A young child with long hair, wearing a blue sweater, is blowing bubbles. The child's face is in focus, and they are holding a green bubble wand. Several colorful bubbles are visible in the air around the child's face. The background is a clear, bright blue sky.

**EVERY CHILD'S BREATH
IS UNDER THREAT
FROM TOXIC AIR**

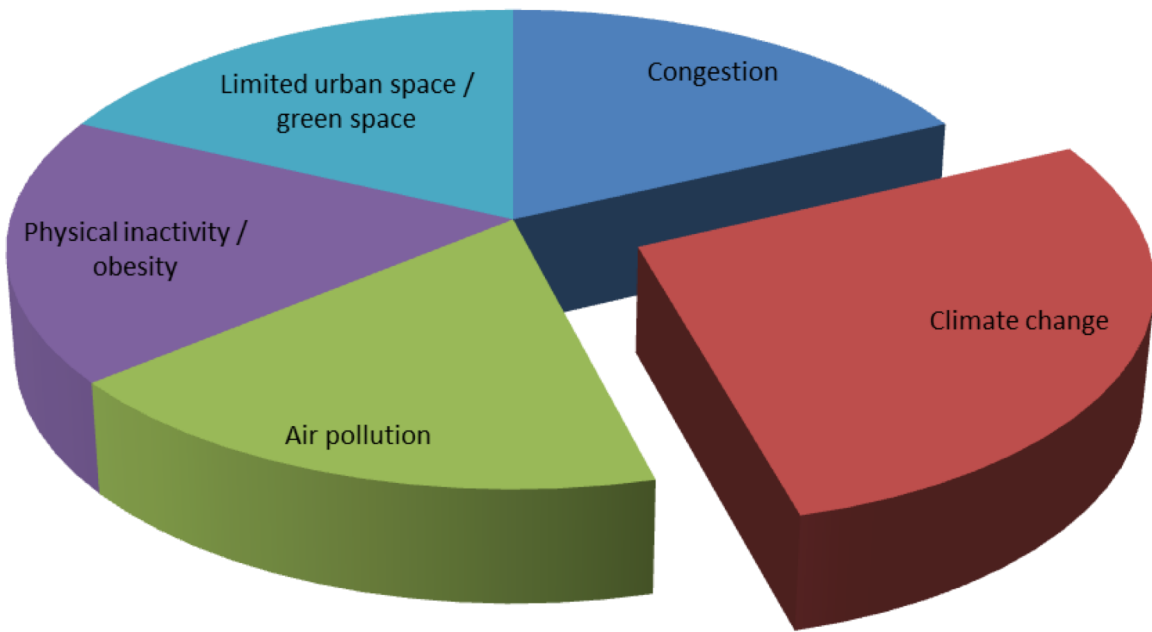
Pete Abel
Volunteer with Manchester Friends of the Earth

Pete Abel, Salford University – Air quality seminar, 21st March 2019



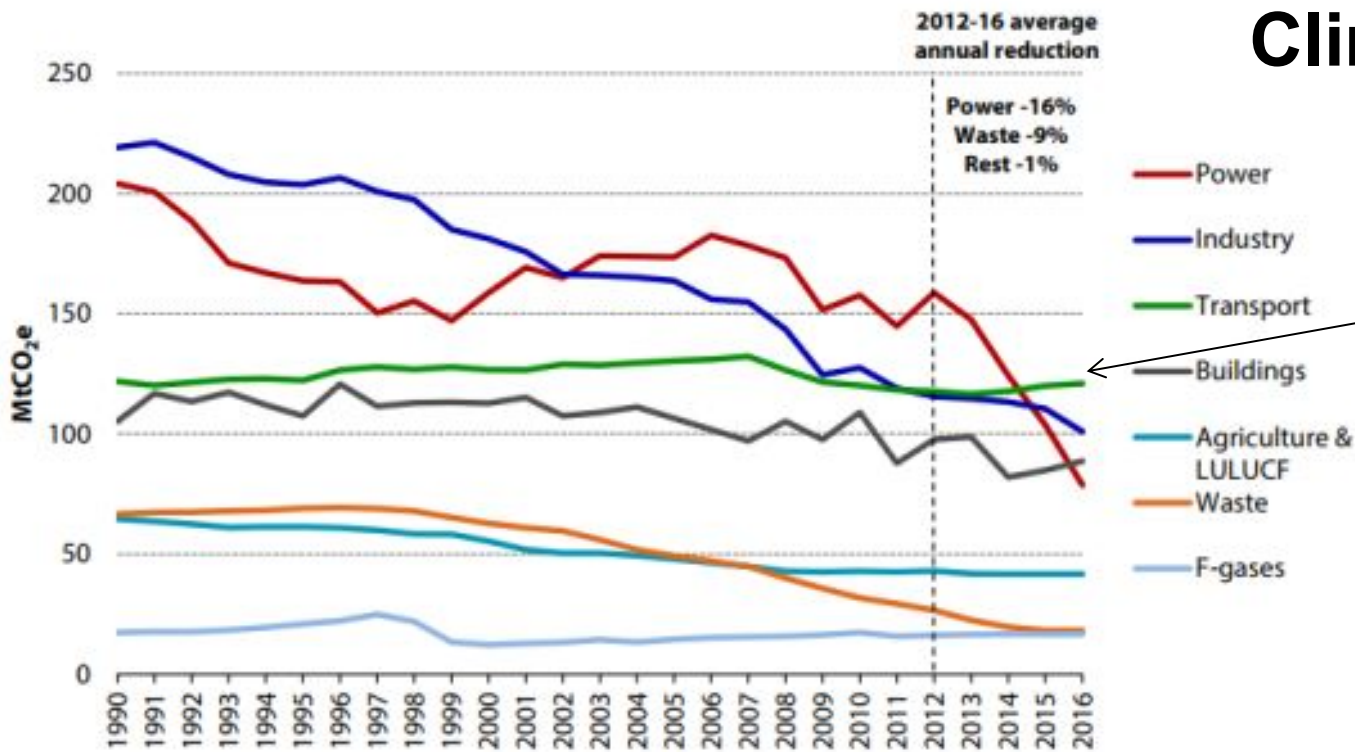
Need to look at the bigger picture – why focussing on one policy objective leads to poor decisions.

Think Diesel !



- **Air pollution**
- **Climate change**
- **Congestion**
- **Physical inactivity**
- **Urban space**

Climate Change



Look at the green line!

Source: BEIS (2017) *Provisional GHG statistics for 2016*; BEIS (2017) *Final GHG statistics for 1990-2015*.

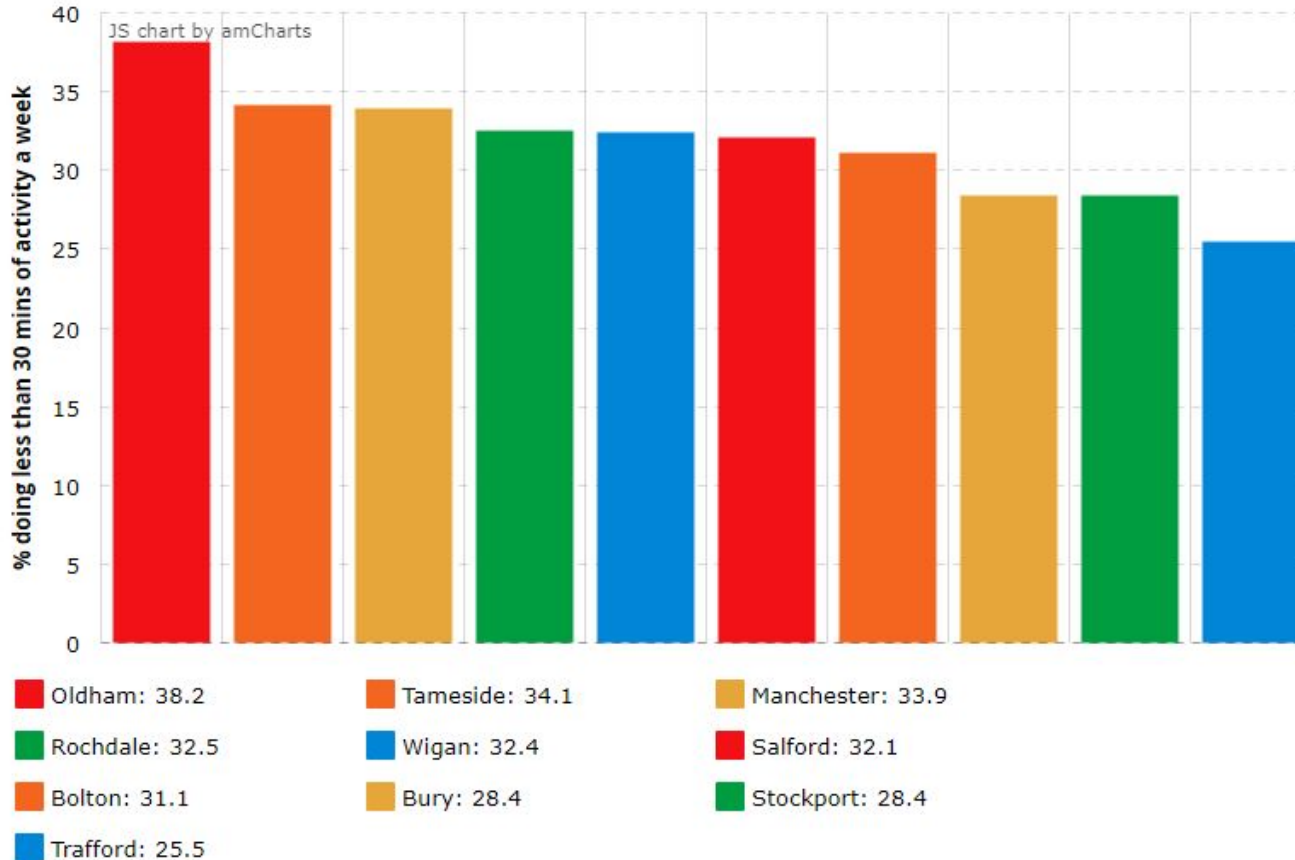
Notes: 2016 emissions are provisional estimates and assume no change in non-CO₂ emissions from 2015.

Transport is the largest climate emissions sector... 26% of the UK emissions and still increasing.

But if we include international aviation & shipping emissions – transport sector contributes nearer 40%

Most inactive people

Physical inactivity



Physical inactivity puts people at greater risk of heart disease, and costs the NHS as much as £1.2 billion a year.

Congestion

"Adding highway lanes to deal with traffic congestion is like loosening your belt to cure obesity."

Lewis Mumford, 1955.
#InducedDemand

THERE IS TOO MUCH TRAFFIC
FOR BILLY TO WALK TO SCHOOL ;
SO WE DRIVE HIM.



Traffic Inducing Traffic

"simply increasing highway capacity to meet an ever growing demand for car travel is not sustainable or, indeed, physically or financially practical". Greater Manchester Transport 2040 Strategy.



Here are 200 people in 177 cars



without cars



on bikes

Images of downtown Seattle's 2nd Avenue
From the International Sustainability Institute's Commuter Toolkit poster



on 3 buses

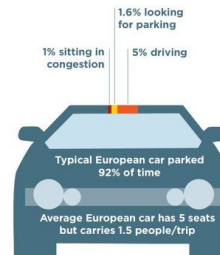
Urban space

"If it is true that all citizens are equal, then a bus with 80 people has a right to 80 times more road space than a car with one person."

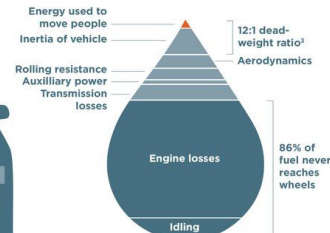
It is estimated that 50% of most city land is dedicated to streets and roads, parking, service stations, driveways, signals and traffic signs. (Ellen MacArthur Foundation)

STRUCTURAL WASTE IN THE MOBILITY SYSTEM

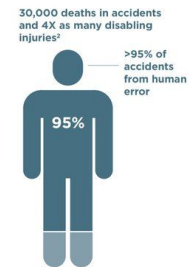
CAR UTILISATION¹



TANK-TO-WHEEL ENERGY FLOW - PETROL



DEATHS AND INJURIES/ YEAR ON ROAD



LAND UTILISATION:

5%

Road reaches peak throughput only 5% of time and only 10% covered with cars then

50%

50% of most city land dedicated to streets and roads, parking, service stations, driveways, signals, and traffic signs

1 Based on car parked number for France and productive vs. unproductive driving time in US. 2 For every death on Europe's roads there are an estimated four permanently disabling injuries. 3 Based on average car weight of 1.4 tonnes and average occupation of 1.5 passengers of 75 kg. Source: EU Commission mobility and transport, accident statistics; www.fueleconomy.gov; EEA car occupancy rates data; S. Heck and M. Rogers, Resource revolution: How to capture the biggest business opportunity in a century; 2014; Centre d'études sur les réseaux, les transports, l'urbanisme et les constructions publiques.

Why does Friends of the Earth campaign on air pollution?

Public Health England: describes air pollution as the biggest environmental threat to health in the UK and says there is strong evidence that air pollution causes the development of coronary heart disease, stroke, respiratory disease and lung cancer, and exacerbates asthma.

According to Transport for Greater Manchester, road transport contributes 75% of emissions of nitrogen oxides and 81% of particulate emissions in the Greater Manchester conurbation.

Road transport also accounts for 32% of carbon dioxide emissions.

Schools should have 'no idling zones', Public Health England chief says

11 March 2019 | UK

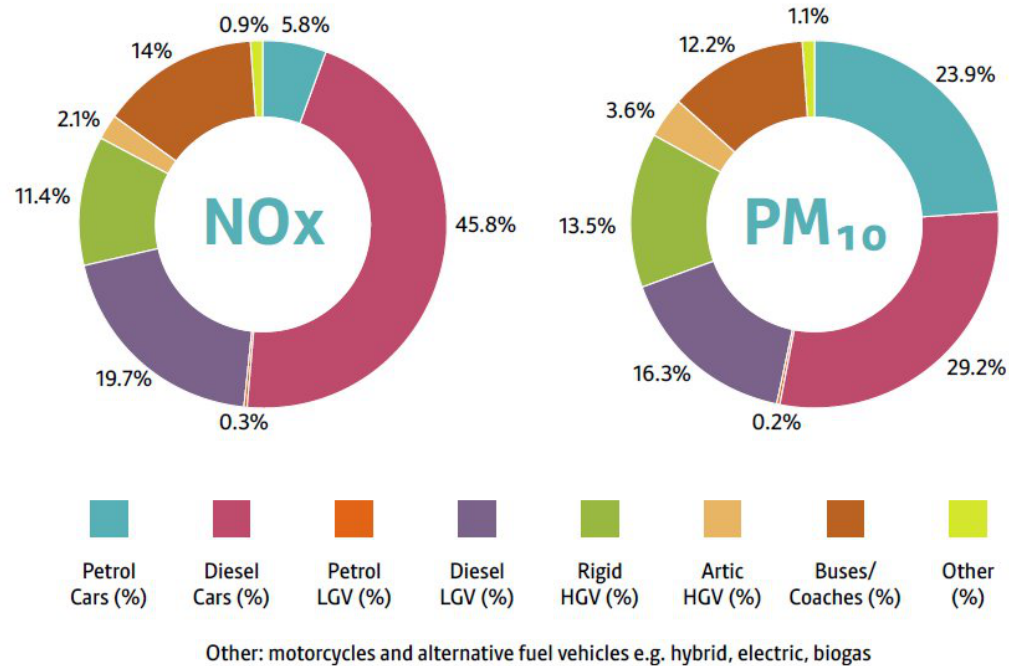


Public health chiefs have proposed a ban on cars idling outside school gates in a bid to cut air pollution.

The influence of cars

"Greater Manchester residents travel 37 million km per day averaging 6.4km per person. **77%** of all kilometres travelled are done so by car (either as driver or passenger)." (Electric Vehicle Update – GMCA, 19/1/2018)

Figure 4: Proportions of NO_x and PM₁₀ Emissions from Road Sources



Private cars typically represents >70% of the vehicle movements on most roads, and so the influence of cars is significant in most areas where high pollutant concentrations have been identified. Furthermore, the large proportion of cars also influences areas of congestion due to the road space taken up by the vehicles. (Greater Manchester Low Emissions Strategy, p56)

Poor air quality is a health inequalities & social justice issue

Vulnerable groups – the very young, older people and people with pre-existing health issues such as respiratory conditions – are disproportionately affected by air pollution.

Many transport-related pollutants are disproportionately concentrated in deprived areas in Greater Manchester.

Health inequalities are often greater in areas with the poorest air quality.

“communities that have access to fewest cars tend to suffer from the highest levels of air pollution, whereas those in which car ownership is greatest enjoy the cleanest air.”
(Mitchell & Dorling, 2003)

<u>Area</u>	<u>Car or van availability</u> <u>Households /</u> <u>number</u>	<u>No cars or vans</u> <u>in household</u> <u>(percentage)</u>
GM	1128066	30.60%
<u>Bolton</u>	116371	28.30%
<u>Bury</u>	78113	23.90%
<u>Manchester</u>	204969	44.50%
<u>Oldham</u>	89703	31.20%
<u>Rochdale</u>	87552	31.40%
<u>Salford</u>	103556	36.90%
<u>Stockport</u>	121979	22.00%
<u>Tameside</u>	94953	29.60%
<u>Trafford</u>	94484	21.70%
<u>Wigan</u>	136386	24.60%

Table KS404EW. 2011 Census: Car or van availability, local authorities
in England and Wales

Nearly a decade of failure!

The UK was supposed to meet air quality limit values by 2010.
This was later extended to 2015.

The Government must act now to tackle this public health emergency. (DEFRA Select Committee, 27 April 2016)



House of Commons
Environment, Food and Rural
Affairs Committee

Air quality

Fourth Report of Session 2015–16

ClientEarth court case against UK Government, February 2018)

- aim to achieve compliance as soon as possible;
- choose a route to compliance which reduces human exposure as quickly as possible;
- ensure that compliance with the limit values is not just possible but likely.
- *the determining consideration has to be the efficacy of the measure in question and not their cost*

Air pollution – why does it matter?

Greater Manchester has the highest rates of emergency admissions to hospital for asthma in the whole country.

Damage to young children's health, lung and mental development.

Around 2000 premature deaths due to air pollution each year in Greater Manchester

Estimated cost to Greater Manchester of over £1 billion.



 News ▶ Greater Manchester News ▶ Andy Burnham MP

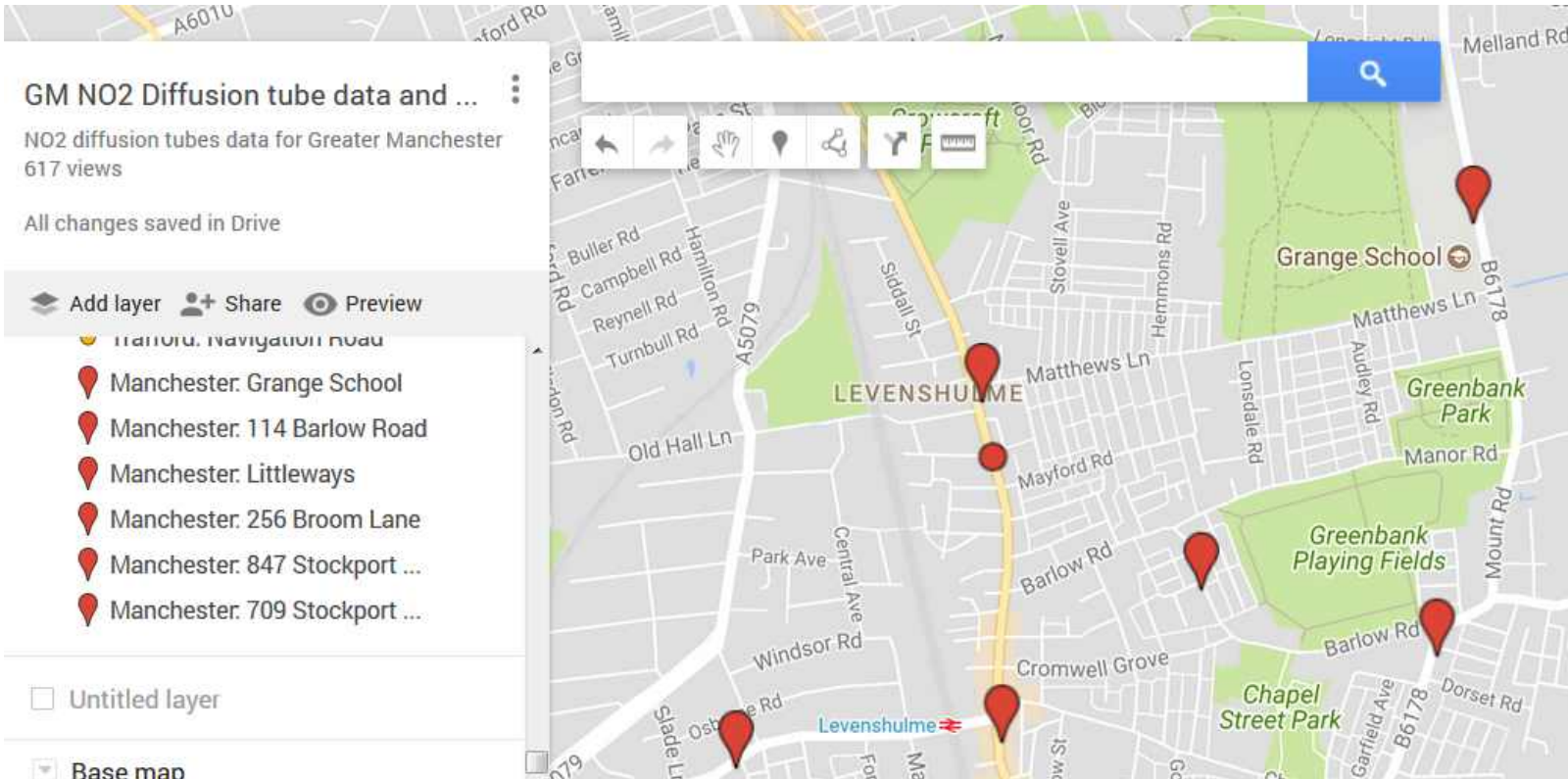
Greater Manchester's deadly air pollution crisis is worse than London, new research has warned

Local strategies and leaders have failed, so far, to recognise the urgency of the situation, the report says

What has FoE been doing?



Citizen science: NO2 monitoring



Location	Your results	Adjusted results
Grange School, Matthews Lane, M12 4GR	44.62	40.16
114 Barlow Road M19 3EF	46.93	42.24
<u>Littleways, 80 Albert Road M19 2FU</u>	57.22	51.50
256 Broom Lane, M19 3NA	68.41	61.57
847 Stockport Road M19 3PW	77.96	70.16
709 Stockport Road M19 3AG	80.46	72.41

School Streets

November 2018



Briefing

Guide for local groups on School Streets

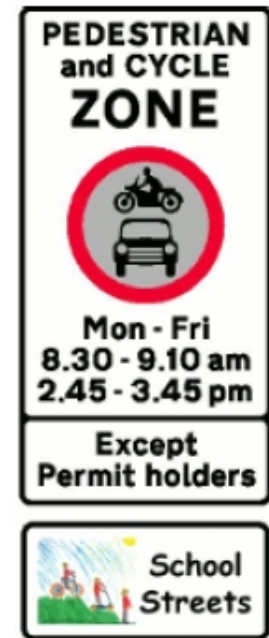
This briefing for Friends of the Earth local groups and activists outlines how to campaign for a School Street, with best practice examples and suggestions on how to get support from Friends of the Earth.

Please email your named Friends of the Earth contact or cleanair@foe.co.uk if you'd like further advice on School Streets. If you want to find out how you can campaign on air pollution more widely [check out our A-Z campaign guide](#).

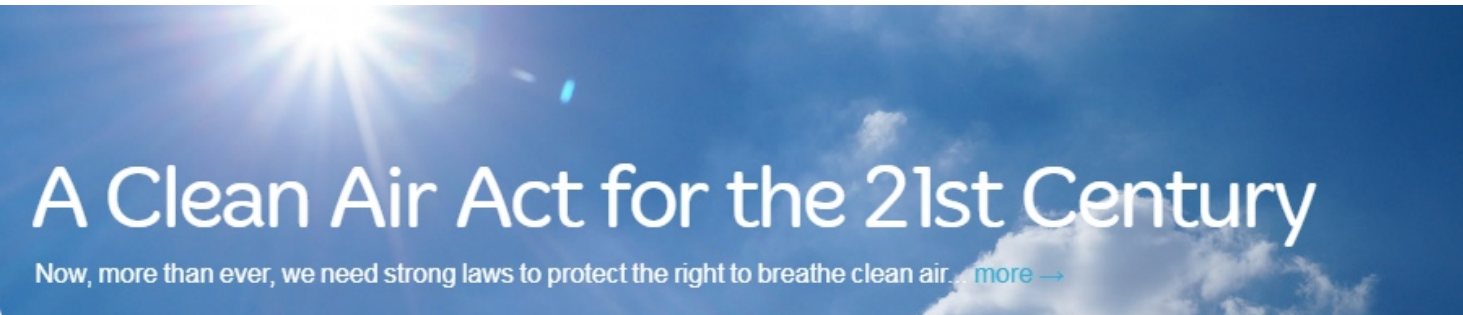
* Research by Unicef reveals that during the school run and while at school, children are exposed to more than 60% of the air pollution they breathe in each day even though these periods account for only 40% of their day.

* Evidence has shown that some primary school children living in highly polluted urban areas have up to **5% less lung capacity than normal**, putting them at risk of lung disease in adult life and early death.

* **Children living in highly polluted areas are also four times more likely to have reduced lung function in adulthood.** Thankfully, improving air quality for children has been shown to halt and reverse this effect.



Campaigning at local, national and international levels



We need a Clean Air Act that will:

Tackle the sources of modern air pollution, such as diesel, and accelerate the shift to zero emissions transport;

Improve and strengthen existing legislation, enshrining the right to breathe clean air into law, so the UK has the most ambitious air quality legislation in Europe;

Make the UK a world leader in clean technology, creating the jobs and industries that will help us, and others, clean up our air.

Government is failing to lead and has pushed responsibility for tackling air pollution onto local councils...

The Secretary of State has the power to require action from LAs “appropriate for the implementation” of the Directive

Ministerial directions have been issued to

- 61 English LA’s**
- 2 Welsh LA’s**

...requiring each to come up with its own proposals for local measures to reduce NO₂



What about Greater Manchester's Clean Air Plan?



“Polluted air is an invisible killer and Greater Manchester needs a wake-up call to what is a growing **public health emergency**.”

(Andy Burnham, 13 February 2017)

“It would be more cost effective to deliver the changes more slowly; however this is a **public health emergency** so action is vital. Option 8 delivers compliance at the **lowest imposed cost**.” (Greater Manchester's Clean Air Plan – Tackling Nitrogen Dioxide Exceedances at the Roadside - Outline Business Case, 1st March 2019)

A public health emergency – but we don't plan to be legally compliant until 2024 !

A child born in GM today would be 5 years old before they can breathe legally 'safe' air, under current [#CleanAirGM](#) plan.

We are failing our youngest

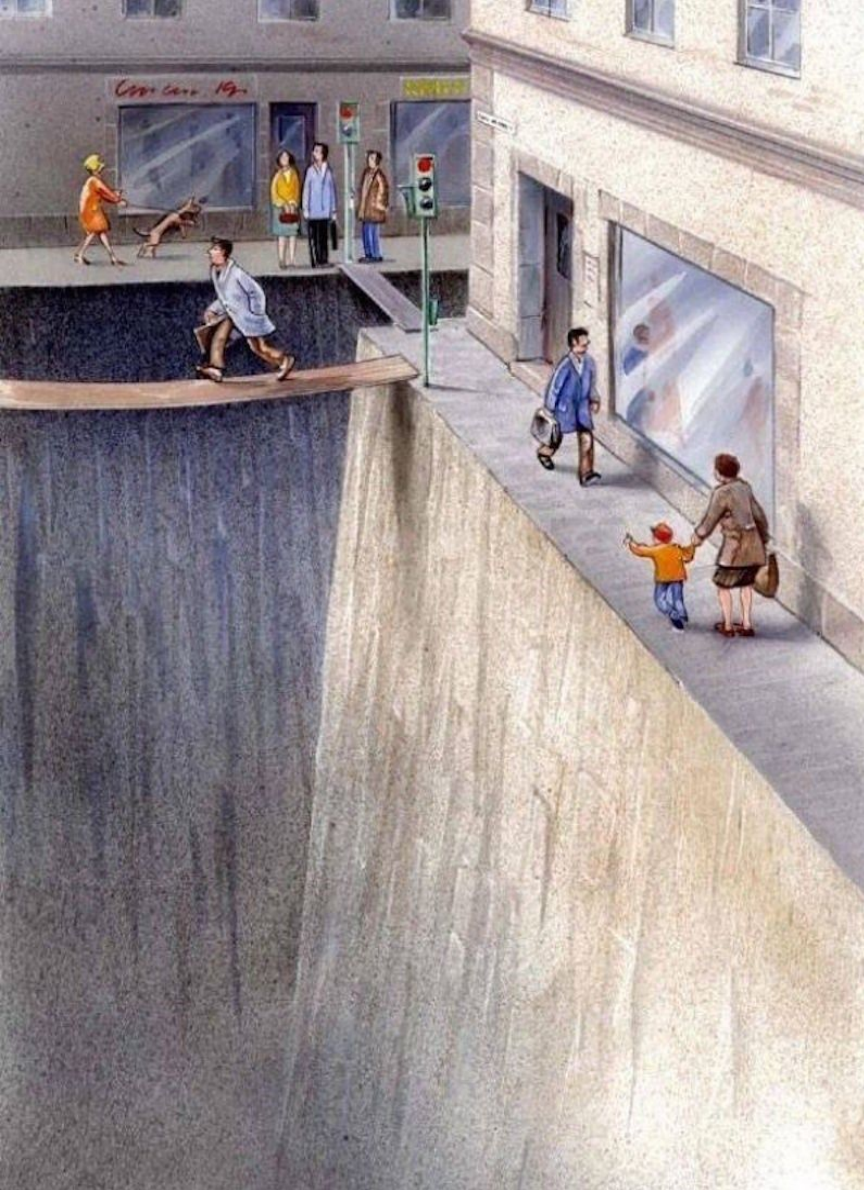
Next steps... we will be:

lobbying GM local council election candidates

encouraging people to respond to the public

challenging the Secretary of State whether the GM plan meets the Government's legal obligations..





If you plan cities for cars and traffic, you get cars and traffic.

If you plan for people and places, you get people and places.

(Fred Kent)

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This ingenious illustration by Karl Jilg reveals how much space we give to cars.