Climate Change & Environment Strategy Progress Report and Annual Carbon Footprint for 2024-2025

To:	Environment and Green Investment Committee
Meeting Date:	20 November 2025
From:	Deputy Chief Executive and Executive Director of Place and Sustainability
Electoral division(s):	All
Key decision:	No
Forward Plan ref:	n/a

Executive Summary: The Council reports annually on its carbon footprint and progress towards delivery of its Climate Change and Environment targets. This report presents these findings, highlights positive climate action taken during the last year and the impact the Council's climate change programme is having on achieving its net zero and nature targets. It also notes the progress, key challenges and residual risk in the delivery of the Council's Climate Change and Environment Strategy targets, alongside providing an update on the Fens 2100+ Programme.

Recommendation: The Environment and Green Investment Committee is recommended to:

a) Approve the annual Carbon Footprint Report as a record of the Council's known greenhouse gas emissions for the financial year 2024-25, as outlined at section 14.1.

b) Approve the annual Climate Change and Environment Strategy (CCES) Progress Report for the period October 2024 - November 2025, as outlined at section 14.2.

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1 Creating a greener, fairer and more caring Cambridgeshire

1.1 **Ambition 1:** Net zero carbon emissions for Cambridgeshire by 2045, and our communities and natural environment are supported to adapt and thrive as the climate changes:

The report outlines progress towards reaching this corporate ambition.

1.2 **Ambition 2:** Travel across the county is safer and more environmentally sustainable:

Transport is the largest contributor to Cambridgeshire's carbon footprint. The Climate Change and Environment Strategy Action Plan includes actions to support sustainable travel.

1.3 **Ambition 3:** Health inequalities are reduced: Improving the natural environment is a key wider determinant of health, supporting better health outcomes and reducing inequalities across the County.

Reducing carbon emissions whether via transport or building improvements improved local air quality.

1.4 **Ambition 4:** People enjoy healthy, safe, and independent lives through timely support that is most suited to their needs:

The actions within the strategy deliver several wider co-benefits that align to this ambition. For example, managing flood risk and water supplies for safety and health; managing waste, supporting building retrofits and adapting services to ensure they continue at their best despite the changing climate.

1.5 **Ambition 5:** People are helped out of poverty and income inequality:

Just transition is a key theme of the strategy. For example, work on community energy and wider energy system change is to support individuals and communities to benefit financially and manage future fuel poverty whilst work managing flood risk is to support communities and the most vulnerable to climate impacts.

2 Background

2.1 The Climate Change and Environment Strategy (CCES) and accompanying action plan was approved in February 2022 by Full Council. It sets out the Council's strategic approach and ambitions in relation to climate and environment issues. The Council has 6 main targets:

Target	Target Area	Target	Deadline
1	Carbon Reduction	Reduce emissions from our buildings and fleet transport to net zero (scopes 1 & 2)	2030
2	Supply Chain	Reduce supply chain emissions (scope 3) by 50.4% *(Excludes agriculture and land use)*	2030
3	Biodiversity	Bring the Council's important biodiversity sites into positive conservation management status	2030

Target	Target Area	Target	Deadline
4	Tree & Hedgerow Cover	Increase tree and woodland cover on the County Council's estate to 13% and increase hedgerow extent by 5%, compared to the baseline	2040
5	County-wide emissions	Cambridgeshire carbon emissions will be net zero	2045
6	Climate resilience	All Council buildings and infrastructure to be resilient to climate change impacts	2045

2.2 To support delivery of the CCES and its targets, the Council has established a Climate Change and Environment Programme, overseen by the Deputy Chief Executive and Executive Director for Place and Sustainability. A total of £4.28m from the Just Transition Fund was allocated to support delivery of the programme and to secure over £18m in external grants.

2.3 This report provides an overview of the Council's Carbon Footprint, Target Progress Report and also includes key delivery highlights and recommends next steps.

3 Cambridgeshire's Climate

3.1 Cambridgeshire, like the rest of the UK, is already experiencing "disruptive climate change". This means extremes of weather that we are not prepared for: more and worse floods and droughts, wildfires, disruption to agriculture, increased vulnerability, and increased inequality due to different abilities of different parts of our community to cope. Currently the county is most acutely impacted by increasing temperatures.

3.2 In July 2019, Cambridgeshire recorded the highest ever temperature in the UK, reaching 38.7ºC. In July 2022, Cambridge saw temperatures of 39.9ºC. Using data from the Cambridge University Botanical Gardens weather station as a proxy for the rest of the county, the trend in heatwaves in Cambridgeshire has been steadily increasing over the last century (a heatwave is classed as three consecutive days where the maximum daily temperature meets or exceeds 28ºC). In the last decade (2010-2019) there has been a total of 11 heatwaves in Cambridgeshire, in the most recent year for which data is available (2023), there have been 2 heatwaves. Average maximum temperatures for a given year have also been increasing.

3.3 Looking ahead, under a 2°C global temperature rise, the County is projected to face:

- More frequent hot days exceeding 25°C - posing serious health risks to vulnerable populations.
- Increased rainfall and storm events - raising the likelihood of flash flooding and storm damage.
- Reduced cloud cover - leading to higher UV exposure, which may negatively affect crop yields, air quality, and public health.

4 Key Programme Highlights

4.1 Since the last progress report in October 2024, a range of actions have continued to be delivered which have contributed to the delivery of the Council's ambitions and targets. Key successes are highlighted below, and provide context for the Carbon Footprint and Risk-based Progress Report which follow.

Recruitment & Capacity Building	The Natural and Historic Environment team have recruited to support key initiatives, including Community-led Nature Restoration, Woodland Creation Accelerator projects and the continuation of Local Heritage Listings nominations and assessments. A Natural Capital Specialist and an Environmental Projects Manager have also joined the team. A Fleet Manager has been appointed to lead the improvement and decarbonisation of our vehicle fleet. A new Community Energy Manager and Community Energy Development Officer have been recruited to deliver the actions outlined in the Community Energy Action Plan. The Climate Training Programme has continued, training a further 790 colleagues across the training options, including Carbon Literacy.
Climate and Energy	Air source heat pumps have been installed at 30 out of 59 corporate assets to date, supported by Public Sector Decarbonisation Scheme (PSDS) grant. A methodology and toolkit to develop a locally determined contribution (LDC) has been delivered under the Innovate UK funded project to overcome barriers to market confidence, funding and misalignment of local and national ambitions. The grant funded Peterborough Accelerated Net Zero (PANZ) and the Cambridgeshire Local Area Energy Plan (LAEP) projects have begun delivering insights into low carbon how energy and associated infrastructure can be delivered and financed in Cambridgeshire. Both projects continue into the next reporting period. Major energy projects have continued to deliver, with 97 homes now connected to the Swaffham Prior Heat Network and project energisation at St Ives P&R and North Angle Solar Farm. Collectively, the large energy projects[1] have delivered over 3000tCO2e savings and c.£1.2million income for the council over the last year.
Nature and Biodiversity	The CCC Biodiversity and Tree and Woodland strategies have been adopted and published, with detailed delivery planning underway The Local Nature Recovery Strategy public consultation has taken place and is on its way to being published at the end of this year/beginning of next year.
Water and Adaptation	Sustainable Drainage Systems (SuDS) in two schools; Willingham Primary School and Westfield Junior School in St Ives.

[1] Includes: St Ives P&R, North Angle Solar Farm, Tringle Solar Farm and the New Shire Hall Solar Carports.

	The Corporate Climate Risk Assessment project has completed, producing a key evidence base for the council to support us in ensuring our services are future-proofed and resilient. Supported Anglian Water to complete SuDS in Morton Avenue, March. The Community Flood Action programme grant process has been extended following previous success and consultant assessments highlighting this could produce better outcomes than bigger schemes.
Highways &Transport	Secured £5.4m of Capital funding for on-street public electric vehicle charging infrastructure across Cambridgeshire and Peterborough and planning for procurement of a charge point operator has commenced Continued and expanded use of low carbon materials and techniques on the highway, such as warm mix asphalt and use of recycled aggregates, to bring down construction and maintenance emissions. Secured £1.5m from the Cambridgeshire and Peterborough Combined Authority to trial innovative solutions to Peat Soil Affected Roads in Cambridgeshire. Design and investigation work to develop the detailed approach is underway.
Corporate processes	Carbon and nature considerations embedded into multiple procurements with a combined value of over £23m, through the integration of robust evaluation criteria, requiring bidders to respond to targeted sustainability questions. The Council-wide corporate outcome focused on climate and nature ambitions successfully increased awareness, strengthened staff understanding of these priorities, and improved how informed colleagues felt about the Council's environmental goals. Incorporation of climate and nature into the business planning process for FY2026/27, alongside continued scrutiny of Key Decisions for climate related implications.
Awards and Recognition	**Recognised as "A-"** in the Carbon Disclosure Project reflecting our strong performance and leadership in climate action. Of the 752 areas scored, only 15% of areas worldwide achieved a score of "A". **Second best performing County Council** in the Climate Emergency UK "Climate Scorecards 2025". **Winner** of bronze award in the Public Sector Transformation Awards 2025 "Green Public Service". **Finalist** in the APSE Energy Awards 2025 for working in collaboration. **Finalist** in The Retrofit Academy Awards - Best Local Authority Led Retrofit Programme. The Highways team contributed to a joint editorial in the Jan/Feb 2025 edition of the Highways Magazine alongside Metis Consultants, for the development of their highways maintenance strategy and road map to Net Zero.

5 Annual Carbon Footprint Report 2024/25

5.1 The Council has previously published its annual carbon footprint for the financial years 2018/19 to 2023/24. This is the seventh annual carbon footprint developed and covers the Council's organisational carbon footprint for the year 2024/25, and also that of the geographical area of Cambridgeshire as a whole (for which the most recent data available is the calendar year 2023). The full report is available in section 14.1.

5.2 The carbon footprint for 2024/25 is summarised below:

Organisational Emissions	Scopes 1 and 2 [2] (Market-based)	764 tCO_2e	51% reduction since 2018/19
	Scope 3[3] (excluding Rural Estates)	123,647 tCO_2e	32% reduction since 2018/19
	Avoided emissions	-2,690 tCO_2e	
	Total Net Emissions	**121,721 tCO_2e**	**32% reduction since 2018/19 baseline**
County Wide Emissions	Cambridgeshire County (Emissions for 2023)	6,451,566 tCO_2e	9% reduction since 2018

5.3 **Scopes 1 and 2**: Direct emission from council buildings and fleet vehicles.

- In 2024-25, the largest share of scope 1 and 2 emissions came from gas consumption (66%), followed by emissions from business travel (30%).
- For Scope 1 emissions, key reductions from the 2018/19 baseline include decarbonising heating & property rationalisation, and some fleet vehicles switching to lower carbon HVO fuel.
- Scope 2 emissions cover electricity use in Council buildings. The emissions from this are zero, as the Council purchases a zero-carbon electricity tariff through our supply contract. This has been the case since the 2018/19 baseline.

Figure 1 below identifies Scope 1 and 2 emissions reductions to date and predictions for 2025/26 onwards.

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[2] Scope 1 emissions are those that occur directly from sites/assets controlled by the organisation (e.g. gas boilers, fleet vehicles). Scope 2 emissions are those that are from purchased electricity, heat or steam.
[3] Scope 3 emissions are those that occur due to the organisation's activities / products / services, but at assets not owned or controlled by the organisation (e.g. travel in employee-owned vehicles or public transport, purchased goods and services)

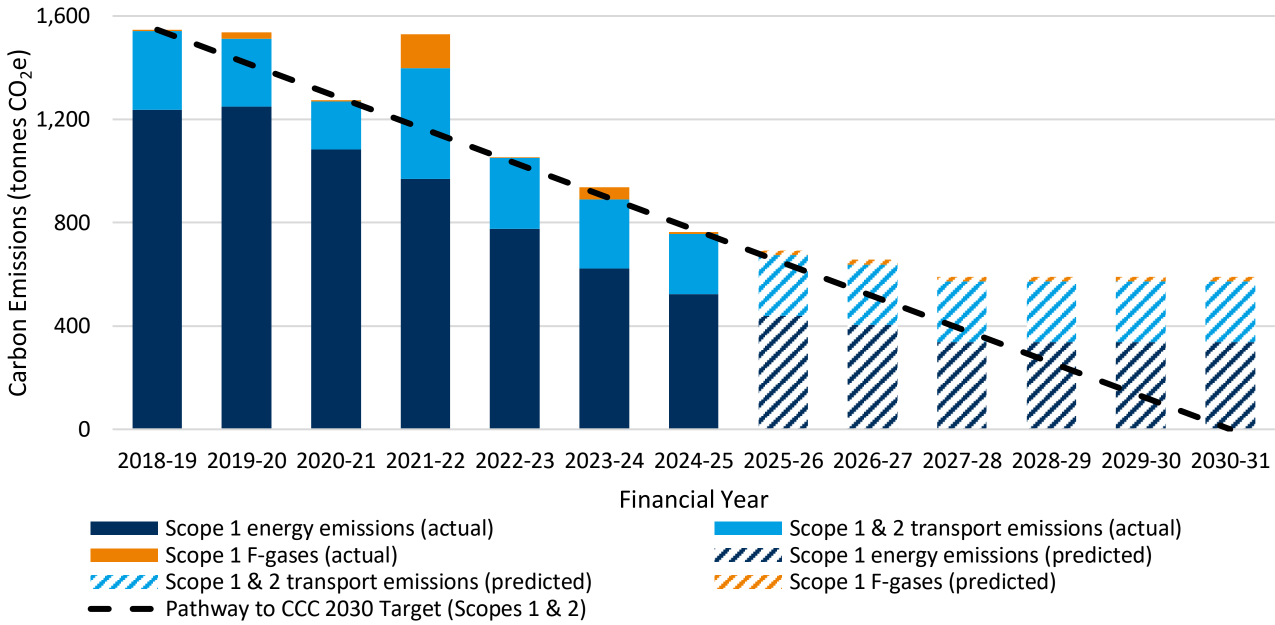

Figure 1 CCC annual GHG emissions, scope 1 and 2 (actual and predicted)

5.4 **Scope 3 emissions** are indirect emissions from assets outside of CCC's control, such as those of our contractors and suppliers. Scope 3 also includes emissions from employee commuting and homeworking energy use.

5.5 For Scope 3 emissions, key reductions from the 2018/19 baseline include reduced construction activity since 2020 (partially due to Covid-19 restrictions); and decreases in utility consumption for maintained schools (combination of academisation moving schools out of CCC's emissions boundary; and retrofit of some remaining schools). Figure 2 below identifies Scope 3 emissions reductions to date.

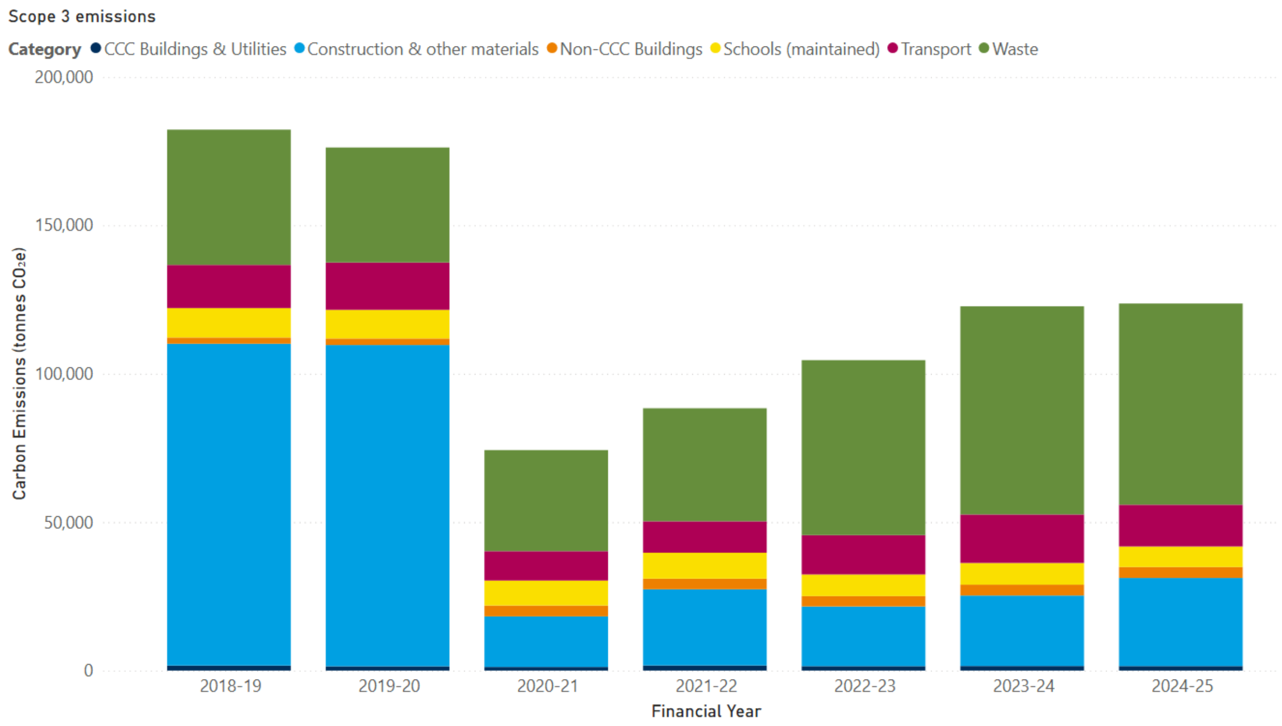

Figure 2 CCC annual GHG emissions, scope 3 (actual)

5.6 Figure 3 below identifies Scope 3 emissions reductions to date and predictions for 2025/26 onwards.

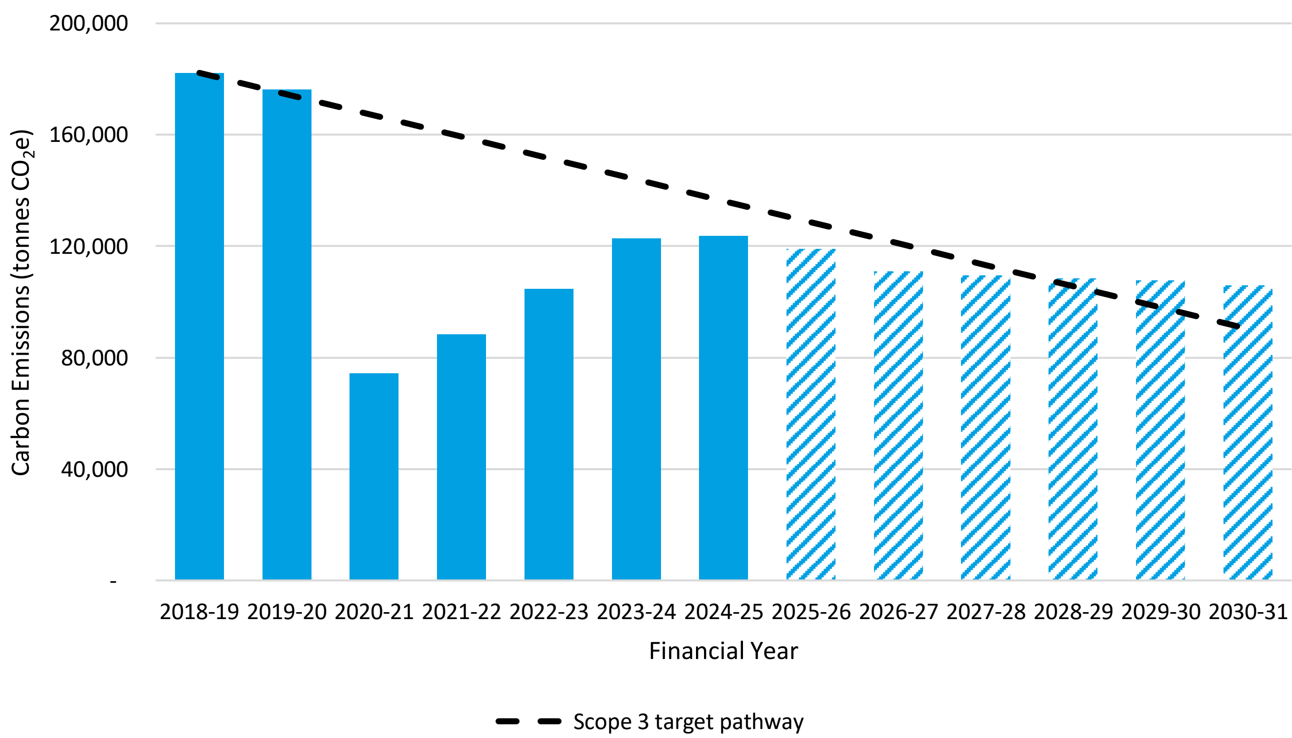

Figure 3 CCC annual GHG emissions, scope 3 (actual and predicted)

5.7 As Scope 3 emissions are from assets outside of the Council's control, it is harder to measure these emissions as we do not always have access to all of the required data. Ongoing improvements are made to improve this data and emissions estimates. Some emissions associated with additional purchased goods and services are excluded from the figures presented here, as we do not have robust data to calculate these. An indicative estimate suggests these excluded emissions may be in the region of 110,000 tCO_2e per year; close to the same amount of Scope 3 emissions again (123,647 tCO_2e). Improving data on the supply chain will help to constrain these estimates of emissions, and understand whether emissions improvements in CCC's supply chain are being made.

5.8 **Rural Estate Emissions**: Due to the size of these emissions compared to the rest of the Council's emissions, following industry best practice, and as agreed in 2024, these emissions are to have their own target, separated from the rest of the Scope 3 emissions. Decisions related to this target will be included in the refreshed Climate Change and Environment Strategy later in 2025-26.

5.9 Rural Estate emissions have continued to be estimated following the method used by expert consultancy support procured last financial year to calculate a more accurate baseline estimate for 2022-23. No new primary data from tenants has been collected to estimate the 2024-25 emissions – emissions changes in other years therefore only reflect changes in number and type of farms owned. Rural estate emissions are estimated as in Figure 4.

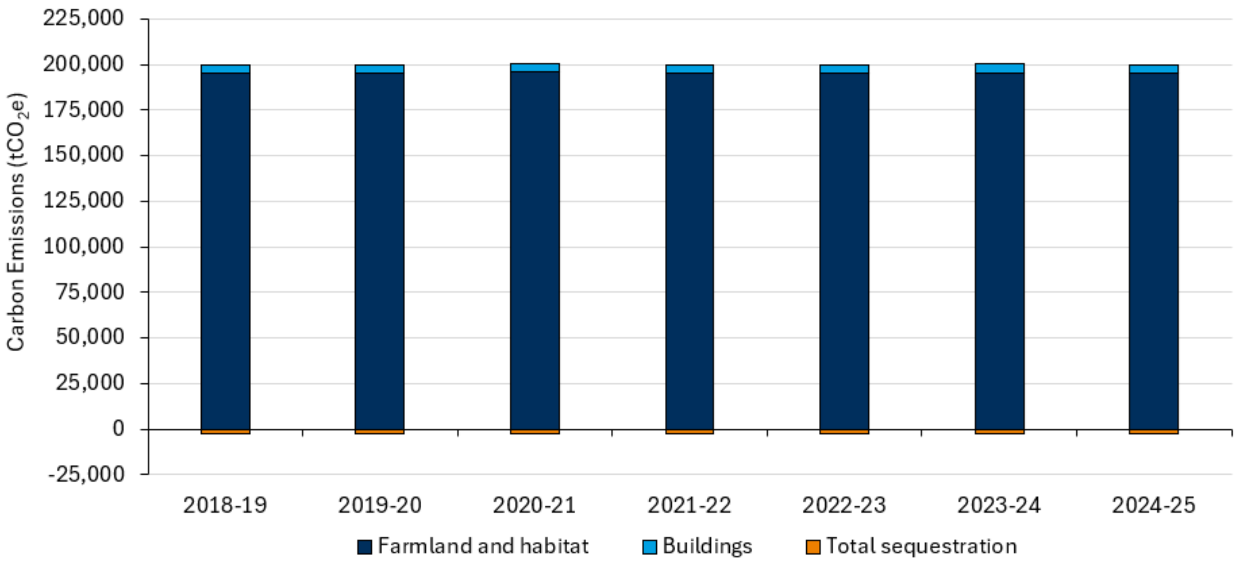

Figure 4 CCC annual GHG emissions, rural estate (estimated actual)

5.10 **Cambridgeshire-wide Emissions**: The carbon footprint of the geographical area of Cambridgeshire comprises greenhouse gas emissions from commercial, industrial and public sector sources, domestic homes, transport, agriculture, waste, and land use. This data is published by the UK Government Department for Energy Security and Net Zero (DESNZ) on GHG emissions by local authority area.

5.11 In July 2025, emissions for 2023 were published. The total greenhouse gas emissions for Cambridgeshire were 6.45 million tonnes CO_2e. This is a reduction of 1.5% compared to 2022. For Cambridgeshire, this follows a dip in emissions in 2020 due to COVID-19 restrictions, subsequent rebound, and re-continued decline. Emissions are now for the first time lower than they were in 2020 (*Figure 5 Cambridgeshire area emissions, 2005 to 2023*.

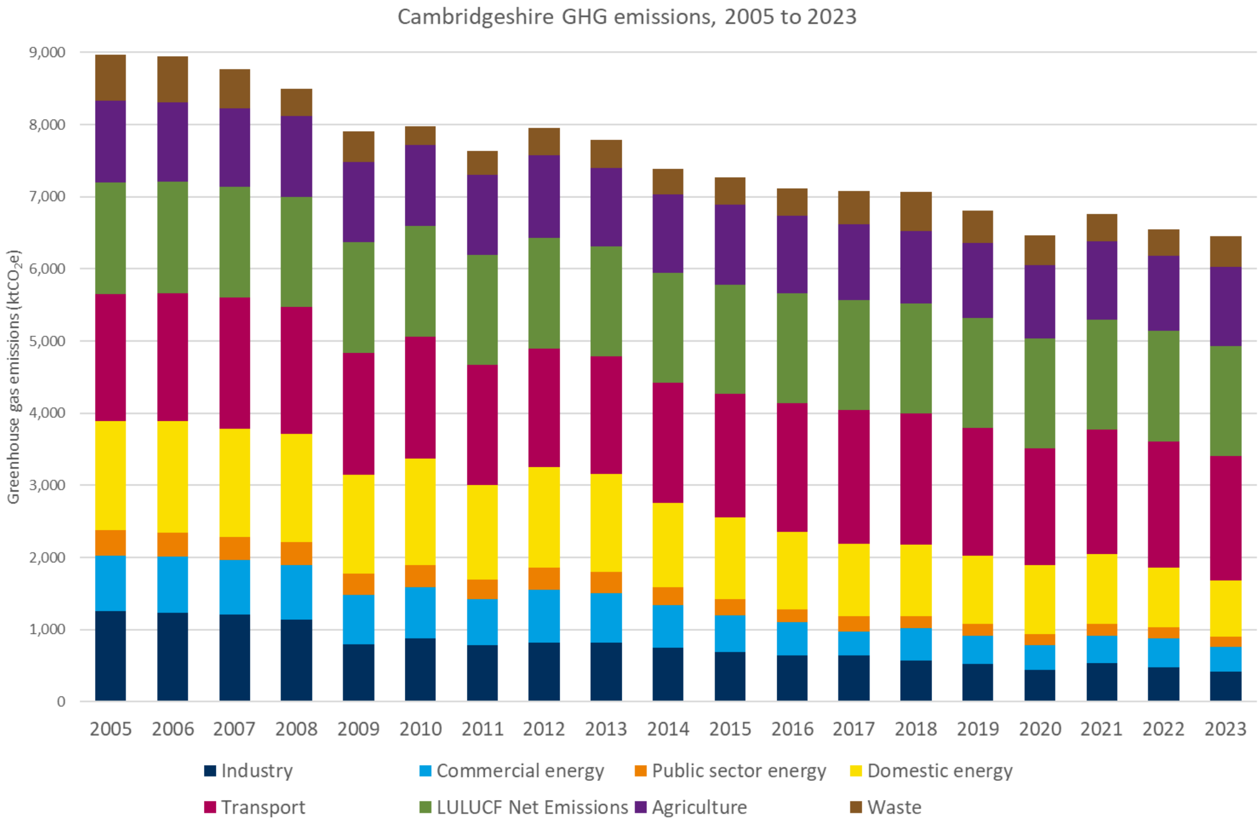

Figure 5 Cambridgeshire area emissions, 2005 to 2023

5.12 Transport remains the highest emitting sector in the county, accounting for 27% of emissions, followed by land use, land use change and forestry (LULUCF), at 24%, agriculture (17%) and domestic sector (12%). Further details are available in the accompanying annual carbon footprint report (see section 14.1).

6 Annual Risk Report on the Delivery of the Climate Change and Environment Strategy (2024/25)

6.1 The annual risk report looks at progress towards achieving the Council's six targets (set out in paragraph 2.1 above). It provides assurance that targets are on track for delivery. The methodology treats the action plan as risk mitigations to manage the risk of the council not meeting its targets. The residual risk reported is the risk of **not** achieving the target(s). The first progress report using this approach was approved at October 2023's Environment & Green Investment Committee (item 5).

6.2 A summary of the risk change is highlighted below (Table 1, Figure 6). The residual risk in October 2025 has not changes since the last report in 2024.The risk of non-delivery of the council's targets remains 16.

Table 1 Overall Climate Change & Environment Strategy delivery risk.

Pre-CCES Status	2023	October 2024 Status			New Average Programme Status Nov 2025		
Risk	Risk	Severity	Likelihood of Delay Factor	Risk	Severity	Likelihood of Delay Factor	Residual Risk
25	20	6	4	16	4	4	16

Figure 6 Comparison of residual risk between October 2023 and November 2025

6.3 It should be noted that although the overall risk rating remains unchanged, there have been reductions in residual risk for Targets 1 and 6. These improvements are attributed to ongoing efforts to decarbonise heating systems, enhance understanding of the council's fleet, and advance the climate change risk and opportunities assessment for the authority.

6.4 There has also been significant recruitment activity to build capacity across the organisation. New roles have been filled in Fleet Management, Natural Capital, Natural and Historic Environment, and Community Energy. While this additional capacity marks a positive step forward, it is still in the early stages of delivering measurable outcomes. As a result, the benefits are not yet reflected in the current risk analysis.

6.5 Targets 3 and 4 (highlighted in yellow) are newly introduced biodiversity targets, established in early 2025. Consequently, no trajectory data is available at this stage.

6.6 The full Annual Risk Report for 2023-2024 is available in section 14.2 providing further detail on target delivery and next steps.

6.7 From 2026 onwards, reporting periods for the Progress Report and the Carbon Footprint will be aligned. This will be facilitated by the implementation of the new CCES, along with its associated targets and action plan (see Section 8 below).

7 Pathways to target delivery

7.1 To ensure delivery of the council's targets, continued and sustained action is needed. This will build from the successes already delivered and capitalise on the enabling work to increase the council's resource, capacity and skills implemented over the last year.

7.2 Figure 7 illustrates the key actions completed and those that are needed in the future to deliver Target 1. It is important to note that it requires the continued delivery of existing actions (green bars) and new actions (orange bars). In particular, asset rationalisation and measures to support low carbon heating, alongside the Fleet Manger's role to improve and decarbonise the council's vehicles, will be important. Securing of funding and resourcing to facilitate these activities will be a key challenge.

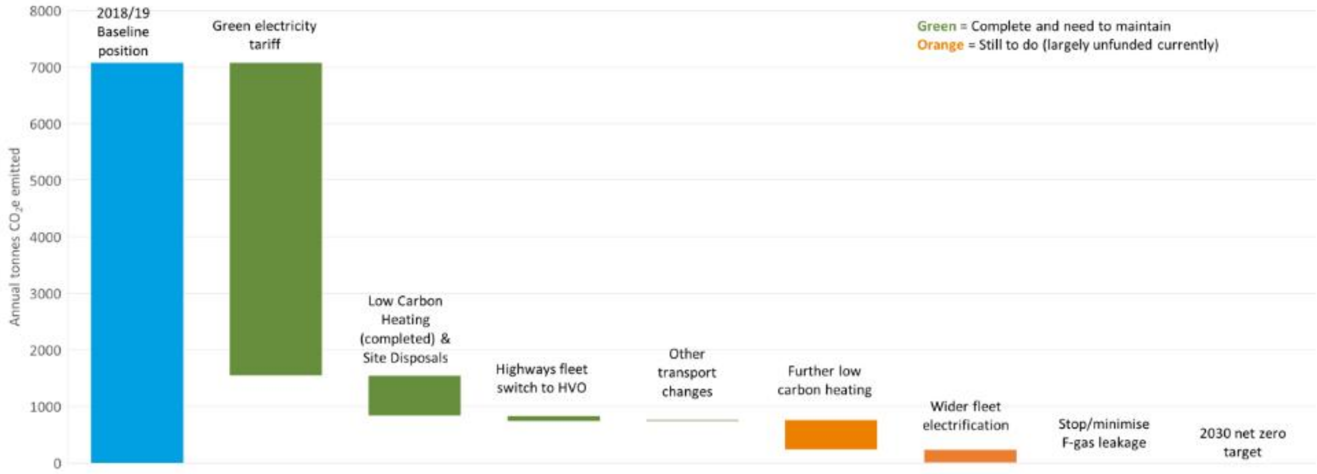

Figure 7 Waterfall diagram - how to achieve net zero by 2030 for scopes 1 and 2

7.3 Figure 8 illustrates the key actions to achieve Target 2. Further actions to reduce Scope 3 emissions have been identified, as shown in the orange bars. This includes continuing to expand and decarbonise maintained schools and highways decarbonisation. An emissions gap exists however, where further reduction actions as yet unidentified are required to reach the Scope 3 target by 2030.

There is some uncertainty as to levels of future construction, however based on current forecasts for upcoming capital projects, these emissions are forecast to decrease further between now and 2030. Should this significantly increase, there will be a larger emissions gap to reach the 2030 scope 3 target. The Council will need to consider its forward capital programmes for schools and infrastructure projects to understand the impact these will have on carbon emissions and incorporate this into pathway planning.

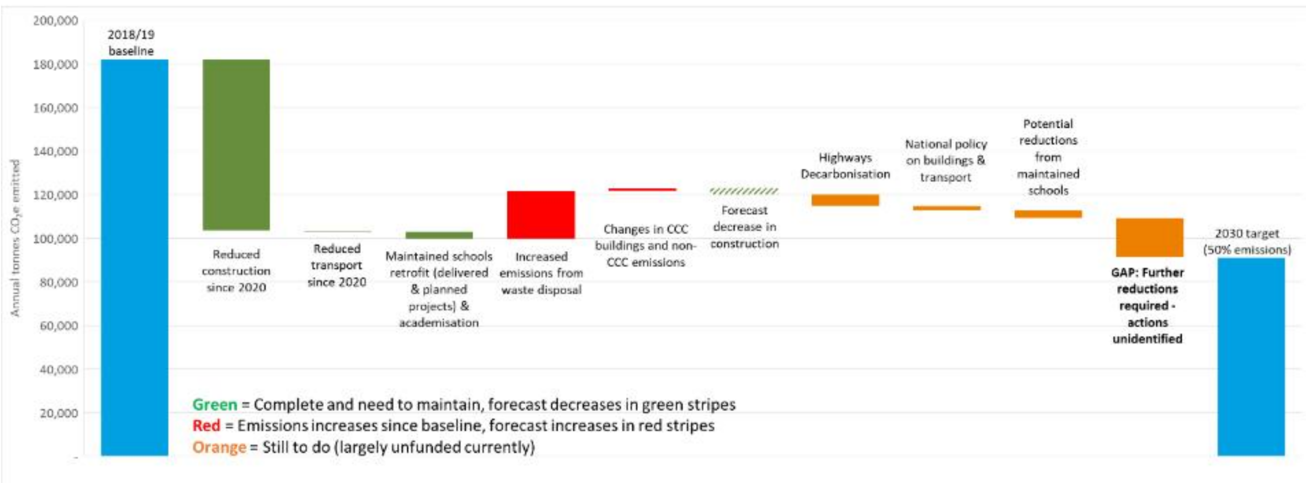

Figure 8 Waterfall diagram - how to achieve a 50% reduction in scope 3 emissions by 2030

7.4 These key next steps will be incorporated into the emerging CCES 2025-2028.

8 A new Climate Change & Environment Strategy for 2026-2028

8.1 The current Climate Change and Environment Strategy (CCES) is approaching its expiry and requires updating to reflect evolving priorities, delivery progress, and forthcoming changes related to Local Government Reorganisation (LGR).

8.2 The Council's overarching ambition to deliver net zero emissions for Cambridgeshire by 2045, while supporting our communities and nature to thrive as the climate changes will be retained. However the actions and targets sitting beneath will be updated.

8.3 The new strategy is proposed to adopt a more focused and delivery-oriented approach, with the following key changes:

Alignment with LGR: The strategy will be reframed to emphasise tangible delivery within short timeframes, while laying the groundwork for collaborative working following LGR outcomes.
Refined Scope: The strategy will narrow its focus to areas where the Council has direct influence and delivery capability. It will clearly set out how the Council can achieve its targets and where targeted collaborations can support residents and drive wider change in areas beyond the Council's direct remit.
SMART Targets: The level of ambition within the current strategy will be retained. However, targets will be refined to ensure they are Specific, Measurable, Achievable, Relevant, and Time-bound, and pro-rated to conclude in 2028. This will also incorporate emerging issues such as council catering and IT emissions.
Nested Documents: The strategy will include an overarching executive summary, supported by three distinct chapters, each forming a stand-alone strategy: Carbon Reduction; Climate Risk and Adaptation; and Nature (delivered through the existing Biodiversity Strategy, approved by this committee in March 2025)

8.4 Timeline and Next Steps: The new strategy is currently in development and is anticipated to be brought to this committee for approval in January 2026.

9 Fens 2100+ Update

9.1 At Full Council in July 2025, it was agreed that an update on the Fens 2100+ programme would be provided as part of this committee report.

9.2 Fens 2100+ Programme is a £9.8m programme to develop a Fens-wide flood resilience investment strategy, hosted by the Environment Agency. The Council has been a key partner since its inception.

9.3 The programme has 3 key strands, encompassing a Baseline Report, Case for Change and Flood Resilience Strategy. The full update is available in section 14.3.

10 Alternative Options Considered

10.1 No other options considered – this report is reporting progress following established and previously approved processes. However, changes are being proposed to target and actions to reflect current position and keep delivery on track.

11 Conclusion and reasons for recommendations

11.1 The report outlines progress in the delivery of the council's climate ambitions and outlines key next steps – including the high-level approach to the new CCES 2025-2028. The recommendations align to this, seeking approvals for the Carbon Footprint and Annual Progress Reports.

12 Significant Implications

12.1 Finance Implications

There are no direct financial implications resulting from the recommendations within this report. However, future delivery of actions will be subject to separate finance and funding decisions and will be considered alongside the Council's other ambitions, service obligations and pressures, as well as keeping within the Council's overall financial limits. Some climate actions can reduce costs (such as those that lead to reduced energy use, reduced use of material resources and reduced waste, and/or mitigate the risk of other future costs), and other actions will not result in a financial pay back.

12.2 Legal Implications

While there are no direct legal implications arising from the recommendations in this report, the Council recognises the evolving legal landscape around climate governance.

The Council will continue to monitor emerging statutory duties and case law developments to ensure legal compliance and resilience in its climate governance.

12.3 Risk Implications

There are no direct risk implications resulting from the recommendations within this report, however progress on the strategy feeds into the overall position for the Risk 12 on the Council's corporate risk register. Progress towards these carbon targets is a key mechanism of monitoring and assuring management of risk 12.

12.4 Equality and Diversity Implications

There are no implications under this category.

12.5 Climate Change and Environment Implications

This report outlines progress towards the council's climate change and environment ambitions. Through setting out progress to date this report highlights where further attention is required to assure delivery, supporting the council's strategic response.

12.6 Procurement implications

There are no implications under this category.

12.7 Resource implications

There are no direct resourcing implications resulting from the recommendations within this report. Through setting out progress to date this report highlights where further attention is required to assure delivery, however future resourcing will be subject to separate decisions.

13 Source Documents

13.1 CCES Progress Report October 2023 (item 5)

[cambridgeshire.cmis.uk.com]

13.2 Previous Annual Carbon Footprint Reports

[climate-change-energy-and-environment/carbon-footprinting-how-big-is-the-problem]

13.3 Full Council July 2025 Meeting Minutes (Item 27b) – Fens 2100+ Motion

[cambridgeshire.cmis.uk.com]

14 Appendices

14.1 Appendix 1 - Annual Carbon Footprint Report 24/25

14.2 Appendix 2 - Annual Risk Report: Climate Change and Environment Targets

14.3 Appendix 3 - CCES Updated Action Plan

14.4 Appendix 4 - Fens 2100+ Update