

# **South Gloucestershire Council: Local Greenhouse Gas Report (2019/2020)**

**Council-own carbon emissions and renewable energy  
generation**

## Executive Summary

- Our aim is to become a carbon neutral Council across our estate and all functions by 2030.
- We have actively reduced our carbon emissions since 2009, reflecting a long record of action on climate change. Total greenhouse gas (GHG) emissions in 2019/20 have decreased by 18% since the previous year and by 69% since the base year (2009/10).
- Total energy consumption from our corporate buildings and schools; street lighting; fleet vehicles, and staff business mileage, has reduced year on year. In 2019/20 it was 1% lower than in the previous year and 51% lower than in 2010/11. The energy used in Council buildings (including SGC-run schools) accounts for two-thirds of the Council's total GHG emissions.
- We are already taking further action to reduce energy consumption in existing schools through retrofitting and solar pv schemes. New schools are being designed to achieve very high energy efficiency standards e.g. Elm Park School will be 'Passivhaus'.
- Our ongoing street lighting LED replacement programme continues to deliver significant reductions in electricity use.
- A 22% reduction in staff business mileage has been achieved which is a saving of over 277,000 miles compared to the previous year (and this does not yet include the impact of Covid-19).
- A total of 942,040 KWh of renewable energy has been generated from solar pv schemes on our land and buildings. Five new rooftop solar pv schemes have been installed this year, and we continue to generate a significant amount of renewable heat energy from biomass sources too.

## **1. Purpose of report**

This report monitors the Council's own greenhouse gas emissions and the renewable energy directly generated by the Council. In future years it will include the monitoring of carbon offsetting projects that the Council directly implements or invests in.

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

## **2. Climate emergency**

A changing climate is recognised as being the most significant threat to our society that we have faced. Nationally, the UK Government has set a target in law for all greenhouse gas emissions to be net zero by 2050. However, in order to pursue efforts to limit warming to 1.5C (as per the Paris Agreement in 2015) and avoid the severest impacts of climate change, it is important that the 'net zero' target is achieved much sooner. Consequently, many Councils have declared a Climate Emergency and set a 2030 target.

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. In the declaration, the Council's committed to providing the leadership to enable the whole of South Gloucestershire to be carbon neutral by 2030. As part of this, it included the aim of the Council itself becoming carbon neutral by 2030, across all its functions.

In order to monitor progress towards this aim, and 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.

### 3. 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 have also been monitored and are included in the reporting figures.

- **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 e.g. 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 1** 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

There are other emissions that result from the Council delivering its functions, such as outsourced services and the procurement of products and services (known as Scope 3), but the emissions are not easily measured and are not currently included in the data reported. However, this is something that we will investigate further as part of our pledge to be carbon neutral by 2030, and is one of our actions prioritised in the [Climate Emergency Action Plan](#). Our [Carbon Emissions Baseline report](#) estimated that Council Scope 3 emissions from procurement activity could be 5 times higher than scopes 1 and 2. Therefore it is an

important issue to focus on, and we are working with the Local Government Association and Local Partnerships to help develop better carbon accounting across local authorities.

**Appendix 2** sets out an initial list of potential emission sources to explore further.

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 offset through other carbon saving projects by 2030.

The purpose of this report is therefore to quantify GHG emissions from the Council's estate and activities listed in the bullet points above, and to analyse progress against this target. The relevant data is set out in **Appendix 3**, with key points highlighted in the Report.

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. For example, the Strategic Property Asset Management Plan contains carbon management opportunities that relate to Council property, development and corporate estate.

## 4. 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. But it does not include academy schools and leisure centres);
- Electricity consumption in street lighting (including lighting for street furniture, signs, bollards, traffic signals, metrobus 'l 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 is outsourced to Suez and so these waste vehicles are not included); and,
- Business mileage paid to staff and Members for business use of their own vehicles (this excludes commuter mileage).

Table 1 (Appendix 3) shows a breakdown of the Council's total energy consumption. This has fallen year on year since monitoring began. **Energy consumption<sup>1</sup> in 2019/20 was 1% lower than in the previous year and 51% lower than in 2010/11.**

The key changes compared to the previous year are:

- **Energy consumption in our schools has fallen only by 1%.** The reduction has mainly been driven by a reduction in electricity use (5%), but has been hindered by an increase in the use of gas (by 1%). Also, one primary school transferred to an academy during the reporting figures this year, and so is no longer included in the figures. These figures show that further action is needed to help reduce energy consumption in schools as progress seems to have stalled.

Scoping studies have already been completed to look at installing roof top solar PV on school buildings and retrofitting measures to reduce the heating requirements of the 1970s 'scolas' school building stock. These need to be taken to the next stage.

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<sup>1</sup> 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.

With regard to new school developments, the Council has pursued designs which ensure new schools are built to very high energy efficiency and sustainable building standards, for example, Passivhaus. Once renewable heat and power generation technology are incorporated, it is then possible to achieve a net zero carbon standard. The first school to be built to Passivhaus standards will be Elm Park School, and the schools at Lyde Green are also designed to meet this internationally recognised standard.

- An overall **increase of nearly 3% in energy consumption in non-school buildings**. This was mainly driven by a 9% increase in the use of electricity and is likely due to the first full years worth of data from the Bristol and Bath Science Park being included in the figures. It may also reflect increased use of the electric pool cars by staff for business mileage. There was a small reduction in gas use (2%) overall. Biomass as a fuel is not currently included in the energy consumption figures, but we intend to include it from 2020/21 onwards. It is important to recognise the role Biomass plays in shifting our buildings away from fossil fuel based heating systems.
- Almost **7% reduction in electricity use in street lighting** and other street / highways infrastructure. This is mainly a result of our ongoing street lighting LED replacement programme as consumption has increased in other areas due to increasing assets, for example the infrastructure to support Metrobus. The LED replacement programme will be completed in 2024/25, but after that, years 1, 2 and 3 of the programme will be revisited as technology has improved and further savings can be made.
- A very small reduction of **0.24% in fleet vehicle fuel use** (which is the equivalent of 1,400 litres of fuel) has been achieved over the previous year. However, this could be due to variations in the weather from one year to the next and the increased need for gritting lorries to be used, for example. It also highlights that focussed action is needed in this area of consumption as progress appears to have stalled. Early this year (2020) a report by the Energy Savings Trust was commissioned and recommended key areas for action, which are currently being implemented. Furthermore, work is also being undertaken to assess the carbon impact of highways maintenance services with a view to guiding decisions to reduce the carbon impact in future.

- A **22% reduction in business mileage** (a reduction of over 277,000 miles compared to the previous year) is a significant achievement and is likely due to efficiencies through staff being based in fewer offices, increased home working and flexible working arrangements, increased use of video / tele conferencing facilities, and more staff using more sustainable modes of transport (walking, cycling and public transport). The figures do not cover commuter mileage, but this is an area where the Council has significant influence and will continue to encourage staff to use sustainable modes of transport.



## 5. Greenhouse gas emissions

We convert fuel use to Greenhouse Gas 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.

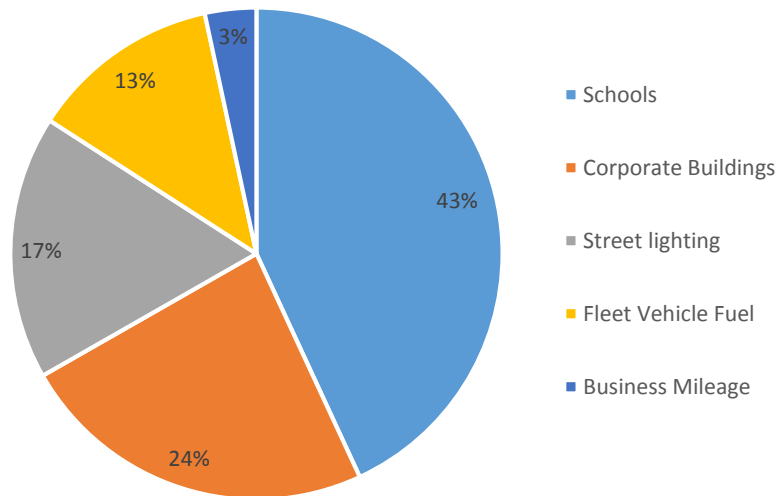
Table 2 (Appendix 3) sets out GHG emissions data for each year since the base year 2009/10. **Total GHG emissions in 2019/20 have decreased by 18% since the previous year and by 69% since the base year (2009/10).**

However, it is important to remember that 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 the greenhouse gas emissions would still reduce due to the progress being made to decarbonise the national grid.

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 too.

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

## SGC Greenhouse Gas Emissions by Source 2019/20



Some key points are described below:

- The energy used in Council buildings (including Council-run schools) accounts for **two-thirds of the Council's total emissions**. The Council's electricity consumption reduced slightly this year (as detailed above), and therefore, once the emissions factor has been applied, this has meant that **the total emissions from electricity use have reduced by 11%** (but this also reflects the impact of the ongoing decarbonisation of the national grid). **There has been no change in the emissions from gas** – there was an increase in emissions from gas in schools but a decrease in emissions from gas in other Council buildings.
- Emissions from street lighting and highways infrastructure, through electricity consumption, have **fallen by 15% this year** (but this also reflects the decarbonisation of the national grid too).
- Emissions from **business mileage has decreased by 20%** due to the significant reduction in staff mileage being undertaken by private car. From our staff travel survey this year, about 11% of staff said they normally used the Council's electric pool cars for business use, 11% used the train, and a further 10% usually car

shared. However, for those that did use their private cars for business, 99% were petrol/diesel fuel type.

- **Progress on reducing the emissions from Fleet vehicles has been minimal** this year. This may be reflective of the weather conditions during last winter and the increased need for gritting.

### **Improvements in Carbon Accounting**

We intend to work with the LGA / Local Partnerships on carbon accounting by participating in their standardised method of carbon accounting developed for local authorities. The method is very similar to our existing data collection process, but includes some additional sources of emissions. From next year we intend to incorporate these into our report. These include: wood pellets (biomass); fugitive emissions; and water supply/treatment.

The LGA / Local Partnerships are also investigating how to measure further sources of Scope 3 emissions, for example staff commuter mileage and outsourced services such as waste. We also intend to do this as part of our Climate Emergency action plan, and so will work collaboratively with them. The LGA/Local Partnerships team will also collate information from many local authorities in order to carry out appropriate benchmarking. This will be useful to see how well we perform compared to other similar authorities.

## 6. 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.

### *Electricity*

The Council generates renewable energy from a range of sources. The prime source 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 scheme generates electricity that is fed into the National Grid. In total, solar PV schemes from the Council estate have generated **942,040 KWh** this year (see Table 3 in Appendix 3). An additional 4,902 KWh has been generated from the wind turbine at Marshfield Primary School.

Since the previous reporting year, there have been several roof mounted solar PV installations completed (totalling 142kWp installed capacity), which supply renewable electricity directly to the buildings. This means the energy consumption recorded is reduced. These installations include:

- Baileys Court Primary School
- St Michaels C of E Primary School, Stoke Gifford
- Watermore Primary School
- The Kingswood Centre
- Winterbourne Library

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 consumed from the national grid.

Significantly increasing the amount of renewable energy generated by the Council has been identified as a focus for action in the Climate Emergency Action Plan.

## *Heat*

The Council has also generated a significant amount of renewable heat energy this year from Biomass sources, totalling **76,050 KWh**. This is less than previous years due to plant faults. 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 installed (but has not currently been used in this reporting year). 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 electricity and is therefore not counted in Table 3 of Appendix 3, which sets out renewable energy generation for this year).

## **7. Offsetting residual emissions**

The priority of the Council is to minimise energy consumption to reach as close to zero emissions as possible. We recognise that there will likely be some residual emissions which require offsetting. We intend to do this through implementing and investing in carbon offsetting projects located within South Gloucestershire. In order to encourage others (residents, visitors, businesses, communities etc) to do this as well, we have initiated the idea of a 'Green South Gloucestershire' fund through our Climate Emergency Action Plan.

We intend to monitor the progress made with carbon offsetting projects in future reports, as the fund is set up and becomes fully operational.

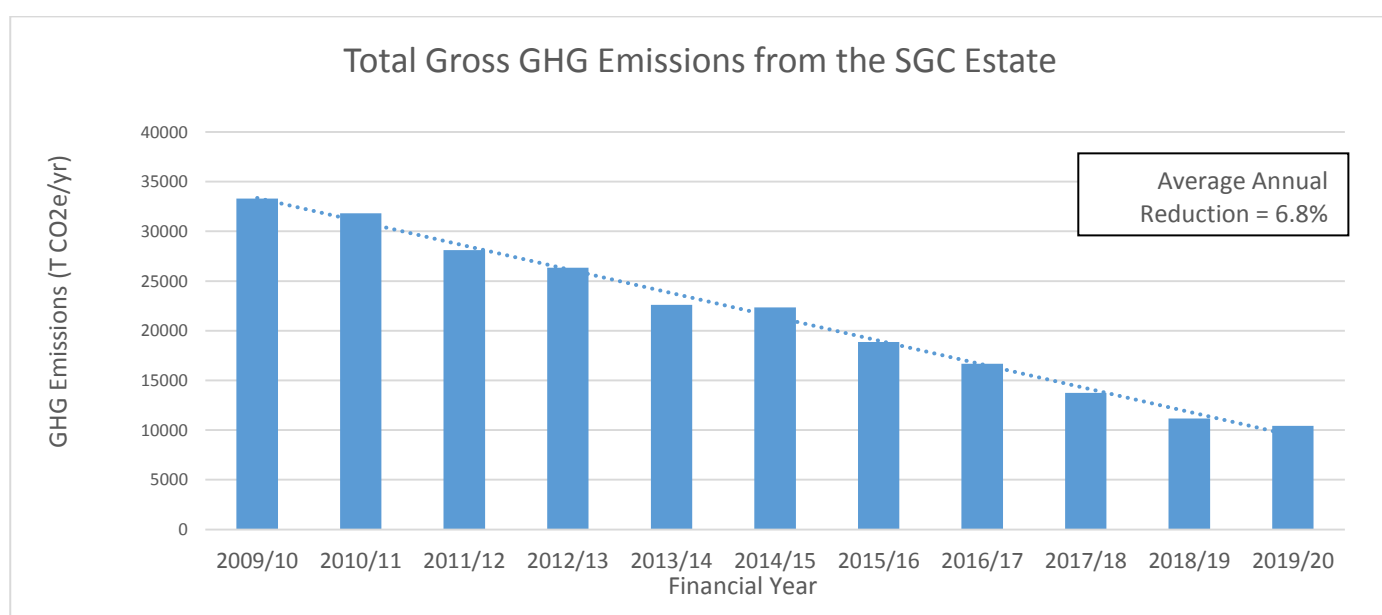
An immediate action that the Council took following its Climate Emergency declaration was to switch the purchased electricity and gas used in corporate buildings to a green energy tariff. Therefore from April 2020, all the energy purchased for our corporate buildings, and also some schools, will be renewable. We are encouraging our remaining schools to switch to a green energy tariff too, and will assist them with this.

## 8. Conclusion

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. There has been an absolute reduction in GHG emissions of nearly **18%** since last year.

Please note that this doesn't include the impact of Covid-19 (because the report covers data from April 2019 to March 2020) and therefore the next annual report is likely to show the impact of the national lockdown period. In 2 years time we will see how any longer term reductions have been secured through the changes made as a result of Covid-19.

The graph below demonstrates an **average annual reduction of 6.8%** since the baseline year of 2009/10.

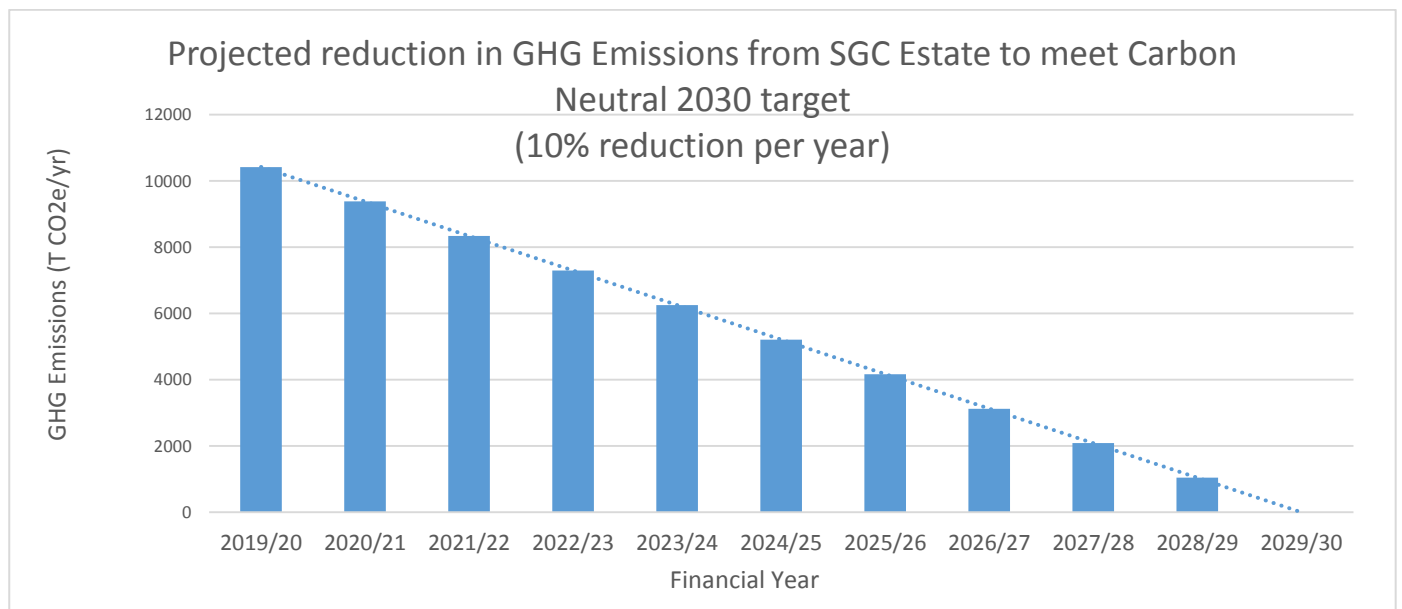


Total GHG emissions are now **69% lower** than in the baseline year, however, this has been skewed somewhat by the conversion of schools to academies (which are no longer included in the Council's emissions data), but on the other hand some new properties have been brought into the Council estate e.g. the Bristol & Bath Science Park.

Overall the data recorded still demonstrates that the Council has made significant progress in its efforts to reduce energy consumption and greenhouse gas emissions. But there is still much to be done to reach the 2030 target of a carbon neutral Council.

The following chart shows a linear trajectory to zero GHG emissions in 2030. This is based on the data that we collect now and assuming that we will continue to measure our GHG emissions in this way. This means all scope 1 and scope 2 emissions, plus some scope 3 emissions (business mileage and transmission/distribution of electricity).

We have calculated that a **10% annual reduction in GHG emissions** from these sources is required in order for the Council to be on track to achieve the carbon neutral target in end March 2030. In other words a saving of 1,042 tonnes of CO<sub>2</sub>e per year is needed.



The **annual target for the Council is to reduce GHG emissions by at least 10%** to put us on course to achieve our overall aim of being carbon neutral by 2030.

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 we also recognise that we will be reliant as a society in generating sufficient renewable energy to meet our needs. Therefore action on carbon offsetting projects is a priority and also increasing renewable energy generation capacity in the area. The Council has been proactive in the generation of renewable energy from its Estate in the past, although progress has stalled in recent years



in bringing new schemes on board. However, this is now being revisited in response to the Climate Emergency.

We also recognise that more work needs to be done to define and track the Council's additional Scope 3 emissions. We will build on the information we have already gathered ([South Glos Carbon Baseline Report 2019 – Regen](#)) and the knowledge from other authorities to help inform a way of effectively monitoring these emissions and identifying the key actions the Council can take to influence each type of emission source. In our Carbon Baseline Report, Scope 3 emissions from the Council procurement of goods and services has been estimated equate to 65,000 tonnes of CO<sub>2</sub>e, which is around 6% of the South Gloucestershire whole area-wide emissions. In addition, there are other scope 3 emissions associated with the generation of waste, school transport, staff commuting, pensions and investments and office management. We have therefore committed to exploring this further in our Climate Emergency Action Plan, and we will measure and report progress in future reports.

In summary, this report demonstrates that the Council is leading by example to mitigate and adapt to climate change. However we recognise that there is still more to be achieved and we are committed to implementing the actions identified in the overarching [Climate Emergency Action Plan](#) (Year 1, and subsequent years) 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.

## Appendix 1: Technical background information

### Greenhouse Gas Emissions - Definitions of Scope:

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

<p><b>Scope 1 (direct emissions)</b> 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.</p> <p><b>Scope 2 (energy indirect)</b> 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.</p> <p><b>Scope 3 (other indirect)</b> 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 <a href="#">Greenhouse Gas Protocol Corporate Standard</a>.</p>
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### 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:

Sources of Emissions included in monitoring	Detail
<b>Scope 1 – direct emissions</b>	
Fuel used in School Buildings (SGC only, not academies)	KWh gas 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). Litres Fleet Vehicles Petrol Litres Fleet Vehicles Diesel Litres Fleet Vehicles Gas Oil	<p>Bulk Storage Fuel – used to fuel fleet vehicles on site (Broad lane depot). Data is total amount purchased in financial year, in litres.</p> <p>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.</p> <p><b>Note:</b> this does not include vehicles operated by Suez (Waste Contractors)</p>

<b>Scope 2 – energy indirect emissions</b>	
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 all unmetered street lights, illuminated signs and bollards as well as traffic signals)
<b>Scope 3 – other indirect emissions</b>	
Business Mileage	Staff / Members / Schools business mileage – totals (not split by type of fuel used in the car)
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 (kgCO <sub>2</sub> e) of the losses associated with the electricity purchased.

### Conversion Factors:

Conversion factors are updated annually and published by the Government here - <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020>.

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<sub>2</sub> (kgCo<sub>2</sub>e) to enable comparisons to be made.

We use conversion factors for:

- Electricity
- Gas (we use the conversion figure for ‘natural gas gross calorific value’)
- Diesel (we use the conversion figure for ‘average biofuel blend’)
- Petrol (we use the conversion figure for ‘average biofuel blend’)
- Gas Oil (we use the conversion figure for ‘bio fuel blend’)
- Business mileage (we use the conversion figure for ‘passenger vehicles, medium car, unknown fuel’)
- Transmission and Distribution losses

We also convert the litres of fuel used into KWh so that we can make comparisons year on year in respect of energy consumption in KWh. The conversion factors for fuel used are: 9.4 per litre of Petrol, 11.1 per litre Diesel, 11.4 per litre of Gas Oil and have been used since 2010. Note the business mileage information is not converted into KWh.

## Appendix 2: Further scope 3 emissions

From the definition of Scope 3 set out above, it is clear that there are a range of additional potential sources of Scope 3 emissions that the Council could have influence over that are currently not included in the reporting figures. We will explore these further to identify action that can be taken to minimise these emissions too, in line with our Climate Emergency declaration.

The following potential sources of Scope 3 emissions have been identified for further investigation so far, and 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.

Potential sources of Emissions to be explored further	Detail
<b>Scope 3 – other indirect Council emissions</b>	
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.
Waste services (currently outsourced)	The Waste services are operated by Suez on behalf of the Council. Work is already being done to undertake a whole system review of emissions in relation to waste and how to achieve zero carbon.
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.
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.
Facilities Management	Integra provide services, for example, the staff restaurant. 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. There may be opportunities for the Council to work collaboratively with the Circadian Trust to help reduce energy consumption and carbon emissions.
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.

## Appendix 3: Data tables

Table 1: Total energy consumption across the Council estate										
Energy Consumption (MWh/year)	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
<b>School Buildings</b>	52,272	45,222	40,491	33,961	31,971	27,610	25,484	23,264	21,883	21,633
MWh gas Schools	32342	27405	25603	19981	19509	16880	15640	15181	14042	14212
MWh oil Schools	3,906	2,107	2,551	2,191	1,636	1,349	1,682			
MWh electricity Schools	16025	15709	12337	11789	10826	9381	8162	8083	7841	7421
<b>Non-School Buildings</b>	18,288	15,798	15,197	12,724	10,080	9,915	11,536	9,833	11,002	11,303
MWh gas Non Schools	10,403	8,492	8,392	7,088	4,493	4,777	6,465	5,519	5,891	5,727
MWh oil Non Schools	932	323	256	0	0	0	0	n/a	n/a	n/a
MWh electricity Non Schools	6,952	6,983	6,549	5,636	5,587	5,138	5,071	4,314	5,111	5,576
<b>Street Lighting</b>	14,609	14,138	14,486	12,831	11,763	10,488	9,450	8,558	7,667	7,148
<b>Fleet Vehicle Fuels</b>	8,300	8,540	8,671	7,873	7,651	6,486	6,352	5,936	5,659	5,645
<b>Total (MWh/year)</b>	<b>93,469</b>	<b>83,698</b>	<b>78,844</b>	<b>67,389</b>	<b>61,466</b>	<b>54,500</b>	<b>52,822</b>	<b>47,592</b>	<b>46,210</b>	<b>45,728</b>
Business Mileage (miles per year)	2,890,460	2,442,864	2,347,587	1,874,482	1,802,028	1,648,889	1,567,171	1,565,672	1,521,858	1,244,445

**Table 2: GHG emissions data for period 1<sup>st</sup> April 2009 to 31<sup>st</sup> March 2020 Tonnes CO2 (e)**

	2009/10 (base year)	2010/ 11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
<b>Total GHG Emissions (t CO2e/yr)</b>	33,284	31,819	28,096	26,352	22,597	22,359	18,870	<b>16,671</b>	<b>13,743</b>	<b>11,153</b>	<b>10,423</b>
School Buildings	15,261	14,732	12,653	11,047	9,467	9,363	7,782	6,656	5,637	4,586	4,343
Gas in Schools	6,073	5,991	5,032	4,742	3,677	3,609	3,114	2,878	2,796	2,582	2,613
Heating Oil in Schools	1,694	964	520	630	538	404	333	415	n/a	n/a	n/a
Electricity in Schools	7,494	7,777	7,101	5,675	5,252	5,351	4,336	3,363	2,842	2,004	1,730
Non-School buildings	6,018	5,531	4,795	4,630	3,815	3,593	3256	3279	2,533	2,389	2,353
Gas in all non-school buildings	2,177	1,927	1,559	1,554	1,305	831	881	1,189	1,016	1,083	1,053
Heating Oil in all non-school buildings	225	230	80	63	0	0	0	0	n/a	n/a	n/a
Electricity in all non-school buildings	3,615	3,374	3,157	3,013	2,511	2,762	2,375	2,090	1,517	1,306	1,300
Street Lighting	7,296	7,090	6,391	6,664	5,716	5,814	4,848	3,894	3,009	1,960	1,666
Fleet vehicle fuel	2,113	2,028	2,030	2,063	1,873	1,822	1,535	1,520	1,411	1,328	1,304
Business Mileage Paid	1,140	969	804	736	574	549	495	477	465	443	352
Electricity Transmission & Distribution losses	1,457	1,469	1,423	1,213	1,152	1,218	954	845	689	447	404

**Table 3: Renewable Energy Generation from the Council Estate for 1<sup>st</sup> April 2019 to 31<sup>st</sup> March 2020 in KWh**

Type of Renewable Energy Installation	2019/2020
<b>TOTAL KWh GENERATED</b>	<b>1,014,892 KWh</b>
Solar PV	942,040
Wind Turbine	4,902
Biomass	76,050
CHP - heat	40,745
CHP - electricity	20,155