

Leicester
City Council

Leicester City Council

Carbon Footprint Statement 2017/18

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1. Executive Summary

Leicester City Council is committed to reducing carbon emissions¹ from its own estate and operations, and has set itself a challenging target to reduce carbon emissions by 50% by 2025 based on a 2008/09 baseline. This equates to a carbon reduction of 30,655 tonnes in 17 years. The council is also reporting on progress towards the UK Government's voluntary Emissions Reduction Pledge 2020, which asks public sector bodies to reduce their CO₂e emission by 30% by 2020/21, compared to a baseline year of 2009/10.

The carbon footprint calculated for the baseline year of 2008/09 was 67,732 tonnes CO₂e (carbon dioxide equivalent) and included all of scope 1 and scope 2 and some scope 3 emissions. The total carbon footprint for the Emissions Reduction Pledge 2020 baseline year of 2009/10 was 66,699 tCO₂e.

At the end of the 2017/18 financial year emissions stood at 42,557tCO₂e. This represents:

- a decrease of 25,175 tCO₂e from the 2008/09 baseline figure, or 37.2%
- a reduction of 24,143 tCO₂e from the 2009/10 baseline figure, equal to 36.2%

It means that Leicester City Council met and exceeded the voluntary Emissions Reduction Pledge 2020 target. Changes in carbon emissions are highlighted under the relevant scope, and compared to both the 2008/09 baseline year and 2016/17.

An explanation for the changes in carbon emissions in this report has been provided wherever possible; however in some cases further detailed analysis of the data would be needed to be able to fully explain the change.

2. Introduction

Leicester City Council is committed to taking action to significantly reduce carbon emissions (CO₂e) resulting from its activities. It has set an ambitious target of reducing its emissions by 50% by 2025, compared to a 2008/09 baseline. This report also shows progress towards the UK Government's voluntary target for public sector organisations;

¹ Carbon emissions refers to emissions of greenhouse gases which contribute to global warming. This is measured as carbon dioxide equivalent (CO₂e), and includes other gases covered by the Kyoto Protocol.

the Emissions Reduction Pledge 2020. This aims for a reduction in emissions of 30% by 2020/21, compared to a baseline year of 2009/10

Carbon emissions from human activity are a key driver of dangerous climate change, which represents a significant risk to both the city council and the residents of Leicester.

In order to measure progress on reducing its emissions, Leicester City Council monitors emissions from each area of its activities, which are broken down into three scopes, as shown in this report. This report sets out Leicester City Council's carbon emissions for the 2017/18 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 also committed to a wide range of actions to reduce its environmental impact and make the city more sustainable. A full list of actions is set out in Leicester's Sustainability Action Plan which is available on the council's website at: <https://www.leicester.gov.uk/your-council/policies-plans-and-strategies/environment-and-sustainability/sustainability-action-plan/>

The figures in this report show that Leicester is on track to meet its target, as well as the voluntary target set by the UK Government.

3. Company Information

This Carbon Footprint Statement is for Leicester City Council, City Hall, 115 Charles Street, Leicester, LE1 1FZ.

4. Reporting Period

Carbon emissions are measured over the financial year. Therefore the period covered in this report is 1st April 2017 to 31st March 2018.

5. Change in Emissions

For the 2017/18 financial year, Leicester City Council's carbon emissions have decreased for the 5th year in a row, this year by 10.8%, or 5,120 tonnes. This is a reduction of 37.2% compared to the baseline year of 2008/09. Additionally the level of carbon emissions per full-time equivalent staff member (FTE) has decreased to 4.2

tCO₂e per employee. This compares to a figure of 4.6 tCO₂e in 2016/17 and 5.4 tCO₂e for 2008/09.

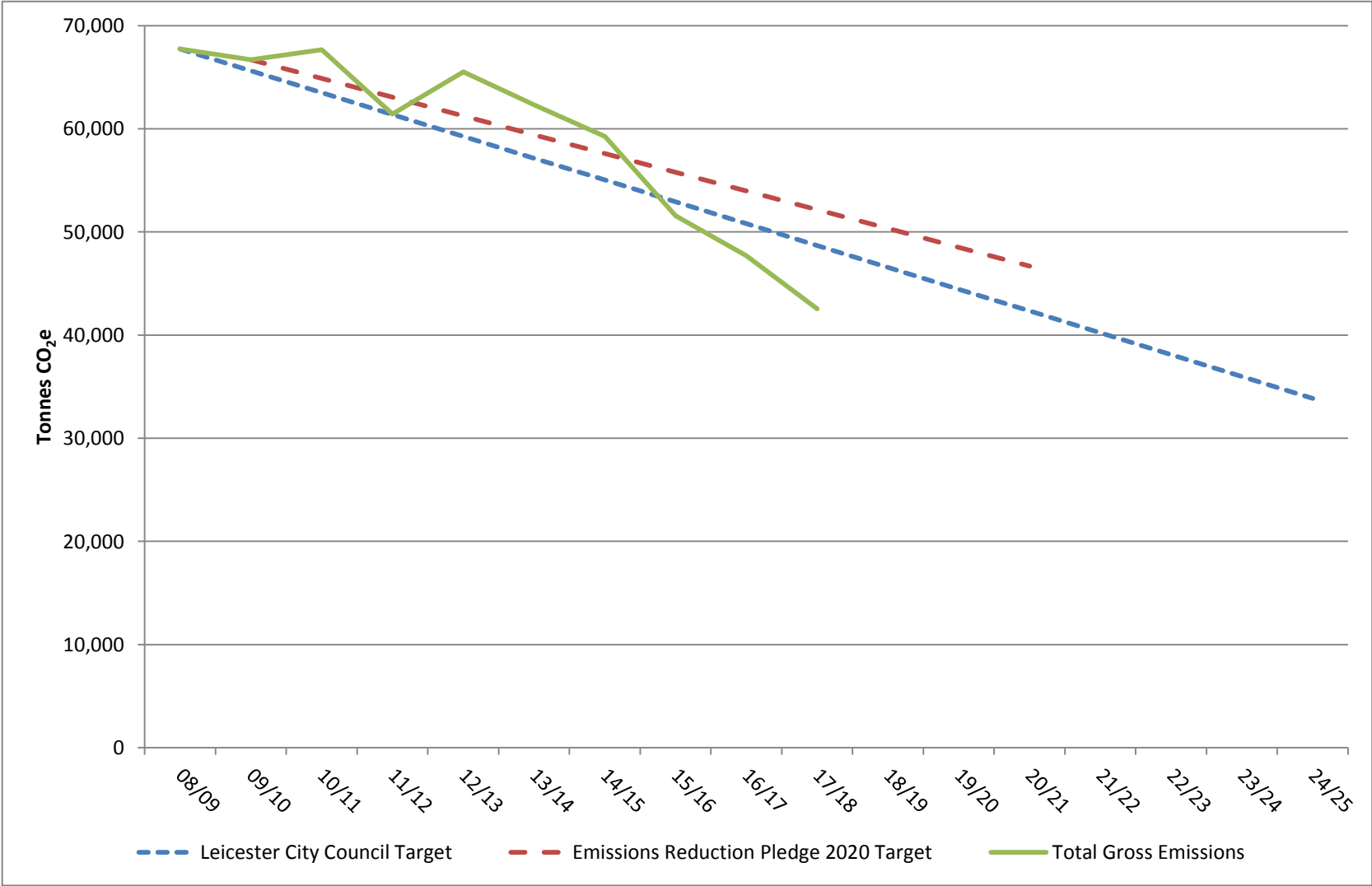
Carbon emissions have also reduced by 24,143 tCO₂e from the 2009/10 baseline figure, equal to 36.2%. This means that Leicester City Council has met and exceeded the UK Government's voluntary Emissions Reduction Pledge 2020 target of a 30% reduction by 2020. Changes in emissions are highlighted and discussed under the relevant scope later in this report, and compared to both the 2008/09 baseline year and 2016/17.

Table 1 below shows an overall summary of emissions from the years from 2008/09 to the current year. It also shows the change on the baseline years of 2008/09 and 2009/10 for each year. Graph 1 shows Leicester City Council's progress towards both of the emissions reductions targets.

Table 1 – Total Emissions (tonnes of CO2e)

Category	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	
Total Gross Emissions	67,732	66,699	67,654	61,438	65,517	62,333	59,247	51,567	47,676	42,557	
Carbon Offsets	0	0	0	0	0	0	0	0	0	0	
Green Tariffs	Not calculated									-8,849	
Net Emissions	67,732	66,699	67,654	61,438	65,517	62,333	59,247	51,567	47,676	33,708	
All changes based on Gross Emissions	Change from 08/09 baseline	0	1,033	78	6,295	2,215	5,399	8,485	16,165	20,056	25,175
	Percentage Change from 08/09 baseline	n/a	-1.52%	-0.11%	-9.29%	-3.27%	-7.97%	-12.53%	-23.87%	-29.61%	-37.17%
	Change from 09/10 baseline	0	0	-955	5,261	1,182	4,366	7,452	15,132	19,023	24,143
	Percentage Change from 09/10 baseline	n/a	n/a	1.43%	-7.89%	-1.77%	-6.55%	-11.17%	-22.69%	-28.52%	-36.20%
	Tonnes of CO ₂ e per FTE	5.6	5.4	5.5	5.4	5.7	5.5	5.2	4.7	4.6	4.2

Graph 1 – Changes in Leicester City Council’s Gross CO₂e Emissions Compared with Trajectories to Meet Targets



5.1 Scope One 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 fuels used by schools, and emissions due to leaks of 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 have decreased over the year by 8%, or 1,445 tCO₂e and have decreased by 38% since the 2008/09 baseline. They have also decreased by 34% compared to the 2009/10 baseline. Since 2008/09 emissions have decreased in each individual category apart from LPG (liquid petroleum gas) usage, which is used by the Parks service for horticultural machinery.
- 5.1.3. The largest reductions are in gas use, both in council (referred to as corporate) buildings and in schools. During the year there has been a 4% reduction in emissions from gas use in corporate buildings, whilst the number of buildings for which there is recorded gas use has fallen by 10%. Using Degree Day data, it can be seen that the 2017/18 financial year was 4.3% colder than the previous year, which is likely to have led to higher gas consumption than would otherwise have been expected.
- 5.1.4. There has been a 10% reduction in fleet vehicle emissions compared to 2016/17. During this period the number of vehicles in use by the council has reduced by 7% as a result of a planned fleet rationalisation process. There has also been a reduction in staff numbers in the same period, which may have contributed to the fall in emissions.
- 5.1.5. The reduction in emissions from corporate air-conditioning units this year is because emissions for air-conditioning units are now based on actual recorded leakage rates, instead of estimates, which is more accurate. As such, the reductions are not expected to continue at this pace.

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
Fuels Combustion	Natural Gas (Corporate)	12,905	12,239	11,854	10,008	10,692	9,307	7,963	7,748	7,217	6,940
	Natural Gas (Schools)	10,402	9,480	10,787	9,140	10,031	8,329	7,441	7,172	8,352	7,463
	LPG	28	25	21	26	16	29	2	6	0	5
	Petrol	53	54	35	27	37	35	37	38	22	18
	Diesel	529	510	175	166	225	193	210	170	150	146
	Schools Fuels Combustion ²	372	71	343	326	324	103	15	7	0	0
Owned Vehicles	Vehicle Fleet	3,093	3,568	2,799	2,970	2,723	3,165	3,157	2,835	2,641	2,383
Fugitive Emissions	Air Conditioning (Corporate)	150	233	148	176	314	309	135	147	61	52
	Air Conditioning (Schools)	4	5	94	64	79	155	113	155	132	123
Total		27,536	26,185	26,256	22,904	24,442	21,626	19,072	18,278	18,574	17,128

² This figure shows use of fuels such as solid fuels and oil that were previously used for non-gas heating systems at schools, which have now all been replaced.

5.2 Scope Two Emissions

- 5.2.1 Scope 2 emissions are emissions resulting from the council's consumption of purchased electricity and heat. These are emissions due to the council's activities, but occur at sources not owned or controlled by the council. This includes all of the electricity that the council purchases, in both council buildings and schools, and the electricity used to run our street lighting and traffic signalling. This also includes the heat that is 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 decreased in the 2017/18 financial year by 13%, or around 3,300 tCO₂e compared to last year, and have decreased by 42% compared to the 2008/09 baseline. They have decreased by 43% compared to the 2009/10 baseline.
- 5.2.3 Emissions from electricity consumption have declined in all areas, largely as a result of a reduction in the carbon intensity (greenhouse gas emissions per unit of electricity generated) of the national electricity grid. There has also been a reduction in the number of corporate buildings, with the disposal of older and less efficient buildings and the fitting of more efficient lighting in a number of existing buildings, which has contributed to a drop in their electricity use. Ongoing work to replace street and traffic lighting with energy efficient LEDs has also led to a drop in their electricity use and therefore carbon emissions.
- 5.2.4 Another part of the reason for the overall decrease compared to the baseline is that emissions from transmitting and distributing electricity have only been calculated separately since 2016/17. These emissions are now included in the scope 3 calculation instead of scope 2. For 2017/18 these emissions totalled around 1,900 tCO₂e, which contributes to the reduction in electricity emissions compared to the baseline years.
- 5.2.5 Emissions from the District Heating system have increased since the 2008/09 and 2009/10 baseline years as the system was not in use until 2011/12, although they have declined significantly from their peak in 2012/13. In 2017/18 emissions from

District Heating increased by around 28% for schools and council buildings. The amount of heat consumed has increased by 7.5%, which is likely due to 2017/18 being a colder year than 2016/17. Most of the increase was due to an increase in the carbon intensity of heat supplied. This increase in the carbon intensity of the scheme is due to a number of issues including downtime of the CHP plant and faulty biomass boilers. Most of these issues have now been resolved, so the carbon intensity of the scheme is expected to reduce in the coming years.

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
Purchased Heat	District Heating (Corporate Buildings)	0	0	0	1,038	2,570	2,421	1,946	1,303	1,175	1,503
	District Heating (Schools)				1,095	1,236	1,011	931	779	625	789
Purchased Electricity	Buildings (Corporate)	16,501	17,019	17,699	15,015	15,105	14,725	14,662	12,702	9,891	8,093
	Buildings (Schools)	10,243	10,232	10,941	9,582	10,415	11,243	12,020	10,686	9,464	8,349
	Street Lighting	10,937	10,806	10,287	9,406	9,412	8,744	7,956	5,450	3,847	3,137
	Traffic Signalling	1,508	1,552	1,569	1,519	1,534	1,517	1,574	1,381	952	766
Total		39,189	39,609	40,497	37,654	40,271	39,661	39,089	32,301	25,955	22,636

5.3 Scope Three 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, but which do not come under scope 2. This includes emissions from transport related activities (including grey fleet and business travel), and from energy lost through the distribution of electricity through the national grid. Data is not collected for emissions from its staff commuting to work. These fall within the city-wide carbon footprint rather than the council's own estate and operations. The footprint does not include data for outsourced contracts, purchased materials or waste disposal as time constraints and data complexities make it prohibitive to collect and calculate these. A summary of scope 3 emissions can be seen in Table 4.
- 5.3.2 Scope 3 emissions have increased by 1,785 tCO₂e since 2008/09, and 1,886 tCO₂e since 2009/10. This is mostly due to the inclusion of emissions from the transmission and distribution of electricity. These emissions were not calculated separately until 2016/17, and totalled 1,902 tCO₂e in 2017/18, which is a decrease of 13% on 2016/17. They have decreased over the year as a result of lower electricity consumption, especially in street and traffic lighting and corporate buildings, and a 12% reduction in the carbon emissions factor used to calculate them. Overall scope three emissions have fallen by 11% in the 2017/18 financial year.
- 5.3.3 Emissions from business travel, which is travel by staff using taxis, trains, buses and occasionally planes for council business, have increased slightly in the financial year. These emissions have risen by 57 tCO₂e in 2017/18. This is mainly a result of an increase in emissions from taxi use and flights, and is partially offset by a fall in business travel by schools.
- 5.3.4 Emissions from corporate grey fleet vehicles (employees using their own vehicles for council business) have decreased by 24%, although the reasons for this are not currently known. Emissions from schools grey fleet travel have decreased by 80%; however this is due to a change in reporting that has left us unable to access this data beyond May 2017.

Table 4 – Scope 3 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
Transport Related	Grey Fleet Travel	825	775	737	677	653	651	541	515	531	401
	Business Travel (Corporate)	69	38	54	61	74	322	457	418	359	447
	Business Travel (Schools)	113	93	110	141	77	73	89	56	74	42
	Commuting	Not Calculated									
Purchased Electricity (transmission & distribution)	Buildings (Corporate Buildings + Housing)	Electricity transmission and distribution emissions not previously calculated separately.								895	757
	Buildings (Schools)	Electricity transmission and distribution emissions not previously calculated separately.								856	781
	Street Lighting	Electricity transmission and distribution emissions not previously calculated separately.								348	293
	Traffic Signalling	Electricity transmission and distribution emissions not previously calculated separately.								86	72
Outsourcing	Outsourced Contracts	Not Calculated									
Purchasing		Not Calculated									
Waste Disposal		Not Calculated									
Total		1,007	905	902	879	804	1,047	1,086	988	3,148	2,792

6. Approach

This report follows the Government's guidance³ on how to measure and report greenhouse gases.

7. Organisational Boundary and Operational Scope

This report covers emissions produced from Leicester City Council's operations including schools under city council control and academies. Reporting now also includes carbon emissions related to the work done to provide and maintain social housing services, but does not include emissions from council-owned housing.

The report does not cover emissions generated by outsourced service providers in operating public services on behalf of the council. Nor does it cover emissions generated by suppliers of goods or services to the council, including emissions generated during the manufacture or transportation of goods.

8. Baseline Year

Leicester City Council's carbon reporting baseline year is the 2008/2009 financial year. The baseline year for the UK government's voluntary Emissions Reduction Pledge 2020 is the 2009/2010 financial year.

9. Targets

Leicester City Council has committed to reducing carbon emissions from its operations by 50% by 2025, based on the 2008/09 baseline year. This is a reduction of 30,655 tonnes in 17 years. Progress towards this target is measured annually, and reported in the Leicester Sustainability Action Report.

In addition, the UK Government has set the voluntary Emissions Reduction Pledge 2020 target for public sector organisations. This asks them to commit to reducing their carbon emissions by 30% by 2020/21 compared to a baseline year of 2009/10. Leicester City Council is reporting progress against this target, but has not formally adopted it.

³ The UK Government's Emissions Reduction Pledge 2020 guidance can be found at: <https://www.gov.uk/government/publications/emissions-reduction-pledge-2020-emissions-reporting-in-public-and-higher-education-sectors>

10. Intensity Measurement

The Council has chosen an intensity ratio based on the number of full time equivalent staff. This includes staff on temporary contracts, agency workers and staff working in schools. The intensity measure is reported in Table 1.

11. Conversion Factors

The 2017-18 figures in this report were calculated using the UK Government's published conversion factors for 2017. 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-2017>

12. External Assurance

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

13. Carbon Offsets

Carbon offsets allow organisations to pay for projects to be carried out that reduce carbon emissions elsewhere in the country or world, 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, carbon offsets will not be purchased by the council.

14. Green Tariffs

Leicester City Council purchases electricity from 100% renewable sources which meet GHG Protocol Corporate Standards for zero-carbon electricity.

15. Contact Details

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/sustainability-action-plan/>

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