

Improving People's Lives

Strategic Evidence Base for Bath and North East Somerset

Air Quality

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Air Quality Summary

Improving People's Lives

The key pollutants impacting air quality in Bath and North East Somerset (B&NES) are Nitrogen Dioxide (NO_2), Sulphur Dioxide (SO_2) and Particulate Matter (PM_{10} and $PM_{2.5}$), and the main source of these pollutants is road traffic. Air pollution in Bath is exacerbated because it is set in a valley surrounded by hills which can trap the pollution within the city.

Air quality across B&NES has improved over the last decade, for instance in 2014 only 28% of monitoring sites recorded annual average concentration levels of NO₂ were below the 40 μg/m³ government objective, compared to 100% in 2023 and 2024.*

However, according to the World Health Organisation (WHO), there is no safe level of exposure to air pollution where there is no risk of adverse health effects, as even low concentrations can pose health risks. This means that further reduction of PM and NO₂ concentrations could achieve substantial health benefits for all populations, especially for more vulnerable groups like children and older people. Consequently, the Council continues to work to improve air quality in B&NES via various projects such as, Bath's Clean Air Zone (CAZ), Financial Assistance Scheme to support businesses to upgrade to less polluting vehicles, emissions-based parking permits, anti vehicle idling campaigns, and improvements to active travel infrastructure e.g. Bath Quays Links and Bath to Bristol Sustainable Corridor.

For more information click on the links below...

Air Quality and Health

Air Quality Annual Status Report (ASR)

Air Quality Management Areas

Nitrogen Dioxide Monitoring

Bath's Clean Air Zone (CAZ) Live Air Quality Data

*It is important to note that the number of NO₂ monitoring sites has increased substantially from less than 30 in 2024 to over 160 in 2024.

Data Sources:

Bath & North East Somerset Council (June 2025), <u>2025 Air Quality Annual Status Report (ASR)</u>
Bath & North East Somerset Council (September 2025), <u>Annual Average NO₂ Concentrations in B&NES Report</u>
World Health Organisation (2021), <u>WHO global air quality guidelines</u>

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Air Quality and Health

A 2025 report by UK Royal College of Physicians stated that **air pollution affects almost every organ** in the human body.

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Air pollution can affect our health throughout our lives and is associated with a range of adverse health impacts, depending on the period of exposure...

Pregnancy and Developing Foetus

· Low birth weight

Children



- Asthma
- Slower development of lung function
- Development problems
- More wheezing and coughs
- Start of atherosclerosis

Adults



- Asthma
- · Coronary heart disease
- Stroke
- Lung cancer
- Chronic obstructive pulmonary disease
- Diabetes

Older People



- Asthma
- Accelerated decline in lung function
- Lung cancer
- Diabetes
- Dementia
- Heart attack, heart failure and stroke

The impacts of air pollution are disproportionately experienced by vulnerable populations and marginalised communities, such as those with:

- lower incomes.
- · existing chronic health conditions, and
- those living, learning, or working near sources of air pollution such as busy roads.

The local picture...

Proving the health effects of local-level air pollution is difficult because small populations at a local level mean there are not enough cases to show clear statistical links.

However, the national and international evidence (taking into account confounding factors such as age and income levels) shows that improving air quality can substantially improve public health, and there is no reason to believe that this is any different in B&NES.

Data Sources:

Bath & North East Somerset Council (June 2025), <u>2025 Air Quality Annual Status</u> Report (ASR)

World Health Organisation (2021), WHO global air quality guidelines

Royal Collage of Physicians (2025). <u>A breath of fresh air: responding to the health challenges of modern air pollution</u>

B&NES Council (2025), Learn about air quality



Air pollution linked to 30,000 deaths in the UK in 2025.

In the UK the estimated costs to the NHS and social care of health problems linked to air pollution between 2017 and 2025 was £1.6 billion.