

# Air Quality Health Inequities and Inequalities

Ensuring no single group or community unfairly shoulders the burden of exposure to poor air quality or is denied access to clean air

Joe Swift

IAPSC  
28<sup>th</sup> September 2022



UK Health  
Security  
Agency



Department  
for Environment  
Food & Rural Affairs

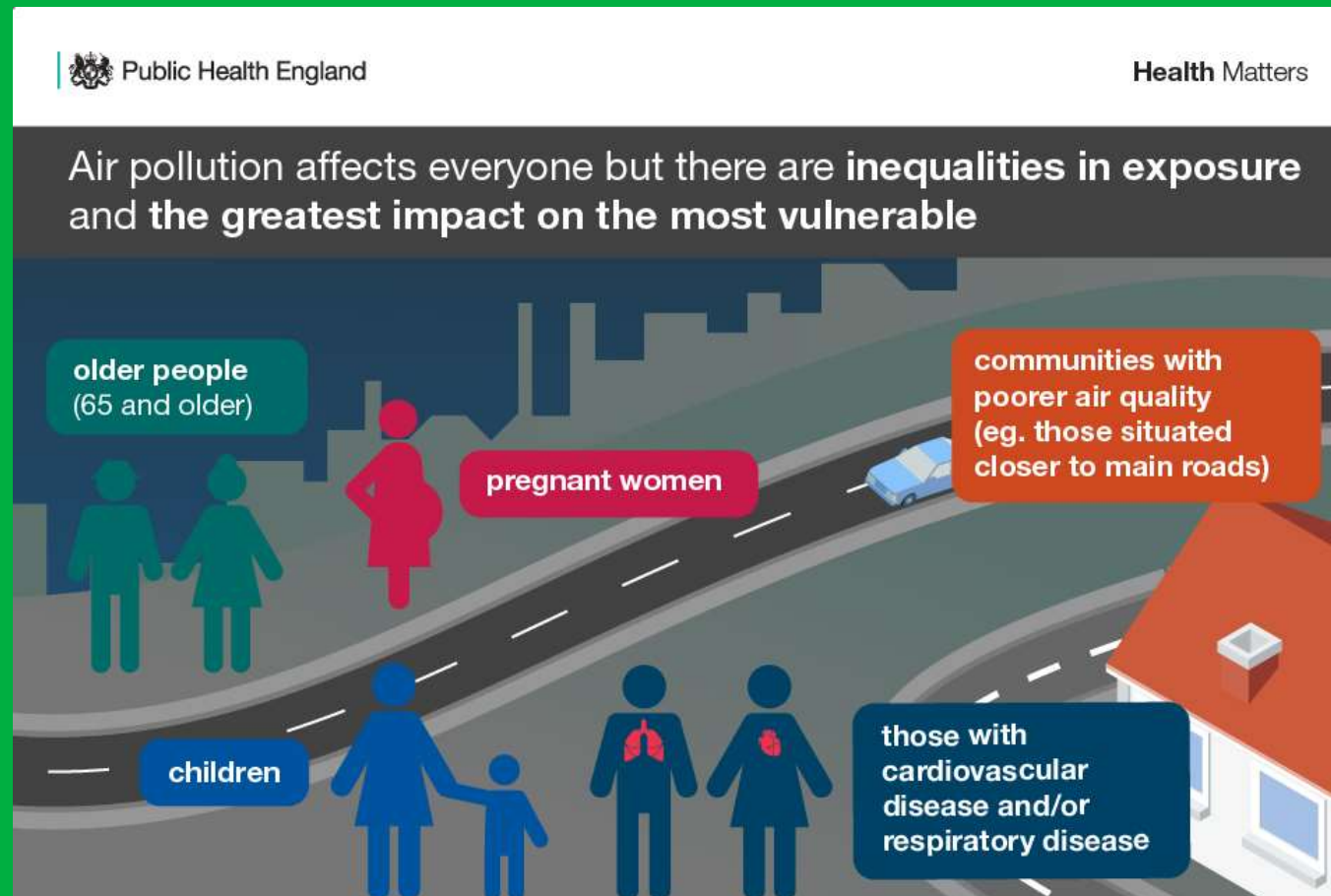


Environment  
Agency

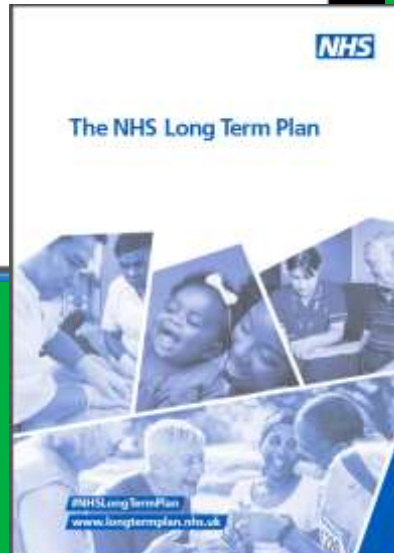
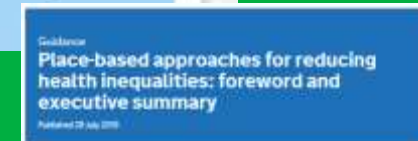
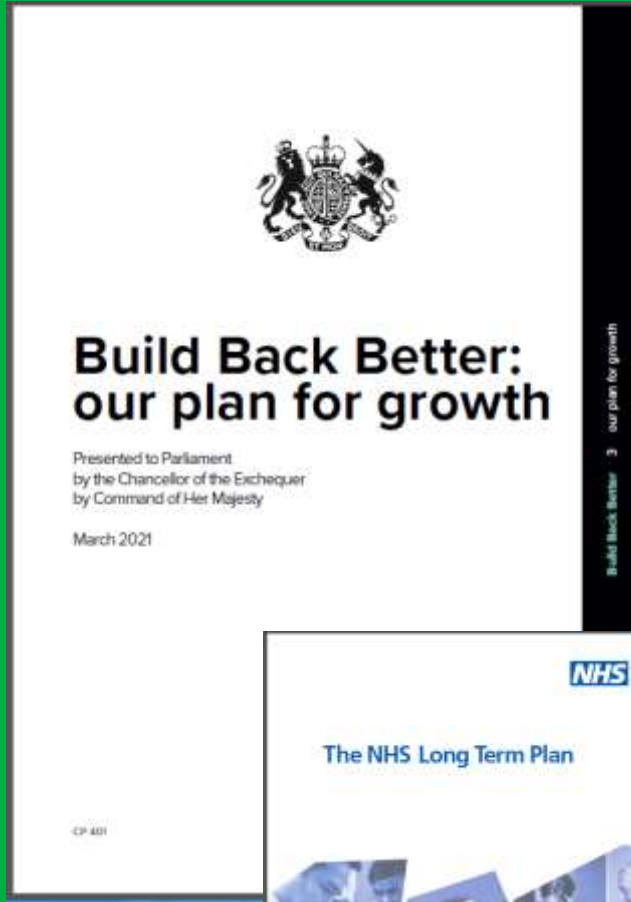
# Contents

- Framing the problem
- Air Quality Inequalities Project
- Project Findings
- Current and future interventions
- Project outcomes and the way forward

# Project Context




# Opportunity



# Air Quality Inequalities Project - Overview

- Collaborative knowledge share, engaging and gathering the “lived experiences” of those most affected by air quality and health inequities
- Engaging those with expertise in the area of air quality and health inequalities
- The Environment Agency, supported by UKHSA and academic and third sector partners leads the collaborative project

# Project Role & Responsibilities

Role	Contributors
<b>Coordinating Group</b>	
<b>Section 1: Lived Experience Working / Focus Groups: 8 sessions</b>	Group Members - primarily those with or representing those with lived experience
<b>Section 2: Context and the way forward - Working groups</b>	Group members - primarily those with policy / practical and academic experience
<b>Processing and Report writing</b>	Environment Agency (with support as available)
<b>Review</b>	Environment Agency, Co-ordinating groups and working group members as appropriate

# Contacts and Network

AGE UK	Bristol Council	Derby college	Gas Works Communities	Lancaster Environment Centre	NHS Patient Representatives	Suscoms
AirTeam UK	Bristol Green Capital	DfT	GM Hazards	Leicester University	NHS Wales	Sustrans
Allergy UK	British Heart Foundation	DHSC	GSTT Charity	London Borough of Newham	NRW	TRANSITION
Anticipate	British Safety Council	Doctors Against Diesel	GWR	Medact	PHE	TUCAN
Asthma UK/BHF	Burngreave Clean Air Campaign	EDF	Health-NI	Met Office	Public Health Wales	UK Clean Air Champions
AUK-BLF	Camden LBC	EllaRoberta.org	Impact on Urban Health	Muir Consultants	Residents Against Dirty Energy	UK100
Birmingham University	Centric Lab	EPUK	Imperial College London	Mums for Lungs	Saaf Hava	University of Birmingham
Black and Green Ambassadors	Clean Air for Southall and Haynes	EuroHealthNet	Imperial College NHS Trust	Nature Youth Connection and Education CIC	School Streets Bristol	UWE
Black Environmental Network	Clean Air Fund	Friends of Suburban Bristol Railways	Inert	NEU Architects	See Sustainability	Way Out West
Born in Bradford	Clean Air London	Friends of the Earth	JAQU	Newport City Council	SEPA	Welsh Government
Bristol Clean Air Alliance	Client Earth	GAP	Knowledge Hub - Improving AQ	NHS England & Improvements	Staffordshire University	UCL

# Focus Groups

Title	Date	Presentations and focus
Age	13/01/21	Asthma UK and British Lung Foundation - <u>Toxic Air: a health emergency for older people</u> Natural Resources Wales & 'Youth campaigners and My World My Home Programme participants' - <u>Air Quality Inequalities and Young People</u>
Ethnicity	20/01/21	Clean Air for Southall and Hayes – <u>Environmental Injustice</u> Black Environment Network – <u>Working Effectively with Diverse Communities</u>
Indoor Environment	27/01/21	Public Health England - <u>Indoor Air Pollution and Housing Inequalities</u> Allergy UK – <u>Housing and Lived Environment</u>
Employment	10/02/21	GM Hazards & TUCAN (Trade Union Clean Air Network) – <u>Air Pollution – all in a day's work?</u> British Safety Council – <u>Time to Breathe</u>
Travel	17/02/21	University of Birmingham – <u>Indoor and outdoor air quality UK land surface transport</u> UWE – <u>Travel behaviour, transport access and use: What does this mean in terms of emissions and exposure to air pollution?</u> Transport for Greater Manchester - <u>Greater Manchester's Clean Air Plan</u>
Geography (urban / rural)	24/02/21	British Heart Foundation and Patient Representative – <u>Air Pollution and Geography. Fine particulate matter pollution in urban and rural settings</u> Environmental Protection UK – <u>Urban and Rural Air Pollution. Two sides of the same penny?</u>



# Focus Groups

Title	Date	Presentations and focus
Equity	17/03/21	Centric Lab – <i>'Health Justice is Racial'</i> Staffordshire University – <i>'Equity and Air Quality'</i>
Community Engagement	31/03/21	UWE - <i>'Community Engagement for a clean air future'</i> Residents Against Dirty Energy – <i>'Community Engagement'</i> Burngreave Clean Air Campaign – <i>'Burngreave Clean Air Campaign'</i> Global Action Plan - <i>'Clean Air Day 2021'</i>
<b>PROJECT CONSOLIDATION</b>		
Multiple Deprivation & Compounding Factors	13/10/21	<b>Competing challenges and agendas</b> A general overview of the complexity of factors around inequity. This will highlight both policymaker and wider community issues.
Policymaker Engagement	20/10/21	<b>Agendas, Challenges and Opportunities and Interventions</b> Policymakers outlining their mandate and agendas for equity work; highlighting the challenges and opportunities; and examples of and ideas for interventions.
Policymaker Engagement	03/11/21	<b>Engagement, Policy implementation and alignment, Interventions</b> How policymakers engage with others, from both the policymaker and wider community view. How to get alignment for policy implementation; and examples of and ideas for interventions.
Interventions	08/12/21	<b>Pilot schemes, Resources, Collaborations and Next Steps</b>

# Project update

- The project is a collaborative effort with a network of over 200 individuals and 90 groups.
- 12 sessions completed so far with an average of 40 plus per session.
- Slides and summaries of the 12 sessions have been shared.
- Interim 'Review & Summary' and 'Findings' reports.
- Launch of the 'Air Quality Inequalities Network' (AQIN) with a number of successful collaborations.



# Project Findings



# Key Findings

- **Lived Experience:** We need to listen to, engage with and understand the lived experience of those living in areas of poor air quality.
- **Engagement:** Essential that there is engagement and consultation and that this is accessible, equitable and platforms the widest range of people possible.
- Engagement is not a one off and should be a continuous process.
- **Communication:** Big difference between engagement and communication.
- Important to achieve buy-in and then communicate in a transparent way, with positive and useful messages.

# Key Findings

- **Access to information:** Data needs to be accessible, easy to understand and give people concrete ideas for action and change.
- **Informed choice:** Better information will allow for individuals to make the best decisions for themselves and others.
- **Targeted actions:** policy and interventions that focus on those most disadvantaged by poor air quality are preferred to universal actions.

# Key Findings

- **Limitation of choice:** Many people are limited in the choices they can and individual actions they can take to reduce exposure or emissions.
- **Contribution factors** include:
  - Employment
  - Housing
  - Fuel-poverty
  - Travel
  - Schools
  - Access to green and blue space

# Key Findings

- **Responsibility** can't just rest on the individual and a cross-sectional approach is needed with involvement from employers, planners, government etc.
- A broad range of stakeholders control the means by which people can make positive changes, or can support people to make changes
- **Responsibility** can't just rest on the individual and a cross-sectional approach is needed with involvement from:
  - Employers,
  - Planners,
  - Government,
  - Healthcare,
  - Education.

# Recommendations

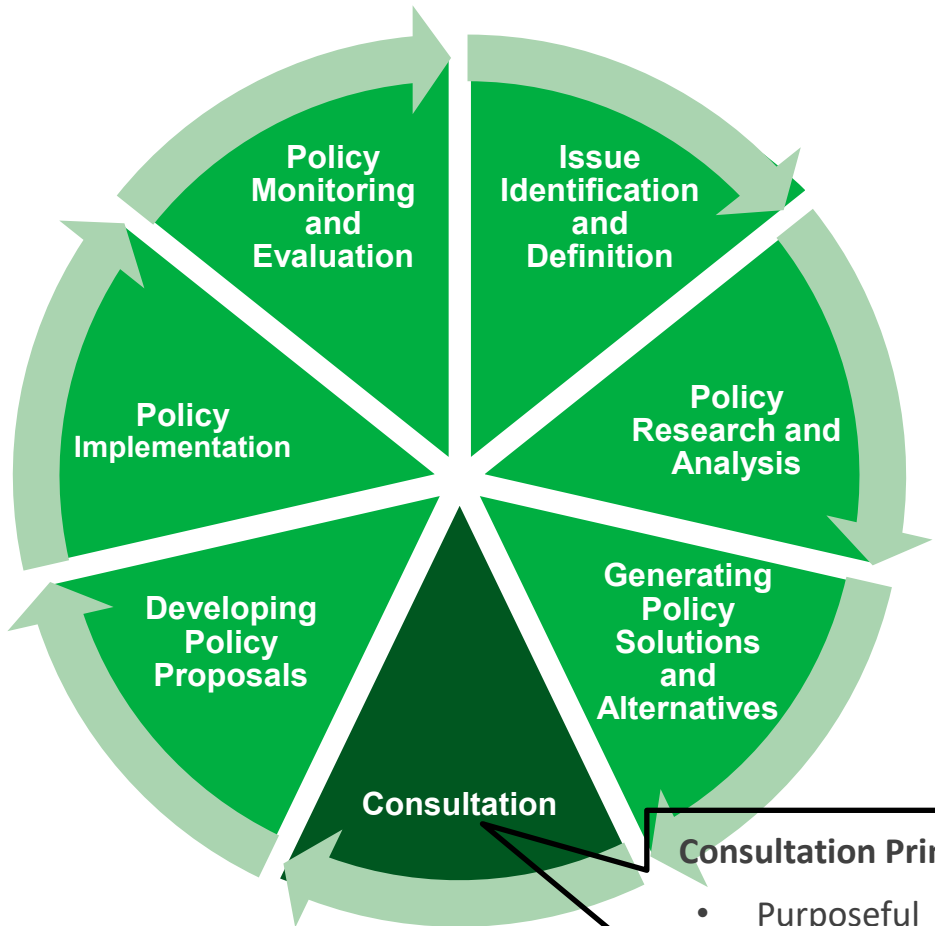
*.....and concepts in action*



# Recommendations

- **Engagement:** Make engagement accessible, intersectional and meaningful. Meet people where they are and put lived experience at the centre of engagement.
- **Engagement** should be viewed as positive, not combative, and should be an ongoing process, not just when you need something from someone.
- **Forming a network:** Make use of local community groups that already exist and can help with wider engagement and communications.
- **Network** should include a wide range of partners covering travel, healthcare and wellbeing, young, old, those with complex needs; anyone in society with increased vulnerability.

# ....The Policy Cycle



- Consultation Principles**
- Purposeful
  - Informative
  - Proportionate
  - Targeted
  - Clear
  - Transparent

## How to engage: the Community Engagement Continuum

Inform	Consult	Involve	Collaborate	Empower
To provide stakeholders with balanced and objective information to assist them in understanding the problem, alternatives and solutions.	To obtain stakeholder feedback on analysis, alternatives and/or decisions.	To work directly with stakeholders throughout the process to ensure that their concerns and aspirations are consistently understood.	To partner with stakeholders in each aspect of the decision from development to solution.	Shared leadership of community-led projects with final decision-making at the community level
"Here's what's happening"	"Here are some options, what do you think?"	"Here's a problem, what ideas do you have?"	"Let's work together to solve the problem"	"You care about this issue and are leading an initiative, how can we support you?"



# .... Citizen Science



## The Bristol Approach



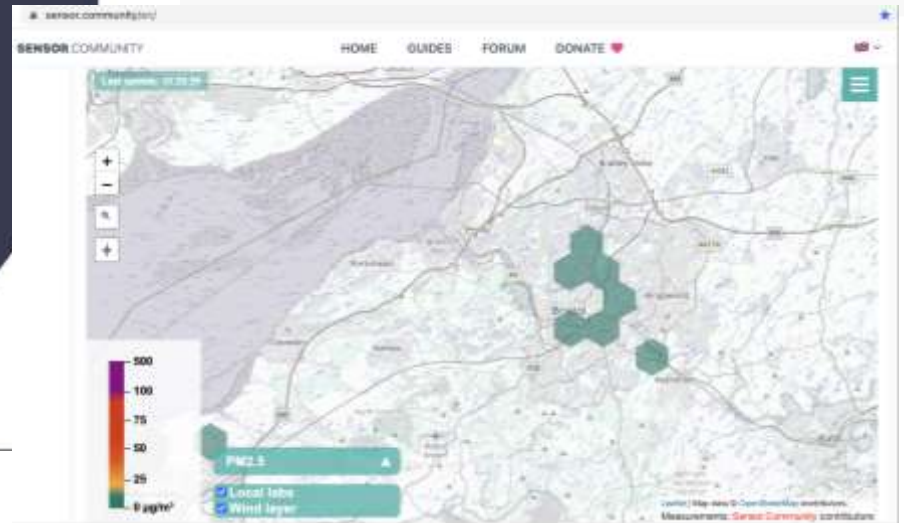
Deployment

**Luftdaten**  
Air Quality Sensor

- Measures Particulate Matter (PM2.5, PM10)
- Luftdaten Platform (including European-wide map)
- Visualisations on DataUnity

**Framing the issue**

**Design**



# Recommendations

- **Communicating advice:** Make communications meaningful and practical. Work with trusted messengers who have strong bonds with the local community. Communicate with a wide range of stakeholders (landlords, builders, employers, etc.)
- **Data collection and monitoring:** Monitoring and data collection need to be an ongoing activity.
- **Data** can come in many forms and from many sources.
- Innovative methods should be employed to collect a broad range of data. Citizen science, journaling, photos, etc.
- **Unintended consequences:** Good engagement, data collection and monitoring will help to identify and mitigate any unintended consequences that may arise from policies and interventions.

# .... Data and Communication



## RIGHT TO KNOW

The Centric team is launching a new digital tool, which is a postcode analysis of environmental pollutants and deprivation data.



**Air (pm2.5)**  
**25.61**

We analysed the average particulate matter (PM 2.5  $\mu\text{g}/\text{m}^3$ ) from the top 10% (35 days) worst days in a year. Reporting the average of the worst days (spikes) rather than the annual average creates a more accurate health risk narrative, particularly for vulnerable populations.

[Learn more](#)

**Summer Heat ( $^{\circ}\text{C}$ )**  
**28.59**

We analysed the average temperatures of the top 10% (35 days) hottest summer days in a year that experienced heatwaves. This is to capture the changing weather in cities, which are creating longer and more acute heat waves, which present a risk to health. Annual averages include colder days and can hide dangerous days of temperature spikes.

[Learn more](#)

**Night Light (radiance)**  
**14.18**

We analysed the annual average light pollution based on the night emissions recorded by satellite because they are sustained and prominent sources of light that are well documented. In the case of light, the annual average is an accurate health risk narrative as spikes in light are rare.

[Learn more](#)

**Noise (Decibel)**  
**65.14**

We analysed the annual average noise pollution based on the road, rail, and plane data because they are sustained and prominent sources of noise that are well modeled. In the case of noise, the annual average is an accurate health risk narrative as spikes in noise pollution fluctuate rapidly, exposure can be more controlled, and the risk to health happens on a long temporal scale.

[Learn more](#)

**Deprivation (IMD)**  
**2.00**

Indices of multiple deprivation are widely-used datasets within the UK to classify the relative deprivation of small areas. Multiple components of deprivation are weighted with different strengths and compiled into a single score of deprivation. For the purposes of Right to Know, deprivation is a proxy to exposure of psychosocial stressors from urbanisation. The geographic boundary for IMD is scored by LSOA, where the 32,844 regions are put into a decile ranking system that we have used here for Right to Know.

[Learn more](#)

[DOWNLOAD RESULTS](#)

[DOWNLOAD GUIDEBOOK](#)

[SHARE RESULTS](#)

[SCHEDULE A SESSION](#)

Key: 

Low	Medium	High
-----	--------	------

# .... Data and Communication



## Deprivation Easton Bristol 2011

[Census]



## NO2 Easton, Bristol 2017

[Earthsense]



# Recommendations

- **Co-production of interventions:** Co-produced and community led initiatives will ensure appropriate buy-in from stakeholders and identify possible unintended consequences.
- **Responsibility:** Individual behaviour change is a positive thing, but responsibility sits with everyone.
- Employers, business networks, private and social landlords, planners, healthcare professionals, all have a role to play.
- Engaging the widest range of stakeholders in the process will lead to interventions that are complimentary and work for everyone.

# .... Working together

## Some of our projects

Impact  
on **Urban**  
**Health**

### Dxw x Rooted by Design – Review of air pollution alerts

Alongside Southwark Council, we co-funded dxw and Rooted by Design to undertake a review of the air quality alerts system, airTEXT. The aim was to surface the experiences and voices of Southwark residents and identify opportunities for change and emerging ideas.

A number of potential solutions emerged including more presentation of air quality data in public spaces, public awareness campaigns, engagement with schools, working with groups that currently work with Black communities.

We are working with Southwark Council and the researchers to co-develop some of these solutions, along with the community.

### ClearView Research and Repowering – Indoor Air Quality research

We recently funded a suite of projects to better understand residents experiences of indoor air quality.

ClearView Research will be working with up to 40 households on a digital ethnography and monitoring project to understand the sources and causes of indoor air pollution. They will then work with these residents to identify potential follow up projects.

Repowering will be piloting a community support service that helps residents to feel healthy and comfortable in their home, including indoor air quality alongside other aspects such as temperature, hot water, etc. They will be working with 25 residents on an estate in Brixton.

### Team London Bridge – Bikes for Business

Team London Bridge are working with [MP Smarter Travel](#) to deliver an 18-month project directly engaging with local businesses by offering subsidies and support for them to switch to cargo bikes for deliveries.

This project builds on the success of a smaller [initiative](#) carried out in the London Bridge area during 2019 which saw businesses respond enthusiastically to the cargo bike model.

The partners will be providing a whole market advisory and subsidy service. The delivery area will be focused around the 'Low Line' area spanning London Bridge and Bermondsey. This is an area with poor air quality and high levels of susceptible residents.





# .... Working together



- What is the impact of the Bradford on:
  - Respiratory health, cardiovascular health and birth outcomes
  - Health inequalities
- What is value for money of the Bradford Clean Air Plan?



Low Medium High



# Ongoing projects



# Project outputs and next steps

# Project Outputs

- Interim Report covering project structure and findings
- Presentations to internal and external stakeholders
- Public webinar on Clean Air Day
- Presentation at COP26
- ‘Community Health Summit’ event
- Input to LAQM guidance
- Input to Air Quality Strategy
- Collaboration with partner organisations



Part IV of the Environment Act 1995 as amended by the Environment Act 2021

## Local Air Quality Management Policy Guidance (PG22)

August 2022



## The Air Quality Strategy for England, Scotland, Wales and Northern Ireland

Volume 1



Department for Environment, Food and Rural Affairs in partnership with the Scottish Executive, Welsh Assembly Government and Department of the Environment Northern Ireland



# .... Local Authorities

## Tackling air quality disproportionality and inequity through Camden's Clean Air Action Plan 2022-2026

8 December 2021



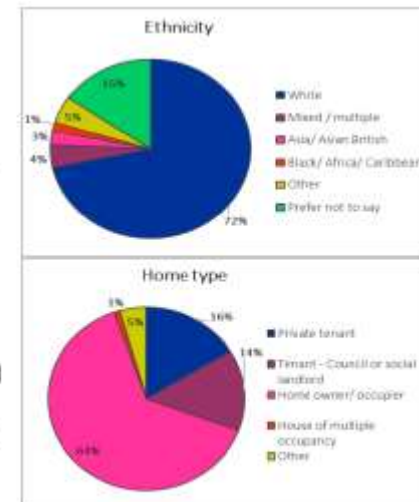
Tom Parkes, Senior Air Quality Officer

camden.gov.uk



## Tackling AQ disproportionality and inequity in Camden

- Reference disproportionality and inequity in strategic ambitions for improving AQ in Camden. Clean Air Action Plan 22-26:
  - Will realise citizens' vision for a borough in which *'no person experiences poor health as a result of the air they breathe'*
  - Will work towards WHO Guidelines
  - Will proactively and affirmatively tackle disproportionate and inequitable effect of air pollution
- Refocus attention to tackle inequity – ensure officers and external stakeholders are aware, incorporate in collaborative work with public health/NHS organisations
- Affirmative action to improve representation and in strategy development, decision-making etc.



camden.gov.uk



## Tackling AQ disproportionality and inequity in Camden

- Reprioritise project and day-to-day work to focus on improving air quality equitably (directly tackling disproportionality)
- More representative air quality monitoring – working towards an even distribution between wards and, ideally, LSOAs
- Allocating budget for translating resources into the most relevant languages



camden.gov.uk



# Lessons Learned

- Talking to people is OK
- People appreciate transparency and honesty
- You don't need to be the expert at everything
- Engagement takes a lot of initial work but is worth it in the long run
- Lived experience is essential to good policy making and interventions
- You can do a lot with not a lot

# Thank you

## Any questions?

Joe Swift – [joe.swift@environment-agency.gov.uk](mailto:joe.swift@environment-agency.gov.uk)