

## Annual carbon footprint report 2020-21

To: Environment and Green Investment Committee

Meeting Date: 20 January 2022

From: Steve Cox, Executive Director, Place and Economy

Electoral division(s): All

Key decision: No

Forward Plan ref: Not applicable

Outcome: The outcome of this report is that the Committee have a good understanding of the sources of greenhouse gas emissions from Council activities during 2020-21, to enable monitoring of progress against our climate change targets and that this information is available to the public.

Recommendation: a) To accept the annual carbon footprint report as a record of the Council's greenhouse gas emissions for the financial year April 2020 to March 2021

b) To publish the report on the Council's climate change pages on the website

### Officer contact:

Name: Sarah Wilkinson  
Post: Energy Manager  
Email: [sarah.wilkinson@cambridgeshire.gov.uk](mailto:sarah.wilkinson@cambridgeshire.gov.uk)  
Tel: 01223 729157

### Member contacts:

Names: Councillor Lorna Dupré / Councillor Nick Gay  
Post: Chair/Vice Chair  
Email: [lorna.dupre@cambridgeshire.gov.uk](mailto:lorna.dupre@cambridgeshire.gov.uk); [nick.gay@cambridgeshire.gov.uk](mailto:nick.gay@cambridgeshire.gov.uk)  
Tel: 01223 706398

## 1. Background

- 1.1 In May 2020, Full Council approved the Council's Climate Change and Environment Strategy and associated Action Plan. The Strategy contains a commitment to a number of targets, including reducing our 'scope 1' (direct) emissions by 50% by 2023 (compared to 2018 levels), reducing our 'scope 3' (indirect) emissions by 50.4% by 2030, and to deliver Government's net zero carbon target for Cambridgeshire by 2050. In order to monitor progress against these targets, it is necessary to measure the Council's carbon footprint each year.
- 1.2 The Action Plan commits the Council to publishing annual carbon footprint calculations to demonstrate progress, and also includes additional agreed actions to identify ways to improve the data provision for carbon footprinting, in order to enable greater accuracy, fill gaps and further expand the scope of what we can report on in future.
- 1.3 Data has now been gathered on the Council's greenhouse gas (GHG) emissions for the financial year April 2020 to March 2021.
- 1.4 During the year 2020-21, the COVID-19 global pandemic changed ways of working for many people, in particular reducing travel. This has had a significant impact on the associated GHG emissions.
- 1.5 The full findings are presented in the attached report (Appendix A). As well as presenting the Council's own organisational carbon footprint, the report also looks, separately, at the carbon footprint of the whole county of Cambridgeshire.

## 2. Main Issues

- 2.1. County-wide emissions. Carbon dioxide (CO<sub>2</sub>) emissions from the county of Cambridgeshire in 2019 (the most recent year of data available) were just under 6.1 million tonnes. This 6.1m tonnes does not include emissions of other, non-CO<sub>2</sub> GHGs such as methane (CH<sub>4</sub>) or nitrous oxide (N<sub>2</sub>O), which are not broken down by local authority area in the published statistics. Across the whole UK, CO<sub>2</sub> accounts for around 80% of all GHG emissions, after taking into account the Global Warming Potential (GWP) of different GHGs.
- 2.2. This dataset (of CO<sub>2</sub> emissions by local authority area) has been revised significantly since the previous year's publication, with the largest differences being from methodology improvements in the Land Use, Land Use Change and Forestry (LULUCF) sector. In Cambridgeshire, CO<sub>2</sub> emissions per capita and per km<sup>2</sup> area were considerably higher than the national average, with much of the excess due to the LULUCF sector. Excluding LULUCF, Cambridgeshire's CO<sub>2</sub> emissions were under 4.1 million tonnes. Aside from LULUCF, the trend in Cambridgeshire is reflective of the national trend: emissions slowly and steadily declining over the last few years, due mainly to the decarbonisation of the electricity grid.
- 2.3. Emissions of other (non-CO<sub>2</sub>) GHGs from the county, such as methane or nitrous oxide, have been estimated based on combining UK emissions data with Cambridgeshire's land area, population and CO<sub>2</sub> emissions data for each sector. The results of these calculations put these emissions of other GHGs at 1.214m tonnes CO<sub>2</sub> equivalent (CO<sub>2</sub>e) in 2019.

- 2.4. The non-CO<sub>2</sub> emissions are then added to the CO<sub>2</sub> emissions to give the total GHG emissions for the geographical area of Cambridgeshire as 7.3 tonnes CO<sub>2</sub>e.
- 2.5. Council's own emissions. The total GHG emissions for the Council's own operations for 2020-21 is 113,477 tonnes CO<sub>2</sub>e. This is 40% less than the previous year, with the majority of the difference due to a reduction in construction activity during the 20-21 year, and reduced activity due to the impacts of COVID-19. This will therefore not be a permanent reduction.
- 2.6. In gathering the data for this report, some gaps were identified. The biggest gaps are in our 'scope 3' (indirect) emissions, which accounts for the largest share, but is also where we have the least control, since much of the required data lies with other organisations.
- 2.7. Our Scope 1 (direct) emissions were 1,734 tonnes CO<sub>2</sub>e. This is a 14% reduction compared to the previous year. Gas usage in our buildings and resulting emissions was reduced by 20% and oil reduced by 30%. Part of this reduction was due to the mild winter in 2020-21 meaning reduced need for heating.
- 2.8. Further reductions in scope 1 emissions were seen in our fleet transport, as people made fewer journeys during the COVID-19 pandemic, with an 82% reduction in mileage in our pool cars, 48% reduction in fuel used for our social and education transport fleet, 39% less fuel used in other fleet cars and vans, and a 19% reduction in fuel used for our highways maintenance and gritting fleet, which combined with a switch to HVO biofuel for some vehicles, reduced the resulting emissions from fleet transport by 40% compared to the previous year.
- 2.9. Emissions of fugitive F-gases (from air conditioning units) are also included in this total under scope 1. We have been unable to obtain the data for 2020-21, but have estimated the emissions based on previous years, at 24 tonnes CO<sub>2</sub>e, which is a very tiny proportion of our emissions.
- 2.10. Scope 2 (purchased electricity) emissions were 4,388 tonnes CO<sub>2</sub>e, a 23% reduction from the previous year. Emissions from electricity for street lighting were 20% lower this year, due to both a 12% reduction in the amount of electricity used, and the national grid getting greener with more electricity generated from renewable sources. Emissions from electricity for our buildings were also 8% lower, despite a 1% increase in electricity usage in buildings. The very small increase in usage could possibly be due to the increased requirement for ventilation during the COVID-19 pandemic.
- 2.11. Altogether, our scopes 1 and 2 emissions amounted to 6,122 tonnes CO<sub>2</sub>e (gross, before any reductions or offsets). This is 20% lower than the previous year. Net GHG emissions for scopes 1 and 2, after taking into account purchasing of 100% renewable electricity, were reduced to 1,734 tonnes CO<sub>2</sub>e. The largest share of this remains from gas to heat our buildings.
- 2.12. Scope 3 (indirect) emissions remain by far the largest share, accounting for 107,355 tonnes CO<sub>2</sub>e, which is 95% of the total known emissions.
- 2.13. Emissions from waste, primarily due to our role as the Waste Treatment Authority for household waste disposal, were the largest share of emissions in 2020-21, at 39,192 tonnes CO<sub>2</sub>e. This is 35% of all CCC known emissions for that year. Most of this was from

landfill.

- 2.14. Emissions from energy use in maintained schools was 7,449 tonnes CO<sub>2</sub>e, a 14% reduction since the previous year.
- 2.15. Transport emissions (all scopes) were down by 62% to 4,218 tonnes CO<sub>2</sub>e. Business travel emissions were down by 43%, and employee commuting emissions down by 78%, largely due to reduced travel during the COVID-19 restrictions. Highways transport emissions were also down by 27%.
- 2.16. Emissions of embodied carbon from construction projects (from the manufacture of materials used) were significantly reduced compared to the previous year, at only 4,979 tonnes CO<sub>2</sub>e, which is a 95% reduction compared to the 95,603 tonnes in the previous year. Emissions are expected to be relatively low again in 2021-22 as few projects are on site. However, lots of projects are due to be starting in 2022-23 so associated carbon emissions levels will rise again in future. The temporary reduction this year is due to a smaller programme of works and less use of carbon-intensive products that year based on what type of works were happening at that time, as the majority of projects completed in summer 2020 for the period 2020-21, and few projects were on site for a substantial part of the financial year.
- 2.17. Highways materials for new roads, maintenance and resurfacing works accounted for 11,980 tonnes CO<sub>2</sub>e (which is 10% of the council's total) – this is a 5% reduction from the previous year.
- 2.18. Emissions from agriculture were estimated at 14,511 tonnes CO<sub>2</sub>e, which is similar to the previous year.
- 2.19. Emissions from land use, land use change and forestry (LULUCF) from County Council owned land have been included this year for the first time. These were an estimated 24,490 tonnes CO<sub>2</sub>e (22% of all our emissions).
- 2.20. Some other scope 3 emissions are not included in this report as we do not have the data to calculate them. This is a problem common to many organisations, and for that reason it is common for organisations to report on scopes 1 and 2 only. However, for the purposes of greater transparency and accuracy, we have also reported all scope 3 emissions where known.
- 2.21. Outside of scopes – emissions from biological CO<sub>2</sub> - were 181 tonnes CO<sub>2</sub>e. This is from HVO biofuel for some highways vehicles.
- 2.22. Further details of all these emissions are in our annual carbon footprint report – Appendix A (see separate document).

### 3. Alignment with corporate priorities

- 3.1 Communities at the heart of everything we do  
There are no significant implications for this priority.
- 3.2 A good quality of life for everyone

There are no significant implications for this priority.

- 3.3 Helping our children learn, develop and live life to the full  
There are no significant implications for this priority.

- 3.4 Cambridgeshire: a well-connected, safe, clean, green environment  
Monitoring of greenhouse gas emissions enables the council to keep track of progress against targets of the Climate Change and Environment Strategy, helping to create a greener Council.

- 3.5 Protecting and caring for those who need us  
There are no significant implications for this priority.

## 4. Significant Implications

- 4.1 Resource Implications  
There are no significant implications within this category.

- 4.2 Procurement/Contractual/Council Contract Procedure Rules Implications  
There are no significant implications within this category.

- 4.3 Statutory, Legal and Risk Implications  
There are no significant implications within this category.

- 4.4 Equality and Diversity Implications  
There are no significant implications within this category.

- 4.5 Engagement and Communications Implications  
Publishing the Council's annual carbon footprint report on our website helps to communicate the Council's environmental impacts and be transparent with the public regarding our greenhouse gas emissions.

- 4.6 Localism and Local Member Involvement  
There are no significant implications within this category.

- 4.7 Public Health Implications  
There are no significant implications within this category.

- 4.8 Environment and Climate Change Implications on Priority Areas:

- 4.8.1 Implication 1: Energy efficient, low carbon buildings.  
Positive/neutral/negative Status: Positive  
Explanation: Monitoring and reporting GHG emissions helps to focus on target areas for emissions reductions.

- 4.8.2 Implication 2: Low carbon transport.  
Positive/neutral/negative Status: Positive  
Explanation: Monitoring and reporting GHG emissions helps to focus on target areas for emissions reductions.

- 4.8.3 Implication 3: Green spaces, peatland, afforestation, habitats and land management.  
Positive/neutral/negative Status: Positive  
Explanation: Monitoring and reporting GHG emissions helps to focus on target areas for emissions reductions.
- 4.8.4 Implication 4: Waste Management and Tackling Plastic Pollution.  
Positive/neutral/negative Status: Positive  
Explanation: Monitoring and reporting GHG emissions helps to focus on target areas for emissions reductions.
- 4.8.5 Implication 5: Water use, availability and management:  
Positive/neutral/negative Status: neutral  
Explanation: no impact
- 4.8.6 Implication 6: Air Pollution.  
Positive/neutral/negative Status: neutral  
Explanation: no direct impact, although reducing GHG emissions can, in some cases, also reduce air pollution.
- 4.8.7 Implication 7: Resilience of our services and infrastructure, and supporting vulnerable people to cope with climate change.  
Positive/neutral/negative Status: neutral  
Explanation: no direct impact

Have the resource implications been cleared by Finance? Yes  
Name of Financial Officer: Sarah Heywood

Have the procurement/contractual/ Council Contract Procedure Rules implications been cleared by the Head of Procurement? Yes  
Name of Officer: Henry Swan

Has the impact on statutory, legal and risk implications been cleared by the Council's Monitoring Officer or LGSS Law? Yes  
Name of Legal Officer: Fiona McMillan

Have the equality and diversity implications been cleared by your Service Contact? Yes  
Name of Officer: Elsa Evans

Have any engagement and communication implications been cleared by Communications? Yes  
Name of Officer: Bethan Griffiths

Have any localism and Local Member involvement issues been cleared by your Service Contact? Yes  
Name of Officer: Sheryl French

Have any Public Health implications been cleared by Public Health? Yes  
Name of Officer: Iain Green

If a Key decision, have any Environment and Climate Change implications been cleared by the Climate Change Officer?

Yes

Name of Officer: Emily Bolton

## 5. Source documents

### 5.1 Source documents

- a) Cambridgeshire County Council Climate Change and Environment Strategy
- b) UK greenhouse gas emissions national statistics
- c) UK local authority carbon dioxide emissions national statistics
- d) UK Government carbon conversion factors for company reporting

### 5.2 Location

- a) <https://www.cambridgeshire.gov.uk/residents/climate-change-energy-and-environment/climate-change-and-environment-strategy>
- b) <https://www.gov.uk/government/collections/final-uk-greenhouse-gas-emissions-national-statistics>
- c) <https://www.gov.uk/government/collections/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics>
- d) <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

## Appendix A – Full Report

See separate document attached