



## Greenhouse Gas Emissions Report 2021-22

The urgent need for action on climate change has been recognised by over 170 nations. The 2015 Paris Agreement signed countries up to work together in limiting global temperature rise to well below 2°C, with the aim of achieving a 1.5°C limit. This is the recognised level established by the Intergovernmental Panel on Climate Change to limit the risks and impacts of climate change to within safe levels. In response to this the UK government set a legally binding greenhouse gas emission reduction target of 100% by 2050, achieving net zero, with an interim target of 78% by 2035.

In March 2020, the Council approved a new Corporate Environmental Policy and Corporate Environment Strategy which reaffirmed its commitment to protecting and enhancing the environment for current and future generations. It has subsequently committed in its 10-year [Nottinghamshire Plan](#) to becoming carbon neutral in all its activities by 2030. The Council is also committed to achieving a net zero Nottinghamshire by 2050 in line with the national target.

Since 2014-15 the Council has reduced carbon emissions from energy use across its properties and highways assets by 69%. However, it recognises the need for further urgent action and formalised this by declaring a Climate Emergency in May 2021.

Date report produced: December 2022

### 1. Introduction

The term greenhouse gas refers to gases that trap heat in the Earth's atmosphere, increasing the atmospheric temperature and therefore contributing to climate change. These gases include carbon dioxide, methane, nitrous oxide, and fluorinated gases (mainly used in refrigeration and air conditioning). However, emissions in this report are all expressed as carbon dioxide equivalent, CO<sub>2</sub>e.

### 2. Operational Scope and Organisational Parameters

As suggested by the [Government's Environmental Reporting Guidelines](#), Scope 1 and Scope 2 emissions have been included in this report, along with Scope 3 emissions where reliable data exists. A description of the three Scopes taken from the guidelines is shown below:

**Scope 1** (direct) includes emissions released straight into the atmosphere by activities owned or controlled by Nottinghamshire County Council. Examples of Scope 1 emissions include those released from combustion of fossil fuels in Council owned or controlled boilers and vehicles.

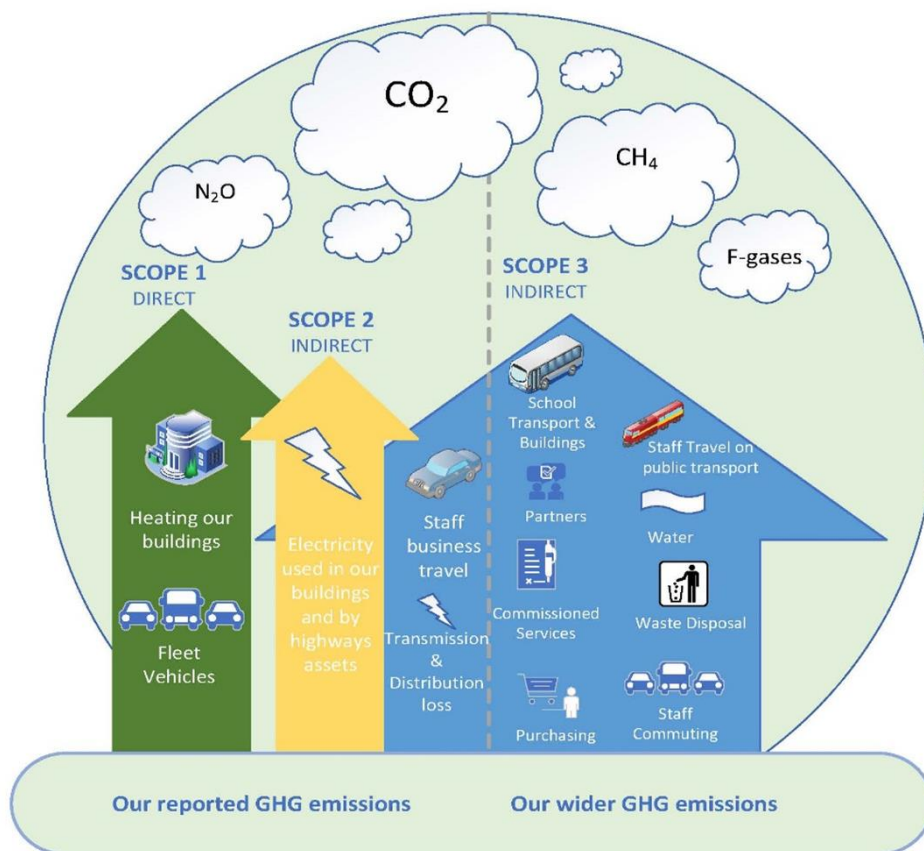
**Scope 2** (energy indirect) includes emissions released into the atmosphere associated with the consumption of purchased electricity, heat, steam, and cooling, which are a consequence of the Council's activities, but occur at sources the Council does not own or control. The most common type of Scope 2 emission is electricity purchased for powering our buildings, streetlights, and other highways assets.

**Scope 3** (other indirect) emissions are discretionary to include and are a consequence of the Council's actions, which occur at sources which are not owned or controlled by the Council, and which are not classified as Scope 2 emissions. Examples of Scope 3 emissions include those from private cars driven on Council business (grey fleet) or the emissions associated with the procurement of goods and services.

This report contains details of emissions related to activities within the Council's operational control. As such, some activities which the organisation has influence but no control over, for example those provided by some partners, have been excluded. Other exclusions may have been made due to the difficulty associated with gathering the data, and these exclusions will be reviewed on a year-by-year basis.

**Appendix 1** lists each source by Scope and briefly describes the basis for inclusion or exclusion in this report.

The diagram below sets out a summary of included and excluded emission sources:



### 3. Base Year and Target

The baseline year set for the Council's Greenhouse Gas Reporting is 2019-20.

The Council's target is to achieve carbon neutrality in all its activities at by 2030.

### 4. Calculation Methodology

Emissions have been calculated using the [Greenhouse Gas Accounting Tool](#) developed specifically for local authorities by Local Partnerships working with the Local Government Association. This tool ensures the appropriate conversion factors for the reporting year are used for the various emission sources to convert consumption data into tonnes (t) CO<sub>2</sub>e.

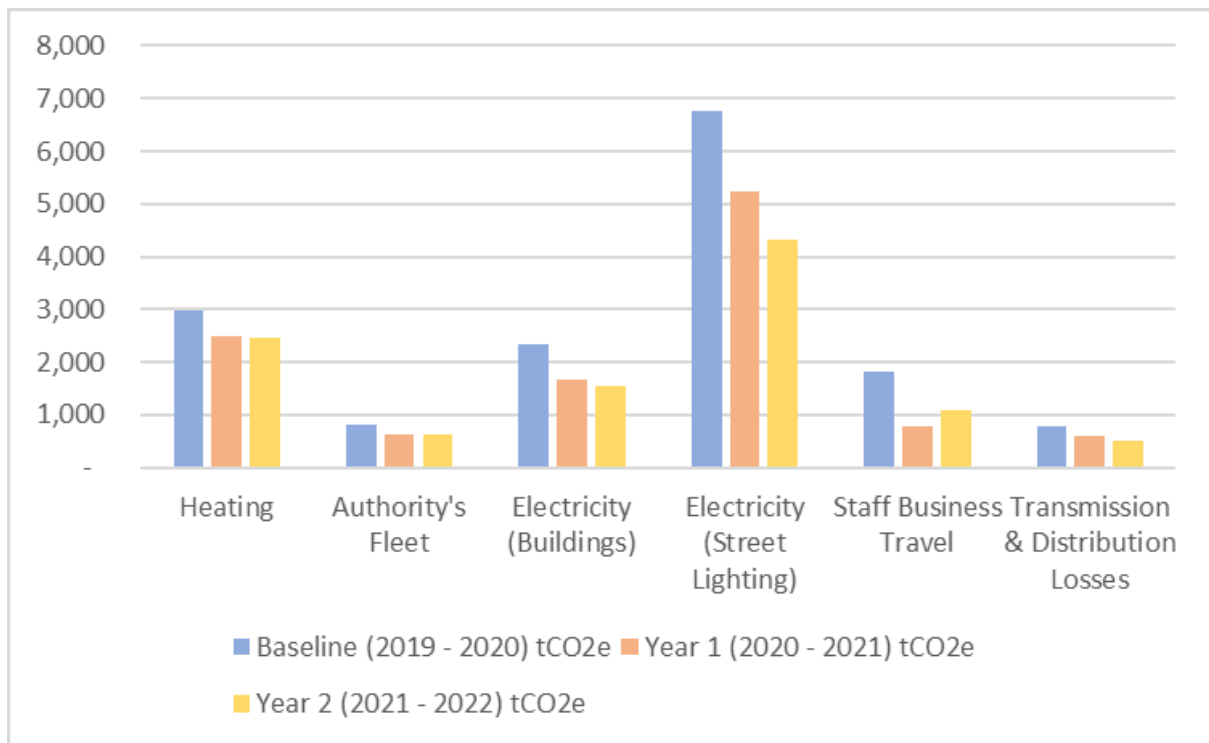
### 5. 2021-2022 Emissions

Table 1. Summary of emissions for Nottinghamshire County Council 2019-20 to 2021-22.

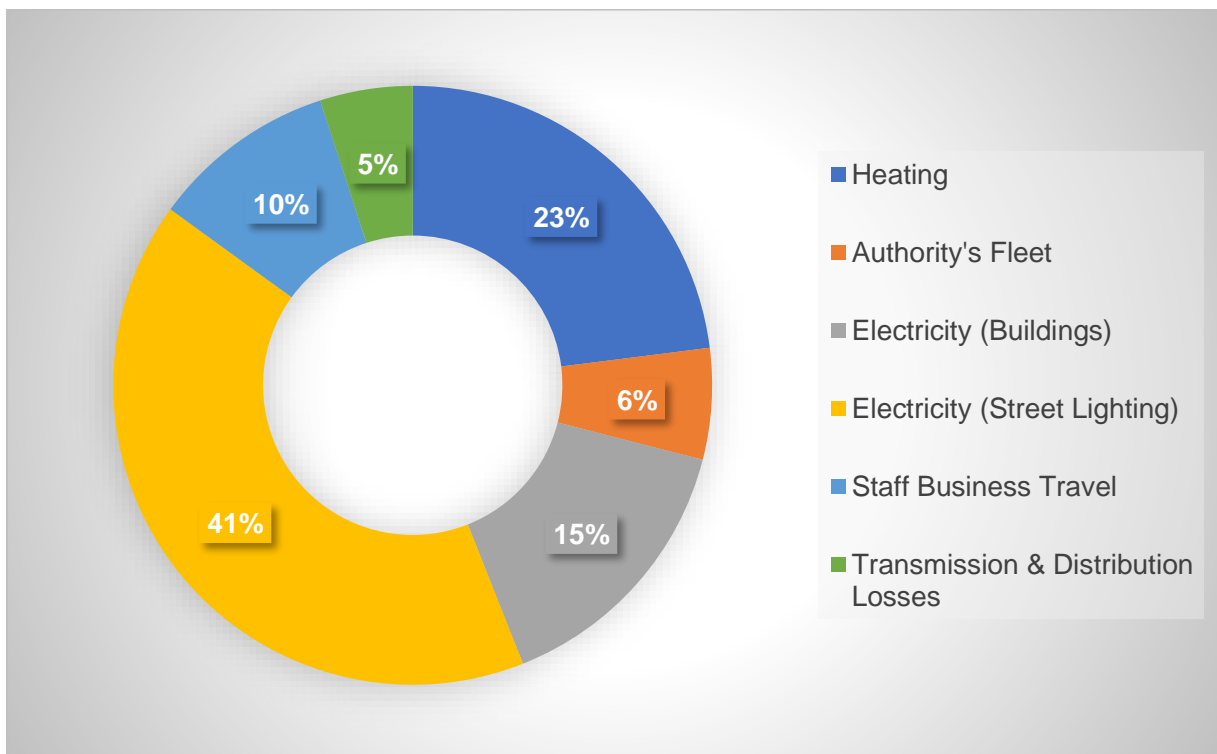
Scope	Emissions source	Emissions (tCO <sub>2</sub> e)			Percentage change from baseline
		2019-20 (baseline)	2020-21	2021-22	
Scope 1	Heating fuels used in buildings	2,970	2,482	2,454	17% lower
	Fuel used by fleet vehicles	811*	639	615	24% lower
Scope 2	Electricity used in buildings	2,336	1,670	1,558	33% lower
	Electricity used by highways assets	6,750	5,232	4,311	36% lower
Scope 3	Fuel used by staff business travel	1,819	777	1,086	40% lower
	Transmission and distribution losses	771	594	519	23% lower
<b>Total</b>		<b>15, 457</b>	<b>11,393</b>	<b>10,543</b>	<b>32% lower</b>

\* This figure has been adjusted down from the previous Greenhouse Gas Emissions Report due to errors in data which have now been rectified.

**Graph 1. Comparison chart of greenhouse gas emissions 2019-20 to 2021-22**



**Graph 2. Summary pie chart of percentage share of emissions by source for Nottinghamshire County Council activities 2021 -22**



## **6. Commentary**

Nottinghamshire County Council's greenhouse gas emissions reduced by 32% since 2019-20. This level of reduction can be largely attributed to the following factors:

- Changes to working practices driven by the Covid pandemic and the adoption of hybrid working policies, enabling staff to reduce fleet and business mileage through use of upgraded ICT, facilitating use of virtual meetings and events. The increase in emissions from staff business travel between 2020-21 and 2021-22 reflects a return to more normal, post-pandemic, circumstances.
- Reduced energy use in Council buildings due to lower occupancy levels from home working, investment in energy efficiency measures, and the impact of increasing grid decarbonisation on emissions from electricity use. The reduction in heating emissions from fossil fuel use being less than that for electricity use is probably due to buildings needing to be adequately ventilated to help reduce risk of viral transmission, yet still heated to the same temperatures regardless of occupancy levels.
- The reduction seen in emissions from electricity use in highways assets reflects continued investment in LED lanterns for street lighting along with the impact of further decarbonisation of the electricity grid.

## **7. Carbon Offsets**

Nottinghamshire County Council has not purchased any carbon offsets.

## **8. Renewable Energy Generation**

PV solar panels on 40 Council buildings generated 855,721 kWh during 2021-22.

## **9. Green Tariffs**

The Council has not purchased any green tariff energy for the years covered by this report. From April 2022, all electricity used in Council properties and highways assets will be supplied via a green tariff, which will feature in future reports.

## Appendix 1 – Emission Sources

<b>A. IN SCOPE EMISSION SOURCES</b>	
<b>Scope 1</b>	<b>Description</b>
Gas	Emissions from fuel consumed for heating purposes in the Council's property assets, excluding its schools and other buildings outside its operational control, such as those operated by Inspire and Via.
Kerosene	As above.
Burning oil	As above.
Biomass	As above.
Core fleet (the Council's fleet of diesel/petrol vehicles)	Emissions from fuel consumed by Council owned or leased fleet covering all services directly operated by the Council, including some adult social care services, school transport, special needs travel and local bus transport.
<b>Scope 2</b>	
Electricity – streetlighting	Emissions associated with electricity consumed by the Council's highways assets, including street lighting, traffic signs and signals, lit bollards, subway pumps and other miscellaneous equipment.
Electricity - buildings	Emissions associated with electricity consumed by the Council's property assets, excluding its schools and other buildings outside its operational control, such as those operated by Inspire and Via.
Core fleet (electric vehicles)	Emissions associated with electricity consumed by Council owned or leased fleet covering all services directly operated by the Council, including some adult social care services, school transport, special needs travel and local bus transport.
<b>Scope 3</b>	
Business travel (private vehicles)	Emissions arising from staff business travel in private vehicles.
Transmission and distribution losses	Emissions associated with the delivery component of getting electricity from the point of generation to point of supply.

<b>B. OUT OF SCOPE EMISSION SOURCES</b>	
<b>Scope 1</b>	<b>Description/reason</b>
Refrigerant and other fugitive emissions	Excluded due to lack of data. Preliminary assessment indicates these emissions are negligible.
<b>Scope 3</b>	
Staff travel to and from work	Excluded as the Council does not have direct control over the methods used for travel and there is a lack of robust available

	data. The Council can influence through flexible working policies and various support schemes for greener options.
Business travel (public transport)	Journeys by modes other than private vehicles, such as by air, train and bus are excluded. Preliminary assessment suggests this is not significant.
Water	Emissions from water supply and treatment to Council property assets is excluded as the data available is low quality due to the prevalence of estimated consumption used for billing.
Nottinghamshire County Council schools	Schools are outside of the Council's operational control.
Waste	Emissions associated with waste generated from Council activities are excluded due to insufficient data.
School transport - mainstream and special educational needs or disabilities home to school journeys	Excluded due to lack of data and being outside of the Council's operational control.
Contracted travel relating to adult social care and other ad-hoc travel	Excluded as outside of the Council's operational control.
Other procured goods and services	Emissions associated with goods and services purchased by the authority are excluded due to lack of data and are being addressed via the Council's Procurement Strategy.
Alternative service delivery models - includes Via East Midlands, Arc Partnership, Inspire Culture, Learning and Libraries, the National Water Sports Centre, and several country parks	Emissions excluded as such organisations are considered outside of the Council's operational control. They will be encouraged to produce their own emissions reports, reduction plans and targets, where they do not already so.