



Office for Health
Improvement
& Disparities

The London Public Health Forum presents:

London's air, London's health

29 November 2022
0930 - 1100

Please use **#LondonPHForum** to live Tweet the event

The **London Public Health Forum** is a collaboration between Office for Health Improvement and Disparities London in partnership with Faculty of Public Health, Association of Directors of Public Health London, UK Health Security Agency, Greater London Authority, NHS England, Academy of Public Health

Welcome

Professor Kevin Fenton

Regional Director London, Office of Health Improvement and Disparities (OHID)

Objectives

This London Public Health Forum brings together public health leaders, practitioners and their teams from across London to:

- Consider impact of air pollution on health and mental wellbeing and health inequalities
- Place air quality interventions in the wider economic, political, environmental and social climate and cost of living crisis
- Discuss solutions and action being taken at national, regional and local level to improve air quality
- Identify opportunities for further action and collaboration



House Keeping



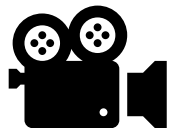
Please stay on mute unless you are speaking.



Please turn your camera on if possible.



Please engage and ask questions by adding to the chat or raising your virtual hand. These will be answered at appropriate points.



This webinar will be recorded. **Slides and recording will be embargoed until the release of the CMO's report.**



To turn your own live captions, select the three dots at top of your screen and click 'turn on live captions'.



Keynote: Chief Medical Officer on air pollution

Professor Chris Whitty

Chief Medical Officer for England, Department of Health and Social Care

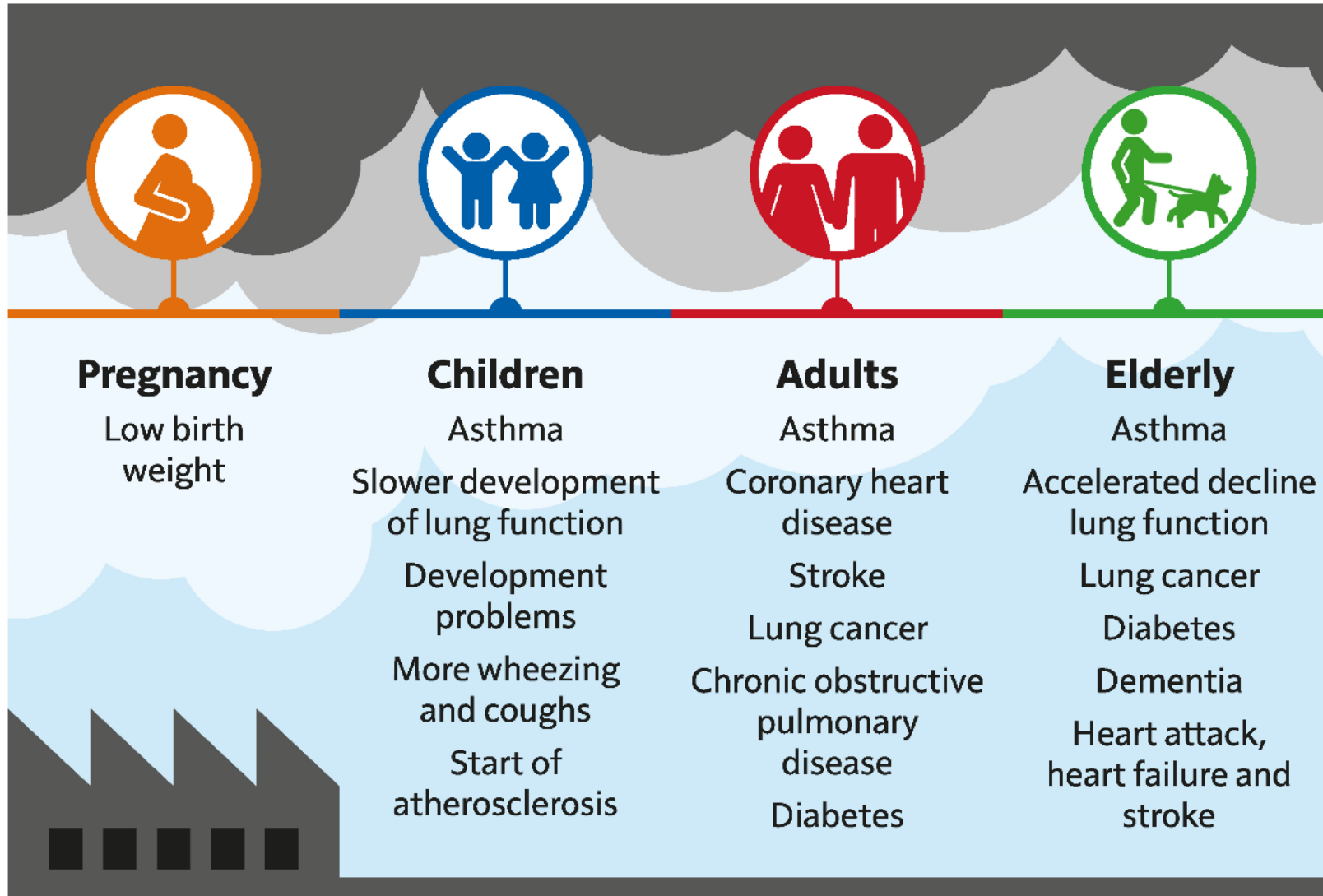
We request that you are sensitive about live tweeting the keynote session given by Prof. Chris Whitty, Chief Medical Officer for England, as he will be discussing his annual report which is not yet published.

Air pollution

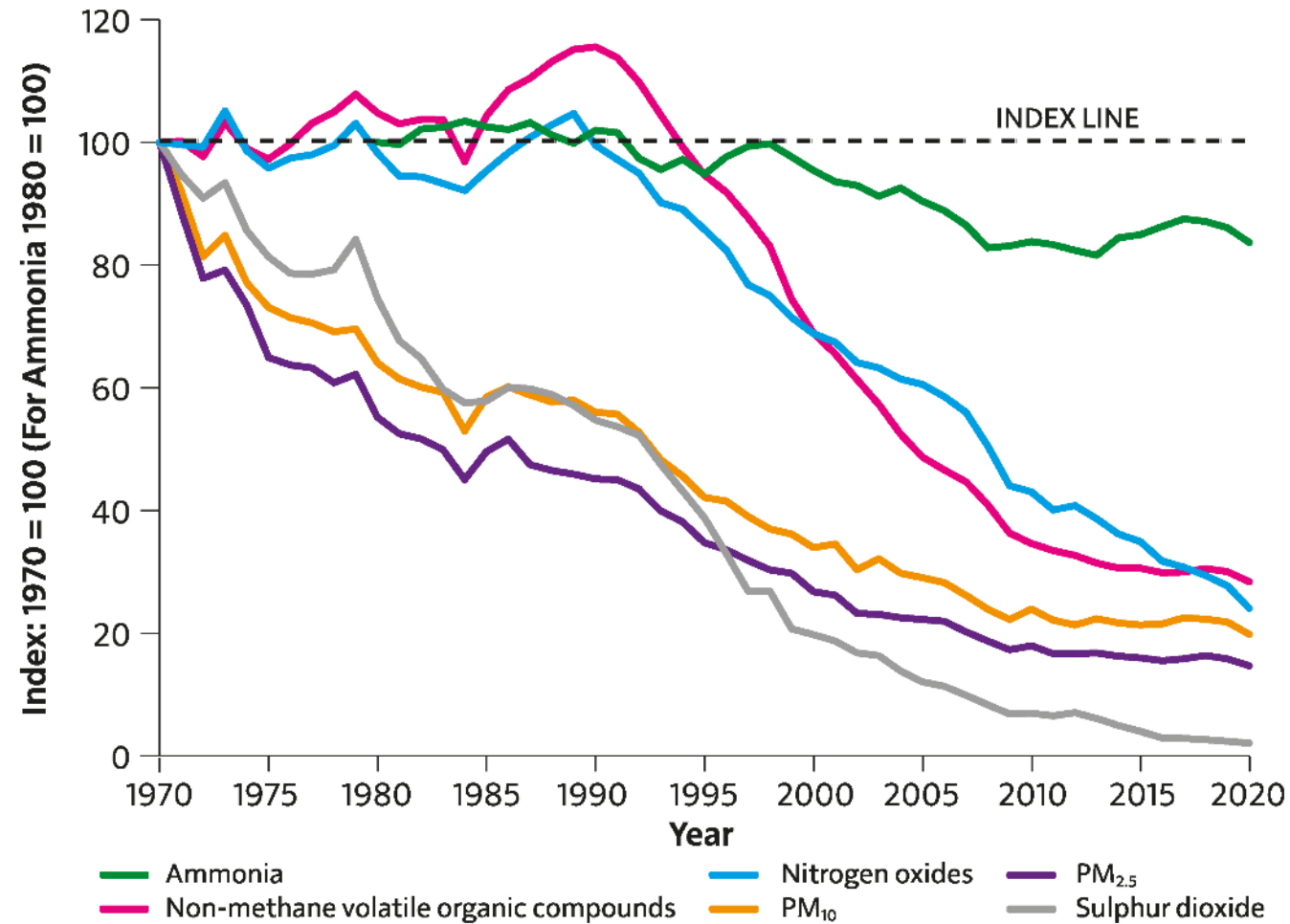


Christopher Whitty, Chief Medical Officer for England

Health effects of air pollution throughout life



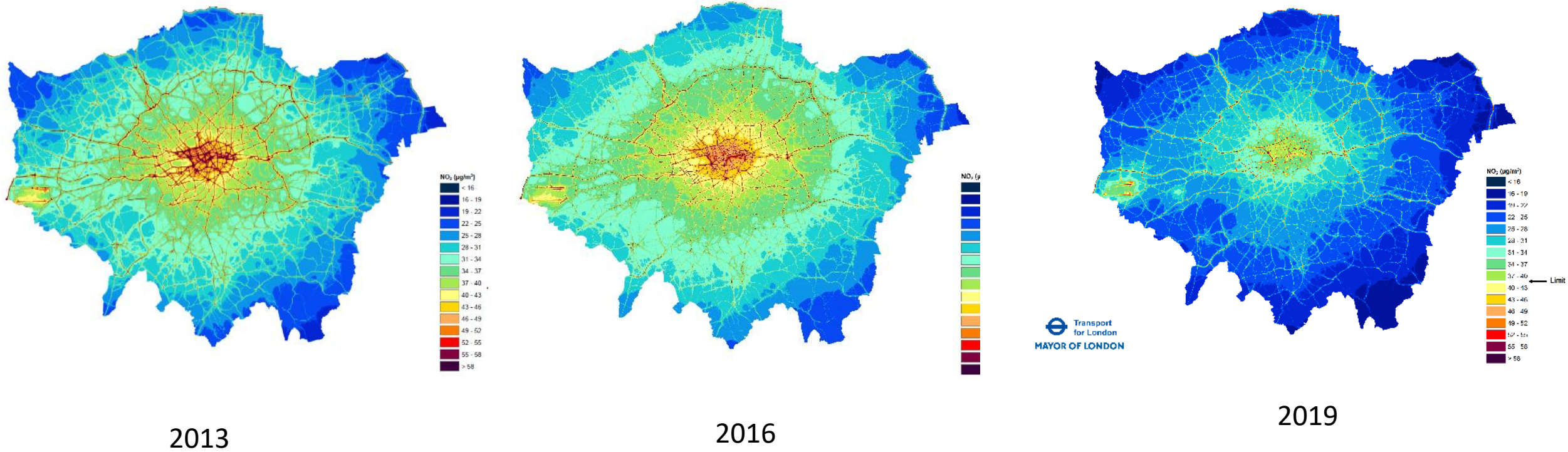
UK outdoor air pollution emissions 1970 to 2020



Trends in annual emissions from 1970 to 2020 expressed as a percentage change from the base year of 1970 (for ammonia the base year is 1980)

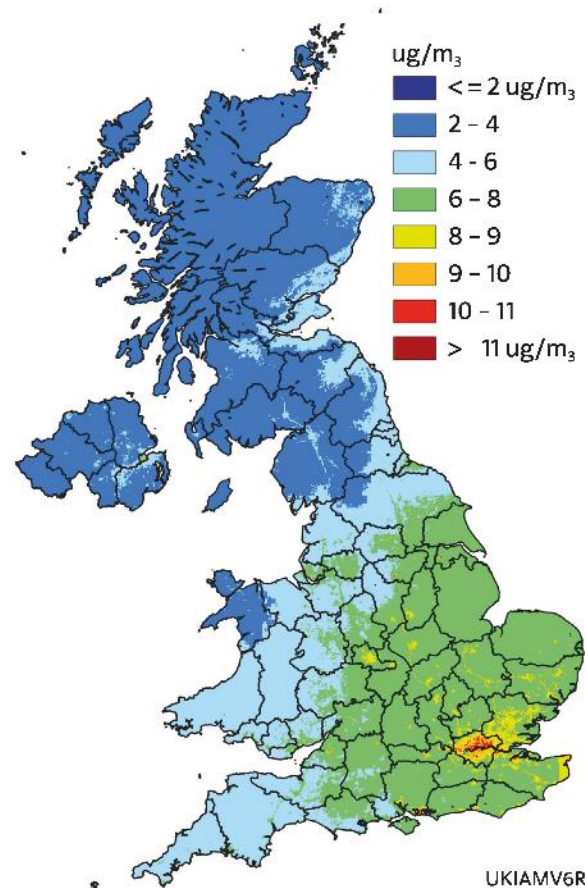
Greater London

Change in nitrogen dioxide (NO₂) concentrations 2013 to 2019



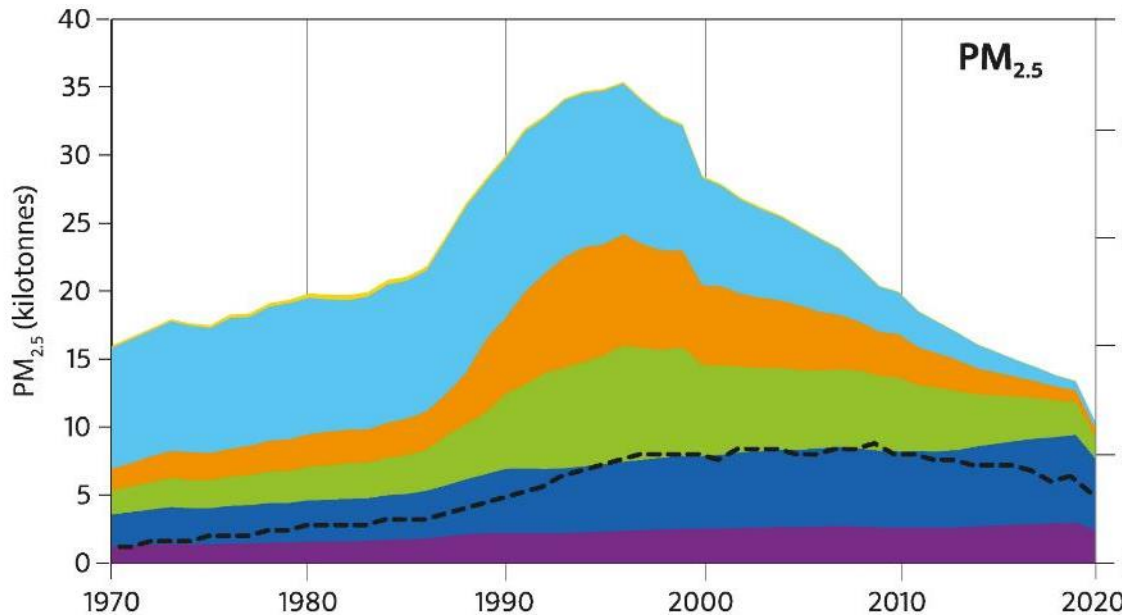
Future PM_{2.5} concentrations

Modelled annual average concentrations of PM_{2.5} in 2030 based on a 'baseline' (existing agreed government policies) emissions reduction scenario

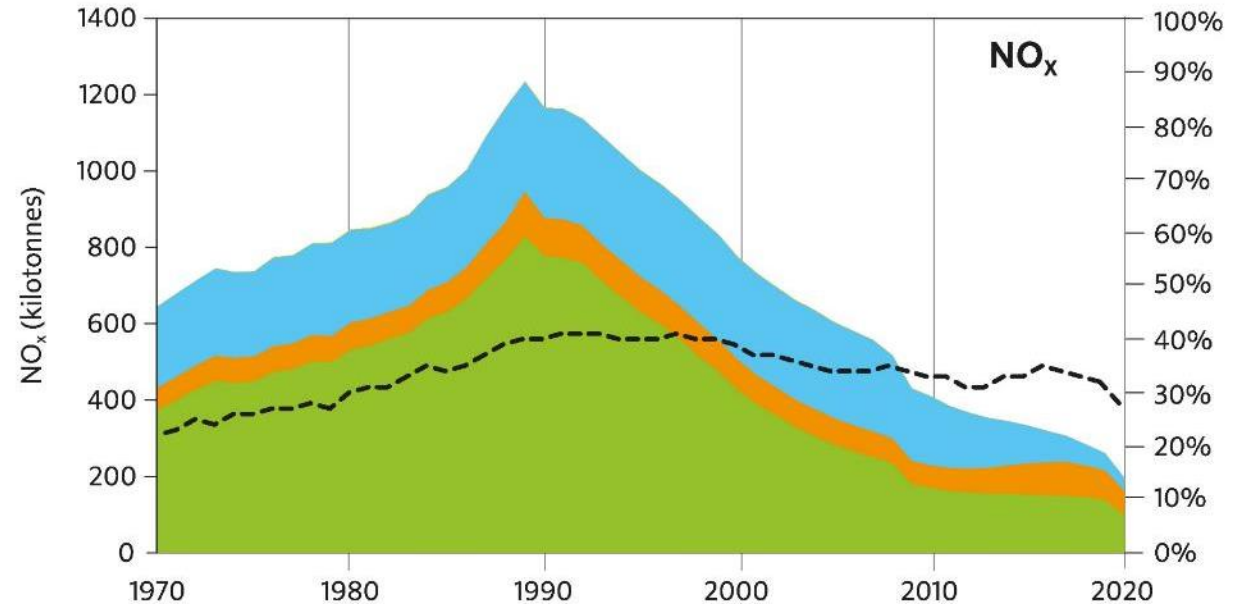


Road vehicles

PM_{2.5} and NO_x emissions from road vehicle sources since 1970



- Mopeds & Motorcycles Exhaust Emissions
- Heavy Goods Vehicles Exhaust Emissions
- Light Goods Vehicles Exhaust Emissions
- Passenger Car Exhaust Emissions



- Tyre and Brake Wear
- Road Abrasion
- Right-hand Axis: Road Transport as % of UK Total

The dashed black line indicates the contribution of road transport to the overall emissions on the right-hand axis

Vehicle air pollution emission sources.

Includes:

Tyres and road wear

Heavy vehicles

Busses

Specialised vehicles

Trains, especially in enclosed locations

Tube

Aviation and shipping, especially in port areas

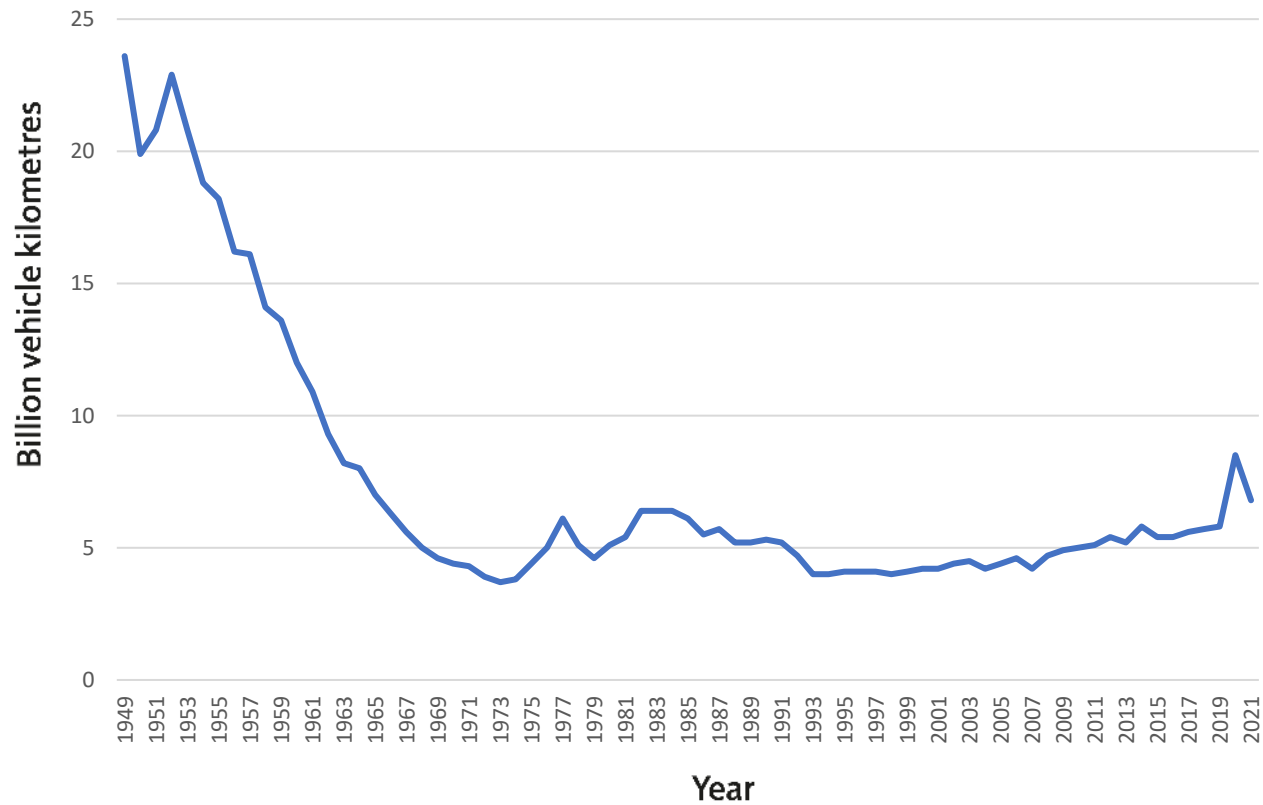


Dennis e-Collect refuse vehicle used by Islington Council

Source: Dennis Eagle UK

Urban planning and active travel.

Kilometres travelled by bicycle in Great Britain from 1949 to 2021



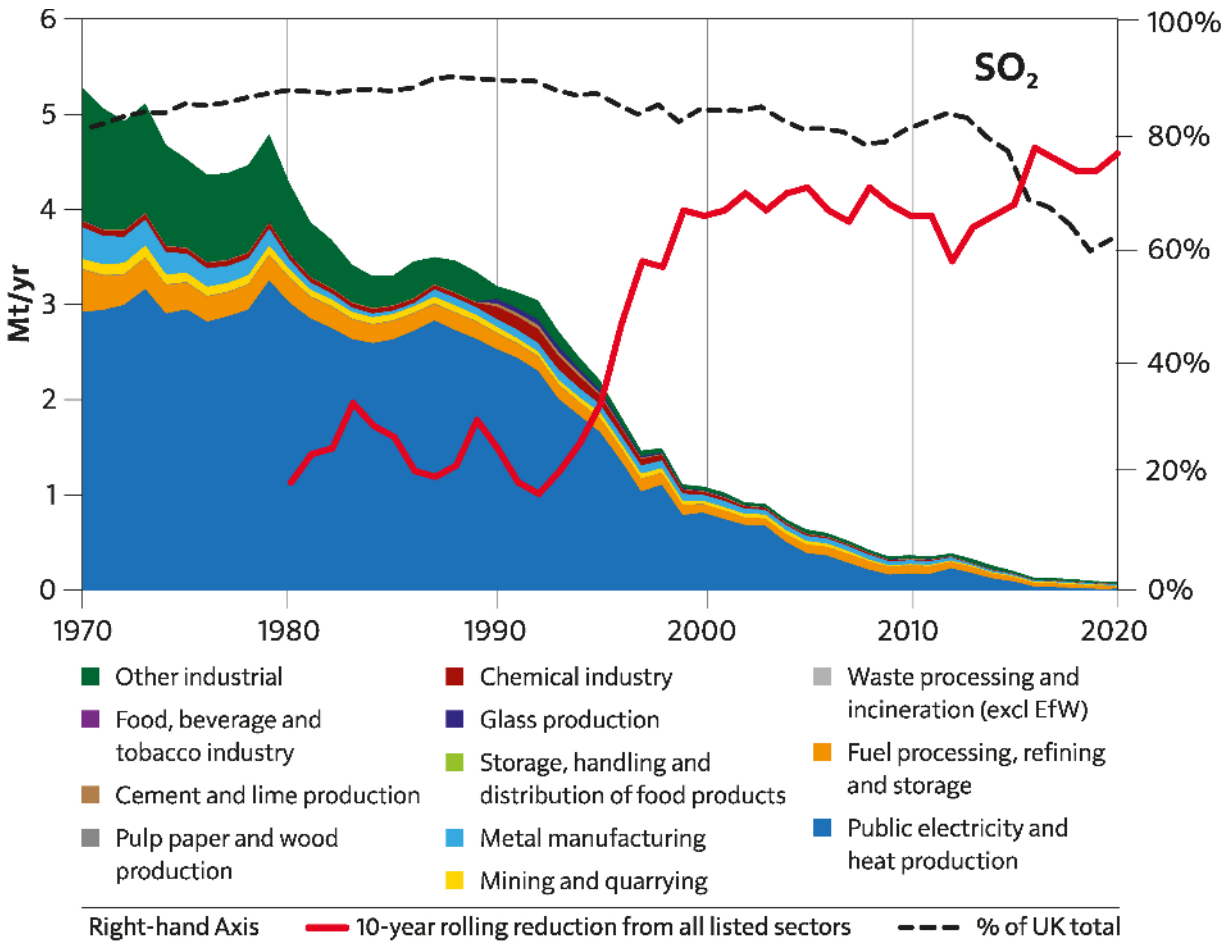
Source: Department for Transport



Pop up cycle lane

Industry

Total UK emissions of SO₂ from industrial sectors



Source: National Atmospheric Emissions Inventory

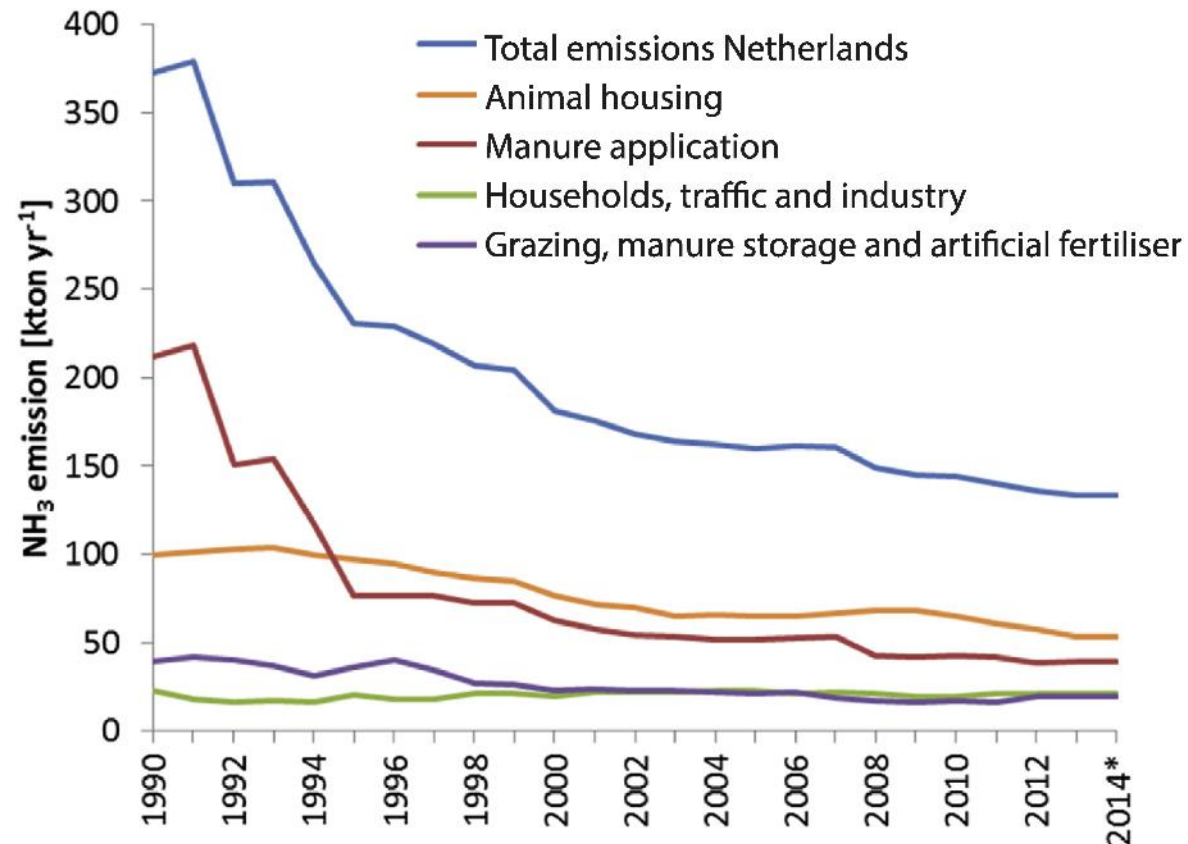


Hope Valley cement works

Source: Wesley Kristopher Photography

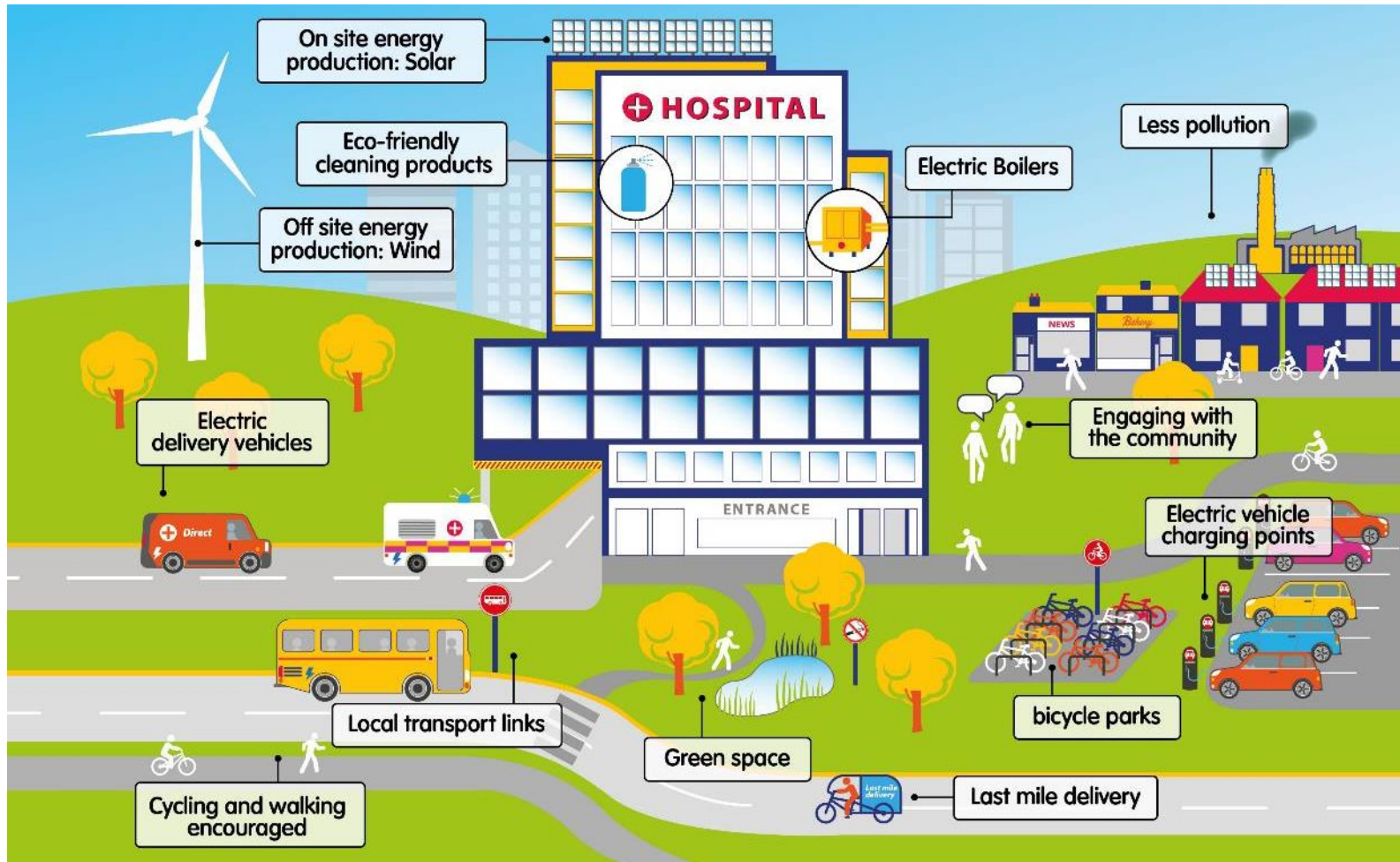
Agriculture- important also for cities because of 2ry PM2.5

Estimated contributions to the changes in NH₃ emissions from agriculture in the Netherlands, 1990 to 2014

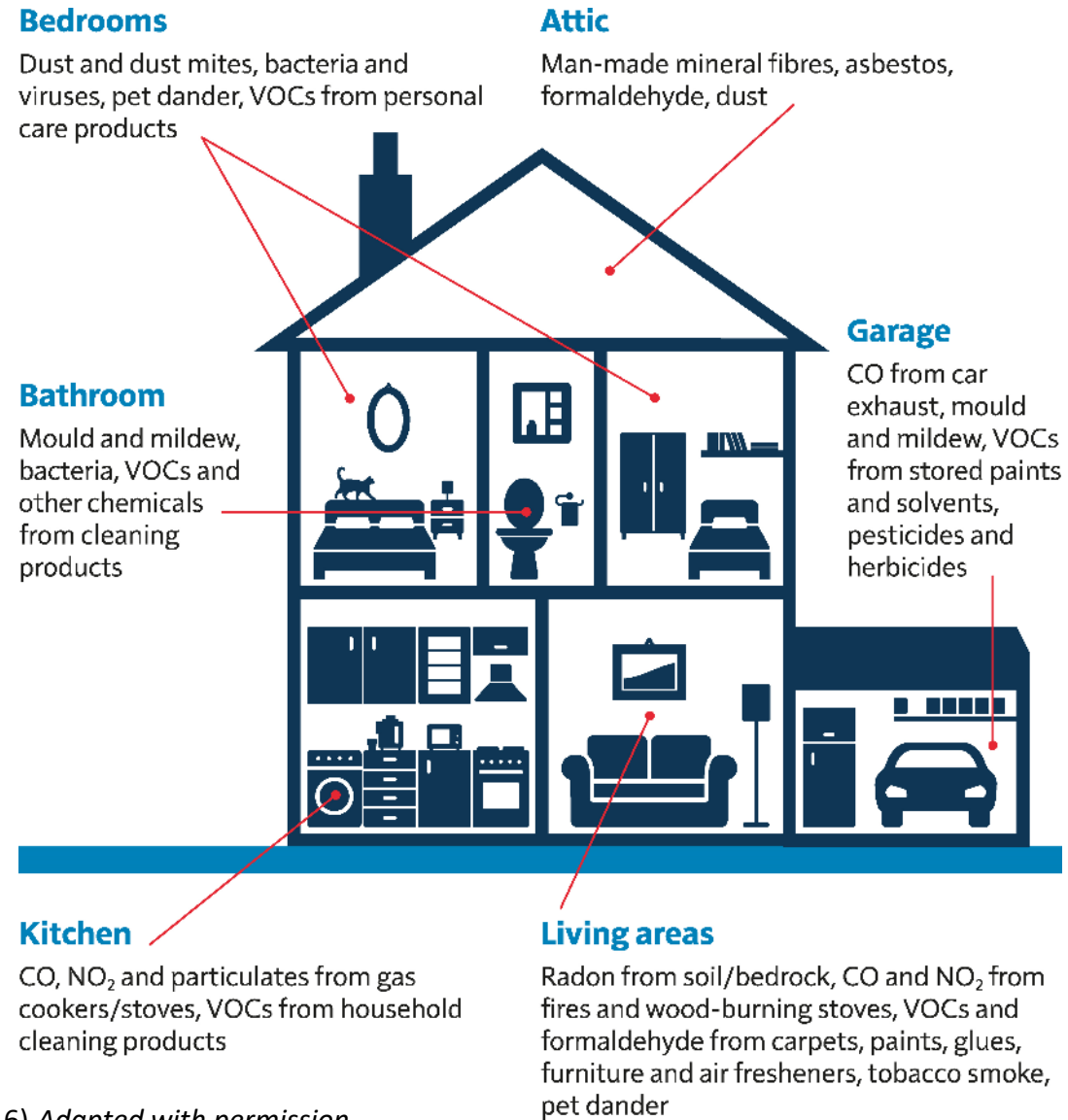


The NHS

Example - the Clean Air Hospital Framework vision for a Clean Air Hospital



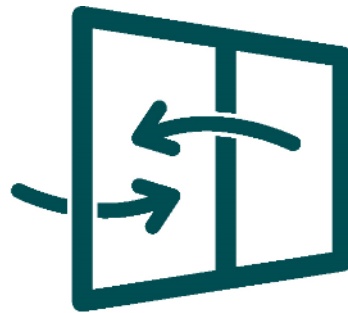
Indoor air quality



Indoor air quality solutions



Reduce sources



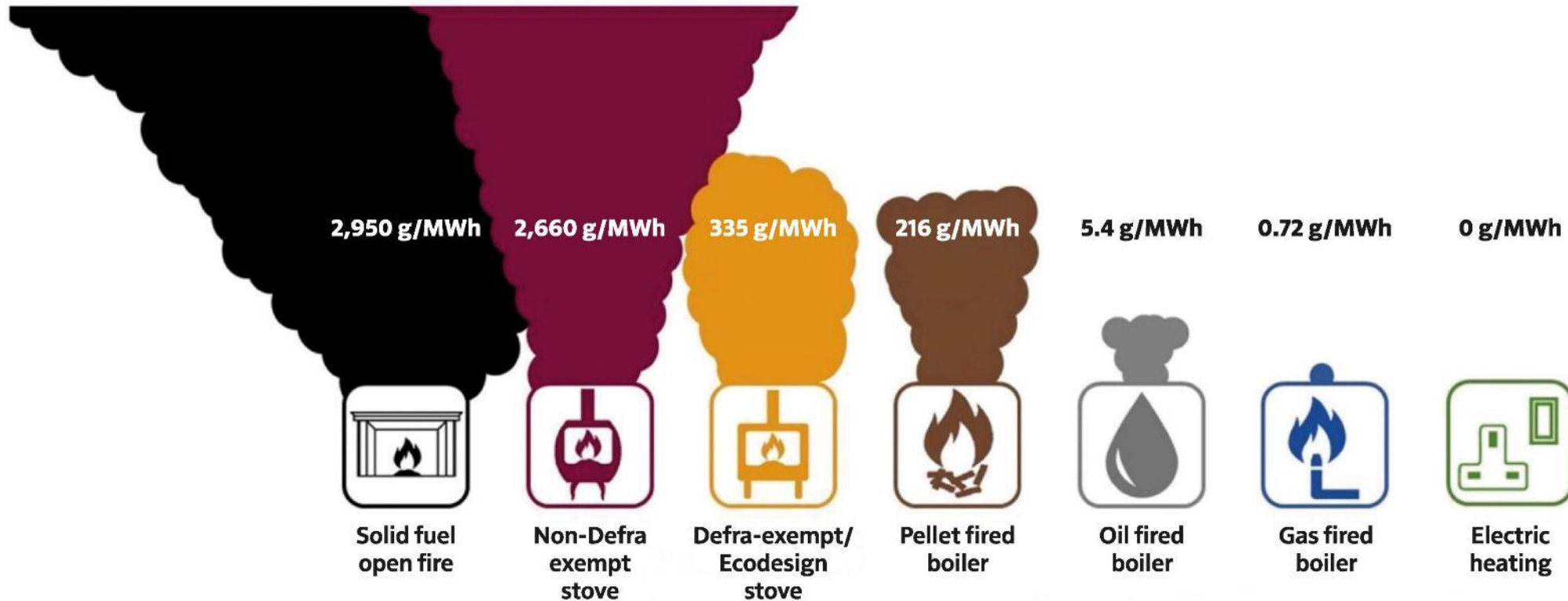
Manage pathways



Protect people

Domestic space heating

PM_{2.5} emissions from different domestic heating methods



Note: The air pollution emissions will also depend on the age of the appliance, how it is maintained and used and the fuel burned (for example, dry or wet wood). The following definitions were used: *Solid fuel open fire*: wood burned in an open fire. *Non-Defra-approved stove*: wood in a conventional stove. *Defra-approved/Ecodesign stove*: wood in an advanced/ecolabelled stove. *Pellet fired boiler*: wood in pellet stoves and boilers. *Oil fired boiler*: fuel oil in a medium (>50KWth <1MWth) boiler. *Gas fired boiler*: natural gas in a small (≤50kWth) boiler.

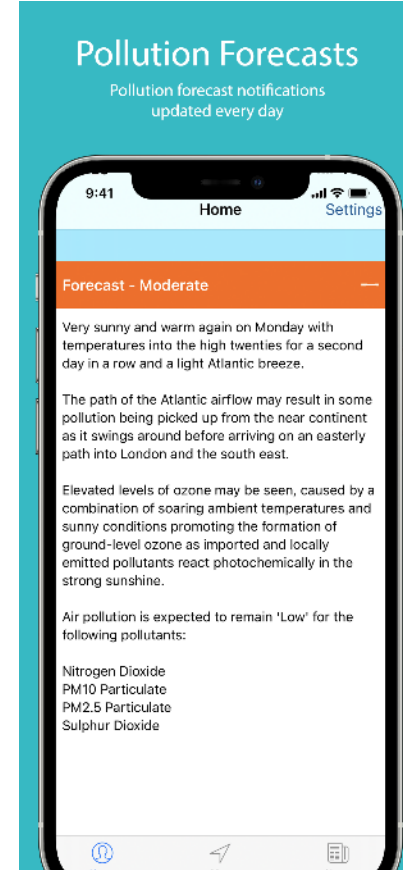
Source: Emission factors taken from EMEP 2019 Guidebook (1A4 small combustion tables). Adapted from the Clean Air Strategy with updated data

Patient and public information



Automatic Urban and Rural Monitoring Network

Source: Defra UK-Air



Example - CityAir smartphone air pollution information app

Source: Environmental Research Group, Imperial College London



Air pollution research and innovation

Multiple academic disciplines

Includes:

Understanding the problem, including indoors

Countermeasures and mitigations

Policy evaluation



Manchester Air Quality Supersite

Source: National Centre for Atmospheric Science



Assessing lung function of a young participant using spirometry in the CHILL study

Source: Children's Health in London & Luton (CHILL) study

Next steps

Report launch in early December 2022

Key points from the CMO's presentation

When you look forward to some of the improvements we are going to see, we're still left in a situation that London will have the highest air pollution in the country. This is a good reason why this meeting and London's strong commitment on air pollution is so essential.

Transport traffic has been one of the biggest driver of air pollution. There has been a substantial amount of process over time. This will continue as we move over to electric vehicles over the next few years. That will really eliminate tail pipe emissions.

Ammonia, the main pollutant from agriculture forms secondary particulate matter that can travel thousands of miles. Not a large but a significant part of the air pollution in the city of London and greater London area is contributed to by gluten from the agricultural sector. Shouldn't see this as someone else's problem.

The medical profession and scientists have a strong role to play both in informing people of risks and identifying who are most at risk by trying to talk through them ways of reducing their risk, but also monitoring systems allowing people to be aware of what their risk is in space and in time, which days are the worst days, which places are the worst places.

London has in particular huge research capacity. We need better to understand indoor spaces and need to concentrate on countermeasures and mitigations.



Ella's story – lived experience on air pollution

Rosamund Adoo-Kissi-Debrah

The Ella Roberta Foundation

Key points from Rosamund Adoo-Kissi-Debrah

I would like to start with the headline this morning, which brings us right up to date - black and Asian children with asthma makeup the highest number of hospital admissions. And my daughter ticks both those boxes because she was black and Asian.

It is coming up to almost 10 years now that Ella passed away, 12 years since she first became ill. How she presented herself was incredibly different from normal asthmatics. If you saw her have one of her hypoxic seizure, you would assume she had epilepsy. It was that severe. She lived in an area as we now know of high air pollution.

The coroner's first recommendation was one that the government needed to clean up the air - all throughout Ella's life there were illegal levels of air pollution all throughout Lewisham. Unless the air is clean, more children are going to continue to die. The second thing the coroner was very clear about is from councils about monitoring. The monitoring is woeful.

There are low levels of public awareness. This is where public health come into it. need to reach out to the general public at large, I sort of see it in a very similar way to the vaccine and how we tapped into and reached communities.

Also need greater education amongst people in health.



Making a positive impact in London

Dr Katie Hunter

Consultant in Public Health, Greater London Authority

Shirley Rodrigues

Deputy Mayor, Environment and Energy, Greater London Authority

Cllr Deirdre Costigan

Vice Chair of Transport and Environment Committee, London Councils

Key points from Shirley Rodrigues

Air pollution is still contributing to thousands of premature deaths every year so we must take bold action to protect Londoners Health.

The introduction of London's ultra low emission zone has helped reduced toxic roadside nitrogen dioxide pollution by around 44% in central London and 20% in inner London. The ULEZ expansion to outer London will mean five million more people will be able to breathe cleaner air.

We are also cleaning up our bus and taxi fleets. Have been working with local authorities and private sector to deliver more electric vehicle charging infrastructure.

Have been working on schools looking to understand what contributes to poor air quality. Have developed guidance and a London schools pollution helpdesk to help schools identify easy measures to reduce exposure to air pollution for children and staff. Have also been working with boroughs to deliver over 100 low traffic neighbourhoods.

Aiming for 80% of transport in London made by foot, bike or public transport.

Breathe London has been established to help local people manage their exposure to high levels of air pollution.

Key points from Cllr Deirdre Costigan

The Climate Action group for London Councils works with all councils in London and is cross party.

Started to consult on the Ealing air quality strategy which is looking at how to get local people to understand the issues around air quality. Strategy has been written in a way so that residents can connect with it

Working with housing authorities and looking into those indoor air quality issues across our council housing.

Working across London on a low carbon transport programme through London Councils. This is led by Kingston and Westminster

There is going to be massive increase in buses across outer London which is something we can really celebrate and that's really needed and will help us move people out of those polluting vehicles. Lots of work to increase active travel by looking at junction treatments to make it easier for pedestrians and cyclists.

Key thing is that we could do with more money and more power to tackle air pollution.



Reflections from the panel



Sir Stephen Holgate CBE

Special Advisor to the Royal College of Physicians on Air Quality



Dr Dagmar Zeuner

Vice Chair, ADPH London and Director of Public Health London Borough of Merton



Professor Sue Atkinson CBE

Chair of Faculty of Public Health Climate and Health Committee



Dr Jo Sauvage

NHS Clinical Director, London Sustainability Network NHSE and Co-Chair of the London Air Quality and Health Delivery Group



Panel member reflections

Chaired by Sir Stephen Holgate: Thank you everybody for what is a really tremendous coming together across the interdisciplinary divides to try and get air pollution higher up the agenda. I had pleasure and privilege in providing some evidence for Ella and her inquest, which was quite a moving experience. I'm delighted that Rosamund is championing the cause, even though now we're ten years after Ella's untimely death. London is a marvellous laboratory.

Dr Dagmar Zeuner



- Air pollution is a health equity issue, ULEZ is a health policy.
- We can add value to public awareness raising through mobilising the public and having community dialogue as well as more data and evidence.
- Have a duty to protect kids, through statutory regulation and enabling individuals to take action. We need to empower our children. We listen first, we engage and then make them our place shaper – shapers of policy.

Prof. Sue Atkinson



- Any policies that are about reducing air pollution, both reduce the burden of disease, but also contribute to the mitigation of climate change.
- Need to educate the public and health professions. Delighted by the ideas of empowering people, children and young people because, of course, they're also the ones who, in the longer term, will suffer the most from the climate emergency.
- It's a public health issue and an issue that needs to be addressed by national government, local government and not just by individuals having the onus to take action themselves.

Dr Jo Sauvage



- We have the most remarkably powerful collaboration within the London region and I represent NHS partners in that space and bringing the NHS to bear in our responsibilities to tackle some of the actions highlighted in this conversation.
- our responsibility as health systems is to really put air quality as a very important element in our endeavour to tackle inequalities within our communities.
- We sit in a very privileged position now to be able to use data in a more interesting, innovative and intelligent way. Through linkages of the data around air quality, how we can begin to be more predictive around how that is impacting people's health.



Questions and comments from audience

Questions from the audience to speakers

What leadership and action can be taken around tackling wood burning and solid fuel burning in homes and making this a priority for the future?

Shirley Rodrigues:

- We're working with colleagues at the impact on urban health, on a strategy around public behaviour and getting people to understand the negative impacts that they're facing when they burn for aesthetic reasons.
- Awareness raising campaign will be launching via impact on urban health, aiming to be released later this winter.
- Lessons from this are being fed into a national campaign that DEFRA are running. This is a national issue.

Modelling data shows how commercial cooking is now a major source and represents a serious risk for public health and for people working kitchens. How can we raise awareness, identify solutions and enable local action to support businesses to reduce this source of air pollution?

Cllr. Deirdre Costigan:

- Need to educate people and getting them to make the decisions for themselves.
- In general, we need better legislation so that we can act locally and we're not getting that now I'm afraid.
- We really need more of a push for more powers for local authorities to be able to take action.
- Mums for lungs do really great work

What lessons can be learned from the tobacco industry, sought to undermine public health interventions and how the oil industry is trying to do the same and how do we address air quality and climate change at the same time?

Sir Stephen Holgate:

- I think one of the things that's needs addressing is how we get these two activities to join up better because they've had an independent origins and they need to be brought together as Sue has illustrated and they haven't yet been adequately brought together unfortunately. So, I think we as an air pollution, health related community are keen to learn from the climate change work, how we can best get our messaging across. I think messaging must be positive and you've made that point all along, Kevin, that we can't always make this a punishing, negative story. It must be positive.

Prof. Sue Atkinson:

- Can learn a lot from tobacco industry. There are a lot of parallels between what they were doing on smoking, what they have done on smoking, what they continue to do on smoking and what is happening in the fossil fuel industry, particularly with green washing and as public health professionals. We need to be very aware of that.
- At the recent COP 27, There were many more delegates, observers from fossil fuel and related consultancies than there were from health, and I think that's telling.
- WHO has produced some guidelines addressing those issues and learning from the tobacco industry, the faculty and public Health website also has a lot of resources on what we call the Co benefits.
- Public health people need to understand how they can bring both issues together into their day-to-day work. Similar is true on transport, food and waste. We can improve people's health and the planet's health at the same time. I think that is a positive message. We need to stop saying how dreadful it all is. We need to not panic people. We need to give people solutions. Public health people need to be helping to give people the solutions to both address air pollution and climate change.

Renewed vigour to collectively clean up London's toxic air

Sadiq Khan

Mayor of London

Session close

Professor Kevin Fenton

Regional Director London, Office of Health Improvement and Disparities (OHID)

Please complete our evaluation form –

<https://forms.office.com/r/k9upp62YqJ>



Session close

Professor Kevin Fenton's 5 key messages from this forum on air quality:



Using data & evidence to go faster now



Action must be cross-system



Understand and promote co-benefits for health



Empowering the next generation



Using our voice as health leaders

