REPORT STRATEGIC SCRUTINY COMMITTEE

Date of Meeting: 5 December 2024

Report of: Strategic Director of Place

Title: Exeter's Greenhouse Gas Emissions 2022

Is this a Key Decision?

No

Is this an Executive or Council Function?

No

1. What is the report about?

1.1 This report sets out the 2022 greenhouse gas (GHG) emissions for the city of Exeter, and progress made since 2019, the first year this was reported on. The publication year of territorial GHG emissions for local authority areas lags the data year by 2 years, so the most recent data available is for 2022.

1.2 The GHG emissions for Exeter are reported under the following categories:

- **Power:** emissions resulting from electricity consumption.
- **Buildings:** emissions resulting from fuel combustion in the domestic, commercial, and public administration sectors.
- **Industry:** emissions as categorised from industry in the government local authority CO2 dataset [5], including large industrial installations but excluding electricity (reported under power).
- **Transport:** emissions from road and rail vehicles (emissions from electric vehicles are also reported under power; emissions from aviation and shipping have not been included due to lack of data).
- **Agriculture:** emissions from fuel use (excluding electricity), livestock, and arable operations in the sector.
- **Land use (including land use change and forestry):** emissions are produced by biomass removal and are removed (sequestered) by biomass growth. Draining or wetting organic soils, soil mineralisation, and fertilizer application in the forestry industry are also included (however, fertilizer use in agriculture is reported under agriculture).
- **Waste:** emissions from the disposal of solid waste and wastewater.
- **F-gases:** emissions from the consumption of fluorinated gases.

1.3 This report and the GHG inventory highlights the challenges in reducing place based GHG emissions and some of the work undertaken to mitigate against climate change (actions taken to reduce or remove GHG emissions). Adaptation (adjustments needed from individuals, communities and businesses countries in response to climate change) will play a greater role in activity going forward.

2. Recommendations:

2.1 Members note the latest Exeter GHG inventory report and support the work being undertaken to reduce city wide GHG emissions, led by the Programme Manager City Wide Net Zero.

2.2 From data provided from the University of Exeter, the Centre for Energy and the Environment report (Appendix 1), members support the priority areas of focus going forward, which supports our communities and business community:

- Power
- Buildings
- Industry
- Transport
- Waste

3. Reasons for the recommendation:

3.1 In 2019 a climate emergency was declared in Exeter and pledged to work towards net zero by 2030. The Exeter GHG inventory provides an update on progress made in reducing GHG across the city.

3.2 The Programme Manager City Wide Net Zero focus on sectors with the highest GHG emissions (as above) to enable the biggest impact on our GHG inventory.

4. What are the resource implications including non financial resources

4.1 £1million was committed from earmarked reserves for net zero activity, of which £800,000 was allocated for City Council Activity and £200,000 for City Wide activity. £155,513 remains from City Wide activity and has been committed to the appointment of a temporary Programme Manager, as well as project activity.

4.2 The City Wide Net Zero Programme Manager was appointed August 2024 for two years, these costs have been included below. Project activity is being drawn up, which supports the priority areas as listed in 2.2 and the delivery of the Net Zero Exeter Action Plan.

City Wide Net Zero	2024/25	2025/26	2026/27
Associated salary costs	£20,990	£63,323	£21,104
Project activity (tbc)	£10,000	£40,096	£0
TOTAL	**£30,990**	**£103,419**	**£21,104**

5. What are the legal aspects?

5.1 Section 1 of the Climate Change Act 2008 states that it is the duty of the Secretary of State to ensure that the net UK carbon account for the year 2050 is at least 100% lower than the 1990 baseline. The target was originally 80% and was increased to 100% by the Climate Change Act 2008 (2050 Target Amendment) Order 2019.

5.2 Exeter City Council has declared a climate emergency and set the target of achieving net zero by 2030.

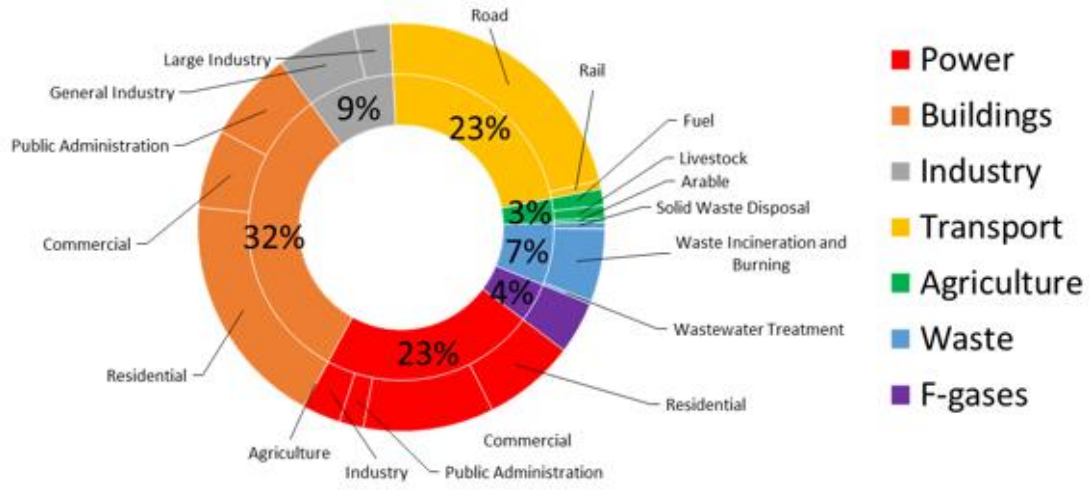
6. Exeter's Greenhouse Gas Report 2024

6.1 Since the Programme Manager for City Wide Net Zero was appointed, the University of Exeter's Centre for Energy and the Environment (SWEEG) has updated the city wide GHG emissions inventory. A copy of the Exeter Greenhouse Gas Report 2024 is located within Appendix 1.

6.2 As part of the University of Exeter's commitment to the Civic University Agreement, the University kindly funded the Exeter Greenhouse Gas Report 2024 to be produced – our thanks and appreciation goes out to them.

6.3 Exeter's GHG emissions decreased by 45 kt CO2e between 2019 the year of the last GHG inventory update and 2022. GHG emissions reduced from 511 kt CO2e in 2019 to 466 kt CO2e in 2022 – **which is equates to a 9% reduction**. The majority of the decline reflects the continued decarbonisation of the power sector through national renewable electricity generation.

6.4 The sources of Exeter's GHG emissions are illustrated in illustration 1 below.



6.5 The methodology has been revised and additional data included. The revised total GHG emissions figure for 2019 is 511 kt CO2e, which is an increase of 35 kt CO2e or 7%. The underlying data sources often include revisions to the historical time series data when data are released.

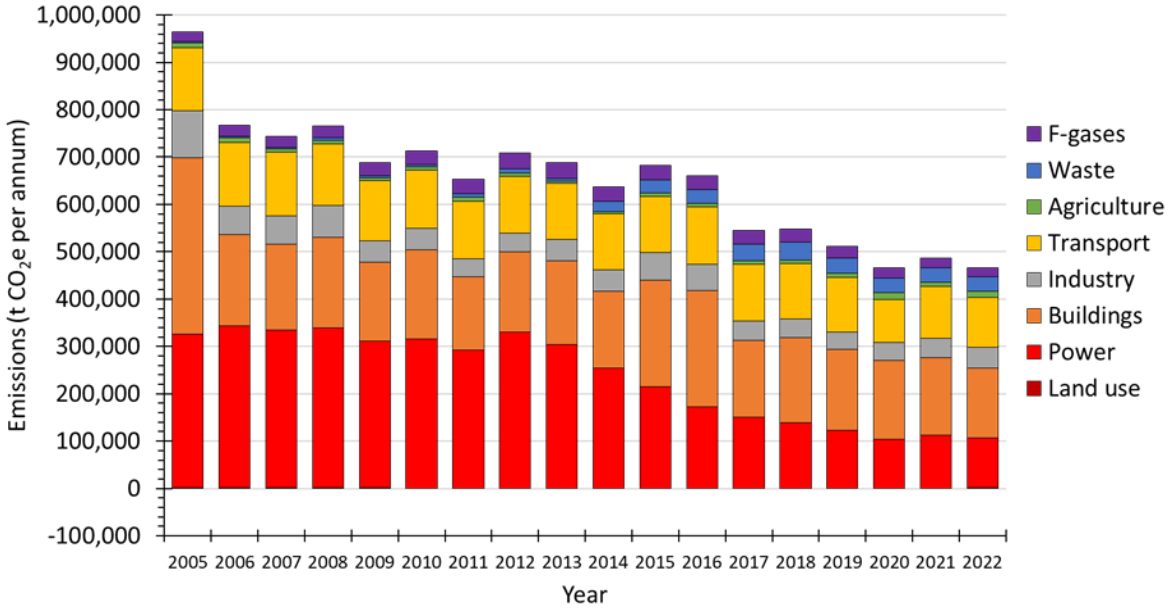
6.6 Due to data revisions, the greatest absolute change in the 2019 GHG emission has been for the industry sector, with an increase of 10kt CO2e or 39%.

6.7 Since 2019, agriculture experienced the largest percentage change (774%) due to the methodology change, which now includes methane and nitrous oxide

emissions, providing more accurate estimates. However, agricultural emissions remain relatively insignificant at 3% of total GHG emissions.

6.8 Land use emissions have also suffered a large percentage change (113%) by considering non-CO2 emissions. There has been a 4kt CO2e decrease (-15%) in reported fluorinated gas emissions due to the methodology and data revisions. Emissions from all other sectors changed by less than 10% due to methodology revisions.

6.9 The illustration below shows revised GHG emissions, along with the extended historical data, the illustration clearly shows the impact of grid decarbonisation on the city's GHG emissions.



6.10 Annual changes in emissions from 2021 to 2022 are shown in the table below. The greatest year-on-year decrease in 2022 has been in the buildings and power sectors, with a decline of 15 ktCO2e (-9%) and 6 kt CO2e (-6%), respectively. Activity in the building sector was impacted by the warmer temperatures and higher energy prices in 2022, resulting in lower fuel demands in both domestic and commercial buildings. The reduction in emissions from the power sector is attributable to the decarbonisation of the grid through increased use of renewables.

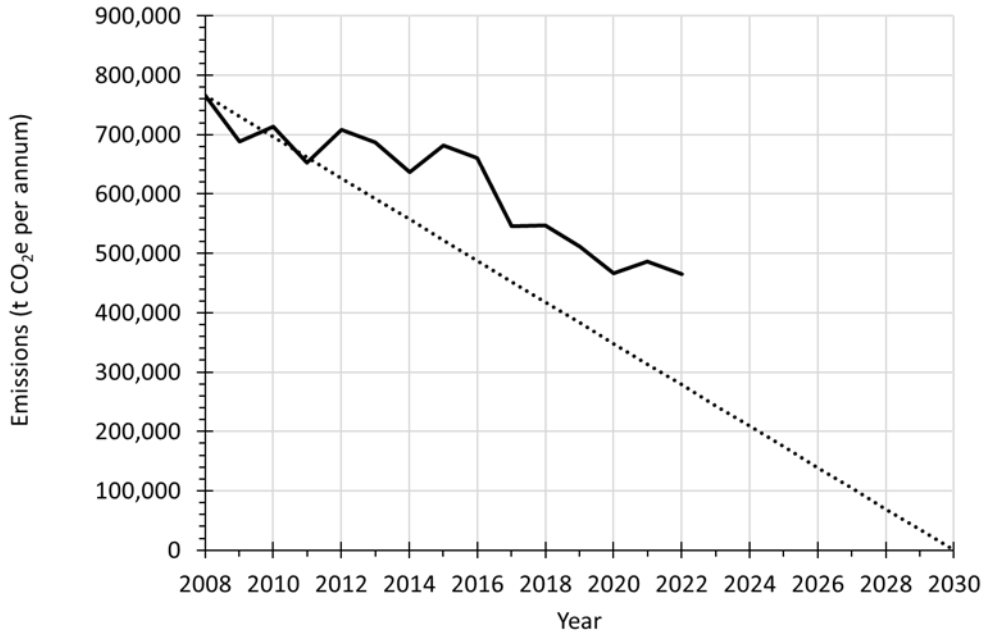
	2021	2022	Change achieved 2021 to 2022	
Sector	t CO_2e	t CO_2e	t CO_2e	%
Power	111,855	105,418	-6,437	-6%
Buildings	163,826	148,705	-15,121	-9%
Industry	41,240	42,777	1,538	4%
Transport	109,421	106,170	-3,251	-3%
Agriculture	9,009	12,054	3,046	34%
Land use	817	953	136	17%
Waste	30,449	30,529	79	0%
F-gas	20,347	19,235	-1,112	-5%
Total	486,963	465,841	-21,122	-4%

6.11 Transport has seen a slight decrease in emissions of 3 kt CO2e (-3%). After the fall in 2020 that resulted from COVID-19 restrictions, transport emissions have returned to pre-pandemic levels, with slight decreases in emissions because of lower fuel consumption and higher fuel efficiency.

6.12 Agriculture has seen a rise in emissions of 3 kt CO2e (34%) likely due to an increase in emissions from agricultural machinery. Other sectors have seen annual changes of between 0% and 5%, except for land use (which is now a net source and has increased by 17% since 2021).

6.13 The illustration below shows the trajectory in reducing GHG emissions from all sectors combined in Exeter since 2008. Overall, progress falls short of delivering net zero in 2030. After the bounce back from lower emissions during the COVID-19 pandemic in 2020, emissions have returned to the rate of decline of the 2016 to 2019 trend.

6.14 The illustration below highlights the significant challenges places like Exeter face in reducing place based GHG emissions and the requirement for a city-wide approach to be taken.



6.15 Since the Programme Manager City Wide Net Zero was appointed in August 2024, the officer has been reviewing a number of areas of work, as well as introducing themselves to a number of organisations across the city.

6.15.1 **Partners, business and community engagement:** a series of meetings have been attended to build relationships and explore collaboration opportunities at organisations across the city including: Exeter Community Energy; University of Exeter Community of Practice groups (Adaptation and Doughnut Economics); University of Exeter Employer Skills; Active Devon; Exeter College Green Construction Advisory Panel (GCAP); Exeter College Future Skills centre;

InExeter; Global City Futures; Devon Wildlife Trust; Devon Climate Emergency Tactical Group, as well as sustainability leads from other Devon and South West local authorities. A database of stakeholders has been developed, and further engagement is planned over the next six months.

6.15.2 Current Projects supported:

- 1Energy District Heating Network: attending update meetings and coordinating City Council responses and actions as required.
- Secure Bike Hub project: working collaboratively with colleagues across City Council to develop plans for providing secure and covered bike storage at work locations and HRA housing sites; working collaboratively with colleagues at Devon County Council, exploring opportunities and approaches for developing secure and covered bike storage in the city centre and residential areas;
- Devon County Council's transport and travel consultations: coordinating and collating the City Council's response to the Devon and Torbay Local Transport Plan 4 and the County Wide LCWIP.
- Supporting a CIC's micro-forest tree planting initiative at an Exeter school with potential for wider role out across Exeter, facilitating the Portfolio Holder's participation in a tree planting event and promotion on City Council communications channels.
- Exeter City Council Transport Working Group: attending meetings and progressing relevant city wide actions arising from this group.

6.15.3 **University of Exeter Civic University Agreement (CUA) Sustainability group:** a new advisory group has been established and comprises of sustainability leaders from CUA signatories, chaired by the City Council. The purpose of the group is to support the delivery of the Exeter CUA Mission 2: *Innovate towards a sustainable low-carbon economy for the City of Exeter*. The Advisory Group meets quarterly and identifies areas of "common ground" where it is expected that joint working will add value to the core mission of each institution. This will include putting evidence into practice around transition to net zero and the wider environmental, biodiversity and health benefits.

6.15.4 **Devon Climate Emergency:** this group offers opportunities for working collaboratively and in partnership with other attendees from across a range of areas to address climate challenges with upcoming workshops focusing how to work together more closely to enhance progress.

6.15.5 **Exeter Net Zero 2030 Plan:** actions are being reviewed with progress on each action being added to a tracking document. Relevant actions from the Devon Carbon Plan have also been included, to avoid duplication and that relevant actions are also addressed and actioned. Monitoring indicators for actions and the priority areas are being researched and will be presented at our next six monthly update to Strategic Scrutiny.

7. How does the decision contribute to the Council's Corporate Plan?

7.1 This report, the work of the Programme Manager City Wide links directly to the Exeter Vision and a number of strategic priorities.

Exeter Vision	Innovative & Analytical City	A range of data sets are being developed to monitor a reduction of city wide GHG emissions to support residents and businesses to reduce their own GHG emissions
	Healthy & Inclusive	Projects to be developed to provide clean, secure and affordable energy to eliminate fuel poverty
	The Most active city in the UK	Projects to be developed to support active and sustainable travel for residents and commuters into Exeter
	Liveable & connected	Commercial and residential properties are energy efficient and built to the best possible standard
	A leading sustainable city	Communications plan to be developed to raise the awareness of the progress made in the city, highlighting good practice from residents and the business and community
	Culture	Advice and support will be provided to the City's cultural venue in how they reduce their GHG emissions

Corporate Plan	Prosperous Local Economy	Activity to City Council are supporting the new Innovation Hub, led by the University of Exeter
	Healthy & Active City	Working in partnership with Live & Move in developing sustainable travel options and low traffic neighbourhoods
	Housing & Building Great Neighbourhoods & Communities	Working with the Local Plan team in progressing with the Exeter Plan, feedback provided on the Climate Change chapter. The team now provide commentary on major planning applications
	Net Zero Carbon City	Activity will Focus on reducing city wide carbon emission, highlighting best practice
	Thriving Culture & Heritage	Advice and support will be provided to cultural venues in how they reduce their GHG emissions, working alongside the net zero team

8. What risks are there and how can they be reduced?

8.1 This report provides an overview of the current state of play for the city of Exeter. A linear decline in emissions from the projected 2024 value to zero in 2030 requires an annual reduction of 74 kt CO2e, 16% of 2022 emissions, for each of the six years to 2030. This amount is 7.4 times the reduction rate of the current trend. The overall trajectory remains downward, albeit at a slowing pace. Cost of living and the squeeze on businesses and residents is very real.

8.2 The financial cost to reduce city wide GHG emissions will be significant, at present the team is unable to provide accurate financial costs. There will be the requirement to explore opportunities with private investors, energy companies, transport

providers and for them to then work collaboratively across the city. There is a risk there won't be the appetite or funding to achieve significant change across the city.

8.3 There will be a six monthly review of work undertaken (linked to reporting back to Strategic Scrutiny), to ensure progress is being made to reduce city wide GHG emissions and that activity links back to priority areas highlighted. Ownership of citywide projects will be challenging, as the City Council has limited scope and powers. Significant projects will require a number of organisations coming together, with the City Council playing the role of facilitator and coordinator.

8.4 A regular agenda item has been added to OMB for Heads of Service to discuss City Wide Net Zero, to address barriers in reducing GHG emissions and lessons learnt across the city.

9. Equality Act 2010 (The Act)

9.1 An EQIA was undertaken in reviewing the Exeter GHG Inventory report 2022. The EQIA identified the following people with protected characteristics that may be potentially impacted:

- Race & Ethnicity
- Disability
- Age
- Pregnancy & Maternity

9.2 For each project Exeter City Council leads on in the delivery, an EQIA will be undertaken to ensure no project discriminates against any protected characteristic.

10. Carbon Footprint (Environmental) Implications:

10.1 This report and supporting GHG inventory provides an overview of the current levels of GHG emissions across the city of Exeter. It raises the financial and technical challenges in reducing city wide GHG emissions. The next update to Strategic Scrutiny, will provide more detail on progress made since 2019, as well as a thorough review of the Net Zero Exeter 20230 action plan.

11. Are there any other options?

11.1 There is the option of the City Council not committing resources to this important area of work, which would result in a lack of co-ordination, strategic direction and delivery, as is currently the case.

11.2 The Programme Manager City Wide Net Zero will be researching external funding opportunities to delivering projects of scale, as well as projects that support small scale change.

Strategic Director Place

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Local Government (Access to Information) Act 1972 (as amended)

Background papers used in compiling this report:-

None

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