

Local Air Quality in Northamptonshire

Air pollution: fine particulate matter



The main pollutants of concern in Northampton, as in most areas of the UK, are associated with road traffic, in particular **Nitrogen Dioxide (NO2)** and **particulate matter (PM)** at locations close to busy, congested roads where people may live, work or shop. **Vehicle emissions** are the main contributing factor, particularly **diesel exhausts**.



The Health Burden of Poor Air Quality

Air pollution is estimated to account for 3.9%² of number of years lost due to ill-health, disability or early death (DALYs) in Northamptonshire. It is one of the top ten risk factors for the global burden of disease; particularly heart disease, stroke, lung cancer, COPD and lower respiratory infections.



In 2017-18 there were **584 emergency admissions per 100,000 for COPD**.



In 2017-18, 651 people were referred urgently where **lung cancer** was suspected.



In 2016-18 there were **45.7 deaths per 100,000 from CVD** considered preventable.



In 2017-18 **13,093 people had a stroke**, 1.7% of the GP population.



In 2016-18 there were **20.7 deaths per 100,000 from respiratory disease** considered preventable.



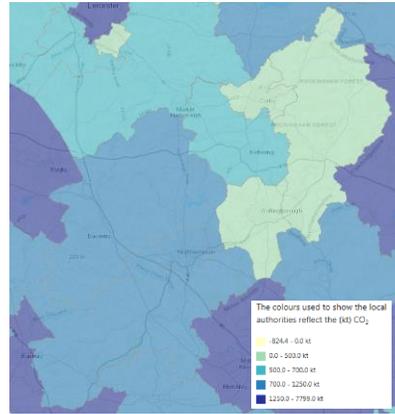
An estimated **37,220 people** living with undiagnosed **hypertension** need to be diagnosed and treated to meet the PHE ambition of 80%¹.

Local Air Quality Management Areas

There are eight declared 'Air Quality Management Areas' in Northamptonshire. Seven of these are in **Northampton** and one is on the A5 in **Towcester**. All concern high levels of **Nitrogen Dioxide**.

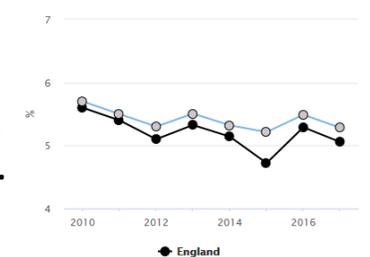


Carbon dioxide is also considered an air pollutant and is addressed in the [Northamptonshire Climate Change Strategy](#). In Northants in **2016**, 28% (38% nationally) of emissions were attributed to the industry and commercial sector, 49% (35% nationally) to transport and 25% (28% nationally) to the domestic sector. All LAs have seen a decrease between 2005 and 2016.



Mortality

Fraction of mortality attributable to particulate air pollution % in Northamptonshire.



If outcomes for Northamptonshire improved to match the top performing CCGs, lives affected by air pollution could be saved.

NHS Right Care quality improvement opportunities in Northamptonshire	Number of lives potentially saved
Mortality from lung cancer under 75 years	39
Mortality from bronchitis, emphysema and COPD under 75 years	42
Mortality from asthma	4
Mortality from all circulatory diseases under 75 years	74
Mortality from stroke under 75 years	18

NHS Right Care Commissioning for Value Northamptonshire STP, December 2016

Costs

An estimated **£2,569** per person per year is spent on dealing with NO2 in the health and social care system. This rises to **£7,569** per person per year for PM.



Public Health Plan on a page: Commissioning for Outcomes (Air Quality)

Vision:

- Improving air quality to reduce hazardous health impacts that air pollution can have across a person's lifetime, the associated health inequalities, and its burden on NHS and social care costs attributable to air pollution.
- To ensure that local action plan to reduce air pollution remains robust and relevant to make Northamptonshire cleaner and healthier and attractive place to live, visit, work and play.

Priorities: Secure clean growth and innovation that tackle emissions from industry, vehicles, products, combustion and agriculture and support both improvements in air quality and decarbonisation; protecting the environment by monitoring the impacts of air pollution on natural habitats; reduce nitrogen oxides emissions from transport; reduce PM2.5, sulphur dioxide and Non-methane volatile organic compounds emissions at home; reduce emissions of ammonia from farming; and reduce emissions from industry.

Our Approach

Whole system approach: Air quality is just one factor influencing the management of urban environments and travel patterns. Others include: economic development and retail, planning, tourism/ visitor strategies, housing growth, workplace travel needs, access to services including healthcare and access to education.

Achieved through:

- Partnership working (health, local government, roads, planning, workplaces, schools) across the system and for all ages.
- Clear leadership on air quality issues.

Addressing existing problems and preventing new ones:

A number of areas in the county have identified/designated Air Quality Management Areas, where air quality is worse than the recommended legal limits. Further such areas may be created due to future housing growth/development and the associated increase in travel.

Achieved through:

- Targeted efforts in known problem areas.
- Preventative measures to avoid further Air Quality Management Areas being required.

Behavioural Change :

Assist relevant partners to address air quality and increase sustainable travel, including: environmental health teams, planning departments, transport and highways and major organisations /employers.

Achieved through:

- Social marketing.
- Influencing on policy.
- Partnership creation and advocacy.
- Health promotion.
- Northamptonshire Health Protection Committee to monitor air quality issues.

Evidence based approach

There is increasing scientific evidence of the health impacts of air pollution, particularly for vulnerable people such as the elderly, the very young and those with certain health conditions, even at pollution levels within the legal limits. Explore new evidence of effective approaches to reduce and mitigate risks.

Achieved through:

- Joint Strategic Needs Assessment (JSNA).
- Return on Investment (ROI) tools.
- Evaluation.

Our Commitment/Enablers

Reducing inequalities: services which mitigate inequalities and work to overcome variation - by location, approach and policy.

System partnerships: engage and co-produce with partners / stake-holders e.g. NHS, schools, prisons, workplaces and local government.

Continued investment in advocacy and policy, and programmes to increase active travel and use of green spaces.

Engagement and co-production of research aligning with evidence. Evaluation to monitor and assure service delivery and quality.

Embed Health in all Policies: a common way of influencing the wider determinants of health: transport policy, economic development policy including industries and agriculture, planning policy, fuel and poverty management and town centre management.

Measures of Success

- All areas meet legal air quality limit values.
- Adoption of sustainability policies and actions among partners.
- Improved Infrastructure for cycling / walking.
- Increased rates of active/sustainable travel.
- Reductions in traffic congestion.
- Improved air quality measures at key sampling sites.
- Increased awareness in organisations and the public.
- Reduced respiratory disease in high traffic areas.