

# One City Climate Strategy Summary

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Written by: Pete Hughes (XR Bristol M&M Coordinator)

## Background

The Bristol One City Environmental Sustainability Board (ESB) was established in July 2019 and tasked with ‘accelerating the city’s progress towards environmental sustainability’. The ESB is currently made up of [17 members](#) (more to be added), comprising private companies, NGOs (Avon Wildlife Trust), public service providers (Bristol Waste, Bristol Water), environmental consultants, and council representatives, among others. The ESB is chaired by the mayor, Marvin Rees and Ann Cousins from Arup. The ESB meets quarterly and its meetings are open to a small number of public observers.

This summary was written in consultation with members of the ESB who are sympathetic to XR.

The ESB, in consultation with Arup and the Bristol Advisory Committee on Climate Change ([BACCC](#)), have produced the [One City Climate Strategy](#) to lay out a pathway for Bristol to become carbon neutral by 2030. The goal is laid out thus:

**“In 2030, Bristol is carbon neutral and climate resilient. We have collectively achieved a fair and inclusive transition; capturing the opportunities of new jobs and investment, improved health, wellbeing and education, and a better environment for local people. We have helped lead the way to a safer global climate.”**

It is worth repeating that this strategy has not been drafted or shaped by Bristol City Council (BCC) and is in line with the [‘One City’](#) approach. It is owned by multiple city partners through the ESB. **It is not owned by BCC.**

The strategy is built on a robust evidence-base of specially commissioned studies for the city, involving Centre For Sustainable Energy (CSE), Eunomia, Arup, University of Leeds among others.

## Where We’re At

- Bristol produces 1,600kt CO<sub>2</sub>e (Carbon Dioxide Equivalent) per annum. This is roughly average per capita in the UK
- Average residents’ emissions mainly arise from gas, electricity, driving, food, and aviation.
- Higher income areas of Bristol are responsible for a significantly higher emissions count per capita than lower income areas.

## Emission Categories

- Scope 1: Direct sources and activities occurring within city boundary: e.g. in-boundary waste, transport, industrial processes, stationary fuel combustion etc
- Scope 2: use of grid-supplied electricity, heat, steam within city boundary
- Scope 3: Indirect. Emissions occurring outside of the city boundary as a result of activity within the city. (ie: products made in China and consumed within city) NB: No other cities wanted to do this analysis: too complicated. This sector amounts to roughly 45% of total emissions.

## Challenges

- Bristol City Council (BCC) lacks the long-term funding commitment from national government to be able to execute this plan single-handedly.
- BCC lacks the legislative power to legally enforce corporate and private stakeholders to pull their weight. This means the plan will require buy-in from all parties; public and private.
- BCC relies on a carbon-intensive national grid for supply of power.
- This plan will need to be constantly updated. ESB states clearly that it is **not perfect** and will need **constant updating** as further research is carried out and events unfold.
- This plan has been put together without consideration for any future 'unicorn' solutions (ie: science will come up with something clever to save the day)

## Opportunities

- Potential for creation of 10,000 new jobs in construction industry (essentially doubling the current number)
- Attraction of environmental industries and businesses to Bristol as frontline city on climate action.
- Climate justice on a city-wide level; new infrastructure and policies framed to address current societal imbalance.

## Cost

- This plan is estimated to cost somewhere in the region of £5-£9bn. This figure **excludes the cost of investment in any new transport system infrastructure.**
- BCC feel they will need to form partnerships with private companies to be able to deliver in many areas.

# The 10 Delivery Themes

The ESB have identified 10 themes under which all elements of work towards 2030 carbon neutrality will fall:

1. Transport
2. Buildings
3. Heat Decarbonisation
4. Electricity
5. Consumption & Waste
6. Business & The Economy
7. Public Services
8. Natural Environment
9. Food
10. Infrastructure Interdependencies

## 1. Transport

- Mode shift towards public transport, walking and cycling.
- Reallocate road space away from vehicles and towards cycling and walking.
- Use transport corridors to enhance blue (water) and green (vegetation) infrastructure.
- Commercial vehicle mileage reduced through freight consolidation.
- Aim for a total of 40% reduction of vehicle mileage.
- All of Bristol's cars consist primarily of Ultra Low Emission Vehicles (ULEVs) and 90% of other vehicles to be ULEVs.
- Reduce total carbon emissions from international and domestic air travel associated with residents and businesses.
- Reduction in parking capacity for non ULEVs, increased car parking charges and workplace car parking levy.
- Enhance existing infrastructure to withstand future severe climate events.
- Improved transport system for lower income homes.
- Cars to electric. Biogas for larger vehicles (lorries & buses).

## 2. Buildings

- New buildings are carbon neutral and climate resilient (aligning heat provision to the city's heat decarbonisation programme).
- The energy performance of existing buildings in the city is improved to minimise heat demand, whilst preventing overheating, through tailored retrofit solutions.
- All key stakeholders (with a focus on building owners and operators) work together to prepare and adapt our current building stock for future climate hazards.
- Address fuel poverty goals in tandem with carbon neutral goals.
- All buildings in the city will be resilient to a changing climate.

### 3. Heat Decarbonisation

Heating buildings and hot water in Bristol currently accounts for nearly 40% of the city's scopes 1 and 2 carbon emissions. This makes it the largest source of direct emissions. At least 85% of this heat is supplied by gas with about 10% from electricity.

- Replace every gas boiler in the city (estimated at 160,000 boilers) with electric heat pumps.
- Yeah. Just that.

### 4. Electricity

- Electricity requirements are expected to increase by 50% of current levels by 2030
- Carbon neutrality will depend on the decarbonisation of the national grid system, which is currently not on track for 2030. There is hope, with the falling cost of renewable energy, that this might speed up.
- Smart electricity solutions installed to manage peaks and resilience of electricity demand.
- Maximise renewable generation within the city limits through solar PV and excess storage.

### 5. Consumption & Waste

Just under half of the carbon footprint of Bristol's households comes from indirect, or scope 3, sources with approximately half of these emanating from outside the UK.

- Bristol's retail economy transitions to high quality, durable products that can be easily repaired.
- Everyone follows principles of responsible consumption, using and buying less and buying carbon neutral goods and services.
- Significant levels of waste reduction (particularly for food, textiles, and plastic).
- At least 65% of all 'waste' is repaired, recycled or reused.
- Intensified engagement, particularly with areas of high consumption and low recycling performance.
- Design and implementation of a tax and dividend scheme, which taxes high carbon products and services and provides the tax back as a dividend to be spent on 'green' or 'eco' products and services.
- Legal requirements on businesses to sort waste for recycling, collect food waste separately and effective enforcement.
- Create advertising standards and restrictions to support responsible consumption.
- Financial incentives, such as the implementation of Pay As You Throw (PAYT) schemes, or other financial mechanisms to reduce waste and encourage recycling.

## 6. Business & Economy

50% of businesses footprint arise from Scope 3 (indirect) emissions.

- Decouple economic growth from resource consumption.
- All businesses and organisations in Bristol are carbon neutral (direct and supply chain emissions) and will annually record and measure scope 1, 2 and 3 GHG emissions in accordance with the Greenhouse Gas Protocol.
- Businesses improve resilience to climate hazards through collaborative organisational strategy, planning and operation. Provision of services to the most vulnerable in society is prioritised.
- Attract businesses at the forefront of the green revolution and develop an eco-innovation cluster. Provide access to these jobs to a diverse group of citizens.

## 7. Public Services

- All public and VCSE (Voluntary, Community and Social Enterprise) service organisations in Bristol to be carbon neutral (direct and supply chain emissions) and annually record and measure scope 1, 2 and 3 GHG emissions in accordance with the Greenhouse Gas Protocol.
- Public and VCSE service organisations improve resilience to climate hazards through collaborative organisational strategy, planning and operation. Provision of services to the most vulnerable in society is prioritised.
- Bristol's public and VCSE sector will build upon its leadership position, sharing lessons from its earlier carbon reduction transition with other organisations in the city.
- Public engagement on services relating to extreme weather events.
- Collaboration for health-led and climate resilient infrastructure to relieve the strain on healthcare and emergency services.

## 8. Natural Environment

- All future developments to use blue and green infrastructure to protect from climate events, but also ecological net gain and enhance tree cover potential.
- City's natural environment (tree canopy cover & biodiversity) restored, preserved and enhanced to maximise carbon sequestration in carbon sinks, climate resilience and health and wellbeing.
- Everyone to live and work within 10 minutes walk of a green space with canopy cover to provide refuge for citizens during climate change induced extreme heat.
- Bristol businesses and organisations to be wildlife friendly by providing habitats, bird boxes or sponsoring development of green infrastructure to recover wildlife lost as a result of climate change or urbanisation.
- Wider environmental regulation.

- Wildlife and nature corridors (green & blue) to create a network through Bristol that connects to surrounding areas.
- Bring green infrastructure solutions into city centre flood management strategy.
- Integrate blue and green infrastructure into existing crowded transport and infrastructure networks in Bristol.
- Overcome silo budgeting, creating an integrated approach to invest in public green space.
- Sustainable restoration and enhancement of wildlife population and habitats in Bristol.
- Redressing the balance of access to green spaces and nature, which is generally lower in deprived areas.

## 9. Food

The majority of food consumed in Bristol is produced not only outside of the city, but outside of the country. Due to the complexity of the food supply chain, we are at risk of food shortages and price rise in case of climate related weather events elsewhere in the world. When food prices rise, the poorest are hit hardest.

- Develop a resilient and lower carbon food chain and boost the local food economy.
- Urban food production potential is maximised and used as a mechanism for community participation and education.
- Citizens to have more plant-based diet, minimise food waste and support increase in market for sustainable and carbon neutral food.
- Potential to convert city car parks that have become redundant after transport modal shift into food growth centres.

## 10. Infrastructure Interdependencies

This encompasses all grey infrastructure, blue and green infrastructure (covering vital services such as water, transport, waste, ICT and energy), and the social infrastructure (such as hospitals, schools, social care services, community services and emergency services) present within the city, or providing services to people in the city.

- Infrastructure in place to deliver needs of everyone in Bristol in even an extreme future climate scenario.
- Develop cross-sector whole system carbon neutral solutions.

## Overview & Next Steps

- From 2005 - 2017, Bristol's scope 1 and 2 carbon emissions have been reduced by 36% by tackling the 'easy stuff' (phasing out of coal, cheap insulation, improved boiler efficiency etc), but **this report highlights the need to move at 1.6 times this**

**previous rate of reduction if we are to achieve carbon neutrality by 2030.** And the measures needed to do this will be far more complex.

- Bristol Advisory Committee on Climate Change to monitor progress and produce biennial reports so continuous revision and review of delivery plans can be made
- Achieving carbon neutrality will mean managing residual emissions remaining after all planned interventions have been completed. This will typically involve carbon offsetting, but as intervention is prioritised, offsetting plans will be looked at closer to 2030.

**Important quotation from doc:** “People’s individual actions to reduce their emissions and **make their voices heard** are extremely important, both in direct emissions reduction and in **bringing about the policy change we need to achieve these goals.**”

## Conclusion

This is huge. We need to applaud the scale and ambition of this plan.

This strategy is something incredibly rare; a document that tells the truth on the need for climate resilience and our vulnerability to severe, climate change-induced weather events regardless of our success in the coming ten years.

We need to highlight and embrace the strong vein of climate justice that runs through this strategy. Combatting the Climate Emergency holistically gives us the chance to reset and rebalance a currently inequitable society.

We need to let council, corporates and stakeholders know that we’ll be watching and will act should they not toe the line.

We need to educate Bristolians on what is set out in this strategy and how incredible our city could become if successful. We need to form a cordial but robust relationship with BCC, Marvin Rees, ESB, BACCC to ensure delivery matches strategy.

We should spread the detail of this strategy with other cities, towns and villages that might not have such ambitious proposals on climate action.

We need to bring pressure on WECA to drop any large infrastructure proposals that conflict with the aim and content of this strategy.

We need to bring pressure to bear on national government to

- a) Unlock funds for BCC to execute effective delivery
- b) Grant robust legislative powers to BCC
- c) Decarbonise our national grid by 2030

**Delivery is what really matters.** Let's see this put into action!