



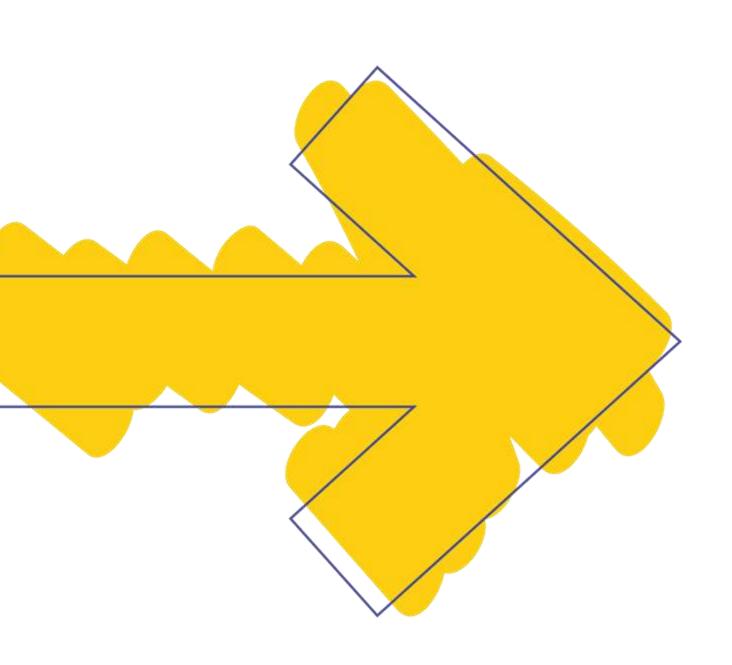
Welcome Westminster Citizens' Climate Assembly







WESTMINSTER CITIZENS' CLIMATE ASSEMBLY



The climate assembly is a group of 51 residents from Westminster City who have been invited and selected to take part in a process of **learning** together, **discussing** together and jointly **deciding** some recommendations that answer this question:

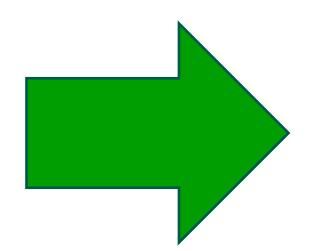
How can we overcome the main barriers to Westminster becoming a net zero city by 2040 together?

How do we ensure this is delivered in the fairest way?



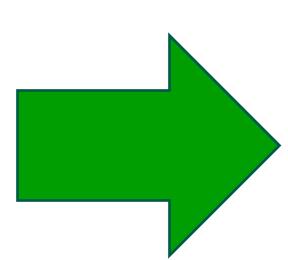
WHAT WILL WE BE DOING?





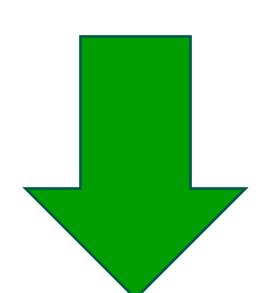
DAY 1

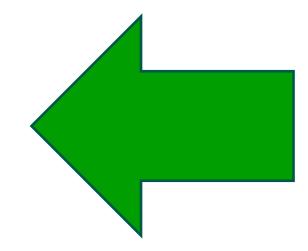
Getting to know each other, thinking critically and digging into the question



DAY 2

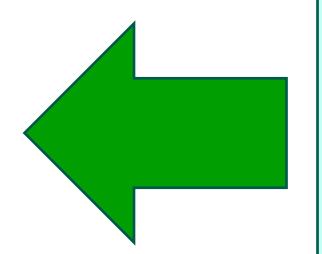
Exploring fairness and the root causes of some barriers.
Starting to think about a vision





DAY 4

Moving from tested ideas to final recommendations



DAY 3

Creating ideas and solutions for testing with a range of people



OUR WAYS OF WORKING



- Firstly, this is new
- Learning and asking questions
- Informal and relaxed
- We want to share what we are doing video/photos
- But not our discussions

- Its ok to need some time out
- Quiet room and prayer room
- We will make sure we start on time, and finish on time
- Set breaks but do take a comfort break as needed

- Agree to disagree, address the point not the person
- Be open to change
- Respect people's different experiences
- Step forward and step back



OUR WAYS OF WORKING



Communication

Collaboration

Remembering the inequality in Westminster

Stay on topic

Attitude

Curiosity







Key questions

"How can we overcome the main barriers to Westminster becoming a net zero city by 2040 together? How do we ensure this is delivered in the fairest way?"

- Who is involved when we say 'together'
- How can we ensure fairness?

Who is involved when we say 'together'?

- Everyone, but...
 - Climate change is disproportionately caused by the most affluent in society
 - The impacts of climate change (e.g. floods) disproportionately affect the poorest in society



Pakistan flooding: Millions still homeless, says aid volunteer

③ 30 December 2022





Millions of people are still homeless and facing displacement after severe flooding in Pakistan

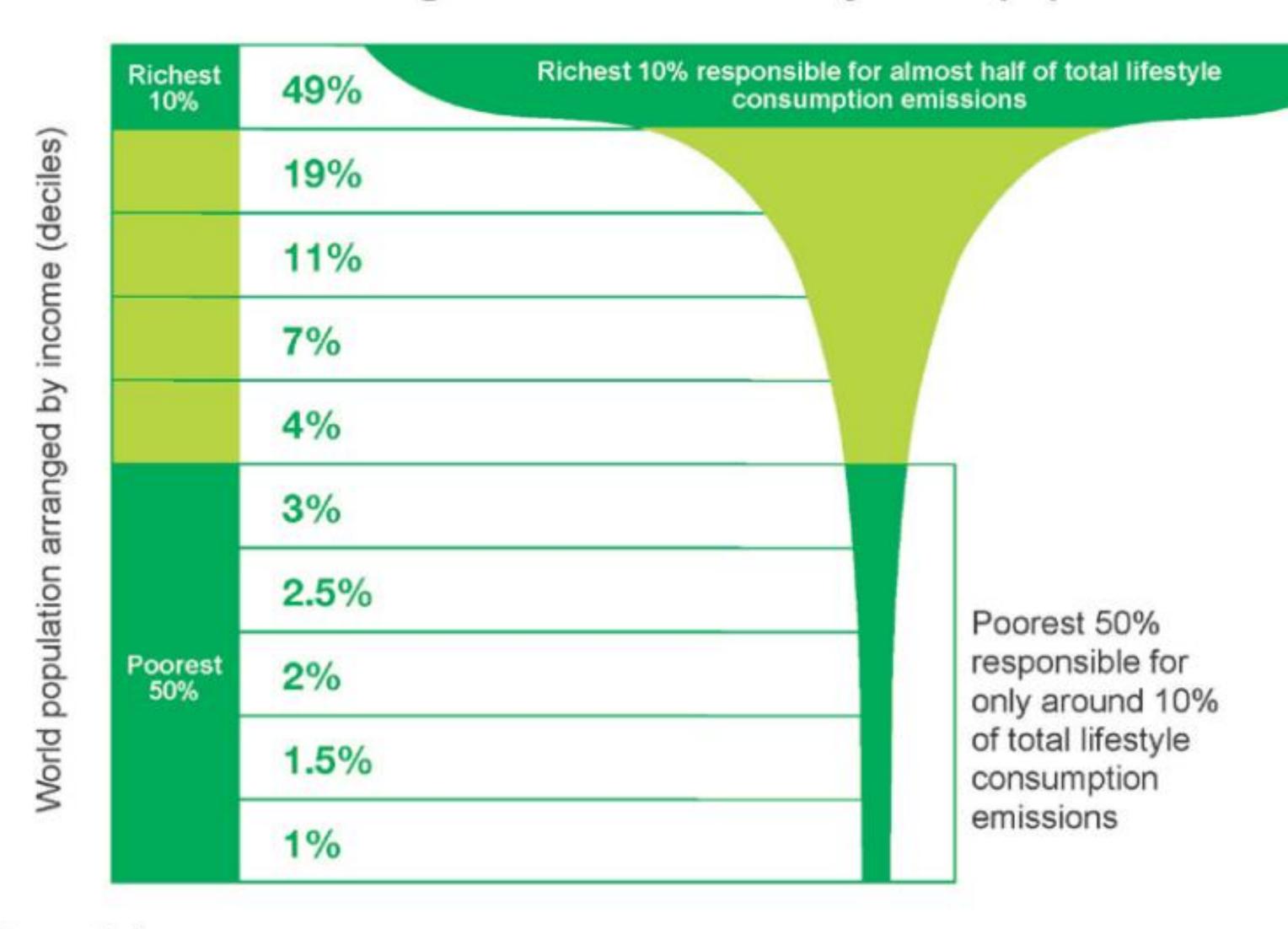
Inequity in source of emissions

'Extreme carbon inequality' report, Oxfam 2015

https://www-cdn.oxfam.org/s3fs-public/file_attachments/mb-extreme-carbon-inequality-021215-en.pdf

Figure 1: Global income deciles and associated lifestyle consumption emissions

Percentage of CO₂ emissions by world population

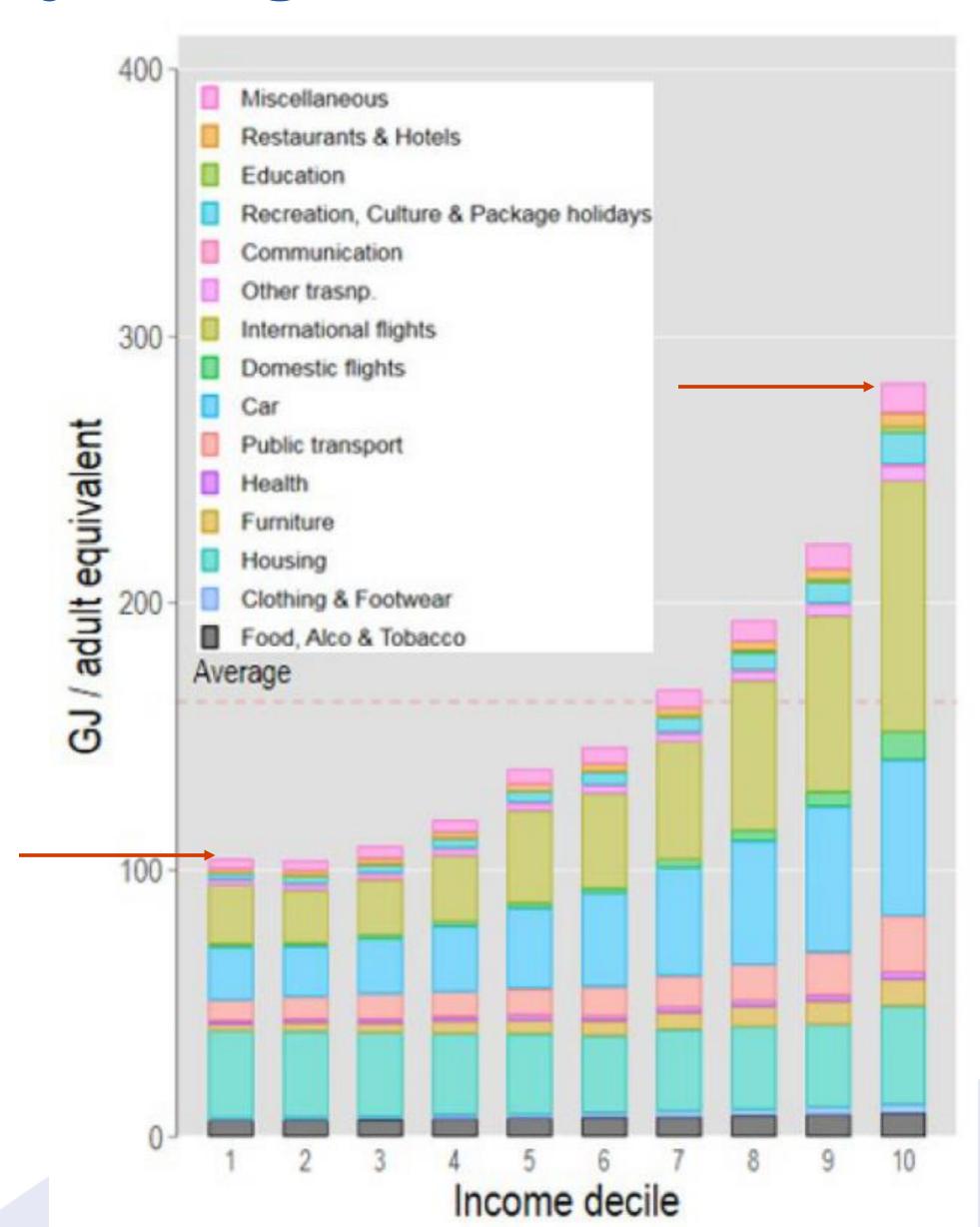


Source: Oxfam

Who is involved when we say 'together'?

The richest 10% of the UK population are responsible for almost 3 times the energy footprint of the poorest 10%

Source: Baltruszewicz et al. Social outcomes of energy use in the United Kingdom: Household energy footprints and their links to well-being. Ecological Economics, 205 (2023). https://doi.org/10.1016/j.ecolecon.2022.107686

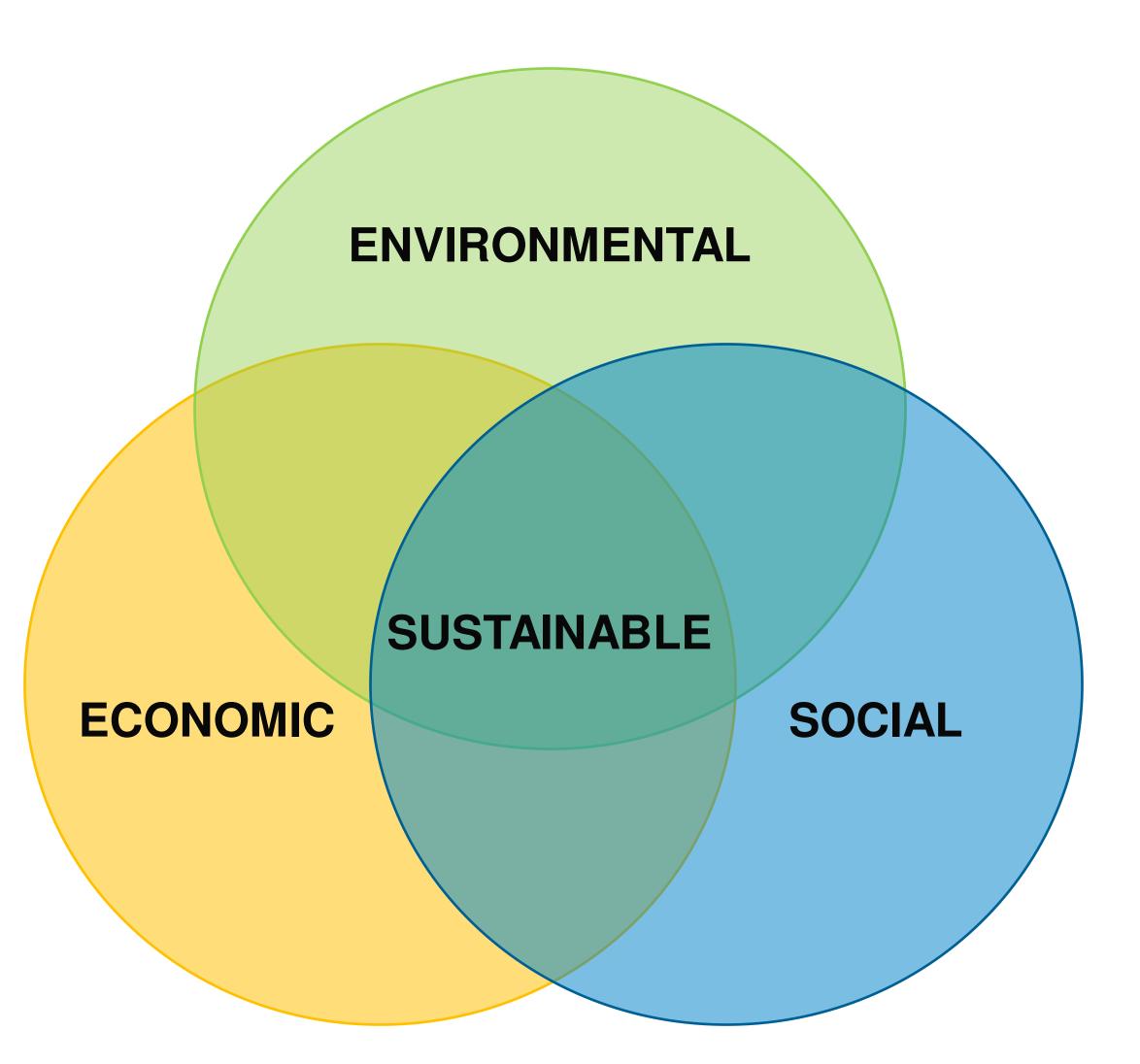


Who is involved when we say 'together'?

• Everyone, but...

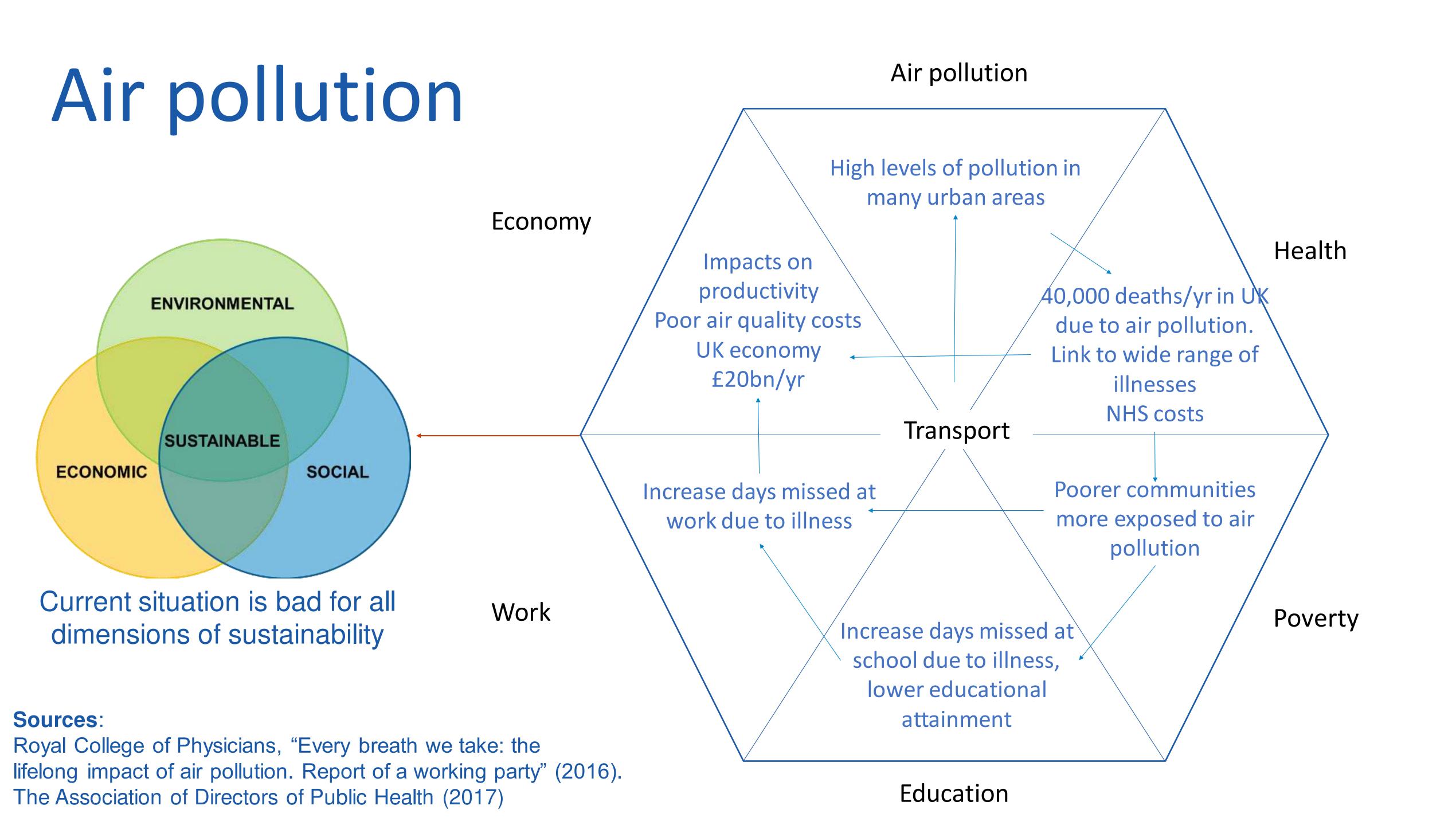
it's only fair that some do more to reduce emissions than others

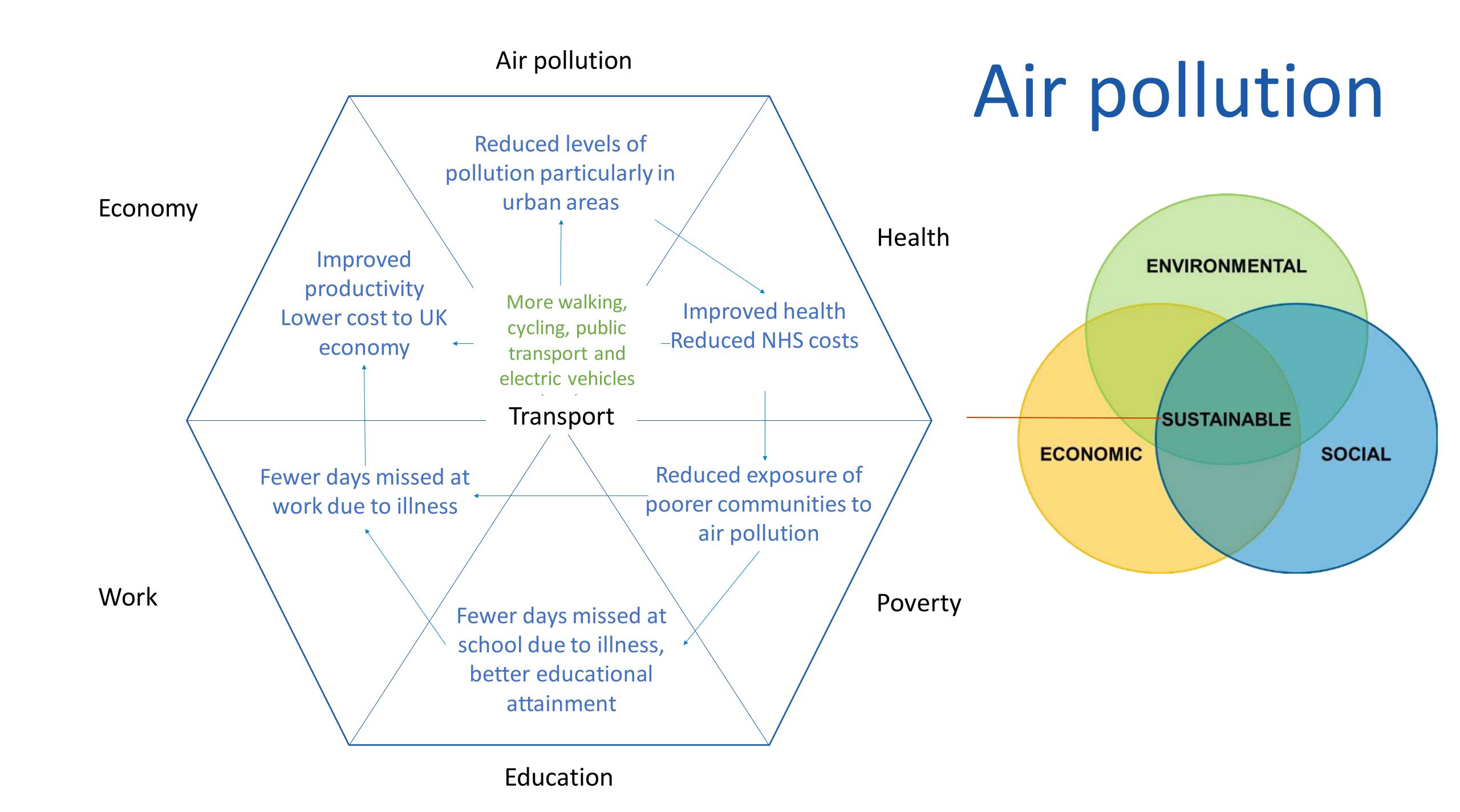
The 3 dimensions of sustainability



- Consider all three dimensions in any proposal
- Find the sweet spot
- Think about knock-on effects and connections between different issues
- Sustainable = fair









Grantham Institute Climate Change and the Environment

An Institute of Imperial College London

Imperial College London

Thanks

neil.jennings@imperial.ac.uk

> @NeilRJennings













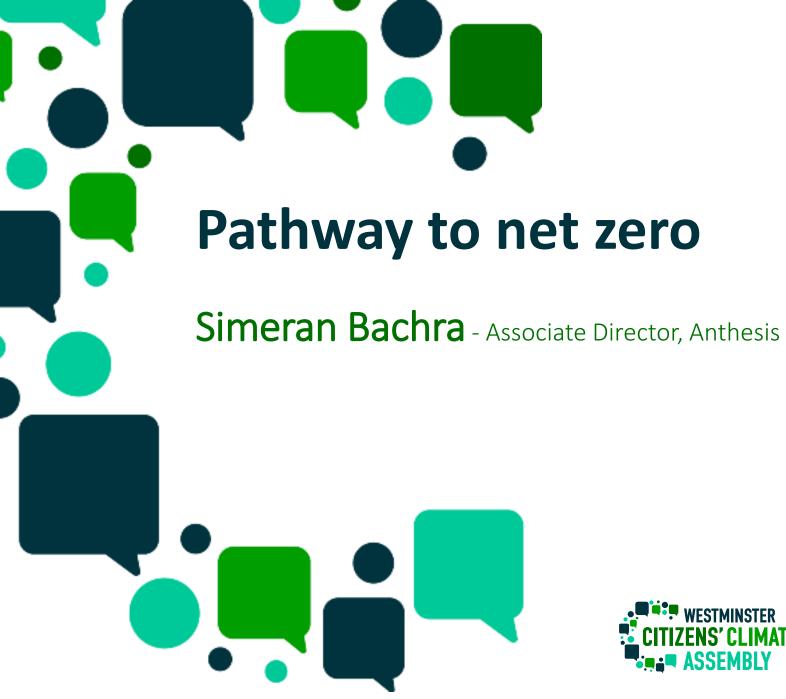












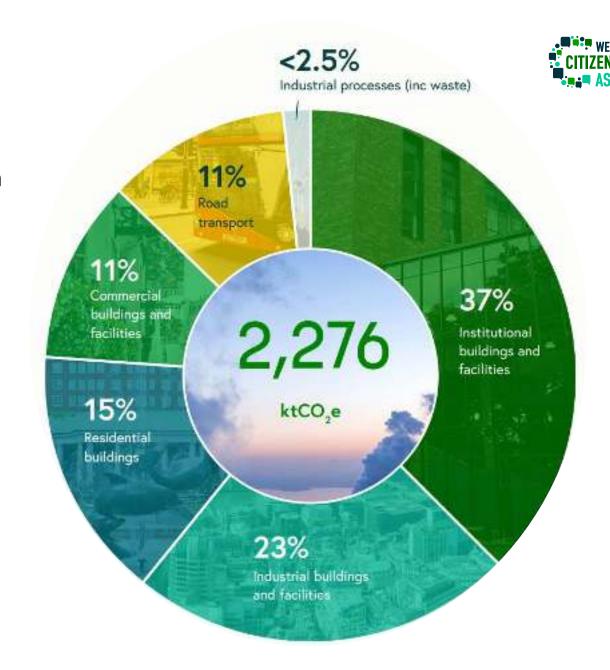






WESTMINSTER'S EMISSIONS

- Westminster has some of the highest carbon emissions for a local authority in the UK, producing over 2 million tonnes in 2017.
- 86% of Westminster's emissions are produced from the energy used in our homes, hospitals, shops, offices, hotels and other buildings.
- This analysis was developed using SCATTER, which is a free emissions reporting tool for UK local authorities, developed by Anthesis and funded by BEIS.



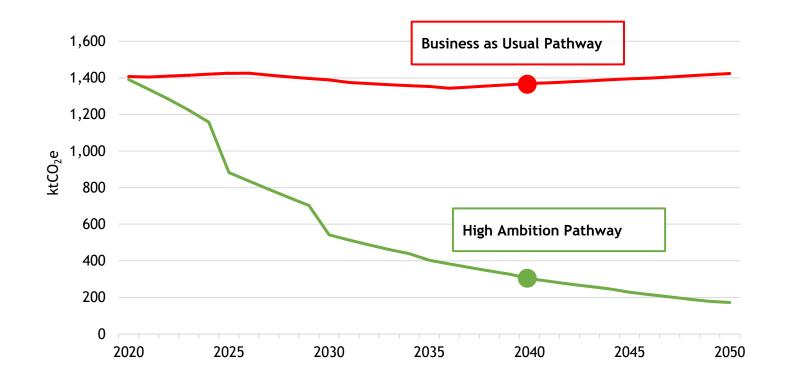


MEETING WESTMINSTER'S 2040 TARGET



Reviewing carbon reduction pathways helps us to understand the impact of different levels of action and how we can reach net zero by 2040.

By taking a High Ambition Pathway, which considers 30+ interventions, Westminster could cut emissions by 84% by 2040.





WHAT DOES WESTMINSTER NEED TO DO BY 2040?



BUILDINGS



28% reduction in energy demand for space heating and hot water



71,900 homes retrofitted



Less demand from lighting and appliances



TRANSPORT



25% reduction in total distance travelled



Increase active travel and public transport travel



Less freight miles & increased efficiency



94% of cars are electric or hybrid



Increased electrified heating systems



Less gas cooking

RENEWABLE ENERGY



406.7MW of local renewables installed





Increase tree coverage to 6.7% of total land area and improve land management

WASTE



40% less waste



64% recycling rate



HOW FAR DOES THAT GET US?





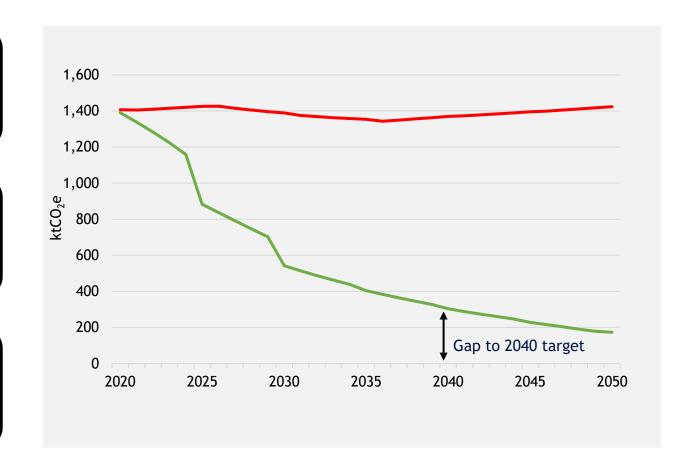
The changes required within Westminster to achieve even an 84% reduction in emissions by 2040 requires significant activity across almost every area of Westminster. Using the pathway still leaves a gap to reaching net zero by 2040.



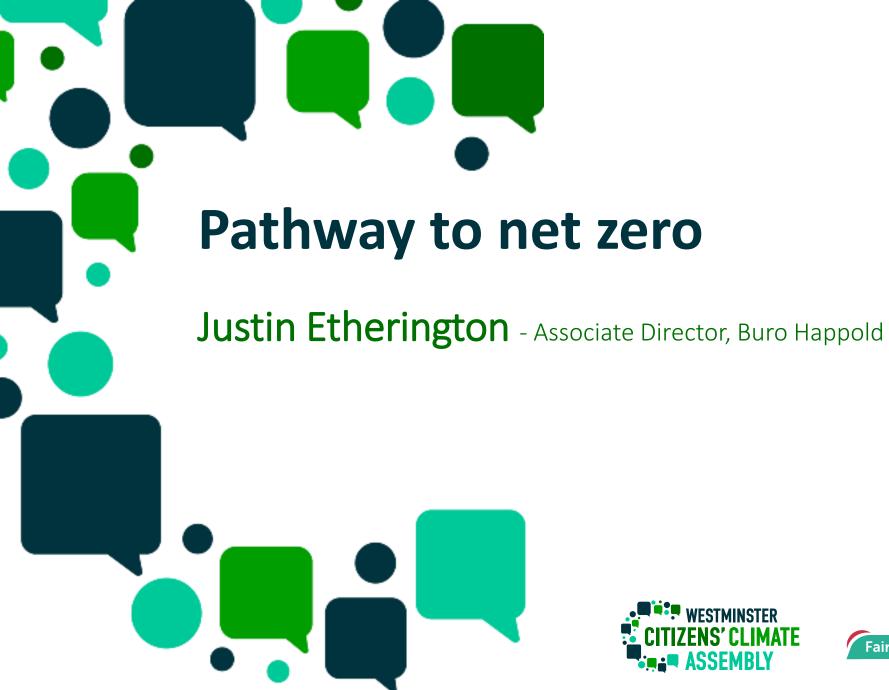
Additional shifts in behaviours and technology to accelerate the speed and scale of implementation will be needed to meet the 2040 timeline.



Everyone in society will need to play their part, collaborate, and advocate for change.













Sustainable Cities

What could the future City of Westminster look like?

Document number here

25 June 2023

Introduction

- Energy Consultant
- Chartered Engineer
- Focused on Urban development and net zero transition



Buro Happold a Westminster based business

We are a world-class global practice of engineers, designers and advisers. We create transformative outcomes for clients and communities through integrated thinking and a truly interdisciplinary, interconnected community of passionate experts.

Long-term Buro Happold operational decarbonisation goal set, to achieve

NET ZERO

by 2045

Reduce embodied carbon intensity of all new buildings, major retrofits and infrastructure projects

50%

By 2030 from 2020 baseline Design all new build projects to be

NET ZERO CARBON

in operation by

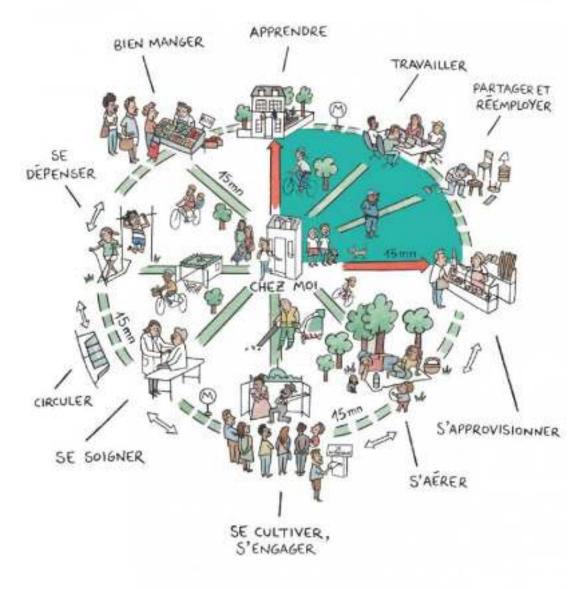
2030

Imagine what your City could be...

LE PARIS DU 1/4 HEURE



Imagine if we could access everything you need in 15 minutes



Imagine if we didn't all need to own a drill



Imagine if we made space for nature

- IGNITION Greater
 Manchester Combined
 Authority
 (greatermanchester ca.gov.uk)
- Green walls
- Green roofs
- Sustainable Drainage



Imagine if we prioritised adaptive reuse and retrofit



34 Weymouth Street Howard de Walden Estate

Use

Residential

Typology

Early 1900s/Edwardian

Heritage status

Grade II listed, Harley Street conservation area

Key measures

Upgrading insultation to external walls; air source heat pumps; whole house ventilation

Carbon savings

Seeks to reduce operational carbon emissions by up to 94% through improved fabric performance and low carbon technologies

Imagine if every home was Net Zero and resilient





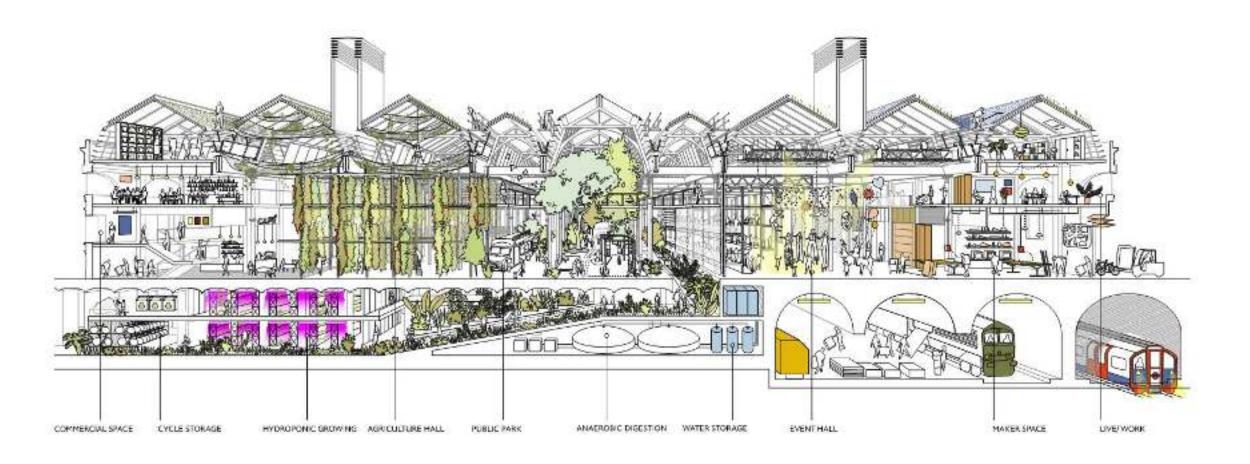
Westminster City Council has opened the doors to a retrofitted show home, a one-bedroom terraced flat in Queen's Park, to encourage residents to make their home more energy efficient.

Improvements made to the show home include:

- Internal wall and underfloor insulation
- Thermally efficient windows and doors
- Replacing the gas boiler with an energy-efficient air source heat pump
- Changing the gas cooker to an electric hob, eliminating gas use at the property
- Powering the home by **solar panels** on the roof with battery storage.

New energy-efficient show home unveiled to help reduce energy bills and carbon emissions | Westminster City Council

Imagine if every building was utilised year round and embodied hypermixity

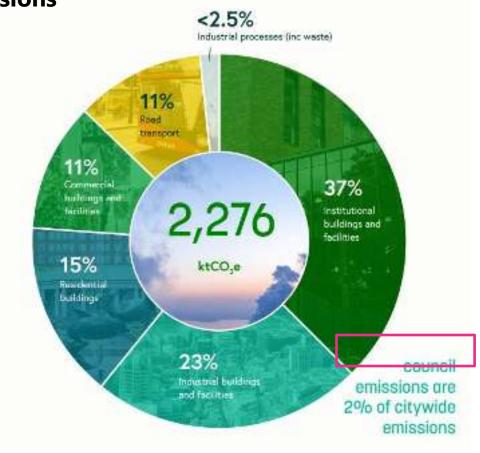




What are the barriers and opportunities in delivering net zero?

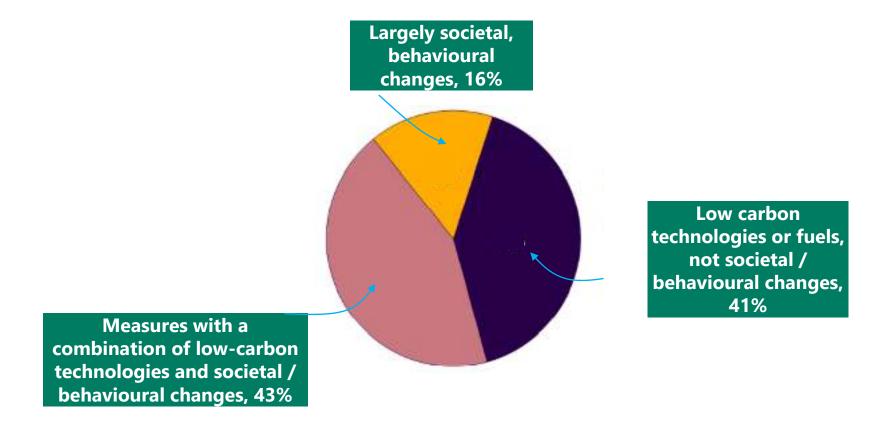
Who's responsible and what are the challenges

City of Westminster emissions



Source: Westminster Climate Action Plan

But bold and collective action is required



Role of societal and behavioural change is over 50% of the savings

Source: CCC Sixth Carbon Budget Report



Pillars of decarbonisation – system thinking



Mobility Electrification

- Switch to Electric Vehicles
- Challenge around sufficient capacity and investment





- Role of heat pumps and. hydrogen
- Heat networks and regulation
- Storage



Investment ahead of demand

- Increase Pace
- Address supply chain issues
- Deliver on "Invest & Connect"



System Design & Management

- By 2035, 75-80% of electricity supply will likely be sourced from renewables.
- Net Zero System needed and function as whole system



You need a plan....

Westminster Local Area Energy Plan (LAEP)

- A whole energy system approach.
- Recognise that factors require local consideration
- Stakeholder engagement is key – incorporating local knowledge/understanding
- Communication plan has to be accessible and useable (not just sit on a shelf)
- Outputs include a preferred energy system plan and the strategy and measures to achieve it.

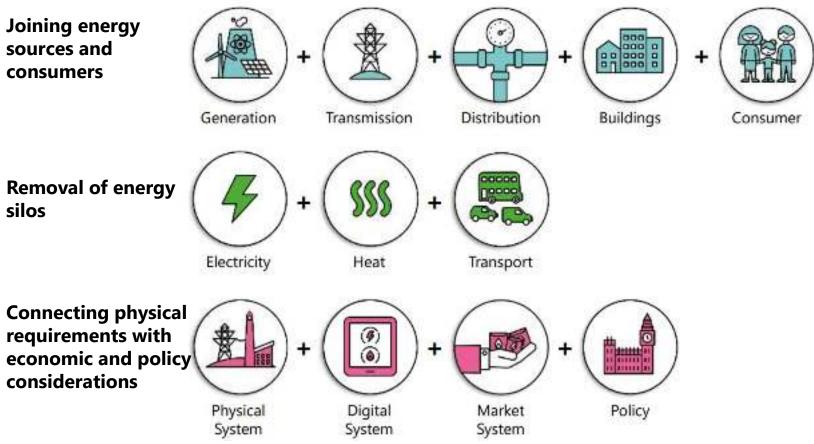
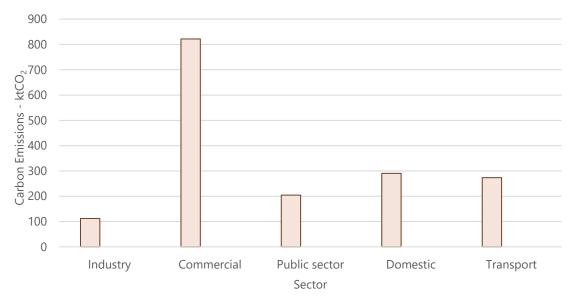
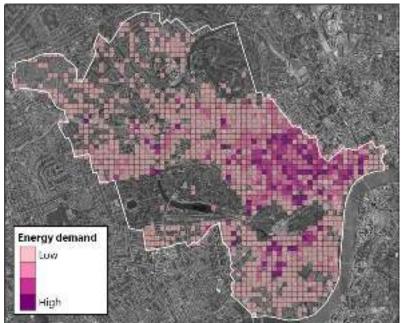


Image from Energy Systems Catapult https://erpuk.org/wp-content/uploads/2019/11/Grant_Tuff.pdf

LAEP - The challenge

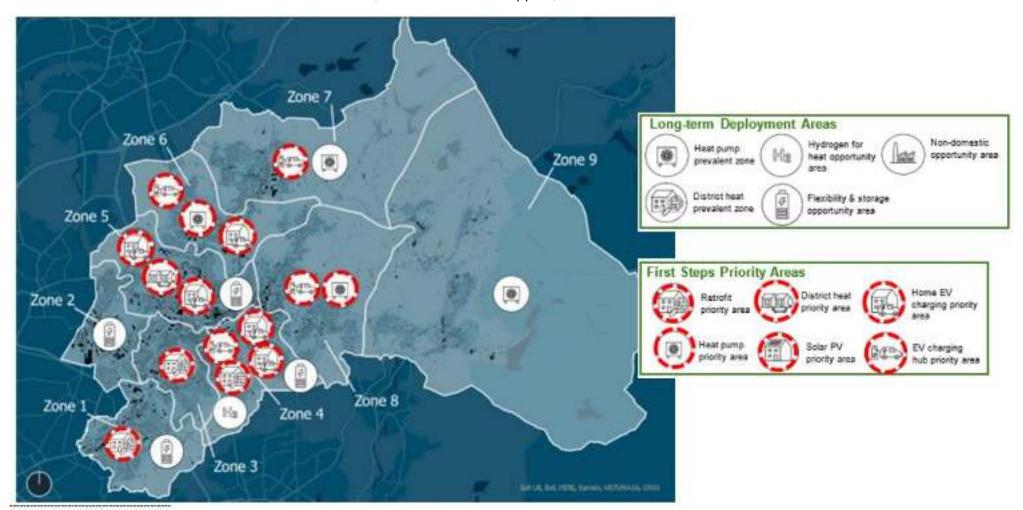
- Need to shift away from a fossil fuel based energy system
- Westminster emissions (2019):
 - 6.5 tCO₂ per capita
 - 77.2 ktCO₂/km²
- Only City of London has higher per capita and density of emissions
- Unique challenges in WCC
 - High no. listed / heritage buildings
 - Lots of Non-Domestic spaces





LAEP – Example outputs

Taken from Greater Manchester LAEP for Oldham (Source: ESC / Buro Happold)



BURO HAPPOLD

Thank you!

Questions?

Justin.etherington@burohappold.com

www.burohappold.com

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Grosvenor's purpose is to improve properties and places to deliver lasting commercial, social and environmental benefit.



Planet Positive: Environmental Objectives

Carbon

52%

emissions reduction from business operations across all scopes by 2030

Nature

20%

increase in biodiversity on managed green spaces by 2030 Waste

Zero

hazardous waste to landfill from our buildings and developments by 2030 **Partnerships**

All

Suppliers compliant with our supply chain charter from 2020





Ideas to get involved

- Find out more about the Greener Futures grantees and explore relevant projects
- Explore local initiatives you can get involved in and volunteer with
- Check the <u>Energy Performance Certificate</u> for your home
- Check if your gas boiler is ready to be replaced by low-carbon heating
- See ideas to reduce the carbon impact of renovation in our <u>Sustainable Fit-Out Guides</u>
- Check your <u>council waste collection times</u>, and <u>additional waste services</u> such as <u>food waste recycling</u>
- Explore waste prevention apps such as OLIO and Too Good to Go
- Reduce transport emissions through using your local parcel locker, parcel collection and drop-off points











VEOLIA IN WESTMINSTER

Efficient Buildings



Minimising usage of our buildings through: Solar panels, LED lighting, motion sensors, efficient monitoring of usage & behaviour change campaigns.



Implementing Circular solution innovations such as: Waste that can't be recycled, powering the collection vehicles & exploring Vehicle to Grid technology.

Sustainable Travel & Transport



Reducing the carbon intensity of the fleet through: Fleet electrification- 80+vehicles & increasing to 150+ in 2024. Electrification of depots.



Supporting improved air quality through: using eBikes for a Last Mile collection approach & supporting biodiversity through Veolia's orchard scheme & urban farming

RECYCLING & WASTE IN WESTMINSTER



recycling rate 21.7%

30th	Newham LB
31st	Wandsworth LB
	Westminster City
32nd	Council
33rd	Tower Hamlets LB





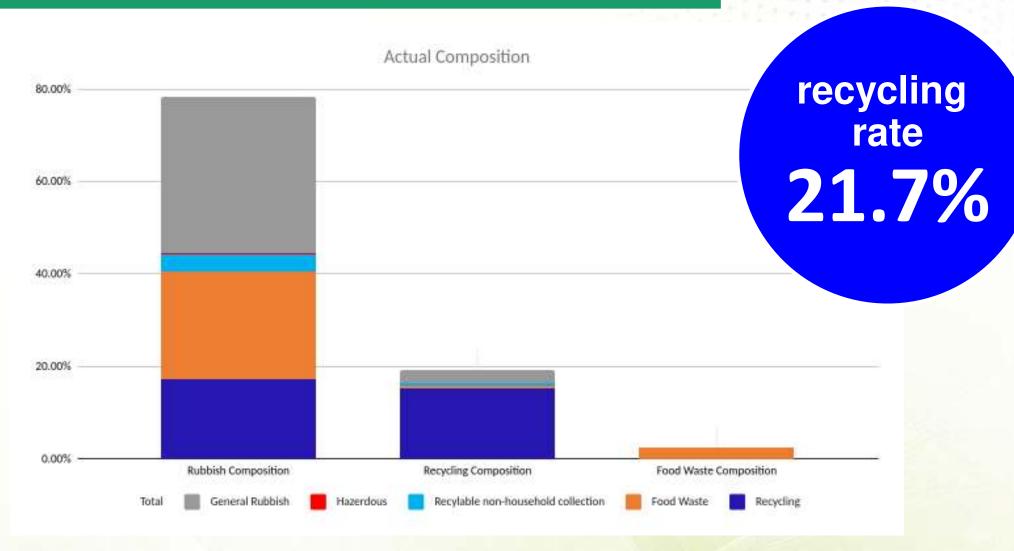








WHAT ARE WE COLLECTING?

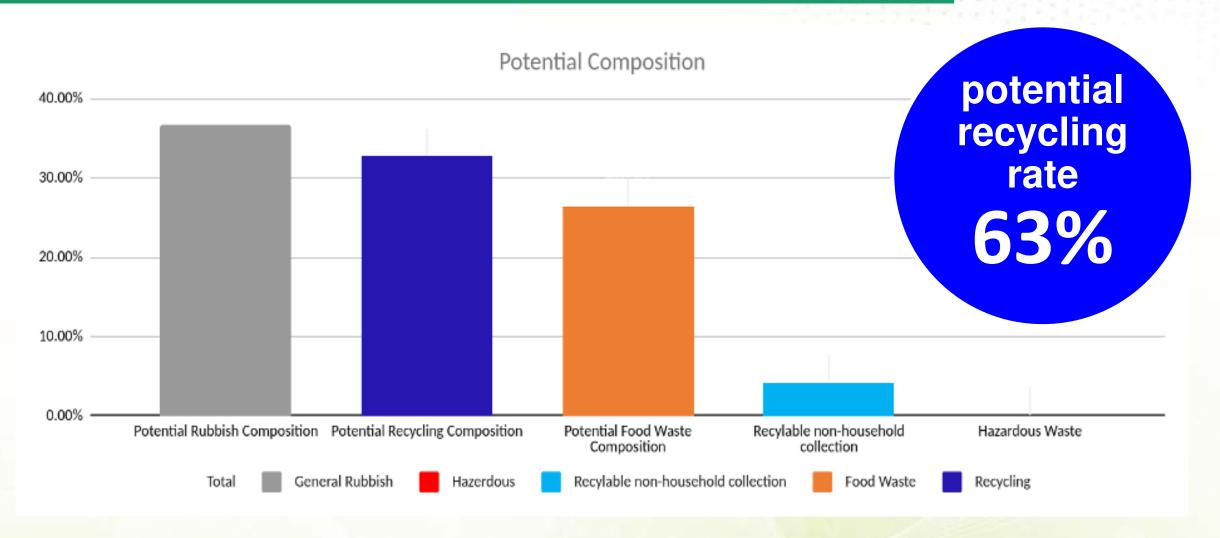








WHAT COULD OUR RECYCLING LOOK LIKE?











BARRIERS TO BETTER RECYCLING

Lack of Storage Space



Dense Population & Tourism



Lack of Understanding



= High Frequency of Rubbish Collections









OPPORTUNITIES FOR BETTER RECYCLING





34,678 kerbside

15,920 communal

> 16,851 neighbourhood





Mobile Recycling





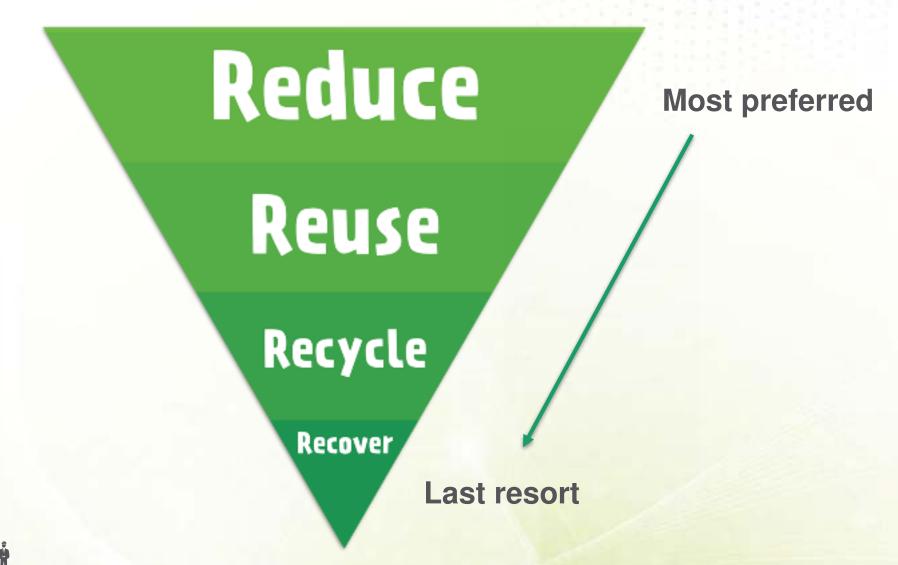








WASTE HIERARCHY











REPOWERING LONDON

CREATING LOCAL ENERGY





YOUR KEY QUESTION

AND HOW COMMUNITY ENERGY CAN HELP



'How can we overcome the main barriers to Westminster becoming a net zero city by 2040 together? How do we ensure this is delivered in the fairest way?'



COMMUNITY ENERGY

WHAT IS IT AND HOW DOES IT WORK?





COMMUNITY ENERGY

WHAT IS IT AND HOW DOES IT WORK?











COMMUNITY ENERGY

CREATING A CLEAN, FAIR ENERGY FUTURE





The climate crisis

Our approach to developing renewable energy contributes to **net zero targets** while empowering communities to act locally on climate change and to have ownership of the solutions.





The energy crisis

Rising energy prices have left millions in fuel poverty. Cooperative community energy projects empower those with lived experience to disrupt the energy system and create a model with **community benefit** at its centre.





The workforce crisis

Community energy groups are training young people for the **green jobs of the future** and building local economic resilience.



REPOWERING LONDON

WHO WE ARE





REPOWERING LONDON



OUR VISION & MISSION



REPOWERING LONDON

WHERE WE HAVE INSTALLED ROOFTOP SOLAR





City of London

Aldgate Solar Power **37 kWp**

Hackney

Banister House Solar **102 kWp**

Kensington & Chelsea

North Kensington Community Energy 224 kWp

Lambeth

Brixton Energy Solar 1, 2, 3

134 kWp

Lambeth Community Solar

145 kWp

Vauxhall Energy

65 kWp



REPOWERING LONDON: OUR IMPACT



707 kWp of rooftop solar across London on 36 buildings since 2011



Avoided over 780 tonnes of CO₂ emissions so far



Generate enough electricity to power over 200 homes every year



Established 8 community cooperatives



Ringfenced over £200k in Community Funds for the local area



Provided training to 149
young people and
mentored 60+
volunteers



Raised capital finance of £768,661 through 650 local investors and donations



REPOWERING LONDON

OUR TOOLKIT



Rooftop Solar

We support local communities to build solar installations that are owned by and provide direct benefits to them. These include cost savings, investment opportunities and employment.

Community Support Services

We fight fuel poverty by offering training, advice and volunteering opportunities, and helping people make the link between their energy use and the climate emergency.

Education & Training

We give people the skills and information needed to build our low-carbon future. This includes delivering education workshops and a Youth Training Programme, mentoring, and creating training opportunities.

Innovation Pilots

We are leading the evolution of London's energy system by developing new, scalable models that can shape the future of urban energy – including local electricity supply and retrofit solutions.



ALDGATE SOLAR POWER

WESTMINSTER CITIZENS' CLIMATE ASSEMBLY

THE CITY OF LONDON'S FIRST COMMUNITY ENERGY PROJECT



Installed 37kWp of solar power



Raised £11,000 from 37 local member investors



Community Fund of £10,000 to be ringfenced for local causes over 20 years





ROOF SPOTTING GUIDE



WHAT MAKES A GOOD SITE FOR A COMMUNITY ENERGY PROJECT?

Think about:

- Schools
- Colleges & universities
- Theatres
- Hotels
- Care homes
- GP surgeries
- Community centres
- Local authority buildings
- Libraries
- Food manufacturers
- Office buildings

Look for:

- Large We aim for a minimum area of approximately 300m2 (about the size of a tennis court)
- Flat or sloped metal
- Easily accessible So we can carry our works and maintenance
- Good condition So they can bear the weight of the solar panels
- Cover an energy-hungry business —
 Buildings that use a significant amount of electricity all year round, particularly during the summer













Somers Town's Future Neighbourhood 2030



MAYOR OF LONDON

Westminster Citizens' Climate Assembly - Day 2 (25th June)

About the Future Neighbourhood 2030

The project is delivered in partnership with

- Somers Town Community Association
- Somers Town Neighbourhood Forum
- Camden Council

It is being delivered in 4 phases:

- Phase 1 almost completed
- Phase 2 currently delivering (up to March 2024)
- Phase 3 developing bid (to run up to March 2025)
- Phase 4 unfunded future







SUPPORTED BY

MAYOR OF LONDON

Phase one - Key achievements

A local sustainability strategy	Sharing spaces in TRA halls	Over 200m2 of green space improved	Lifeafterhummus Room of Things and food redistribution
Over 30 homes retrofitted	Circular economy Chalton Street Market	Somers Town Energy heat supply extension	Air quality monitoring network extension
A 100kW community solar on a local school	Green Mobility Hubs and Healthy School Streets	Local Carbon Offset fund	A new online engagement platfoorm

A local Sustainability Strategy to 2030

A long-term plan for Somers Town that identifies further work that needs to happen locally to combat climate change up to 2030

Developed around

- Community-identified priorities for Somers Town
- Human Rights & UN Sustainable Development Goals
- GLA Green New Deal mission objectives













A local Sustainability Strategy to 2030



A local Sustainability Strategy to 2030

Seven rights: Life - Food - Health - Education - Water - Development - Housing

The right to life free from poverty Global context UN Good To end poverty in all he forms everywhere by 2000. Vagnatiq on right has differentiable and discount planning. to 2015, med. Ave.700 in this gaught on "Dipol and at records possible on the College powers, majoring to full the avoid blass." On this change dispress result in all the Store cap in the high poor in the consequence consets, and other more susceptible to the teproces them. The proceeding levels of a time to construct If a get a subserving on get blanks a tel CAND for account seasoned the rand of powers advector mathems of realizing of neighbors. to solve to the enterty of the subbancy of each, if you shough, at affect food, woulding a how complicate to expect services. Or the an industry productions in resource service; moving front in siling bate; from some consequencing on transfers our local or many impourtingly to convey a construction of your teach continue value willy, a ordust plot to detail of a pe-When the design of the second second there per over pelast up to 4 A transfer projection second there per Record in the many of a firm or any and the burner for him to consider when it excit odgron are hon consister of ortan aquation to system to the control propositions remark that have being to a service proving absorber of Service and error programmers which provide their free he 2000 resinder the factor of souls in recycles-Harring of Prings but or properties a flavour Rober better Tillings over Communication in the narrounding screens a cross & of a talography for a cold to a management of the Chinate and ment address to his call to be, but a more will had and many been bepowerful direkt in die des der handen gehalt 2010, bet die der versie des der bei die de Tajland die begin in die versien und set, in work trout stances, their resolute sectors ins. TT





The right to life free from poverty

Vision

An appropriate where are your has the opposite by the branch distinction for the being and more incommonly, one effect essentials to have a decreased healthy quality of the

Objectives

The strategy webs to improve the high to the free from potenty for people in Surviva Toyoutry supporting, climate action projects that will.

- Help the community to accurate potentiates jobs by ensuring local match we upok finishbets, and years after the local.
- Support the common dy to become stronger and more telline tent by working with them to widow for all leads.
- Employer and equip people to raise household income and spend less on essentials.

The right to life free from poverty

Projects ideas

Consultation empression of the or many drange minted local galaxies as associated, when we dealer.

- We dample or formed a control to complete consistent to come a dedication programme of their nglists, they
- Specifically local businesses and instructions offering and preventing exception in a probability to in a series and in the production of in the end and administration in a larged an approximate.
- More support for local people to set up their overerus lebrar it as research to be incorrected unclear.
- Developing the noticals of the Charter Street Marion as a locus for distant of a property and also

Their ideas car across other sights and goals too specifically.

- Chicagos
- 1 1000

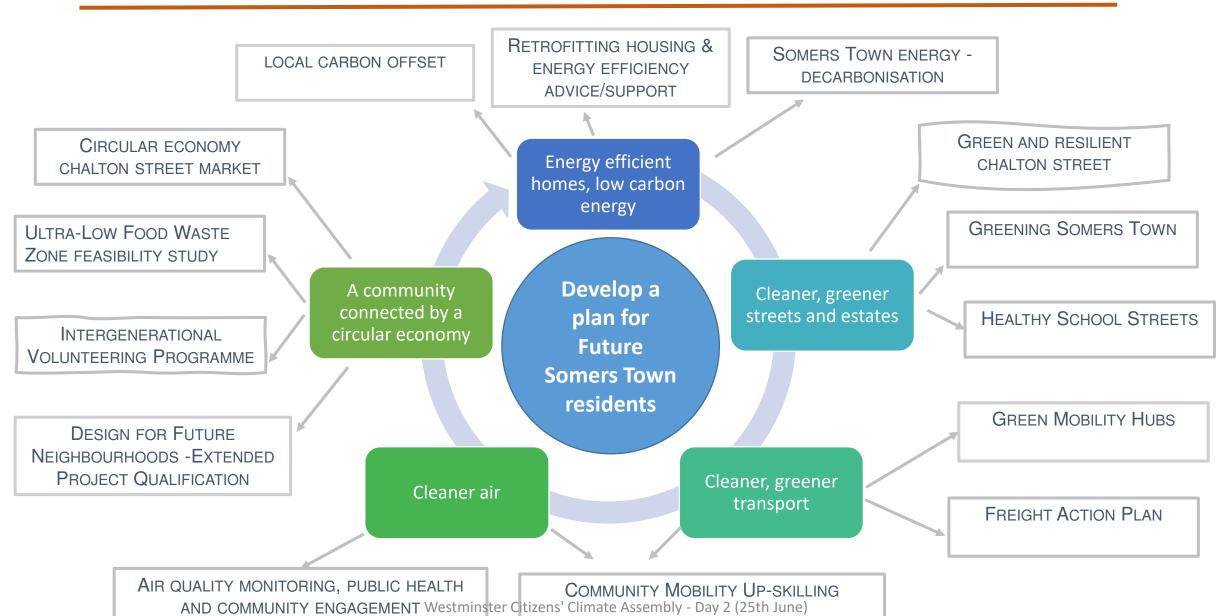
There will require highly for antimoring it meripological distrition of

- Utilizar seminimo medical su laboral como distribuy experience, employem and the laboral reference og sed foreing specificactories and refer.
- Local employing bankers actioned developing to create before apportunities.
 Applies as status—standing, see those given in the control of the contr
- serficioni operationes

 Communication i magnetical procupation

Community of programme in a compared of the compa

Programme delivery



Communications and engagement

Aim

Enable local people to learn more about climate and how they can drive change

Approach

- A Community Climate Learning Hub
- A multi-channel communications campaign
- A Digital engagement platform Scone Ai App



New digital engagement platform - Scone

What is it?

- A footprint calculator to enable residents to understand how individual actions affect their footprint
- A channel to encourage and support community conversations and share information
- A tool to gather quantitative data around desired behaviours

Climate ambassadors

- Local residents and Scone super users
- 1:1 engagement at local events
- Trusted first point of community contact
- Lead by example
- Generate activity in the app by posting and reacting to others' posts





Empowering residents – education and more education

The ultimate aim of all engagement is to empower residents to act, we do this by:

- Supporting skills development (e.g EPQ)
- Community workshops/projects/ideas pot
 - Community ladder
 - Tri-composter
- Cycle instructor and bike mechanic training
- Apprenticeships
- Gardening training
- Listening and providing 1:1 support to enable people to take action











SOMERS TOWN NEIGHBOURHOOD FORUM









GLOBAL GENERATION



















RETROFITTING OUR RESIDENTS HOMES



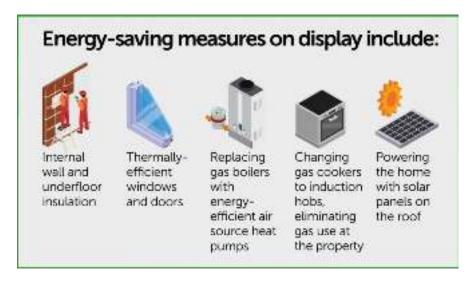




RETROFIT SHOW HOME



Retrofitted one-bedroom void unit



- ✓ Energy demand for heating reduced by 55%
- ✓ EPC rating increased from low D to high B
- ✓ Expected to be self-sufficient for energy



300 visitors

- 118 on public tours, 45 x 1:1 tours for WCC tenants, 120 WCC staff/ contractors and 20 from other boroughs.
- Public tours well attended by owner occupiers (73%)





RETROFIT SHOW HOME

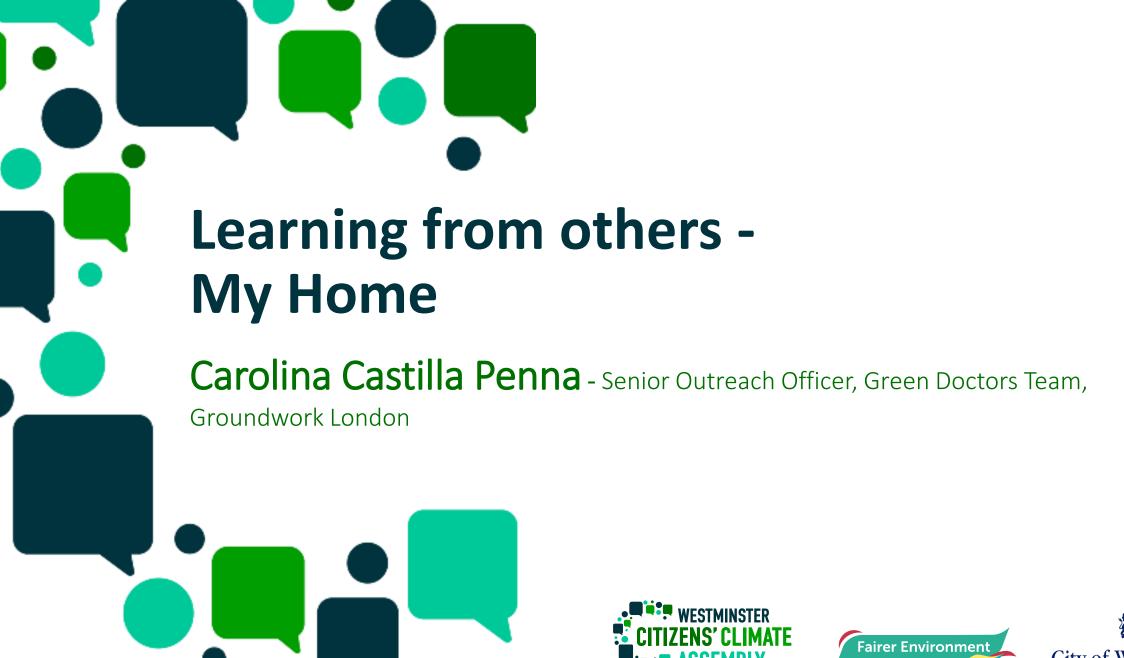


- Visitors are now more likely to insulate, undertake window improvements, install solar PV.
- Visitors included other councils, WCC tenants, leaseholders, private tenants, HAs, WCC employees.
- High demand for additional advice & support:
 - Clearer information on planning requirements
 - Trusted advice (home surveys and bespoke retrofit plans)
 - Trusted suppliers
 - Financial support
- Next steps:
 - Let property and undertake 12-month monitoring
 - Planning for a future show home in South/Central Westminster



"It was enormously helpful - in 10 minutes I could see and understand the improvements and the technology, which would have taken me several hours of research on the internet." Susan, Little Venice resident











Groundwork London- Green Doctors

Part of the community charity, Groundwork London, *Green Doctors* are a team of expert energy advisers. For 17 years the *Green Doctors* have been helping households in London save money, stay warm and improve energy efficiency at home.

We work in partnership with London Boroughs, Foodbanks, Social Prescribers Link Workers Teams and other organisations to deliver the **free energy consultations** where we *give advice on utility bills and provide referrals to further services to improve health and well-being of residents.*







At the moment we are delivering a hybrid model of :

Home visit



Telephone consultation







During energy consultation, the Green Doctor will help residents with:

- Personalised advice on energy bills- for example, help to understand confusing/incorrect bills
- Financial help: Supporting residents applying to discounts or other benefits they may be entitled to.
- Fuel debt management Providing energy and water debt advice and supporting residents to access grants
- Help to apply to larger grants to improve home and heating efficiency (eg, boiler replacement, insulations, etc)
- Delivering/installing free energy-saving items such as draft proofing strips/LED light bulbs/radiators panels, etc
- Signposting to other services for additional support with local organisations







Behaviour change

- Encourage behaviour change for residents to take action
- Our Green Doctors will give tailor energy saving tips per room. For example:
- ✓ How to better control the heating system.
- ✓ Take shorter sowers
- ✓ How to use the dishwasher and washing machine.
- Avoid leaving computers and TV on stand by
- ✓ Etc.
- Small changes in behaviour can lead to significant incremental savings and lower CO2 emissions. 26% of total emissions in the UK, come from households.*

Positive Impacts of the energy consultation

- Reduce the stress and anxiety generated for the high utility bills
- Improve the health and wellbeing of the resident we support
- Learn useful tips on how to save energy and reduce the CO2 emissions
- Get more connected with the local services
- In Westminster, for every 200 household we visit we saved an estimated equivalent of 19 households yearly carbon emissions (average UK household emits 8,514 kg of CO2e a year*)









BREAK



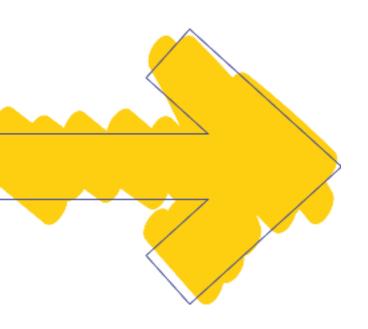








DAY 1 WRAP UP



- What we achieved today and this weekend
- What we will be doing in our final weekend together
- Micro Groups 2
- Reminder for volunteers
- Last minutes to capture thoughts











