North Somerset Council Greenhouse Gas Emissions Report

Emissions from Local Authority Estate and Operations for 2019/20

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North Somerset Council




Introduction

The report provides a summary of greenhouse gas emissions from North Somerset Council's estate and own operations. It includes emissions estimates for the 2018/19 and 2019/20 financial years and any improvements planned which will affect these emissions in the future.

North Somerset declared a climate emergency in February 2019 and is aiming to reduce net greenhouse gas emissions to zero by 2030 for own operations and area. The Council has aspirations to lead by example and reach carbon neutrality for at least Scopes 1 and 2 at an earlier date if possible. The 2018/19 financial year will act as a baseline for monitoring future emissions against.

Summary information can be seen in the table below:

	Total GHG emissions for period (tonnes CO_2e):		**Difference**	
	Apr 2018 – Mar 2019	**Apr 2019 – Mar 2020**	**Tonnes CO_2e**	**%**
Scope 1	3,334	3,156	-178	-5%
Scope 2	3,989	3,641	-348	-9%
Scope 3	6,875	7,172	298	4%
Total emissions	**14,198**	**13,970**	**-228**	**-2%**
Green Tariff	*(-2,168)*	*(-3,605)*	*(-1,437)*	*(66%)*
Total used for target (Scopes 1&2, removing electricity from a green tariff)	**5,155**	**3,192**	**-1,963**	**-38%**

Note: coverage and scope descriptions are given in sections below.

The changes that can be seen in the council's emissions can be attributable to several things:

- There was a significant decrease (21%) in gas consumption in the council's own office buildings. This partly due to the winter of 2019/20 being much milder than 2018/19 and partly due to improvements to heating controls and reduction in services at the Castlewood office building in Clevedon.
- The main cause for reduction in Scope 2 emissions is the reduction in carbon intensity of the national grid. An increase in renewable electricity generation and a decrease in coal consumption meant that the greenhouse gas emissions for every unit of electricity used decreased by 10%.

- The increase between the two years of green electricity procured through our green tariff is because the council began to procure green electricity from October 2018 so the 2018/19 year is only partly covered by that tariff.
- A small impact of the transition to LED bulbs in North Somerset's streetlights began to be observed at the end of the 2019/20 period. This is not a clear change when looking at the whole year but likely to be more significant in the coming years.
- There was an increase in the amount of mileage claimed for business travel, it is not clear what the cause of this was.

In order to meet our 2030 target of Net Zero emissions for Scope 1 and 2, we will need to reduce our emissions by at least 290 tonnes CO_2e each year (to FY 2030/31). However, in reality, emissions will reduce more in some years (for example when upgrading buildings and streetlights).

Organisation Information and Boundaries

North Somerset Council is a unitary authority and is therefore responsible for providing all local services.

There are two reporting periods covered in this report: April 2018 – 31 March 2019 – this will be used as North Somerset's organisational baseline – and April 2019 – March 2020.

We have based this report on the Government's Guidance on how to measure and report greenhouse gas emissions as outlined in communications from The Department for Food, Environment and Rural Affairs.

https://www.gov.uk/measuring-and-reporting-environmental-impacts-guidance-for-businesses

Scope of reporting

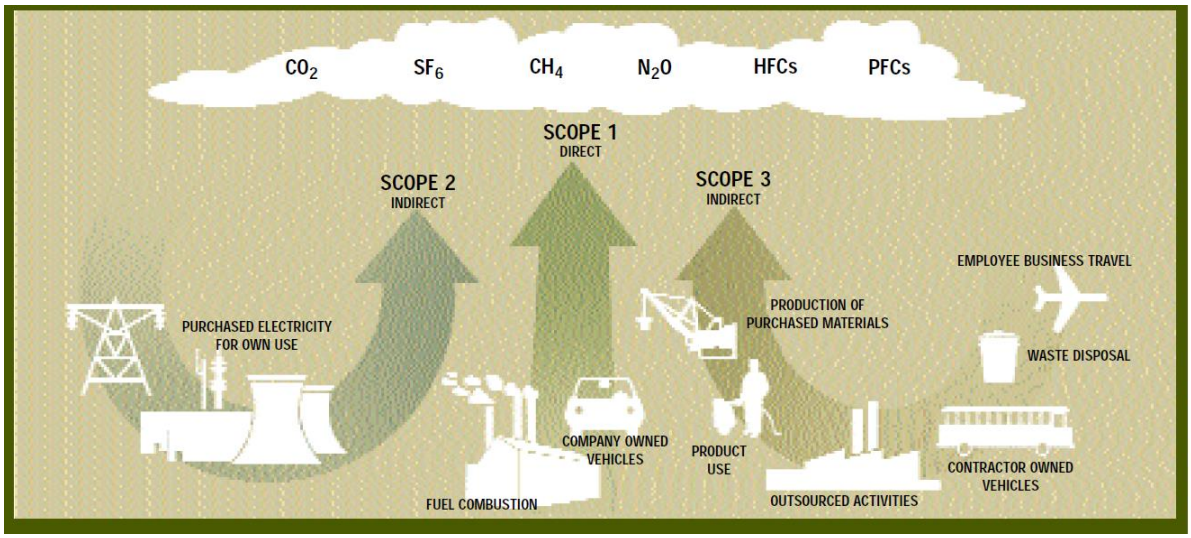
Emissions of organisations can be split into three broad scopes:

Scope 1 – All Direct Emissions from the activities of an organisation or under their control. Including fuel combustion on site such as gas boilers, fleet vehicles and air-conditioning leaks.

Scope 2 – Indirect Emissions from electricity purchased and used by the organisation. Emissions are created during the production of the energy and eventually used by the organisation.

Scope 3 – All Other Indirect Emissions from activities of the organisation, occurring from sources that they do not own or control. These are usually the greatest share of the carbon footprint, covering emissions associated with business travel, procurement, waste and water. Materials purchased, IT hardware,

Figure 1 Diagram showing Scope for organisation emissions reporting



We have measured our total scope 1, 2 and significant scope 3 emissions covering the areas outlined in the organisational boundary (see above). Further details are outlined in the table below.

Due to the COVID-19 outbreak, it has not been possible to collect all required data from contractors and other partners. In future years, as data quality and availability improves, we propose to expand the scope to cover other emissions sources across the Council estate and operations that the Council has direct and in some cases indirect influence over (e.g. operational waste deposited in landfill sites, leisure centres, and procurement).

This is the first time since 2008/09 that North Somerset have recorded and reported all operational greenhouse gas emissions and many things have changed at the council since then – reduced workforce, consolidation of office space, academisation of schools etc. so any direct comparison to that work is not possible.

Source of Emissions	Included in our data?	Comment
Scope 1		
Gas consumption in buildings we fully own, occupy and control	Yes	This includes total fuel consumption from council office buildings, even where office space is shared. This also includes community centres, libraries, car parks, depots, maintained schools. Does not include town and parish council buildings.
Gas consumption: in buildings we own and lease out to others	Partly	These are included where a building is included within our energy management framework. In future, we would like to include leisure centres and the crematorium.
Owned Transport	Yes	This includes our own fleet of vehicles including waste collection vehicles and at waste transfer stations.
Fugitive emissions (from air conditioning units)	No	We do not currently have this information
Scope 2 (Purchased Electricity)		
Purchased electricity: in buildings we fully own, occupy and control	Yes	This includes office buildings, community centres, libraries, car parks, depots, maintained schools*. We have included emissions from transmission and distribution losses here rather than in Scope 3.
Purchased electricity: in buildings we own and lease out to others	Partly	These are included where a building is included within our energy management framework. In future, we would like to include leisure centres and the crematorium.
Streetlights, road signs and fountains	Yes	
Owned electric vehicles	Yes	
Scope 3		

Energy consumed in buildings not directly managed by us but within our scope of influence	Partly	We have included emissions from Academies* here.
Business travel	Partly	We have included emissions for all mileage claimed as business expenses where staff use their own car for business travel. We have not been able to include all public transport emissions as these are purchased separately by each team. We aim to be able to include this in the future.
Outsourced activities	Partly	This includes emissions from grounds maintenance, street cleansing and highways maintenance.
Employee Commuting	Yes	This includes emissions estimated through the annual employee transport survey. Assumptions have been made in the types of vehicles used and emissions have been scaled up from a 22% response rate.
Waste disposal (own waste)	No	We do not currently have data on the waste generated by council services. We aim to include this in the future.
Water		This includes water consumed at those sites which have a water meter - Town Hall, Castlewood and Tropicana.
Purchased materials	No	We do not currently have this information

* Emissions from schools have been scaled up from those schools which are part of the council's energy framework. We have full visibility of gas and electricity consumption for 89% of maintained schools and 37% of academies.

Purchased Green Tariffs

The council procures energy through an energy framework and from October 2018, this framework signed up to a green electricity tariff. The electricity under this tariff comes from 100% renewables sources. This tariff is applied to all of the council's electricity meters.

The amount of CO_2e saved within the framework for emissions reported under Scope 2 was 2,168 tonnes CO_2e in 2018/19 and 3,605 tonnes CO_2e in 2019/20. In addition, 20 out of 60 academies are included in the framework, saving a further 440 tonnes CO_2e in 2018/19 and 785 tonnes CO_2e in 2019/20.

Electricity generated by council owned renewables

The Council owns a 32.48 kW photovoltaic (PV) system which was installed at the Town Hall site in 2012. This generates approximately 33,000 kWh per year which is used on site. This has saved over 100 tonnes CO_2e since installation.

Methodology Used:

The emissions factors used to calculate the emissions in this Greenhouse Gas Report are those provided by BEIS (Department for Business, Energy & Industrial Strategy) and Defra (Department for Environment Food & Rural Affairs) titled: 'UK Government GHG Conversion Factors for Company Reporting' which is available at: www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors2019

These emission factors are applied to activity data (amount of fuel consumed, distance travelled etc.) from utility bills, contractor reported data and council internal reporting.

In establishing our base year recalculation policy, we have closely followed advice given in the Government's guidance on how to measure and report greenhouse gas emissions:

Should the Council in-source or acquire a facility or emission source from another party, then we will aim to recalculate our base year emissions provided that:

- *The facility or emission source in question was operational during our base year (2018/19); and*
- *We had not accounted for the emissions from this facility or emission source when we first established our base year emissions; and*
- *The emissions from the in-sourced or acquired emission source equate to more than 1% of our original base year emissions.*

Should the Council outsource a facility or emission source to another party, we will not recalculate our base year emissions, but we will instead report the emissions arising from the outsourced facility or activity as part of our Scope 3 emissions, provided that:

- *We are able to source comprehensive and accurate data on emissions arising from the facility/ activity from the party to which the facility/ activity has been outsourced; and*
- *The emissions from the outsourced facility or activity equate to more than 1% of our original base year emissions.*

Should we discover errors in the energy and fuel consumption data that we used to calculate our base year emissions, we will recalculate our base year emissions using revised/ amended data in order to correct the errors. In all other circumstances, we

will not recalculate our base year emissions, unless this is specifically required or advised in relevant guidance.

The council purchased the Sovereign Centre during 2019, so in order to maintain a consistent timeseries and not artificially increase emissions, we have replicated the 2019/20 emissions data for 2018/19. We were not able to obtain the energy consumption data from before we owned the building.

Emissions Detail

The table below gives more detailed information about emissions from the council's own operations.

Emissions (tonnes CO_2e)	**2018/19**	**2019/20**	**Change (tonnes)**	**Change (%)**
Scope 1				
Gas consumption	1,388	1,242	-146	-10%
Owned Transport	1,946	1,914	-32	-2%
Total Scope 1	**3,334**	**3,156**	**-178**	**-5%**
Scope 2 (Purchased Electricity)				
Buildings	1,776	1,667	-108	-6%
Streetlights, road signs and fountains	2,190	1,951	-239	-11%
Owned electric vehicles	24	23	-0	-1%
Total Scope 2	**3,989**	**3,641**	**-348**	**-9%**
Total Scope 1 and 2	**7,323**	**6,797**	**-526**	**-7%**
Scope 3				
Buildings	4,322	4,416	94	2%
Business travel	1,066	1,313	247	23%
Outsourced activities	729	725	-4	-1%
Employee Commuting	733	699	-34	-5%
Waste disposal (own waste)	-	-	-	
Water	24	19	-5	-22%
Total Scope 3	**6,875**	**7,172**	**298**	**4%**
Total Gross Emissions	**14,198**	**13,970**	**-228**	**-2%**

Carbon reduction projects

Climate Emergency Strategy and Action Plan

Since declaring a climate emergency in February 2019, North Somerset Council have published a Climate Emergency Strategy and Action plan[1]. The strategy identified seven key principles of our climate emergency work; the first being to "Become a Net Zero Carbon Council". The Action Plan is a working document and the aim is to begin by building an evidence base to enable us to prioritise actions. This report is part of the robust reporting commitment of that key principle.

The Strategy and Action Plan are overseen by the newly appointment Climate Emergency Project Manager and are being driven forward by a Cross Party Working Group of Councillors and an Officers Climate Emergency Working Group.

All major council decisions now require an assessment for their impacts on carbon emissions – we will be working on an approved method of qualitative and quantitative assessment.

Target

Currently the target of becoming a carbon neutral council by 2030 applies only to our Scope 1 and 2 emissions as these are the emissions we have the most control over. However, we aim to reduce Scope 3 emissions as much as possible and apply ethical and sustainability standards to our whole supply chain.

Using this metric and removing emissions from the purchase of green electricity, we have reduced our emissions by a total of 1,963 tonnes CO_2e (38%). However, this is largely because the green tariff only began part way through the financial year. Without that change (looking at Scopes 1 and 2 only), the reduction is 526 tonnes CO_2e (7%). A large amount of this reduction is due to the national electricity grid becoming less reliant on fossil fuels.

In order to meet our 2030 target of Net Zero emissions for Scope 1 and 2, we will need to reduce our emissions by at least 290 tonnes CO_2e each year (to FY 2030/31). However, in reality, emissions will reduce more in some years (for example when upgrading buildings and streetlights).

Also to note, there might be a temptation when removing emissions due to using a green tariff, to ignore electricity consumption. However, the council aim to reduce electricity consumption and increase on-site renewable generation as much as possible in order to reduce the burden on the national grid. This will allow a higher proportion of the UK's electricity to come from renewable sources. No target has yet

[1] https://www.n-somerset.gov.uk/my-services/environmentalprotection/climate-change/climate-emergency/

been set for electricity consumption as a better understanding is required for heating and transport requirements in the future.

Below details a number of actions currently being implemented. The Action Plan and Core Strategy are now influencing recovery work post Covid and the council will continue to report findings and progress to councillors and the public.

Transport

Since the Covid-19 breakout, a significant proportion of the workforce have been working from home successfully. We aim to build on that success in the future and continue to maintain a flexible workforce to reduce our emissions from transport.

We already run 34 Electric Vehicles (EVs), saving approximately 46 tonnes CO_2e in 2019/20 compared with if these were diesel vehicles. We are planning to replace the rest of our car and van fleet with EVs shortly with an expected emission saving of approximately 30 tonnes CO_2e per year.

Energy Efficiency

We have begun a project to replace all streetlighting with low energy LED units. This 18-month project began in December 2019 and is expected to reduce energy consumption from our streetlights by 60%. In 2018/19, emissions from the consumption of electricity for our main streetlights was 2,080 tonnes CO_2e.

The council has commenced working with the South West Energy Unit, based at Bristol City Council. The Unit receives funding from the European Investment Bank to undertake audits of public buildings to assess whether measures can be introduced to improve their energy efficiency. The funding continues to be available despite the confirmation that the UK will leave the European Union.

A business case will propose and cost improvements that could be made to, for example lighting, heating and insulation systems, subject to approval. Costs of the work will be met through Salix funding (an interest free government sponsored funding stream) and repaid by savings made from reduced energy costs. The initiative will also work with schools (including Academy Trusts) and town and parish councils in North Somerset.

The project is currently being initiated and audits will shortly be underway. The project has the potential to drive investment into buildings, reduce energy costs in the long term and make reductions in carbon emissions from premises across North Somerset, at no cost to the council.

Carbon Literacy

The council is investigating Carbon Literacy training to demonstrate our commitment to embedding a low carbon culture in our work. It will equip council employees with a

deeper understanding of the causes and impacts of climate breakdown; enabling and empowering them to make low carbon choices in all council work.

Rewilding

On 23rd July 2019, Council agreed a motion to embark on a programme of Rewilding, citing ecological benefits. Rewilding can also support addressing the Climate Emergency by increasing the capacity of the area to sequester carbon.

The council's programme of Rewilding activities is summarised in the table below:

Phase	Activity	Notes	Time period
1	5000 trees to be planted	This was completed Spring 2020	Complete
2	Tall grass management	Some carefully evaluated areas selected for tall grass management in April 2020	Summer 2020
3	20,000 trees to be planted	Sites will be evaluated during the summer 2020 for this phase	Winter 2020/21
4	Tall grass management areas created	The new grounds and trees maintenance contract will be in place and tall grass areas will be selected prior to the growing season	Summer 2021
5	25,000 trees to be planted	Sites will be evaluated during the summer 2021 for this phase	Winter 2021/22
6	Tall grass management areas created	The new grounds and trees maintenance contract will be established, and tall grass areas will be selected prior to the growing season	Summer 2022
7	Expand re-wilding beyond amenity grass	New sites will need to be identified that are suitable for re-wilding	Ongoing