North Tyneside Council's Annual Greenhouse Gas Report: 2022-23

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Anneliese Allen-Norris

North Tyneside Council

Introduction

Company information

North Tyneside Council, Quadrant, The Silverlink North, Cobalt Business Park, North Tyneside, NE27 0BY.

Reporting period

1st April 2022 to 31st March 2023 (unless otherwise stated).

In July 2019 North Tyneside Council declared a Climate Emergency. The Our North Tyneside Council Plan 2021-25 has the stated ambition that:

"We will publish an action plan of the steps we will take and the national investment we will seek to make North Tyneside carbon net-zero by 2030."

The resulting North Tyneside Carbon Net-Zero 2030 Action Plan, published in 2022, outlines our approach to reducing our carbon footprint and can be found at http://my.northtyneside.gov.uk/category/539/sustainability or by CLICKING HERE.

The Carbon Net-Zero 2030 Action Plan is a rolling programme of projects which are identified by the council and its stakeholders on an ongoing basis. This Plan is used as a communication tool to describe and showcase what is happening within the council processes and practices, and to highlight work that we are aware of happening in the borough.

North Tyneside Council recognises that the climate emergency challenge must be tackled at a number of different levels, with the combined effort of government, businesses, stakeholders and individuals. As an organisation, the Council's carbon footprint is less than 2% that of the Borough, so it is essential to develop a collaborative approach to the challenge.

The Council will update this plan on an annual basis to reflect emerging national policies and accelerated action to support the council's 2030 net-zero pathways. Updated plans will be published in September and available at http://my.northtyneside.gov.uk/category/539/sustainability

In the meantime, the Council continues to deliver projects that reduce carbon emissions.

The Council's Carbon Footprint

This is North Tyneside Council's thirteenth annual Greenhouse Gas (GHG) Report. Our baseline year is 2010/11.

Approach

Our approach follows Government guidance published by the Department for Environment, Food & Rural Affairs (Defra) on how to measure and report greenhouse gas emissions. We have used the relevant 2021 conversion factors.

Organisational boundary

We have used the financial control approach as recommended within the guidance above. All operational and non-operational buildings, for which the council pays the energy bills are included within our organisational boundary. Social housing is excluded other than where the council supplies energy directly, such as to sheltered accommodation schemes and shared usage in housing blocks, such as stairwell lighting and door entry and alarm systems. School building emissions are excluded from our organisational boundary to reflect the increased autonomy schools have from the Local Authority, including the establishment of Academies and the North Tyneside Learning Trust.

Geographical breakdown

All North Tyneside Council's operations fall within the UK and therefore the reported emissions are not broken down further.

Base year

Our base year for GHG reporting is 1st April 2010 to 31st March 2011. The base year has been recalculated to show the organisational boundary excluding school buildings.

Operational scope

We have measured scope 1, 2 and significant scope 3 emissions.

	GHG emissions 2022/23 in tCO2e
Scope 1	
Gas consumption	5,643
Owned transport and plant (fuel consumption)	2,316
Process emissions	0

Fugitive emissions	0
Total scope 1	7,959
Scope 2	
Purchased electricity (Generation)	3,948
Total scope 2	3,948
Significant scope 3	
Electricity (Transmission & Distribution)	361
Water consumption and treatment	74
Business travel	292
Total significant scope 3	727

We have included emissions from our natural gas consumption, which heats our buildings and is used in some locations for cooking. We have also included the emissions from purchased electricity that powers our buildings and street lights.

We do not have any process emissions. We have excluded fugitive emissions due to the nature and cost of data collection. We estimate that these account for less than 0.5% of total scope 1 emissions.

Emissions associated with our owned transport and plant (diesel and petrol) are included in scope 1.

We have included significant scope 3 emissions where data is available and robust. This includes our business travel (journeys made by employees using their own vehicle) and the supply and treatment of water.

Location- and market-based emissions figures are provided below to demonstrate the Scope 2 emissions associated with reliance on the National Grid and the purchasing of zero carbon electricity. As more on-site renewable generation for power and heat is introduced, such as solar panels, battery storage and heat pumps, over time the council will be able to reduce its use of electricity from the national grid and therefore reduce location-based emissions alongside maintaining zero emissions from its purchasing.

In addition, we have calculated more accurate location-based emissions using the grid carbon factor for the local area (covering the Northern Powergrid distribution network area). In the Northeast, we generate some of the cleanest electricity in the country due to our strong investment in renewable power. This is backed up by new data published by National Grid at carbonintensity.org.uk, which shows the carbon emissions of electricity generation in each region across the country. North Tyneside Council have used this data to measure our electricity emissions based on the local energy sources that we use. This more precise, local approach shows how our street lighting and electrification of heat across our buildings have produced significant emissions reductions compared to national estimates.

Tonnes CO2	**2022/23**	**2021/22**	**Base year 2010/11**
Scope 1	7,959	9,115	10,152
Scope 2 **LOCATION-BASED**	3,948 *(653 using regional grid carbon factor)*	4,313 *(1,417 using regional grid carbon factors)*	17,489
Scope 3	727	683	2,313
Outside of scopes	99	88	N/A
Carbon offsets	0	0	0
MARKET-BASED adjustment: zero-carbon tariff	*-3,948 (-653 based on regional grid factor)*	*-4,313 (-1,417 based on regional grid factor)*	*0*
Total net emissions	**12,632**	**14,111**	**29,954**
Total net emissions using regional grid carbon factors	*9,339*	*11,215*	*29,954*
Total net emissions accounting for electricity purchases	*8,686*	*9,798*	*29,954*

Attached as Appendix A to this Report is a copy of the Greenhouse Gas Accounting Tool completed for North Tyneside Council, from which the above summary derives, and includes additional datasets such the emissions

associated with staff commuting and working from home. The Tool has been developed by Local Partnerships, working with the Local Government Association, to provide a consistent approach for councils seeking to calculate their own carbon baseline. While local authority reporting on emissions is currently voluntary, consistent and easy calculation of an annual carbon baseline is an important part of managing the carbon in our organisations. The council is undertaking additional work to publish its full carbon footprint using this Tool, including significant scope 3 emissions and emissions generated from the council's responsibility as a Waste Collection Authority and Waste Disposal Authority.

Change in emissions

Overall, North Tyneside Council's absolute carbon emissions have decreased by 58% between 2010/11 and 2022/23.

The Council continues to deliver a programme of carbon emission reduction, following the hierarchy of energy reduction, energy efficiency and implementing low carbon / zero carbon technology.

This approach has enabled us to deliver energy and carbon emission savings through a behaviour change campaign, improved energy management, investment in energy efficient technology and building asset and fleet rationalisation. We have implemented a programme to install more energy efficient LED lamps into our street lights, and have trimmed the hours they are operational, dimmed them during the night and following a successful trial, introduced a part night switch off scheme. Electrification of heat across the council's portfolio and the shift to an electrified vehicle fleet will continue to drive down emissions, particularly where more accurate emissions from local grid factors are taken into account.

The natural gas carbon footprint of our buildings has reduced by 24% since the baseline year 2010/11.

The electricity carbon footprint of our building portfolio has reduced by 72% since the baseline year of 2010/11.

The electricity carbon footprint of our street lighting has reduced by 82% since the baseline year of 2010/11.

The carbon footprint of fuel (diesel, red diesel, petrol) in operational vehicles has reduced by 15% and the carbon footprint of business miles travelled by staff has reduced by 55% since the baseline year of 2010/11.

Intensity Measurement

The Council does not use an intensity measurement. The overall aim is to become carbon net-zero, so an intensity measurement is not relevant.

The Borough's Carbon Footprint

Approach

Each summer the Department for Energy Security and Net Zero (DESNZ) produces a breakdown of carbon dioxide emissions by Local Authority area as a subset of its annual inventory of greenhouse gas emissions. Publications can be found here. 2021 is the most recent available data.

Two datasets are provided. One containing all emissions assigned to Local Authority boundaries. A second containing emissions "within the scope of influence of Local Authorities." The latter set excludes large industrial sites, railways, motorways and land-use. There is little difference in emissions between the two datasets for North Tyneside and although not all emissions are in the control of the Council, to fully address the climate emergency it is important that the Council reports against all emissions.

Base year

Our base year for reporting the carbon footprint of the Borough is 1st January 2005 to 31st December 2005. This is the earliest data provided by DESNZ.

Scope

The Borough's carbon footprint is made up of the power and heat used in the commercial, industrial and domestic buildings across the whole of the Borough, emissions from road and rail transport, and land use and forestation activities, which can result in either a release into or removal of emissions from the atmosphere.

CO_2 emissions data for North Tyneside (kilotonnes)			
	2021	**2020**	**Base year 2005**
Commercial and Industrial	206	178	475
Public Sector	32	35	99
Domestic	311	301	517
Transport	240	231	334
Land Use & Agriculture	0.9	0.7	1.1

Total net emissions	789	746	1,426

Change in emissions

Overall, the Borough of North Tyneside's absolute carbon emissions have decreased by 45% between 2005 and 2021. Between 2020 and 2021, carbon emissions increased in 358 out of the 374 local authorities in the UK, including in North Tyneside. This is consistent with the increase in overall UK emissions in 2021, which increased by 5% largely due to COVID-19 restrictions easing and colder temperatures increasing the use of heating in buildings. Whilst emissions across most sectors increased between 2020 and 2021, emissions from the public sector continued to decrease. The impact on emissions of COVID-19 restrictions and their easing emphasises the importance of the combined efforts of councils, government, businesses, residents and other stakeholders to achieve net-zero at a Borough-wide scale.

Borough-wide carbon footprint: consumption-based emissions

Standard territorial accounting of greenhouse gas emissions, using the datasets taken from DESNZ for local authorities, measures the direct emissions produced in the Borough area. By contrast, consumption-based emissions accounts take a wider view by including the emissions embodied in the goods and services that are imported into North Tyneside and consumed here. Whilst territorial emissions account for the climate impact of activities occurring in the Borough, consumption-based emissions account for the climate impact of residents' lifestyles.

Using the Place-Based Carbon Calculator available at www.carbon.place, developed by the Centre for Research into Energy Demand Solutions, we have estimated the total carbon footprint for North Tyneside and the average carbon footprint per resident in each LSOA. LSOAs are small statistical areas with a population of about 1,500 - 3,000. The tool takes a consumption-based approach to carbon footprints, this means that the emissions are counted by the consumer of a good or service not the producer. For example, if a resident buys a new phone made in China, the emissions from making that phone will be produced in China, but will count towards that resident's carbon footprint in England as the consumer. We have calculated:

- The total consumption-based carbon footprint of North Tyneside is 148,000 ktCO2e (compared to 789 ktCO2 in "territorial" only emissions)

- The annual carbon footprint of an average North Tyneside resident is 7.1 tonnes CO2e. This compares to the England average of 8.4 tonnes CO2e.
- There is considerable variation across each LSOA area, with the highest emissions estimated at 13.9 tonnesCO2e per person, with flight, food and drink, and recreation emissions all at least double the national average. This compares to the lowest average emissions per person of 3.6 tonnes CO2e, where in all categories apart from gas and van use, residents' carbon footprints are less than half of the national average.

As North Tyneside's net-zero ambitions extend to the whole Borough, we have a collective responsibility to consider not only the impact of the emissions being directly emitted from the Borough, but also to consider the wider environmental impacts of the goods and services that we consume but which are produced outside of the Borough. By measuring these consumption-based emissions, North Tyneside Council is better-placed to support our residents in understanding their wider impact and create demand for a more circular economy, helping to encourage sustainable consumption and production across the globe. These consumption-based emissions estimates provide an evidence base for understanding and shaping local efforts to reduce those emissions in a fair and equitable manner.

If you require any further information relating to this report or North Tyneside Council's approach to carbon management, please contact Anneliese Allen-Norris anneliese.allen-norris@northtyneside.gov.uk (0191) 643 4624.

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