-frequently-asked-questions#74853
[92] Edinburgh Napier university (2022) https://blogs.napier.ac.uk/tri/wp-content/uploads/sites/56/2022/11/TRI-Technical-Paper-101.The-value-of-Prevention.AD_.pdf
[93] Welsh Government (2023) Phase 1 20mph interim monitoring report (tfw.wales)
[94] Transform Scotland Policy Forum (2022) Fair Fares report -- Transform Scotland -- December 2022
[95] Natcen (2019) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/847884/Transport_health_and_wellbeing.pdf
[96] European Parliament (2022) Understanding transport poverty (europa.eu)
[97] Transport Scotland A fairer public transport system for Scotland | Transport Scotland

healthcare, and freedom of movement. As such, improving the viability of public transport could have significant potential to improve socio-economic outcomes as shown in **Figure 17**. [98]

Figure 17: A model of transport poverty – the causes and influences on health and health inequalities (Adapted figure from Public Health Scotland)[99]



It is important to note that the intensifying impacts of climate change, as described in Section 1, are leading to increased disruption on the transport network. Therefore, resilience-based actions, such as **Action 1.10** will become increasingly important as the climate becomes more hostile.

Mobility as a Service platforms (MaaS) and integrated ticketing have the potential to both promote equitable and affordable transportation access. MaaS platforms are usually an app or website that can organise integrated ticketing systems and allow commuters to pay in for joint access to all municipal transport options such as buses, trains, and e-bikes. While MaaS is still in its infancy, it provides a viable route to broaden access to sustainable transport and reduce emissions by a projected 5%. [100,101] Digital solutions can contribute to achieving net-zero through other opportunities such as through the use of telematics and route optimisation (see **Action 1.9**).

Policy Context

The Scottish Climate Change Plan aims to achieve a 44% reduction in transport emissions by 2030. [102] To meet this goal, the Scottish Government has set parallel infrastructure targets for 2030, including:

- Committing to achieving a reduction in our reliance on cars in line with the CCC carbon budgets[103]
- Delivering approximately 24,000 additional electric vehicle charge points as outline in the Draft Scottish Electric Vehicle Public Charging Network Implementation Plan.
- Developing a new national integrated ticketing system for Scottish public transport.

[98] Public Health Scotland (2024) Transport poverty: a public health issue (publichealthscotland.scot)
[99] Public Health Scotland (2024) Tran
sport poverty: a public health issue (publichealthscotland.scot)
[100] World Economic Forum (2022) Digital technologies can cut global emissions by 20%. Here's how | World Economic Forum (weforum.org)
[101] ITS4C (2019) briefing-papers_topic5.pdf (its4climate.eu)
[102] Scottish Government (2024) 3. Section A: Evaluating Scotland's progress in driving a just transition to a net zero, nature positive and circular economy - The Environment Strategy for Scotland: Delivering the Environment Strategy Outcome on Scotland's Economy - Evidence Base & Policy Levers - gov.scot (www.gov.scot)
[103] Transport Scotland (2025) Achieving Car Use Reduction in Scotland: A Renewed Policy Statement | Transport Scotland

Consequently, the Scottish Government's Environmental Strategy Outcomes report notes that re-prioritising spend towards public transport and 20-minute neighbourhood strategies will be key to delivering Scotland's net zero targets.[104]

This reprioritisation will be fostered by Regional Transport Strategies developed by Scotland's seven Regional Transport Partnerships, including Strathclyde Partnership for Transport (SPT) which serves the Glasgow City Region. The SPT strategy set a more ambitious target to reduce transport emissions by 53% as of 2030 and shift 45% of journeys to means other than private cars.[105] Additionally, SPT has published an Active Travel Strategy to support the delivery of these objectives.[106] Of note, an additional bus route from Milngavie to Glasgow has been identified as a top priority for SPT investment.

Transitioning to sustainable transport at the local level is guided by multiple Council strategies. The Council's Local Transport Strategy (LTS) sets out specific goals to improve active travel options and access to sustainable transport across East Dunbartonshire.[107] It includes actions from the previous iteration of the Council's Active Travel Strategy (ATS) in addition to reference of the next iteration, which is in development with an evidence report being approved by Place Neighbourhood and Corporate Assets Committee in January 2023 along with a summary booklet for the vision, priorities and project themes of the ATS.[108] The LTS and ATS will also support the delivery of Council's Air Quality Action Plan to ensure no communities are disproportionately exposed to air pollution from transport options. The forthcoming iterations of both strategies will serve as the main mechanism for delivery of zero and low carbon transport.

Local Context

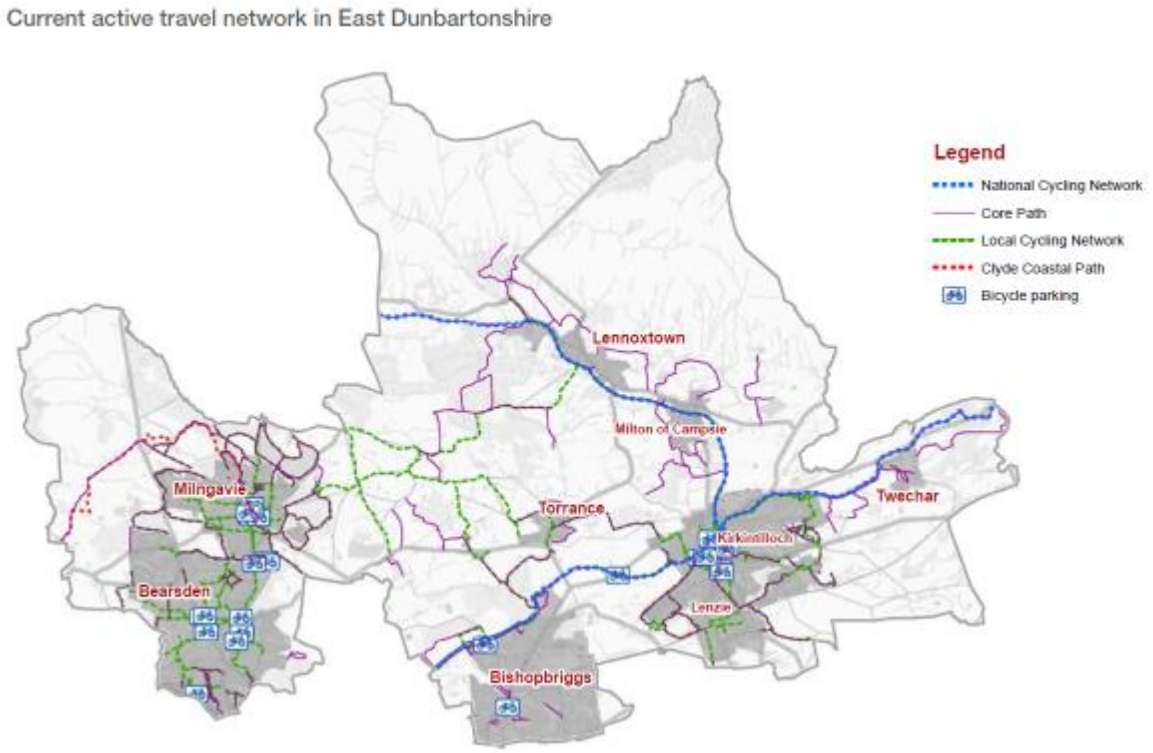
Extensive work is undertaken by the Council to support sustainable and active travel. Recent examples include but are not limited to:

- Working in partnership with the Glasgow City Region to significantly increase the number of electric vehicle charge points in the region (see **Action 1.2**).
- Delivering cycle and scooter training to primary and secondary schools across East Dunbartonshire through the iBike Programme and securing funding to deliver 150 bikes for schools across the authority.
- Securing funding to implement feasibility and design works on a range of active travel infrastructure projects, progressing the A807 Active Travel Corridor, and delivering a number of path improvements to enhance the active travel network.
- Trailing 20 mile per hour zones in Bearsden and Twechar.
- Continuing the pilot of Traffic Free Schools pilot and determining longer term implication of the work to enhance accessibility and sustainable modes of transport for children and school communities.
- Launching the BetterPoints - East Dunbartonshire App to promote active travel.
- Beginning enforcing the national pavement parking ban.[109]

East Dunbartonshire has many high-quality cycle routes for active travel, including National Cycle Route 754, which follows the towpath of the Forth and Clyde Canal. The route provides a traffic-free connection to Glasgow, North Lanarkshire and beyond. There are also several long-distance routes running through East Dunbartonshire, providing enhanced walking and cycling opportunities such as the start of the West Highland Way, the John Muir Way and the Clyde Coastal Path as illustrated in **Figure 18**. These routes should be promoted to encourage use, modal shift, and behavioural change. A highly detailed analysis of travel patterns to and from the Council can be found in the CAP's Evidence and Option Report.

[104] Scottish Government (2024) https://www.gov.scot/publications/environment-strategy-scotland-delivering-environment-strategy-outcome-scotlands-economy-evidence-base-policy-levers/documents/
[105] Strathclyde Partnership for Transport (2024) spt_regional-transport-strategy-2023-2038.pdf
[106] Strathclyde Partnership for Transport (2024) spt_active-travel-strategy-2024-2038.pdf
[107] East Dunbartonshire Council (2020) Local Transport Strategy 2020-2025 - East Dunbartonshire Council
[108] East Dunbartonshire Council (2022) See Evidence reports and summary booklet
[109] East Dunbartonshire Council (2025) Pavement parking ban - East Dunbartonshire Council

Figure 18: Map of cycling networks in East Dunbartonshire[110]



While a reduced number of journeys or increase in the proportion of walking, wheeling and public transport in **Action 1.1** will be the focus of future iterations of the Council's transport strategies and will support local and national net zero targets, electric vehicles are expected to play a crucial role in meeting the Council's net zero targets.

Electric vehicle uptake has increased significantly in East Dunbartonshire, mirroring rapid uptake across the UK. This is anticipated to continue to increase following the significant increase in electric vehicle charging points (see **Action 1.2).**

Council Fleet

The Scottish Government has identified fleet as a key area for action on emissions reduction and prohibited new petrol and diesel cars and light vans procurement from 2025.[111] The emissions reductions modelling from the evidence and options report underscored electrification as recommended pathway to decarbonise the vast majority of Council's vehicles. However, ultra-low Emission Vehicles (ULEVs) can be significantly more expensive than internal combustion engine vehicles, particularly with large vehicles, which poses a challenge for the Council's fleet decarbonisation programme. Additionally, the more limited availability of ULEV fleet maintenance providers presents obstacles to use.

Nonetheless, in March 2025, Council has allocated £650,000 funding from the Scottish Government climate emergency fund to support decarbonisation on the Council fleet. The spend will be on a mixture of EV charge points and studies to support long term fleet decarbonisation. The funding will also help to inform a plan for long-term decarbonisation of all vehicles including plant and large vehicles (see **Action 1.4**).

This will allow delivery against a key action under the Council's net zero modelling: to undertake and implement an Electric Vehicle Infrastructure Plan (see **Action 1.5**) setting out details of what infrastructure is necessary to allow the conversion of Council's fleet to ultra-low emission vehicles as identified in the Fleet Decarbonisation Plan (see **Action 1.6**).

A study was undertaken by the Energy Savings Trust (EST) to set a fleet decarbonisation pathway and assess strategies to overcome barriers to ULEV adoption, including infrastructure challenges and

[110] East Dunbartonshire Council (2020) Local Transport Strategy 2020-2025 - East Dunbartonshire Council
[111] Scottish Government (2020) https://www.gov.scot/publications/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/pages/9/

prohibitive costs, which has informed actions on fleet decarbonisation. The EST report, prepared for the Council to support the Evidence and Options report targets, noted that capacity at the Broomhill site is 125kVA and even in the EST's conservative scenario, it is estimated that approximately 533kVA would be required to meet the fleet's operational needs. It should be noted that some of the fleet's operational need will be met by other sites.

Larger vehicles have a less developed market for ULEVs than small vehicles. While the Evidence and Options report cited hydrogen as having a potential role in decarbonising the Council's large vehicles, more recent evidence from the Climate Change Committee's 7th Carbon Budget estimates nearly two-thirds of heavy goods vehicles on the road will be electric by 2038-2042.[112] This suggests that electrification is likely to be a preferred solution for the whole Council fleet. However, should hydrogen be identified as the preferred solution for larger vehicles, the identification and establishment of the necessary refuelling infrastructure for hydrogen for the Council's fleet will be a core part of **Actions 1.5, 1.6** and **1.7**.

Council Commuting

The pandemic demonstrated that a significant proportion of the Council's staff are able and willing to work from home. Digital working and remote meetings have been adopted by East Dunbartonshire Council to lock in fleet emissions reductions observed during the pandemic.

For in-person staff members, the Council received regular requests for a cycle to work scheme, particularly for teaching staff. The CAP Evidence and Options report further identified the creation of an employee travel survey to allow the creation of a Corporate Travel Plan which would support various initiatives set out in the Evidence and Options report this (see **Action 1.3**). In line with this, the Council ran an employee travel survey in February 2025 to estimate emissions from employees commuting and to support the development of a travel plan for the Council. As recommended in the Guidance, the data from the employee commuting survey will be fed into Zero Waste Scotland's Commuter Emissions Calculator[113] to generate overall emissions estimates from Council commuting which will then be reported in the PBCCD Report and CMP later in 2025. This will support the delivery of further actions (see **Actions 1.3, 1.4** and **1.5**) set out in the Corporate Travel Plan which will be overseen by a new Officer Sustainable Commuting Working Group.

Business Travel and Coach Hires

The Council also aims to reduce emissions related to business travel by staff using vehicles or modes of transport that are not part of the Council's own fleet. The UK Government has committed to phasing out the sale of new petrol and diesel cars by 2030 which will help to support an economy of scale for ultra-low emission vehicles for business travel. **Action 1.8** explore minimisation of taxi use, in line with the recommendations in the Statutory Guidance, and where this is not possible, electrification.

For school buses and coach hires, the Evidence and Options report notes that electrification appears to be the most promising decarbonisation option, which could be implemented through procurement requirements, such as specification, for ULEV coach hires.

However, third party providers will potentially require support in transitioning to low carbon vehicles. Therefore, this is likely to be possible later in the timeframe, and could be supported by engagement with private sector partners to help to overcome barriers to decarbonising taxis, school coaches and buses and explore ways of reducing costs (see **Actions 1.7** and **1.8**).

Community Engagement

Transport concerns generated the largest volume of feedback from the 2021 Climate Conversation and there is a strong appetite for change. 71% of general survey respondents and 52% of employees indicated they were very likely or likely to change their travel behaviours in the near future. These figures are bolstered by the Scottish Government's 2019 Big Climate Conversation, which found 74% of respondents would be able and willing to reduce the amount they travel by car.

[112] CCC (2025) The Seventh Carbon Budget - Climate Change Committee
[113] Zero Waste Scotland (2025) Commuter Emission Calculator | ZWS Digitalisation of Tools

The most popular alternative modes of travel for survey respondents were switching to an electric or hybrid car and walking more. Additionally, over half of employees indicated they would like to travel less by working from home.

The percentage of participants willing to use public transport more (bus or train) was more limited in both the general and employee surveys. Enhancing the appeal of public transport to promote broad behavioural change will be crucial role to reach net zero.

The survey invited participants to suggest specific actions that the Council and public sector partners should consider for sustainable travel. Predominant themes included improved cycle access provision, increased electric vehicle charging provisions, improvements to the public transport networks and creating pedestrian only areas. This is supported by a recent UK government survey which highlighted that traffic reduction measures, including pedestrianisation, received significant public support. [114]

Active travel was of particular interest in surveys and at engagement events, with various calls for increased commitment from the Council and investment in new infrastructure. Input included:

- Calls for delivery of safer routes to schools, including suggestions of closing roads near to schools at the start and end of the school day.
- Concerns about insufficient safe cycling infrastructure such as segregated cycleways and the need for more action and support from local Councillors to deliver modal shift.
- Requests for the Bears Way segregated cycleway to be completed.
- Suggestions to introduce low emission zones, improve pedestrian priority and safety at road crossings, refresh road markings and enact tougher restrictions for car parking.
- 'Your Budget Priorities' survey conducted in late 2023 identified that individuals felt that the Council could help tackle climate change by encouraging active travel and by promoting electric vehicle use. Comments centred around the provision of cycle paths and facilities for cyclists. There was also a focus on the availability and frequency of charging stations and subsidies to cut the costs associated with using an electric vehicle.

Moreover, the quality and availability of public transport was criticised including a lack of bus routes across the area and improved rail infrastructure in the Bearsden and Milngavie area.

As part of the early stages of preparing a new Local Development Plan (LDP3), consultation took place on the LDP3 Evidence Report between November 2023 and January 2024. When asked 'How can LDP3 help address the Climate Emergency and Nature Crisis?' responses included the following:

- The need to improve access to public transport and active travel routes was a very common issue in terms of tackling climate change, and reducing the number of cars, congestion and pollution. A wide range of specific measure were suggested, including investment in active travel routes between towns, reducing the need to travel by only supporting development in sustainable locations that promote local living and 20-minute neighbourhoods.
- Other comments focused on additional EV charging points, zebra crossings as an alternative to traffic lights (e.g. Drymen Road and Milngavie Road), reduced speed limits, extra rail halts at Allander and on the Glasgow to Edinburgh main line, additional car parking at stations and segregated cycle lanes.

[114] UK Government (2024) Rishi Sunak's report finds low-traffic neighbourhoods work and are popular | Low-traffic neighbourhoods | The Guardian

Table 9 – Transport Actions

#	Action	Owner	Potential Sources of Funding and Funding Status (RAG)[115]	Target Date
1.1	**<u>Area-wide</u>: Reduce car mileage and achieve modal shift via behavioural and technological change such as working from home.** - Meeting East Dunbartonshire Council's area-wide net zero target requires approximately 22% of car kilometres to be avoided by 2045. [116] [117] Specifics from climate modelling include: - Shifting 9% of car journeys to walking and cycling - Shifting 17% of journeys or around 6% of car mileage to public transport Increasing vehicle occupancy to 1.7 from a baseline value of 1.5 **Source**: Evidence and Options Report	Executive Officer - Land Planning and Development *Monitored through proxy values in the Carbon Management Plan.*	Amber Potential Funding Sources: - Smarter Choices, Smarter Places (SCSP) Grant - The Active Nation Fund	2025 - 2045
1.2	**<u>Area-wide</u>: Create the conditions to increase the uptake of electric vehicles.** **Source:** SCCF – Sustainable Transport & Travel section, Under action (9.9) & Evidence and Options Report	Executive Officer - Land Planning and Development	Green	2025 - 2045
1.3	**<u>Corporate</u>: Develop and implement a Corporate Travel Plan to support sustainable travel, increase sustainable commuting, explore working towards 'Cycle Friendly Employer' status and Reduce emissions related to Business Travel.** The Evidence and Options Report's approved emissions reductions pathway assumes that changes to business travel policy could deliver a 30% reduction in corporate travel emissions. The Statutory Guidance also identifies this as a required area for scope 3 reporting and this is likely to be included in the forthcoming 2025 Amendment Order. **Source**: Evidence and Options Report (Scope 3) & SCCF - Sustainable Transport & Travel section, action (9.3): Produce a corporate travel planning document and achieve Cycle Friendly Employer status.	Executive Officer - Land Planning and Development Supported by Executive Officer - Customer Services & Organisational Development	Green Salary Sacrifice schemes for bike purchasing and EV vehicle purchasing could support this action and achieve cost savings. Potential Loan Sources: - EST e-Bike loan - EST used EV car loan	2025 - 2030
1.4	**<u>Corporate</u>: Establish an Officer Sustainable Travel Working Group to support the development of a Corporate Travel Plan and the development and implementation of measures to encourage changes to staff commuting behaviour**.	Executive Officer - Land Planning and Development Supported by Executive Officer - Customer Services &	Green	2025 - 2027

[115] Funding Status RAG Key: Green: High confidence the action is achievable with current resources; Amber: Funding gap remains, partially achievable with existing resources or potential funding identified; Red: High confidence action is not achievable with current resources.
[116] Audit Scotland (2025) Sustainable transport: Reducing car use
[117] Cycling Scotland (2024) 30% increases in cycling across Scotland | Cycling Scotland

	Source: Evidence and Options Report	Organisational Development and by Executive Officer - Neighbourhood Services		
1.5	**<u>Corporate</u>: Design and Implement an Electric Vehicle Infrastructure Plan that includes a suitable charging network across Council sites to meet projected demand.** **Source**: Evidence and Options Report and Energy Saving Trust (EST) Fleet Decarbonisation Report (2024/2025) & SCCF – Sustainable Transport & Travel section	Executive Officer - Assets and Facilities Supported by Executive Officer - Roads & Neighbourhood Services	Amber Initial funding of £650,000 has been secured from the Scottish Government's Climate Emergency Fund. Potential Funding Sources include: - Potential future Low Carbon Travel and Transport (LCTT) Challenge Funds - Low Carbon Transport Business Loan (public sector bodies will be considered on a case by case basis)	2025 - 2030
1.6	**<u>Corporate</u>: Develop and implement a Fleet Decarbonisation Plan:** The net zero pathway chosen by Council assumes a transition to an electrified vehicles fleet (all 250+) by 2030 and electrification of most plant vehicles / equipment by 2036 in line with Council's corporate net zero targets and on the basis that suitable electric alternatives are available. The timeframe allows for vehicles being replaced as they reach end of life. **Source**: Evidence and Options Report & EST Fleet Decarbonisation Report	Executive Officer - Roads & Neighbourhood Services Supported by Executive Officer - Assets and Facilities and Executive Officer - Land Planning and Development	Amber Potential Funding Sources: - Potential future Low Carbon Travel and Transport (LCTT) Challenge Funds - Low Carbon Transport Business Loan (public sector bodies will be considered on a case by case basis)	2025 - 2036
1.7	**<u>Corporate</u>: Decarbonise School coach / bus hire vehicle by switching to ULEV alternatives.** The Evidence and Options report notes that this action could be implemented through procurement requirements for ULEV coach hires such as in specifications. **Source**: Evidence and Options Report (Scope 1) & EST Fleet Decarbonisation Report	Chief Education Officer Supported by Executive Officer - Roads & Neighbourhood Services	Green Anticipated to be market driven as CCC predict a greater economy of scale of EVs.	2027 - 2040
	<u>Corporate</u>: Reduce Business Travel emissions, such as through procurement requirements, for Taxi Switch to EV and low carbon vehicles. Modelling assumes 36 taxis switch to EVs by 2030 based on smaller vehicles (cars and	Chief Education Officer Supported by HSCP Chief Officer and Chief Solicitor & Monitoring Officer	Green Anticipated to be market driven as CCC predict a greater economy of scale of EVs.	2027 - 2040

1.8	minivans) having suitable electric alternatives. The UK Government has committed to phasing out the sale of new petrol and diesel cars by 2030. However, there is currently a lack of local private hire providers using electric vehicles which means it will not be possible to implement this action until there is a greater economy of scale and lower prices for electric vehicles. **Source**: Evidence and Options Report (Scope 3)		For earlier adoption potential loan source: - Switched on taxis loan (anticipated loan) - e-Bike loan - used EV car loans	
1.9	**<u>Corporate</u>: Improve efficiency of vehicle use by investigating scope for further use of telematics, route planning and driver training.** The Evidence & Options Report identifies an opportunity to achieve 5% savings on current fuel use through driver training and vehicle adjustments (such as fitting fuel-efficient tyres), including in waste vehicles. This will build on and supersede the original SCCF action to: Arrange and deliver further FuelGood Driver Training sessions for 50 Council staff, pending availability of funding and Covid restrictions. **Source**: Evidence and Options Report & SCCF – Sustainable Transport & Travel	Executive Officer - Roads & Neighbourhood Services Supported by Executive Officer - Assets and Facilities	Green Potential Funding Sources: - Potential future Low Carbon Travel and Transport (LCTT) Challenge Funds - Low Carbon Transport Business Loan (public sector bodies will be considered on a case by case basis)	2023 - 2028 (by 2026 for non-waste vehicles)
1.10	**<u>Adaptation</u>: Increase and improve resilience of transport networks** **Source:** CAP Evidence and Options Report: Adaptation Section	Executive Officer - Roads and Neighbourhood Services Supported by Executive Officer - Land Planning and Development	Green	2025 - 2029
1.11	**<u>Corporate</u>: Assess carparks for potential for renewable energy generation and develop an action plan to roll out appropriate schemes.** **Source**: Evidence and Options Report	Executive Officer - Land Planning and Development Supported by Executive Officer - Assets & Facilities	Green	2026 - 2030

Theme 2: Buildings and Heat decarbonisation

Introduction

Buildings account for 20% of Scottish greenhouse gas emissions.[118] As part of the pathway to reaching net-zero emissions by 2045, the Scottish Government set targets to reduce 68% of building emissions by 2030 against a 2020 baseline and to decarbonise public sector buildings by 2038.[119] Realising these goals requires a systematic approach to decarbonising the energy grid, electrifying heating systems and achieving substantial energy efficiency improvements.

The UK aims to achieve a decarbonised energy grid by 2030, making electricity compliant with Scottish targets.[120] However, over 80% of domestic properties in Scotland rely on gas heating which are often particularly challenging to decarbonise.[121,122] The Council's pathway to achieving net-zero emissions in buildings therefore requires electrification of heat, predominantly through heat pumps, and accompanying substantial energy efficiency improvements.

This will be informed and driven by East Dunbartonshire's Local Heat and Energy Efficiency Strategy (LHEES) which provides a detailed baseline analysis of East Dunbartonshire's building stock and identifies potential opportunities for strategic heat decarbonisation and energy efficiency measures. The LHEES developed priority delivery areas for the interventions to meet national and local net zero and fuel poverty targets.

Key points from the Council's LHEES analysis include the following:

- of the 48,501 domestic properties in East Dunbartonshire, 27,272 are likely to be suitable for heat pump retrofits under current conditions, rising to 43,224 properties once basic fabric improvements have been applied;
- heat pumps are the technology likely to have the biggest impact in decarbonising heat;
- fuel poverty rates in East Dunbartonshire are lower than the Scottish average;
- there are 16 geographical delivery areas where there is significant potential to reduce fuel poverty through prioritised energy efficiency interventions; and
- mapping the density of heat demand and presence of potential anchor loads across East Dunbartonshire identified several heat network opportunities which should be further investigated to determine feasibility:
    - a potentially suitable area for a heat network zone in Kirkintilloch town centre in accordance with the Heat Networks (Scotland) Act;
    - opportunities for a number of district heat networks[123] primarily connecting Council-owned properties, including an area around Bearsden Academy; and
    - decarbonisation of existing communal heat networks[124] that are on mains gas.

The Delivery Plan sets out 29 actions for the Council and including the following broad areas:

- prioritising energy efficiency measures;
- supporting heat pump installation;
- evaluating feasibility for district and communal heat networks and decarbonisation of existing communal heating systems;

[118] Scottish Government (2021) Heat in Buildings Strategy - achieving net zero emissions in Scotland's buildings - gov.scot (www.gov.scot)
[119] Audit Scotland (2024) Decarbonising heat in homes (audit.scot)
[120] UK Government (2024) Energy experts appointed to deliver clean power 2030 mission - GOV.UK (www.gov.uk)
[121] Scottish Government (2023)-Energy Performance Certificate Reform Consultation 2023 (www.gov.scot)
[122] Audit Scotland (2024)Decarbonising heat in homes (audit-scotland.gov.uk)
[123] A network providing heat to multiple buildings that are in close proximity from a single heat source.
[124] A network providing heat to multiple units from a single heat source, within the same building.

- supporting geographically targeted interventions and regional energy collaboration;
- collaborating with Council's partners and wider stakeholders; and
- supporting skills development, signposting to available resources and sharing examples of best practice.

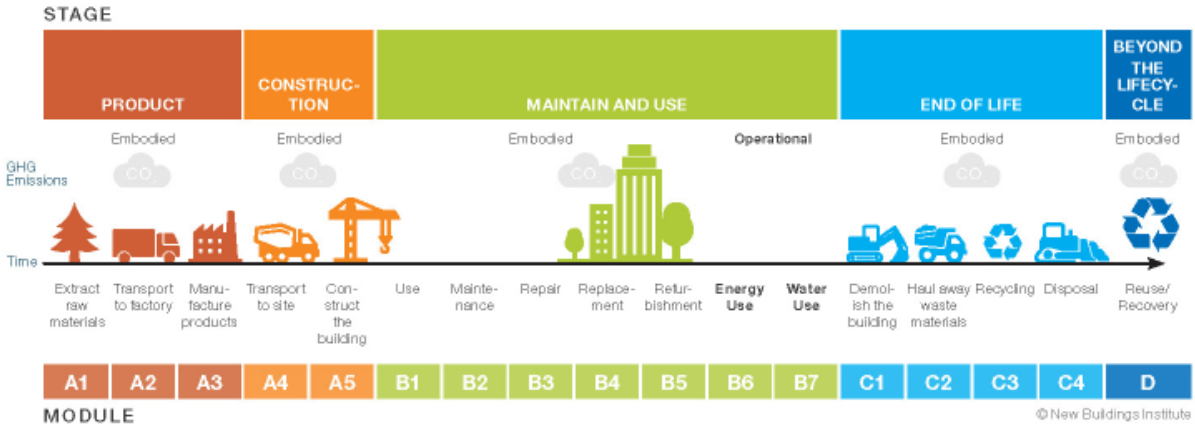
In the Council's overall pathways to net zero emission for the East Dunbartonshire area, there are also requirements for significant increases in local renewable energy generation across all building types. This reflects the fact that as gas heating systems are replaced with electric options, both large and small-scale renewable energy generation as well as distribution and battery storage capacity will need to drastically increase to sustainably meet higher electricity demands. Notably, increasing solar panel installations will serve as a critical tool for promoting energy storage and distribution during peak hours for electricity use.

The Council's target to reach net zero by 2036 for its corporate emissions, means that an accelerated version of similar actions to decarbonise Council owned buildings constitute key actions for the Council in this theme.

Decarbonising Building Construction and Retrofits

A holistic approach to building and heat decarbonisation should consider whole life carbon emissions comprised of operational and embodied carbon as shown in **Figure 19**. Operational carbon refers to emissions from energy consumed during the building use such as lighting, heating and cooling, lighting. Embodied carbon refers to the emissions released during the construction, maintenance and end of life stages of buildings, including raw material extraction, component manufacturing, transport, construction, refurbishments and disposal. Embodied carbon accounts for almost half of a typical building's whole life carbon emissions, making it a core consideration for building decarbonisation. [125]

Figure 19: Lifecycle Stages of Buildings and Whole Life Carbon Emissions[126]



There are several strategies to reduce embodied carbon. Firstly, prioritising refurbishment and repurposing over demolition and construction is crucial for existing building stock, as the former significantly reduces emissions outputs.[127] For new buildings and retrofits, a fabric first approach should be implemented to create a climate conscious design.

Fabric First – prioritises optimising building energy efficiency performance through materials and components (including walls, roofs, windows and insulation) from conception.

Adopting a fabric first approach prevents energy wastage using high-performance materials to install adequate insultation and ensure air tightness for improved heat efficiency (see **Actions 2.2, 2.8** and **2.10**).[128] The UK currently does not regulate embodied carbon emissions from building construction and renovation. [129] As such, local authorities rely on external standards to enact fabric first building approaches. Examples include Energy Performance Certificates which assess building energy efficiency

[125] World Business Council for Sustainable Development (2021) Net-zero buildings: Where do we stand ? | WBCSD
[126] New Buildings Institute (2024) Embodied Carbon - New Buildings Institute
[127] World Economic Forum (2021) https://www.weforum.org/agenda/2021/07/construction-industry-doesn-t-know-where-it-stands-when-it-comes-to-carbon-emissions/
[128] Scottish Government (2024) Key Findings Summary - Scottish House Condition Survey: 2022 Key Findings - gov.scot (www.gov.scot)
[129] UK Green Building Council (2024) Embodied Carbon | UKGBC

and PAS2080, Passivhaus and EnerPHit standards which examine embodied carbon in building works.[130,131]

40% of domestic properties in Scotland fall in the lowest energy performance ratings, underscoring the importance of fabric first approaches in built asset management.[132] Sustainable construction also links closely with reducing waste, sustainable supply chains and circularity principles which are further discussed in **Theme 5: Consumption and Waste.**

Decarbonisation of Heat

In its 7th Carbon Budget Report, the Climate Change Committee (CCC) estimates all domestic and non-domestic heating in the UK will need to rely on a low-carbon electrified system by 2050.[133] According to its balanced pathway for net zero, 68% of homes will need to adopt a low carbon heating system by 2040 of which the following technologies will play a crucial role:

- 75% heat pumps (with heat pumps in 10% of existing UK homes by 2030)[134]
- 3% communal heat pumps
- 9% district heating / heat networks
- 13% direct electric heating

The CCC estimates heating in 88% of non-domestic buildings will be decarbonised by 2040 with a combination of heat networks and individual low carbon heating systems like heat pumps replacing gas and oil boilers. Since Scotland and the East Dunbartonshire area have targets to reach net zero by 2045, these interim targets will have to be achieved in accelerated timescales.

Achieving this will entail a significant increase in electricity demand and a proportional extension of grid capacity and renewable energy generation, including new windfarms, solar panels, and delivery infrastructure,[135] which is why local renewable energy generation is a key part of the Council's emissions reductions (see **Action 2.1** and **Actions 2.10 - 2.12**). Off-peak and smart electricity use strategies will be a key component to maximise local renewable energy generation.

As highlighted by East Dunbartonshire's LHEES, heat pumps have shown unparalleled potential for decarbonisation due to greater efficiency rates than gas heating systems and demonstrated market establishment across Europe.[136] [137] In Scotland, 6,388 heat pumps and 25,875 solar power systems were fitted to homes and businesses in 2023, representing a 113% and 174% increase respectively. These installations contributed to a record number of local renewable energy systems, connecting almost one in ten Scottish households to a green energy system.[138]

Introduction of clean heat standards across the UK will further accelerate the adoption of heat pumps and other zero direct emissions heating technology which could help to push down prices through a greater economy of scale.

The price of electricity is also key for heat decarbonisation. While renewable energy is significantly cheaper in the UK compared to fossil fuels, the lower prices from renewable energy generation are often not passed on to consumers due to artificial financial impediments.[139] [140] Additionally, electricity prices have increased by more than a third over the last decade and are now 3 to 4 times higher than gas, making zero emission heating systems less attractive to consumers.[141] Renewable heating systems will therefore struggle to reach scale until electricity is cheaper than fossil fuels.[142] At the time of writing, options are being explored at a national level to assess pricing methods that increase the affordability of electricity.[143]

Tackling fuel poverty through energy efficiency and decarbonisation

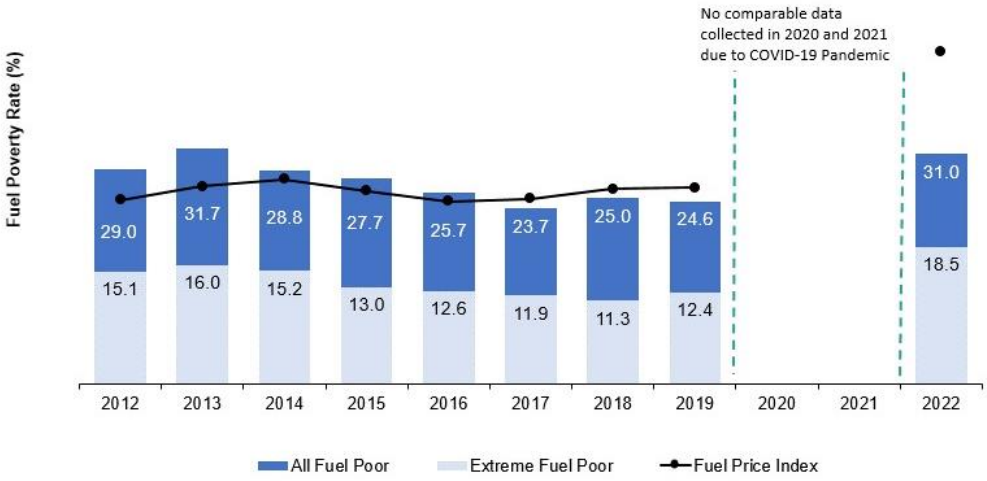
Centring fuel poverty in building decarbonisation strategies is key to ensuring climate justice is entrenched in housing's movement to net zero.

[130] BE-ST (2024) Why choose a whole building retrofit approach? - BE-ST
[131] International Passivhaus Association (2021) The EnerPHit Standard: How does it PHit in? | iPHA Blog
[132] Scottish Government (2024) Reforming Energy Performance Certificates - gov.scot
[133] Climate Change Committee (2025) The Seventh Carbon Budget - Climate Change Committee
[134] UK Climate Change Committee (2024) Progress in reducing emissions 2024 Report to Parliament - Climate Change Committee (theccc.org.uk)
[135] Scottish Parliament (2023) Urgency needed to create capacity in Scotland's electricity infrastructure | Scottish Parliament Website
[136] European Heat Pump Association (2023) https://www.ehpa.org/wp-content/uploads/2023/06/EHPA_market_report_2023_Executive-Summary.pdf
[137] UK Government (2024) Heat pump investment roadmap: Leading the way to net zero - GOV.UK (www.gov.uk)
[138] STV News (2024) Scotland 'leading the UK' with record year for solar and heat pump installations in 2023 | STV News
[139] Nesta (2023) The electricity-to-gas price ratio explained | Nesta
[140] UK Climate Change Committee (2025) The Seventh Carbon Budget - Climate Change Committee
[141] Scottish Government (2021) Heat In Buildings Strategy: Achieving Net Zero Emissions in Scotland's Buildings (www.gov.scot)
[142] Nesta (2023) The electricity-to-gas price ratio explained | Nesta
[143] Bolton et al. (2025) First Scottish forum on future electricity markets - Report

Fuel Poverty – when total fuel costs for a household are more than 10% of adjusted net income and remaining income is insufficient to maintain an acceptable standard of living.[144]

A combination of socio-economic deprivation, high energy costs and poor building insulation are often the causes of fuel poverty.[145] **Figure 20** shows data on the proportion of Scottish households in fuel poverty and extreme fuel poverty from 2012 to 2022.[146]

Figure 20: Proportion of Households in Fuel Poverty Rate (%) in Scotland, 2012 – 2022



The number of Scottish households living in extreme fuel poverty reached a decade-long high in 2022 alongside record fuel price spikes. Although there's been significant improvements to domestic energy efficiency, this rise sparked during the Covid-19 pandemic, driven by the compounding economic pressures of the cost-of-living crisis and inflation. Further, 43% of households relying on electricity for heating experienced fuel poverty, compared to 22% of gas-heated homes. This divide emphasises the need to ensure that the net zero transition policies are both economically sound and equitable to not exacerbate existing fuel poverty.[147] [148]

Recognising this, the UK Government Department for Energy Security and Net Zero published a founding statement for Great British Energy to "*drive clean energy deployment to create jobs, boost energy independence, and ensure UK taxpayers, billpayers and communities reap the benefits of clean, secure, home-grown energy.*" Local authorities and communities are expected to have a central role to this process,[149] particularly as renewable technologies in Scotland generated a surplus of the nation's entire electricity consumption in 2022.[150]

Approximately 3,000 households in East Dunbartonshire are fuel poor. Eliminating fuel poverty is a key objective within both Scotland's decarbonisation strategy and East Dunbartonshire Council's local approach. Household energy efficiency improvements for reducing energy bills is one of the most effective means of alleviating fuel poverty.

Policy Context

The Scottish Government has published a set of core mandates and targets to achieve equitable building decarbonisation.

The Heat in Buildings Strategy[151] outlines the national pathway to decarbonise current building stock by 2045, with the aim to reduce fuel poverty to less than 5% of households by 2040. This includes interim targets for the transition of over 1 million domestic and 50,000 non-domestic properties to clean energy sources. The strategy highlights four strategic priorities for the public sector in transitioning to net zero at a local scale:

[144] Scottish Government (2019) Fuel Poverty (Targets, Definition and Strategy) (Scotland) Act 2019
[145] Scottish Government (2021) Fuel poverty - Home energy and fuel poverty - gov.scot (www.gov.scot)
[146] Scottish Government (2024) Scottish House Condition Survey: 2022 Key Findings - gov.scot (www.gov.scot)
[147] Audit Scotland (2024) Decarbonising heat in homes (audit-scotland.gov.uk)
[148] Scottish Government (2020) Lived experience of fuel poverty: evidence review - gov.scot (www.gov.scot)
[149] UK Government (2024) Great British Energy founding statement - GOV.UK (www.gov.uk)
[150] Scottish Government (2024) Record renewable energy output - gov.scot (www.gov.scot)
[151] Scottish Government (2021) Heat in Buildings Strategy - Summary document (www.gov.scot)

- supporting fuel poor households by reducing poor energy efficiency and deploying zero emission heating systems across social housing stock to ensure warm homes that are affordable to heat;
- investing in low or no regret technologies by maximising private funding such as district heating loans and community-focused funding schemes;
- leading on net-zero through cashback schemes to support early adoption of clean heating technologies, attract private investment and scale market development;
- investing in innovation and pilots to develop business models, finance and technology to overcome barriers for zero emission heating systems, such as electricity grid constraints and mixed tenure properties;

Additional duties are being considered in the forthcoming Heat in Buildings Bill [152] to support the decarbonisation of public sector buildings including:

- a new duty on public sector organisations which would prevent polluting heating systems from being replaced with another fossil-fuel based system from 2025 (unless impractical);
- creating a new duty for public bodies to develop and implement a plan to decarbonise their corporate buildings in line with the 2038 net zero target;
- placing a new statutory reporting duty on public sector organisations to demonstrate progress in scope 1 emission reductions to meet the 2038 net zero target for all publicly owned buildings.

To realise the strategy, all Scottish local authorities are mandated to develop a Local Heat and Energy Efficiency Strategy (LHEES) and Delivery Plan. Local LHEES are supported by various national directives to promote pragmatic climate action planning. The Social Housing Net Zero Standard and the New Build Heat Standard respectively set efficiency standards for Council housing and prohibits the installation of direct emissions heating systems in new construction.[153] The Heat Networks Zones and Building Assessment Reports (Scotland) Regulations 2023 sets a duty for local authorities to conduct a Heat Network Zones Review Statement and opportunities for cost-effective heat networks as required by the Heat Networks (Scotland) Act 2021.

East Dunbartonshire Council has also worked to ensure the LHEES aligns with relevant internal policies such as the Local Housing Strategy which aims to meet the need and demand for quality housing across East Dunbartonshire. By prioritising retrofits to improve energy efficiency in line with net zero targets, adopting joint working approaches with agencies and services and coordinating housing development with the LHEES delivery plan and Heat Network Zones Review Statement (see **Actions 2.3** and **2.12**), the Council is well positioned to deliver on its climate goals.

The Scottish Government has also undertaken separate consultations on a new Social Housing Net Zero Standard for insulation to be installed by social landlords by 2028 and on Energy Performance Certificates reform to incentivise improved fabric properties and the adoption of non-polluting heating systems. New regulations are expected within the coming years to advance net zero progress.

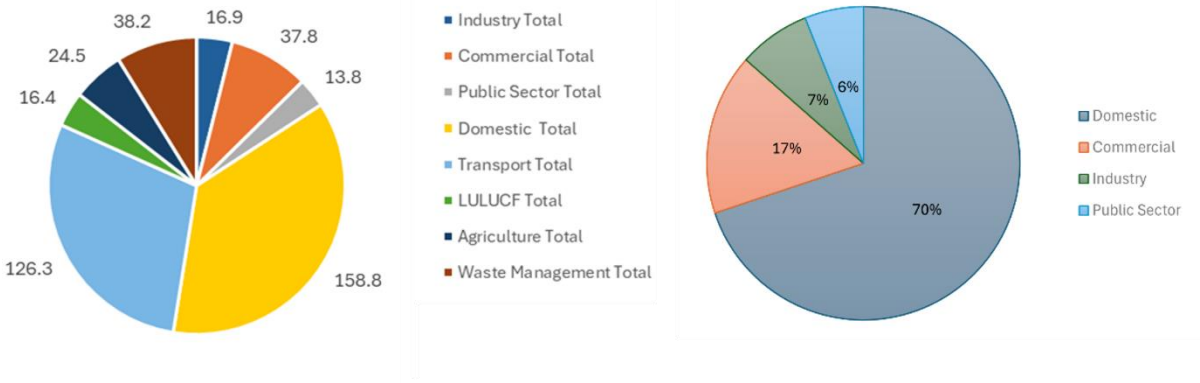
Local Context

As set out in the Council's Carbon Management Plan,[154] East Dunbartonshire Council's emissions from energy use in built assets– continues to be by far the largest source of the Council's carbon emissions, constituting 65% of 2023/24's carbon footprint (see **Figure 6**). Of built assets, Council housing is the Council's second largest emission source followed by Council buildings. The public sector, that primarily relies on gas fuel, accounts for 3% of East Dunbartonshire's total area wide emissions and 6% of East Dunbartonshire's total built sector emissions (see **Figure 21**).

Extensive progress has been made in reducing the building footprint that Council requires through the promotion of digital working. As outlined in the Council's Strategic Planning and Performance Update in February 2025, work is underway to explore further rationalisation of the Council's estate.

[152] Scottish Government (2023) Supporting documents - Delivering net zero for Scotland's buildings - Heat in Buildings Bill: consultation - gov.scot
[153] Scottish Government (2024) https://www.gov.scot/publications/delivering-net-zero-scotlands-buildings-consultation-proposals-heat-buildings-bill/
[154] East Dunbartonshire Council (2024) Carbon Management Plan Annual Report 2023/24

Figure 21: 2022 Total Area-wide Emissions in East Dunbartonshire (kt CO_2e) by Sector (left) and Emission Percentage from Built Sectors (right)



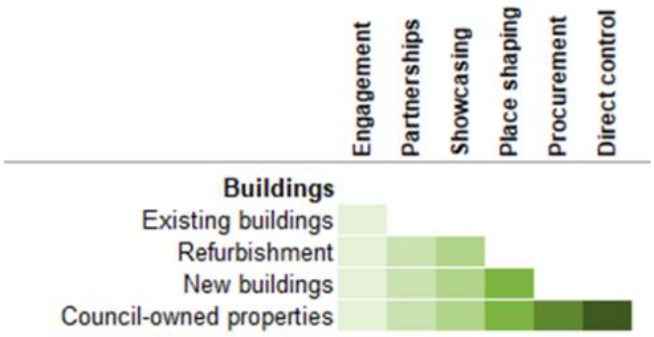
As outlined in the Council's Heat Network Zones Review Statement, while there is limited potential for developing heat network zones in East Dunbartonshire, there is considerable potential for developing a number of council-campus networks and to decarbonise existing heat networks that rely on gas (see **Action 2.12**).

Council Influence on Emissions

The Council recognises that delivering many of the actions identified in both the LHEES and CAP will be subject to one or more enabling conditions. These include steps such as securing additional funding, undertaking feasibility work, and the transferring cost savings of renewable energy on to users. [155] [156]

The CAP Evidence and Options report identified the Council's level of influence for area-wide emissions reductions in buildings as shown in **Figure 22**, with darker areas showing properties under direct Council control and lighter areas showing those with less influence. [157]

Figure 22: Council Influence over Emissions by Area for Buildings and Heat Decarbonisation



The Council has the most influence over corporate built assets and new buildings through direct management and legislating heat and renewable energy standards respectively. For example, the Council recently agreed a to build its next affordable housing programme of 390 units to Passivhaus standard, making it one of the first local authorities in Scotland to set this high standard on such a scale. [158] Passivhaus standards lower bills, reduce exposure to fuel poverty and reduce greenhouse gas emissions for future occupants by ensuring that the buildings' orientation, construction materials and heating strategy maximise energy efficiency and minimise heat demand.

Refurbishment requires partnership to decarbonise current building stock such as improving social housing through collaboration between the Council and its registered landlords. Collaborative stakeholder engagement is critical across all building categories to action the Council's priorities and the LHEES Delivery Plan (see **Actions 2.1 - 2.4**). During the development on the LHEES, the Council

[155] International Energy Agency (2024) Rapid rollout of clean technologies makes energy cheaper, not more costly - News - IEA
[156] Nesta (2024) For the first time, UK household electricity prices rose to levels higher than those in any EU country | Nesta
[157] East Dunbartonshire Council (2023) Ricardo report template (moderngov.co.uk)
[158] East Dunbartonshire Council (2025) αβγδ

identified Scottish Government, Zero Waste Scotland, Scottish Power Energy Networks, Scottish Water and Scottish Water Horizons, Historic Environment Scotland and the National Health Service as some of the key external stakeholders. Improving existing buildings would predominantly rely on further engagement with local businesses, developers and homeowners to raise awareness on energy saving measures, improve thermal efficiency and align financial support to realise decarbonisation strategies in line with statutory requirements (see **Actions 2.7, 2.11** and **2.12**).[159]

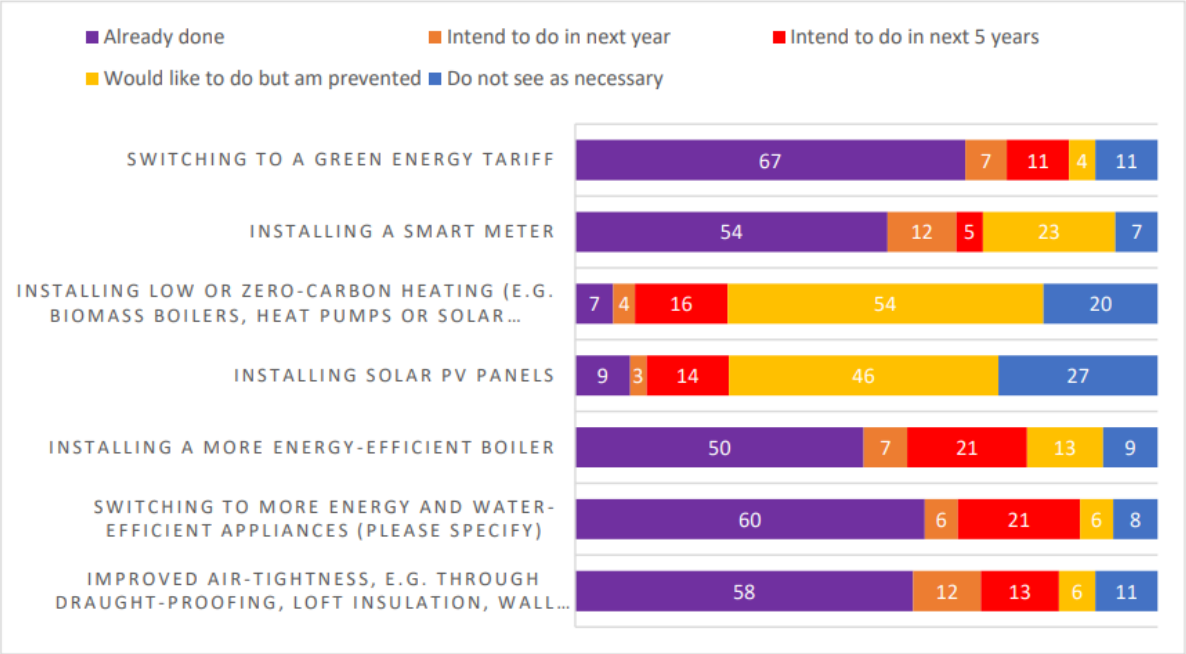
Within Council buildings, transition to low emission refrigerants, reducing electricity consumption, and promoting remote work for council workforce to accommodate limited office spaces are identified as key corporate decarbonisation steps (see **Actions 2.4-2.6**).

Meeting any gaps in energy demand can be facilitated through individual low carbon systems fostered through community ownership schemes and green electricity procurements where suitable. These approaches focus on either installing renewables on Council owned properties and partner sites, or private sleeving that distributes electricity generated by a private sector central plant. In this process, the community may invest, and the Council may charge for the distribution of power through the local grid.

Community Engagement

The Council's 2021 Climate Conversation[160] identified that most homeowners in East Dunbartonshire have taken proactive steps to decarbonise their homes. As shown in **Figure 23**, over half of general survey respondents had installed more efficient appliances, switched to a green energy tariff or improved airtightness of their properties.

Figure 23: General Survey Respondents' attitudes to home energy efficiency measures



Larger steps toward decarbonisation such as installing low carbon heating and solar PV panels were reportedly hampered by cost, lack of knowledge and property ownership issues. However, there is further local support for building and heat decarbonisation in East Dunbartonshire, as more than 75% of property owners support connecting to district heat networks and expect strong leadership on decarbonisation by the Council.

The 2023 'Your Budget Priorities' survey shows the priority actions for Council leadership as identified by communities.

- Communication - making council plans and commitments more visible and accessible to communities and raising awareness on climate change.
- Renewable energy - promoting and using renewable energy within the Council area.

[159] Scottish Government (2023) Supporting documents - National Planning Framework 4 - gov.scot (www.gov.scot)
[160] East Dunbartonshire Council (2021) Climate Conversation | East Dunbartonshire Council

- Insulation - improving insulation in Council properties and encouraging insulation upgrades for privately owned properties through subsidies for homeowners to improve energy efficiency in homes.

Consultations for the new Local Development Plan (LDP3) Evidence Report which took place between November 2023 to January 2024 further highlighted the significance of energy efficiency and low carbon infrastructure with specific project focuses as identified below:

- Installing solar panels, district heat networks, heat pumps, building insulation and a requirement for social housing to be net zero.
- Using waterbodies and flooded mine workings as potential low carbon energy sources for water source heat pumps to power local district heating systems such as the Bishopbriggs Leisure Centre and Southbank Marina.
- Enacting the Future Homes Standard for house builders to create net zero housing through ambitious design and construction methods. Key features will include energy efficient heating systems, electric vehicle charge points, solar panels and sustainable landscaping.
- Enacting grant schemes, incentives or similar initiatives to encourage household heat pump installation.
- Undertaking a review of energy land use policy, to facilitate expansion of renewable energy and battery storage as part of a long-term plan. It was suggested that this could be aided by repurposing vacant and derelict land and decontamination.

The Council's Report of Consultation[161] from the public consultation on the Draft LHEES and Delivery Plan highlights that a majority of respondents agreed with the analysis outputs and proposed heat decarbonisation solutions. Heat pumps are proposed as the most viable technological solution to decarbonise heat in a majority of properties in East Dunbartonshire and almost half of respondents agreed that heat pumps are an efficient / suitable technology for heating buildings (with 62% willing to install a heat pump in their property). This proposal aligns with the UK Government's policies to reduce electricity costs and anticipated cost savings from modelled outcomes for households, where 25% of all homes in Scotland would see energy cost savings when moving to a heat pump, under current energy prices. Uptake of time-of-use tariffs are expected to significantly lower running costs for heat pumps. [162]

[161] East Dunbartonshire Council (2024) Appendix 4 - REPORT OF CONSULTATION.pdf
[162] Nesta (2024) Exploring the costs to consumers of Scottish clean heating requirements | Nesta

Table 10 – Buildings and Heat decarbonisation Actions

#	Action	Owner	Potential Sources of Funding and Funding Status (RAG)[163]	Target Date
2.1	**<u>Corporate</u>: Set out a plan to decarbonise the Council's housing stock through the Capital Investment Plan and Asset Management Plan(s).** The modelling provided from the Evidence and Option Report recommended the following targets: • Upgrade all properties to at least EPC D by 2026 • Upgrade all properties to at least EPC B by 2032. **Source:** Evidence and Options Report & Element Energy Report	Executive Officer - Assets and Facilities	Red While there is some funding available there is still a major gap. Potential Funding Sources: - Scottish Green Public Sector Estate Scheme - Salix Recycling Fund - District Heating Loan Fund - Scotland's Heat Network Fund - Scottish Public Sector Energy Efficiency Loan Scheme - Scottish Central Government Energy Efficiency Scheme - Non-Domestic Energy Efficiency (NDEE) framework - Smart Export Guarantee (SEG)	2025-2036
2.2	**<u>Corporate</u>: Set out a plan to decarbonise the Council's assets, including leased buildings and joint ventures but excluding Council housing, through the Capital Investment Plan and Asset Management Plan(s).** The Evidence and Options Report set out the following reduction targets in emissions and energy use: • 16% reduction of heating consumption from building fabric improvements • 10% reduction of heating consumption from pump and fan replacement • 16% reduction of heating consumption from electrification of heating	Executive Officer - Assets and Facilities	Red While there is some funding available there is still a major gap. Potential Funding Sources: - Scottish Central Government Energy Efficiency Scheme - Salix Recycling Fund - Scottish Public Sector Energy Efficiency Loan Scheme	2025-2036

[163] Funding Status RAG Key: Green: High confidence the action is achievable with current resources; Amber: Funding gap remains, partially achievable with existing resources or potential funding identified; Red: High confidence action is not achievable with current resources.

	• 2% energy savings from Building Energy Management Systems • 2% energy savings from moving to more efficient appliances **Source**: Evidence and Options Report (Scope 1 and 2)			
2.3	**<u>Area-wide</u>: Implement the Local Heat and Energy Efficiency Strategy (LHEES) Delivery Plan for East Dunbartonshire by 2029.** *Replaces SCCF completed action: Produce a Local Heat and Energy Efficiency Strategy (LHEES) for East Dunbartonshire* **Source**: SCCF - Corporate Support Functions	Executive Officer - Land Planning and Development Supported by Executive Officer - Assets & Facilities and External Partners	Amber Potential Funding Sources: - Heat Network Support Unit - EESABS - Future rounds of Social Housing Net Zero Heat Fund - ECO4 - Affordable Housing Supply Programme	2025 - 2029
2.4	**<u>Corporate</u>: Implement office rationalisation**. **Source**: Evidence and Options Report, (Scopes 1, 2 and 3)	Executive Officer - Assets & Facilities Supported by Executive Officer - Customer Services & Organisational Development	Green	2025 - 2030
2.5	**<u>Corporate</u>: Prepare a Refrigerants Plan.** Modelling suggests that a 60% reduction in emissions from refrigerants, including a 10% saving of refrigerant leakage, can be achieved. **Source**: Evidence & Options Report (Scope 1)	Executive Officer - Assets and Facilities	Green	2025 - 2030
2.6	**<u>Corporate</u>: Prepare corporate water and wastewater management plan.** **Source**: Evidence and Options Report	Executive Officer - Assets & Facilities	Green	2025 - 2028
2.7	**<u>Area-wide</u>: The Council will engage with Scottish Water to investigate the potential for preparing an area-wide water and wastewater management plan.** Evidence and Option report modelling recommended the following targets: • reduce water use by 10% • reduce waste-water related emissions by 21%	Executive Officer - Land Planning and Development	Green	2025 - 2030

	• and improve water data for better management of services within the Council's purview. **Source:** Evidence & Options Report, Scope 3			
2.8	**<u>Corporate</u>: Development of Authority Construction Requirements (ACR's) for each new build project or conversion to ensure the housing estate/stock is in alignment with climate change and relevant sustainability policies.** **Source:** Evidence and Options Report	Executive Officer - Assets and Facilities	Green	2025 - 2028
2.9	**<u>Adaptation</u>: Undertake an audit of the Council estate's resilience to climate impacts and identifying the required adaptive measures. Following this, implement the audit recommendations for adaptation and nature-based solutions to build resilience of the Council estate.** **Source:** Evidence and Options Report	Executive Officer - Assets and Facilities Supported by Executive Officer - Land Planning and Development	Amber	2025 - 2030
2.10	**<u>Area-wide</u>: Local Development Plan 3 implements NPF 4 Policy 11 'to encourage, promote and facilitate all forms of renewable energy development including wind and solar, including energy generation, storage, new and replacement transmission and distribution infrastructure and emerging low-carbon and zero emissions technologies including hydrogen and carbon capture utilisation and storage.'** **Source**: Evidence and Options Report	Executive Officer - Land Planning and Development	Green	2025-2045
2.11	**<u>Area-wide</u>: Drive forward renewable outputs, particularly, solar PV uptake across the domestic, commercial/public and industrial sectors through regional partnerships and other avenues within Council remit.** **Source**: Evidence and Options Report	Executive Officer - Land Planning and Development	Green	2025-2045
	<u>Area-wide</u>: Monitor progress on assumptions within the Council's selected net zero pathway, identify where partnership working can support the actions and identify where corrective action needs to be taken to reflect updated modelling. <u>Area-wide metrics, much of which is outside the Council's direct purview, includes:</u> • UK grid decarbonisation to 0.0066kgCO_2e/kWh by 2045	Executive Officer - Land Planning and Development	Green	2025-2045

2.12	• Solar uptake across the industrial, commercial, public and domestic sectors by 2045
	  o Industry: 2GWh and 60% of roof space
	  o Commercial/public: 2GWh and 30% of roof space
	  o Domestic: 40GWh and 60% of roof space
	• Heat pump and heat network uptake across the industrial, commercial, public and domestic sectors
	  o Domestic: 90% heat pumps, 10% heat networks by 2045
	  o Public: 95% heat pumps, 5% heat networks by 2038
	  o Commercial & industry: 95% heat pumps, 5% heat networks by 2045
	  o Resulting 16% drop in heating use by 2038 where heat pumps or heat networks are installed
	• Grid electricity, hydrogen uptake and bioenergy with carbon capture & storage and carbon capture & utilisation capacity uptake for industry in industrial processes
	  o 50% reduction by 2040
	• Industrial and commercial fabric efficiency improvements
	  o 16% heating savings by 2038
	• Upgrades to non-domestic ventilation, and air conditioning systems (including retrofitting measures, smart heating controls, uptake of LED lighting, energy efficient appliances)
	  o 30% reduction in energy demand
	
	Source: Evidence and Options Report			

Theme 3: Sustainable Communities

Introduction

Contextualising the impact of unsustainable development patterns

Unsustainable development patterns have driven global overconsumption, widespread ecosystem damage and global warming, resulting in the exacerbation of unparalleled extreme weather events.[164] This has contributed to a global picture where over 3 billion people live in contexts that are highly vulnerable to climate change.[165]

Despite this, there are effective mitigation and adaptation options which can reduce risks to people and nature.[166] Urban planning can respond to climate risks and promote environmental justice by creating inclusive, resilient, and sustainable spaces that respond to the needs of vulnerable communities and promote healthy environments.

Key actions include:

- to establish community partnership arrangements and raised awareness of the Council's climate actions (see **Action 3.1, 3.3** and **3.4**)
- to support skills development in areas required to achieve the Council targets (see **Actions 3.2** and **3.5**)
- to bolster community resilience to the impacts of climate change (see **Action 3.5**)
- to assess renewable energy generation on Council land (see **Action 3.7**)
- and to ensure alignment of Council spend and use of resources with net zero (see **Action 3.8**).

Local Living and 20-Minute Neighbourhoods

Scotland's National Planning Framework 4 directed local authorities to support healthy and climate resilient communities by prioritising local living and 20-minute neighbourhoods.[167]

The concept of local living aims to support sustainable communities where most daily needs can be met within a reasonable distance by active travel or public transport - commonly referred to as 20-minute neighbourhoods. By promoting mixed-use housing and development, local living can help to deliver climate resilient communities while supporting a good quality of life.[168] Local living focuses on place-based planning to promote sustainable access to facilities and amenities, reduce environmental and health disparities and improve community connectivity.[169]

> **Place-based Planning** refers to approaches that aim to understand the specific issues, interconnections and relationships in a place and coordinating actions and investment to improve the quality of life for that community.[170]

Achieving local living does not require high density neighbourhoods or restricting housing developments to built-up urban areas. Local living can be supported in rural and semi-rural areas through a networked approach that facilitates connected, attractive, and sustainable places.[171]

[164] Kemarau et al. (2024) Planetary boundaries transgressions: A review on the implications to public health - ScienceDirect
[165] IPCC (2022) WGII Summary for Policymakers Headline Statements | Climate Change 2022: Impacts, Adaptation and Vulnerability
[166] IPCC (2022) AR6 Climate Change 2022: Impacts, Adaptation and Vulnerability — IPCC
[167] Scottish Government (2023) https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2023/02/national-planning-framework-4/documents/national-planning-framework-4-revised-draft/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4.pdf
[168] Scottish Government (2023) https://www.gov.scot/publications/local-living-20-minute-neighbourhoods-planning-guidance/
[169] Scottish Government (2023) https://www.gov.scot/publications/national-planning-framework-4/
[170] Our Place (2024) Place Based Approaches | Our Place
[171] Scottish Government (2024) Planning guidance: Local living and 20-minute neighbourhoods

Daily needs of local communities are broadly similar, but planning should independently explore specific community needs and relevant solutions. Key features and hallmarks of a 20-minute neighbourhood are to:

- optimise active travel by providing well-connected infrastructure for pedestrians, wheelchair users, and cyclists
- be safe, and accessible through inclusive planning and design for elderly people and people with disabilities
- offer high-quality public realm and green spaces
- provide services and destinations that support local living
- facilitate access to quality public transport that connects people to jobs and less frequently used services
- deliver housing at densities that make local services and transport viable
- and facilitate sustainable economies.[172]

Figure 24: Features of a 20-Minute Neighbourhood [173]

Figure 25: Headline Figures for 20-minute neighbourhoods [174]

[172] Living Streets Scotland (2023) https://www.livingstreets.org.uk/media/qhkbr3zy/20-minute-neighbourhoods.pdf
[173] Living Streets (2023) https://www.livingstreets.org.uk/media/qhkbr3zy/20-minute-neighbourhoods.pdf
[174] Litchfield Report (2022) 20-Minute Neighbourhoods for Scotland (lichfields.uk)

	Distance Travelled in 10-minutes	Area of their 20-minute neighbourhood
walker	800m	200Ha
electric wheelchair / pavement mobility scooter	1000m	314Ha
road legal mobility scooter / beginner cyclist	2000m	1,257Ha
good cyclist	5000m	7,854Ha

Service distribution and accessibility are key considerations to build 20-minute neighbourhoods, particularly the varying accessibility requirements of different services. For example, while residents may be willing to walk a longer distance to visit the dentist bi-annually, a longer trip would be unfeasible for regular grocery runs. This presents a question of how to weight services based on the frequency of use. Additionally, **Figure 25** shows that the extent of 20-minute neighbourhood shifts depending on whether residents are walking, wheeling, cycling or using public transport. Ensuring accessibility regardless of the mode of transport is critical for equitable communities. Assessing these factors requires significant community mapping and engagement in additional to traditional data analysis to align service provisions with public perceptions.[175]

Local living can play an important role in reducing climate vulnerability and shaping sustainable communities by providing co-benefits for:

- Environmental Impacts: by promoting opportunities to walk, wheel and cycle, local living reduces reliance on emissions-intensive transport, improving air quality and providing more space for nature reclamation (see **Action 3.5**).
- Community Health and Wellbeing: 20-minute neighbourhoods encourage physical activity and social interaction through access to quality greenspaces which create resilient and diverse places.
- Local Business Community: strategic place-based planning supports a range of local services, providing access to employment and training opportunities, increasing footfall for existing businesses, and driving local centre regeneration for effective community wealth building (see **Actions 3.2, 3.3 and 3.5**).[176]

The Scottish National Transport Strategy aims to achieve local living principles by creating communities in which "*walking, cycling and public and shared transport take precedence ahead of private car use.*"[177] Substantial investment in public and active transportation will be key to remove impediments for 20-minute neighbourhoods as explored in **Theme 1: Transport**. Low Traffic Neighbourhoods (LTNs) are an increasingly common tool to aid the development of 20-minute neighbourhoods. LTNs are residential areas where through motor traffic is reduced whilst maintaining vehicular access for residents,

[175] Van der Horst et al., (2021) https://www.pure.ed.ac.uk/ws/portalfiles/portal/327711816/20_Minute_Neighbourhoods_in_the_City_of_Edinburgh_.pdf
[176] Scottish Government (2023) https://www.gov.scot/publications/local-living-20-minute-neighbourhoods-planning-guidance/
[177] Transport Scotland https://www.transport.gov.scot/media/47052/national-transport-strategy.pdf

emergency, delivery and service vehicles. Strategic filters – usually bollards or large planters – are introduced to allow pedestrians, wheelchair-users and cyclists, but block cars, vans and lorries.[178]

Moreover, road space reallocation and reducing overall traffic volume can positively influence several factors, including:

- Reductions in adverse health impacts such as air and noise pollution.
- Likely reductions in greenhouse gas emissions.
- Reduction of health inequalities and improved connectivity for low-income communities.
- Likely increase of footfall for local businesses.[179]
- Improved walking, wheeling and cycling access and infrastructure.
- Provision of space for socialising and recreation.[180]

A UK government study in London[181] found LTNs effectively reduce car ownership and traffic volumes with limited adverse impacts in both affluent and deprived communities.[182] Another study also dispels the argument that LTNs are publicly unpopular, with survey respondents in London, Birmingham, Wigan, and York communities favouring LTN installation.[183] Further, the Walking and Cycling Index of Inverness and Stirling highlight that 66%[184] and 73%[185] of residents respectively support the creation of LTNs.

In Scotland many local authorities have adopted or are advancing the development of LTNs. For instance, the City of Edinburgh Council's Transport and Environment Committee has approved the development of a trial LTN in many of its neighbourhoods.[186]

Figure 26: Part of a low-traffic neighbourhood near Oxford [187]

Community Stewardship and Cultural Preservation

A key aspect of actualising sustainable communities is the active involvement of local stakeholders in urban planning and management processes to foster inclusivity and stewardship.

[178] Low Traffic Costorphone (2023) https://lowtrafficcorstorphine.org.uk/our-aims/low-traffic-neighbourhoods/
[179] Public Health Scotland (2022) https://www.publichealthscotland.scot/publications/road-space-reallocation-in-scotland/
[180] Public Health Scotland (2022) https://www.publichealthscotland.scot/publications/road-space-reallocation-in-scotland/
[181] Goodman, A. et al. (2020) https://findingspress.org/article/18200-the-impact-of-low-traffic-neighbourhoods-and-other-active-travel-interventions-on-vehicle-ownership-findings-from-the-outer-london-mini-holland-progr
[182] Aldred, R. et al. (2021) https://www.sciencedirect.com/science/article/pii/S0966692321002477?via%3Dihub
[183] UK Government (2024) Rishi Sunak's report finds low-traffic neighbourhoods work and are popular | Low-traffic neighbourhoods | The Guardian
[184] Sustrans (2024) Walking and Cycling Index 2023: Inverness (sustrans.org.uk)
[185] Sustrans (2022) Walking and Cycling Index 2021: Stirling (sustrans.org.uk)
[186] City of Edinburgh Council (2021) Developing Low Traffic Neighbourhoods for communities across Edinburgh – The City of Edinburgh Council
[187] UK Government (2024) reported in Guardian (2024) https://www.theguardian.com/uk-news/2024/mar/08/low-traffic-neighbourhoods-generally-popular-report-ordered-by-sunak-finds

Climate Ready Clyde (CRC) emphasises the importance of community ownership of climate action to build a more resilient, prosperous and fairer Glasgow City Region in the flagship actions of its Adaptation Strategy and Action Plan.[188] By working with community and cultural organisations to engage residents, CRC and local authority partners can ensure programmes respond to community needs to build climate resilience for frontline groups. This approach aligns with growing calls for locally led adaptation, in which communities are empowered to lead on the design and delivery of climate solutions.[189] Achieving this level of community engagement requires decision-making power to be devolved to the lowest appropriate level and to reshape climate resilience planning through long-term local capacity investment and training. The locally led adaptation paradigm centres local stakeholders, particularly those in vulnerable and priority communities, to move towards 'business-unusual' and meet the scale of the climate crisis (see **Actions 3.4, 3.5,** and **3.6**).[190]

A key focus for community stewardship is the protection of important community and cultural sites, including landmarks, town centres, churches and local network hubs. Cultural and natural heritage preservation is intricately linked to climate change due to increasing ecological risks to cultural heritage sites.[191] These impacts have already been observed across Scotland, however more research and action are needed to understand risks and protections for landmarks.[192] Accordingly, better modelling and vulnerability assessments[193] are needed for all types of cultural heritage, from archaeological sites and built heritage to landscapes and heritage artifacts. For East Dunbartonshire further monitoring and climate change risk assessments are needed for key sites including Mugdock Country park, the Antonine Wall, Bar Hill and Twechar, Lillie Art Gallery, Auld Kirk Museum, Kirkintilloch Town Hall, and Kilmardinny House.

[188] Climate Ready Clyde (2021) Adaptation Strategy and Action Plan | Climate Ready Clyde
[189] World Resources Institute (2024) Principles for Locally Led Adaptation | World Resources Institute
[190] International Institute for Environment and Development (2024) Principles for locally led adaptation
[191] Historic Environment Scotland (2024) Climate Change and Environmental Action Plan (CCEAP) 2019-24
[192] UK Climate Risk CCRA-Evidence-Report-Scotland-Summary-Final-1.pdf (ukclimaterisk.org)
[193] Climate Heritage Network (2022) 2022-2024 Action Plan — Climate Heritage Network

Policy Context

There is a robust statutory and regulatory landscape which will govern the required actions needed to build sustainable communities in East Dunbartonshire. Full details can be found in the Policy Plans and Strategy Directory.

Local Development Plan 3 (LDP3)

Scotland's planning system is plan-led, meaning development decisions are made based on criteria set by current Scottish National Planning Framework 4 (NPF4) and Council-level Local Development Plans (LDPs).[194] Together, these plans are used to determine how local authorities develop their land. East Dunbartonshire passed its LDP2 in 2022, outlining requirements for planning applications within the Council area. Examples of LDP considerations include building standards, sustainability criteria and local service proximity, each of which contribute to a broader planning vision of East Dunbartonshire.

The Council is currently developing LDP3, presenting an opportunity to strengthen climate and ecological considerations within the Council's communities. The CAP's working groups will be integral to this process and ensuring that the LDP3 supports sustainable development from the bottom-up.

Local Place Plans

Local Place Plans were introduced by Scottish Government in the Planning (Scotland) Act 2019 and allow communities to produce their own local area plans.[195] They provide the chance for communities to develop projects and proposals for their area with support from the Council as part of the preparation of the Local Development Plan.[196]

Local Place Plans specifically relate to the development or use of land. This is differentiated from Locality Plans which primarily work to address poverty and inequalities, and by proxy, environmental issues more broadly. It is key for Local Place Plans to consider climate risks and include adaptation measures to lessen the impact of current and future climate impacts. By doing so, Local Place Plan projects can bring multiple co-benefits to their respective community.

Examples of Local Place Plan measures helping deliver **Actions 3.4, 3.5** and **3.6**, include:

- Identifying and delivering community renewable energy production projects.
- Adapting buildings and making them more resilient to projected future weather events.
- Improving and using greenspaces and blue spaces to adapt to and mitigate impacts of climate change.
- Managing land in ways that support climate adaptation and protect priority locations from increased flooding and temperatures.
- Embedding adaptation into site management plans.
- Supporting forward changes and significant improvement in local sustainable transport infrastructure.
- Implementing community growing projects.

Local Context

20-Minute Neighbourhoods Evidence Gathering

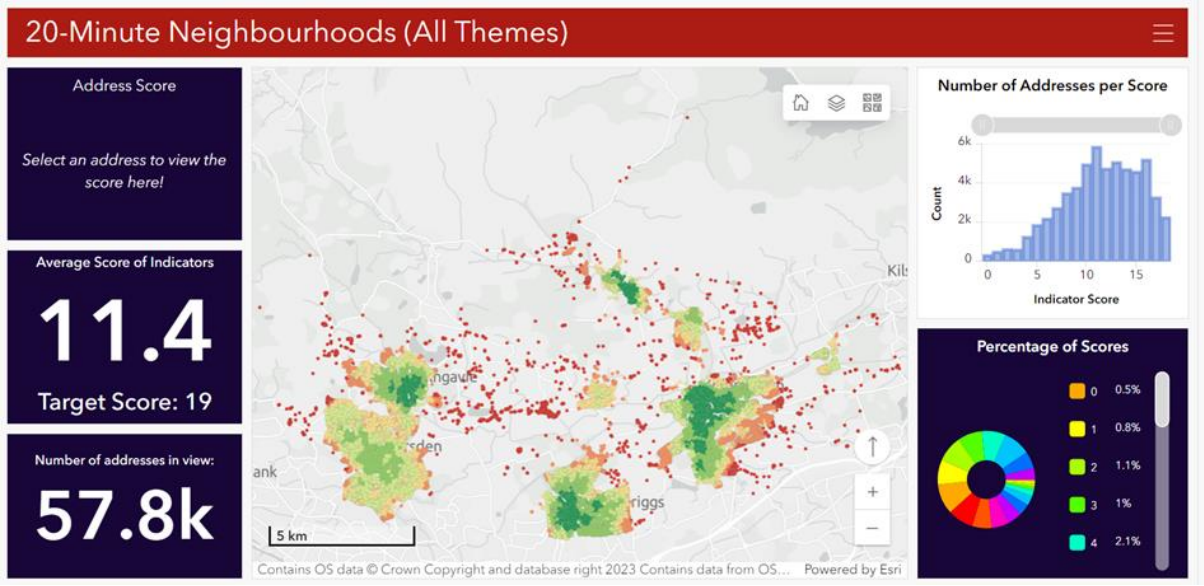
A 2021 baseline assessment by ClimateXChange shows that rural and urban communities across Scotland, including East Dunbartonshire have the required services and infrastructure to implement solutions to become 20-minute neighbourhoods.[197] A clear plan integrating bespoke local considerations will be required to successfully advance local living.

The Council is establishing a baseline process to better understand the status of local living in East Dunbartonshire and advance the goal of 20-minute neighbourhoods. The process will formalise 20-minute neighbourhood criteria in assessing planning applications and inform the development of the Evidence Report stage for the forthcoming Local Development Plan 3 (LDP3).

[194] Scottish Government Development plans - Planning and architecture - gov.scot
[195] Our Place (2024) https://www.ourplace.scot/home/local-place-plans
[196] Planning Aid Scotland (2025) Resources - Planning Aid Scotland
[197] Climate Xchange (2022) 20 minute neighbourhoods in a Scottish context | Climate XChange

An interactive mapping tool has been developed to analyse the quality of services and facilities to meet the daily needs of community residents. This information was used to produce a map that shows regional accessibility to local facilities as illustrated in **Figure 27**.

Figure 27: 20-minute neighbourhood Mapping Tool Extract



The mapping tool is intended to inform discussion with other Council departments and inform wider decision making. Communities and stakeholders will be engaged in how sustainable places, local living and 20-minute neighbourhoods should be delivered in East Dunbartonshire utilising the mapping tool and to help deliver on **Actions 3.2, 3.3** and **3.5**.

Locality Plans

The draft Locality Plans 2023-28, which were developed by communities and the Community Planning Partnership to alleviate local issues with tailored solutions, were approved by Council in September 2023. While Locality Plans primarily address poverty and inequality, the annual progress reports present an opportunity to advance local living and address environmental disparities. The actions under the environment section for each plan is outlined below:

- Lennoxtown Locality Plan
  - Promote and support local food growing and gardening
  - Increase links with wider organisations (such as the John Muir Trust)
  - Make connection with historical and paths
  - Create opportunities within vacant spaces/shops

- Hillhead and Harestanes Locality Plan
  - Community led improvements in area including upgrading part of locality: i.e. outside centres and information notice boards
  - Create opportunities within vacant spaces/shops
  - Create community resource facility to enable storage of equipment for community activities, e.g. litter picks
  - Carry out environmental assessments with the local community, including upgrade of grounds and notice boards outside centres

- Auchinairn Locality Plans
  - Explore how the Auchinairn Community Garden space can be made more accessible to community groups and members
  - Explore the potential of developing a co-ordinated programme of activities that help to improve the appearance of the local area – e.g., litter picks, repurposing derelict land and other emerging issues

- Twechar Locality Plan

- Deliver localised collection day/days for large items.

Community Climate Action

Carbon Literacy Training

The Climate Action Plan recognises the crucial role of community climate action, behaviour change and the importance of interventions to raise awareness and empower residents to build sustainable communities.

To this end, the Council delivered a free Carbon Literacy Training for Communities in partnership with Keep Scotland Beautiful to increase awareness and agency for community-led climate action. Over 170 participants attended the fully funded training which will support contributing to the wider benefits being realised through its delivery will help implement **Actions 3.2** and **3.5**.

East Dunbartonshire Climate Action Hub

Scottish Government allocated £5.5M in 2024-25 for Climate Action Hubs across Scotland to build capacity for community-led climate action.[198] The Scottish Government announces Twechar Community Action successfully applied to establish a Climate Action Hub for East Dunbartonshire. Development of the East Dunbartonshire Climate Action Hub aims to increase networking and connectivity of community organisations to build inclusive community capacity for climate projects and shared learning.

The East Dunbartonshire Climate Action Hub offered an initial round of £500 seed grants for local climate action projects and community engagement events in early 2025. While Councils are not directly involved in the establishment, management or oversight of the Climate Action Hubs, the Council will collaborate with the Hub to develop local partnerships and initiatives that prioritise local climate concerns.

Community Engagement

Community input gathered during the preparation of Evidence Report Consultation of the Local Development Plan (LDP3) highlighted various local needs, including:

Sustainable Travel and Active Travel

- A common theme was that achieving a reduction in car use is only possible through greatly improved access to public transport, quality and reliability of services and active travel routes. A wide range of specific measures were suggested, including investing in active travel routes between towns and the implementation of local living improvements to build 20-minute neighbourhoods. Other comments focused on technical solutions such as additional EV charging points, zebra crossings as an alternative to traffic lights (e.g. Drymen Road and Milngavie Road), reduced speed limits, extra rail halts at Allander and on the Glasgow to Edinburgh main line, additional car parking at stations and segregated cycle lanes.

Land Management and Community Ownership

- A relatively small number of responses focused on more effective management of land, including ways of facilitating greater community ownership and stewardship. The importance of local food growing opportunities was raised frequently, specifically its role in reducing 'food miles' and supporting local producers/businesses. Further details about community Food Growing and its significant role in sustainable communities are set out in **Theme 8: Food and Agriculture.**
- Other more specific suggestions included community land buy-out schemes (e.g. Birdston Regeneration Group), Developer Contributions, better data on the nature crises in East Dunbartonshire, re-use of brownfield land and collaboration with landowners and development of a 'hydro brake' in the greenbelt at Chestnut Lane in Milngavie. (See **Action 3.4**).

[198] East Dunbartonshire Council (2025) Technical Notes 2025, Issue 5 - East Dunbartonshire Climate Action Hub - East Dunbartonshire Council

Table 11 – Sustainable Communities Actions

#	Action	Owner	Potential Sources of Funding and Funding Status (RAG)[199]	Target Date
3.1	**<u>Corporate</u>: Establish the communication plan for the CAP.** This action incorporates and supersedes the following SCCF actions: - ensure that Sustainability and Climate Change Communication Strategy and Action Plan includes workshops and learning sessions for staff and e-learning to promote behaviour change, improve awareness of sustainability and climate change issues, and support delivery of the Council's sustainability and climate change commitments. - Continue to promote sustainability to staff and the wider public systematically, in line with CAP developments and national guidance contained in Net Zero Nation **Source:** Evidence and Options Report & SCCF - Corporate Social Function section and education sections	Executive Officer - Customer Services & Organisational Development Supported by Executive Officer - Land Planning and Development	Green	2025
3.2	**<u>Corporate, Area-wide and Adaptation</u>: Implement targeted training and Skills Development Opportunities for Climate Mitigation and Adaptation and ensure relevant skills are reflected in the Work Force Strategy.** **Source:** SCCF – Education section (Action 7.1), Evidence and Options Report & SCCF - Community Capacity Building under action (6.1).	Corporate: Executive Officer - Customer Services and Organisational Development Area-Wide: Chief Education Officer Supported by Community Learning and Development Partnership	Green	2025 - 2045
3.3	**<u>Area-wide</u>: Develop a set of Community Payback principles.** **Source:** SCCF - Community Capacity Building section (action 6.3)	HSCP Chief Officer	Green	2025 - 2028
3.4	**<u>Area-wide</u>: Support community climate empowerment via community grant pots and community asset transfer processes.** **Source:** SCCF - Community Capacity Building section	Executive Officer - Community Services Supported by Executive Officer - Land Planning and Development	Green	2025
	<u>Adaptation</u>: Support communities to build resilience and create climate ready places throughout East Dunbartonshire.	Executive Officer - Community Services	Green	2025-2030

[199] Funding Status RAG Key: Green: High confidence the action is achievable with current resources; Amber: Funding gap remains, partially achievable with existing resources or potential funding identified; Red: High confidence action is not achievable with current resources.

3.5	**Source:** CAP Evidence and Options Report	Supported by Executive Officer - Land Planning and Development and Executive Officer - Legal & Regulatory Services		
3.6	**<u>Adaptation</u>: Disseminate up to date information on projected local and national impacts of climate change to key internal and external partners to help to protect critical services and anticipate impacts on service delivery and business continuity.** **Source:** CAP Evidence and Options Report	Executive Officer - Land Planning and Development Supported by Executive Officer - Legal & Regulatory Services and Executive Officer - Community Services	Green	2025-2027
3.7	**<u>Corporate and Area-wide</u>: Conduct a review of Council land to assess potential and feasibility of renewable energy generation in partnership with local stakeholders.** **Source**: Evidence and Options Report	Executive Officer - Assets & Facilities Supported by Executive Officer - Land Planning and Development and Executive Officer - Neighbourhood services	Green	2025 - 2026
3.8	**<u>Corporate, Area-wide and Adaptation</u>: Develop a robust process such as a Climate Change impact Assessment (CCIA) process to deliver against the statutory requirement for an alignment of Council spend and use of resources with net zero.** **Source:** Evidence and Options Report and Statutory Guidance	Executive Officer - Land Planning and Development	Green	2025 - 2026

Theme 4: Natural Environment

Introduction

State of the Environment

Healthy ecosystems regulate themselves through biogeochemical cycles commonly known as ecosystem services. Ecosystem services, for instance water filtration, soil regeneration and crop pollination, supply the basic resources we all rely on such as water, food, shelter and most modern medicines. However, these services are dependent on robust biodiversity and ecological health. Current economic activity has discounted humanity's environmental impacts so that our demands far exceed the planet's capacities.[200] As a result, the strength of Scotland's ecosystem services has shown quantified deterioration as early as 1950.[201] If global consumption continues to outpace the limits of our planet, we may endanger biodiversity and strain ecosystem capacity to the point of collapse.

The scale of human impacts is incurring tangible damage to biodiversity. Wildlife populations have decreased by an average of 73% over the past 50 years[202] and core Scottish species numbers have declined by 15% since 1994.[203] This biodiversity loss is disrupting natural cycles, resulting in intensifying environmental inequities, such as food and water insecurity.

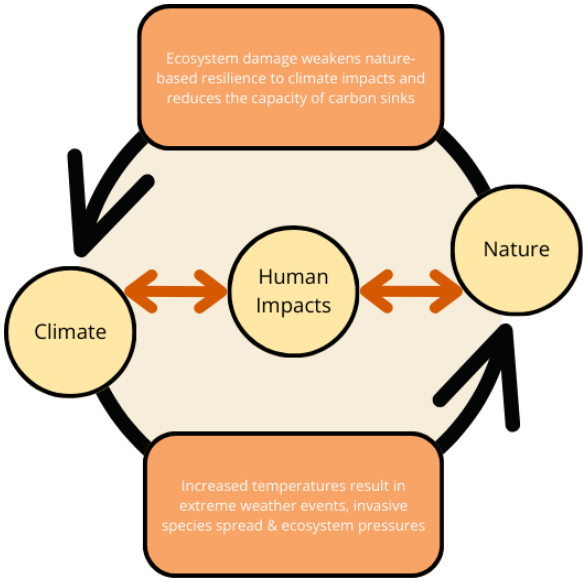
Headline actions in this theme include, maximising East Dunbartonshire's ecological climate resilience solutions through the establishment of a nature-based investment fund and a Greenspace Strategy. The actions in this theme also entail mainstreaming adaptation and biodiversity considerations while honing in on key watercourses to reduce flood risk.

Ecological Impacts of Climate Change

These impacts are further multiplied by climate change. For example, ecological threats from land-use change for agriculture and lumber, overgrazing and overfishing are exacerbated by rising temperatures and the resulting introduction of invasive non-native species and diseases. Weakened ecosystems are then less effective as carbon sinks and natural buffers to extreme weather events.[204] This cyclical relationship results in twin ecological and climate emergencies as shown in **Figure 28**.

[200] The Economics of Biodiversity: The Dasgupta Review (2021) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962785/The_Economics_of_Biodiversity_The_Dasgupta_Review_Full_Report.pdf
[201] State of Nature Partnership (2023) https://stateofnature.org.uk/wp-content/uploads/2023/09/TP26056-SoN-Scotland-summary-report-v5-1.pdf
[202] BBC (2024) Nature decline is now nearing dangerous tipping points, WWF warns - BBC News
[203] State of Nature Partnership (2023) https://stateofnature.org.uk/wp-content/uploads/2023/09/TP26056-SoN-Scotland-summary-report-v5-1.pdf
[204] Scottish Government (2023) Section B. Results – Net Sources of Scottish Greenhouse Gas Emissions - Scottish Greenhouse Gas Statistics 2021 - gov.scot (www.gov.scot)

Figure 28: Illustration of Twin Crises



One of climate change's most notable ecological impacts are increasingly unpredictable weather patterns and severe events. This shift has caused a significant disruption in the water cycle, impacting animal behaviour patterns and plant growing seasons.[205] These impacts were particularly evident in 2023 as record temperatures and low water levels resulted in an unusually warm winter and intense rainfall events, such as Storm Babet and extreme events, such as Storm Eowyn. Strong storms and flooding events are predicted to grow continually more frequent and intense over the coming decades due to locked in warming from past and current emission levels. Fortifying resilience in Scotland's landscapes and ecosystems is essential to reduce these identified impacts (see **Actions 4.3 - 4.5**).

The impacts of climate change on the natural environment are place-specific and vary depending on type and scale, but may include:[206]

- Increased risk of species loss and habitat alteration through climate-driven competition for nutrients and water. This will encourage a rise in invasive non-native species and ecosystem imbalance.
- Increased frequency and risk of flooding events with more concentrated pollution and higher water temperatures that will disrupt aquatic ecosystems.
- Disrupted natural carbon storage and sinks, including peatland and other carbon-rich soils. Changing weather patterns are driving longer growing seasons and more frequent droughts, which cause drier vegetation, can drain peatland habitats and increase the risk of wildfires. Tangible differences and impacts on peatland habitats are illustrated in **Figures 29** and **30** below.

[205] BBC (2024) https://www.bbc.co.uk/news/science-environment-67705812
[206] The John Hutton Institute (2023) https://www.hutton.ac.uk/research/projects/climate-change-impacts-natural-capital

Figure 29: Damaged Peatland Habitat

Figure 30: Healthy Peatland Habitat

The required response and investment needed to reverse ecological declines is still far from commensurate with the scale and pace of the twin crises.[207,208] East Dunbartonshire must enact transformative adaptation measures that build climate resilience by centering nature to protect vital ecosystems and human well-being.

[207] State of Nature Partnership (2023) https://stateofnature.org.uk/wp-content/uploads/2023/09/TP26056-SoN-Scotland-summary-report-v5-1.pdf
[208] Scottish Government (2024) https://www.gov.scot/binaries/content/documents/govscot/publications/consultation-paper/2024/01/public-consultation-scottish-national-adaptation-plan-2024-2029/documents/draft-scottish-national-adaptation-plan-2024-2029/draft-scottish-national-adaptation-plan-2024-2029/govscot%3Adocument/draft-scottish-national-adaptation-plan-2024-2029.pdf

Nature-Based Solutions

Nature-based solutions refer to actions that address social or environmental challenges while providing co-benefits for both human wellbeing and biodiversity. For example, watercourse biodiversity enhancements also serve to reduce flood risk as plant root systems slow water flow during periods of extreme rainfall. Nature-based solutions can produce a variety of co-benefits such as improving livelihoods and health, increasing natural carbon storage, moderating heat impacts and enabling species migration through strengthened nature networks.

Figure 31: Nature-Based Solution – Outcomes [209]

[209] NatureScot (2023) https://www.nature.scot/climate-change/nature-based-solutions/nature-based-solutions-local-authorities

Compared to technology-based climate change solutions, nature-based solutions are generally more cost-effective, longer lasting, scalable and deliver more co-benefits including:

- Expanded carbon sinks through ecosystem restoration and preservation of peatland and carbon-rich habitats (see **Actions 4.1 - 4.4**).
- Provision of habitats for biodiversity (see **Actions 4.3 - 4.5**).
- Benefits to human health and wellbeing such as protection from extreme weather, shade and cooling effects and access to green space.
- Making communities more resilient and attractive (see **Actions 4.7, 4.8, 4.9** and **4.10**).
- Flood risk alleviation through naturalisation of watercourses (see **Actions 4.5** and **4.6**).
- Improvements to air and water quality through natural filtering processes.
- Improvements to mental and physical health by promoting active travel, social interaction and a connection to nature.

Policy Context

The Environment Strategy for Scotland sets out the Scottish Government's commitments to ensure the country plays its role in tackling the climate and ecological emergencies together. The strategy highlights that a significant cross-sector transformation will be needed to achieve an economy which has a nature-positive impact and notes the necessity to increase public funding for nature restoration and enabling regulatory levers.[210] The Infrastructure and Investment Plan for Scotland 2021-22 to 2025-26 works to address this need, proposing increased investment in natural infrastructure that benefits the environment and human wellbeing to drive a nature positive transition to net zero.[211]

Funding will be deployed for nature-based biodiversity solutions as outlined by the Scottish Government's Biodiversity Strategy and associated Delivery Plans. The strategy sets the ambition for Scotland to be nature positive by reversing nature loss by 2045.

Additionally, the Clyde and Loch Lomond Flood Risk Management Plan meets statutory requirements set by the Flood Risk Management (Scotland) Act 2009 to identify potentially vulnerable areas (PVA) for flooding events. The Plan identifies 23 key catchments that would benefit from delivery of natural flood management strategies across the Plan district. Detailed action to mitigate and prepare for anticipated flooding in the River Kelvin PVA can be found within the full Management Plan.[212]

The Plan presents actions to reduce the risk of flooding and protect PVAs, while also directing recovery planning for inevitable future flood events. Actions include flood protection schemes, research, early warning schemes, surface water management plans and natural flood management studies.

Local Context

Flood Risk and Mitigation

Within the PVAs, clusters of properties (98,000 homes and businesses throughout the Plan District) are at significant risk of flooding. Financially, the estimated average damage of these identified flood risks is approximately £70 million per annum.[213]

The River Kelvin is designated as a PVA due to the flooding risk to its adjacent communities, including Bearsden, Bishopbriggs, Milngavie, Torrance and Balmore. In the assessed areas, approximately 14,500 people and 8,550 combined homes, properties and businesses are at risk of river and surface water flooding. While some of these areas are only partially within East Dunbartonshire's boundaries, these risk factors are a key priority for the Council to support roll-out of the flood management plan (see **Commitment to Climate Justice**).

East Dunbartonshire Nature-based Solutions

East Dunbartonshire is engaged in various nature-based solutions, which will be set out in further detail in the Local Biodiversity Action Plan (LBAP) and forthcoming Greenspace Strategy (see **Actions 4.1 -**

[210] Scottish Government (2024) https://www.gov.scot/publications/environment-strategy-scotland-delivering-environment-strategy-outcome-scotlands-economy-evidence-base-policy-levers/documents/
[211] Scottish Government (2021) A National Mission with Local Impact: Infrastructure Investment Plan for Scotland 2021-22 to 2025-26 - gov.scot
[212] Glasgow City Council (2022) https://www.glasgow.gov.uk/clydeandlochlomond
[213] Glasgow City Council (2022) https://www.glasgow.gov.uk/CHttpHandler.ashx?id=58993&p=0

4.3). Current projects include habitat improvements, climate adaptation, greenspace development, air quality improvement, biodiversity gain, carbon sequestration and flood alleviation. This includes:

- Investments from the Shared Prosperity Fund for habitat improvements, wetland creation and water quality improvements in the Kelvin Valley.
- Completed delivery of the Greenspace Improvement Plan in Waterside and Rosebank.
- Completed delivery of the Bearsden Air Quality Action Plan.
- Works for the Bishopbriggs Climate Ready Park (Etive Park) to create a sustainable greenspace for the community that improves biodiversity and stormwater drainage.
- Planting of 5,000+ native trees and hedges alongside removal of invasive non-native species.
- Wildflower project at South Bishopbriggs and Auchinairn to create 55,165m^2 of wildflower meadow.

Colquhoun Park Flood Alleviation Scheme

A successful local example of utilising nature-based solutions to solve climate-related issues is the flood mitigation work undertaken at Colquhoun Park, in Bearsden. Numerous historic flooding events have occurred in the park since the 1980s, with significant flooding in 2006, 2012 and 2013. The Council took a holistic and sustainable approach through the Colquhoun Park Flood Alleviation Scheme to harness the flood reduction properties of biodiversity and increase resilience via habitat creation and enhancement.

Figure 32: Original Colquhoun Park

The design included:

- creation of a large wetland area
- re-instatement and enhancement of a former skating pond
- de-culverting a section of the Ledcameroch Burn through the wetland
- wildflower meadows
- removal of invasive species
- access improvements
- relocation and upgrade of play facilities.

Freshwater and wetland habitats such as those created and enhanced at Colquhoun Park are critical for wildlife. These habitat types cover just 3% of the UK land surface yet are known to support about 10% of UK species.[214] The created wetland and pond provide additional water storage during high rainfall events, easing the pressure on underground drainage systems. These features also provide

[214] North Wales Wildlife Fund (2021) Celebrating wetlands – where land meets water | North Wales Wildlife Trust

amenity asset for residents. Similar initiatives will be crucial to promote ecological resilience across East Dunbartonshire to address the climate and nature crises in tandem.

Figure 33: Biodiversity enhancements at the former skating pond

Figure 34: New wetland area

Delivering Biodiversity Enhancements and Nature Networks

The Council has received funding allocations from the Scottish Government via the Nature Restoration Fund (NRF). A wide range of projects funded by the NRF were undertaken up until March 2024. It is expected that this funding will continue into future years. Examples of the projects include additional tree planting, wetland works, woodland improvements and the creation of management plans for various sites including Lenzie Moss, Cairnhill Woods, Heather Avenue Greenspace and Whitefield Pond. Cut-and-lift machinery was also purchased as an investment in wildflower meadow management. These projects are making an important contribution to biodiversity within the Council area.

Nature-Based Investment Study

The Evidence and Options Report estimated that approximately 8% of current emissions will remain as unavoidable residual emissions in 2045, primarily from owned buildings and supply chains. Companies and governments have addressed residual emissions through offsetting, the practice of investing in nature-based solutions to claim additional carbon sequestration as a reduction measure against total corporate emissions. As noted in the Scottish Government's Statutory Guidance, carbon offsetting does not reduce emissions at the source and should be used as a last resort after all other measures to

reduce or avoid emissions have been explored.[215] The Guidance also sets out specific criteria for offsetting due to the fact that some offsetting schemes have made misleading claims.[216] Consequently, integrating safeguards and terms of reference when identifying potential offsetting opportunities will be crucial to ensure successful interventions and compliance with the Scottish Government's Climate Change Duties.

The Council aims to commission a Nature-Based Investment Study to identify effective direct and indirect offsetting opportunities for East Dunbartonshire (see **Action 4.1**). The core focus of this study is to maximise nature-based solutions and explore every available opportunity in East Dunbartonshire through both public and private funding mechanisms. The Council approach will align with the Scottish preferred policy of supporting territorial offsetting, giving preference to projects within the Council's boundaries then Scotland as set out in **Figure 35**. It is important to note that the study will investigate nature-based solutions beyond the expected residual emissions, examine potential co-benefits and assess revenue raising potential of different options. Possible solutions include:

- Tree planting/reforestation
- Peatland and carbon-rich soils restoration and enhancement
- Grasslands
- Wetlands
- Green infrastructure development through urban greening

Figure 35: Offsetting Hierarchy

Crucially, the study will need to evaluate potential for attracting private investment from organisations who are interested to demonstrate corporate social responsibility by supporting biodiversity and carbon sequestration projects.[217] These investments will be mutually beneficial, contributing to respective companies' emission targets and East Dunbartonshire's area-wide emission reduction. This will require consideration of landownership in areas which have the greatest emission reduction potential for investment, such as damaged peatlands or suitable land for rewilding and biodiversity-based enhancement projects. Accordingly, it will contribute to a range of actions, including **Actions 4.1 - 4.5**.

These collaborative investments are a form of insetting. Insetting is differentiated from offsetting in that emissions projects are conducted as a working partnership with an interested organisation rather than being managed by a third-party. These partnerships can also be made within the Council's supply chain to reduce internal emissions. Insetting actions could be integrated into the Open Space Strategy, Green Network Strategy, the forthcoming community Food Growing Strategy, and emerging Greenspace Strategy.

[215] WWF Understanding carbon offsetting and your footprint | WWF
[216] MIT Technology Review (2023) The growing signs of trouble for global carbon markets | MIT Technology Review
[217] Initial offsetting options and calculations were developed through the CAP Evidence and Options Report to provide provisional estimates of the scale and cost of offsetting required for the Council's preferred pathway to net zero.

Community Engagement

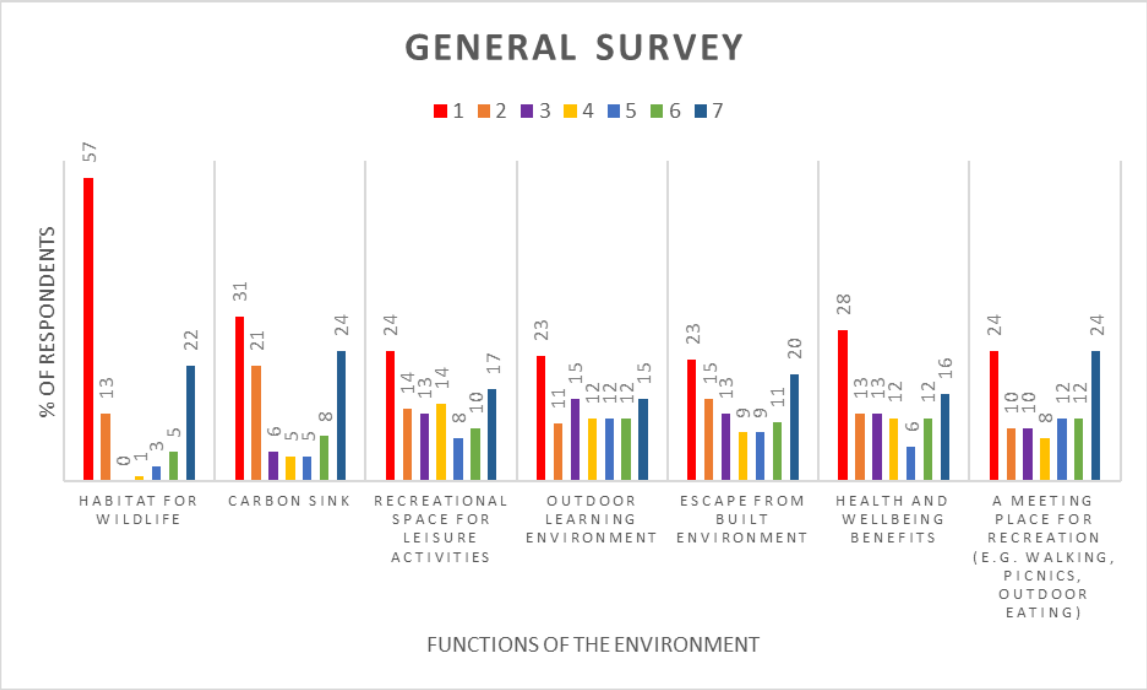
Climate Conversation

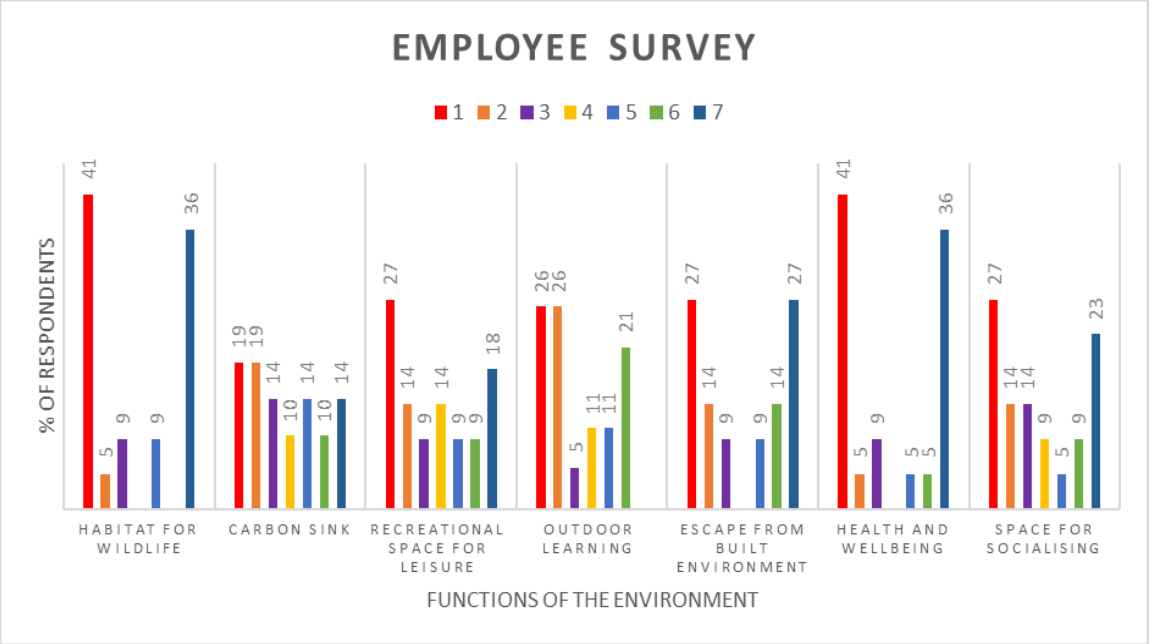
As set out in the Baseline section, the Council conducted a 'Climate Conversation' engagement process to seek local public opinion and views of Council employees on climate change and the ecological crisis in 2021.

The natural environment, in particular biodiversity, was a key focus of the Climate Conversation given its inherent links with climate change. 91% of general survey respondents and 100% of Council employees consider that we are facing an ecological emergency, with only a minority of general and employee survey respondents (18% and 3% respectively) viewing East Dunbartonshire's biodiversity as adequately protected.

When surveyed on the various functions of the natural environment, respondents prioritised wildlife habitats, with 57% of general respondents and 41% of employees considering this as nature's most important function.

Figure 36: Respondents' Valuations of the Functions of the Natural Environment (1: Most Important – 7: Least Important)





Over three quarters of respondents to the general survey supported policies to implement changes in land-use, such as sustainable biomass, tree planting and peatland restoration that promote carbon sequestration.

The theme of biodiversity generated several discussions during online events, with key topics including the role of land-use planning in assessing and mitigating impacts of built developments and the potential for street tree planting. Comments captured during the events also indicated an awareness of and interest in the concept of rewilding, a process of restoring biodiversity and ecological processes across various land types.

"**Rewilding**: is the large-scale restoration of nature until it can take care of itself – and us – again. It's about restoring nature's remarkable web of life, including habitats, natural processes and, where appropriate, missing species."[218] - Rewilding Britain

Local Development Plan 3 – Evidence Report Consultation 2023-24

The Planning (Scotland) Act 2019 has introduced a new requirement to consider how development and the planning system can best contribute to the enhancement of Scotland's biodiversity. As a result, one of the key statutory outcomes of Council's Local Development Plans is to secure 'positive effects for biodiversity' (see **Actions 4.8 - 4.10**).

To meet this aim, early engagement and consultation for the new Local Development Plan (LDP3) included questions to gather public opinion on biodiversity and the ecological crisis. An online survey and multiple in-person drop-in sessions were conducted throughout East Dunbartonshire. There was also an online session, in-person workshop and open call for public comment.

A clear majority of support for action on climate was noted with 84% of the general survey and 70% of the employee survey responses were very concerned about the loss of biodiversity and wildlife due to factors like habitat loss and climate change. When asked "How can LDP3 help address the Climate Emergency and Nature Crisis?", responses fell into two themes:

1. Enhancing green spaces and preserving biodiversity
Many comments highlighted the importance of green spaces and biodiversity to tackle the climate emergency and nature crises. Common suggestions included increased tree planting, street planting, and woodland restoration to offset carbon emissions and improve connectivity between habitats. Suggestions also included support for regional forestry and peatland initiatives.

[218] Rewilding Britain (2025) What is rewilding? | Rewilding Britain

Many respondents called for the introduction of biodiversity net gain calculations in the next LDP to monitor progress on these initiatives. There was also support for the Council's planting of wildflower meadows and calls to expand this work with rewilding efforts. Several comments requested better management of woodlands and action to bring the green belt[219] into active use for sport and recreation. Finally, several comments noted the positive impact on mental health of green spaces and access to the natural environment (see **Actions 4.1 - 4.4** and **4.7**).

2. Flood risk mitigation and adaptation

The need to address flooding was often tied into biodiversity enhancements and specific design measures such rain gardens, retention ponds and multipurpose nature-based solutions (see **Actions 4.1** and **4.2**). A smaller number of comments raised the issue of responsible water management and flood risk mitigation. There was concern at localised flooding issues, notably in the Milngavie area, including Craigdhu Burn and Allander Water. It was suggested that a stronger approach should be taken against non-permeable lawns and surfaces, and the gradual reduction in water absorption. Flood attenuation schemes and drainage system requirements for new builds were raised as actions to prevent downstream damage and impacts. (see **Actions 4.5** and **4.6**).

[219] The green belt is an area of land surrounding urban areas and serving as a buffer zone. It is designated for conservation and protection of natural habitats, wildlife, and biodiversity.

Table 12 – Natural Environment Actions

#	Action	Owner	Potential Sources of Funding and Funding Status (RAG)[220]	Target Date
4.1	**<u>Corporate, Area-wide and Adaptation</u>: Develop and implement the actions from a Nature-Based Investment Study to maximise natural sequestration of emissions, deliver adaptation solutions, and support flourishing biodiversity.** This will build on and supersede the SCCF action to undertake peatland restoration and investigate the feasibility of producing a Peatland Action Plan for East Dunbartonshire. **Source**: Evidence and Options Report and SCCF – Natural Environment Section	Executive Officer - Land Planning and Development Supported by Executive Officer - Roads & Neighbourhood Services	Amber Potential Funding Sources for the initial study: - Nature restoration funds - Sustainability Budget Potential funding for delivery: - Peatland Action Project - Forestry Grant Scheme - MOREwoods (The Woodland Trust) - Rewilding Innovation Fund (Rewilding Britain) - Private Sector Funding	2025 - 2045
4.2	**<u>Area-wide</u>: Maximise nature-based solutions through planning mechanisms and establish partnerships to support area-wide nature-based solutions.** **Source**: Evidence and Options Report, area-wide section	Executive Officer - Land Planning and Development	Green	2025 - 2045
4.3	**<u>Area-wide</u>: Produce and implement a Greenspace Strategy.** **Source**: SCCF – Natural Environment Section	Executive Officer - Land Planning and Development	Green	2025-2026
4.4	**<u>Area-wide and Adaptation</u>: Identify nature-based solutions and climate adaptation opportunities along the main corridor of the River Kelvin in East Dunbartonshire to maximise co-benefits for biodiversity, flood mitigation, community development and health and wellbeing.** **Source:** Evidence and Options Report	Executive Officer - Land Planning and Development Supported by Executive Officer - Roads and Neighbourhood Services	Green	2025 - 2030
	<u>Adaptation</u>: Drive naturalisation and de-culverting of watercourses	Executive Officer - Roads and	Green	2025 - 2035

[220] Funding Status RAG Key: Green: High confidence the action is achievable with current resources; Amber: Funding gap remains, partially achievable with existing resources or potential funding identified; Red: High confidence action is not achievable with current resources.

4.5	**for biodiversity and flood attenuation.** **Source:** Evidence and Options Report	Neighbourhood Services Supported by Executive Officer - Land Planning and Development		
4.6	**<u>Adaptation</u>: Implement existing Surface Water Management Plans (SWMPs) and develop additional plans where problems areas are identified.** **Source:** Evidence and Options Report	Executive Officer - Roads and Neighbourhood Services	Green	2025 - 2028
4.7	**<u>Adaptation</u>: Through the Greenspace Strategy, identify opportunities to create climate ready parks across East Dunbartonshire to make them more climate resilient.** **Source:** Evidence and Options Report	Executive Officer - Land Planning and Development Supported by Executive Officer - Roads and Neighbourhood Services	Green	2025 - 2030
4.8	**<u>Area-wide and Adaptation</u>: Develop strengthened actions for climate change and biodiversity in LDP3 and associated workstreams.** **Source:** CAP Evidence and Options Report	Executive Officer - Land Planning and Development	Green	2024 - 2025
4.9	**<u>Adaptation</u>: Embed and mainstream adaptation considerations, monitoring and actions throughout the Local Authority including delivering on statutory SNAP3 requirements.** **Source:** Evidence and Options Report	Executive Officer - Land Planning and Development (through the Adaptation and Nature-Based Solutions Working Group)	Green	2025 - 2027
4.10	**<u>Adaptation:</u> Contribute to the delivery of adaptation at a Glasgow City-Region level.** **Source:** Evidence and Options Report	Executive Officer - Land Planning and Development	Green	2025 - 2029

Theme 5: Consumption and Waste

Introduction

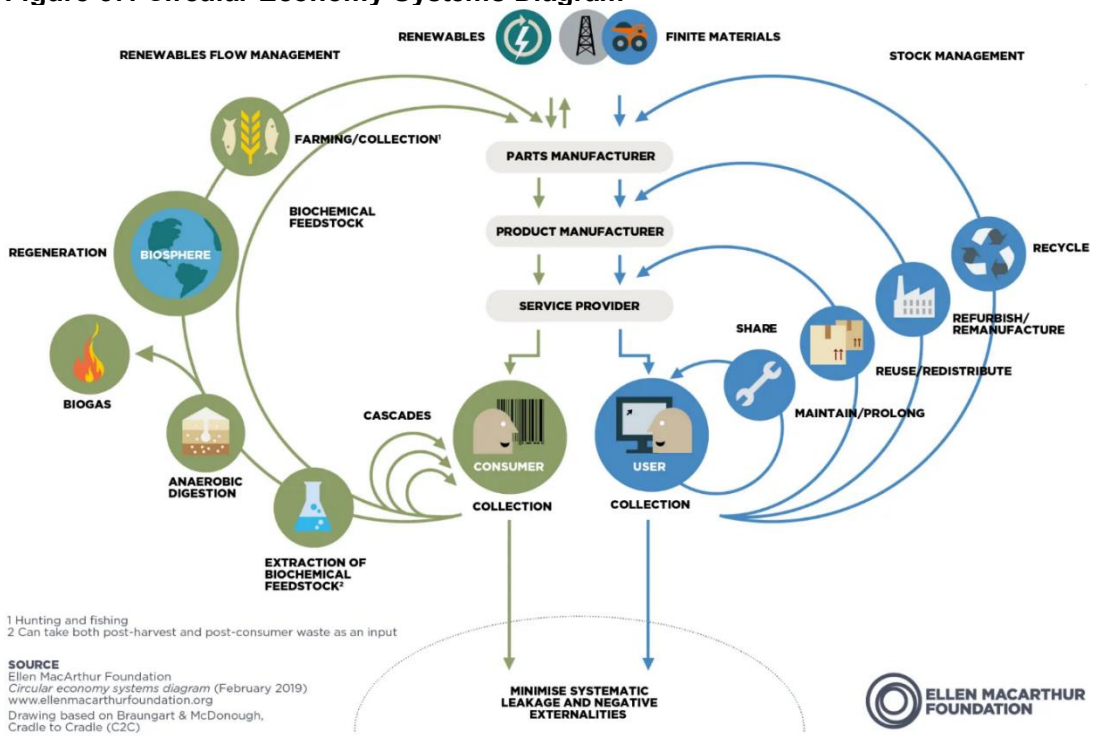
Contextualising the Impact of Consumption and Waste

Humanity is depleting Earth's resources at an unsustainable rate. Earth overshoot day marks the date when humanity's consumption of ecological resources and services exceeds the Earth's capacity for that year. As of 2025, global overshoot day is July 25; for the UK it's as early as May 20.[221] This demand produces over 2 billion tonnes of municipal solid waste annually, of which the average person in Scotland contributes 21.7 tonnes of material, nearly double the global average of 11.9.[222] This consumption results in critical environmental problems such as plastic and chemical pollution, land use change and water scarcity.[223]

These challenges have sparked dialogues on the need for circular economies, systems in which waste from one manufacturing process become inputs for another and products are kept in circulation through repurposing and repair.[224] Circular economies work to address the climate and ecological crisis by reimagining our use of finite resources as shown in **Figure 37**.

This theme's actions are shaped by the principles of a circular economy and the waste hierarchy: preventing waste, reducing non preventable waste and recycling or composting remaining waste that is generated where possible.

Figure 37: Circular Economy Systems Diagram [225]



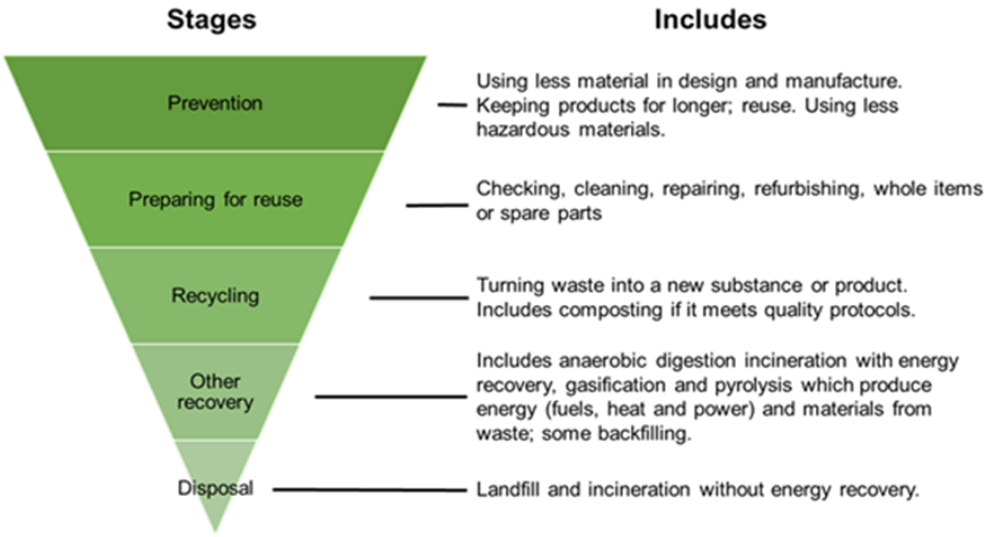
[221] Earth Overshoot Day (2025) Country Overshoot Days 2025 - Earth Overshoot Day
[222] Circle Economy (2023) *The Circularity Gap Report Scotland* circularity-gap.world
[223] World Bank (2024) Trends in Solid Waste Management (worldbank.org)
[224] Ellen MacArthur Foundation What is a circular economy? | Ellen MacArthur Foundation
[225] Ellen Macarthur Foundation (2021) The Butterfly Diagram: Visualising the Circular Economy

In Scotland, only 1.3% of resources are reused, compared to 8.6% globally and 24.5% in the Netherlands, the world leader in terms of circularity.[226] Additionally, Zero Waste Scotland estimates that approximately 80% of Scotland's carbon footprint comes from our consumption of goods, materials and services.[227]

Minimising Waste

Improving circularity requires application of the waste hierarchy, **shown in Figure 38**, to prioritise waste prevention and reuse over recycling, late-stage recovery, and disposal. Preventing waste from the outset of product design itself is key to reducing total consumption and waste emissions (see **Action 5.4**). This approach creates long-term cost savings, supporting the development of resilient supply chains that centre sustainability and empowering communities to consume responsibly and repair existing goods and products (see **Action 5.1**).[228]

Figure 38: Waste Hierarchy [229]``



Circularity in the Built Environment

Circularity principles are also key to sustainable development and urbanisation. The construction industry accounts for approximately 62% of total waste generated in the UK, primarily driven by demolitions and excavations (see **Action 5.1**).[23] According to the Chartered Institute of Buildings, new buildings tend to create a greater carbon impact than reusing or repurposing existing buildings. However, demolitions are frequently still prioritised over retrofits due to various pressures and perceptions on building efficiency, demand for more facilities like social housing, and limited funding for refurbishments (**see Theme 2: Buildings and Heat Decarbonisation**).

As the UK lacks an overarching strategy to manage consumption and waste, various public and third sector organisations are establishing strategies to integrate circularity into their processes. Therefore, the responsibility of the public sector to lead by example falls on the Scottish national government and local authorities.

Policy Context

Consumption and waste have a robust statutory and regulatory framework to meet in addition to a significant amount of policy documents which will govern the required actions needed to achieve net zero and increase climate resiliency for East Dunbartonshire. Full details can be found in the CAP Policy, Strategy & Plan Directory.

[226] Scottish Government (2024) https://www.gov.scot/publications/environment-strategy-scotland-delivering-environment-strategy-outcome-scotlands-economy-evidence-base-policy-levers/documents/
[227] Zero Waste Scotland (2023) Circular economy business support | Zero Waste Scotland
[228] Ellen McArthur Foundation (2023) How does the circular economy create value?
[229] Southwest Environmental Limited (2008) Site Waste Management Plan

The Scottish Government's circular economy strategy and accompanying a Circular Economy and Waste Route Map to 2030 contain targets to improve circularity and reduce. The Scottish Government's 2024 Environmental Strategy for Scotland Evidence-Base and Policy Levers notes the following recommendations for the circular economy:

- Fully integrating Scotland's climate change plans with the circular economy strategy to ensure targets, policies, governance and delivery are aligned, including on consumption-based emissions.
- Adopting a net zero-style governance approach to meeting circular economy outcomes by requiring and tracking contributions from different Scottish Government portfolios.
- Signalling intent by setting a clear target for reduction of per capita material use and intensity.
- Advocating to UK Government for business fiscal incentives such as tax breaks to reduce their material footprint by investing in circular product and process standards.
- Exploring incentives for consumers and businesses to promote the product-as-service model.
- Exploring how Extended Producer Responsibility, which exists in sectors such as plastic packaging, could be extended to the textile sector.[230]

Moreover, the Circular Economy Bill, which passed in 2024, will allow Scottish local authorities to:

- Set local recycling targets, building on the experience of Wales, which has the best recycling rate in the UK
- Set statutory targets for delivery of a circular economy to measure progress in transforming the economy
- Restrict the disposal of unsold consumer goods to prevent good products ending up in landfill
- Place charges on single-use items like disposable cups to encourage the move to reusable alternatives
- Give local authorities additional enforcement powers, allowing them to crack down on fly-tipping and littering from cars.[231]

Notably, a review by Zero Waste Scotland found that while incineration produces less emissions than directing waste to landfill, energy from waste is no longer considered a low-carbon solution due to decarbonisation of the electricity grid.[232] Consequently, the Scottish Government announced a moratorium on new waste-to-energy plants that were pending approval for construction.[233] The Scottish Government is also introducing a ban on biodegradable municipal waste going to landfill, which come into effect from the 31 December 2025. The ban is implemented by amending the Landfill (Scotland) Regulations 2003 and as a provision of the Waste (Scotland) Regulations 2012.[234]

Local Policy

East Dunbartonshire Council's Circular Economy Strategy (CES) was published in March 2023. Work has commenced as of 2024 to develop a new Economic Development Strategy, which will build upon the CES and COVID-19 Economic Recovery Plan to set out the next steps in working towards a local wellbeing economy.

The Council 's CES has the overarching objectives to:

- Encourage a movement away from a disposable culture, towards one in which materials are reused.
- Reduce the consumption of virgin resources and the volume of materials ending up as waste.
- Support local businesses and third sector organisations to become circular, providing the added benefit of enabling the Council to reduce its scope 3 emissions by purchasing goods and services from circular businesses.

[230] Scottish Government (2024) https://www.gov.scot/publications/environment-strategy-scotland-delivering-environment-strategy-outcome-scotlands-economy-evidence-base-policy-levers/documents/
[231] Scottish Government (2024) Circular Economy Bill passed - gov.scot (www.gov.scot)
[232] Zero Waste Scotland (2021) https://www.zerowastescotland.org.uk/content/climate-change-impact-burning-municipal-waste-scotland
[233] Scottish Government (2022) Putting limits on incineration capacity - gov.scot (www.gov.scot)
[234] Scottish Environment Protection Agency SEPA (2024) Biodegradable municipal waste landfill ban | Scottish Environment Protection Agency (SEPA)

- Foster a wellbeing economy by shifting economic priorities from a volume and profit driven model to one focused on people and the planet.
- Align with the delivery of the Scottish Government's Circular Economy Route Map and comply with any new legislation introduced by the proposed Circular Economy Bill.
- Support efforts to reduce greenhouse gas emissions in line with Scottish Government targets

Furthermore, the CES contains aims and corresponding actions for Council services in the following eight areas:

1. **Procurement – Support the circular economy through Council procurement**
2. **Built Environment – Encourage the reuse of existing buildings and land**
3. **Construction – Minimise waste and reuse materials**
4. **Council Assets – Maximise the use value of material assets**
5. **ICT – Use technology to drive new ways of creating value in a circular economy**
6. **Waste – Provide services to support reuse and recycling**
7. **Collaboration with community planning partnership**
8. **Collaboration with other Scottish Councils and public bodies**

The Council's waste team are actively delivering against the targets within Scottish Government's Circular Economy and Waste Route Map to 2030 and will use this as a basis to create a Local Waste Strategy (see **Action 5.1**). This was a core action from the Evidence and Options Report which underscored the need to develop and implement a waste strategy and estimates that its implementation could deliver a significant reduction in waste.

Construction Standards

Adhering to best practices for construction waste and procurement will be key to sustainably managing Council assets. Scotland's Zero Waste plan currently mandates developers to submit a Site Waste Management Plan. These requirements can be further strengthened by setting local PAS 2080 standards, circular economy statements and pre-demolition audits to set developer responsibilities to properly manage environmental impacts and embodied carbon throughout a building's life cycle.[235] Enacting these standards can support a foundational transformation within the construction industry to plan for the entire life cycle of buildings, from material sourcing, transportation and assembly to usage, demolition and sustainable disposal (see **Theme 2: Buildings and Heat Decarbonisation**).

Local Context

Local Waste Emissions

East Dunbartonshire's household waste accounts for 2.3% of the total waste generated in Scotland, two-thirds of which are comprised of textile and food waste. **Table 13** below shows the area-wide waste generation and management results, where East Dunbartonshire has been able to reduce contributions to landfills through recycling and waste diversion strategies (see **Action 5.3**).

Table 13 – East Dunbartonshire Household waste generated and managed in 2023 Data [236]

Generated (tonnes)	Recycled (tonnes)	Recycled (%)	Other diversion from landfill (tonnes)	Other diversion from landfill %	Landfilled (tonnes)	Landfilled (%)	Carbon Impact (tCO_2e)
52,230	24,001	46.0	26,987	51.7	1,242	2.4	117,103

Various corporate and area-wide emission reduction actions related to consumption and waste were set out in the CAP Evidence and Options Report. For example, in 2019 approximately 6% of total emissions across East Dunbartonshire were generated from treatment of waste and wastewater generated within the Council area and disposed of elsewhere, such as the Dunbar waste treatment facility in East Lothian.

[235] Institution of Civil Engineers (2023) PAS 2080: Carbon management in buildings and infrastructure guidance | Institution of Civil Engineers (ICE)
[236] Scottish Government & SEPA (2024) Household waste generated and managed 2023

Local Waste Management Approaches

The Council is responsible for the management of most municipal waste within East Dunbartonshire in addition to our own corporate waste. Key local focus areas include prioritising alternatives to single use plastics, designing out waste from products and improving procedures for household waste collection. The Scottish Government has introduced a ban on many single-use plastics since the CAP's initial public consultation, providing leverage for local Council action. Additional potential Council mandates include mandating donations of unsold durable goods to prevent material and energy waste (see **Action 5.1**). Composting is also a key focus area given its significance in diverting food and garden waste from landfills. The Council's net zero pathways therefore entail increasing composting to help to reduce organic waste emissions (see **Action 5.2**).

Taking a Collaborative Approach

At a local economy scale, coordination across supply chains presents a key opportunity to reduce waste outputs. For example, the by-products of one business such as recycled plastics can be used as an input for another business such as a shoe manufacturer, creating a closed loop. This circular supply chain forms a kind of industrial symbiosis where businesses can support sustainable mutual success rather than isolated linear material extraction. Relationships like this can support product standardisation and modularity, where product parts can be more easily disassembled, repurposed and recycled. This eco-conscious supply chain is critical as 80% of a products environmental impact is determined in product design.[237] Creating these partnerships may require third-party support to establish functional relationships. External action such as the implementation of circularity credential requirements, regional regulatory frameworks and the expansion of circular public sector procurement demand can significantly bolster local circular economy opportunities.[238]

The Council's Roads Network Operations Team liaise with colleagues from local authorities across Scotland to explore developments that may be adopted to increase use of recycled material in roadbuilding and maintenance where possible including the Livelabs2 Project. Roads Network Operations Team can provide figures on recycled materials in roads operations as required which will help to contribute to section 3 'Construction – Minimise Waste and Reuse Materials' of the Circular Economy Strategy work (see **Action 5.4**).

Community Engagement

East Dunbartonshire Council's 2021 Climate Conversation Consultation explored themes around 'green economy', 'sustainable consumption and production' and 'procurement' to gain insights on waste management and related Council services. Survey results found that 80% of the community and 67% of both employees and businesses were very concerned about increasing levels of waste and increased use of limited resources, underscoring the importance of promoting circularity in the CAP.

The survey also found near unanimous support to reduce single-use plastic consumption from community members. Additional research from the Scottish Government's 2019 Big Climate Conversation found 82% support for additional charges on single-use plastic products.[239] Single-use packaging in shops and workplace items such as hygiene products and catering goods were identified as a key challenge. Over half of businesses reported using single-use plastics, 80% of which struggle to eliminate their use. However, community input differed on the need for improved recycling facilities. The Your Budget Priorities survey found a high number of responses emphasizing the need for better recycling infrastructure whereas 75% of respondents to the Climate Conversation Consultation found waste and recycling facilities to be sufficient.

More than a third of community members and businesses consider the transport distance or 'product miles' as an essential factor of the goods they purchase. Despite this increased awareness, the industrial sector is yet to reflect this shift as transport and delivery emissions are still substantial and a key consideration for responsible procurement.

There is demonstrable public interest for waste reduction, resource reuse and recycling to support a circular economy. **Figure 39** shows that residents view government, large businesses and local authorities as the responsible entities to create sustainable economic practices. Moreover, almost half of participants identified small businesses and individuals as important actors to build a more sustainable

[237] Weavabel (2022) https://www.weavabel.com/blog/the-role-of-circular-design-in-reducing-environmental-impact
[238] Circular Procurement for Cities (2025) https://emf.gitbook.io/circular-procurement-for-cities
[239] Scottish Government (2020) https://www.gov.scot/publications/report-findings-big-climate-conversation/documents/

economy, emphasising opportunities for bottom-up behaviour change strategies that can be facilitated by the Council's Circular Economy Strategy.

Figure 39: General survey respondents' views on responsibility for making the economy more sustainable (1: low responsibility – 6: high responsibility)

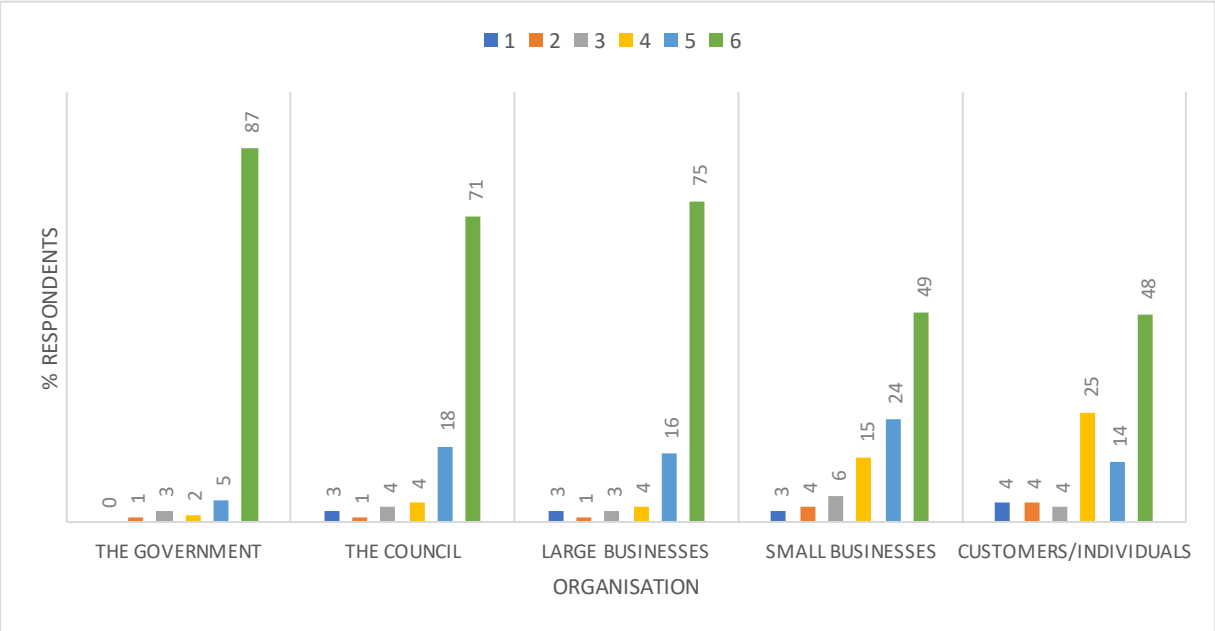


Table 14 – Consumption and Waste Actions

#	Action	Owner	Potential Sources of Funding and Funding Status (RAG)[240]	Target Date
5.1	**Corporate: Develop and implement a corporate Waste Route Map and Local Waste Strategy**. The Waste Strategy, with support from facilities management and education, will deliver against the SCCF's and Circular Economy Strategy's focus on reducing waste in schools, much of which is already underway through the Waste Team's engagement with schools. Among the CES actions delivered against are: - Utilise additionally captured data on purchased goods to identify key areas for improvement (**CES Action 1B**). - Work to reduce food waste in schools, including working towards achieving the Soil Association UK's Food for Life award for local school meals (**CES Action 6D**). - Encourage active participation in the Circular Economy from school age through daily school activities and ethos, and working to improve recycling provision and waste segregation in schools (**CES Action 16E**). **Source:** Evidence & Options Report (Scope 3), SCCF – Single Plastic Use section, under action (11.3) & Circular Economy Strategy	Executive Officer - Roads & Neighbourhood Services	Green	2025 - 2026
5.2	**Area-wide: Promote composting to reduce organic waste emissions as far as the Council's sphere of influence and control allows** The Evidence & Options Report projects a 23% reduction of current composting emissions based upon the CCC's Sixth Carbon Budget Report through improving composting processes. **Source:** Evidence & Options Report (Scope 3)	Executive Officer - Roads & Neighbourhood Services	Green	2025 - 2030
5.3	**Area-wide: Continue to promote the reduction of waste going to landfill through waste reduction, recycling incentives and targeted material bans.** **Source:** Evidence & Options Report (Scope 3)	Executive Officer - Roads & Neighbourhood Services	Green	2025 - 2045
5.4	**Corporate: Increase use of recycled material in roadbuilding and maintenance where possible.** This action delivers against SCCF and the Circular Economy Strategy actions: - incorporate use of recycled materials into path creation more systematically and pursue other elements of resource efficiency and	Executive Officer - Roads & Neighbourhood Services	Green	2025

[240] Funding Status RAG Key: Green: High confidence the action is achievable with current resources; Amber: Funding gap remains, partially achievable with existing resources or potential funding identified; Red: High confidence action is not achievable with current resources.

	sustainable sourcing (SCCF action 9.2) - undertake a baselining exercise for road resurfacing works to establish recycled content and carbon impacts over 2022/23. Alongside the online guidance for potential Council suppliers (CES Action 1C), highlight the Council's commitment to working towards circular construction (CES action 3E). **Source:** SCCF – Sustainable Transport & Travel section and Circular Economy Strategy			

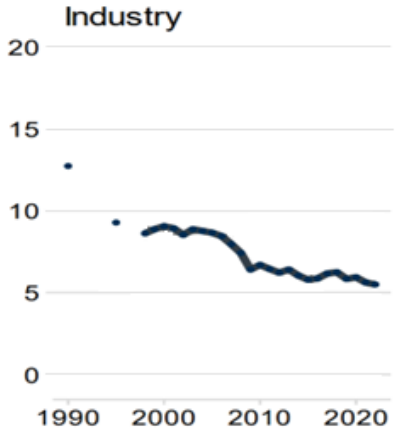
Theme 6: Business and the Economy

Introduction

Contextualising the Impact of Business and the Economy

In 2021, business and industrial activities contributed to at least 20% of the UK's emissions.[241] The business and industrial sectors both experienced drastic drops in emissions during the 1990s due to improvements in metals manufacturing and industrial processes, as shown in **Figure40**.[242] Since these initial reductions, gradual improvements have been led by decarbonisation of the national grid, while internal efforts to improve energy efficiency and circular business operations may have also made smaller contributions.[243]

Figure 40: Industry Sector Greenhouse Gas Emissions in Scotland, 1990 to 2022 [244]



This theme focuses on East Dunbartonshire's businesses and the role that the Council plays in supporting them to reach net zero. Key actions include providing targeted support to businesses to enable them to reduce their emissions, adapt to the on-going effects of climate change and contribute to sustainable development. There are many opportunities from previous themes and business that are strongly applicable to business and the economy including measures to reduce emissions from buildings, sustainable transport and circularity.

Due to the nature of transboundary supply chains, it can be difficult to identify direct commercial emissions sources; nevertheless, it is clear that business and the economy play a key role in the transition to net zero in both East Dunbartonshire and Scotland as a whole. There are significant economic returns, job creation potential and social opportunities to be gained from the transition to net zero (see **Financing Net Zero** in **Section 3**), particularly given continued global renewable energy investment records year-on-year (see **Section 1**).

Achieving a just transition also demonstrates socio-economic and environmental benefits. However, there are numerous challenges for business and industrial sectors in the pursuit of net zero.

[241] UK Department for Business, Energy & Industrial Strategy (2021) 2021 UK Greenhouse Gas Emissions, Final Figures
[242] Scottish Government (2023) Section B. Results – Net Sources of Scottish Greenhouse Gas Emissions - Scottish Greenhouse Gas Statistics 2021 - gov.scot (www.gov.scot)
[243] Statista (2024) Scotland: greenhouse gas emissions by sector | Statista
[244] Scottish Government (2021) Scottish Greenhouse Gas Statistics 2021

Policy Context

There is a growing emphasis on industrial sustainability in Scotland. The Scottish National Strategy for Economic Transformation sets out a vision of a wellbeing economy that includes economic, social, and environmental dimensions.[245]

A significant number of policies in this area will govern the required actions needed to be undertaken to achieve net zero. There are numerous policies that would help to drive emissions reductions in buildings (see **Theme 2: Buildings and Heat decarbonisation**), Transport (see **Theme 1: Transport**), and Waste management (see **Theme 5: Consumption and Waste**). The key policies, plans and strategies have been outlined in the Business and the Economy section of the CAP Policy, Strategy & Plan Directory. Collectively, the CCC's and East Dunbartonshire Council's pathway to achieving net zero provides a framework to achieve economic transformation, improve job creation, enhance health and wellbeing, and becoming more circular and sustainable.

The Climate Change Committee (CCC) established an independent expert advisory group to explore barriers and opportunities for businesses and industry to accelerate progress to net zero. The key messages are set out in **Figure 41** below.

Figure 41: Key Messages from CCC's Independent Business Advisory Group [246]

- Net Zero presents commercial and economic opportunities for the UK, and decisive action on net zero is central to UK business competitiveness.
- The private sector can support efforts for net zero beyond reducing operational emissions by enabling change through supply chains and in broader society.
- Key barriers currently hold back private sector action, including inconsistency across voluntary business initiatives, delays to the provision of key infrastructure, the perceived higher cost of certain net zero interventions and limited finance and capacity – particularly among smaller businesses.
- Realising the full potential of business to support efforts towards Net Zero depends on government action to create clear and consistent policies, incentives and regulations.
- Strong business action is framed around "Five I's":
  - **Integrity** and transparency of impact and actions
  - **Investment** into low carbon solutions
  - **Implementing net zero** through supply chains, procurement and infrastructure
  - **Innovative** industries and workers
  - **Influence** on business and society

The CCC's advisory group also note that a successful transition to a net zero economy requires targeted investment and a sufficient supply of skilled green economy labour workers. For example, the roll-out of new technologies such as heat pumps will require a workforce prepared to install and maintain such technologies at the scale and pace required to meet emissions targets. Between 135,000 and 725,000 new green jobs could be created by 2030 in sectors such as buildings retrofit, renewable energy generation and electric vehicle manufacturing.[247] The Scottish Government's Climate Emergency Skills Action Plan & Implementation Plan[248] and Future Skills Action Plan[249] outline national strategies to realise these jobs and respective skills training.

These new capacity building efforts present the opportunity to transform our economy and relationship with the natural environment. Estimates suggest that UK companies delivering goods and services aimed at meeting carbon targets could be worth more than £1 trillion by 2030.[250] Local businesses thus

[245] Scottish Government (2022) Scotland's National Strategy for Economic Transformation
[246] Climate Change Committee (2023) The Power of Partnership: Unlocking business action on Net Zero (Expert Advisory Group) - Climate Change Committee (theccc.org.uk)
[247] Climate Change Committee (2023) A Net Zero workforce - Climate Change Committee (theccc.org.uk)
[248] Scottish Government (2020) climate-emergency-skills-action-plan-2020-2025.pdf
[249] Scottish Government (2019) Scotland's Future Skills Action Plan
[250] Climate Change Committee (2023) The Power of Partnership: Unlocking business action on Net Zero (Expert Advisory Group) - Climate Change Committee (theccc.org.uk)

need to consider climate action as an opportunity to invest in wider environmental and societal benefits that can inform, encourage, and enable the public to act on net zero.[251]

The CCC have also compiled a series of business and industry recommendations to ensure that the Scottish Government's net zero targets are achieved on time. These include working with businesses to extend product use through initiatives such as reuse and repair schemes,[252] and providing long term visibility and certainty to support efficient and effective work to a just transition.[253] Given the Council's remit to promote economic development, provide business support, and maximise public value in contracts, it has a pivotal role driving this shift locally and facilitate emissions reductions for the area's businesses who collectively employ tens of thousands of people.[254]

Additionally, the Council has a responsibility to create a more circular economy in which resources are used and repurposed for as long as possible to minimise waste and emissions. In line with this aim, East Dunbartonshire's Circular Economy Strategy (CES) sets out ambitions for the Council's procurement processes to promote sustainability through green partnerships, contracts, and construction. This will consider the targets set out in the recent version of the Circular Economy (Scotland) Act 2024, which is set to be refreshed every 5 years as described in the Scottish Government Climate Change Duties Report (2025) (see **Action 6.2**).

The Council's forthcoming Economic Development Strategy (EDS) will also align with the CES to craft an economic approach focused on advancing wellbeing and living within ecological limits. The EDS aligns the work of Council functions and contributes to a partnership-led approach to support delivery of a sustainable, inclusive, and resilient economy in East Dunbartonshire (see **Action 6.1**).

Local Context

The Glasgow City Region economy generated £48 billion of gross value added in 2021, making it the 4th largest city region in the UK outside of London.[255] As a local authority within the city region, East Dunbartonshire is home to a thriving business community with over 3,000 registered businesses. In 2022, the commercial and industrial sectors accounted for around 13% of East Dunbartonshire emissions in 2022.[256] While there are no large industrial energy installations in East Dunbartonshire, the Evidence and Options report estimates that approximately 5% of total emissions in East Dunbartonshire stem from the industrial sector, likely comprised of fuel use for heating and production processes (see **Table 15**). Similarly to commercial buildings, it is assumed that light industrial facilities can achieve an approximate 25% reduction in energy demand from energy efficiency measures and that nearly all facilities can switch to heat pumps, with the remaining using direct electric.

Table 15 – GHG Emissions in East Dunbartonshire in 2020

Sector	Sector Total ($ktCO_2e$)
Commercial	**30.12; approximately 7% of total emissions**
Industrial Processes and Product Use (IPPU)	**20.62; approximately 5% of total emissions**
F-gases	**19.85; approximately 5% of total emissions**

The Council's Business Support team provides support to local businesses through Business Gateway to encourage and support new start business, business growth, and sustainability job creation and inward investment.

This includes providing a Digital Development Grant, Green Business Support grant and offering a green audit service. The Council has also delivered a social enterprise support programme to

[251] Climate Change Committee (2023) The Power of Partnership: Unlocking business action on Net Zero (Expert Advisory Group) - Climate Change Committee (theccc.org.uk)
[252] Climate Change Committee (2022) Progress in reducing emissions in Scotland 2022 Report to Parliament (theccc.org.uk)
[253] Climate Change Committee (2020) The-role-of-business-in-delivering-the-UKs-Net-Zero-ambition.pdf (theccc.org.uk)
[254] East Dunbartonshire Council East Dunbartonshire Area Profile | East Dunbartonshire Council
[255] Glasgow City Region Annual Performance Report (2023) Glasgow City Region - Annual Performance Report 2022/23
[256] Data Gov UK (2024) 2005 to 2022 local authority greenhouse gas emissions dataset

supporting existing and help new start Social Enterprise businesses and is developing the site enabling and regeneration grant, which is expected to go live early 2024/2025. This indicates the groundwork that has been laid for continued support to businesses that is outlined in **Actions 6.3** and **6.4**. Continued implementation of these actions will include outlining the benefits of low carbon choices and providing trusted information to align with the CCC's Seventh Carbon Budget strategy for engagement with climate issues. This will range from seminars provide clear information to businesses and one-to-one workshops to provide a bespoke two-way engagement opportunity to increase understanding of existing opportunities and local buy-in from businesses.

Local Businesses

In East Dunbartonshire, 90.7% of enterprises are classified as micro, with up to 9 employees. 8.4% fall under the small-scale category, with 10 to 249 employees, while less than 1% are considered medium to large-scale enterprises. The predominant industry based on the number of employees in the area is wholesale and retail trade; repair of motor vehicles, followed by education, human health and social work activities, and accommodation and food service activities.[257] Understanding the predominant industries in East Dunbartonshire and the scale of the businesses within them is crucial to inform and shape net zero approaches in the area.

Business Improvement Districts

There are two Business Improvement Districts (BIDs) within East Dunbartonshire, one in Kirkintilloch and one in Milngavie. Business Improvement Districts (BIDs) are part of a town, tourism and visitor area, commercial district, in which businesses work together to invest in local improvements.[258] They provide a platform for local businesses to discuss issues and play a key role in communicating challenges and progress towards net-zero. Going forward, the BIDs in East Dunbartonshire will be used to organise a continuing engagement approach. This approach will reflect the significant scale of Glasgow's commercial sectors and prepare industry leaders with the skillset and tools necessary for climate action.

Targeted information and regular bulletins will be provided to business owners by the Council to highlight key developments and opportunities for sustainable change (see **Actions 6.3** and **6.4**). The Council will need to work in tandem with businesses, organisations, communities and individuals to deliver a step change in terms of scale and pace of action.

Achieving net zero within individual organisations will require carbon accounting, whereby organisations set their own emission reduction targets and set out plans to reduce their corporate emissions. The Council will play a role in this process by supporting businesses in developing their emissions reductions framework and signposting available funding and support.

Additionally, the Council can facilitate circular partnerships between businesses where one company's waste can be used as another's resources as explored in **Theme 5: Consumption and Waste.**

Business Interconnections: Circularity and Decarbonisation

Driving down industrial and business emission requires a cultural change that disrupts existing business models. Achieving this repositioning will require coordination across the other themes explored in the CAP such as:

- Transport – Theme 1: Sustainable transport has a major role in facilitation business emissions reductions given the significance of goods transport in manufacturing and employee business miles. Improvements to active travel and sustainable transport, in line with the Sustainable Transport Hierarchy, also have a major role in facilitating reductions in business carbon footprints given the significance of transport in manufacturing, employee business miles, and organisations' individual carbon footprint.
- Decarbonising Energy - Theme 2: The Local Heat and Energy Efficiency Strategy (LHEES) will set a strategic approach to heat decarbonisation by identifying priority areas for building fabric improvements to improve energy efficiency. This work will support continuing efforts to

[257] Office for National Statistics (2024) Labour Market Profile - Nomis - Official Census and Labour Market Statistics
[258] Scottish Government https://www.gov.scot/policies/regeneration/business-improvement-districts-bids/

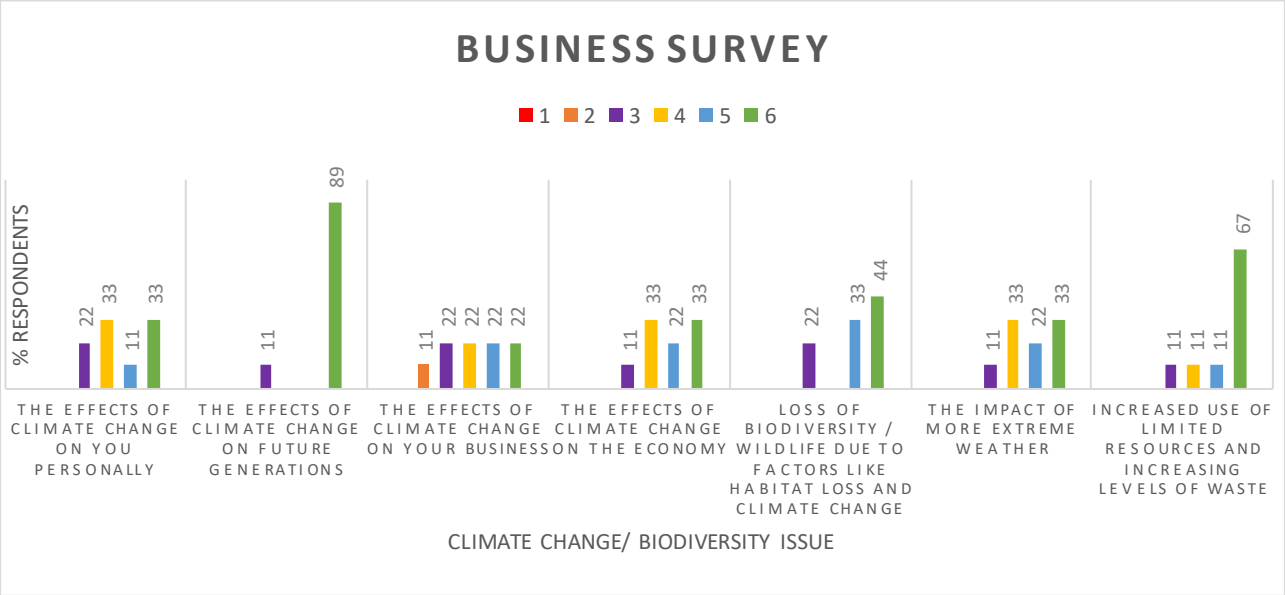
decarbonise the electricity grid, which is essential to ensure that businesses and industry can deliver genuine emissions reductions.

- Circularity - Theme 5: Zero Waste Scotland found that making Scotland's construction industry more circular could reduce national material use by 11.2% and carbon output by nearly the same value. [259] Ensuring the use of reuse of sustainable materials and waste reduction protocols alongside retrofitting and a fabric first approach will be critical to ensure businesses contribute to emissions reduction. Moreover, circularity can foster collaboration between different businesses in order to close the loop on resources, thus strengthening partnerships. [260]
- Supply Chain Redesign –The supply chain study detailed in **Theme 7: Supply Chains, Investment and Digital Infrastructure** will identify ways that East Dunbartonshire can use its purchasing power to drive decarbonisation in the wider supply chain. Additionally, Council will work to make connections between businesses to promote supply chain loops to reduce materials waste and support regenerative industry.

Community Engagement

During the Council's Climate Conversation consultation (see **Public Perspectives** in **Section 2**), the lack of circularity was a key concern highlighted by businesses. It was also noted that the perception of responsibility for improving circularity lies on governments and large businesses as opposed to individuals and small businesses who generally have less internal capacity.

Figure 42: Levels of Environmental Concern - Businesses (1: not concerned – 6: very concerned)



[259] Zero Waste Scotland (2022) Circularity Gap Report | Zero Waste Scotland
[260] East Dunbartonshire Council (https://www.eastdunbarton.gov.uk/residents/planning-and-building-standards/planning-policy/economic-development/circular-economy

Table 16 – Business and the Economy Actions

#	Action	Owner	Potential Sources of Funding and Funding Status (RAG)[261]	Target Date
6.1	**<u>Corporate</u>: Support delivery of sustainable development actions in the forthcoming Economic Development Strategy (EDS) and through East Dunbartonshire Economic Development Partnership (EDEP) activities.** **Source:** SCCF - Sustainable Economic Growth section	Executive Officer - Land Planning & Development	Green	Ongoing
6.2	**<u>Corporate</u>: Develop a new Circular Economy Strategy delivery programme, amended Action Plan, and Monitoring and Review Framework in line with the emerging Economic Development Strategy.** **Source:** SCCF – Sustainable Economic Growth section	Executive Officer - Land Planning & Development	Green	2025
6.3	**<u>Area-wide</u>: Develop and send a regular community bulletin to highlight key sustainability developments and opportunities for local businesses.** This incorporates SCCF action (2.3) Communicate regularly with the local business community on sustainability. **Source:** SCCF – Sustainable Economic Growth section	Executive Officer - Land Planning & Development	Green	Ongoing
6.4	**<u>Area-wide</u>: Run sustainability seminars and workshops through Business Gateway and explore other opportunities to encourage businesses to take up support for renewable energy and sustainability.** Under **SCCF Action 2.3** Communicate regularly with the local business community on sustainability **Source:** SCCF – Sustainable Economic Growth section	Executive Officer - Land Planning & Development	Green	Ongoing

[261] Funding Status RAG Key: Green: High confidence the action is achievable with current resources; Amber: Funding gap remains, partially achievable with existing resources or potential funding identified; Red: High confidence action is not achievable with current resources.

Theme 7: Supply Chains, Investment and Digital Infrastructure

This theme covers supply chains, investment impacts and digital infrastructure which have been divided into separate subsections for clarity.

While emissions from procurement and investments have not traditionally been included with Councils' carbon footprints, the Evidence and Options report and statutory guidance both note the need to address their emission intensity. There are therefore numerous actions that set out pathways to achieve emissions reduction in these areas to achieve Council's net zero targets, coupled with a series of opportunities that is presented by digitalisation in facilitating emissions reductions.

Supply Chains

The CAP Evidence and Options Report estimates that 80% of corporate scope 3 emissions originate from the Council's supply chains.[262] This estimate was made by multiplying the Council's spend data against average emissions factors for respective sectors. The Evidence and Options report's modelling assumes that the Council's supply chain can be decarbonised without significant internal costs due to various policy mandates and increasing economy of scale of low emissions technology in decades to come, however, the independent consultants recognised that there is significant uncertainty about this assumption. Additionally, there are shortcoming to this approach of estimating emissions as reductions in Council spend would be incentivised more than shifting to more sustainable goods and services. Strengthening supply chain emissions information and estimates would require specific supplier data.

As such, the Climate Action Plan's Evidence and Options Report recommends funding a supply chain assessment to provide more accurate supplier information, estimates of emission intensity of Council good and services, and details required to identify specific decarbonisation opportunities in the Council's supply chain (see **Action 7.1**). This study would allow the Council to identify how East Dunbartonshire's procurement process can achieve decarbonisation and greater circularity in resource use.

Scottish Government has established a focus group to develop a standardised methodology for assessing and reporting on procured goods and services. Once this group has reported and any amendments to the Climate Change (Duties of Public Bodies: Reporting Requirements) (Scotland) Order and associated guidance have been made to guide reporting requirements, and adequate resource has been put in place, the actions will be carried out in accordance with the recommendations set out in the Evidence and Options report (see **Action 7.1**).

The results of this study also align with the estimated significance of the supply chain in the draft statutory guidance from the Scottish Government[263] and an anticipated expansions in annual emissions reporting requirements.[264] These will build on the current sustainable procurement duty in the Procurement Reform (Scotland) Act 2014 and national recommendations for reducing supply chain emissions while delivering other co-benefits.[265]

Findings may also be supported by the Scottish Climate Intelligence Service and Sustainable Scotland Network (see Monitoring Arrangements in Net Zero Framework).[266]

[262] East Dunbartonshire Council (2023) Climate Action Plan Evidence Options and Next Steps.pdf (moderngov.co.uk)
[263] Scottish Government (2025) Supporting documents - Climate change duties - draft statutory guidance for public bodies: consultation - gov.scot
[264] Scottish Government (2024) Scottish Government Improvement Plan - Response to Environmental Standards Scotland Investigation - Climate Change Delivery Improvement Report
[265] Scottish Government (2024) https://www.gov.scot/publications/environment-strategy-scotland-delivering-environment-strategy-outcome-scotlands-economy-evidence-base-policy-levers/documents/
[266] Improvement Service (2023) Climate Intelligence Service | Improvement Service

East Dunbartonshire Procurement

A core consideration for the Council's supply chain is the Annual Procurement Strategy (APS). Currently, the strategy commits to embedding sustainable and socially responsible purchasing to reflect the Scottish Model of Procurement. However, the Evidence and Options Report recommends integrating a sustainable procurement strategy that would further embed climate considerations across Council spend. This would entail targets for circular economy suppliers and contracts, a centralised bidding process and an updated scoring system that more heavily weights sustainability (see **Action 7.2**). These actions can additionally be reviewed through internal audits to meet desired outcomes and align with other Council policy such as the Circular Economy Strategy (see **CES Action 1**).[267]

The Council's Annual Procurement Strategy will be updated to reflect the additional forthcoming requirements above and beyond those in the Sustainable Procurement Duty. Once reporting requirements are finalised and associated resources are provided, an Action Plan will be developed and incorporated into the Annual Procurement Strategy. The Action Plan will:

- Develop supplier engagement prioritisation plan including mapping of priority suppliers to reduce emissions from key suppliers.
- Plan and agree data collection mechanisms for all purchased goods and services and review Council processes.
- Develop and implement sustainable procurement within APS.
- Work with suppliers to assist them in decarbonising.
- Use the Sustainable Procurement Tools as a basis for indicators and actions on procurement-related climate change considerations.
- Update the Circular Economy Strategy and procurement strategy with these additional steps from the action plan.

This will build on and supersede the SCCF's commitments to additional enabling actions that will embed sustainability within the procurement function including:

- investigating the feasibility of further embedding whole-life costing into the procurement process, through engagement with other Council's on their experience
- raising staff awareness through sustainable procurement and contract management
- reviewing the APS to align with the latest Public Procurement Strategy for Scotland

Key evaluation considerations could include lifetime comparison costs to ensure products last longer, limiting small value transactions for efficiency and the use of product-as-service systems where items are leased for Council use. A strengthened sustainability scoring system will also require internal engagement and organisational learning to support effective use (see **Action 7.3**). Once developed, the strategy will require a set of key performance indicators to monitor progress across Council directorates. This will be supported by contract management modules for relevant officers across the Council to enable sustainability commitments (see **Action 7.3**).

The Annual Procurement Strategy also includes community benefits clauses in all appropriate contracts. These clauses can be expanded to include community benefits within net zero project procurement such energy efficiency advice for housing tenants, local sourcing of materials to benefit the Council's economy, and upskilling and educational programmes. Identifying and mobilising these opportunities can be supported through the re-establishment of the Community Benefits Forum to advise the Community Benefits Strategy (see **Action 7.5**). It is encouraged that the Council continues to embed community benefits within their ongoing sustainable procurement process through the forum and strategy development. The Circular Economy Strategy will assist sustainable procurement by emphasising the importance of circularity in tender evaluation and contracts, and by working with existing suppliers to encourage them to become more sustainable and considering the longevity of the purchased items (see **Theme 6: Business and the Economy**).

In recent years, the Council has made progress improving sustainability in procurement, including repurposing surplus office furniture, a windows reuse project, the removal of plastic cups from Council buildings and office-based staff using a hot-desk system with minimal paper use.

[267] Circular Economy Strategy (2023) East Dunbartonshire Council https://www.eastdunbarton.gov.uk/services/a-z-of-services/sustainability-and-climate-change/circular-economy-strategy?page=10

Investment

There are strong indications that the global market is changing at pace, supported in some instances by market-based instruments including subsidies and carbon pricing. This is driving changes to the economics of decarbonisation by reducing prices through a greater economy of scale of key technology required for net zero such as ultra-low emission vehicles (ULEVs) and zero direct emission heating systems.

Renewable Investment Trends

Global investments in renewable energy continue to outpace growth expectations. By 2026, global renewable energy capacity is forecast to rise more than 60% from 2020 levels - equivalent to the current total global power capacity of fossil fuels and nuclear combined.[268] Over 700 million electric vehicles are projected to be on the road globally by 2040[269] and European heat pump installations have increased from 2 million in 2011 to over 5 million in 2021.[270] These trends will buoy uptake in the UK, which is currently considered a late comer due to an insufficient economy of scale, in particular for heat pumps.[271] See **Section 3** for further information.

Despite these trends, there are still significant artificial financial barriers to decarbonisation. The International Monetary Fund (IMF) estimates that global fossil fuel subsidies were 7.1% of worldwide GDP in 2022, representing a $2 trillion increase since 2020 as a result of government support from surging energy prices.[272] The UK is a major contributor to these figures, providing an estimated £13.6 billion between the 2015 Paris Agreement and 2021. [273,274]

Continued fossil fuel investments are mathematically incompatible with Scottish net zero targets[275] as an estimated 60% of known oil and gas reserves and 90% of coal reserves must not be burned to limit global warming to 1.5°C.[276] New fossil fuel investment therefore carries major financial risks.[277,278] Additionally, the UK's reliance on fossil fuel imports leaves the country vulnerable to economic shock as demonstrated by gas price spikes in 2022, making renewables funding an investment in both climate resilience and national energy security.[279]

Despite the significant increase in the pace of global renewable investment, it is still insufficient to meet legally binding targets. This gap emphasises the imperative for proactive renewables investment to minimise risks associated with fossil fuels and maximise on the opportunities presented by the energy transition.

Council Investments and Net Zero

Alignment of direct and indirect Council investment with low emissions technology and infrastructure is one of the most effective ways to support decarbonisation. Environmental, social and governance (ESG) frameworks are prominent approaches used to ensure financial portfolios support sustainability goals through environmentally and ethically conscious investment. Aligning with ESG criteria can redirect significant funding from fossil fuels to renewables and support the demand for clean power.

Divestment refers to the process of selling asset for financial, ethical, or political objectives. Throughout this section it refers to reducing fossil fuel investments.

Notably, fossil fuel companies have largely ignored ESG criteria in favour of continued fossil fuel development. As a result, local authorities and universities have increasingly called for fossil fuel divestment, or the liquidation of fossil fuel assets in endowments and financial portfolios. The value of institutional divestment from fossil fuels to date is an estimated $40.76 trillion, and includes numerous public sector

[268] International Energy Agency (2021) Renewable electricity growth is accelerating faster than ever worldwide, supporting the emergence of the new global energy economy - News - IEA
[269] Bloomberg (2023) BloombergNEF (bnef.com)
[270] Nesta (2022) From powerhouses to latecomers: how different European countries are adopting heat pumps | Nesta
[271] Nesta (2022) From powerhouses to latecomers: how different European countries are adopting heat pumps | Nesta
[272] IMF (2023) IMF Fossil Fuel Subsidies Data: 2023 Update
[273] Bloomberg (2024) UK Subsidies for Fossil-Fuel Power Plants Swell to Record - Bloomberg
[274] Sky News (2021) Climate change: UK government oil and gas subsidies hit £13.6bn since Paris Agreement, campaigners say | Climate News | Sky News
[275] Scottish Environment Link (2014) Scotland-and-the-carbon-bubble-final-for-publication.pdf (scotlink.org)
[276] Welsby, D., *et al.* (2021) https://doi.org/10.1038/s41586-021-03821-8
[277] Scottish Environment Link (2014) Scotland-and-the-carbon-bubble-final-for-publication.pdf (scotlink.org)
[278] The London School of Economics and Political Science Gratham Institute (2022) What are stranded assets? - Grantham Research Institute on climate change and the environment (lse.ac.uk)
[279] UK Climate Change Committee (2025) The Seventh Carbon Budget - Climate Change Committee

pension funds[280,281] and international finance institutions.[282, 283] These trends reflect a growing understanding that divestment does not affect long-term investment portfolio returns and actively maintains fiduciary duty.[284]

East Dunbartonshire is a member of Strathclyde Pension Fund (SPF), which is one of Europe's largest pension funds and a primary provider for Scotland through the Local Government Pension Schemes (LGPS). While the SPF has a sustainable investment policy,[285] it holds an estimated £433.8million in fossil fuel assets and has some of the largest absolute investments in fossil fuels out of all UK pension funds.[286]

In response to growing calls for divestment amongst its members,[287,288,289] SPF produced a Climate Action Plan that seeks to align with the Paris Agreement and achieve an 'ultimate goal' for the Fund to achieve net zero across its portfolios by 2050. However, SPF's proposals fall significantly short of the ambition sought by key local stakeholders with the new framework being described as *"weak and ineffectual,"*[290] as the plan only uses the term *'fossil fuels'* once without mentioning the term in relation to investments. Moreover, divestment is only discussed as a selective option *"recommended in specific circumstances as part of the toolbox for aligning the portfolio."* [291]

The House of Commons Environmental Audit Committee conversely recognised the "material threats" of failing to adequately account for climate change in pension investments and emphasises that: *"The Government should clarify that pension schemes and company directors have a fiduciary duty to protect long-term value and should be considering environmental risks in light of this."*[292] Further, the Scottish Government recognised that "*in all cases, public bodies should consider the climate impact of their investments*," and specifically names divestment as a responsible strategy to realign investments with climate goals.[293] Engaging with SPF and other partners to drive forward strategic divestment and promote local renewable opportunity could therefore have a significant impact (see **Actions 7.4** and **7.6)**.

Climate conscious investing not only avoids these legal complications but presents lucrative opportunities for pension funds to support community wealth building by creating a unique net zero selling point for local renewable initiatives in East Dunbartonshire and the Glasgow City Region. [294]

Examples of pension funds bucking this trend, include Councils in Manchester and London entering a partnership to co-own one of the largest windfarms in Europe[295] and a Council Pension Fund investing in the UK's first community-owned solar power development.[296] These developments and renewable energy generation on-site coupled with fuel efficiency measures come with benefits of resilience against supply issues and in some cases recuperation of initial investment costs (see **Action 7.8**).

To date, the Council has undertaken work to support sustainable investment through its direct investments such as the Standard Chartered Sustainable Deposit, which guarantees that investment is referenced against sustainable assets, both existing and future. The investments are referenced against the United Nations Sustainable Development Goals (SGDs).

As noted in **Section 3**, in order to achieve Council's net zero and adaptation targets, significant amounts of additional funding will be required. While Council has no direct levers that would allow it to raise all of the revenue required to bridge the funding gap, potential finance models and mechanisms to help to secure additional funding to deliver on the net zero and adaptation targets will be explored (see **Action 7.7**). This includes targeting relevant grants and subsidies, identifying specific private finance

[280] UK Divest (2024) Divestment commitments - UK Divest
[281] Global Fossil Fuel Divestment Database (2024) Homepage - Global Fossil Fuel Commitments Database (divestmentdatabase.org) see also Ireland set to be first country to end investment in fossil fuels - BBC News
[282] European Investment Bank (2024) EIB energy lending policy at a glance
[283] The Guardian (2014) Glasgow becomes first university in Europe to divest from fossil fuels | Environment | The Guardian
[284] Grantham Institute (2018) https://www.lse.ac.uk/granthaminstitute/news/the-mythical-peril-of-divesting-from-fossil-fuels/
[285] Strathclyde Pension Fund (2024) Climate Change - Strathclyde Pension Fund (spfo.org.uk)
[286] Divest Platform London (2024) Platform UK Divest (platformlondon.org)
[287] UK Divest (2024) Local council motions - UK Divest
[288] Glasgow City Council (2015) viewSelectedDocument.asp (glasgow.gov.uk)
[289] UK Divest (2024) Local council motions - UK Divest
[290] Friends of Earth (2022) SPF-Briefing-FoES-1-Mar-2022-1.pdf
[291] SPF (2023) SPF_Climate_Action_Plan_2023.pdf (spfo.org.uk)
[292] The House of Commons Environmental Audit Committee (2019) Greening Finance: embedding sustainability in financial decision making (parliament.uk)
[293] Scottish Government (2025) Supporting documents - Climate change duties - draft statutory guidance for public bodies: consultation - gov.scot
[294] Law Commissions (2017) No legal barriers to social investment, but pension schemes still not investing - Law Commission
[295] Responsible Investor (2016) Manchester and London pension funds buy into 350MW Scottish wind farm (responsible-investor.com)
[296] Blue and Gren Tomorrow (2013) Westmill solar co-op gets £12m backing from Lancashire council pension fund - Blue and Green Tomorrow

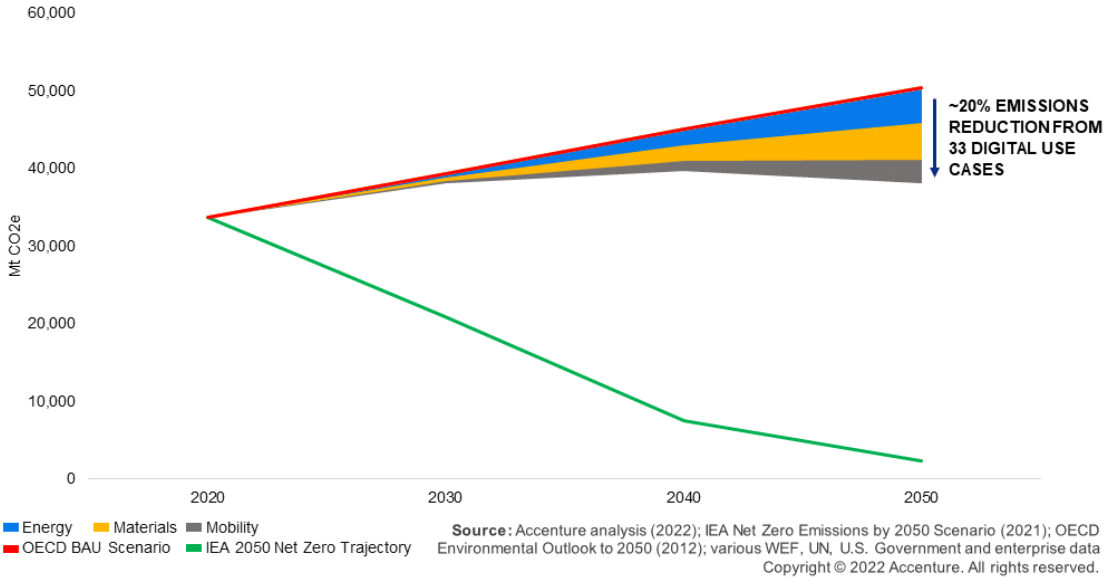
opportunities and exploring the other options such as those set out in the Council's Financing Net Zero report[297] (see **actions 7.7** and **7.8**).

Digital Infrastructure

The demand for digital infrastructure is on the rise, yet data centres and their associated infrastructure require significant resources and energy to operate. Data centres consume up to 50 times as much energy per floor space of a typical commercial office building[298] and now account for a 1–1.5% of global electricity use.[299] Data centres also create environmental burdens due to the vast water resources needed for cooling systems and embodied carbon in electronic waste.[300]

Despite this, there are a wide range of ways that digitalisation and information technology can drive forward decarbonisation.

Figure 43: Digital Solutions can accelerate net zero trajectories in high emission industries [301]



The rise of interconnected technologies such as the Internet of Things (IoT) offers a significant opportunity to enhance data collection and monitoring, enabling more efficient resource management, real time tracking of emissions, and smarter and faster decision-making. Thus, investing in smart infrastructure and technologies supports East Dunbartonshire's resilience and mitigation efforts. For instance, energy and resources could be efficiently managed through the integration of smart transport networks and smart energy networks / grids. Moreover, environmental monitoring can support the development of adaptive solutions through faster detection of risks and losses.

The Internet of Things (IoT) is a network of sensors, software, and network connectivity attached to physical devices, vehicles, appliances, and other objects that are embedded, allowing them to collect and share data.
Smart infrastructure is the use of digital technologies to improve efficiency and resilience of physical infrastructure.

Further details on some of the opportunities from digitalisation are provided in **Figure 44** below.

Figure 44: Digitalisation for Decarbonisation [302]

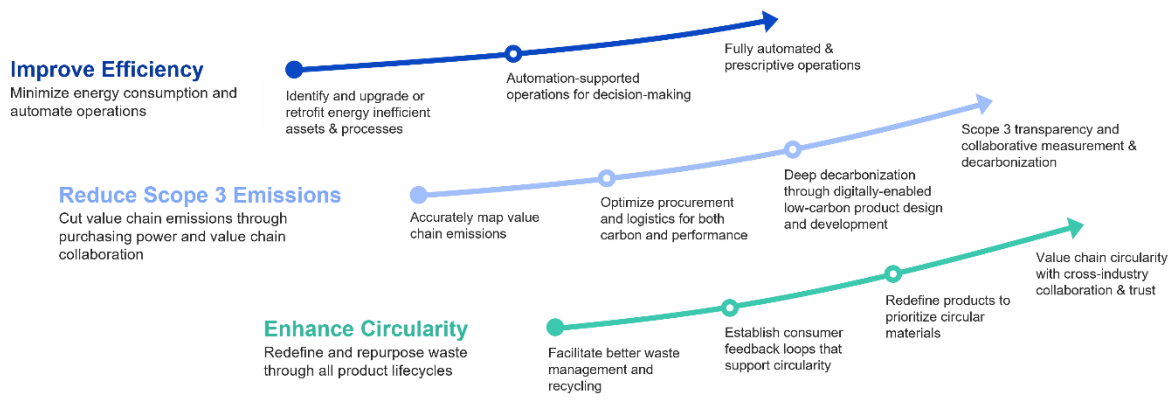
[297] East Dunbartonshire Council (2023) https://eastdunbarton.moderngov.co.uk/documents/s4611/Appendix%202%20Financing%20Net%20Zero%20Report.pdf
[298] US Government Department on Energy Efficiency and Renewable Energy Data Centers and Servers | Department of Energy
[299] IEA (2023) Data centres & networks - IEA
[300] Schneider Electric Assess the environmental impact of data centers | TechTarget
[301] World Economic Forum (2022) Digital technologies can cut global emissions by 20%. Here's how https://www.weforum.org/stories/2022/05/how-digital-solutions-can-reduce-global-emissions/
[302] World Economic Forum (2022) Digital technologies can cut global emissions by 20%. Here's how https://www.weforum.org/stories/2022/05/how-digital-solutions-can-reduce-global-emissions/

In the **Energy Sector**, digital application can reduce emissions by 8% by 2050 via enhancing efficiency in carbon-intensive processes and enhancing energy efficiency in buildings, as well as by deploying and managing renewable energy using artificial intelligence.

In **Materials**, digital application can reduce emissions by 7% by 2050 by relying on foundational technologies such as big data analytics and cloud/edge computing. Use cases leveraging blockchain could enhance process efficiency and advance circularity.

In **Mobility**, digital application could decrease up to 5% of emissions by 2050. This would mean leveraging sensing technologies like IoT, imaging and geo-location to gather real-time data to drive system decision-making. It would ultimately improve route optimisation and lower emissions in both rail and road transport.

Figure 45: Ways Digitalisation Can Support Reaching Net Zero[303]



Source: Accenture in collaboration with the World Economic Forum

Digital Integration of Climate Considerations

To maximise these opportunities and assess sustainability commitments, a scoring matrix is now applied to all projects within the Council's Digital Development Programme. The Council encourages a paperless office environment through hot-desking, remote working and online meetings. The Council also reuses IT equipment where possible through reuse programmes. [304]

East Dunbartonshire's new Digital Strategy [305] also aligns with this Climate Action Plan and the Council's Circular Economy Strategy. High-level priorities such as the Council's net zero targets and the environmental impact of technology are addressed within the strategy and these feature throughout actions in various themes such as telematic in **Theme 1: Transport** and the role for digital monitoring of heating systems to increase efficiencies in **Theme 2: Buildings and Heat Decarbonisation**.

East Dunbartonshire's Circular Economy Strategy (CES) presents information and communications technology targets to drive new ways of creating value in a circular economy. The proposed technological improvements in the Digital Strategy and Circular Economy Strategy will focus on circular design, lifecycle of IT, business systems, cloud migration and data analytics (see CES **Action 5**).[306]

Further areas where IT investment can add value to decarbonisation, above and beyond those set out in the Council's Circular Economy Strategy include:

- Expanding building energy management systems.
- Smart infrastructure.
- Excess heat use.
- Embodied carbon [307] in devices and IT infrastructure.

Initiatives that sit under these areas could include introducing the metering energy usage for IT equipment, monitoring it and setting targets against it.

[303] World Economic Forum (2023) https://www.weforum.org/stories/2023/01/davos23-digital-solutions-to-power-decarbonization/
[304] East Dunbartonshire Council (2023) Circular Economy Strategy | East Dunbartonshire Council
[305] East Dunbartonshire Council (2024) https://eastdunbarton.moderngov.co.uk/documents/s9393/EDC-035-24-AD%20-%20SPPF%20-%20Appendix%204%20-%20Digital%20Strategy%202024-2029.pdf
[306] Circular Economy Strategy (2023) East Dunbartonshire Council https://www.eastdunbarton.gov.uk/services/a-z-of-services/sustainability-and-climate-change/circular-economy-strategy?page=10
[307] Embodied carbon refers to all CO2 emitted in producing materials.

Table 17 – Supply Chains, Investment and Digital Infrastructure Actions

#	Action	Owner	Potential Sources of Funding and Funding Status (RAG)[308]	Target Date
7.1	**Corporate: Carry out an in-depth assessment of the steps required to decarbonise the Council's supply chain.** The Evidence and Options Report stresses the need for this action due to the disproportionate significance of this area to the Council's corporate carbon footprint. However, there is not yet a standardised methodology for public bodies in Scotland to estimate and monitor emissions from the Council's supply chain and the Council would need to allocate additional resources to be able to do this. **Sources**: Evidence and Options Report & SCCF – Procurement section	Chief Solicitor & Monitoring Officer	Red	2027 - 2030
7.2	**Corporate: Expand the Annual Procurement Strategy to embed sustainability via an Action Plan to reduce supply chain emissions and to ensure alignment with forthcoming legislation on supporting net-zero carbon targets through procurement.** The Evidence and Options Report assumes that 90% of suppliers decarbonise although with the caveat that facilitative action from the Council, including the development of an action plan, would be required to realise these benefits. It also notes that additional costs are likely to arise from implementing the action plan. **Source:** Evidence & Options Report, (Scope 3)	Chief Solicitor & Monitoring Officer Supported by Executive Officer - Land Planning & Development	Amber	2030-2032
7.3	**Corporate: Promote sustainable procurement capacity building, including specification / tender writing training for relevant staff.** This action incorporates the SCCF action to use the tender process to introduce a more systematic approach to sustainable procurement, encompassing and building on existing systems. [309] .	Executive Officer - Land Planning & Development Chief Solicitor & Monitoring Officer	Green	Ongoing

[308] Funding Status RAG Key: Green: High confidence the action is achievable with current resources; Amber: Funding gap remains, partially achievable with existing resources or potential funding identified; Red: High confidence action is not achievable with current resources.
[309] https://sustainableprocurementtools.scot/index.cfm/elearning1/

	Source: Evidence and Options Report, Procurement Early Actions & SCCF actions – Procurement			
7.4	**<u>Corporate</u>: Continue to consider sustainable investments and to continue to explore whether the Council's investments are consistent with its statutory duties in relation to climate change mitigation and sustainable development.** This action stems from the SCCF action to continue to explore whether our investments are consistent with our statutory duties in relation to climate change mitigation and sustainable development. **Source**: SCCF – Finance section	Chief Finance Officer Supported by Executive Officer - Land Planning & Development	Green	On-going
7.5	**<u>Corporate / Area-wide</u>: Incorporate Climate within the forthcoming Community Benefits Strategy.** **Source**: SCCF – Procurement section	SLT	Green	2025-2028
7.6	**<u>Area-wide</u>: Monitor Strathclyde Pension Fund's commitment to responsible investment, advocate for decarbonisation and ensure the Council's investments are consistent with statutory duties in relation to climate change mitigation and sustainable development.** This action will entail delivering against SCCF action (8.1) **Source**: SCCF – Finance section & Evidence and Options Report section 3.4.3.3	Chief Finance Officer Supported by Executive Officer - Land Planning & Development	Green	Ongoing
7.7	**<u>Corporate</u>: Explore potential finance models to help to bridge funding gaps to climate action and support the achievement of the Council's net zero targets.** The Evidence and Options report notes that significant amounts of additional funding will be required to achieve Council's net zero and adaptation targets. **Source:** Evidence & Options Report and Funding Net Zero report	Chief Finance Officer Supported by Executive Officer - Land Planning & Development	Green	2025 - 2045

Theme 8: Food and Agriculture

Introduction

Contextualising the Impact of Food and Agriculture

The UN Food and Agricultural Organisation reports that the world's agri-food systems account for 31% of global greenhouse gas emissions.[310] In Scotland, agriculture is the second largest source of net emissions and accounts for near 20% of total Scottish emissions.[311,312]

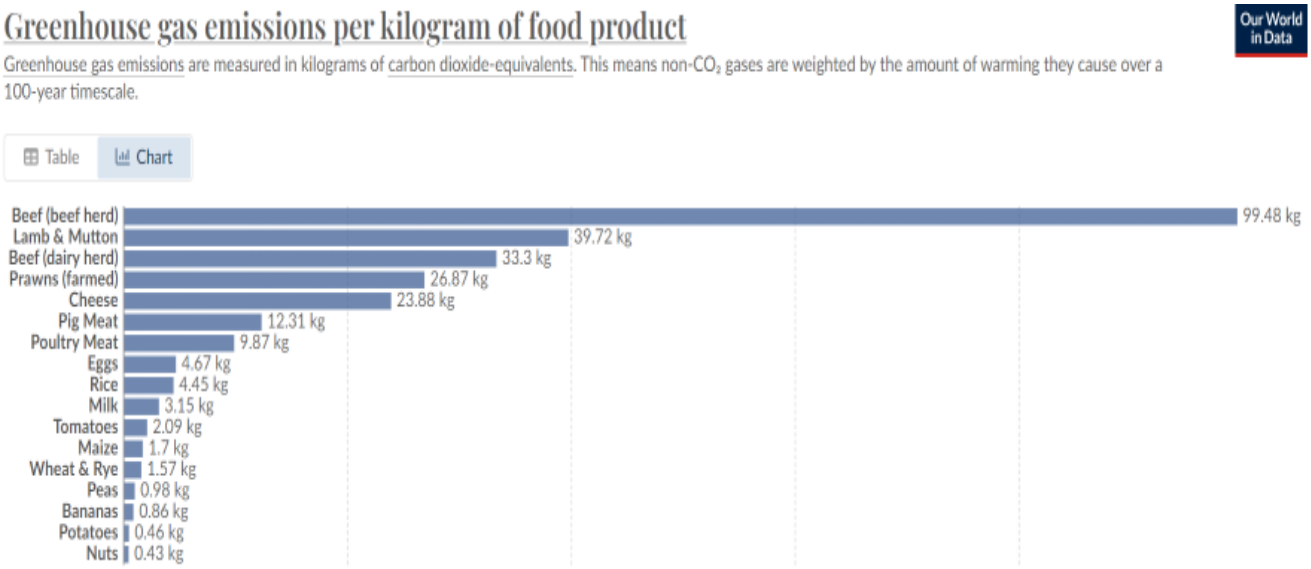
Actions have been developed to focus on areas within East Dunbartonshire's remit, such as school meals, catering, reducing food waste and community food growing. Despite this, partnership arrangements and community engagement will be necessary to support the overarching transitions the Council has limited direct influence over. More specifically, meeting East Dunbartonshire Council's area-wide net zero targets require the following transitions:

- a 20% reduction in meat consumption by 2030
- a further 15% meat reduction by 2045
- reduce agricultural fossil fuel use by 60%.

Meat and dairy consumption are key emissions factors due to their disproportionate land use and livestock outputs. Nearly half of UK land is estimated to be used for animal agriculture although animal products only provide around a third of total calories consumed.[313,314] Herds are often reared on woodlands or areas of high and varied ecological importance, damaging local ecosystems and reducing the capacity of natural carbon sinks. Additionally, bovine livestock produce a high quantity of methane - a greenhouse gas with 28 times the warming potential of CO_2.[5] As such, CCC carbon modelling is emphatic about the need to reduce meat and dairy intake to achieve net zero targets and free up a significant amount of land for nature-based solutions.

[310] UN (2021) https://news.un.org/en/story/2021/11/1105172
[311] ClimateXChange (2024) Understanding metrics for effective environmental measures under the Agricultural Reform Programme for Scotland | ClimateXChange
[312] Scottish Government (2022) Scottish Greenhouse Gas Statistics 2022 - gov.scot (www.gov.scot)
[313] Hayek MN and Miller SM. (2021) Underestimates of methane from intensively raised animals could undermine goals of sustainable development
[314] de Ruiter, Henri, et al. (2017) Total global agricultural land footprint associated with UK food supply 1986–2011 - ScienceDirect

Figure 46: GHG per KG of Food Product



Consumer diets have shifted in recent years with a quarter of the UK population adopting meat-free or meat-reduced diets[315] and may people are willing to reduce the amount of red meat they consume to reduce emissions.[316] However, while demand for plant-based foods has grown rapidly, shifting to sustainable diets at scale will not happen if left to the market, individuals, or voluntary industry initiatives.[317]

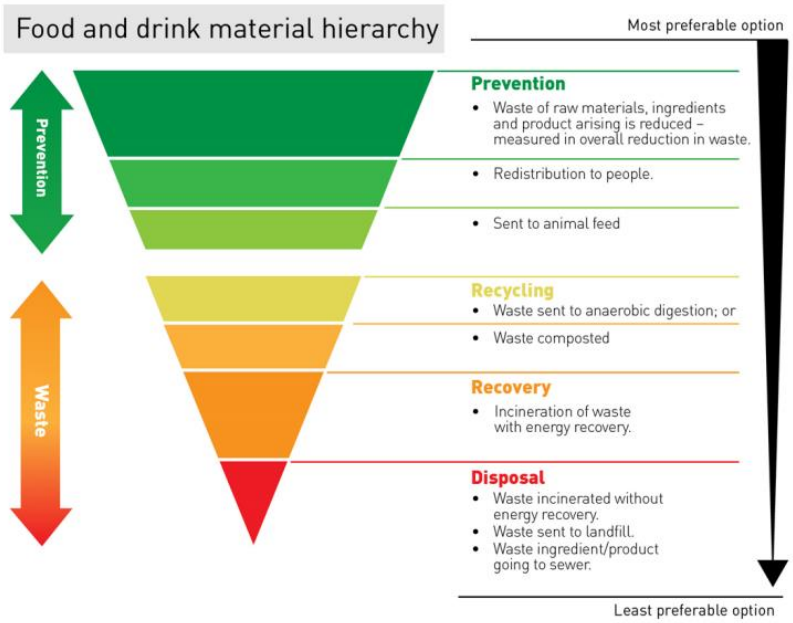
Farmers and the food that they produce are essential to maintaining food security in the UK. Given the potential threats to food and agriculture, as well as the accompanying opportunities to reduce related emissions, farmers will require significant support to protect crop and livestock yield, reduce emissions through improved farming practices, and adopt sustainable practices such as the optimisation of agricultural land use. Farmers will also need to be supported to diversify their income streams away from livestock agriculture, with opportunities in areas such as woodland creation, peatland restoration, energy crops, and renewable energy (see **Action 8.5**). Support for farmers is paramount to achieving a just transition.[318]

Food Waste

In addition to the emissions intensity of agriculture and the food supply chain, food waste is a significant resource issue and accounts for half of food system emissions.[319] Food waste mostly goes to landfill and releasing the potent greenhouse gas methane as they decompose. This makes food waste a disproportionate source of emissions in Scotland, accounting for 25% of Scotland's total carbon footprint, but only 5% of national waste, in 2018.[320] Like the waste hierarchy set out in **Theme 5: Consumption and Waste**, prioritising the prevention of food waste before recycling waste is optimal, as set out in **Figure 47**.

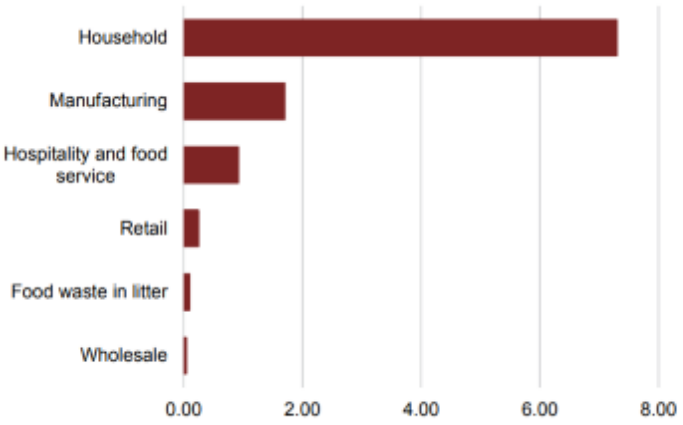
[315] Sajeev E.P.M., et al. (2020). www.foodsecurity.ac.uk/publications/is-the-uk-ready-for-plant-based-diets.pdf
[316] Scottish Government (2020) https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2020/12/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/documents/research-public-attitudes-climate-change-policy-green-recovery/research-public-attitudes-climate-change-policy-green-recovery/govscot%3Adocument/research-public-attitudes-climate-change-policy-green-recovery.pdf
[317] Carmichael, R. (2019) *Behaviour change, public engagement and Net Zero (Imperial College London) - Climate Change Committee (theccc.org.uk)*
[318] The Climate Change Committee (2025) The Seventh Carbon Budget
[319] Dwyer, O. (2023) https://www.carbonbrief.org/food-waste-makes-up-half-of-global-food-system-emissions/#:~:text=Where%20food%20waste%20comes%20from,this%2C%20the%20new%20study%20says.
[320] Scottish Government (2022) Progress to date and the case for further action - Delivering Scotland's circular economy - route map to 2025 and beyond: technical annex - gov.scot (www.gov.scot)

Figure 47: Food Material Hierarchy [321]



The issue of food waste is also hitting resident's pocketbooks. The UK produces the highest amount of food waste in Europe and throws away **around 9.5 million tonnes** every year – despite an estimated **8.4 million people in the UK being in food poverty.** [322] The Department for Environment Food and Rural Affairs found that 70% of food waste occurs within households, equating to 14% of consumers' weekly food purchase being discarded. [323]

Figure 48: UK food and drink waste through the food chain (million tonnes) (DEFRA)



These food waste rates reveal a prevalent throwaway culture and the level of systems and behavioural change required to create a circular food system to reduce waste, save residents money and mitigate emissions (see **Action 8.4**) Council campaigns can continue to focus on minimising food waste at the source as far as possible, with any remaining waste being used as resources in a circular system such as compost or put into food waste caddies.

[321] Waste and Resources Action Programme (2017) WRAP-Estimates-of-Food-Surplus-and-Waste-Arisings-in-the-UK-2017.pdf
[322] Business Waste (2024) https://www.businesswaste.co.uk/food-waste-the-facts/#:~:text=Over%20%E2%85%93%20of%20all%20food,food%20is%20disposed%20of%20unnecessarily.
[323] Department for Environment Food and Rural Affairs (2016) Food statistics pocketbook 2015 - GOV.UK (www.gov.uk)

Shifting to Sustainable Diets

By promoting the availability of plant-based foods in school catering for example, local authorities can reinforce the importance of healthy and environmentally conscious meal choices (see **action 8.2**). There is also a growing precedent for Councils switched to plant-based catering as part of broader efforts to combat climate change, improve sustainability and public health. For instance, Oxfordshire County Council, Cambridge City Council, Exeter City Council, and Nottingham City Council have adopted policies to solely serve plant-based food and drink at internal meetings[324] (see **Action 8.3**). Similarly, a case study of from Edinburgh City Council is outlined below in **Figure 49**, illustrating how the adoption of a Plant-Based Treaty has helped the city to contribute to its emission reduction targets and wider sustainability goals.

Figure 49: Edinburgh City Council Plant-Based Diets Case Study [325]

Edinburgh City Council provides a case study of how to mainstream plant-based diets. Edinburgh is now considered a Sustainable Food Place after the adoption of the city's Plant-Based Treaty Action Plan.

Developed following the Council's endorsement of the Plant-Based Treaty in 2023, the **Action Plan** will improve access to plant-based foods among residents, promote food security and lower emissions. It is important to note that the plan "does not seek to eliminate meat and dairy… [but rather] increasing availability and awareness of plant-based options." Instead, the action plan is designed to create better health and environmental outcomes.

For these initiatives, Edinburgh City Council was awarded silver accreditation status by the **Sustainable Food Places Network** in recognition of meal distribution programmes for those in need, the launch of a Sustainable Food Directory, and community food growing projects.

Policy Context

The food and agriculture sectors have a robust statutory and regulatory framework that will govern the required actions to achieve net zero and increase climate resiliency for East Dunbartonshire.

Recognising the scale of food system impacts, the CCC made recommendations in the agriculture and food sectors to achieve net zero and adjust food production to the impacts of a warming world including:[326]

- Promoting diet shifts to enable land use change for carbon sequestration and adaptation measures such as woodland creation and peatland restoration. Meeting the CCC's UK Net Zero pathway requires the release of 6% of agricultural land by 2035, and 19% by 2050 – the East Dunbartonshire and Scottish equivalents would be accelerated to meet the 2045 targets
- Retiring the least productive farmland for rewilding, to maintain domestic food production while meeting environmental goals.
- Reducing 25% of meat consumption by 2040 and reaching 35% reduction by 2050 by shifting to plant-based options, particularly in public sector settings such as schools and hospitals (see **Actions 8.1 - 8.3).**
- Improving livestock and soil management via sustainable approaches such as regenerative farming, optimal use of fertilisers (with increased focus on organic-based fertilisers) and pesticides, and increased diversification (monitored through **Action 8.5**)
- Reducing the emission intensity of equipment and transport in food supply chains (monitored through **Actions 8.4 - 8.5).**
- Integrating innovation and technological measures with a strong policy framework, investment support, developing skills among the agri-food industry workforce (prioritising farmers and growers) to take advantage of emerging innovations, alongside shifts in public diets for healthy food consumption patterns.

[324] BBC (2024) Nottingham City Council switches to plant-based catering - BBC News
[325] ECC (2024) https://www.edinburgh.gov.uk/news/article/13898/council-agrees-plant-based-treaty-action-plan#:~:text=Developed%20following%20the%20Council%27s%20endorsement,capital%2C%20to%20join%20the%20initiative.
[326] Carmichael, R. (2019) https://www.theccc.org.uk/publication/behaviour-change-public-engagement-and-net-zero-imperial-college-london/

To enact these goals, The Scottish Government has set a vision for Scotland to be *"a Good Food Nation, where people from every walk of life take pride and pleasure in, and benefit from, the food they produce, buy, cook, serve, and eat each day."*[327]

The Good Food Nation (Scotland) Act 2022 places duties on Councils to produce Good Food Nation Plans which set out the main outcomes and policies in relation to food-related issues such as:

- the environment;
- social and economic wellbeing;
- people's health and physical and mental wellbeing;
- education;
- economic development;
- animal welfare; and
- child poverty.

The Scottish government carried out a consultation on proposals for the Good Food Nation Plan in 2024 which sought to establish the role of an independent Food Commissioner to make recommendations on Good Food Nation Plans. The research undertaken by the commission may have major implications and will be used to advise Scottish ministers and health boards in meeting responsibilities outlined under the act.

Local Context

Food Growing Strategy

Local food allotments can have a multitude of benefits, including reducing the emissions associated with food due to reduced fertiliser use and processing, promotion of plant-based diets, and limited transportation miles. Furthermore, land allotments can support community food security by increasing local ownership of healthy and affordable food.

East Dunbartonshire currently operates one food allotment and has been developing regulations, that underwent consultation in 2024, to facilitate the expansion of further sites in a forthcoming Food Growing Strategy.

The Food Growing Strategy (**see Action 8.1**) aims to transform underutilised and unproductive land such as blaes pitches into a community asset. This will provide local opportunities for sustainable food growing, assisting carbon reduction and reducing food miles through local sourcing of healthy food. It will also identify proposed allotment sites to accommodate interested residents and facilitate local community food growing opportunities. Increasing allotment provisions will be key to meet community expectations and achieve local food growing ambitions, thus the strategy proposes different sites across East Dunbartonshire.

While this is significant in terms of local authority action to reduce food's emissions, it is important to note that the production phase is responsible for over 8 times the emissions than transporting food,[328] meaning what people eat is significantly more impactful than where food is sourced in terms of emissions.

Local Food Initiatives

In 2022, East Dunbartonshire achieved the nationally recognised Food for Life Served Here bronze award in recognition of its commitment to ensure the Council's 5,800 daily school meals contribute to good health, reduce environmental impact and support the local economy (see **Action 8.2**).[329] While the Council had to discontinue the certification of Food for Life due to financial pressures in 2025, the programme's legacy is firmly reflected in the healthier and more sustainable food that is provided through schools meals.[330]

[327] Scottish Government (2023) https://www.gov.scot/policies/food-and-drink/good-food-nation/
[328] Our World In Data (2020) https://ourworldindata.org/food-choice-vs-eating-local
[329] Soil Association Scotland (2022) East Dunbartonshire achieves the Food for Life Served Here bronze award. Soil Association Scotland. https://www.soilassociation.org/our-work-in-scotland/scotland-news/2022/december/east-dunbartonshire-achieves-food-for-life-served-here-bronze-award
[330] East Dunbartonshire Council (2024) School meals - East Dunbartonshire Council

Additionally, East Dunbartonshire Council adopted a weekly food waste caddy collection system to increase food recycling rates while providing relevant digital information on how food waste can be utilised through garden compost and recycling food waste for biogas energy (**Figure 50**).[331]

To build on this progress and deliver against the need for a reduction in meat and dairy consumption to meet the Council's net zero targets and promote greater sustainability, Council should lead in areas under its purview in addition to providing educational informational resources on the benefits of behaviour change and making low-carbon choices more accessible, as set out in **Action 8.2**.

Broadening dietary choice is a clear first step to enable a shift to lower-emissions and healthier eating habits. New regulation should require that all schools, hospitals and other public-sector catering outlets - which provide 30% of UK meals - include at least one fully plant-based menu option that is available every day without special request.[332] This shift increases access to plant-based meals and normalise low-impact diets. Similar actions are outlined in the Council's Circular Economy strategy, with actions to:

- Continue to reduce food waste in schools, including working towards achieving additional Food for Life award for local school meals;
- Support schools in reducing food waste; and
- Support food manufacturing in reducing food waste.

Figure 50: Food Waste Recycling: A Circular Economy

Local Farming and Agriculture Practices

Three-quarters of land in East Dunbartonshire is made up of large swathes of open agricultural areas, used primarily for grazing livestock and cereal production. Although such sites can often be heavily managed there are ample opportunities for landowners to improve biodiversity on their land through habitat enhancement projects along field boundaries (such as hedgerow management, woodland shelter belts, watercourse development and planting of buffer strips for wildlife). Moreover, only 5% of the district is of prime agricultural soil,[333] highlighting limited local agriculture potential and the opportunity to use land for sustainable alternatives such as carbon sinks.

Nonetheless, to create a just transition to net zero, it will be essential to support farmer's shift to food production that is both less emission intensive and more climate resilient to protect crop yields from the impact of more frequent extreme weather events.

[331] East Dunbartonshire Council (2024) https://www.eastdunbarton.gov.uk/residents/recycling-waste/bins-and-recycling
[332] Carmichael, R. (2019) https://www.theccc.org.uk/publications/
[333] East Dunbartonshire Council (2018) Environmental Baseline Data Report 2017 - 18 Annual Report

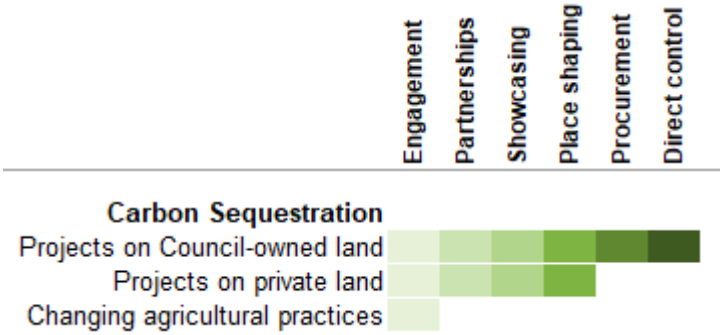
Where funding becomes available or through signposting to national support, the Council **can** potentially play a role in supporting farmers as they transition to more sustainable agriculture practices. Ensuring a just transition by providing equitable opportunities for all farmers, particularly smallholders, is essential.

To improve resilience of the food supply, East Dunbartonshire Council can increase the use of local growing and allotments to create a resilient supply of healthy and readily available produce for individual households. This can be accomplished through development of local food growing strategies grounded in regenerative agriculture that prioritises conservation and enhancement of soil and ecosystem health. A simple step such as ending traditional pesticide use enhances biodiversity, creates better soil quality, promotes natural carbon storage and reduces pollution from fertilizer or pesticide run-off.[334] [335] Regenerative agriculture can also be coupled with vertical urban farming to make use of otherwise redundant infrastructure such as city carparks. Urban farming reduces the strain on land used for food production and promotes food security at the community level.[336] Tangible actions for Councils to decarbonise the local food chain include:

- Promoting a fair price for quality, locally produced food;
- Supporting public procurement of local produce;
- Helping farmers modernise through contributing to improve thermal and energy efficiency;
- Providing resources to adopt regenerative agriculture practices; and
- Adopting flexible planning approaches to farming buildings;

Land use, land use change and forestry (LULUCF) present an opportunity to reduce emissions through measures such as afforestation, broadleaf management, peatland restoration, agro-foresty, and energy crops & short rotation forestry. According to the CCC, the LULUCF sector is currently close to net zero in the UK.[337] Through ambitious local action, Council land can be restored to serve as a carbon sink. However, this measure is highly location dependent and difficult to quantify. In East Dunbartonshire, LULUCF emissions mainly arise from croplands. Further research is needed into how cropland emissions can be reduced and how much afforestation potential there is in the local authority. It is further important, that emissions are not "exported" in an effort for the Council to reach net zero.

Figure 51: What areas can the Council influence the most?



Public Perspectives

In a Scottish Government survey, 60% of respondents supported the idea of changing farming practices to reduce the amount of land use needed for food production to instead use land for habitat restoration and increase biodiversity.[40] 58% of respondents supported reallocating land to capture and store carbon through nature-based solutions, such as planting trees or restoring peatlands (see **Theme 4: Natural Environment**).[40] For the respondents that did not support these changes, a potential negative impact on farmers and employment was listed as the main reason.[338]

During General survey respondents also confirmed strong support for the community food growing agenda, with 86% supporting the overall concept and 79% stating that they would participate if they were given an accessible opportunity. An interest in food growing was also recorded at the online

[334] Varanasi, A. (2019). https://news.climate.columbia.edu/2019/10/22/organic-food-better-environment/
[335] World Economic Forum (2022) Regenerative agriculture can help feed the world. What is it? | World Economic Forum (weforum.org)
[336] Scottish Government (2020) Research into public attitudes to climate change policy and a green recovery (www.gov.scot)
[337] UK Climate Change Committee (2025) The Seventh Carbon Budget (theccc.org.uk)
[338] Scottish Government (2020) Research into public attitudes to climate change policy and a green recovery (www.gov.scot)

events; comments were recorded in support of local opportunities for growing at home, in schools and through allotment sites.

Table 18 – Food and Agriculture Actions

#	Action	Owner	Potential Sources of Funding and Funding Status (RAG)[339]	Target Date
8.1	**<u>Area-wide</u>: Prepare and implement a Food Growing Strategy.** **Source:** SCCF - Natural Environment Section	Executive Officer - Land Planning & Development	Green	2025 - 2026
8.2	**<u>Corporate</u>: Promote and support the adoption of sustainable food including through school meals whilst complying with Scottish Government nutritional guidelines.** **Source**: Evidence and Options Report	Executive Officer - Assets & Facilities	Green	2025 - 2030
8.3	**<u>Corporate</u>: Promote and support the adoption of sustainable food through Council catering.** **Source**: Evidence and Options Report	Executive Officer - Land Planning and Development Chief Solicitor & Monitoring Officer	Green	2025 - 2045
8.4	**<u>Area-Wide</u>: Promote the reduction of food waste through local awareness campaigns and programmes.** **Source:** Evidence and Options Report, Area-wide	Executive Officer - Roads and Neighbourhood Services Supported by Executive Officer - Land Planning & Development	Green	On-going
8.5	**<u>Area-wide</u>: Monitor progress on reducing emissions from agriculture and reduced meat and dairy consumption and identify new actions or partnerships to support the transitions where possible.** The Climate Change Committee's sixth and seventh carbon budgets both identify the need to reduce meat and dairy consumption in addition to achieving reductions in agricultural emissions. Accordingly, assumptions relating to this are key parts of the Council's area-wide pathway to net zero. • a 20% reduction in meat consumption by 2030 • a further 15% meat reduction by 2045	Executive Officer - Land Planning and Development *To be monitored through proxy values in the CMP*	Green	

[339] Funding Status RAG Key: Green: High confidence the action is achievable with current resources; Amber: Funding gap remains, partially achievable with existing resources or potential funding identified; Red: High confidence action is not achievable with current resources.

	• reduce agricultural fossil fuel use by 60%. **Source:** Evidence and Options Report			