

The background of the slide is a close-up photograph of several vibrant green leaves. The leaves are layered, with some in sharp focus and others slightly blurred in the background, creating a sense of depth. The lighting is bright, highlighting the intricate vein patterns on the leaf surfaces.

Catherine Auld  
Assistant Director of Economic Regeneration

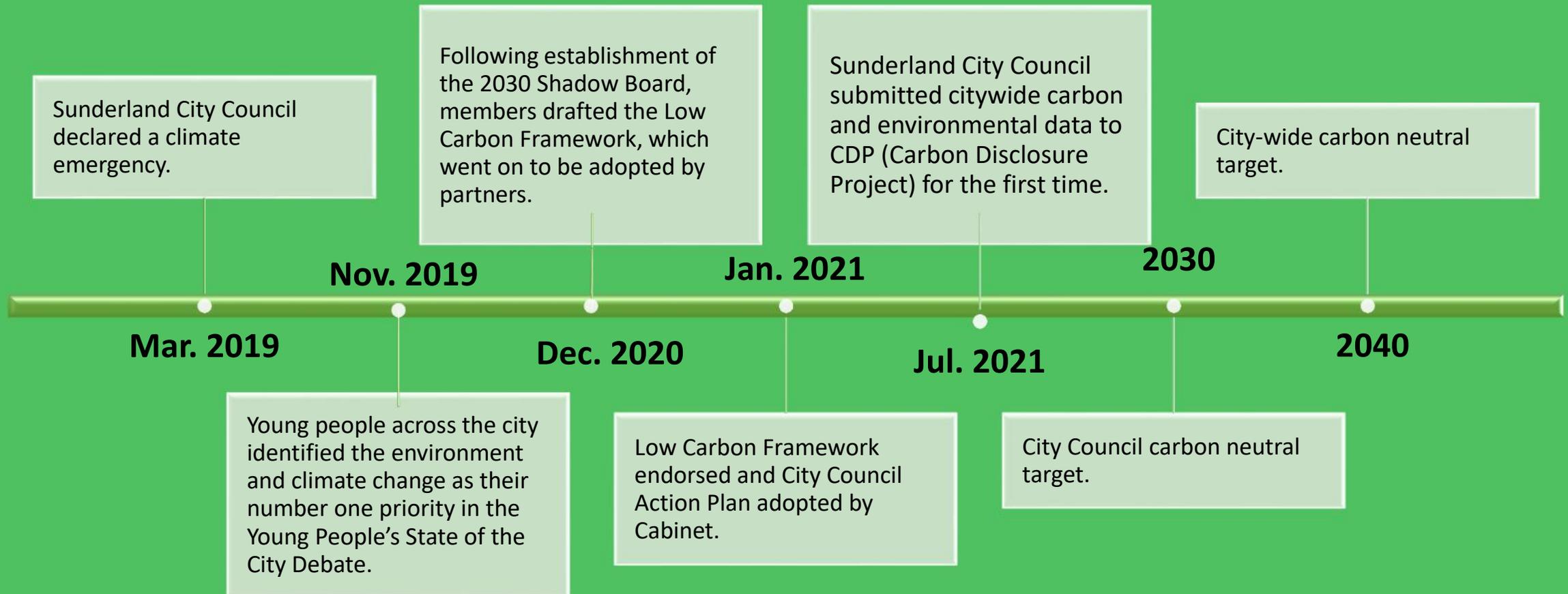
Low Carbon Annual Report 2022/23  
Tuesday 9 January 2024 – Economic Prosperity Scrutiny Committee

City of **Low Carbon**  
Sunderland

# Overview:

- Overall approach and targets - recap
- Council emissions – recap of definitions, financial year 2022/23
- City-wide emissions – calendar year 2021
- Key activity – highlights across 7 strategic priorities
- Moving forward
  - Clarification of wider targets
  - Key areas to prioritise
- Any questions

# Sunderland City's Commitment



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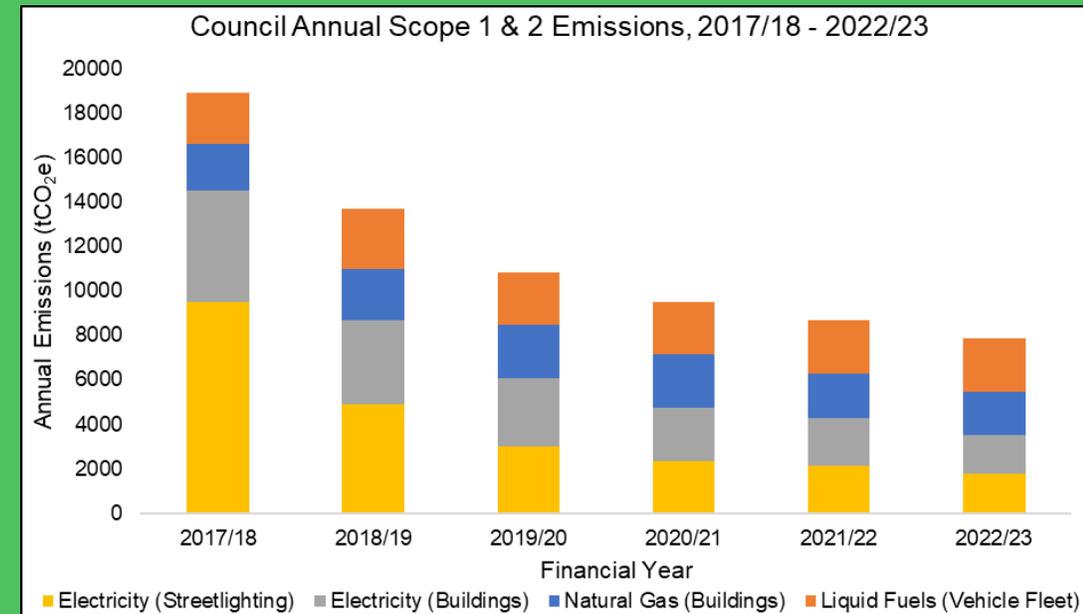
# Council Emissions

In line with the Greenhouse Gas Protocol, the Council's emissions are categorised by three scopes:

- Scope 1 emissions - include direct emissions from owned or controlled sources, for example the combustion of fuel.
- Scope 2 emissions - include emission from the generation of purchased energy, for purchased electricity.
- Scope 3 emissions - include all indirect emissions which occur in the value chain, for example emissions from purchased goods.

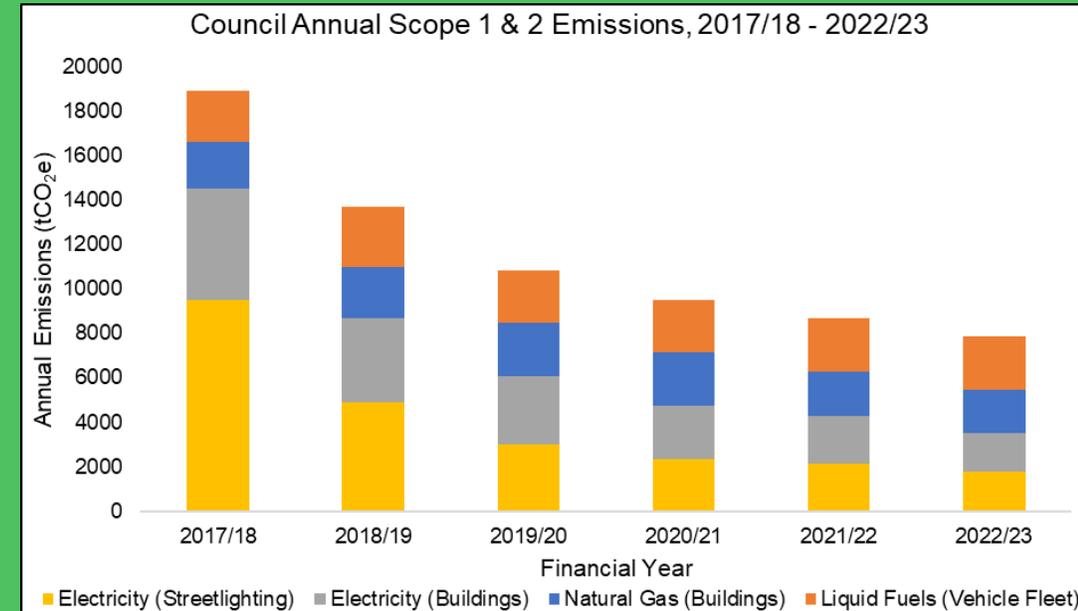
# Council Emissions – 2022/23

- The Council has a target to be carbon neutral by 2030.
- The carbon neutral target currently covers scope 1 and 2
- Although reporting on scope 3 data is not mandatory, work continues to develop the Council's scope 3 datasets.
- Annual data report for 2022/23 – Cabinet, December 2023.
- In 2022/23 Sunderland City Council's operational carbon footprint (Scope 1 and 2) was **7,866tCO<sub>2</sub>e**.
- This represents a **9% reduction** since the previous year and a **58% reduction** since the 2017/18 baseline.



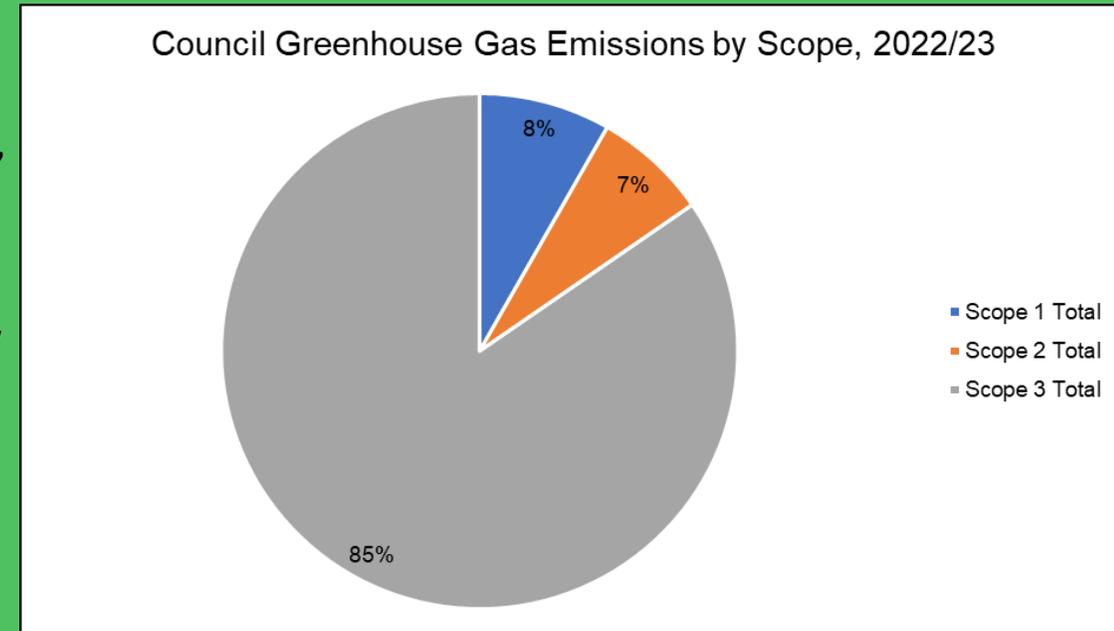
# Council Emissions – 2022/23

- All scope 1 and 2 emissions sources decreased compared to the previous financial year.
- The largest source of Council emissions (across scope 1 and 2) is consumption of **liquid fuels for the vehicle fleet**  
NB fleet data reviewed 22/23 – more accurate assessment now based on fuel consumption rather than mileage; data for previous years also adjusted for consistency and transparency
- Emissions from the **vehicle fleet** have decreased by 2% from the previous year and increased by 3% overall (from baseline).
- Most fleet emissions come from HGVs.
- **Gas consumption** across the estate is also a significant decarbonisation challenge. Emissions from gas have decreased by 2% from the previous year and 6% overall (from baseline).
- The top 10 buildings accounted for 90% of overall emissions from gas in 2022/23.



# Council Scope 3 Emissions – 2022/23

- The Council's value chain was estimated to account for **43,630tCO<sub>2</sub>e** in 2022/23 or 85% of total Council emissions, and is an area of significant focus for the future.
- Scope 3 emissions – known as the Council's value chain - include business travel and commuting, gas and electricity in buildings outside the Council's financial control, purchased goods and services, water supply and treatment, waste generation

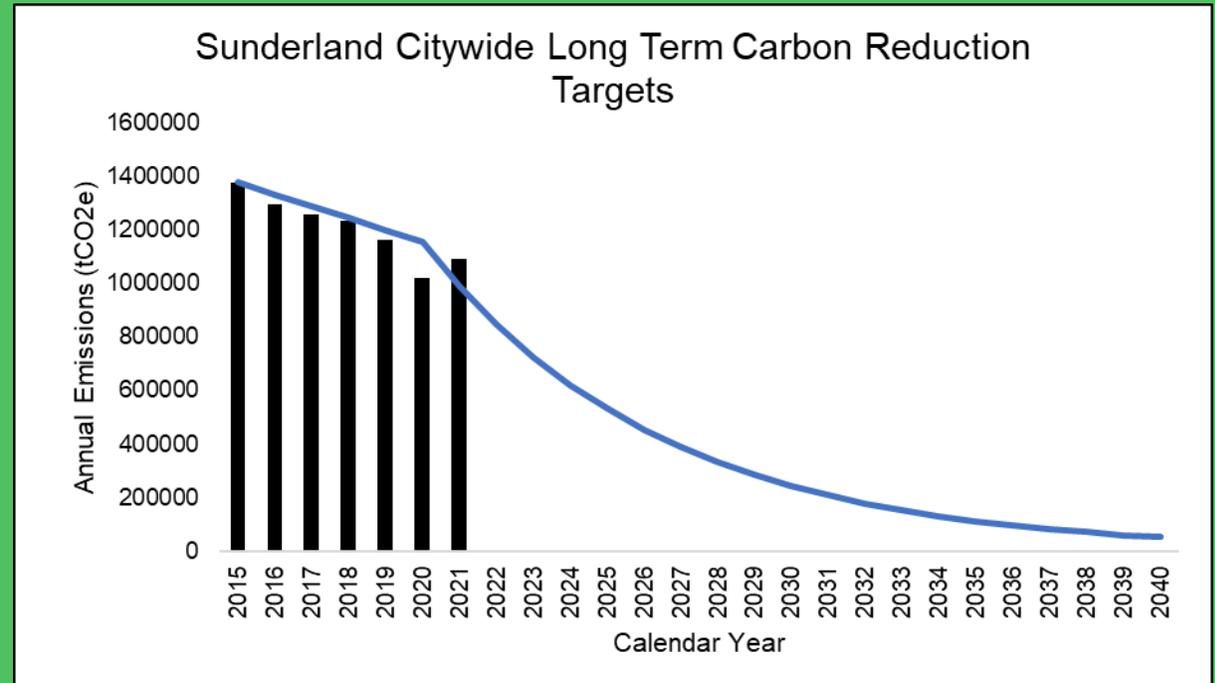


# Council Scope 3 Emissions – 2022/23

- The main sources of the Council's scope 3 emissions are: purchased goods and services; scope 3 buildings (also known as leased assets); home working and commuting.
- The largest source of scope 3 emissions is **purchased goods and services** (70% of scope 3 emissions) – we continue to estimate this using the 'environmentally extended input-output' method.
- **Scope 3 buildings (also known as leased assets)** such as schools also contribute significantly to the Council's scope 3 emissions (21% of scope 3 emissions).
- **Home working and commuting** are the third largest source of the Council's scope 3 emissions (5% of scope 3 emissions).
- **All other sources** make up ~4% of Council scope 3 emissions.

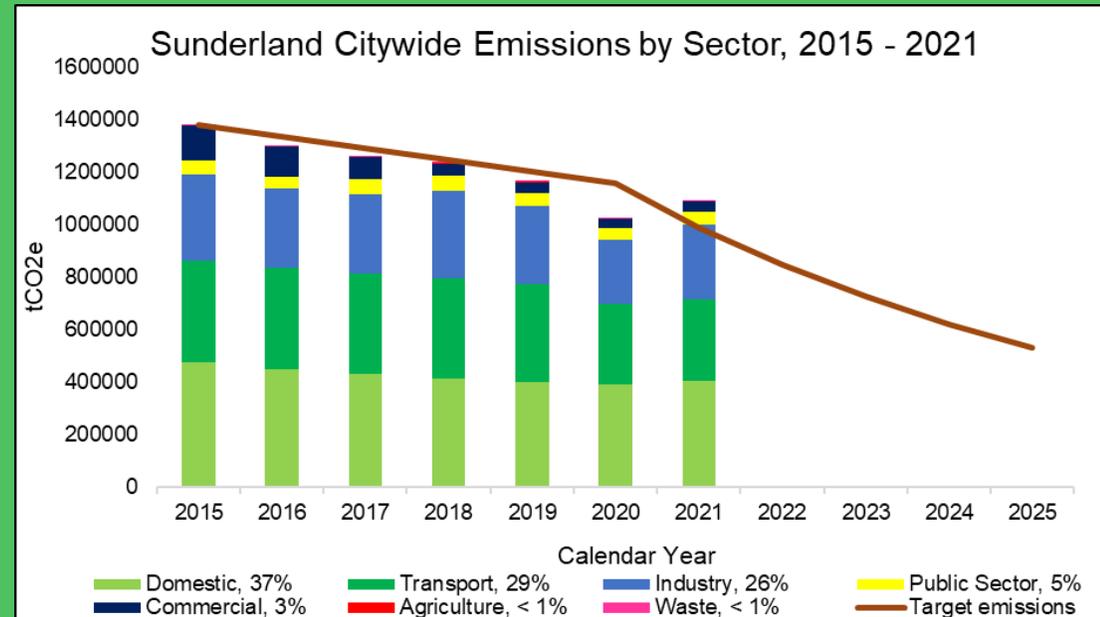
# CO<sub>2</sub> Citywide Emissions Targets

- Sunderland aims to become a carbon neutral city by 2040.
- We have a carbon budget of **8.2 million tonnes CO<sub>2</sub>** for the period 2020 to 2100.
- At 2017 levels, Sunderland would use this entire budget by 2026.
- We aim to reduce emissions by **14.4% per year** to reach our 2040 target.
- In line with this, Sunderland has an interim 5-year carbon budget to emit no more than 5.8 million tonnes CO<sub>2</sub> in total during the period 2018 -2022.



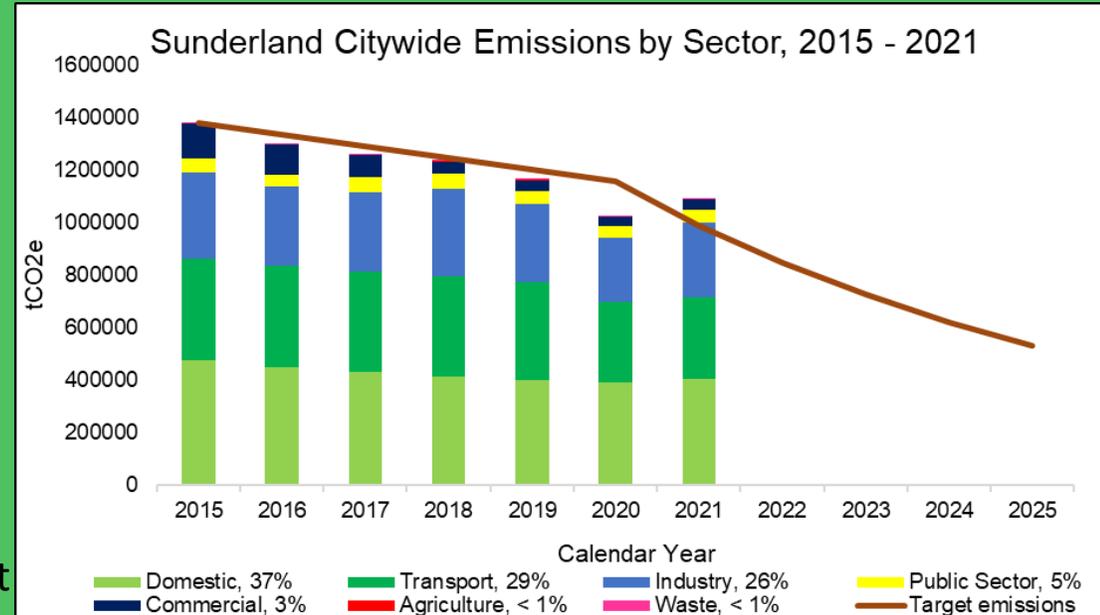
# Citywide Emissions - 2021

- Citywide emissions data is centrally published with a two-year delay.
- Emissions sources are broken down into industrial, commercial, public, domestic, transport, agriculture and waste sectors.
- In 2021, Sunderland emitted **1.089 million tonnes CO<sub>2</sub>**.
- This represents a **7% increase** since 2020 levels (impacted by Covid), a **6% decrease** since 2019 levels (not impacted by Covid) and a **21% decrease** since the 2015 baseline.
- Sunderland is on track to meet its first interim recommended 5-year target carbon budget period of 5.8 MtCO<sub>2</sub> between 2018 – 2022 (aligned with the overall carbon budget) – due to targets being exceeded in previous years (2015-2020)
- However, Sunderland is not currently on track to meet the second recommended interim citywide decarbonisation target of 61.5% by 2025, against a 2015 baseline.



# Citywide Emissions - 2021

- Emissions in 2021 continued to be impacted by COVID-19 pandemic (to a lesser extent than in 2020).
- **Domestic energy** and **transport** remained the main causes of CO<sub>2</sub> emissions in 2021.
- Emissions from all sectors increased in 2021 – this is largely in line with the national picture.
- **The Industrial, Commercial and Public sectors** experienced the largest increase in annual emissions compared to 2020, each with increases of **15%**; the **Waste** sector experienced the smallest increase in emissions, with an increase of **0.4%**.
- **Domestic energy** and **transport** remain the greatest challenges for decarbonisation at a citywide level, being the highest emitting sectors exhibiting the slowest rate of decarbonisation.
- **Sunderland is ahead** of both the North East and UK national average for decarbonisation in 5 of the 7 sectors (also ahead of the UK – but not NE- average for public sector, with agriculture as the exception).
- Significant work and investment across the city is however needed given the recommended annual reduction in city-wide emissions is **14.4%**



# Key Activity

Highlights across each of the 7 Strategic Priorities

# Our Behaviour

- Environmental, Green and Sustainability (EGS) young people's group - continues to grow and meet quarterly; 39 young people have attended since the launch in October 2021; covering topics from Single Use Plastics to biodiversity.
- Sunderland60 Legacy programme - launched June 2022, bringing together 18-25 year olds to collaborate across the city and develop initiatives linked to how to achieve a cleaner and greener Sunderland; second event held in April 2023.
- Sunderland Climate Friendly Schools launched November 2022 in partnership with OASES – alongside development of #WearSustainable Resources and Trail, and city-wide network.
- 'We Love Cities' public engagement campaign - encouraged residents to engage with sustainable development in their city during October 2022 and provide suggestions to become more sustainable – as well as to vote.
- 'Eco-fest Sunderland' – first held October 2022, and again in October 2023 aligned to Sunderland Business Festival.
- Green Champions programme launched - 25 Green Champions across the Council currently.
- Local Climate Engagement (LCE) project – focussing on how to engage residents in Low Carbon delivery, particularly around transport.

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# Policies & Operational Practices

- Range of plans and policies reviewed and updated with strengthened Low Carbon considerations
  - including Business Continuity and Strategic Framework Plan, Community Wealth Delivery Plan.
  - Green Infrastructure Audit and a Joint Biodiversity Supplementary Planning Document under development (Local Plan)
- Integrated Impact Assessment (IIA) and Joint Strategic Needs Assessment (JSNA)
  - updated to further incorporate the Low Carbon agenda.
- Understanding, monitoring and reporting of low carbon data
  - increasingly embedded, citywide environmental data disclosed to CDP again in July 2022 & 23 - listed as an A list city
  - data supporting funding bids and priority areas for action.
- UK100 Climate Leadership Academy – attended by Deputy Leader
- Second NE Community Forest planting season completed (22/23) - 2,676 trees, 2,412 hedge plants, 2.48ha wildflower meadow seeding and 14,000 bulbs planted – alongside tree planting through other schemes.

# An Energy Efficient Built Environment

- Series of externally funded projects delivered / in delivery.
- Domestic retrofitting successfully delivered through Local Authority Delivery Phase 2 (LAD2 – 215 properties), Social Housing Decarbonisation Fund (in partnership with Gentoo – 400 properties), ECO3 / ECO-Flex (357 properties).
  - ECO4 scheme now underway, alongside advice and guidance through Warm Homes Fund.
- Non-domestic retrofitting successfully delivered through city-wide BREEZ project
  - helping SMEs install energy efficiency measures (74 grants awarded with a combined value of £532,449, supporting a total project value of £1,249,334) – building on the successful BEST project; BREEZ phase 2 to be launched (UKSPF funded)
- Operational estate - Nomad / Boldyn partnership – harnessing SmartCity technology to catalyse decarbonisation – work ongoing across 14 buildings, following pilot at 2 locations.
- Public Sector Decarbonisation Scheme – works were completed in summer 2022 to decarbonise 8 Council buildings with a project value of £2.2m.
- Following the successful LED Streetlighting roll-out – street lit signs have also been converted to LED.

# Renewable Energy Generation & Storage

- Jacobs appointed as Strategic Energy Advisor over a 9-month period - to undertake a review and make energy recommendations in four key areas
  - land supply to support renewable energy, Council property, Port of Sunderland and development standards.
- Sunderland Energy Storage and Efficiency Project (SESEP) - carried out solar PV and battery storage works worth £2.2m at business centres, Jack Crawford House and the Port Transit Shed 7.
- Solar PV and battery storage installed at a further 7 major operational sites (completed Sept 2023) - at the new Parsons Depot, the energy generated by the Solar PV will be stored in batteries and used to supply Electric Fleet Vehicles.
- City centre minewater heating opportunities continue to be explored; Sunderland is also 1 of 28 pilot cities assisting BEIS with their methodology for Heat Network Zoning.
- Ongoing development of the 100% renewable electricity 'Microgrid' project at IAMP, which will bring together energy generation, consumption and storage to secure both cost reduction and decarbonisation.

# Low Carbon & Active Transport

- Electric Vehicle Delivery Plan in place – including phased delivery of community charging points planned.
- Funding for EV infrastructure secured – Local Electric Vehicle Infrastructure scheme (£44k towards an £823k scheme, delivering 115 charge points), Levelling Up Fund Round 2 (£667k for three rapid charging hubs and 20 electric buses).
- Parsons Vehicle Workshop and Depot in Washington complete – will act as a charging hub for the Council’s fleet, including the additional 50 E-Vans which have also been ordered to help further decarbonise the fleet.
- Local Cycling and Walking Infrastructure Plan - adopted by Cabinet in October 2022 - will help secure investment for schemes across the city to increase active transport opportunities and participation.
- Project V-CAL – £8m project to trial 4 zero-emission autonomous HGVs; Sunderland Advanced Mobility Shuttle - £6m project to trial self-driving shuttle (electrified).
- Range of active travel initiatives – including Better Points (1275 sign ups), cycle training (delivered to 86 residents), Cycle to Work (32 orders) as at April 2023.

# Green Economy

- 9,800 jobs in 41 businesses engaged in the green sector in Sunderland – as at April 2023 – and green economy integrated into Business Investment Team’s Aftercare Programme
- Work underway to construct the AESC gigafactory, the first of its kind in the UK and a key part of the EV36zero project - a £1billion project announced in July 2021 to create an EV eco-system, creating green jobs and manufacturing green cars powered by renewable energy; November 2023 - Nissan announcement of 3 Electric Vehicles.
- Ongoing work led by Newcastle University on the Driving the Electric Revolution (DER) national programme as well as the DER North East Centre.
- Housing Innovation Construction Skills Academy (HICSA) – scheduled to open in Spring 2025.
- Further work ongoing to engage small businesses in the Low Carbon agenda including as part of EcoFest (Oct 23) during Sunderland Business Festival.
- Raising awareness of Green careers with the city’s children and young people

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# Consumption & Waste

- Reuse shop established at the Pallion Household Waste Recycling Centre.
- Refill Sunderland was launched in June 2022 - to reduce single use plastic waste in the city, currently 112 Refill sites in Sunderland. Worldwide over 350,000 people have downloaded the app which connects residents to facilities to refill their water bottle for free.
- Schools – Single Use Plastics removed from primary school and commercial catering; Bronze Food for Life and Green Kitchen Standard retained across all primary schools; Evolve pre-order system implemented in 8 schools; support given to schools to achieve the Bronze Food and Nutrition Charter Mark; ‘Belly Bugs’ pilot launched.
- No Side Waste Policy introduced.
- Sunderland Good Food Partnership successfully became a Sustainable Food Places Network.
- Citywide Allotment Audit complete with over 100 abandoned allotments brought back into use.
- Promotion of garden waste collection scheme ongoing.

# Sunderland Ecofest 2023

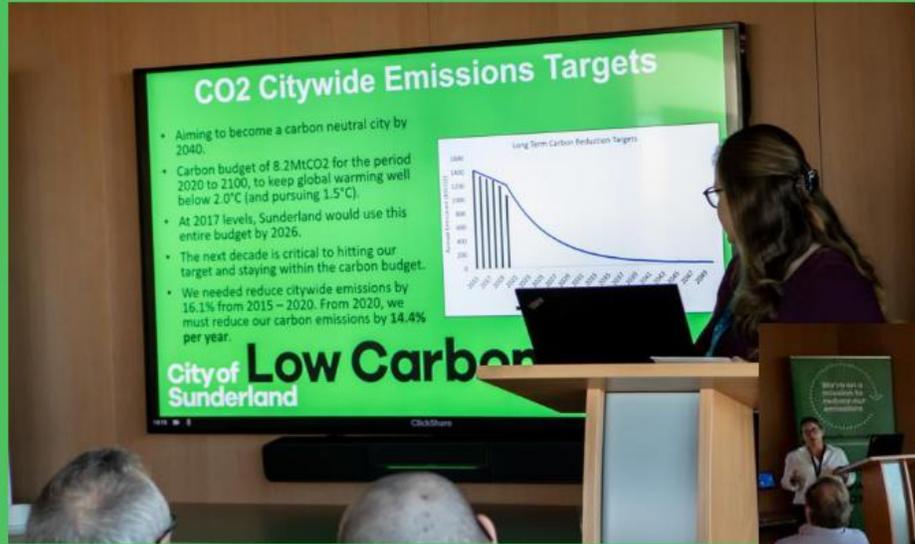


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**ecofest** 14  
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# Sunderland Ecofest 2023



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# Moving forward - Clarification of Targets

- Tfc and SCAS – recommended 2030 (scope 1 and 2) - as for Council
  - currently included in different ways in SCC reporting reflecting adoption of ‘financial control’ approach
  - would unify and encourage collective approaches, eg to fleet, staff travel, HR policies, recycling from operational estate
  - requires recategorisation of data for previous years to ensure consistency and transparency
- Siglion and Port – recommended 2040 - as for citywide
  - reflects nature of businesses, more aligned with citywide industrial and commercial sector emissions datasets
  - aligns with citywide engagement with businesses more broadly across the city on emissions reduction
  - aligns with discussions between regional ports
- Subject to discussion by Boards and decision-making in line with individual governance structures

# Moving forward - Key Areas to Prioritise

- Fleet – including associated infrastructure.
- Citywide domestic energy – including mobilisation of wider resident population, greater engagement with Registered Housing Providers and landlords.
- Transport – modal shift, including staff business travel and commuting, and citywide acceleration of charging infrastructure.
- Operational buildings – invest to save capital investments linked to Boldyn / Nomad work (case by case assessments as data available).
- Energy – strategic approach.

**Any questions?**

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