

Leicester
City Council

Leicester City Council

Carbon Footprint Statement for 2021/22

January 2023

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1. Executive Summary

Leicester City Council is committed to reducing carbon emissions from its own estate and operations and has set itself an ambition to reach net zero emissions by 2030/31.

Each year a carbon footprint is calculated for the council, which presents the greenhouse gas emissions the council is responsible for, expressed as carbon dioxide equivalent (CO₂e). The carbon footprint calculated for the baseline year of 2008/09 was 46,836 tonnes CO₂e and included all scope 1 and scope 2 and some scope 3 emissions. The different emission scopes are explained in the corresponding sections of the report.

At the end of the 2021/22 financial year emissions stood at 16,852 tCO₂e. This represents:

- a reduction of 29,984 tCO₂e (64%) from the 2008/09 baseline
- an increase of 411 tCO₂e (2.5%) from 2020/21

Further details of the changes in emissions compared to both the 2008/09 baseline year and to 2020/21 are provided in the later sections of the report covering each emissions scope.

Wherever possible the reasons behind changes to the footprint have been provided in this report. In particular it should be noted that the covid-19 pandemic and associated public health measures have had a major impact on figures over the last two financial years. This includes a much larger than usual annual fall in emissions in 2020/21 during pandemic restrictions, followed by an increase in 2021/22 as restrictions were eased.

2. Introduction

In February 2019 Leicester City Council became one of the first UK local authorities to declare a Climate Emergency. As part of the council's response to the Climate Emergency an ambition was declared to achieve net zero carbon emissions for the city and the council by 2030. This report presents progress towards this ambition within the council's own operations.

Greenhouse gas emissions from human activity are a key driver of dangerous climate change, which represents a huge risk to both the city of Leicester and to humanity and

biodiversity worldwide. The council is committed to play its part in rapidly reducing the emissions from its operations, as well as helping residents and organisations in the city to do the same.

In order to measure progress in reducing its emissions, Leicester City Council monitors emissions from each area of its activities. The emissions are broken down into the three scopes set out by the Greenhouse Gas Protocol, which are explained in section 5 of this report. The report sets out the council's carbon footprint for the 2021/22 financial year, and compares them to a baseline year of 2008/09, as well as providing figures for the intervening years.

Leicester City Council is committed to a wide range of actions to reduce its environmental impact and make the city more sustainable. The council has produced a Climate Emergency Strategy and a Climate Emergency Action Plan, outlining a wide-ranging programme of action to drive the move towards net zero carbon in the council and city. This can be viewed at: <https://www.leicester.gov.uk/your-council/policies-plans-and-strategies/environment-and-sustainability/climate-emergency/>

3. Company Information

This carbon footprint statement is for Leicester City Council, City Hall, 115 Charles Street, Leicester, LE1 1FZ.

Leicester City Council is the unitary authority responsible for providing council services to people and organisations within Leicester, a city of over 350,000 residents. Its responsibilities include education, highways, transport planning, passenger transport, social care, housing, libraries, leisure and recreation, environmental health, waste collection and disposal and planning. Further information about the council can be found on its website here: <https://www.leicester.gov.uk/your-council/about-us/>

4. Reporting Period

Carbon emissions are measured over the financial year, therefore the period covered in this report is 1st April 2021 to 31st March 2022.

5. Reasons for Change in Emissions

Leicester City Council's operational carbon emissions have risen somewhat in 2021/22, and this is the first time they have not fallen since 2012/13. The main reason for this increase is the ongoing effects of the Covid-19 pandemic. Emissions fell much more than usual in 2020/21 during the local lockdowns as many staff moved to home working, buildings were closed, and many services delivered remotely. As such, it was expected that emissions would rise again to some extent as activity increased again in 2021/22 as restrictions eased.

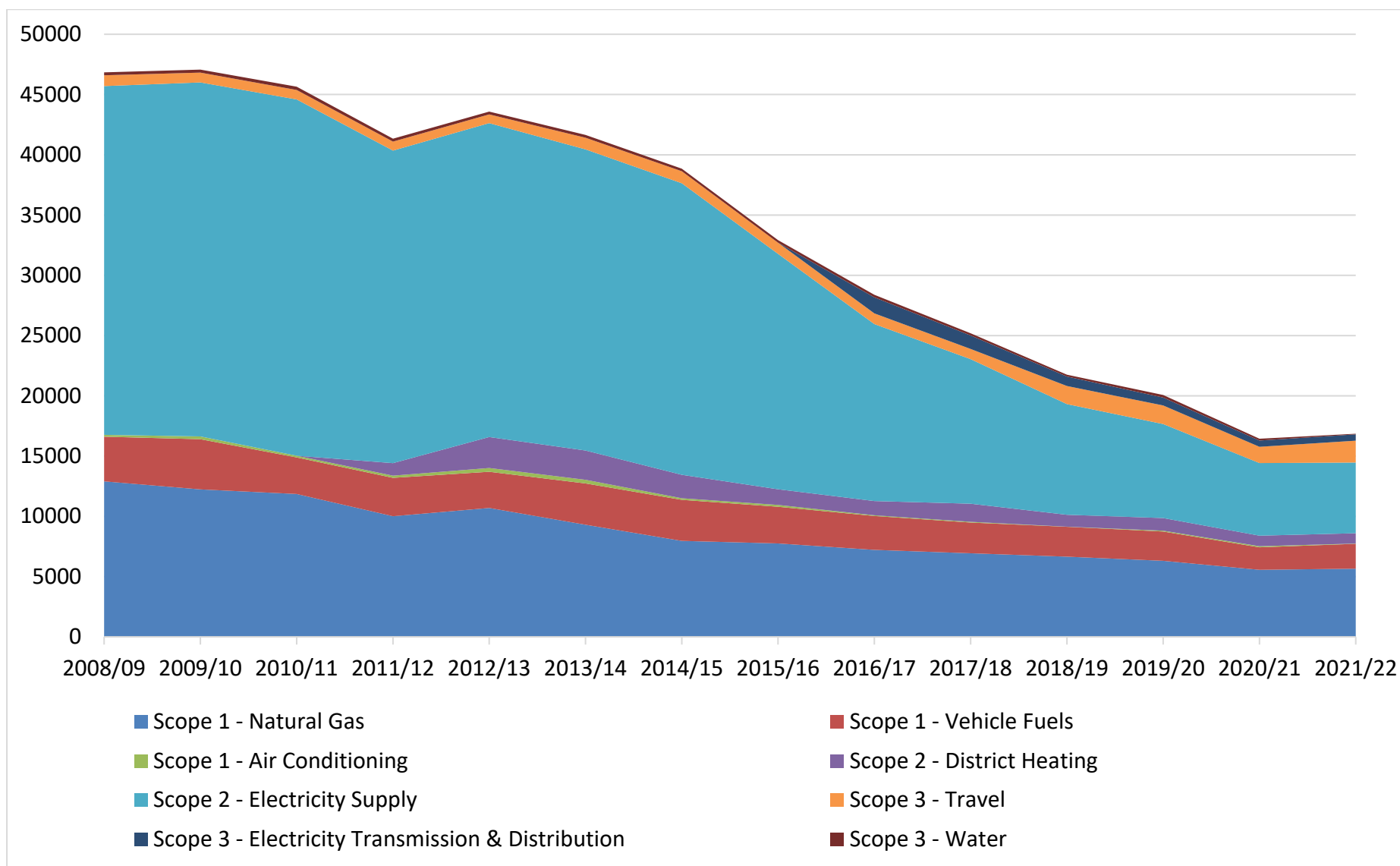
Whilst emissions have risen by 2.5% (411 tCO₂e) against 2020/21, they remain 16% lower (3,221 tCO₂e) than the last pre-pandemic year of 2019/20. The council's emissions also remain a long way below those in the baseline year of 2008/09, having fallen by 64% (29,984 tCO₂e). Emissions per full-time equivalent staff member (FTE) have also increased in 2021/22 to 3.4 tCO₂e per employee, from 3.2 tCO₂e per employee in 2020/21, although they are significantly lower than the 2008/09 baseline figure of 7.2 tCO₂e.

Table 1 below shows an overall summary of emissions from 2008/09 to the current year, including emissions per FTE staff member. Within this report emissions are analysed and discussed under scopes 1, 2 & 3, as set out by the Greenhouse Gas Protocol. Graph 1 shows Leicester City Council's overall carbon emissions since 2008/09, split between the main emissions sources within each scope. Details of how these emissions have changed over time, and a more detailed breakdown of each scope is provided below.

Table 1 – Leicester City Council’s Greenhouse Gas Emissions (tonnes of CO₂e) from 2008/09 to 2021/22

Category	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22
Total Gross Emissions	46,836	47,067	45,647	41,333	43,585	41,652	38,842	32,917	28,388	25,187	21,756	20,073	16,441	16,852
Carbon Offsets	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Green Tariffs	Not calculated													
Net Emissions	46,836	47,067	45,647	41,333	43,585	41,652	38,842	32,917	28,388	25,187	21,756	20,073	16,441	16,852
Change from 08/09 baseline	n/a	+231	-1,189	-5,503	-3,251	-5,184	-7,994	-13,919	-18,448	-21,649	-25,080	-26,763	-30,395	-30,215
Percentage Change from 08/09 baseline	n/a	+0.5%	-2.5%	-11.7%	-6.9%	-11.1%	-17.1%	-29.7%	-39.4%	-46.2%	-53.5%	-57.1%	-64.9%	-64.5%
Tonnes of CO ₂ e per FTE	7.2	7.1	6.9	6.5	6.8	6.7	6.5	5.7	5.2	4.8	4.3	4.0	3.2	3.4

Graph 1 – Leicester City Council’s Greenhouse Gas Emissions by scope and source from 2008/09 to 2021/22



5.1 Scope 1 Emissions

- 5.1.1. Scope 1 emissions are direct emissions, which result from activities owned or controlled by Leicester City Council which release emissions straight into the atmosphere. This includes all of the fuels directly burned in council owned vehicles and boilers, as well as 'fugitive' emissions due to leaks of refrigerant gases which cause climate change from air-conditioning units. A summary of scope 1 emissions can be seen in Table 2.
- 5.1.2. Overall scope 1 emissions were 7,744 tCO₂e in 2021/22, an increase of 2.9% (222 tCO₂e) compared to the previous year. This is, however, a reduction of 53.8% (9,014 tCO₂e) since the baseline year of 2008/09, and emissions for each of the categories within this scope remain below their level in 2019/20.
- 5.1.3. The largest increase in scope 1 this year came from use of fuel in the council's own vehicle fleet, for which emissions increased by 11.8% (203 tCO₂e). This is assumed to be due to increased activity following lockdown restrictions in 2020/21, when many staff were required to work and deliver services remotely.
- 5.1.4. There was also a rise in emissions from consumption of natural gas in council buildings, of 1.7% (92 tCO₂e) for the year. This is a result of the reopening of many of the council's public buildings such as leisure centres, libraries and community centres following the pandemic.
- 5.1.5. Emissions from other fuel use in Parks machinery did not change significantly, falling by 0.6% (0.9 tCO₂e), and were not substantially affected by the pandemic in the previous year. Emissions from air-conditioning leakage decreased significantly this year, by 78.9% (972.2 tCO₂e). These emissions fluctuate year on-year, with the figure higher than usual in 2020/21 due to damage and mechanical failure in which two specific units lost some of their refrigerant. Both of these areas continue to make up a very small part of the footprint overall.

Table 2 – Scope 1 Emissions (tonnes of CO₂e)

Category	Area	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22
Fuels Combustion	Natural Gas	12,905	12,239	11,854	10,008	10,692	9,307	7,963	7,748	7,217	6,940	6,657	6,307	5,564	5,656
	LPG ¹	28	25	21	26	16	29	2	6	0	5	1	1	2	0
	Petrol	53	54	35	27	37	35	37	38	22	18	18	22	15	18
	Diesel	529	510	175	166	225	193	210	170	150	146	147	126	119	117
Owned Vehicles	Vehicle Fleet	3,093	3,568	2,799	2,970	2,723	3,165	3,157	2,835	2,641	2,383	2,313	2,288	1,730	1,933
Fugitive Emissions	Air-Con	150	233	148	176	314	309	135	147	61	52	8	63	92	19
.	Total	16,758	16,629	15,032	13,374	14,007	13,038	11,503	10,944	10,090	9,543	9,146	8,807	7,477	7,522

¹ LPG, Petrol & Diesel are included separately to the council's vehicle fleet in this table, as this represents fuels used in Parks equipment and machinery.

5.2 Scope 2 Emissions

- 5.2.1 Scope 2 emissions are those resulting from the council's consumption of purchased electricity and heat. These emissions occur as a result of the council's activities, but they occur at sources not owned or controlled by the council. The largest source of the council's scope 2 emissions is the electricity that it purchases, including that which is used to run street lighting and traffic signalling. Scope 2 emissions also include those created in generating the heat purchased through the district heating scheme. This is a network of insulated piping that delivers heat from central boilers to buildings around the city. A summary of scope 2 emissions can be seen in Table 3.
- 5.2.2 Scope 2 emissions fell by 2.6% (178 tCO₂e) in the 2021/22 financial year and have fallen by 76.8% since 2008/09. Part of the reason for the large fall since the baseline years is the movement of transmission and distribution emissions from electricity supply to the scope 3 section of the footprint from 2016/17, although the large majority of the reduction is due to the factors detailed below.
- 5.2.3 Within the overall reduction referred to above, there was an increase in emissions from electricity use within council buildings of 2.4% (92 tCO₂e). As expected, following the pandemic electricity consumption from buildings increased significantly as services reopened. However, this was balanced by a reduction in the carbon intensity of UK electricity. This is the amount of carbon emitted per kWh of electricity generated, and it has been falling for a number of years as renewables such as wind and solar PV continue to replace coal-fired power generation.
- 5.2.4 Emissions from street lighting and traffic signalling provided the largest decrease in scope 2 emissions for 2021/22, falling by 10% (181 tCO₂e) and 15.8% (69 tCO₂e) respectively. This is a result of a small reduction in energy use due to ongoing work to replace old traffic signals with LEDs, and the reduction in the carbon intensity of grid electricity. These emissions have not been significantly affected by the pandemic.
- 5.2.5 Emissions from use of the district heating system also fell, by 2.4% (21 tCO₂e) in the year. As there are a relatively small number of council buildings on the system, this reduction is likely due to changes in how these particular buildings were used.

Table 3 – Scope 2 Emissions (tonnes of CO₂e)

Category	Area	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22
Purchased Heat	District Heating	0	0	0	1,038	2,570	2,421	1,946	1,303	1,175	1,503	981	1,048	874	853
Purchased Electricity	Buildings	16,501	17,019	17,699	15,015	15,105	14,725	14,662	12,702	9,891	8,093	6,264	5,204	3,771	3,864
	Street Lighting	10,937	10,806	10,287	9,406	9,412	8,744	7,956	5,450	3,847	3,137	2,317	2,089	1,817	1,636
	Traffic Signals	1,508	1,552	1,569	1,519	1,534	1,517	1,574	1,381	952	766	605	511	435	366
	Total	28,946	29,377	29,556	26,977	28,620	27,406	26,138	20,836	15,865	13,498	10,167	8,853	6,360	6,719

5.3 Scope 3 Emissions

- 5.3.1 Scope 3 emissions are indirect emissions, those that occur due to the council's activities but do not take place at sources under its ownership or control, and do not come under scope 2. This includes emissions from transport activities (including use of 'grey fleet'² vehicles and business travel by staff), water consumption (from the energy used to provide and treat water used in council buildings) and from energy lost through the distribution of electricity through the national grid. A summary of scope 3 emissions can be seen in Table 4.
- 5.3.2 Scope 3 emissions have risen significantly this year, by 18.2% (368 tCO₂e), however they remain lower than in 2019/20. Reported emissions have increased significantly since 2008/09, however this is mainly due to changes in the methodologies used to calculate these figures. This includes the addition of emissions from passenger transport to the footprint from 2018/19 onwards. In addition the recategorization by the Government of transmission and distribution emissions from supply of electricity from scope 2 to scope 3 from 2016/17 required us to move these emissions into our scope 3 figures.
- 5.3.3 The largest increase this year comes from passenger transport, where emissions rose by 26.9%. This is partly due to an increase in service use following the pandemic, however the main reason for this increase is a change in the methodology used to calculate these emissions since 2019/20. Emissions from business travel also increased significantly, again this is partly due to increased service delivery, but is mainly a result of a change in the calculation methodology used.
- 5.3.4 Emissions from the 'grey fleet' (employees using their own vehicles for work travel) rose by 50.9% (97 tCO₂e), which is a direct result of a return to normal business following pandemic restrictions. However, these emissions remain below their pre-pandemic levels in 2019/20.
- 5.3.5 For emissions from the transmission and distribution of electricity there was a 5.4% (18 tCO₂e) increase for council buildings. As for the scope 2 emissions this reflects an increase in building energy use, balanced by a reduction in this part of the carbon factor of electricity. Emissions from street lighting and traffic signalling fell by 7.4%

² Grey Fleet refers to employees using their own vehicles to carry out their work, for which they are reimbursed by the council.

(11 tCO₂e) and 13.3% (5 tCO₂e) respectively, again due largely to the reduction in the carbon factor.

5.3.6 Emissions also appear to have fallen significantly, by 71.4% (152 tCO₂e), from water supply and treatment (specifically from the energy required for these processes). However, a majority of this fall is due to a change in the how the UK government has calculated the 'carbon factor' of these sources, which should be more accurate from now on. Actual water use did also fall for the year, despite the rise in building usage over the year.

5.3.7 Data is not currently collected for emissions from staff commuting to work, or from homeworking. The footprint reported here also does not include Scope 3 emissions from services commissioned through outsourced contracts except passenger transport, from manufacture or transport of purchased goods and materials or from waste disposal.

Table 4 – Scope 3 Emissions (tonnes of CO_{2e})

Category	Area	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22
Transport Related	Grey Fleet Travel	825	775	737	677	653	651	541	515	531	401	394	417	191	288
	Business Travel	69	38	54	61	74	322	457	418	359	447	44	30	17	82
	Passenger Transport ³	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1,068	1,091	1,143	1,451
Purchased Electricity - Transmission & Distribution ⁴	Buildings	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	895	757	534	442	324	342
	Street Lighting	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	348	293	198	177	156	145
	Traffic Signals	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	86	72	52	43	37	32
Water	Supply	68	82	87	80	75	76	67	67	70	58	50	69	50	32
	Treatment	170	168	180	164	155	157	137	138	145	119	104	143	102	70
	Total	1,132	1,062	1,059	982	958	1,207	1,201	1,137	3,289	2,927	2,973	2,413	2,021	2,390

³ Emissions not previously calculated until 2018/19

⁴ Emissions not calculated separately until 2016/17. Previously included in electricity use under scope 2.

6. Reporting Methodology

The report follows the Environmental Reporting Guidelines provided by the UK government on voluntary carbon emission reporting for organisations under Streamlined Energy & Carbon Reporting (SECR).

Further details are available at:

<https://www.gov.uk/government/publications/environmental-reporting-guidelines-including-mandatory-greenhouse-gas-emissions-reporting-guidance>

Leicester City Council previously reported under the UK government's Emissions Reduction Pledge 2020, developed specifically for public sector organisations. This programme has now concluded, and as yet no replacement guidance on targets and reporting has been provided for the public sector specifically.

The 2021/22 figures in this report were calculated using the UK government's published greenhouse gas conversion factors for 2021. These are provided by the Department for Business, Energy and Industrial Strategy (BEIS) and are available at:

<https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021>

7. Organisational Boundary and Operational Scope

This report covers emissions produced from Leicester City Council's operations, including:

- Scope 1 emissions from building heating, fuel use and air-conditioning.
- Scope 2 emissions from purchased electricity for buildings and street lighting and purchased heat
- Scope 3 emissions from business mileage and passenger transport, electricity transmission and distribution and water consumption.

This report excludes emissions from outsourced and contracted services (except passenger transport), waste disposal and consumption of goods and materials due to the cost and complexity of data collection or lack of availability. This report also does not cover emissions from schools in the city.

8. Baseline Year

Leicester City Council's carbon footprint reporting baseline year is the 2008/2009 financial year, which is the first year for which detailed greenhouse gas emission figures are available.

9. Targets & Responsibility

Following Leicester City Council's declaration of a Climate Emergency in 2019, an ambition was declared to achieve net zero carbon for the city and the council by 2030.

Leicester's Deputy City Mayor for Transport, Clean Air and Climate Emergency, Cllr Adam Clarke, has overall responsibility for sustainability action within the council. This report is produced by the council's Sustainability Service, which leads on the Climate Emergency response within the city council.

10. Intensity Measurement

The Council has chosen an intensity ratio based on the number of full-time equivalent staff. This is because the number of staff gives the best indication of the scale of operational activity of the organisation. The intensity measure is reported in Table 1.

11. External Assurance

The data reported in this document is not subject to external verification.

12. Carbon Offsets

Carbon offsets allow organisations to pay for projects to be carried out that reduce carbon emissions outside their organisational boundary, as an alternative to reducing their own carbon emissions.

Leicester City Council is committed to reducing its own emissions as far as possible, as purchasing carbon offsets will not prevent us needing to make these reductions in the long term. Therefore, until we have reached a satisfactory level of reductions, purchase of carbon offsets will not be considered by the council.

13. Electricity & Heat

Electricity purchased for our own consumption: 27,954 MWh

Renewable electricity generated from owned or controlled sources: 472 MWh

Exports of electricity to the grid from owned or controlled sources are not metered separately.

No metered heat was generated at council owned or controlled sources in 2021/22. A number of council buildings are connected to a district heat network, controlled by an external provider, and carbon emissions data for this is included under Scope 2.

14. Green Tariffs

Leicester City Council purchases electricity from 100% renewable sources.

15. Contact

This report was prepared by Aidan Davis, Sustainability Officer, on behalf of Leicester City Council.

For further information about Leicester City Council's sustainability actions, please visit: <https://www.leicester.gov.uk/your-council/policies-plans-and-strategies/environment-and-sustainability/climate-emergency/>

If you wish to contact us, please email: sustainability@leicester.gov.uk