

Breathing life into West Yorkshire

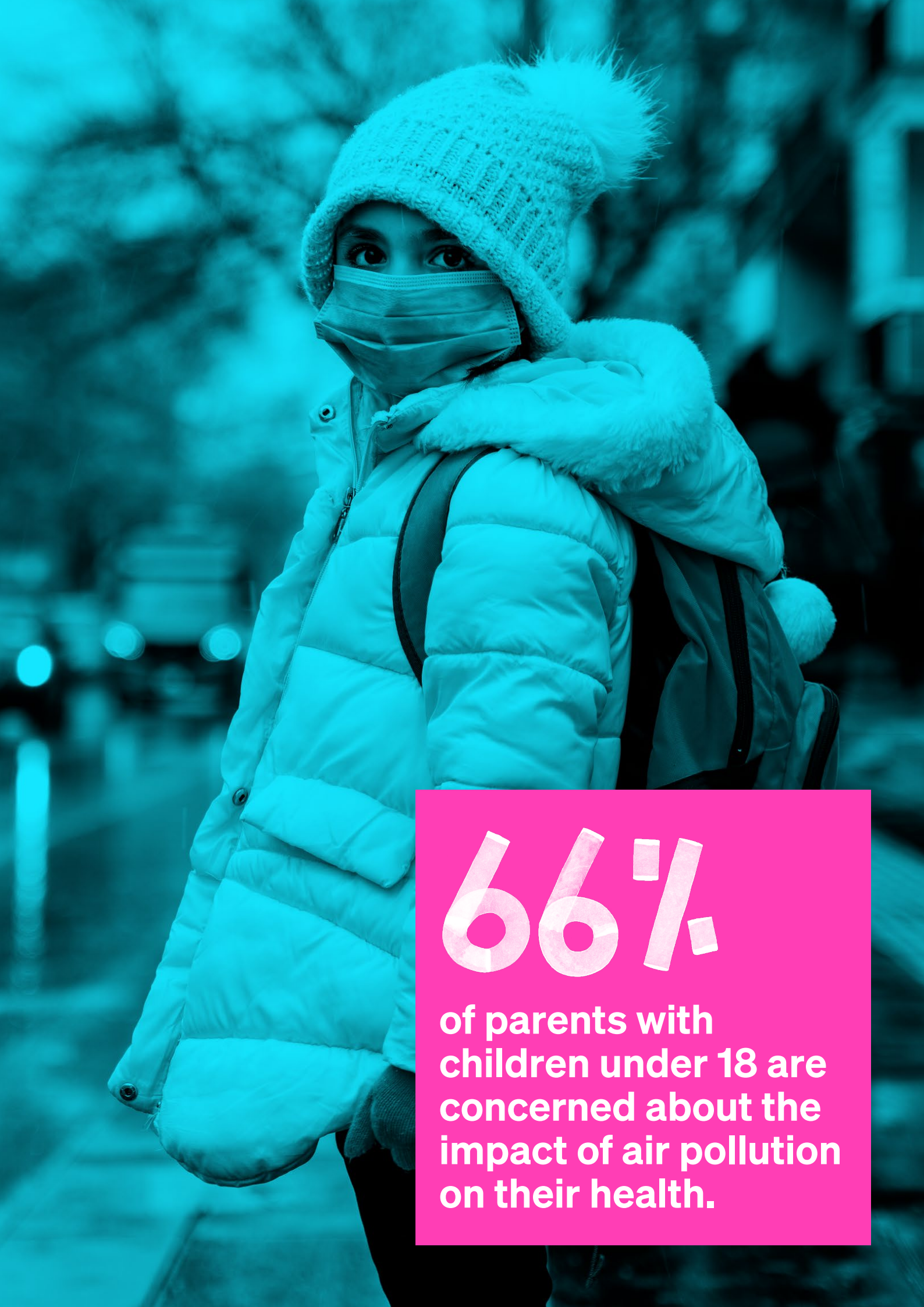
**Taking action
on toxic air for
lung health**

November 2023



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66%

of parents with children under 18 are concerned about the impact of air pollution on their health.

Foreword

People deserve to feel safe and secure in their communities. Yet levels of air pollution in West Yorkshire mean that millions of people are breathing in harmful toxins where they live, work and play.

No level of air pollution is safe, but certain groups are more at risk than others. A shocking 84% of schools throughout the region are based in areas with air pollution above the World Health Organisation guidelines. For children, breathing in dirty air can stunt their lung growth, and for people with lung conditions, it can force them into hospital with a worsening of their condition.

But it doesn't have to be this way. Policymakers, at all levels of government, have the power to deliver change. With bold leadership and commitment to implement evidence-based solutions, local politicians can bring about a step-change to tackle air pollution which will reap huge health benefits in the long-term.

Change is happening in some areas of the region, but in many other areas, lung health has been left behind. For instance, results from the clean air zone in Bradford have been very promising; however, the wider region has been without a clean air strategy for the last two years. Our report sets out the urgent need for action, particularly where vulnerable communities are most affected.

If action is taken now, we can protect the lung health of people living across West Yorkshire for years to come.



Henry Gregg
Director of External Affairs
Asthma + Lung UK

Executive summary

Around 800,000 people across West Yorkshire are living in areas with illegal levels of nitrogen dioxide (NO₂), including 200,000 people with lung conditions and 56,000¹ children under the age of six¹. These legal targets should have been met a decade ago by the UK government.

Recorded levels of NO₂ and particulate matter (PM_{2.5}) across the region are also exceeding recommended guidelines set by the World Health Organisation (WHO)². This means that according to the WHO, 2.3 million³ people in West Yorkshire are breathing in toxic air pollution that could be harming their health.

Our new survey conducted by YouGov with 769 residents across West Yorkshire shows that 66% of parents are deeply concerned about the detrimental effects of toxic air on their children's health. Furthermore, 91% are eager to see more affordable public transport, 50% support improved access to cycle routes, and 74% support scrappage schemes in the region, highlighting a clear demand from the public to shift to cleaner transport options.

Despite some progress, such as the establishment of a clean air zone in Bradford, targeted action to tackle toxic pollution across West Yorkshire seems to have stalled. There has been no overarching plan for the region since 2021.



To resolve this critical issue, the West Yorkshire Combined Authority needs to:

1

Implement a new Low Emissions Strategy for the next five years that:

- **sets out action** across all local areas with the aim of achieving WHO guidelines, learning from best practice across the country
- **targets action** to the most polluted areas and encourages the development of clean air zones in the most polluted areas
- **develops** a public transport plan that seeks to increase access and affordability for the communities that need it most
- **works closely** with communities to develop local travel interventions, especially people on lower incomes and people with lung conditions
- **is integrated** with the West Yorkshire Integrated Care System's plans for improving respiratory health.

2

Develop school streets and air monitoring programmes

with all councils in West Yorkshire, prioritising worst affected areas. This should include live air quality monitoring of NO₂ and PM_{2.5} at all schools. All data should be made available so that school communities can use it to protect their health and improve transport infrastructure in those areas.

3

Improve monitoring across the region

with a particular focus on areas of deprivation and where pollution is worst.

4

Developing an air quality alert system

that provides timely information about high air pollution episodes, targeted to communities who need it most with the advice they need to protect their health.

¹The air pollution levels are maximum annual averages across the whole local authority, so people may not be exposed continuously to the same amount. Similarly, we cannot identify how many people with a lung condition live exactly where air pollution exceeds legal limits. The data that provides how many people with a lung condition live in West Yorkshire local authorities is based on people registered to a GP with a lung condition so may not capture everyone in the population and is hence an estimate.

The health impacts of toxic air

Across West Yorkshire, millions of people are exposed to life-limiting toxic air just going about their daily lives. This doesn't affect everyone equally – children, pregnant women, older people and the poorest communities are paying the highest price. Furthermore, the region has higher than average levels of lung disease, meaning that there are more people vulnerable to harm and that action on toxic air could reap rewards for local NHS services.

Air pollution is an invisible killer

Nobody is immune to the dangers of toxic air. Breathing in pollution puts us all at increased risk of lung cancer and early death, and for people with lung conditions like asthma and chronic obstructive pulmonary disease (COPD), pollution can trigger life-threatening exacerbations even from short-term exposure⁴.

Children's developing lungs are also especially vulnerable. Children growing up in highly polluted areas are four times more likely⁵ to have reduced lung function in adulthood⁶. Children exposed to high concentrations of air pollution are also more likely to have respiratory infections, and strong links have been found between air pollution and the causation of asthma⁷. Research has also shown air pollution can adversely affect the development of unborn babies in the womb, with links to low birth weight and premature birth⁸.

Those from lower socioeconomic backgrounds and ethnic minorities face disproportionate exposure to environmental hazards, often experiencing the worst air pollution levels⁹.

People in West Yorkshire are breathing in harmful levels of air pollution

While Leeds is the only council in the region breaching UK legal limits for NO₂ (<40 µg/m³) data set out below shows that all councils in the region exceed the WHO guidelines (<10 µg/m³). Ultimately, there is no safe level of air pollution to breathe, yet the UK legal limit for annual levels of NO₂ is four times higher than the WHO guidelines. Every local authority in West Yorkshire has annual average PM_{2.5} that is above the WHO guidelines. Therefore, policymakers should seek to achieve the WHO guidelines through bold and decisive action in order to protect those who are most vulnerable.

Table 1: Annual mean nitrogen dioxide (NO₂) and particulate matter (PM_{2.5}) in West Yorkshire local authorities and their compliance with World Health Organisation (WHO) guidelines.

Local authority	Annual mean NO ₂ concentrations in 2022	Compliance with annual WHO NO ₂ limit	Annual mean PM _{2.5} concentrations in 2022	Compliance with annual WHO PM _{2.5} limit
Leeds	41	Exceeding	10	Exceeding
Bradford	36	Exceeding	10	Exceeding
Kirklees	35	Exceeding	9	Exceeding
Wakefield	31	Exceeding	11	Exceeding
Calderdale	30	Exceeding	10	Exceeding

Childhood asthma is higher than the national average

In Bradford, 1 in every 5 children has a breathing problem, and it's estimated that at least one third of childhood asthma cases in the city are caused by air pollution¹⁰. Asthma admissions for children under 9 are far above the national average in all local authorities apart from Leeds. It's therefore extremely concerning that 84% of schools in the region are located in areas that breach WHO guidelines, putting children's health at risk on their way to and from school.¹¹

Admissions for asthma (0-9 year olds) per 1000,000 population in 2021/22

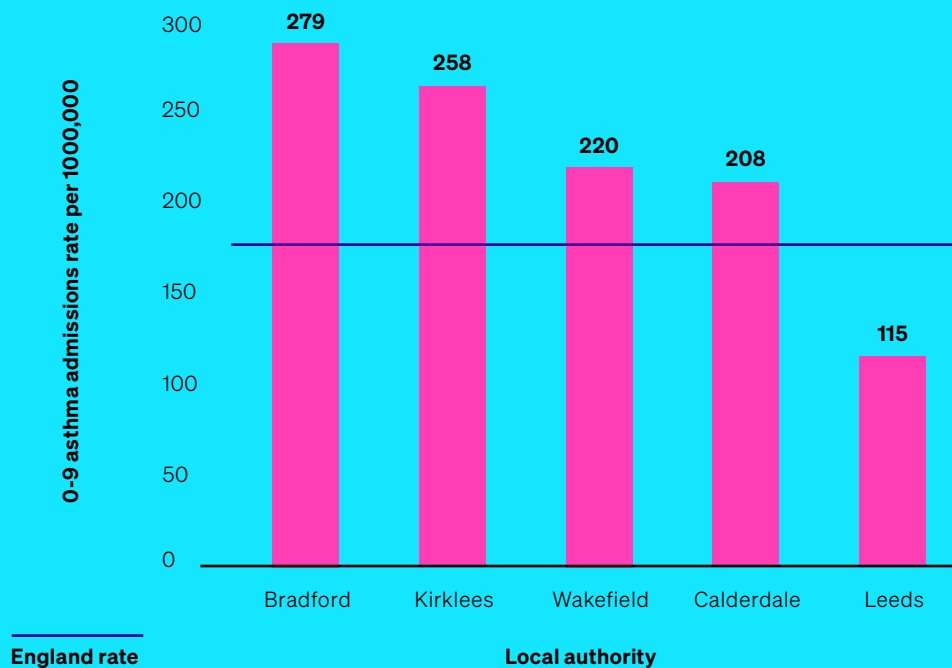


Figure 1: Childhood asthma admissions rate per 100,000 in 2021/22. The purple line indicates the national rate across England (173 admissions per 100,000 population¹¹).

Alongside high childhood asthma admissions, hospital admissions for chronic obstructive pulmonary disease (COPD) are also above the national rate in all five local authorities in West Yorkshire (figure 2).

Emergency hospital admissions rate for COPD in adults (35+) per 100,000 population in 2019/20

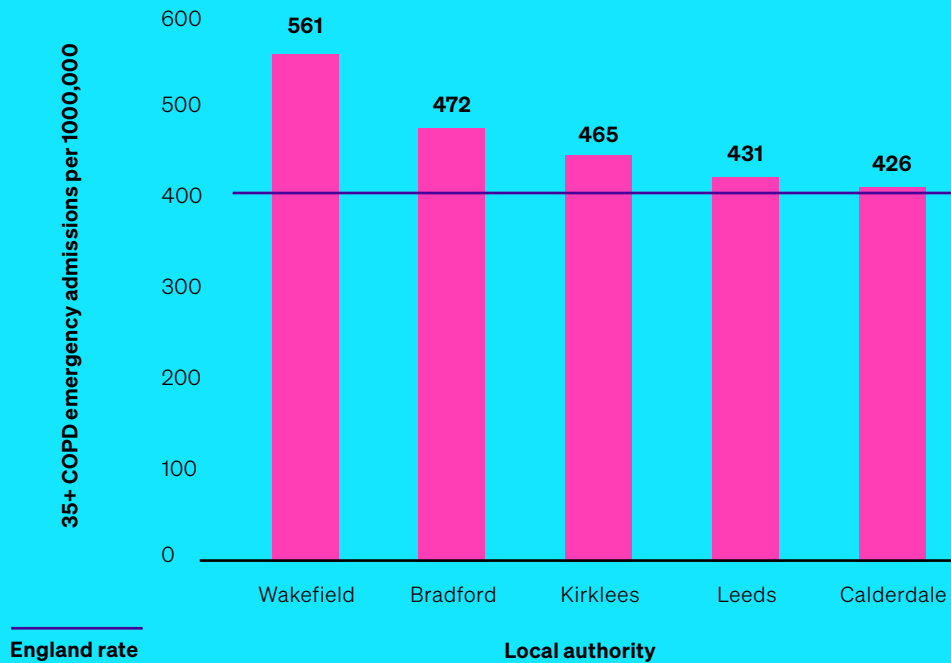


Figure 2: Adult (35+) COPD emergency admissions rate per 100,000 population in 2019/20. The purple line indicates the national rate across England (415 admissions per 100,000 population¹²).

Additionally, the Office for National Statistics (ONS) reported that mortality rates from COPD in 2021 were higher across all local authorities in West Yorkshire (52 deaths per 100,000 population) compared to the national rate in England (40 deaths per 100,000), with Calderdale having the highest age-standardised COPD mortality rate in West Yorkshire (56 deaths per 100,000 population¹³). Furthermore, across the region, 2.1% of people are diagnosed with COPD compared to 1.9% in England¹⁴. Overall, this highlights a higher than average respiratory disease burden experienced in the region.

¹²Calculated using Defra air quality compliance data 2019 filtered by local authority. Available at: <https://uk-air.defra.gov.uk/compliance-data>



91%

of people in West
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public transport.

Our survey findings

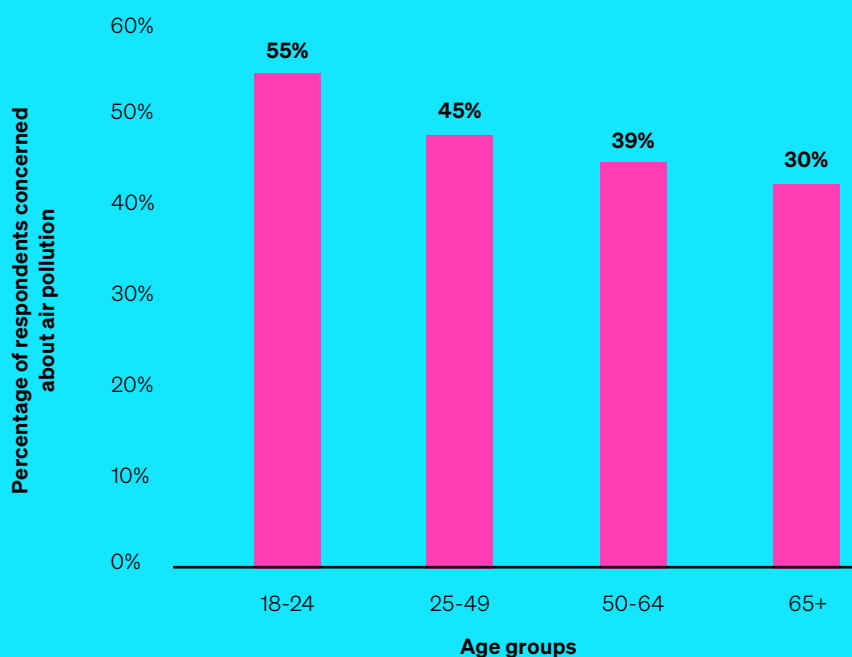
Through polling agency YouGov, we surveyed 769 people across West Yorkshire in January 2023. We found people are worried about breathing in toxic air and the damage it does to their health. They want to see bold action to change this. There was huge backing for investment in cleaner transport options - public transport, cycling and scrappage schemes - to make it easier for them to make cleaner choices.

People are concerned about air pollution

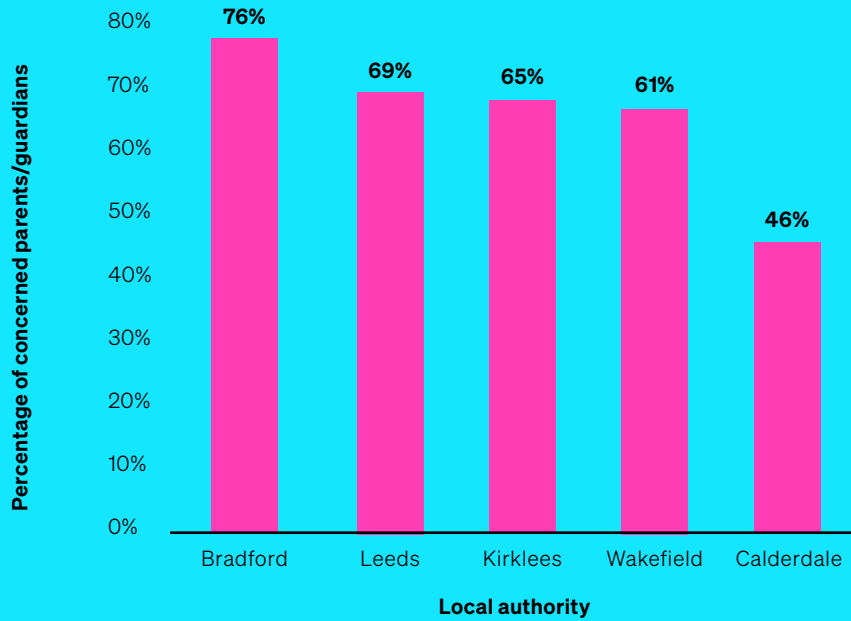
When asked “How much of a problem, if at all, do you think air pollution is in your local area?”, Leeds and Bradford saw **the highest number of people saying that air pollution was a problem (47% and 46% respectively).**

Additionally, there was a significant difference in responses based on age, **with 55% of people aged 18-24 stating that air pollution was a problem in their local area**, with levels of concern decreasing as the age groups increased. This trend has been widely reported¹⁵, with younger populations having greater awareness of air pollution and environmental issues. It seems that while older age groups seem to have lower awareness, they are amongst those most impacted by air pollution. This suggests much more needs

Proportion of residents that see air pollution as a problem in their local area, by age groups



Proportion of residents worried about impact of air pollution on their children's health, by local authority



to be done to ensure older people in the region, who are more likely to have long-term health conditions, are given localised health advice to manage their exposure to toxic air. Furthermore, **over 60% of those we surveyed said they were worried about the impact that air pollution has on people with a lung condition.**

66% of parents we surveyed with children under 18 **were concerned about the impact of air pollution on their child's health.** Furthermore, **all parents aged 18-24** years of age with young children **reported being concerned about air pollution on the health of their children/child.**



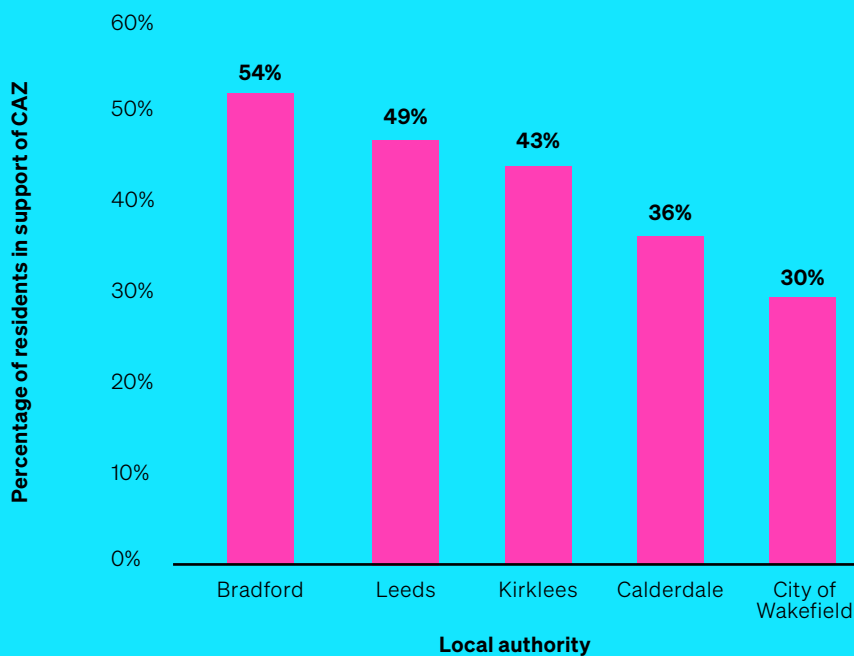
People want to see bold solutions and change

Clean air zones

According to the government's research, clean air zones (CAZs) are one of the most effective ways of reducing air pollution quickly, and should be accompanied by other interventions such as active travel schemes for maximum impact. Early evidence from Bradford demonstrates the success of rolling out these schemes in the most polluted places; initial data already shows a drop in NO₂ levels from 38 µg/ m³ in 2021 to 36 µg/m³ in 2022¹⁶.

Across all those surveyed, 45% of people were in support of a clean air zone in their area. This was highest in Bradford, followed by Leeds, where plans for a clean air zone have been scrapped in recent years.

Support for a clean air zone (CAZ), by local authority



Public transport

Our survey results also indicate strong support for policies that promote cleaner forms of travel. A resounding **91% of all respondents displayed support for cheaper public transport in their area.** It's worth noting that in 2021, 88% of kilometres travelled in Great Britain were by cars, vans and taxis, compared to only 10% by bus, coach or rail¹⁷.

Cycling

We found a small gender difference in support for cycling lanes and routes, with **53% of males showing support compared to 49% of women**. This could be in reflection of national trends which show more men than women cycle in England, due to issues such as safety concerns¹⁸.

With regard to socio-economic status, more people from affluent backgrounds were in support of cycle routes in their area, 59%, compared to 42% from lower-income communities.

These differences may be attributed to less space for those from lower socio-economic backgrounds to store bikes and the cost of maintenance¹⁹. A potential solution to this problem could be more safe and accessible storage options in more deprived areas and access to affordable bike repair services.

It is critical that local interventions are developed and co-created with local communities to ensure they factor in access and attitudes. This is particularly true for people with long-term health conditions, who often tell us they struggle to use and access active travel options like bikes and walking due to their reduced mobility²⁰.

Financial support to switch to cleaner vehicles

Financial support is needed by local authorities to enable them to introduce clean air measures. In turn, communities need support to switch to less polluting ways of getting around. In areas with CAZs, scrappage schemes have made a huge difference to communities²¹ and there is widespread support for such initiatives across West Yorkshire.

In our survey, 3 out of 4 respondents were in favour of scrappage schemes, with over 70% saying they supported them across all the areas in West Yorkshire except Wakefield (58%). Support for a scrappage scheme was not just isolated to urban areas and towns: over 77% of rural respondents were also in favour of financial support to facilitate the transition towards cleaner modes of transport.



Our action plan for West Yorkshire

Air pollution doesn't stop at local authority boundaries. It must be tackled as a problem across the whole region. High rates of childhood asthma, 200,000 people with lung conditions and toxic levels of air pollution mean the case for change is incredibly compelling, and the stakes are high. Health must be put at the heart of any plans to tackle air pollution, and a key way for councils to do this is to set out goals that aim to meet the WHO air quality guidelines.

What's happening already?

In West Yorkshire, councils have adopted some approaches to tackle pollution involving community-led initiatives, the promotion of sustainable travel options and the shift towards cleaner transportation methods.

However, these councils require substantial and proportionate support from central government to scale these up and shift all communities towards cleaner travel. The successful implementation of policies like clean air zones depends on cooperation between local and national government. Asthma + Lung UK is advocating for a total government investment of £777 million to establish the Cleaner Travel Access Fund (CTAF), which would provide the necessary assistance for people on low incomes and people whose mobility is affected by lung and other health conditions to transition to cleaner modes of transportation, in areas with a CAZ²².

After implementing the CAZ in Bradford, automatic monitoring stations recorded NO₂ levels within legal limits. Notably, the city centre witnessed a drop in NO₂ levels, reducing from 38 µg/m³ in 2021 to 36 µg/m³ in 2022²³.

Clean air doesn't just save lives: it saves money. The quantified health-based savings associated with improvements in air quality in Bradford are almost £15.7m in total²⁴.

Our proposed action plan builds on the impact already made by the West Yorkshire Low Emissions Strategy 2016 to 2021²⁵. This time, we call for a more systematic approach. A new clean air plan will allow the West Yorkshire Combined Authority to continue to demonstrate leadership in this key area. It will also encourage local authorities to work together towards common plans, connecting with the communities they represent on this health crisis.

OUR ACTION PLAN

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Conclusion

There is no doubt that air pollution is affecting people's lives across West Yorkshire. Alongside national measures, local and regional government has a central and critical role in achieving improvements in air quality.

The results of our polling revealed a clear sentiment among residents in West Yorkshire: they are concerned about the impact of air pollution on their lives, especially on their children's health. And they back direct and effective approaches to address toxic air in the region.

We need urgent action. We want to work with leaders and organisations right across West Yorkshire to support these ambitious plans. Improving air quality doesn't only save lives but creates safer, healthier communities where everyone can thrive and fulfil their potential. It will also save local NHS services money and resources. It's time to turn the tide, to take bold action on toxic air and to protect everyone's lungs.



Improving the air quality in West Yorkshire can save lives and create healthier communities



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