

## Clean Air Campaign - Facts So Far 14<sup>th</sup> September 2023

### What are we doing?

We are asking our local politicians to keep us safe from harm and deal with Northampton's toxic air.

**The science is clear: air pollution is an invisible killer that is cutting people's lives short, worsening existing lung conditions, and creating new ones. It significantly contributes to health inequalities and is hitting the following groups hardest: pregnant women, children, those living with a lung condition, older people and those living on the lowest incomes – as well as potentially those experiencing long-term breathing problems from COVID-19. [The invisible threat | Asthma + Lung UK \(asthmaandlung.org.uk\)](#)**

Northampton air is amongst the most polluted in the UK and in some studies ranks top for poorest quality air. Toxic air can stunt the growth of children's lungs and has been linked to a range of serious health issues, from heart disease to dementia and poor mental health.

Northampton's air quality is rated as "dangerous" by the World Health Organization.

"Air pollution is a major health issue in the UK, says Dr Nick Hopkinson, the medical director of the British Lung Foundation. He estimates that between 30,000 and 40,000 premature deaths each year are caused by exposure to toxic air."

### Why hasn't the Council done anything about it?

**The health effects of air pollution are well documented, and politicians have known about its devastating health effects for well over a decade, yet there is no comprehensive plan in place to protect people from this harm.**

The former Northamptonshire County Council received notice of six Air Quality Management Areas (AQMAs) in Northampton in 2006. The former council and the new unitary council have a legal obligation to develop an action plan in response. They were permitted 18 months - It's been 17 years.

We don't know why they haven't and aren't taking action. We can only assume that they do not believe the health of Northampton's residents is a priority.

The local Council acknowledge that action needs to be taken locally – but so far no action has been taken to clean up our toxic air.

Tackling air pollution in Northampton would save lives. It would also help West Northamptonshire Council take a step towards achieving their pledge to reach Net Zero carbon emissions by 2030 and show that they're taking toxic air seriously.

### Why are we calling for the council to take action?

We think the Council should do something to protect the people of Northampton.

## **What is air pollution. Why are we top and what is toxic about Northampton's air?**

The main source of air pollution in the Borough is road traffic emissions from vehicles on major roads, notably the M1, A43, A45, A4500, A5101 and A5123. Traffic emissions are a major source of nitrogen (NO<sub>2</sub>) and particulate matter of different size fractions (PM<sub>10</sub> and PM<sub>2.5</sub>) (Extract from WNC Air Quality Statement 2020)

## **Legal targets in the UK are failing people's health. Targets for fine particulate matter are twice as high as those recommended by experts at the WHO.**

Three quarters of England's local authorities have cleaner air than Northampton. The Government promised that Northampton's level of fine particulate air pollution would be made illegal when the Environment Bill was due to become law in 2021 **but** in January 2021 two amendments to reduce the current limit on fine particles from 25 to the WHO recommended 5 µg/m<sup>3</sup> of background PM<sub>2.5</sub> were rejected by the Minister, Rebecca Pow. She wants to "seek expert input and stakeholder views to develop not just one but two legally binding air quality targets".

The WHO has reduced the guideline for annual average exposure to PM<sub>2.5</sub> from 10 to 5 micrograms per cubic metre (µg/m<sup>3</sup>). The WHO classified these particles as cancer-causing in 2013. For NO<sub>2</sub>, the WHO has cut the annual average limit from 40 to 10 µg/m<sup>3</sup>.

<https://www.theguardian.com/environment/2021/sep/22/who-cuts-guideline-limits-on-air-pollution-from-fossil-fuels>

There are different components involved in air pollution FPM/Nitrogen Dioxide/Sulphur Dioxide/Benzene, some of the most dangerous to us are:

## **Fine particulate matter** in particular something called **PM2.5 is some of the most damaging pollution**

Particulates are microscopic byproducts produced by burning fossil fuels that can be harmful to the human body and exacerbate existing health problems and increase the chance of heart attacks, strokes and lung and circulation diseases.

**FPM - consists of tiny particles known as PM2.5s which have a diameter of less than 2.5 micrometres across - that is one-four-hundredth of a millimetre, or about 3% of the diameter of a human hair!**

**PM2.5 particles are so small they can lodge in the lungs and even pass into the bloodstream. There's evidence they can damage blood vessels and other organs.**

**The current legal limit for PM2.5 in the UK is twice the WHO recommendation, at 20 micrograms per cubic metre.** Source: <https://www.bbc.co.uk/news/science-environment-56013240>

PM<sub>2.5</sub> comes from Domestic wood and coal burning (38%), industrial combustion (16%), road transport (12%) and industrial processes (13%).

**Nitrogen Dioxide**– is one of the toxins within the fine particulate matter this is a poisonous byproduct produced by diesel engines that is harmful in high concentrations. Traffic produces much of this in particular tiny particulates from exhaust fumes and tyres. At the roadside 80% of this pollution comes from road transport.

There are a few things contributing to the toxicity of Northampton air. Exhaust fumes are kicking out CO2 and other harmful chemicals. Another is the very small particles which come off tyres of the vehicles as they travel. They are incredibly small just 3% of the diameter of a strand of hair. Because they are so small our bodies natural filtering system doesn't stop them from entering our lungs.

### **What does this mean for the people of Northampton?**

According to one study by the [British Heart Foundation](#), approximately one in every 20 deaths in Northampton can be linked to air pollution. Source: <https://housefresh.com/secondhand-smoke-world-map/>

*To illustrate the harm done through breathing airborne particulates, experts recently used this data to calculate the number of cigarettes the resident of a location would have to smoke to do the same degree of health damage as simply breathing. Breathing Northampton's air—with the current levels of particulate contamination—has the same health outcome over a year as smoking 189 cigarettes.*

This extremely distressing fact means that two days after being born in our town, in the Barratts Maternity Unit a baby will have breathed the equivalent toxins of smoking its first cigarette.

There is no safe amount of toxic air for anyone to breathe in, and levels in the UK are extremely damaging to health. The majority of this pollution is coming from vehicle emissions, especially from older diesel engines.

Now, the British Heart Foundation say they have analysed mortality rates in the UK to determine that 1,700 deaths in Northamptonshire will be caused by air pollution in the next decade. Source: ['As many as 1,700' deaths in Northamptonshire could be down to air pollution in the next decade, charity warns \(northamptonchron.co.uk\)](#)

*Further dangers of air pollution include cancer - "fine particulates contained in car fumes "awaken" dormant mutations in lung cells and tip them into a cancerous state."* Source: <https://www.theguardian.com/science/2022/sep/10/cancer-breakthrough-is-a-wake-up-call-on->

Prof Tony Mok, of the Chinese University of Hong Kong and who was not involved in the research, said: "We have known about the link between pollution and lung cancer for a long time, and we now have a possible explanation for it. As consumption of fossil fuels goes hand in hand with pollution and carbon emissions, we have a strong mandate for tackling these issues – for both environmental and health reasons."

Source: <https://www.theguardian.com/science/2022/sep/10/cancer-breakthrough-is-a-wake-up-call-on-danger-of-air-pollution>

### **Health Impacts: The science**

**Toxic air** can stunt the growth of children's lungs, worsen existing lung conditions like chronic obstructive pulmonary disease (COPD) and asthma, and cause new lung conditions like lung cancer. Air pollution increases the chances of a person developing cardiovascular disease and may be associated with cognitive decline, including dementia.

## **Health effects of air pollution**

### **Short-term effects**

- inflammation and irritation of the lining of your airways, which can cause symptoms such as coughing and difficulty breathing
- asthma attacks, heart attacks or COPD flare-ups for people with lung or heart conditions, and potentially hospitalisation

### **Long-term effects**

- increased chance of early death, lung cancer and cardiovascular disease
- damage to developing lungs and brains during pregnancy
- increased chance of low birth weight and premature birth
- likely to cause new cases of asthma stunted and smaller lungs in children, increased lung infections and chance of future lung problems potentially increased risk of type 2 diabetes and dementia

Source: <https://www.asthmaandlung.org.uk/what-effect-does-air-pollution-have-your-health>

### **Other references**

[https://www.blf.org.uk/sites/default/files/Air%20pollution\\_v4\\_2017\\_PDFdownload.pdf](https://www.blf.org.uk/sites/default/files/Air%20pollution_v4_2017_PDFdownload.pdf)

<https://www.theyworkforyou.com/divisions/pw-2020-02-05-32-commons/mp/25686>

<https://www.bbc.co.uk/news/uk-england-northamptonshire-58788905>

<https://www.northampton.gov.uk/downloads/file/10176/northampton-low-emission-strategy-2017---2025>

<https://www.northamptonchron.co.uk/news/transport/air-pollution-in-northampton-the-10-neighbourhoods-with-the-worst-air-quality-including-abington-semilong-and-town-4046566>

<https://www.northantslive.news/news/northamptonshire-news/northampton-people-indirectly-smoke-189-8168681>

<https://www.northamptonchron.co.uk/news/residents-march-on-council-hq-demanding-cleaner-air-in-northampton-4190936>

On 5 Feb 2020 Andrew Lewer voted not to call on the Government to develop and implement a plan to eliminate the substantial majority of transport emissions by 2030.

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