

Welcome
Climate Change Members Session
24th February 2020



**PLACE-BASED
CLIMATE ACTION
NETWORK**

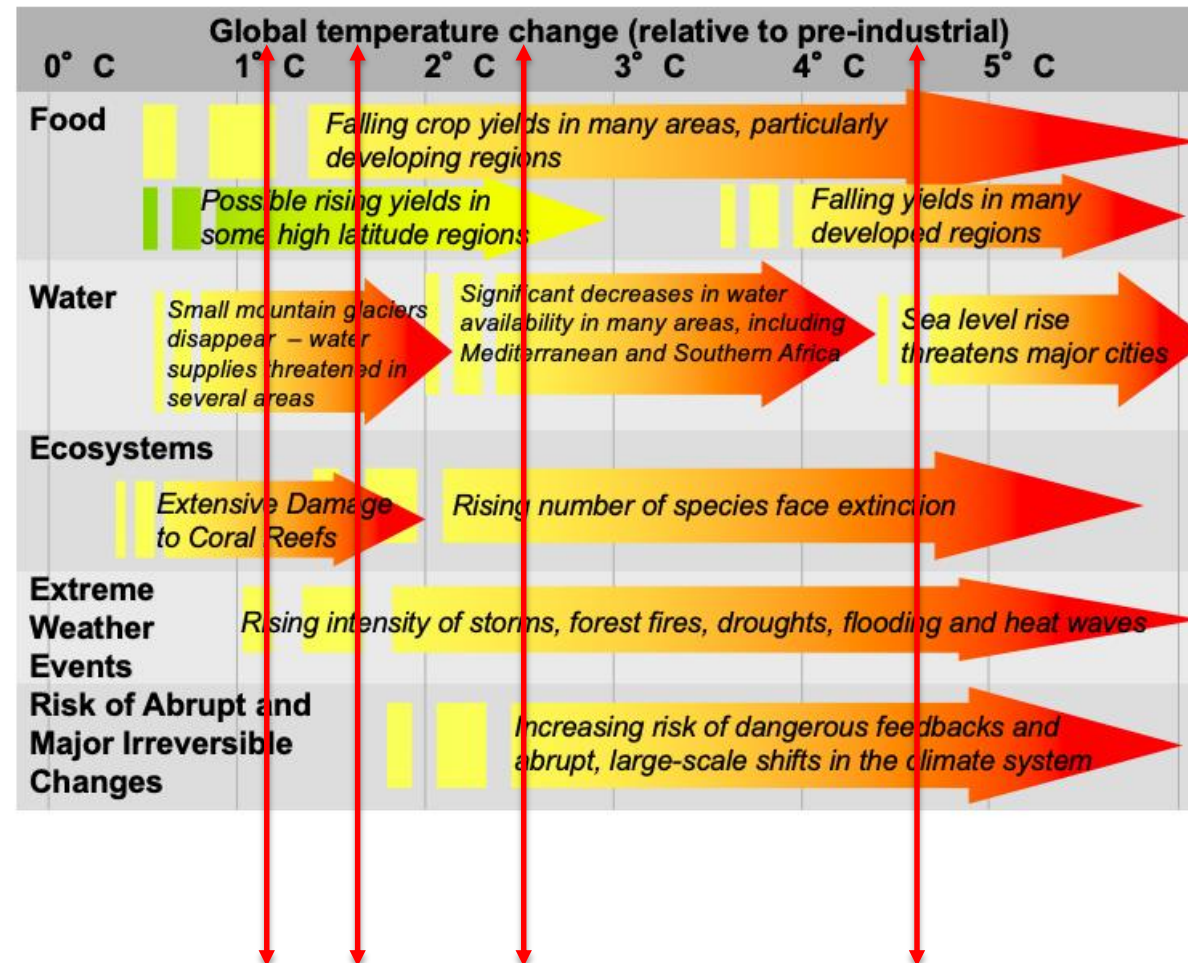
A Net Zero Carbon Roadmap for Surrey

Andy Gouldson
Co-Director – PCAN
University of Leeds
a.gouldson@leeds.ac.uk
@andy_gouldson



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The Need for Climate Action





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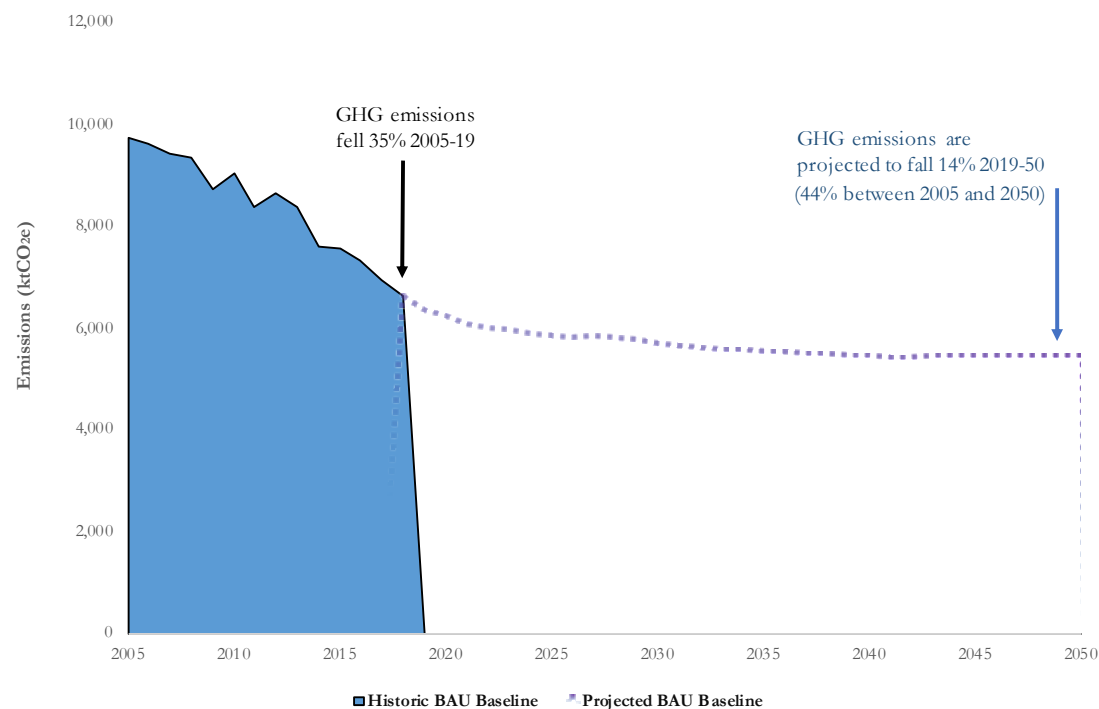
Surrey's Share of the Global Carbon Budget

- Dividing the global carbon budget up by population gives Surrey a total carbon budget of 56 million tonnes.
- Based only on the fuel and electricity used within its boundaries, Surrey currently emits c.6 million tonnes of carbon a year.
- This means that Surrey will use up its share of the carbon budget through to 2050 in just over 8 years.



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Surrey's Carbon Footprint (scope 1 and 2)



Since 2000, emissions have fallen by 35%.
They are predicted to fall by 44% by 2050.



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Breakdown of Surrey's Carbon Footprint

2019

Projected 2050

46%

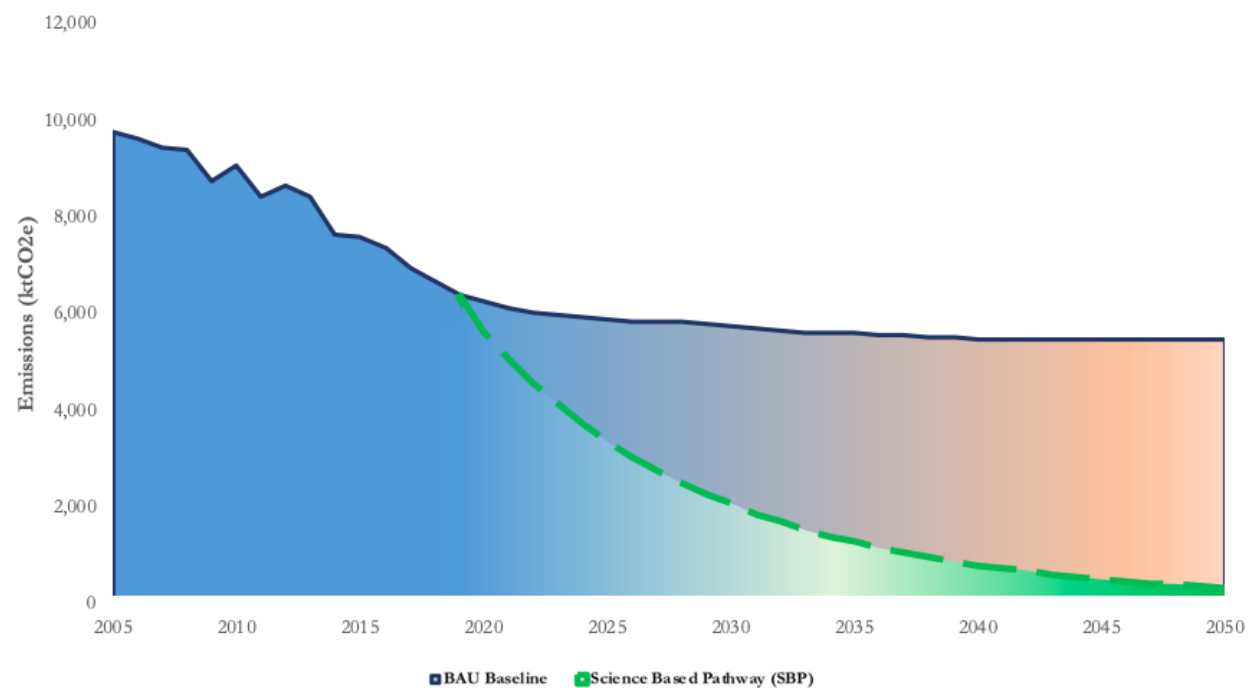
45%

■ Domestic ■ Commercial ■ Industry ■ Transport



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Science Based Targets for Surrey



Since 2005

Currently – 35% down

Targets

2025 – 46%

2030 – 67%

2035 – 80%

2040 – 87%

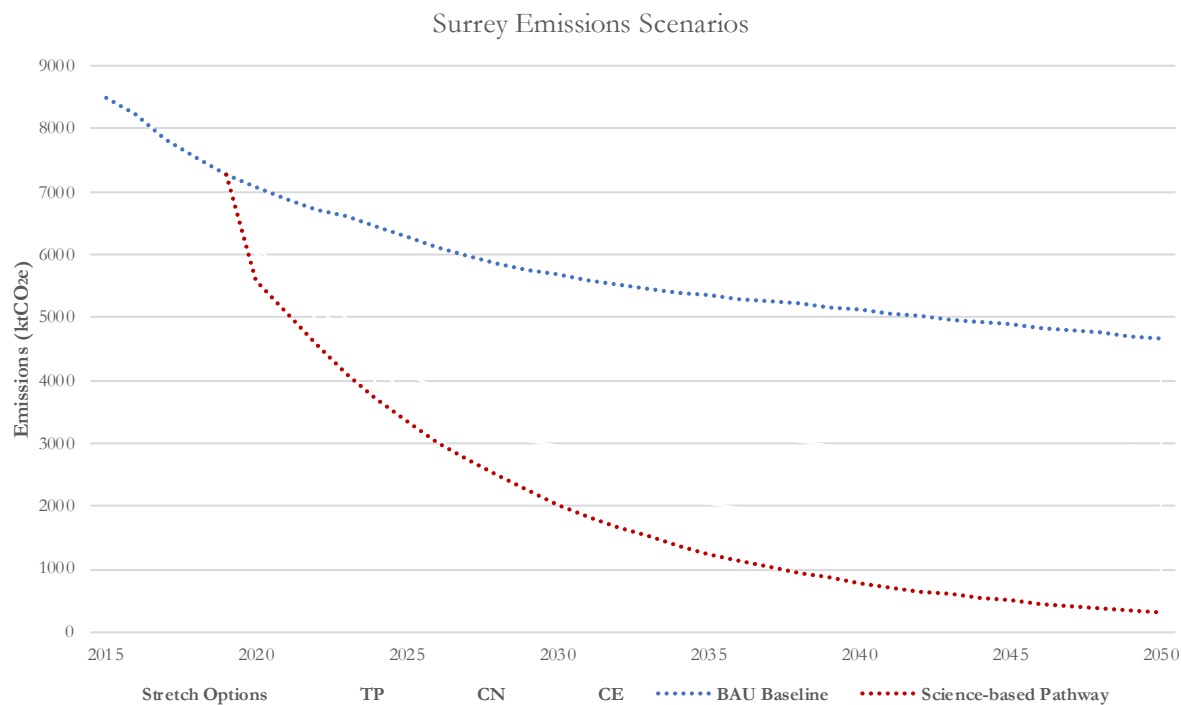
2045 – 92%

2050 – 95%



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Towards a Net Zero Plan for Surrey



Cost-effective – 37%

Cost-neutral – 50%

Technically viable – 64%

Remaining gap – 36%



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Surrey: The Low Carbon Economic Opportunity

- Surrey's annual energy bill is currently c£2.5bn. By 2050, we forecast it will increase to c£4bn.
- Surrey could invest £5bn in cost-effective energy savings measures that would more than pay for themselves whilst also cutting its emissions by 37%.
- Making these investments would save Surrey £734m a year by 2030 and £1.3bn a year by 2050, whilst also creating 1,000 jobs for 20 years.



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The Most Carbon Effective Options

Rank	Measure	Emissions Reduction Potential (ktCO ₂ e)
1	Shift from Large Private Car to Non-Motorised Journeys	8,914.93
2	Shift from Executive Private Car to Non-Motorised Journeys	6,283.62
3	Shift from Medium Private Car to Non-Motorised Journeys	6,135.85
4	Shift from Small Private Car to Non-Motorised Journeys	5,452.68
5	Domestic Cavity Wall Insulation	5,197.75
6	Behavioural Measures Reducing Domestic Electricity Demand	4,302.26
7	Upgraded Domestic Gas Appliances	3,258.71
8	T5-Luminary Upgrades in Commercial Buildings	2,365.80



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The Most Cost Effective Options

Rank	Measure	Cost Effectiveness (£/tCO ₂ e)
1	Fabric Improvements in Retail Buildings	-467.28
2	Shift from Private Car to Bus Journeys	-429.69
3	Shift from Private Car to Cycle Journeys	-334.05
4	Fabric & Window Improvements in Public Buildings	-298.00
5	Shift from Private Car to Pedestrian Journeys	-291.56
6	Improved Cooling & Ventilation in Retail Buildings	-259.54
7	Appliance Upgrades in Domestic Buildings	-154.49
8	Lighting Improvements in Domestic Buildings	-154.40
9	Improved Cooling Systems in Offices	-146.04
10	Lighting & Cooling Improvements in Public Buildings	-139.28



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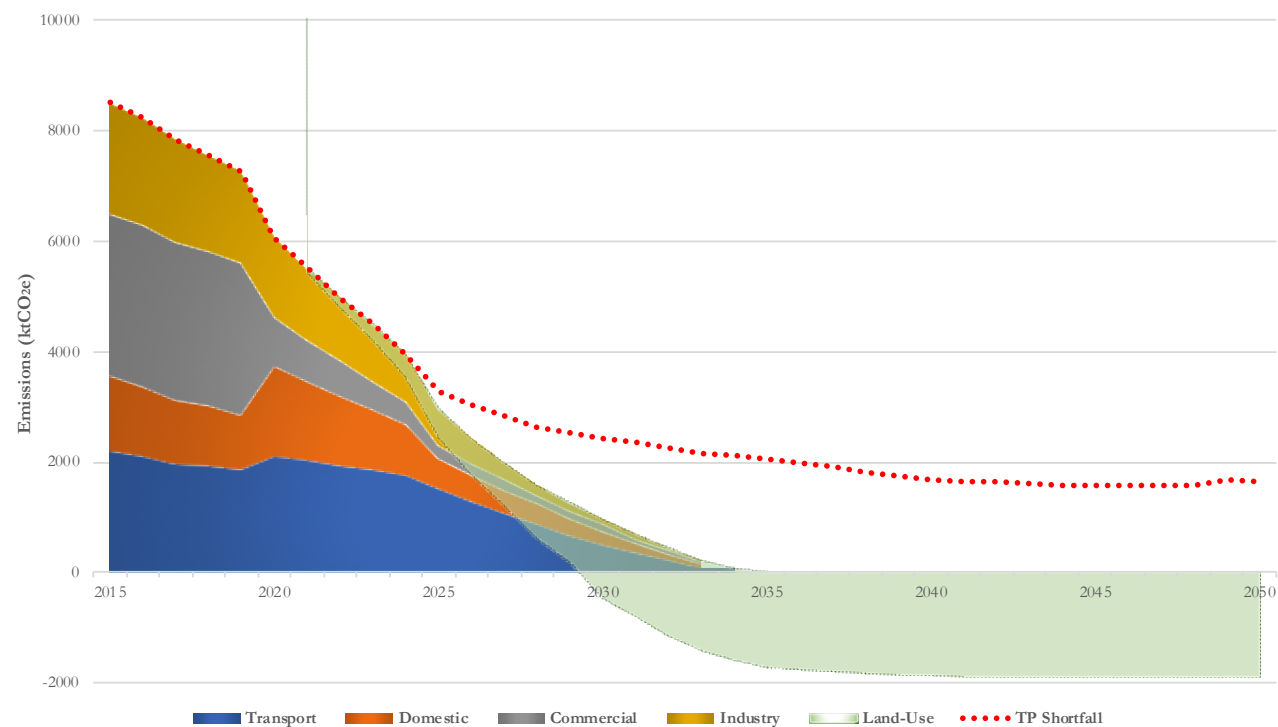
Can More Innovative Options Deliver Net Zero?

- Zero carbon heavy goods transport
- Industrial heating and cooling electrification
- 10 Ha. reforested annually 2020-2029
- Electrification of domestic heating
- Electrification of domestic cooking
- Electrification of public/commercial heating



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Can More Innovative Options Deliver Net Zero?





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Conclusions

- At current rates, Surrey will use up its share of the global carbon budget compatible with avoiding dangerous climate change within 8 years.
- Surrey's emissions have fallen by 35% since 2005.
- The reductions need to reach 46% by 2025 and 67% by 2030 to stay within the carbon budget.
- The first phase of this transition is cost-effective and could also deliver economic benefits of £734m a year and create 1,000 jobs in Surrey by 2030.
- The second phase is technically possible but less directly cost-effective but has wider benefits.
- The final phases involve more innovation, but early analysis suggests that it is possible to reach net zero emissions by 2035.

Questions

Engaging residents and community groups on climate change – a co-benefits approach

24th February 2020

Emma Jones

Ashden supports and promotes sustainable energy enterprises from around the world

[UK local authority toolkit launch →](#)

[2019 Ashden Awards Ceremony →](#)



- Introduce a co-benefits approach to engaging citizens on climate action: health, economy, resilience, equity
- Outline how co-benefits can be used to overcome objections to climate actions
- Introduce some options for how councillors can engage with citizens on carbon reduction actions



Introduction Ashden



Chargemaster / Charge of the EV brigade

Region: UK

Awards year: 2018

Ashden Award for Clean Air in Towns and Cities



Energy Local / Making sustainable energy work locally

Region: UK

Awards year: 2018

Ashden Award for Energy Market Disruptors



Upside Energy / Reducing energy stress for the grid

Region: UK

Awards year: 2018

Impax Ashden Award for Energy Innovation



Q-Bot / Minimum fuss, maximum insulation



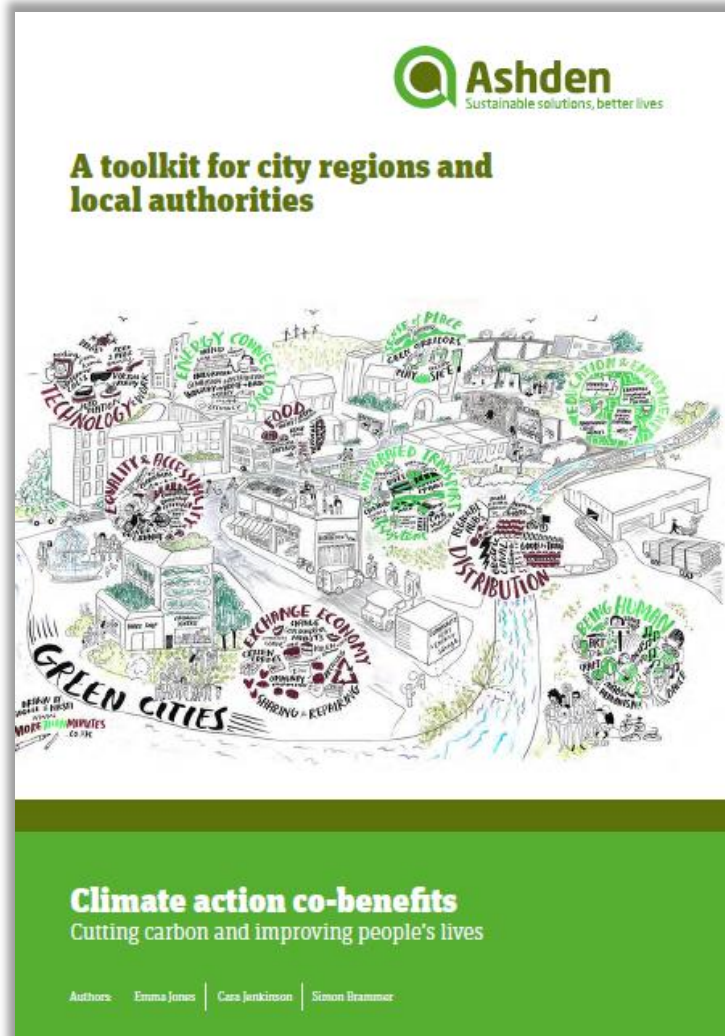
The Active Well-Being Society (formerly Big Birmingham Bikes) / Improving the health of Britain's second biggest city



Nottingham City Council / Robin Hood would approve...










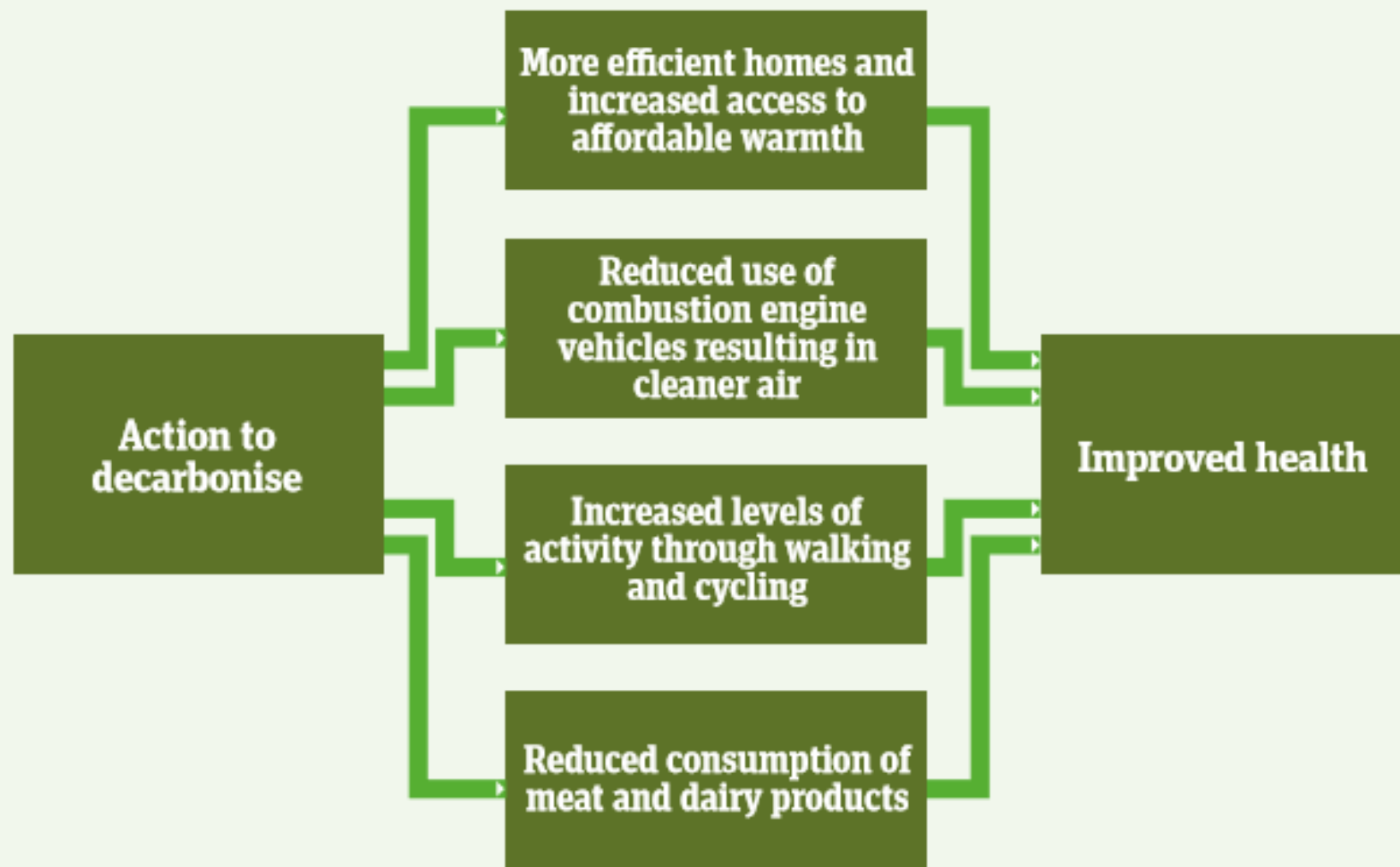
Climate Action Co-benefits toolkit



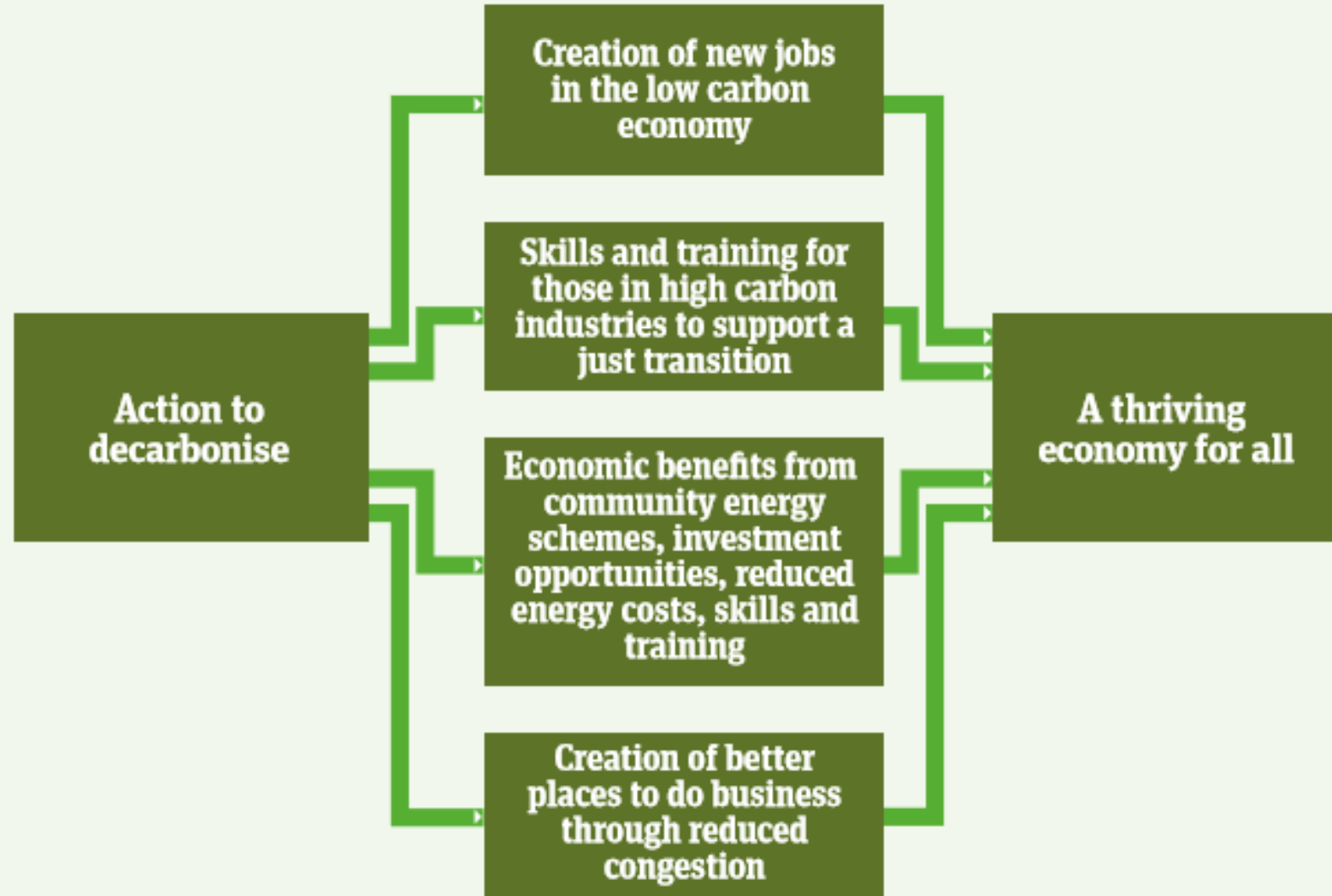
- 1 Introduction
- 2 Health and wellbeing
- 3 Economic opportunity and job creation
- 4 Resilience
- 5 Equity and social cohesion
- 6 Useful resources
- 7 Videos

Multiple co-benefits - examples

Action	Carbon	Health	Economy	Equity	Resilience
					
Insulating homes 	Cuts energy demand and cuts carbon emissions	Reduces fuel poverty as people stay warmer	Creates jobs for local people, and people save money on their energy bills which they may spend locally	Increased access to affordable warmth	Households are better placed to withstand future energy price rises as well as overheating during heatwaves
Car sharing 	Reduced fuel consumption cuts carbon emissions	Reduced NOx improves air quality. Improved wellbeing through social interaction	People save money on their fuel, which they may spend locally. People can make journeys (e.g. to work) that they may not otherwise be able to do. Reduced congestion	Brings people together; can reduce isolation and loneliness	Increased resilience to impact of future fuel price rise

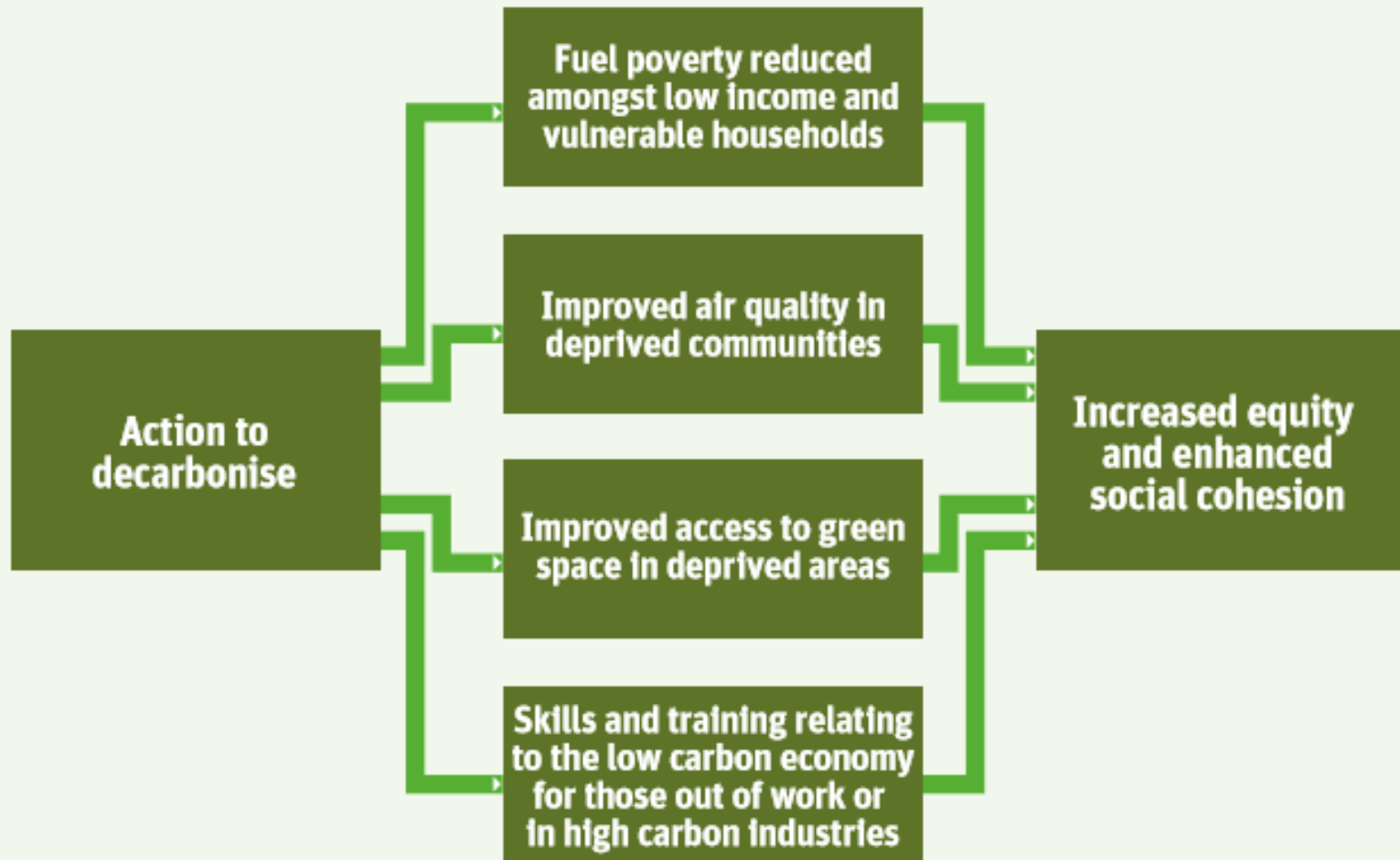


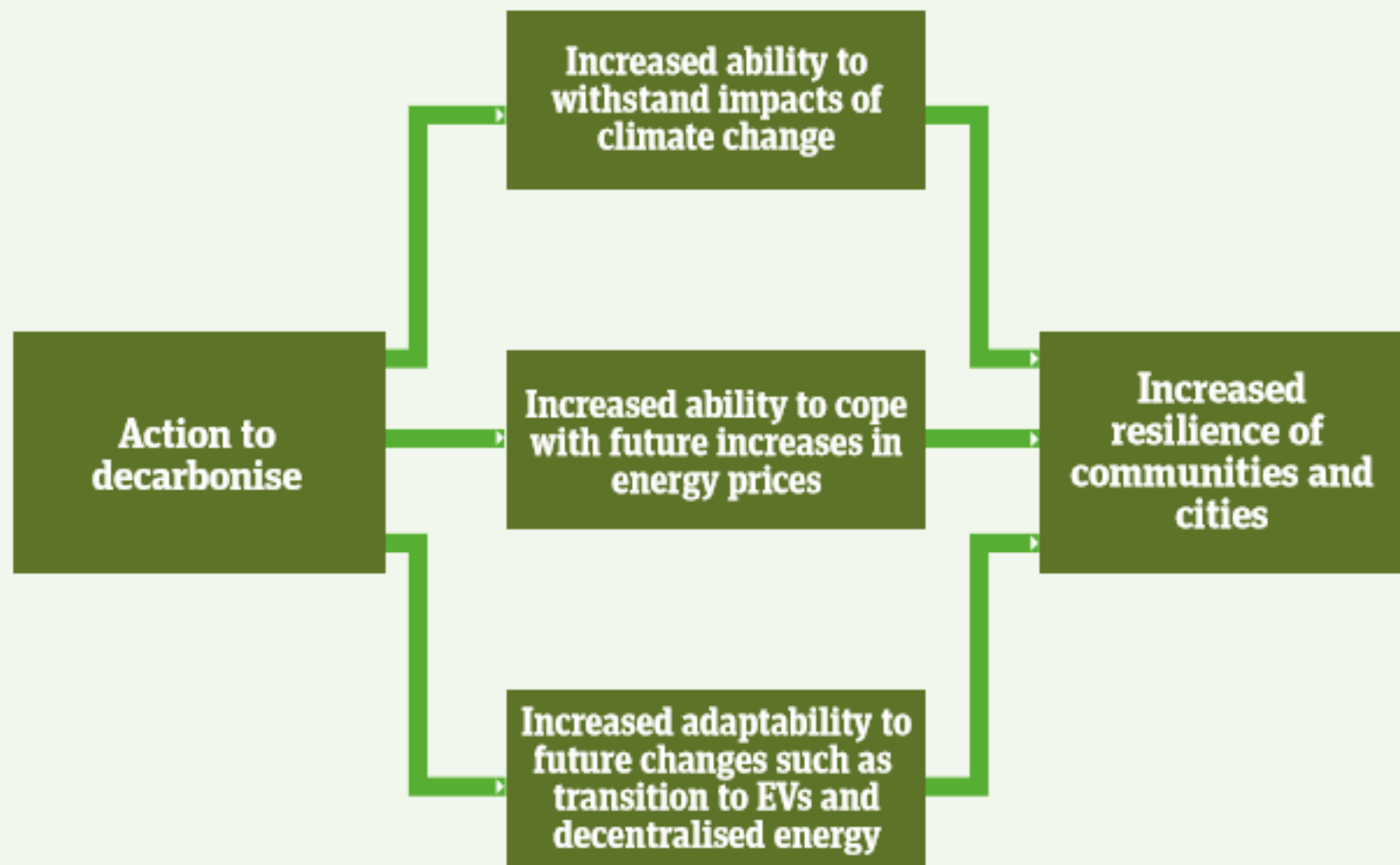
Economic opportunity and job creation



Equity and social cohesion

GROUPS MOST VULNERABLE TO BEING AFFECTED BY POOR AIR QUALITY





Example actions and their co-benefits

Greatest
co-benefit
potential:



HEALTH

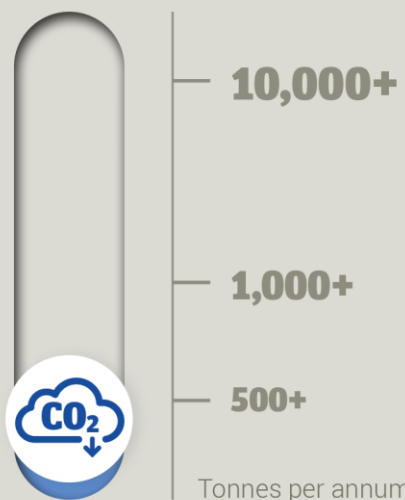


EQUITY

**Introduce a workplace
car parking levy and/or
similar initiative to fund
sustainable transport**

Estimated Carbon Savings

Based on a town of 100,000 people



Every tonne matters

Nottingham City Council – using
workplace levy to fund electric buses
and other public transport
improvements

**Replace existing
buses with
electric buses**

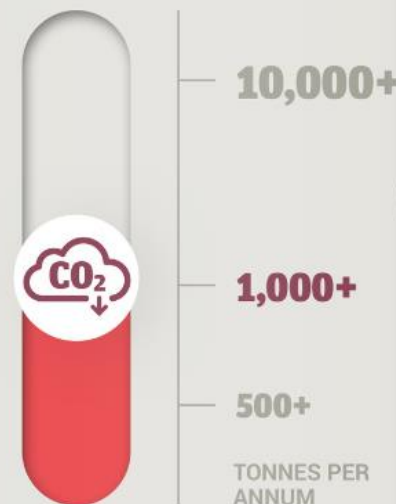
Greatest
co-benefit
potential:



HEALTH

Every Tonne Matters

Estimated carbon savings based
on a town of 100,000 people



Example actions and their co-benefits

Waltham Forest –
road closures and
schemes to
discourage cars,
encourage cycling
and walking



**Ban or discourage
private cars from
the city centre**

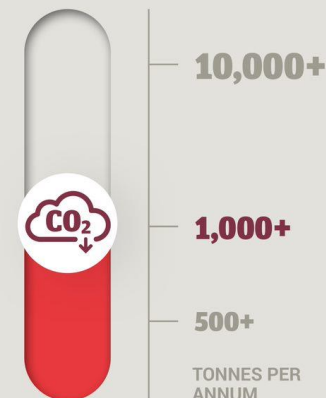
Greatest
co-benefit
potential:



HEALTH

Every Tonne Matters

Estimated carbon savings based
on a town of 100,000 people



Citizen support will be essential to achieving net zero through:

- Supporting council policies
- Individual actions to cut carbon

Options for structuring this:

- A climate change partnership or panel with representatives from different community groups
- Online forums and consultations providing opportunity to feed in
- Engage with existing groups; tell them what's planned, get them involved, ask for their input

**Gloucestershire
Climate Change
2019 Residents survey**



Engage with existing community groups on developing plans e.g:

- Extinction Rebellion:
 - Glasgow – regular meetings
 - Lewisham – endorsement of council's climate change plan
- Groundwork - an integral member of the council's Climate Change Partnership
- Transition Towns
- Friends of the Earth groups

EXTINCTION REBELLION SUPPORTS LEWISHAM COUNCIL'S RESPONSE TO THE CLIMATE EMERGENCY



Lewisham Extinction Rebellion are demonstrating outside tonight's meeting in support of the Council's proposals to enable Lewisham to become Carbon Neutral by 2030. It is clear that Lewisham Council had two choices:

- To pay lip service to a nice sounding policy which wishes the ends and not the means of staving off disaster.
- To contribute to being part of the solution to the existential crisis which is obviously bearing down on us locally, nationally and internationally.

We in **Extinction Rebellion** think that the document is a good start, setting out the scale of the problem. It does not address the detailed policies required and we will be taking a very close look at policies as they emerge to judge whether they are a fit response to what the council has declared: an emergency. Our house is on fire. There are no hiding places. Turning the aims set out in this document into policies that achieve this will be difficult for the council, the business community and residents. We are sure the majority of Lewisham residents want the council to succeed in their aims and that the whole community will play their part in this.

We welcome the realisation by the Council that the emergency is real and suggest some guidelines they could consider:

Disinvestment from all organisations not committed to similar climate policies

Ensuring that all future developments approved by the council are carbon neutral from the outset and that developers who are not committed to so doing are not welcomed within the borough

Work towards design and build organisation within the council to showcase best practice

Minimise carbon cost of council buildings by retro fitting insulation etc.

Promote local manufacturing to create green jobs and a local green economy

Leading Greater London in provision charging points for electric vehicles

Prioritise public and sustainable transport

Tree planting in the borough on a large scale in parks and open spaces

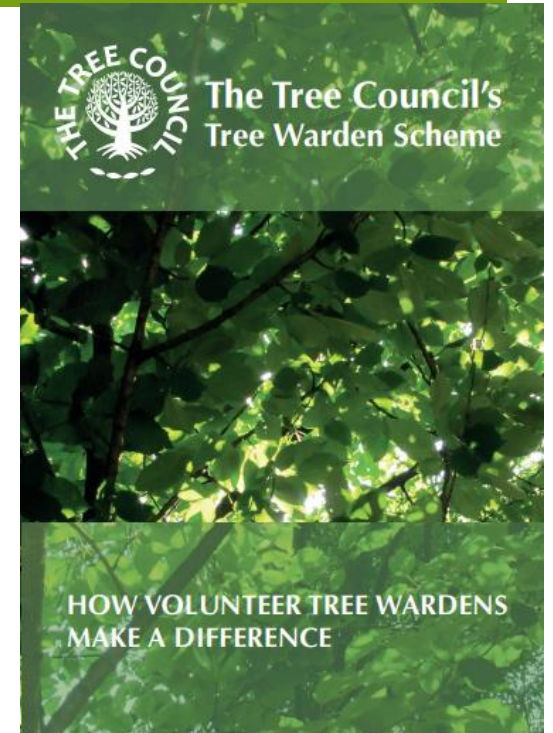
Zero waste policy

Ensuring that the council leads the fight against pollution switching to clean vehicles in a planned manner

It is clear that as citizens of the Borough we will have to judge the council by the seriousness of its response to the Climate and Ecological Crisis, but that this can only be means of actions which will speak louder

Engage with existing groups to help deliver initiatives e.g:

- Community street tree care
- Community-run fuel poverty cafes
- School climate strikers developing school carbon reduction plans



As councillors:

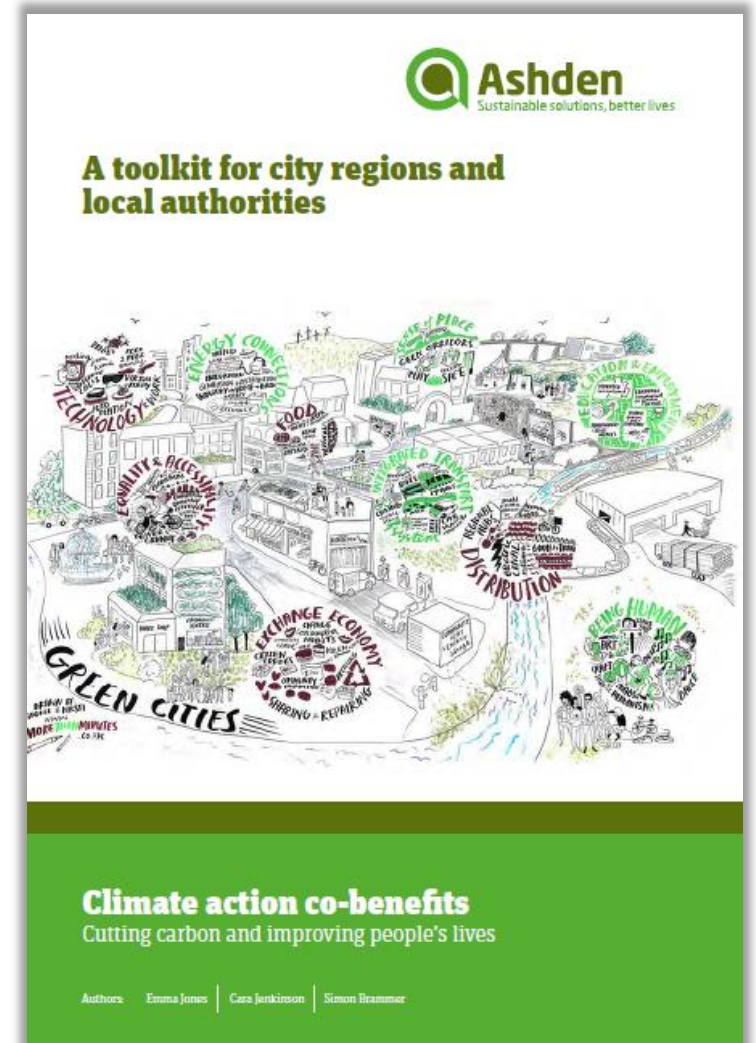
- What local organisations can you work with to help realise opportunities within your ward?
 - Merstham Food Waste Café
 - Greener Future Design Challenge
 - Re-use shops
 - Boomerang Bag schemes
- What obstacles to action are there?
- Can a co-benefits approach help engage residents and overcome these obstacles?
- Can you lead by example?



www.ashden.org

- Climate Action Co-benefits Toolkit -
<https://www.ashden.org/programmes/co-benefits>
- 31 Actions -
<https://www.ashden.org/programmes/top-31-climate-actions-for-councils>

Emma.jones@ashden.org



Questions

Q & A Panel

Closing Address