



Let me breathe.

Why voting 'yes' for a £3 billion transport revolution across Greater Manchester will deliver cleaner air, a safer future and better health for all – a campaign briefing from Clean Air Now.



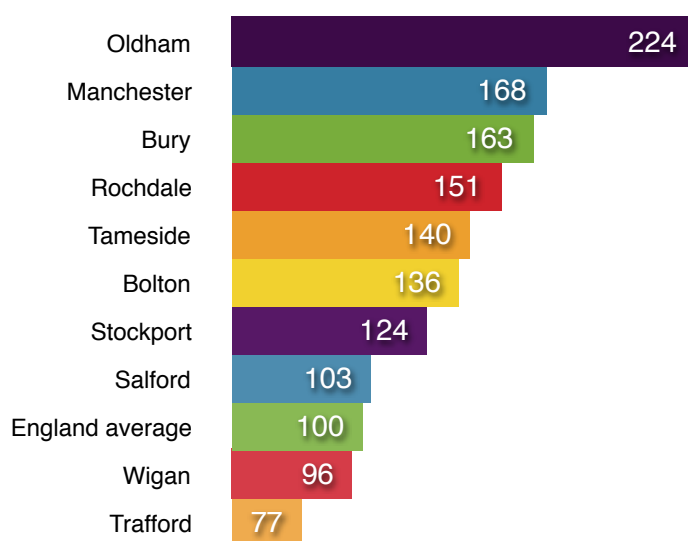
Let me breathe

Cleaner air, a safer future & better health for all

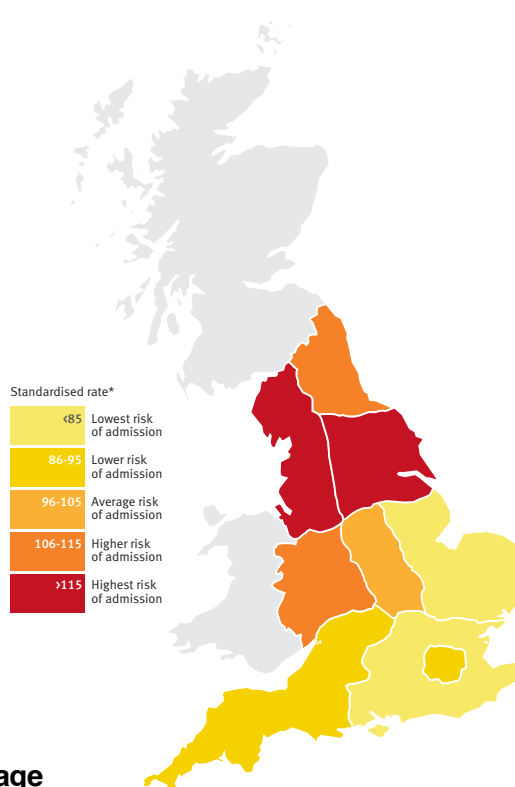
Greater Manchester, do we have a problem?

Across our city region's Primary Care Trusts (PCTs), eight out of our ten PCTs recorded hospital admissions for childhood asthma in 2006-07 at a rate higher than the national average. In Oldham, the admissions for children under the age of 14 were more than double the national average while Manchester, Bury and Rochdale showed a rate of admissions running more than 50% above that seen across the rest of the country. Only Wigan and Trafford bucked this trend.¹

Hospital admissions for childhood asthma



Regional differences in risk of emergency hospital admission for asthma in England.



Across England as a whole, there is a marked difference between emergency admissions for asthma in the North of England and the rest of the country and as a whole Greater Manchester has **double the national average** of hospital admissions for childhood asthma.²

The city's health record is equally challenging on obesity and levels of physical activity, and on levels of mental wellbeing, all of which could be improved if we take the opportunity to fight congestion and invest in public transport.

¹ Asthma UK, Hospital admissions for asthma by Primary Care Trust 2006-07 (Children 0-14)

² Asthma UK, taken from Department of Health, Hospital Episode Statistics, 2004 15.

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Asthma is a rapidly increasing problem for individuals, families and the health service. Every eight minutes a person with asthma requires emergency treatment to help them breathe, at an estimated cost of £58.3 million a year. In England's Northwest, hospital admissions are 65% higher than in the east of the country.³

More than two out of five hospital admissions for asthma in 2004 were for children aged 15 years or under 2. That means that, on average, **every 18 minutes a child with asthma is admitted into hospital** needing emergency hospital care to help them breathe.⁴

Asthma and congestion

Given the dramatic increase in levels of childhood asthma over the last half-century, an extensive amount of research is being conducted into genetic, lifestyle and environmental factors that may or may not contribute to asthma. **The increase in incidence of asthma is chilling: in 1964 childhood asthma stood at less than 5%; in 1999 this had increased to more than 25%**⁵

A number of studies have revealed that traffic pollution and congestion can have a detrimental impact on human health and in particular with regard to respiratory illness. According to a groundbreaking study by the University of Nottingham for example, **living within approximately 90 metres of a main road** is associated with a proximity-related increase in the risk of wheezing illness in children.⁶

Another study by researchers at the University of Southern California recently found that children with a higher genetic susceptibility to asthma who lived in a home near a main road had a **nine times greater risk** of suffering with asthma.⁷

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Traffic pollution is often cited by experts as being linked to an increased incidence of asthma attacks rather than increased overall rates of asthma, as the assistant director of research at Asthma UK said in a recent press interview: **"living near a busy road was associated with worsening of asthma symptoms but it was unclear which chemicals were to blame."**⁸

And again the closer young children live to a main road, **the greater their risk of a coughing attack**, according to a study presented to the British Thoracic Society in 2003. Researchers from the University of Leicester studied 3,410 children and found that for every 100 metres they lived closer to a busy main road the incidents of coughs increased by up to 3%. The children studied were between one and five years of age.⁹

³ The Asthma Divide - Inequalities in emergency care for people with asthma in England. Asthma UK 2007

⁴ The Asthma Divide - Inequalities in emergency care for people with asthma in England. Asthma UK 2007

⁵ Shaping the future of asthma research, Asthma UK 2004

⁶ Venn et al, Am J Respir Crit Care Med Vol 164. pp 2177–2180, 2001

⁷ BBC News, Pollution 'may boost asthma risk', 25 August 2007

⁸ BBC News, Diesel traffic makes asthma worse, 6 December 2007

⁹ The Western Mail, Coughing attacks 'linked to heavy traffic', 3 December 2003

Other health impacts

In addition to reducing a population's levels of physical activity – and consequently being a contributor to a range of health impacts including obesity – there are other direct health impacts from congestion across conditions such as **cardiovascular health and mental wellbeing**.

In February 2008 a team of researchers from New York University for example revealed alarming new evidence of the way air pollution damages the cardiovascular system. Their presentation to the American Association for the Advancement of Science stated that microscopic soot particles from vehicle exhausts killed an estimated 30,000-40,000 people a year in the U.S., and that breathing the air in New York City was similar to **living with a smoker in terms of risk from heart disease**.¹⁰

Another study released by a team from Harvard University in September 2008, reported on BBC News revealed that air pollution – from traffic – **hinders the heart's ability to conduct electrical signals**.¹¹ The Harvard study found that exposure to small particulates - tiny chemicals caused by burning fossil fuels - caused worrying changes on the heart traces of 48 heart patients. The electrocardiograms of the patients studied (who had recently been hospitalised for heart attack, unstable angina or worsening symptoms of coronary heart disease) showed unusual changes called ST-segment depression - characteristic of poor oxygen supply to the heart.

Excessive noise can impact on speech development in children and can increase aggressive behaviour.

There are other studies that underline these findings around heart disease. Germany's National Research Centre for Environment and Health recently found that **people caught in traffic jams are three times more likely to have a heart attack** in the first hour than those who are not stuck in traffic. Scientists at Kaoshiung Medical University, Taiwan recently found higher hospital admission rates in cities where pollution is high. And a study by University of Naples found that fumes from cars and other vehicles can **lead to male fertility damage**.

Beating congestion really could save lives. At the time of her study's launch, the NYU lead researcher, Dr Diane Gold said that "Our study provides additional rationale to **avoid or reduce heavy traffic exposure**... even for those without a heart attack, since traffic exposure involves pollution exposure as well as stress."

And stress is an other important consideration, beyond particulates and pollution. With many commuters stuck in stationary traffic or crammed onto standing room only trains, is congestion also contributing to mental ill health too? Stress is now in widespread use as a reason given for illness and time off work. Levels have risen exponentially in the past decade and continue to rise.

Wellbeing and mental health is also disrupted by the dramatic impact of noise pollution from heavy traffic levels. **Excessive noise can impact on speech development in children and can increase aggressive behaviour in (predisposed) individuals.**

¹⁰ Financial Times, Car fumes may make heart beat irregularly, 19 February 2008

¹¹ BBC News, Pollution Hinders Hearts, 9 September 2008

Voting 'YES' for a cleaner, healthier Greater Manchester

In our city region, car ownership is set to increase by 25% across the next decade. Congestion is already hitting peak time commuters and according to the Greater Manchester Passenger Transport Executive (GMPTE) since 2000, rush-hour traffic has slowed by 20%. **However, it is estimated that as soon as the £3 billion investment in public transport is introduced, coupled with a limited congestion charge, traffic levels will drop by 10-15%.**

The double jeopardy of increased car usage and a strained transport system have already led to alarming trends: a consequent reduction in the levels of physical activity for our residents and workers and lower air quality results across our city region.

Evidence from public opinion research carried out to prepare Greater Manchester's Transport Innovation Fund (TIF) bid has shown that **carbon emissions and local air quality** were the most important issues identified by both public and business audiences.

The congestion-TIF package forecasts that increased physical activity via public transport and related changes in behaviour could result in as much as a 22% reduction in preventable illness (including the risk of preventable death). In total, studies carried out for GMPTE have suggested that **up to 100 lives could be saved each year through better air quality and higher levels of physical activity.**¹²

Congestion charging has already been proven to improve health. A 2008 study in the Occupational and Environmental Medicine Journal stated that **London's congestion charging has successfully reduced pollution as well as aiding local people's health.** Predicted benefits in the charging zone wards were 183 years of life per 100,000 population compared to 18 years among the remaining wards. In London overall 1,888 years of life were gained. Also, more deprived areas with higher air pollution concentrations experienced greater air pollution reductions and, positively, concurrent mortality benefits.

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Greater Manchester's Transport Innovation Fund proposals – including a limited congestion charge – will make a tangible difference to pollution levels. **Within the charging zone area the package will deliver a reduction in carbon dioxide emissions of more than 6 %**, helping the city achieve its important climate change targets.

There will be a reduction in the amount of oxides of nitrogen (NOx) and particulate matter (PM10) emitted by road traffic overall, **with a 10% reduction in key areas**, particularly within the M60. However, this does not take account of the air quality effects of 'smarter choices' measures designed to promote significant levels of behavioural change, which will deliver further benefits.

There will also be reductions in **traffic noise levels**, for example 'Trafford Boulevard', of all city region roadways, will experience the most significant noise reduction if a congestion charge is introduced.

¹² Strategic Environmental Assessment of the GM Transport Innovation Fund, Steer Davies Gleave, April 2008



Is a congestion charge too much to pay for clean air?



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Conclusion

If the public across Greater Manchester vote 'YES' in December's referendum then the combined package of £3 billion transport improvements and a limited, peak-time only congestion charge could deliver a tangible set of benefits in terms of air quality and climate change. The improved public transport system, offering for the first time a genuine alternative to the majority of travellers, will immediately start to reduce pollution; the associated congestion charge will offer the necessary inducement to switch to this new, cleaner alternative and will help to get people out of their cars and onto the improved buses, trams and trains. In addition the 'smarter choices' package within the proposals will make a real difference in winning hearts and minds over to greener ways of travelling, including walking, cycling and green forms of commuting such as car sharing.

With traffic levels set to continue to increase, with our public transport system literally beyond full capacity at peak times and with congestion already costing business billions of pounds each year, there is already a powerful case to be made for the Transport Innovation Fund (TIF) proposals: now the vital health and environmental dividend from TIF is the final argument, should it be needed, for voting 'YES' this December.

November 2008//Cleaner Air Now

Clean Air Now is a coalition campaigning for a sustainable transport system that delivers: clean air, safe streets and a better quality of life for the people of Greater Manchester, now and in the future. It is made up of a range of public interest, environmental and transport groups from across Greater Manchester. It supports the Greater Manchester bid into the Transport Innovation Fund and the proposed congestion charge for the City.

www.letmebreathe.org
www.cleanairnow.co.uk