

The streets around our schools are filling classrooms with harmful pollutants, but there are simple, practical steps that schools can take to protect children's health and learning, says **Nathalie Pearson**

Clearing the air: tackling pollution in schools



When we think about healthy places for children, we often picture green spaces, playgrounds and safe streets. Yet outside the home, children spend most of their day inside classrooms. While we monitor the water they drink and the food they eat, schools are not obliged to monitor the air they breathe.

Conversations about air quality and schools often focus on outdoor pollution from traffic, which disproportionately affects deprived neighbourhoods. In Britain, around 25,000 schools are in areas where air pollution exceeds World Health Organisation (WHO) guidelines. Breathing poor-quality air is a well-documented risk to children's immediate and long-term health and cognition. Despite these conversations and risks, many planned new school sites in England fail to meet WHO air-quality standards, often because they are located near busy roads, where traffic remains a key contributor to the pollution.

Why indoor air matters

Outdoor pollution enters school buildings through cracks and windows. When windows are closed, indoor air becomes stagnant, allowing carbon dioxide (CO₂), indoor pollutants and a range of airborne contaminants to accumulate. These include fine particulate matter,¹ allergens like dust mite debris and pollen, mould spores, respiratory viruses like flu and Covid-19, and chemicals from cleaning products and fragrances. A child may walk through relatively clean streets yet spend six hours breathing unhealthy classroom air.

Although children breathe the same classroom air, they do not experience it equally. Building design, local pollution, and the surrounding environment influence the air children breathe indoors, while pupils with health conditions or those attending schools near busy roads or bus routes, for example, face greater risks. Recognising how health, building conditions, and local environments interact is essential for safe, inclusive, equitable learning spaces.

Children with asthma or weakened immune systems are particularly vulnerable. Even brief exposure to allergens, viruses, or environmental triggers, such as exhaust fumes from passing vehicles, can exacerbate symptoms or worsen existing conditions. Evidence shows that during peak pollen season,



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joined a global
call for clean
classroom air
at the United
Nations in
New York in
September 2025

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some students perform worse in examinations, with measurable declines between mock and final GCSE results.

Poor indoor air quality affects every pupil in every classroom. While healthy children may show fewer immediate effects, they remain at risk of long-term consequences from traffic pollution. Further, elevated CO₂ levels impair cognitive performance and increase risk of airborne infections, contributing to headaches, fatigue, reduced concentration, and higher absence rates. In schools, these conditions create unnecessary barriers to all students' health, wellbeing, and achievement.

Climate pressures on classroom air

Schools now sit at the intersection of climate resilience, public health and children's right to safe learning, making indoor air quality an increasingly urgent issue. In addition to the risks from traffic pollution, rising temperatures, heatwaves and changes in humidity can alter classroom conditions. Warmer, more humid environments may allow some viruses to survive longer indoors, while increasing dust mite populations and extending pollen seasons. Heavier rainfall, storms, and flooding can create damp conditions that encourage mould growth, particularly in older school buildings. As the climate changes, these pressures are likely to make existing differences in how pupils experience classroom air even more pronounced.

Practical solutions

Safe Air Schools is a parent-led organisation supported by air-quality experts that places air quality and wellbeing at the heart of healthy schools. From playgrounds to corridors and classrooms, every child deserves to breathe clean air in the place that shapes their future. Committed to safe, inclusive education, we work locally and nationally, promoting practical, evidence-based solutions and showing that healthier learning environments are both possible and essential.

Using Hampshire as a blueprint for community action, our website is a living, regularly updated online resource,

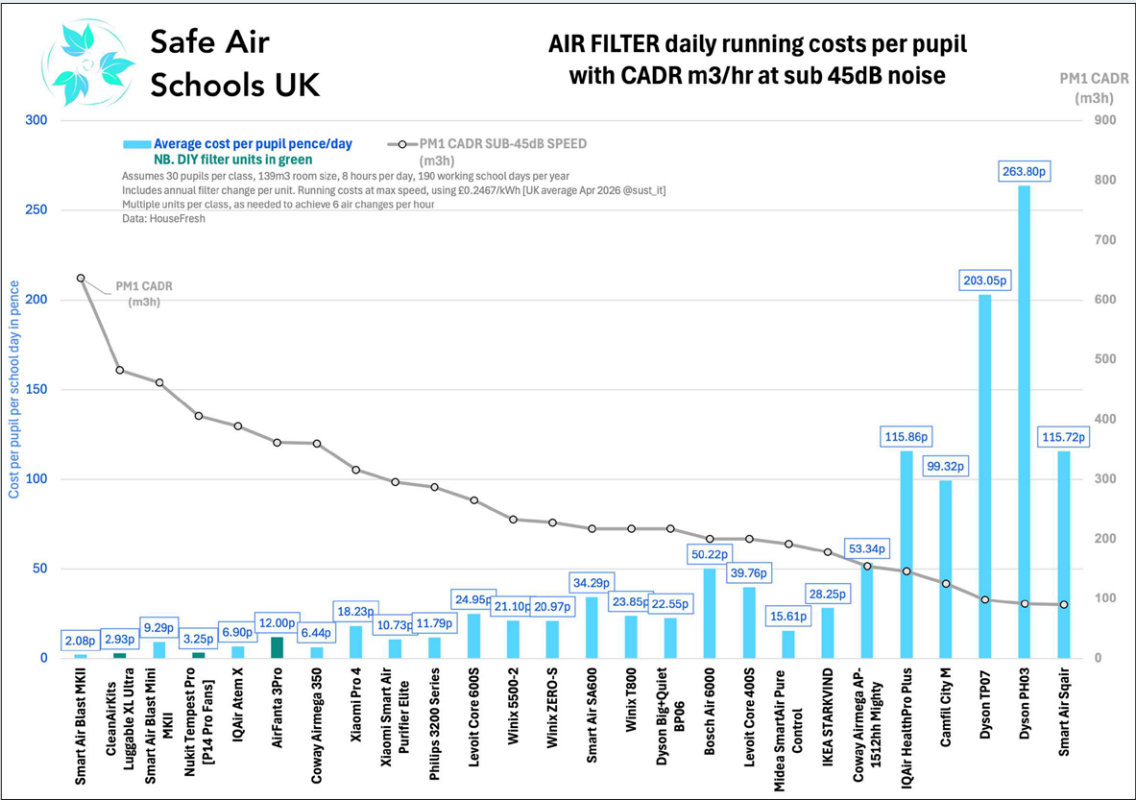
sharing guidance and proven practical resources to spark conversations and support decision-makers. We promote achievable steps – from immediate action to short-term measures and longer-term goals – to drive real change through national policy, school initiatives and community action. Improving classroom air quality doesn't have to be complicated or expensive. Every action counts.

Immediate actions involve empowering children as ventilation champions or air-quality ambassadors to air out classrooms and monitor air quality. Air can be improved by strategically opening windows or using the less polluted sides of a building. A reliable indoor air-quality monitor can track particulate matter, while a CO₂ monitor identifies poorly ventilated spaces. Together they provide real-time feedback to improve air quality, guide adjustments and track progress.

Short-term steps include portable air filtration. A Hampshire headteacher saw a 21% drop in illness-related absence after installing filtration, adding 4,500 extra pupil days each autumn. Using independent data from our trusted partner, HouseFresh,² we've shown that clean air can be

⏮
The running costs of a selection of portable air filters, May 2026: evidence shows that clean classroom air can be provided for a few pounds a year, per child (including filter change)

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achieved for under five pence per child per day. Medium-term solutions include urban greening initiatives, such as the introduction of 'living gates', as well as creating safer drop-off zones. These can be achieved by distancing cars from school grounds through the School Streets initiative, where residential roads are temporarily closed to traffic during pick-up and drop-off times. This approach not only improves safety but also reduces air pollution around schools.

In the long term, further measures could include retrofitting schools with mechanical ventilation systems to improve indoor air quality, alongside planning and constructing new school buildings in locations set back from major sources of road traffic pollution.

Clean air in schools is essential infrastructure for health, learning and inclusion, connecting classrooms, streets and communities to healthier futures for children and generations to come. Safe Air Schools is dedicated to making this a reality.

Nathalie Pearson is the founder and driving force behind Safe Air Schools UK CIC, building it from the ground up and leading local and national action with a coalition of independent organisations united in the same goal. All views expressed are personal. To find out more about Safe Air Schools, visit <https://www.safeairschools.org>

Notes

- 1 See more about particulate matter at www.gov.uk/government/statistics/air-quality-statistics/concentrations-of-particulate-matter-pm10-and-pm25
- 2 HouseFresh is an independent website that provides information about air quality, see <https://housefresh.com>