South Gloucestershire Council

Delivering for you

South Gloucestershire Council: Local Greenhouse Gas Report (2024/2025)

Council-own greenhouse gas emissions and renewable energy generation

(December 2025)

1. Executive Summary

- Our aim is to become a carbon neutral Council across our estate and all functions by 2030. This was set out in our Climate Emergency declaration of 2019, and the revised UK100 pledge that we have signed up to.

- We monitor energy use (and associated greenhouse gas emissions) from all Council buildings, including South Gloucester Council run schools; street lighting; fleet vehicles; and staff business mileage.

- We have actively reduced our carbon emissions since 2009, reflecting a long record of action on climate change. Significant reductions have happened from interventions including changing streetlights to LEDs; obtaining funding to put renewable technologies on buildings, including schools; and changing the fuel used in fleet vehicles.

- This year (2024/25) total greenhouse gas (GHG) emissions have decreased by 7.5 % (577 tonnes CO_2e) since the previous year. However, this is mainly due to three schools moving out of scope, as well as continued emissions reductions from streetlights. Our Scope 1 emissions from fuel (fleet and non-school buildings) have increased.

- Total energy consumption shows a 7.95% reduction in 2024/25 compared to the previous year, with variability across the scopes and sectors. It is important to monitor our energy use figure as whilst the carbon factor of the grid has not changed this year, generally there will be a reduction in greenhouse gas emissions from electricity as the grid decarbonises, whereas to meet our carbon neutral council ambition we must also be reducing the amount of energy we consume.

- Fossil fuel use in the Councils fleet has increased by 5% compared to the previous year. The changing climate is producing an increase in marginal conditions and precautionary gritting treatments for road surfaces has resulted in an increase in fuel use.

- Staff mileage has decreased by 7% and remains below pre-covid levels.

- There was a 22% reduction in electricity use in street lighting and other street / highways infrastructure. This reduction is due to the councils ongoing street lighting LED replacement programme, alongside savings from a programme of light dimming.

- The energy used in Council buildings (including SGC-run schools) accounts for two-thirds of the Council's total GHG emissions. Annual council non-school council building emissions also includes the electricity used to charge the EV vehicles.

- There has been an overall increase of fossil fuel energy consumption in non-school buildings, of 5%. A significant proportion of this additional gas energy use was for air conditioning in the summer in our council owned children's home.

- Reducing energy consumption in existing schools and Council buildings through retrofitting fabric improvements, energy control systems, technology upgrades, solar PV and phasing out fossil fuels as a heating source continues to be incredibly important.

- Fleet vehicles continue transfer to electric vehicles (EVs) where possible, however we are reaching capacity at our depots in relation to electric power supply.

- Approximately 1,415,834 kWh (1,415 MWh) of renewable energy has been generated from solar PV (and small wind) schemes on our land and buildings. In addition, the remaining electricity we purchase for non-school council buildings is on a green energy tariff. It has not been possible to purchase green gas this year.

- As expected, emissions reductions are getting more difficult as we progress through the years, once the easier to implement measures are undertaken, and this means we must rapidly accelerate our own actions, influence and lobbying to be as close to net zero as possible at 2030, our focus on insetting and offsetting is also increasing.

- The above figures contain our Scope 1 and 2 emissions and a small amount of Scope 3 (business mileage and electricity transmission). Further understanding and reducing our wider Scope 3 emissions is important for our Carbon Neutral Council ambition. We are continuing to look at our Scope 3 emissions, in particular in relation to procurement.

2. Purpose of report

This report monitors the Council's own greenhouse gas emissions and the renewable energy directly generated by the Council. It also includes reference to carbon insetting or offsetting projects that the Council is considering or directly implements or invests in.

The data presented establishes the progress being made towards the aim of becoming a carbon neutral Council by 2030. This aim formed part of the Climate Emergency declaration made by the Council in July 2019.

Net zero is the term now generally used rather than carbon neutrality. The Office for National Statistics sets out: *net zero means that the….. total greenhouse gas (GHG) emissions would be equal to or less than the emissions … removed from the environment. This can be achieved by a combination of emission reduction and emission removal*[1].. This definition is very similar to that used by the Climate Change Committe, though they have more of an emphasis on deep reductions first: *A net-zero target requires deep reductions in emissions, with any remaining sources offset by removals of CO_2 from the atmosphere*[2].

3. Climate emergency

A changing climate is recognised as being the most significant threat to our society that we have faced. South Gloucestershire Council made a Climate Emergency declaration on 17th July 2019. This means that the council is saying that the global climate is in a state of breakdown and that this is an emergency situation and that urgent steps need to be taken to address the situation by preparing for the local impacts of climate change and by reducing carbon emissions. Part of the declaration was to identify work streams and budgets with the aim of making South Gloucestershire Council carbon neutral by 2030, across all functions, as our contribution to fighting climate change.

To help inform the identification of areas for action, it is important that we monitor the greenhouse gas emissions from the Council's own estate and activities. This is something we have been doing since 2009 and reflects the Council's long record of action on climate change.

[1] Net zero and the different official measures of the UK's greenhouse gas emissions - Office for National Statistics
[2] Net-Zero-The-UKs-contribution-to-stopping-global-warming.pdf

4. Scope of emissions data

We have monitored annually, since 2009, all the Council's emissions that are known as Scope 1 and Scope 2 emissions. Some Scope 3 emissions (business mileage and electricity transmission / distribution losses) are also monitored and are included in the reporting figures. We are also building data and looking at ways to reduce our other Scope 3 emissions.

- **Scope 1** emissions are those that come directly from the burning of fuel e.g. gas boilers used in buildings, diesel used in vehicles.

- **Scope 2** are the emissions that come from the energy (electricity) that is purchased and used by the Council.

- **Scope 3** emissions are those that are a consequence of the Council's actions and occur at sources not owned or controlled by the Council e.g. through procurement activity.

Appendix A sets out a full definition of the 'scopes' and how our data fits into these.

In summary, the emissions data that we collate in this report comes from the following sources:

- emissions from energy consumption in buildings
- electricity consumption in street lighting
- fuel use in fleet vehicles, and
- business mileage

We are building data on, and looking at ways to reduce, the wider Scope 3 emissions that result from the Council delivering its functions, such as outsourced services and the procurement of products and services.

In **Appendix B**, we set out the key sources of these Scope 3 emissions alongside some of the actions we are taking, or plan to take, as part of our Climate Emergency response.

Scope 3 emissions from procurement activity could be 5 times higher than scopes 1 and 2 and therefore there is a focus on work in this area.

The Council has an **overall target to become carbon neutral by 2030.** This means that our emissions must be zero or as close to zero as possible with the residual emissions being balanced out, or inset or offset, through carbon saving projects by 2030.

The purpose of this report is therefore to quantify GHG emissions from the Council's estate and activities, and to analyse progress against this target. The relevant data on our Scope 1 and 2 emissions (and business mileage and transmission loss) is set out in **Appendix C,** with key points highlighted in the report**.** The report also sets out our work on tackling Scope 3 emissions and how we will consider residual emissions as we get closer to 2030.

The actions that are currently being taken and are planned to be taken over the next few years to reduce GHG emissions from the Council's estate and activities and services (which together form the Council's carbon management plan) are set out in the overarching Climate Emergency Action Plan , with more specific opportunities and actions set out in other Council strategies and plans relevant to that particular service area.

5. Energy consumption

Energy consumption across the Council estate derives from:

- Energy consumption in buildings (this includes local authority maintained schools, libraries, council offices, public toilets, the Bristol Bath Science Park. However, it does not include academy schools and leisure centres)
- Electricity consumption in street lighting (including lighting for street furniture, signs, bollards, traffic signals, metrobus 'I points' etc)
- Fuel use in council fleet vehicles - pool cars and Streetcare vehicles used for highways maintenance, litter bin collections, open spaces management etc (the household waste collection service has been outsourced to Suez and so these waste vehicles are not included in this report at present. Waste collection is coming back to council control next year and this will impact on the figures in our greenhouse gas report)
- Business mileage paid to staff and Members for business use of their own vehicles (this excludes commuter mileage).

Table C1 (Appendix C) shows a breakdown of the Council's total energy consumption. This has historically fallen year on year. . **Energy consumption[3] in 2024/25 was 33,449 MWh which was 8% lower than in the previous year and 64% lower than in 2010/11**.

The key changes compared to the previous year are:

- **Energy consumption in our schools fell by 17%**. 3 schools became academies and therefore moved out of Scope 1 and into Scope 3 which has a significant impact on our emissions figure.

- There has been an overall **increase of fossil fuel energy consumption in non-school buildings, of 6%.** A significant proportion of this additional gas energy use was for air conditioning in the summer in our council owned children's home.

[3] Energy consumption is calculated in MWh and covers gas, oil and electricity use in schools and non-school buildings, plus electricity used for street lighting, and fuel used for fleet vehicles. It does not include business mileage as this is not calculated in MWh.

- There has been a **small reduction (1% decrease)** in electricity use in our non-school estate. Measures continue to reduce energy consumption, for example, all Children's Centres now are fully fitted with low energy lighting (LEDs). Non-school building energy use also includes the energy used to charge our EV fleet.

- A **22% reduction in electricity use in street lighting** and other street / highways infrastructure. This reduction is mainly a result of our ongoing street lighting LED replacement programme. The LED replacement programme will be completed this year (2024/25). The early years of the programme have been revisited, as technology has improved, to see if further savings can be made but these are not considered cost effective. A 2-year rolling program of light dimming is in progress (i.e.: reprogramming our street lighting lanterns) providing further reduction in the yearly energy consumption.

- There has been a **5% increase in non-EV fleet vehicle fuel use** over the previous year. The changing climate is producing an increase in marginal conditions. Precautionary gritting treatments for road surfaces resulted in an increase in fuel use evidenced by an average increase in vehicle mileage from winter 23-24 to 24-25 of 1,500 miles per gritter.

- **Business mileage has decreased by 7% from last year**. Business mileage compared to the base year of 2009/10 is 66% less and business mileage remains lower than that of pre covid levels.

The above figures do not cover commuter mileage, but this is an area where the Council has significant influence and will continue to encourage staff to choose sustainable transport options, preferably active travel modes. The staff survey from 2025 shows small variations (between 1-2%) in all modes compared to 2024, including a small increase in car use. This is the second year that staff car use has had a small increase and we will continue to monitor this to see if this is a direction of travel or a variation in figures as the survey is not completed by all staff each year. The biggest variation from 2024 is the increase in those stating that they work in a workplace for the majority of their working hours (rather than working from home).

6. Greenhouse gas emissions

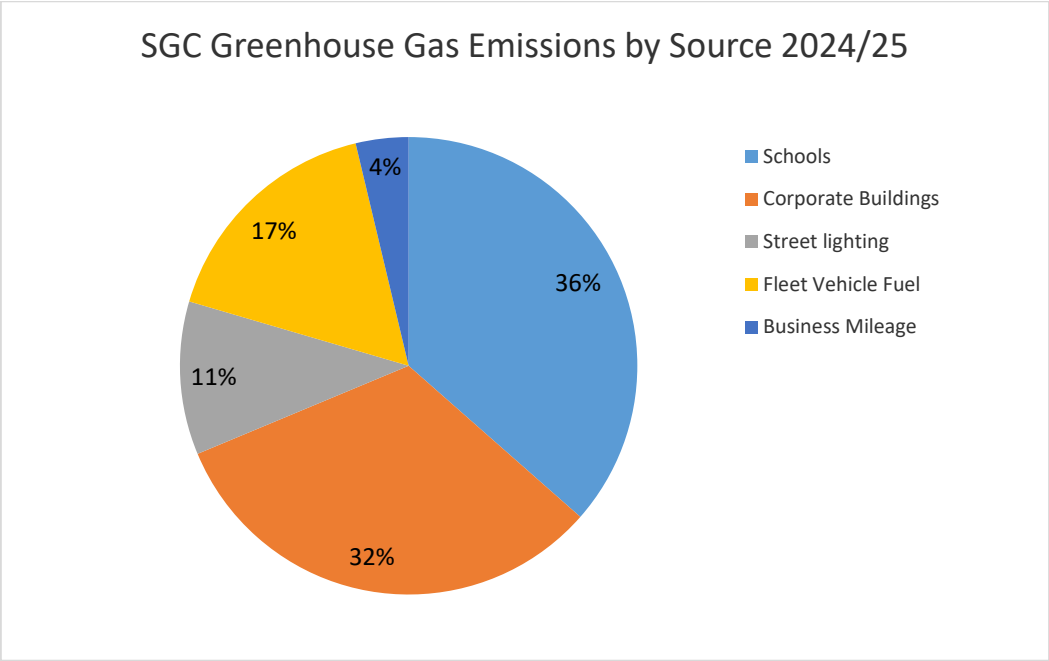
We convert fuel use to Greenhouse Gas (GHG) Emissions using conversion factors published by the Government each year. Emissions from different fuel types vary over time, especially for electricity where the various forms of generation (coal, wind, gas, solar, etc) affect the emissions per unit of electricity generated. We therefore need to see a decreasing trend in both energy consumption and GHG emissions if we are to hit our GHG emissions targets.

Table C2 (Appendix C) sets out GHG emissions data for each year since the base year 2009/10. **Total GHG emissions in 2024/25 have decreased by 7.5% since the previous year and by 78.7% since the base year (2009/10)**.

It is important to remember that in most years, as the national electricity grid decarbonises (due to the move away nationally from coal based power stations, and to an increase in renewable energy generation from primarily wind and solar) then this will also be reflected as a reduction in our greenhouse gas emissions too. In other words, if the Council's electricity consumption remained the same, then most years the greenhouse gas emissions would still reduce due to the progress being made to decarbonise the national grid. This year is the second exception to this trend as the national carbon factor for electricity is the same as the previous year.

Also, as we move forward to a carbon free future, we will need to continue to focus on minimising energy consumption because there will be more demand for electricity as we shift heating and transport over to electricity as a fuel source, and it will also save money as well.

The following chart shows the GHG emissions from the Council estate and activities by source.



Some key points are described below:

- Overall **total Greenhouse Gas emissions have reduced by 7.5%**. There is significant variation across the council functions in the change to emissions. The grid factor has not changed this year (from the factor used last year).

- Emissions from street lighting and highways infrastructure (utilising electricity), continues to decrease having **fallen by 22% this year**. This reflects the reduction in actual energy use from the streetlight's replacement programme, which is in its final year.

- The energy used in Council buildings (including Council-run schools) accounts for **two-thirds of the Council's total emissions**. and non-school buildings emissions includes electricity used in the EV charging for the fleet.

- Emissions at schools reduced by 17.5% reflecting 3 schools moving to academies and therefore moving out of scope from (1 to 3). We are continuing to look at ways we can better reflect the impact of schools moving out of scope on our figures.

- Greenhouse gas emissions for non-school buildings have **increased by 2%** with increased use of gas being the main reason for this. As set out above 70% of

this increased gas is due to cooling requirements from the hot summer in 2025 at a council owned children's home. As the climate changes we may start to see further impacts from issues such as cooling.

- The council has been successful in previous years with undertaking projects on the council estate from the Public Sector Decarbonisation Scheme. With the closure of this scheme we will need to look for new funding opportunities to decarbonise our estate.

- The council has moved towards a Corporate Landlord Model and has a Corporate Estates Management Strategy. Existing Council sites, including open spaces, have been reviewed to look for Climate and Nature opportunities with over 1200 sites large and small scale assessed. This is an early-stage review and the next stage will be to see if these can lead to business cases.

- Reducing energy consumption in existing schools and Council buildings through retrofitting fabric improvements, energy control systems, technology upgrades, solar PV and phasing out fossil fuels as a heating source continues to be incredibly important. Work is being undertaken to review and cost this to be prepared for any future funding opportunities that arise.

- There has been a **6% increase in fleet fuel emissions** this year, with increased fossil fuel mileage, due to pre-emptive gritting, and a reduction in the amount of miles travelled by the vehicles trialling hydrogenated vegetable oils also contributing towards the change in emissions.

- Fleet vehicles continue transfer to electric vehicles (EVs) where possible. The EV Mileage over 2024-2025 was 437,285 this is 40% of the whole mileage. However, we are reaching capacity at our depots in relation to electric power supply, and this is impacting the amount of vehicles that can transfer.

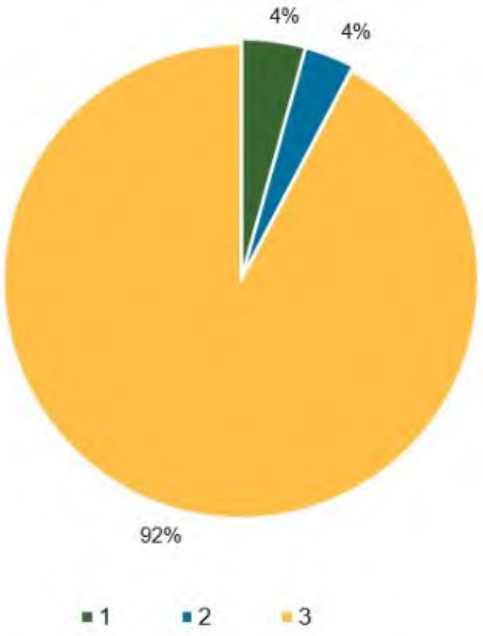
- Emissions from **business mileage have decreased by 4% from last year,** with business mileage remaining lower than that of pre covid levels.

7. Scope 3 emissions

Work continues on improving our understanding and data in relation to our wider Scope 3 emissions (over and above business mileage and electricity transmission which are already included in our greenhouse gas reporting).

Information produced by EY last year shows that our estimated Scope 3 emissions based on our procurement spend data would be approximately 92% of our emissions (with Scope 1 and 2 making up the remaining 8%).

South Gloucestershire Council estimated total emissions by Scope from procurement spend



Staff from the Climate and Nature Team have contributed to the procurement review, which is currently in progress, contributing advice on net zero and outlining the challenges of achieving this goal. This is already influencing contract specification including notably the waste contract, providing information on how the service is measuring carbon and how it is reducing emissions. Discussions with the Senior Management Team to shape up an approach to dealing with Scope 3 emissions are underway.

Carbon accounting

We again took part in the CDP reporting (previously known as Carbon Disclosure Project, and made our fifth submission of South Gloucestershire area – wide (not just Council-own) data in 2025. CDP runs the global environmental disclosure system and each year thousands of companies, cities, states and regions are supported by CDP to measure and manage their risks and opportunities on climate change and a wide range of sustainability issues. CDP have created a system over the last two decades that has resulted in unparalleled engagement on environmental issues worldwide.

8. Renewable energy generation

Generating energy from renewable and low carbon sources is a positive and practical way that the Council can help to tackle climate change through the use of its own estate and activities. By increasing renewable energy generation we are supporting the transition of South Gloucestershire to a low carbon society and directly contributing to the decarbonisation of the national grid.

The Council generates renewable energy from a range of sources. Approximately **1,415,834 kWh (1,415 MWh) of renewable energy** has been generated from schemes on our land and buildings.

Electricity

The prime sources of renewable electricity generation are the two ground mounted solar systems at Badminton Road, and Moorend. The Badminton Road scheme feeds renewable electricity directly into the Badminton Road office building, whilst the Moorend Solar farm generates electricity that is fed into the National Grid. In total, ground mounted solar PV schemes from the Council estate have generated an estimated **804,454 kWh** this year (see Table C3 in Appendix C).

The installations that feed directly into Council buildings are taken into account in the energy consumption figures for those buildings – i.e. they help to reduce the amount of energy purchased from the national grid.

The Council's standalone ground mounted solar scheme at Moorend supplies electricity directly into the national grid. Last year it generated 633,719 kWh of electricity. Continuing to increase the amount of renewable energy generated by the Council, including on council owned buildings, is an action in the Year 6 Climate Emergency Action Plan.

Heat

There are a total of six biomass boilers installed across the Council estate (in one office and five schools), as well as two ground source heat pumps, two air source heat pumps and four

solar thermal arrays. The Bristol and Bath Science Park also has biomass and solar PV installed. Two mini combined heat and power units are also installed, which are generating low carbon heat and electricity (though this is not considered to be renewable and is therefore not counted in Table C3 of Appendix C, which sets out renewable energy generation for this year).

9. Offsetting or insetting residual emissions

The priority of the Council is to minimise energy consumption to reach as close to zero emissions as possible. However, we recognise that there will likely be some residual emissions which require insetting or offsetting in order for us to be a carbon neutral council. In order to encourage others (residents, visitors, businesses, communities etc) to do this as well, we will develop opportunities for investment.

In 2021/22 we commissioned the University of the West of England to undertake a piece of work, 'Plan to 2030', which looks at the likely remaining carbon emissions in our area by 2030 when both the maximum possible national and local interventions have been applied. This can input into our work to consider our offsetting and insetting and we continue to work collaboratively with partners such as the University of West of England and other local authorities to share knowledge and ideas.

An immediate action that the Council took following its Climate Emergency declaration was to switch the purchased electricity and gas used in corporate buildings to a green energy tariff. Therefore, from April 2020, our aim has been for all the energy purchased for our corporate buildings, and also some schools, to be renewable. We have been encouraging our remaining schools to switch to a green energy tariff and whilst initially there was a significant increase in schools getting their energy from a green tariff this has reduced and remained back down due to cost. While this is useful mitigation buying certified green energy should be done alongside demand reduction as it doesn't automatically lead to an increase in renewable energy supply.

This year we have been unable to purchase green gas, due to supply shortages. This shows the challenge that we are likely to continue to face going forward as more organisations look to reduce emissions and meet targets. This is why it continues to be important to develop innovative solutions ourselves.

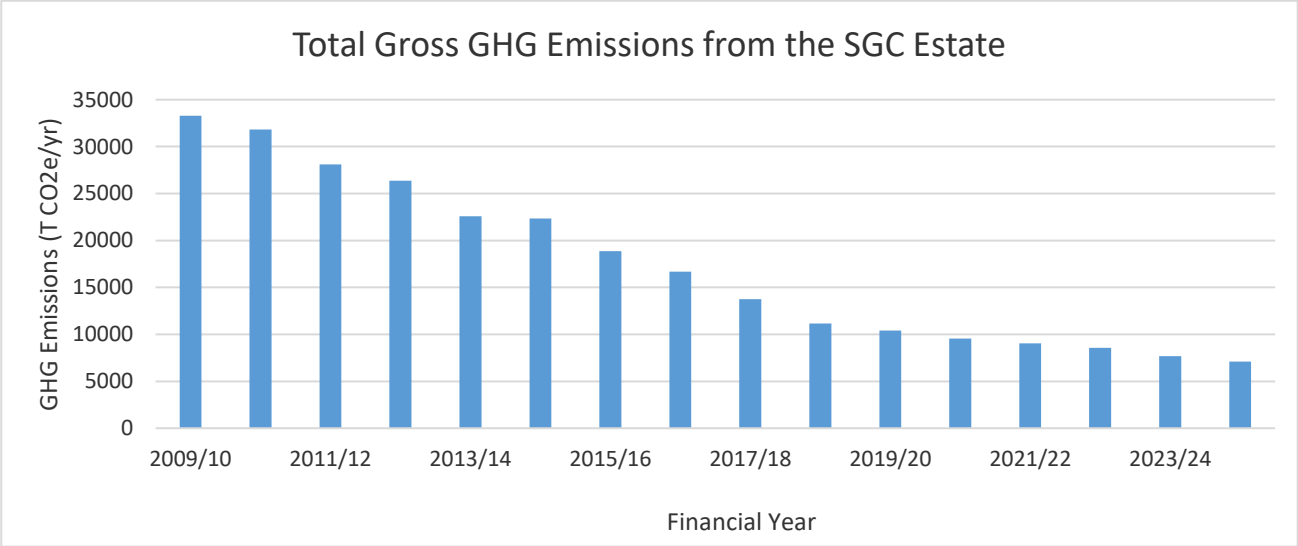
Investing in Climate and Nature (ICaN)

Our South Gloucestershire Investing in Climate and Nature (ICaN) initiative will bring funding to deliver nature and climate projects on council sites, bringing new opportunities to our

area. The opportunities for ICaN to be utilised for insetting against our emission are being investigated. Further information can be found here: Climate tools for businesses | BETA - South Gloucestershire Council

10. Conclusion and future work plans

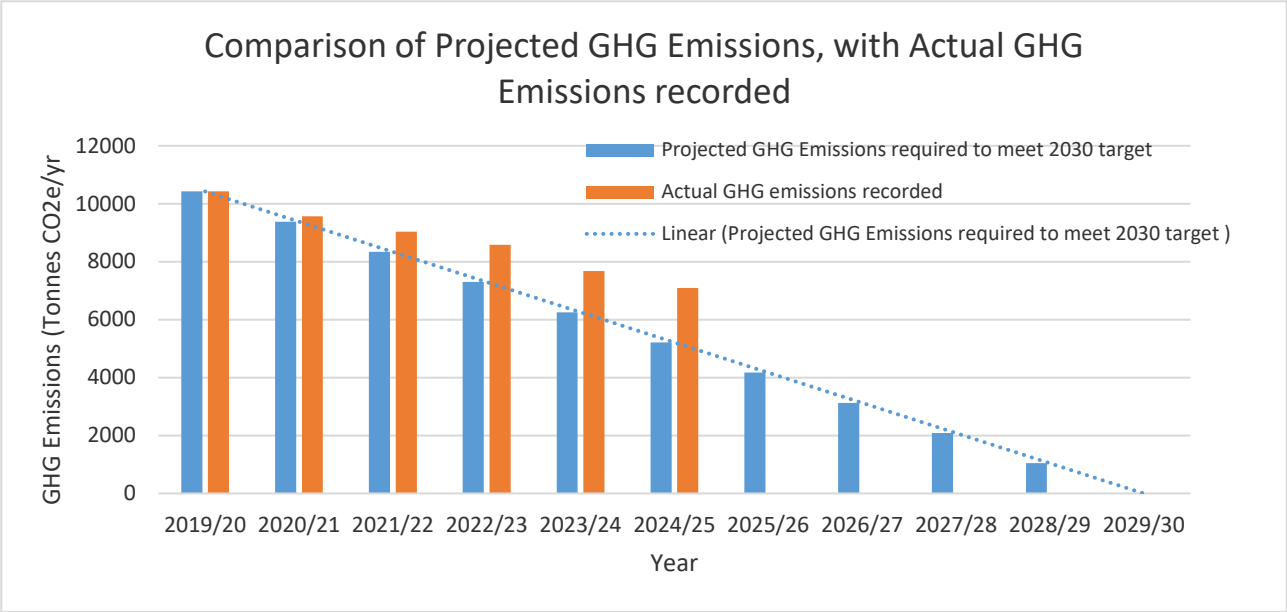
The Council has a target to **reduce its GHG emissions to 'net zero' by 2030**, in line with the Climate Emergency declaration. To complement this aim, the Council also needs to minimise energy consumption as far as possible. Our Scope 1 and 2 emissions show a reduction in GHG emissions of **7.5%** since last year, which equates to **517 tonnes** of CO2e. Whilst a reduction in emissions from streetlights has contributed to this, a key reason for the reduction is three schools changing to academies and moving out of scope. Total GHG emissions are now **78.7% lower** than in the baseline year.



The data shows emissions reduction is now slowing down. To some degree this can be expected, as the easier measures have now been undertaken and we are moving on to more difficult tasks. However, this means we must increase our efforts to minimise emissions from all sources if we are to reach the 2030 target of a carbon neutral Council. The increase in summer gas consumption for air conditioning, and the pre-emptive gritting, also shows how a changing climate is starting to impact our emissions. Considering how we can adapt and build resilience is therefore increasingly important. Our work continues within the council with our Carbon Management Group to look at how to reduce our emissions.

In 2019/20 we calculated that a saving of 1,042 tonnes of CO2e per year each year for the next ten years was required in order for the Council to achieve the carbon neutral target by

the end March 2030 (the blue bars in the graph below). This means all Scope 1 and Scope 2 emissions, plus some scope 3 emissions (business mileage and transmission/distribution of electricity). The graph below shows our trajectory against this target.



However, the way the target is calculated means that it does not include any residual from the years where we don't meet our target. Therefore, we now recalculate our target to take into account this residual. The target for 2024/25 was 1,279 tonnes of CO2e and the target emissions reduction amount for 2025/2026 will be 1,419 tonnes of CO2e.

The data presented in this report shows that we have missed our target this year, as we also did last year. The emission reduction we have achieved is still positive, but we need to continue to focus on the work that we can do, including a strong focus on those areas of our largest greenhouse house gas emissions.

By analysing our data, we can identify where we need to focus our efforts to ensure we are on track to achieving our 2030 target. For example -

- **The energy used in Council buildings (including SGC-run schools) continues to account for two-thirds of the Council's total GHG emissions.**
    - The need to rapidly accelerate action on reducing energy consumption in existing schools and Council buildings through retrofitting and solar PV schemes, and phasing out fossil fuels as a heating source, continues to be a high priority.

- As set out within our overarching Climate Emergency Action Plan, and within this report, there are a variety of programmes being undertaken which aim to assist the Council to reduce energy use and emissions. For example, we will continue to use the Corporate Landlord Model and the Corporate Estates Management Strategy to drive adaptation and resilience, renewable energy, green infrastructure, food, and nature recovery as per the Council Plan priorities
- We need to ensure we are not adding to the problem through our new build proposals. We have recently built two new schools to Passivhaus standards (Frenchay and Elm Park).
- We need to work with government to ensure that new schools (and any other Council buildings) are designed and built to very high energy efficiency standards (such as Passivhaus), have renewable sources of heating and are resilient to a changing climate.

- **With streetlighting continuing to reduce, fleet is now the second highest source of council Greenhouse Gas Emissions**.
  - We need to continue the 'greening' of the fleet and continue to investigate opportunities for larger vehicles as these develop. However, the national target of net zero carbon by 2050 is likely to impact the timescale of these coming forward, as is our electric power supply and the timing of changing fleet vehicles.

In terms of the Council's own emissions, we recognise that there will be a certain level of residual emissions that we won't be able to eliminate and further consideration of offsetting and insetting needs to occur in coming years. We will continue to work with both the University of West of England, other councils, and on innovative projects such as ICaN to develop our plan in relation to insetting and offsetting

We continue to recognise that more work needs to be done to define, track and reduce the Council's additional Scope 3 emissions. We will continue to work on this in the coming year, in particular in relation to procurement.

We also recognise generating renewable energy and increasing renewable energy generation capacity within South Gloucestershire, alongside national generation, will be important. We continue to look for opportunities in this area, and council land has been reviewed, and identified, for potential community owned wind turbines and exploration of heat from mines.

In summary, this report demonstrates that the Council is leading by example to mitigate and adapt to climate change, and action needs to continue to be accelerated so that we meet our 2030 target. We are committed to revisiting our Climate Emergency response each year and implementing the actions identified in the overarching Climate Emergency Action Plan and the more specific strategies and plans relating to specific Council service areas and activities in order to achieve further reductions in energy consumption and carbon emissions, and to increase renewable energy generation and carbon offsetting.

11. Appendix A: Technical background information

Greenhouse Gas Emissions - Definitions of Scope:

These definitions are set out by the Government (source) as follows:

Scope 1 (direct) emissions are those from activities owned or controlled by your organisation. Examples of Scope 1 emissions include emissions from combustion in owned or controlled boilers, furnaces and vehicles; and emissions from chemical production in owned or controlled process equipment.
Scope 2 (energy indirect) emissions are those released into the atmosphere that are associated with your consumption of purchased electricity, heat, steam and cooling. These indirect emissions are a consequence of your organisation's energy use, but occur at sources you do not own or control.
Scope 3 (other indirect) emissions are a consequence of your actions that occur at sources you do not own or control and are not classed as Scope 2 emissions. Examples of Scope 3 emissions are business travel by means not owned or controlled by your organisation, waste disposal, materials or fuels your organisation purchases. Deciding if emissions from a vehicle, office or factory that you use are Scope 1 or Scope 3 may depend on how you define your operational boundaries. Scope 3 emissions can be from activities that are upstream or downstream of your organisation. More information on Scope 3 and other aspects of reporting can be found in the Greenhouse Gas Protocol Corporate Standard.

The Council's Emissions:

We have monitored annually, since 2009, all the Council's Scope 1 and Scope 2 emissions. Some Scope 3 emissions have also been monitored and included in the reporting figures.

The sources of emissions monitored is set out according to 'scope' below:

Table A1: Scope 1: Direct Emissions

Sources of Emissions	Detail
Fuel used in School Buildings (SGC only, not academies)	kWh gas Schools kWh oil Schools kWh biomass (wood pellets) Schools
Fuel used in SGC buildings (corporate buildings, Bristol Bath Science Park and others e.g. libraries, toilets etc.)	kWh gas Non Schools
Fuel use in SGC Fleet Vehicles (Streetcare) this consists of two types: Bulk Storage Fuel – used to fuel fleet vehicles on site (Broad lane depot). Data is total amount purchased in financial year, in litres. Fuel card system – amount of fuel used in fleet vehicles that fill up off site using fuel cards. Total amount in litres for the financial year.	Litres Fleet Vehicles Petrol Litres Fleet Vehicles Diesel Litres Fleet Vehicles Gas Oil

Note: this does not include vehicles operated by Suez (Waste Contractors)	

Table A2: Scope 2: Energy indirect emissions

Source of emissions	Detail
Electricity consumption in School Buildings	kWh electricity Schools (SGC only, not academies)
Electricity consumption in SGC buildings	kWh electricity Non Schools (this means corporate buildings, and other Council-owned and run buildings e.g. Bristol Bath Science Park, libraries, toilets etc.)
Electricity consumption in Street lighting, street furniture and highways structures.	kWh Electricity used (Note: Data includes metered and unmetered supplies for street lights, illuminated signs and bollards as well as traffic signals)

Table A3: Scope 3: Other indirect emissions

Source of emissions	Detail
Business Mileage	Staff / Members / Schools business mileage – totals (not split by type of fuel used in the car. Does not include use of pool cars, that is captured in fleet vehicles information)
Transmission and Distribution Losses associated with purchased electricity	The total electricity consumed (kWh) in Buildings and Street lighting is multiplied by the Transmission and Distribution conversion factor (see below) to get the emissions impact (kgCO2e) of the losses associated with the electricity purchased.

Conversion Factors:

Conversion factors are updated annually and published by the Government. For consistency, we use the conversion factors that are embedded in the LGA/LP GHG accounting tool.

This enables us to convert energy consumption (in the form of kWh for electricity and gas, Litres for diesel, petrol; Miles for business mileage etc) into the equivalent kg of CO_2 ($kgCo_2e$) to enable comparisons to be made.

12. Appendix B: Scope 3 Emissions

There are a range of additional potential sources of Scope 3 emissions and these can be difficult to quantify.

The following potential sources of Scope 3 emissions have been identified so far, and we have taken some steps to reduce these emissions.

We will share knowledge and data with the carbon accounting team from the Local Government Association and Local Partnerships who are also doing further research into Scope 3 emissions.

Table B1 : Scope 3 – other indirect Council emissions- Potential sources of Emissions to be explored further

Potential sources of Scope 3 Emissions to be explored further	Detail and Actions
Commuter mileage	Commuting to and from work in fossil fuel based vehicles by staff. Information is collected through the Travel to Work survey carried out annually. Also, staff are encouraged through various travel campaigns e.g. Access West to walk, cycle or use public transport. The salary sacrifice Electric Vehicle leasing scheme has been launched to staff in 2021. A staff travel plan was produced in 2023.
Waste services (out sourced for 24/25)	The Waste services have been operated by Suez on behalf of the Council and that includes for the year of his report (24/25). Waste services are now back within the councils control and so next year's report will include additional figures to be included in Scope 1 and 2.
Investments and Pensions	The finance team have commissioned advice to implement a green finance strategy to ensure the Council investments are aligned with our climate emergency aims. The Avon Pension Fund is committed to being a net zero investor by 2050 or earlier.
Procurement activity	This covers a wide range of goods and services. The Procurement strategy has been revised to incorporate the assessment of carbon impacts in the decision-making process. Sustainable procurement information is available on our intranet. Further work on looking at how we can reduce the emissions associated with our procurement is underway.

Facilities Management	The council managed the café at Badminton Road and the community meals service. Some of the related emissions will be included already in the Building data e.g. energy use. However, there may be other sources of emissions that need to be addressed.
Leisure services	The Circadian Trust operates the leisure centres in South Glos. We have been working collaboratively with the Circadian Trust to help reduce energy consumption and carbon emissions. A total of 400 kWp of solar PV was installed at Bradley Stoke Leisure Centre jointly funded by the council and Circadian Trust. We have installed an additional 52kWp of solar PV at Longwell Green Leisure Centre which was funded by a Sport England Grant. The Circadian Trust has funded 122kWp and 144kWp of solar PV at Thornbury and Yate Leisure Centres respectively
Academies (schools not run by SGC)	There are cases where the Council leases buildings and land to academies. There may be potential to influence action taken to reduce emissions by working collaboratively with the academy chains.
Highways Operations	The delivery of highways schemes has implications for emissions from the construction process, materials used, and the maintenance practices required. Work being undertaken as part of the GreenPrint/ Livelabs project has enabled us to baseline our transport greenhouse gas emissions.
Working from home emissions	Working from home emissions in relation to domestic energy related impacts.

13. Appendix C: Data tables

Table C1: Total Energy consumption across the Council Estate

Energy Consumption (MWh/year)	**2010/11** Base Year	**2023/24** Last Year	**2024/25** This Year	*% Change since base year*	*% Change since last year*
School Buildings	**52,272**	**15,624**	**12,983**	**-75%**	**-17%**
MWh gas Schools	32342	8,802	7,452	-77%	-15%
MWh oil Schools	3,906	725	654	-83%	-10%
MWh electricity Schools	16025	5,479	4,707	-71%	-14%
MWh Wood Pellets Biomass Schools	-	617	0		-100%
MWh Wood Chip Biomass Schools	-	0	170		100%
Non-School Buildings	**18,288**	**11,195**	**11,727**	**-36%**	**5%**
MWh gas Non Schools	10,403	6,183	6,417	-38%	-4%
MWh oil Non Schools	932	0	0	-100%	0
MWh electricity Non Schools	6,952	5,012	4,983	-28%	-1%
MWh Wood Pellets Biomass	-	0	0		0
MWh Wood Chip Biomass	-	0	327		100%
Street Lighting	14,609	4,612	3,587	-75%	-22%
Fleet Vehicle Fuels	8,300	4,917	5,151	-38%	5%
Total (MWh/year)	**93,469**	**36,348**	**33,449**	**-64%**	**-8%**
Business Mileage (miles per year)	2,890,460	992,931	918,689	-68%	-7%

Table C2: Greenhouse Gas (GHG) emissions across the Council estate (tonnes of carbon dioxide equivalent (tCO2e))

Emissions (tonnes of CO2e)	2009/10-Base Year	Last Year 2023/24	This Year 2024/25	Change in Tonnes of CO2e since last year	% Change since base year	% Change since last year
School Buildings total	**15,261**	**2,931**	**2,501**	-429	-81%	-15%
Gas in Schools	6,073	1,611	1,364	-247	-73%	-15%
Heating Oil in Schools	1,694	179	162	-18	-89%	-10%
Electricity in Schools	7,494	1,134	974	-160	-85%	-14%
Wood Pellets Biomass in Schools	-	7	0	-7		-100%
Wood Chip Biomass Schools	-	0	2	2		100%
Non-School buildings total	**6,018**	**2,169**	**2,210**	41	-63%	2%
Gas in all non-school buildings	2,177	1,131	1,174	43	-46%	4%
Heating Oil in all non-school buildings	225	0	0		-100%	0%
Electricity in all non-school buildings	3,615	1,038	1,032	-6	-71%	-1%
Wood Pellets Biomass in all non-school buildings	-	0	0	0		0%
Wood Chip Biomass in all non-school buildings	-	0	4	4		100%
Street Lighting	**7,296**	**955**	**743**	-212	-90%	-22%
Fleet vehicle fuel	**2,113**	**1,080**	**1,147**	68	-46%	6%
Business Mileage Paid	**1,140**	**266**	**255**	-11	-78%	-4%
Electricity Transmission & Distribution losses	**1,457**	**272**	**239**	-33	-84%	-12%
Total GHG Emissions (t CO2e/yr)	**33,284**	**7,672**	**7,095**	-577	-79%	-7.5%

Table C3: Renewable Energy Generation from the Council Estate for 1st April 2024 to 31st March 2025 in kWh

Type of Renewable Energy Installation	2024/2025
TOTAL GENERATED	**1,415,834 kWh**
Total from SGC Ground mounted Solar PV schemes	**804,454 kWh**
Badminton Road solar array	*170,735 kWh*
Moorend Solar farm	*633,719 kWh*
Small school wind turbine	**1,818 kWh**
Biomass	**496,240 kWh**