

Healthy Air Cymru and the journey to the Environment Bill

Joseph Carter



*South Wales Argus, A472, Crumlin, Caerphilly

Who are we

- Healthy Air Cymru (HAC) brings together organisations that share a common vision for a cleaner and greener Wales. We want our nation to be a better place, where people have the right to breathe clean air and do not have to suffer from the harmful effects of air pollution.
- We raise awareness of the impact of poor air quality on our everyday lives. We aim to shape the conversation in Wales about how we tackle these problems and influence policy decisions; to make the case for practical local solutions to reduce air pollution.



ClientEarth®

DiABETES UK
DEALL DIABETES. BRWYDRO DIABETES.
KNOW DIABETES. FIGHT DIABETES.
CYMRU


cyfeillion
y ddaear
cymru
friends of
the earth
cymru


Royal College
of Physicians



ni yw
beicio
O blaidd beicwyr
UK


RC
PSYCH
ROYAL COLLEGE OF
PSYCHIATRISTS


Swansea University
Prifysgol Abertawe



YMUNWCH Â'R MUDIAD
sustrans
JOIN THE MOVEMENT



**ASTHMA+
LUNG UK**
CYMRU

**Healthy Air
Awyr Iach
Cymru**

Chartered Institute of
Environmental Health 

Healthy Air Cymru original policy asks

- A cross-government clean air strategy including:
 - Independent monitoring & assessment network
 - National Advisory Board
 - Clean Air Zones including charging options in main cities
 - Annual Clean Air Plan for every local authority (in conjunction with PSBs) with control measures
 - Strategic Development Plans and regional transport authorities must consider air quality
- Clean Air Fund to finance local government action
- Increased measurement and reporting of air pollution near schools
- Improve pollution monitoring, awareness campaigns and public health alerts

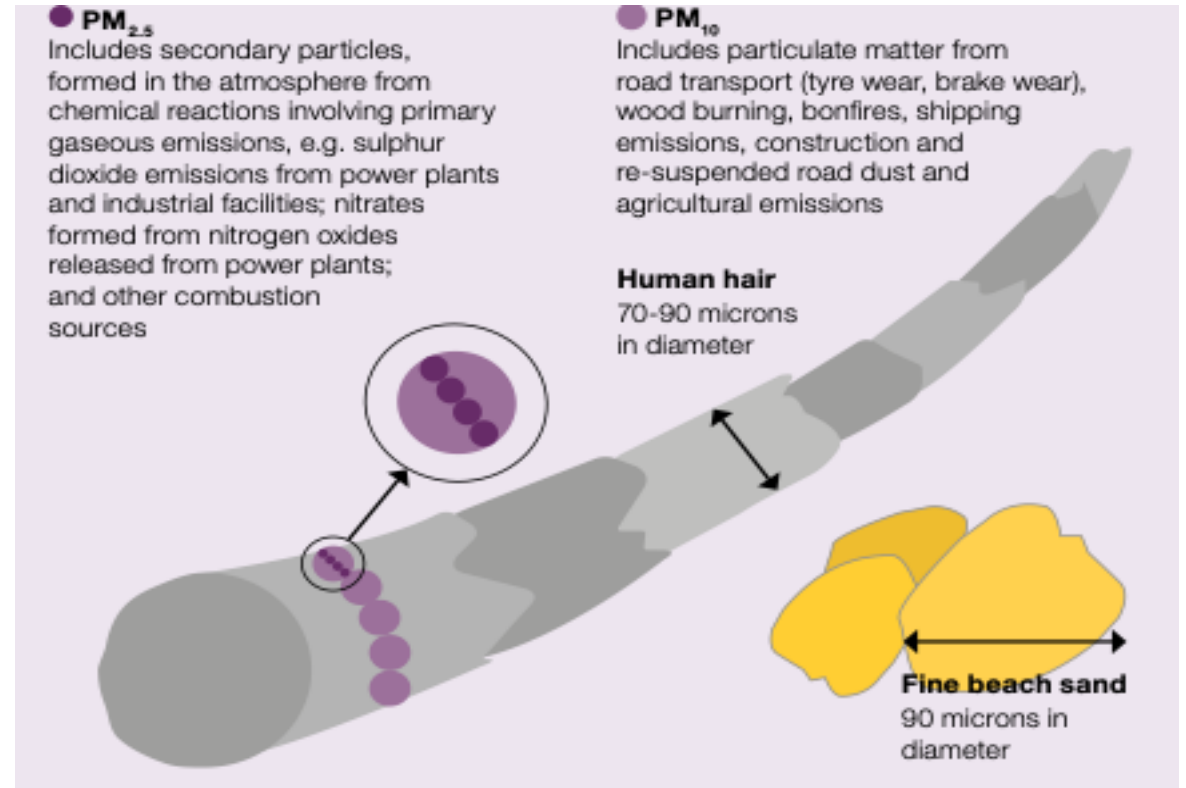
Healthy Air Cymru original policy asks

A Clean Air Act for Wales including:

- Enshrine in law WHO air quality guidelines;
- Mandate Welsh Government to produce a statutory air quality strategy every 5 years;
- Provide a statutory duty on local authorities to appropriately monitor and assess air pollution, and take action against it;
- Introduce a 'right to breathe' whereby local authorities are obliged to inform vulnerable groups when certain levels are breached.

What we are concerned about

- Particulate matter (PM₁₀ and PM_{2.5})
- Nitrogen dioxide (NO₂)
- Sulphur dioxide (SO₂)
- Ozone (O₃)



What are the sources of air pollution and where are people exposed?

Road vehicles are the main pollution source that people are exposed to in the most populated urban environments and the pollutants they cause and emit have the greatest health impacts. Combustion for heating, farming activities and certain industrial processes also contribute to air pollutant emissions, but these tend to be more dilute contributing to background

levels of air pollution. Small changes in distance from the source, street layouts and physical barriers can make a big difference to exposure because air pollution levels can decrease over very short distances depending on the sources and the local situation.

Construction sites and non-road mobile machinery (NRMM) are significant and often localised sources of PM and NO₂.

Aircraft contribute to NO₂ emissions, particularly at take-off.

Farming creates primary PM and emissions from fertilizer can create secondary PM.

Bonfires and fireworks create significant PM.

Industrial processes, particularly combustion processes, create primary PM and NO₂. Additional gases emitted from industry can also contribute to secondary PM.

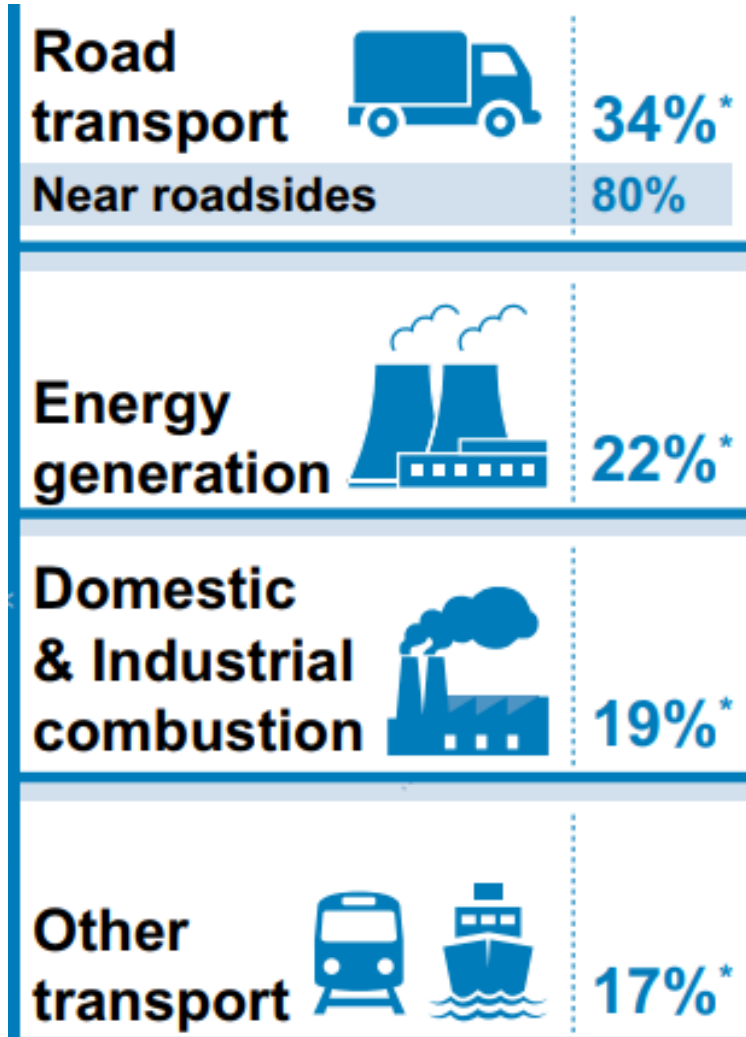
Road transport is a significant source of primary PM and NO₂. PM is emitted both from exhausts as well as from brake and tyre wear as well as road surface abrasion. Other gases emitted from exhausts can add to secondary PM. Rail can contribute to PM and NO₂.

Home and commercial heating contributes to NO₂. Solid fuel burning in homes creates significant PM.

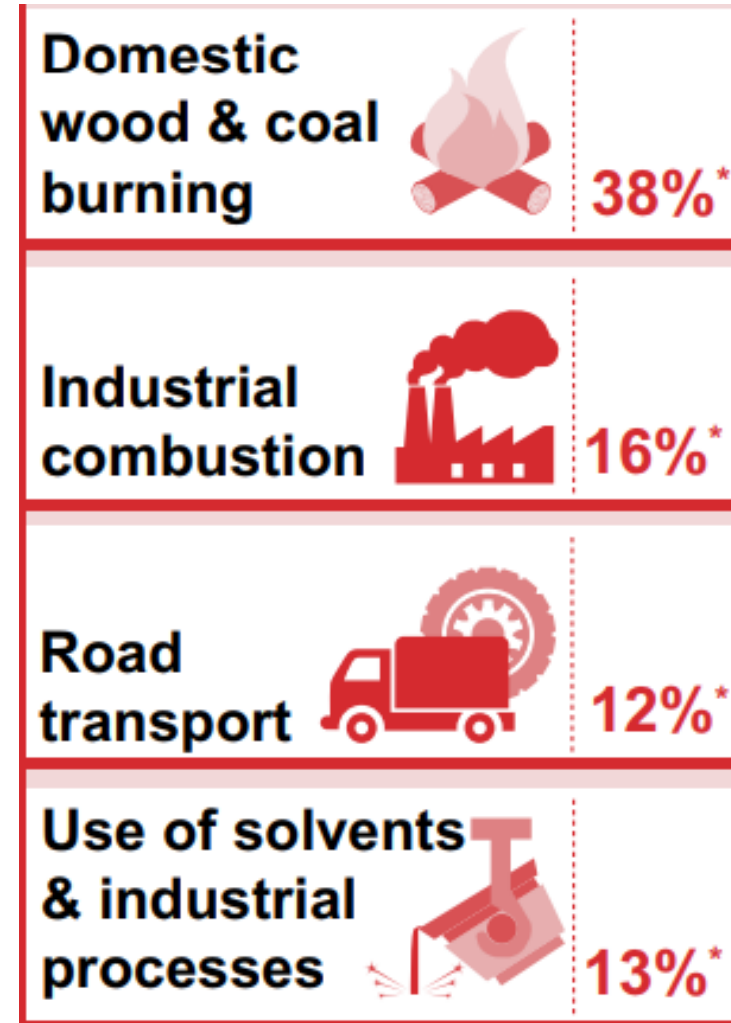
Shipping creates PM and NO₂.



Nitrogen dioxide NO₂ - Sources



Particulate matter - PM₁₀, PM_{2.5}



Health Impacts



Increased rates of
Childhood Asthma



Decreased lung
development &
function



Exacerbation of
existing health
conditions



Heart disease



Dementia



Mental health



Obesity



Increased risk of
cancer



Mortality Impact

- 1400-2000 deaths per year in Wales can be attributed to air pollution
- People from most deprived communities are impacted the most

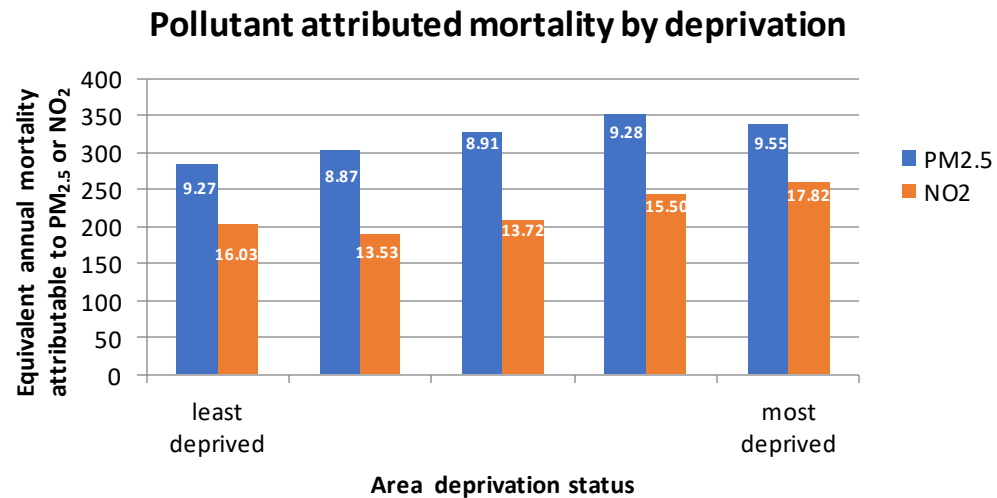
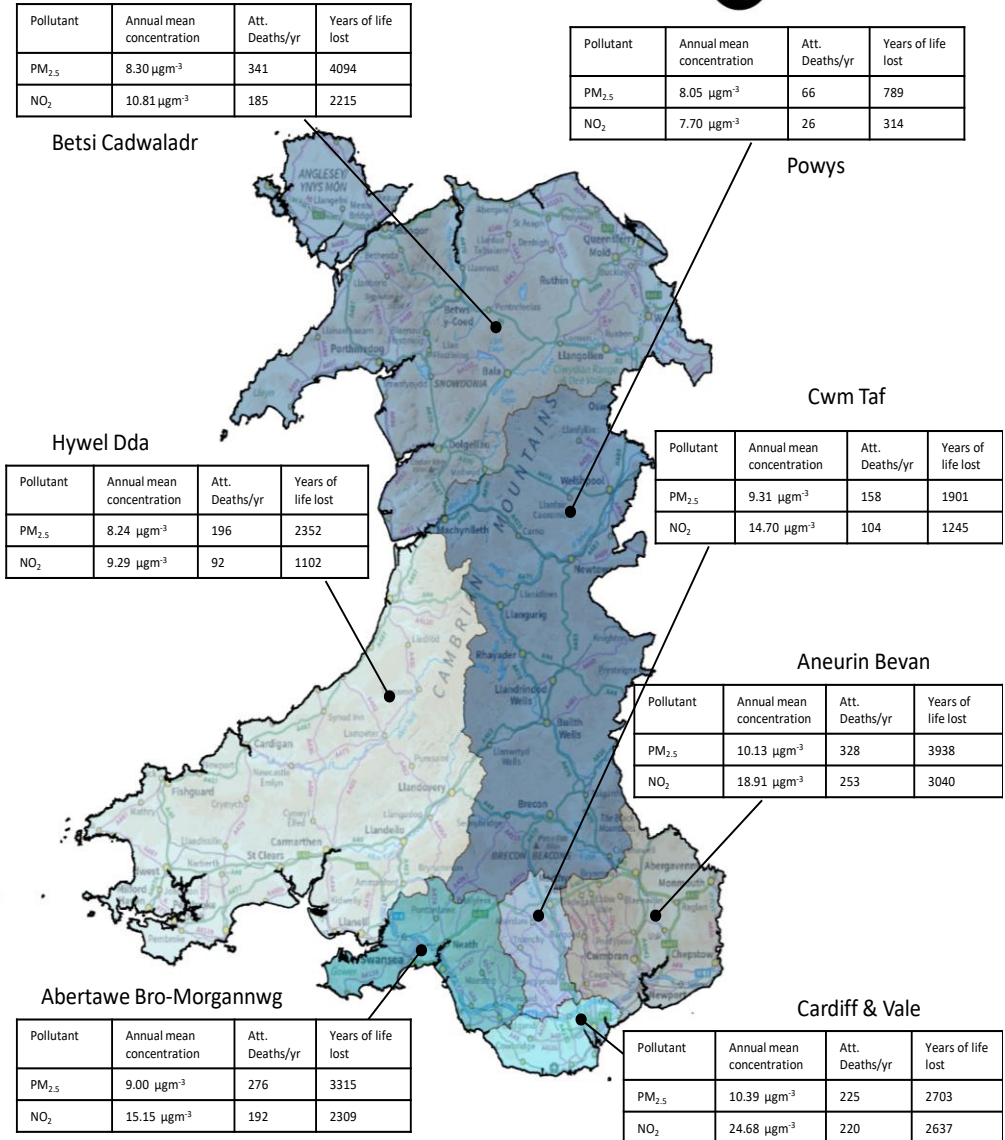


Figure 1
Pollutant attribute mortality across Health Boards in Wales



Cost impact

PHW estimates that the cost of Air Pollution to Wales is £1 Billion per year.

'Making the difference Report' estimates that promoting physical activity can save the NHS nearly a Billion pounds over 20 years.

The 2021 White Paper highlights the high return of investment; with every £1 invested in improving air quality, £10 is returned.





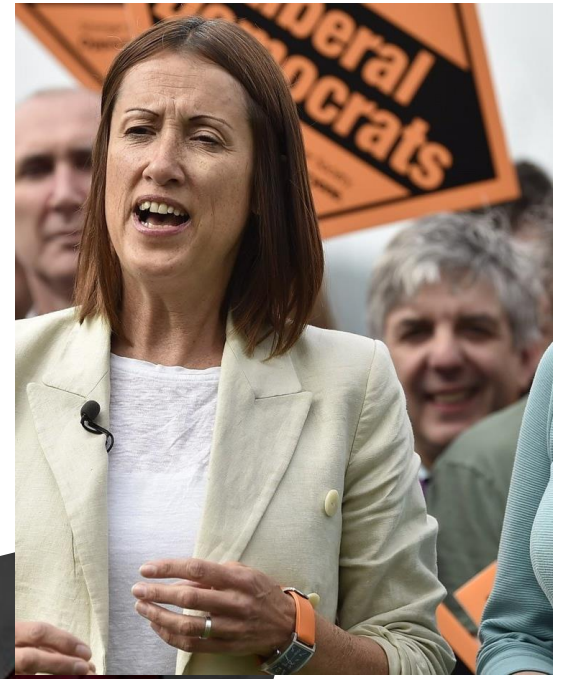
The Clean Air Plan for Wales

Healthy Air, Healthy Wales



The 2020 Clean Air Plan

- Investment in active travel infrastructure
- Measures to support a reduction in personal vehicle use such as road user charging, Clean Air Zones and/or Low Emission Zones.
- reviewing the powers local authorities have to tackle emissions from domestic burning.
- increasing air quality monitoring through the development of a new Air Pollution Monitoring Network.
- New statutory guidance to help protect workforces from exposure to air pollution.
- proposals for a new Clean Air Act for Wales to enhance existing legislation and introduce new powers to further tackle air pollution.





- Follow this link to read our Manifesto in English/Welsh:

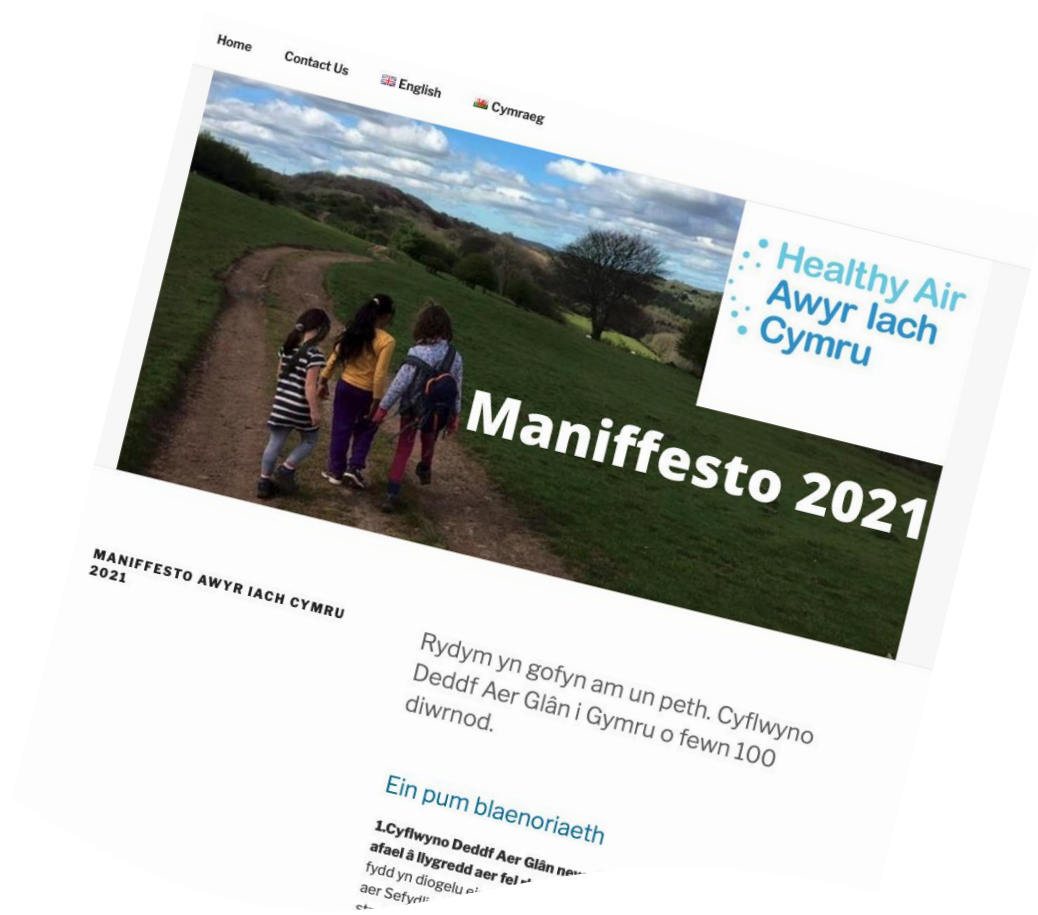
<http://healthyair.cymru/>

AIR CYMRU MANIFESTO

We have one ask. Deliver a Clean Air Act within 100 days.

Our 5 priorities

1. Introduce a new Clean Air Act for Wales which commits to tackling air pollution as a public health imperative. A new Act that will protect our 'right to breathe' by enshrining World Health Organization (WHO) air quality guidelines with the mandatory



Labour  Llafur **Manifesto**



Thank you **Welsh Labour** for listening to our calls and pledging to deliver a Clean Air Act in their manifesto!

"We will set the highest international standards of air quality into law in a Clean Air Act for Wales."

Chapter 5

Pledges Taken:



 **Manifesto**



Thank you **Welsh Conservatives** for supporting our calls and including enacting a Clean Air Act in their manifesto!

"Introduce a Clean Air Act to tackle pollution and reduce the incidence of respiratory diseases"

Page 30

Pledges Taken:



 Plaid Cymru | Party of Wales **Manifesto**



Thank you **Plaid Cymru** for listening to our calls and pledging to make introducing a Clean Air Act a priority in their manifesto!

"As a priority, in our first year in Government we will introduce a Clean Air Act for Wales..."

Page 37

Pledges Taken:



Welsh Liberal Democrats  **Manifesto**
Democratiaid Rhyddfrydol Cymru



Thank you **Welsh Liberal Democrats** for listening to our calls and pledging to introduce a Clean Air Act in their manifesto!

"We will pass a Clean Air Act in the first 100 days to tackle dirty air and the poor health outcomes it causes."

Page 9

Pledges Taken:



ACCOMPANYING DOCUMENTS

Explanatory Notes and an Explanatory Memorandum are printed separately.

**Environment (Air Quality and Soundscapes)
(Wales) Bill**
[AS INTRODUCED]

CONTENTS

PART 1

AIR QUALITY

CHAPTER 1

NATIONAL TARGETS

- 1 Air quality targets: general
- 2 Air quality targets: particulate matter
- 3 Target-setting process
- 4 Effect of targets
- 5 Reporting on targets
- 6 Review of targets
- 7 Monitoring progress towards meeting targets

Environment (Air Quality and Soundscape) Bill

- **New air quality targets** – Ministers will get powers to set new air quality targets helping us to reduce air pollution and have the right to breathe clean air.
- Section 1 gives Ministers wide scope to set targets on any pollutant at any time in the future through regulations, whilst section 2 gives a specific requirement to set target(s) on PM2.5.
- WHO is not mentioned on the face of the Bill.



Environment (Air Quality and Soundscape) Bill

- **Promoting awareness** – Ministers will have a duty to promote awareness of the health and environmental impact of air pollution and the steps that can be taken to reduce it.
- Cross-departmental duty with a budget of £500k for all aspects of behavioural change.
- We would support this being widened to include a duty to promote active travel.



Environment (Air Quality and Soundscape) Bill

- **National Air Quality strategy** – Ministers will need to develop a new 5 year air quality strategy. They currently have a Clean Air Plan, but making it statutory strategy defined in law will strengthen it.
- This is the cross-departmental strategy that Healthy Air Cymru has called for since 2017.
- The strategy and Welsh Government actions to implement it will be scrutinised by the Senedd.
- Healthy Air Cymru are concerned about the way this section amends the old Environment Act 1995 rather than is a stand alone new clause.

The Clean Air Plan for Wales

Healthy Air, Healthy Wales



Environment (Air Quality and Soundscape) Bill

- **Local air pollution** – The Bill will change the system that local councils use to monitor air pollution and take action to reduce it. At the moment councils can declare air quality management areas where there are pollution hotspots, but then take little action to address it.
- Does this give Ministers the powers to overhaul the legal framework about monitoring and unify it?
- Is £1 million a year budget enough?



The background of the slide is a photograph of a residential building with a dark tiled roof and several brick chimneys. A thick plume of white smoke is rising from one of the chimneys, filling the upper right portion of the frame. The sky is a pale, overcast grey. In the top left corner, there is a short, horizontal orange line.


Environment (Air Quality and Soundscape) Bill

- **Smoke control** - The Bill will move smoke control offences from criminal to civil offences, allowing councils to issue fines.
- It is hoped that this will improve enforcement and better awareness that burning wood or coal is bad for air pollution and dangerous for people with pre-existing health conditions.
- We want to see better fuel, better appliances, better information and moving away from domestic burning – does the Bill do that?
- A smoke control zone for all of Wales?
- Clean Air Act 1995 or the Environment (Air Quality and Soundscape Bill)?
- No new budget to enforce this

Domestic Burning

- Since January 2022 all new wood burning stoves have to meet new EcoDesign standards.
- European Environment Bureau report (2021) showed that Euro-certified 'Eco-stoves' produce 750 times more PM2.5 per unit of energy produced than a modern HGV
- Burning just 1 kg of wood will pollute 500,000 m³ of completely clean air up to 10 µg/m³





Environment (Air Quality and Soundscape) Bill

- **Road charging** – Ministers already have the power to introduce Clean Air Zones in cities, but the Bill will give them powers to introduce charged on motorways or other main roads linking towns and cities if it will tackle air pollution.
- ULEZ – 50% reduction of NO₂.
- ULEZ - Pollution has decrease five times faster than elsewhere.
- ULEZ - On million hospitalisations estimated to be averted by 2050.
- However, the M4 is not London.

Environment (Air Quality and Soundscape) Bill

An idling engine
can produce
this much pollution
in one minute*.

- **Anti-idling measures** – the Bill will lead to higher fines for vehicles idling and will be used particularly around schools and medical centres.
- An idling car can fill 150 balloons every minute with harmful chemicals, including cyanide, NOx and PM2.5

Environment (Air Quality and Soundscape) Bill

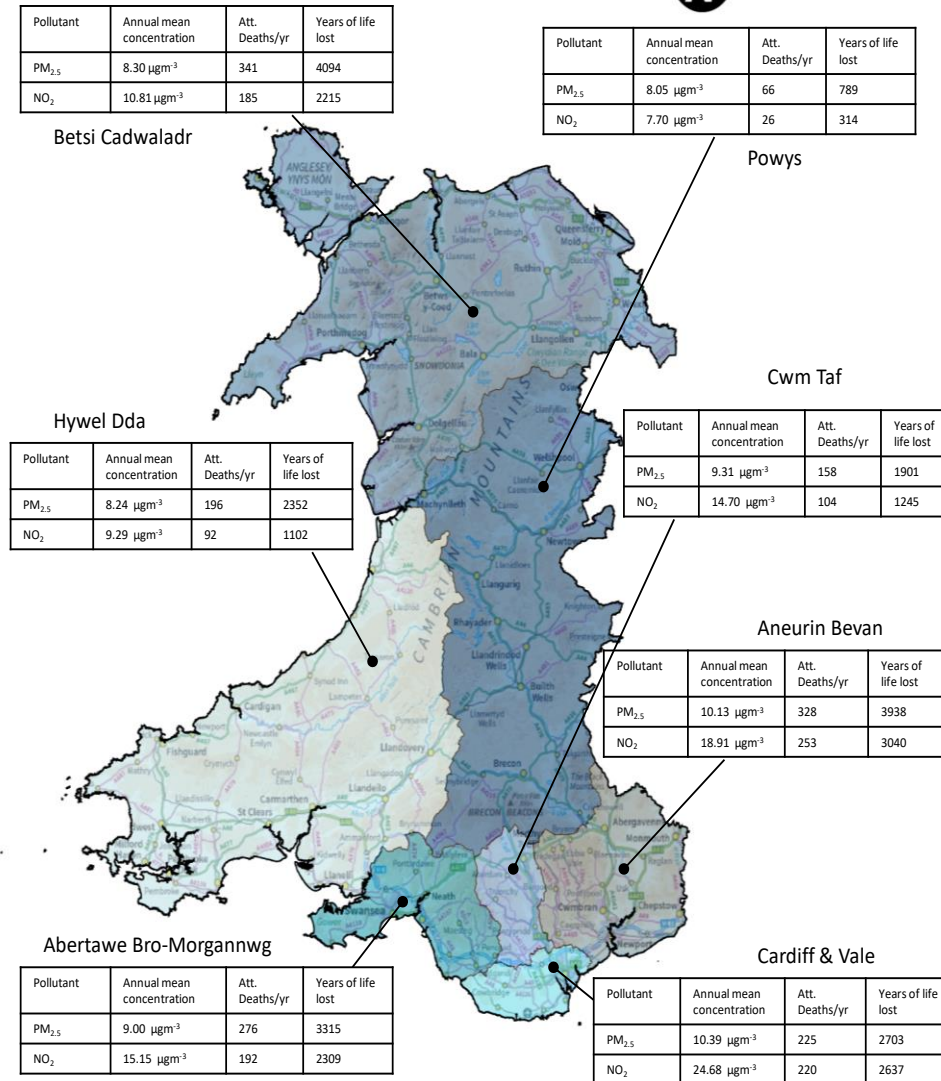
- **Soundscapes** - sections 22-24 relate to the new area of soundscape that led to the Bill being renamed.
- Ministers to publish a soundscape strategy.
- A positive addition that will tackle a form of pollution that not only impacts on the ears but on mental health, learning, the cardiovascular system, and can impact on dementia and cognitive function.



Do we breach now?

Annual Mean Concentration	NO2	PM2.5
Aneurin Bevan	18.91 μgm^{-3}	10.13 μgm^{-3}
Betsi Cadwaladr	10.81 μgm^{-3}	8.30 μgm^{-3}
Cardiff & Vale	24.68 μgm^{-3}	10.39 μgm^{-3}
Cwm Taf	14.70 μgm^{-3}	9.31 μgm^{-3}
Hywel Dda	9.29 μgm^{-3}	8.24 μgm^{-3}
Powys	7.70 μgm^{-3}	8.05 μgm^{-3}
ABM	15.15 μgm^{-3}	9 μgm^{-3}

Figure 1
Pollutant attribute mortality across Health Boards in Wales



What do these new guidelines mean for Wales?

All data

Care homes

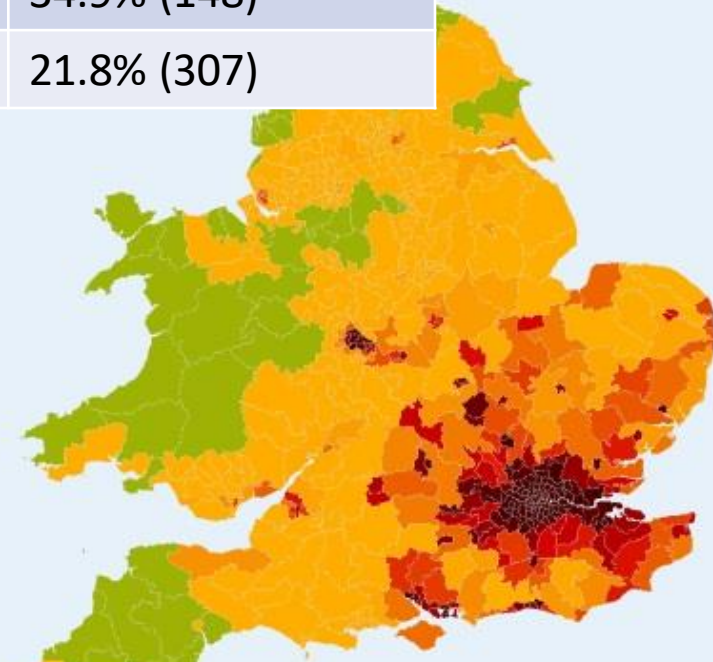
GPs

Hospitals

Schools

NO2	Number	40 $\mu\text{g}/\text{m}^3$	10 $\mu\text{g}/\text{m}^3$
Care homes	1101	0%	21.7% (240)
Libraries	231	0%	22% (51)
Sports grounds	3131	0%	18.9% (591)
Hospitals	107	0%	26.1% (28)
GPs	424	0%	34.9% (148)
Schools	1406	0%	21.8% (307)

Postcode not found.



vulnerable lungs at risk

Located in areas with PM^{2.5} over 2005 WHO levels...

3.3%

GP

1%

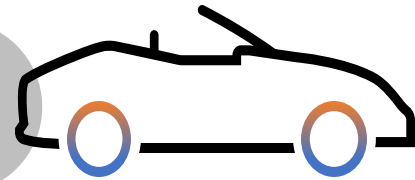
schools

1.9%

care homes

0.9%

hospitals



vulnerable lungs at risk

Located in areas with PM^{2.5} over 2021 WHO levels...

100%

GP

100%

schools

100%

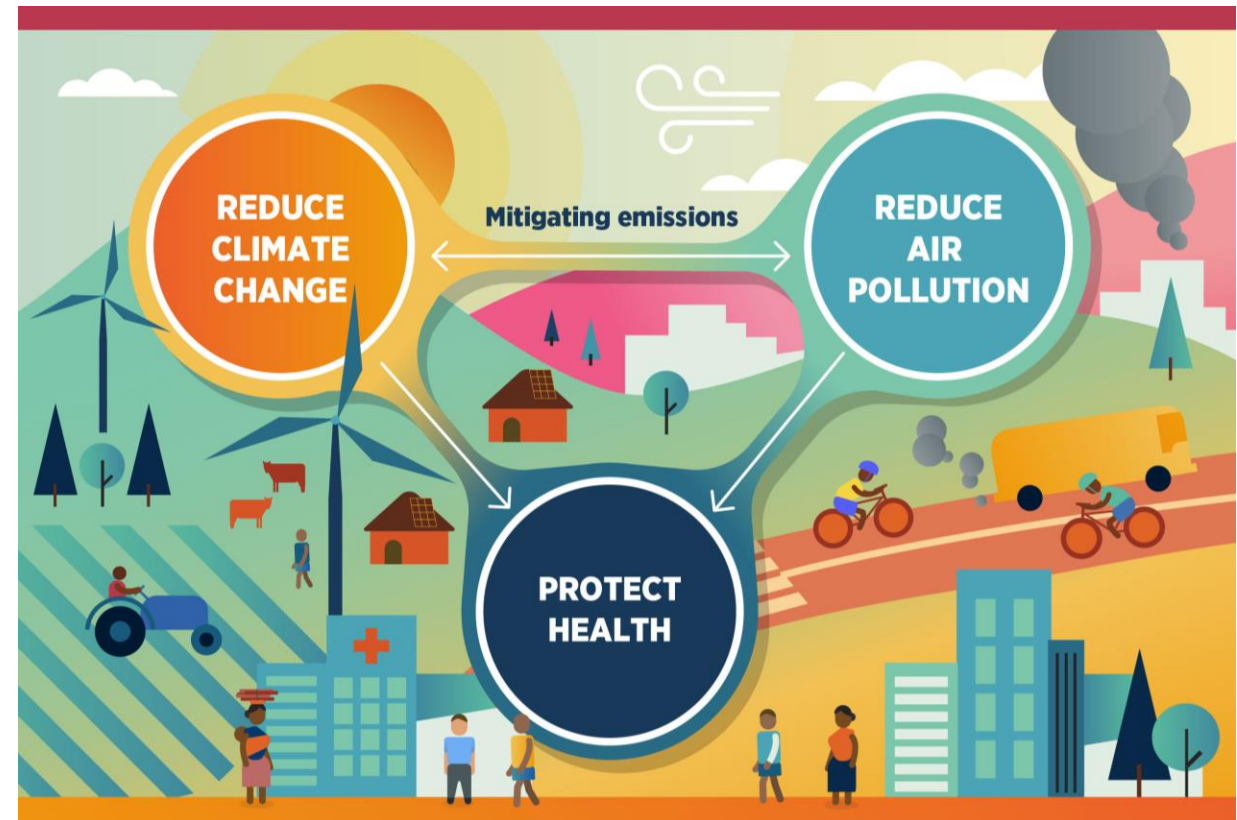
care homes

100%

hospitals



Will the Environment Bill be enough to tackle air pollution?





Thank you