

WHAT about air pollution in West Hampstead and Camden?

West Hampstead Amenity and Transport

Simon Birkett, Founder and Director

Clean Air in London

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Summary

- Air pollution much worse than we realised
- Little or no progress in the last 15 years
- Governments and others ‘understate’ the risks
- Challenges: inequalities, diesel and other
- Priorities following the ‘Year of Air’
- 10 steps for ‘Clean Air in Cities’
- Opportunity

'The London Matrix': Clean air urgently and sustainably in all large cities

	Air quality	Climate change
London (or any city)	2014	
Rest of world		

Successive Governments have hidden the dangers of air pollution

- Governments keep saying air quality: much better than 20 years ago; good across 99% of UK; and takes maximum 6 months off life (of 61 million people)
- Government stopped issuing smog warnings after widespread media coverage of one episode
- Mayor claims improvements based on computer-modelled emissions that conflict with monitoring results
- Officials say “We don’t want to worry people”

Introduction to air pollution

- Health impacts dwarf those known during Great Smog in 1952
- Over twice legal limits and World Health Organisation guidelines near our busiest streets. Laws in place since 1999 for 2010/2011
- Particles: PM_{2.5} and PM₁₀. Combustion gases: nitrogen dioxide (NO₂)
- Health impacts from long and short-term exposure and different types of air pollution. Only smoking causes more early deaths
- Living or going to school within 150 metres of roads carrying over 10,000 vehicles per day could be responsible for 15-30% of all new cases of asthma in children and COPD in adults aged 65 and older
- Diesel causes 91% PM_{2.5} and 95% NO₂ of vehicle exhaust in London
- London and UK have highest levels of NO₂ in Europe

EU legal standards compared to WHO guidelines

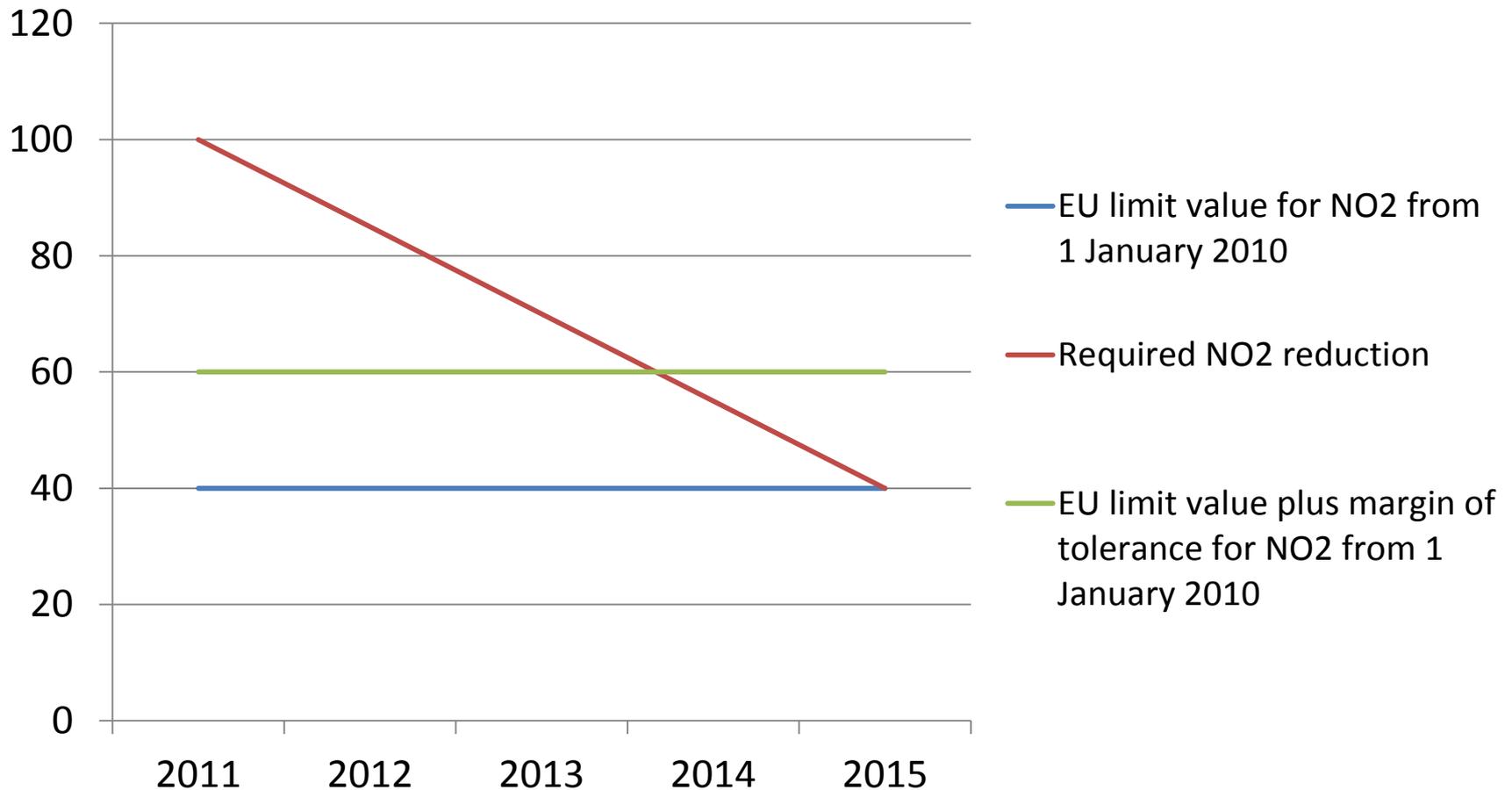
Pollutant	Legal standard		WHO guideline	
	Short term	Annual mean	Short term	Annual mean
Fine particulate matter (PM _{2.5})	<ol style="list-style-type: none"> 25 µg/m³ annual mean to become limit value in 2015 20 µg/m³ exposure concentration obligation based on 3-year average by 2015 Exposure reduction target in percentage by 2020 		25 µg/m ³ 24-hour mean	10 µg/m ³
Particulate matter (PM ₁₀)	35 days over 50 µg/m ³ since 2011	40 µg/m ³ since 2011	50 µg/m ³ 24-hour mean	20 µg/m ³
Nitrogen dioxide (NO ₂)	18 hours over 200 µg/m ³ since 2010	40 µg/m ³ since 2010	200 µg/m ³	40 µg/m ³



ClientEarth win and case referred to CJEU

<http://www.clientearth.org/201307172236/news/press-releases/supreme-court-calls-on-europe-to-fast-track-uk-air-pollution-case-2236>

Concentrations of nitrogen dioxide (NO₂) in micrograms per cubic metre (µg/m³)

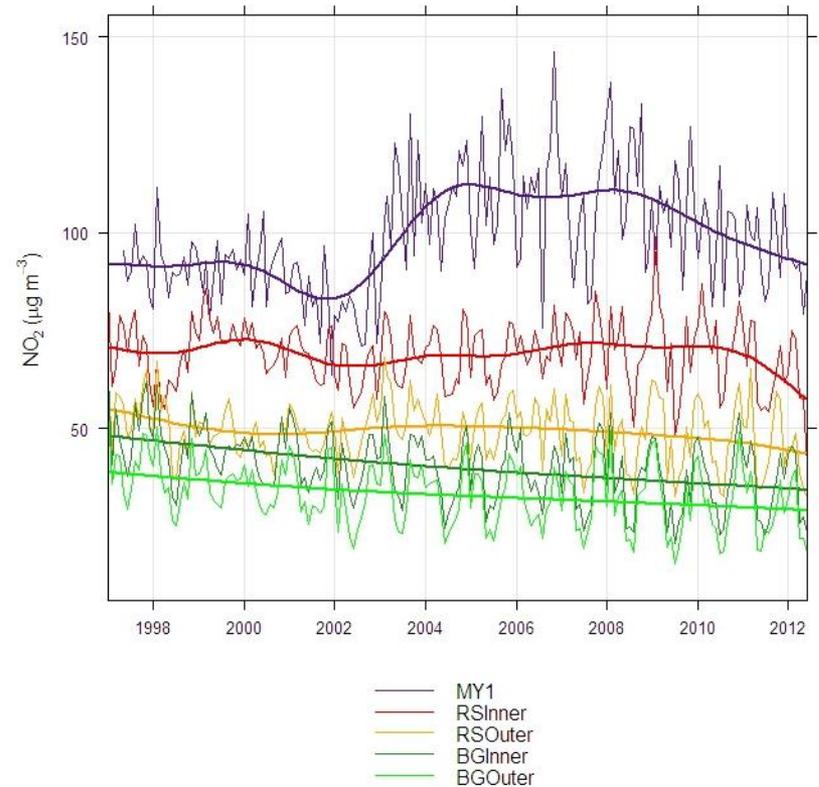
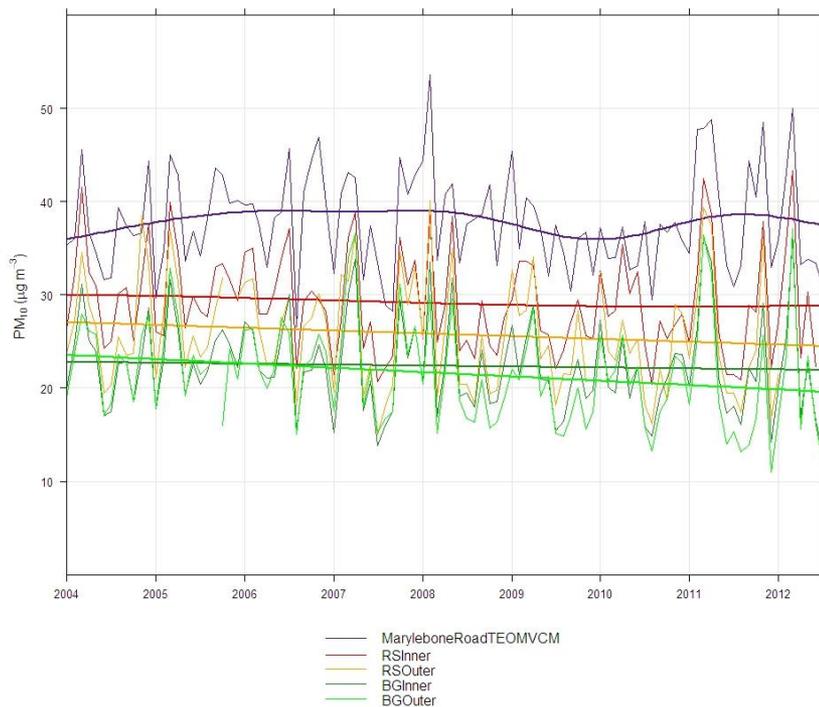




Air pollution is the biggest public health risk after smoking

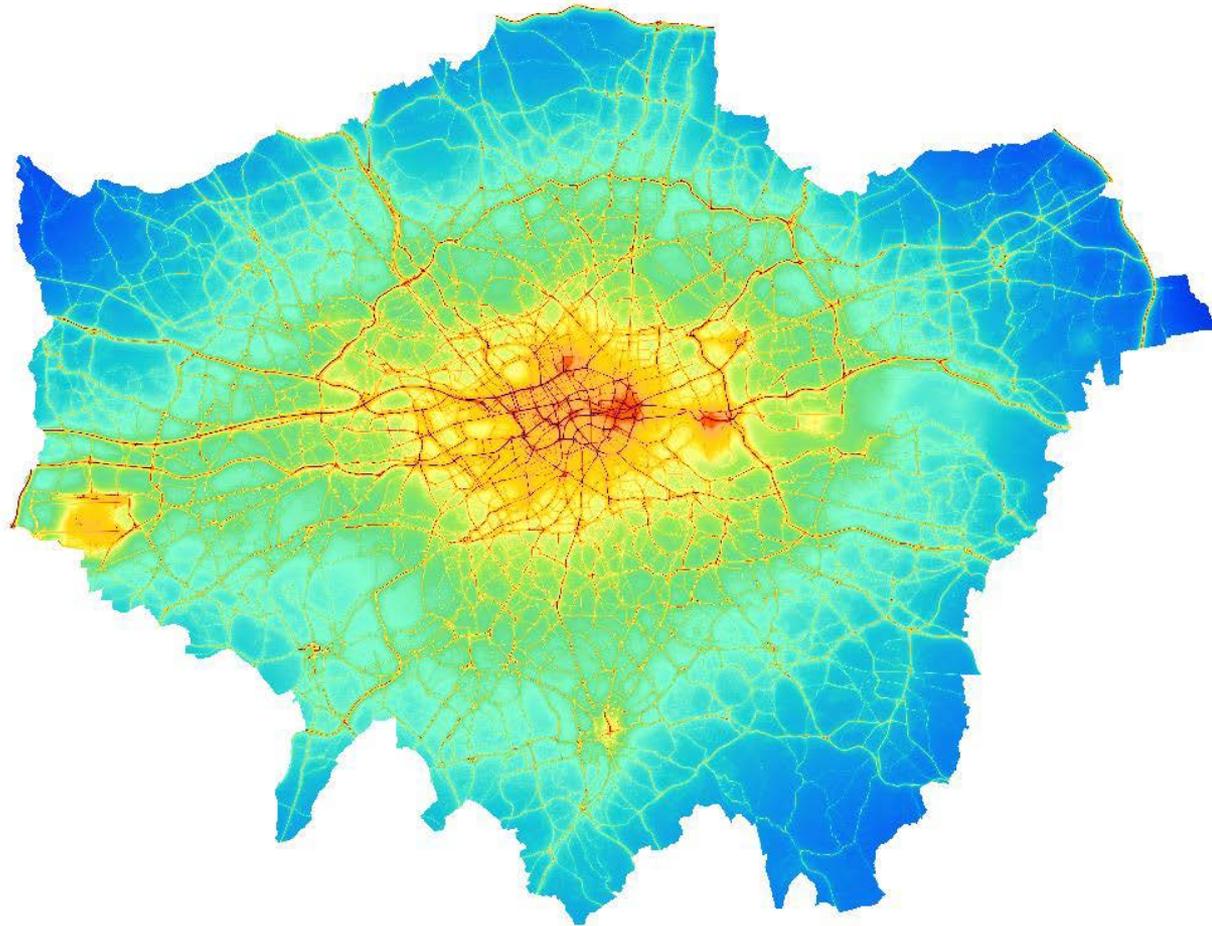
Parliament on one of the smoggiest days in recent years. 15 March 2012

Long-term trends measured by the London Air Quality Network



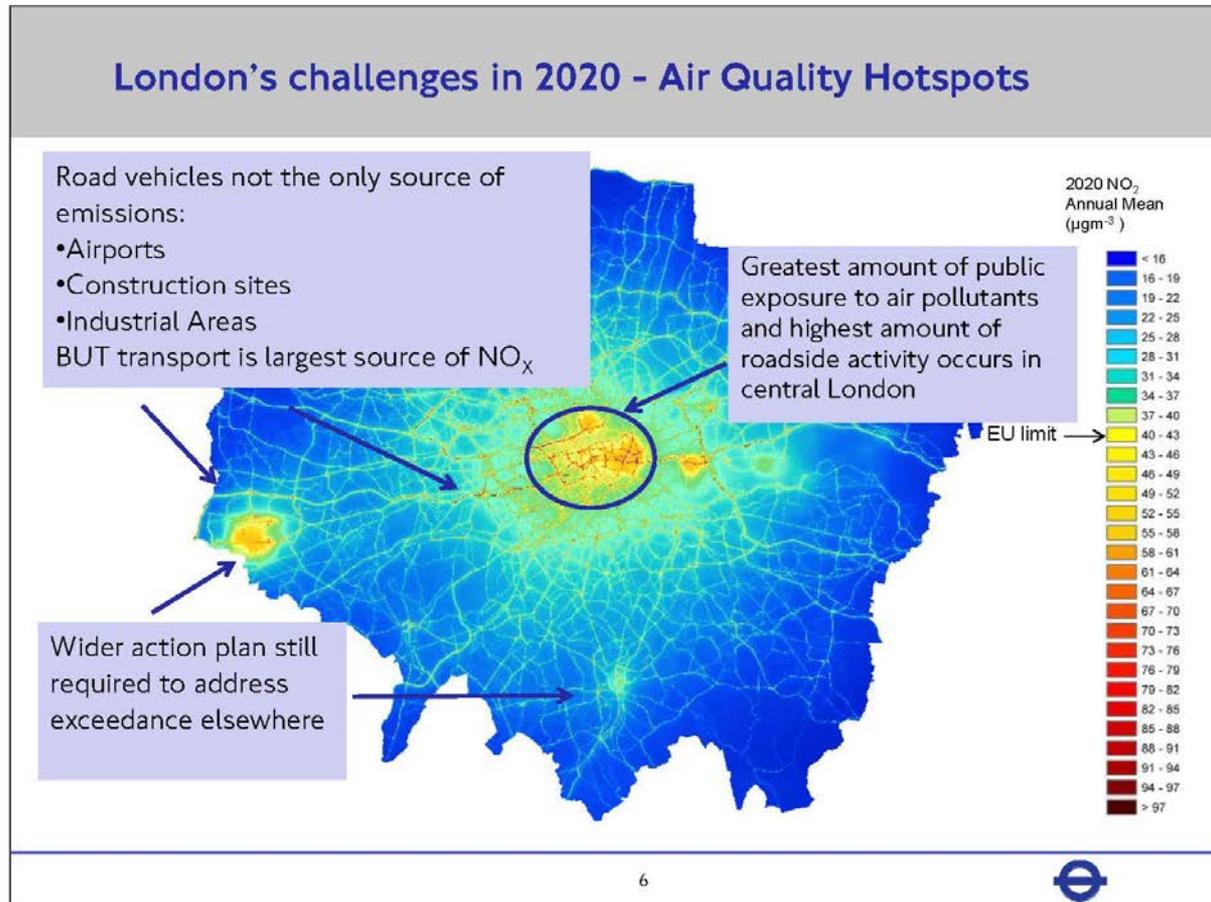
Annual mean NO₂ in London in 2010

Yellow or red exceeded the legal limit



Annual mean NO₂ in London in 2020

Yellow or red will still exceed the legal limit



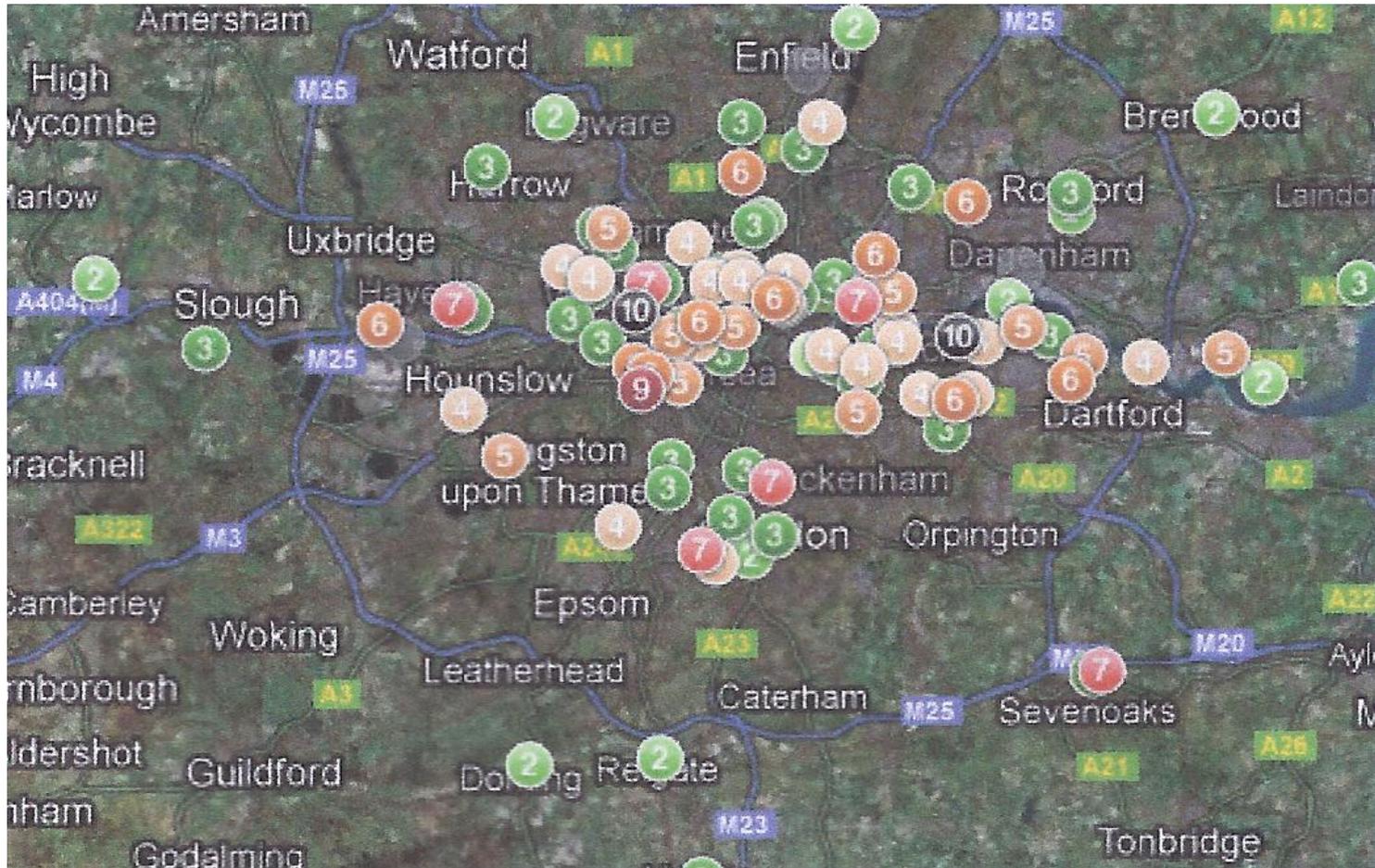


**Pollution Suppressors were used beside key London monitors in 2012.
They reduced particulate matter concentrations by more than 30%**

You Tube: <http://youtu.be/WUkvGkDOyYA>

Worst smog episode since 2006 on eve of Olympics

London Air Quality Network www.londonair.org.uk



West Hampstead

Annual mean nitrogen dioxide in 2010





PUBLIC **POLICY** **SCIENCE**

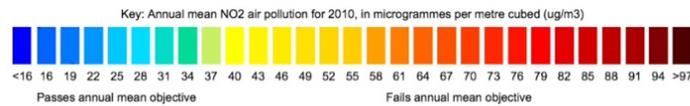
You are on this page: Annual Maps

Annual Pollution Maps

Enter postcode or area:



Modelled annual mean NO₂ air pollution, based on measurements made during 2010.



What is an Annual Pollution Map?

This map shows the annual mean pollution for the chosen species during 2010 in detail across London. Zoom into the map for more detail and to see the annual mean concentration band. The maps also show which areas pass or fail the annual mean objective if there is one.

More Information

- ❏ Why create a pollution map?
- ❏ Why do you show only four pollutants?
- ❏ Why annual averages?
- ❏ Why 2010?

West Hampstead

Most-polluted roads

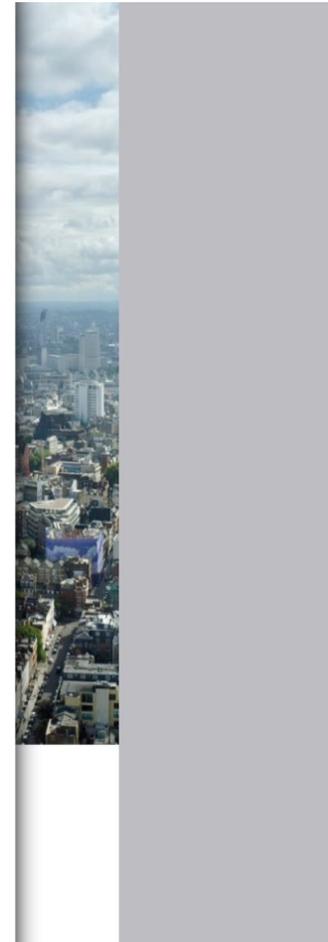
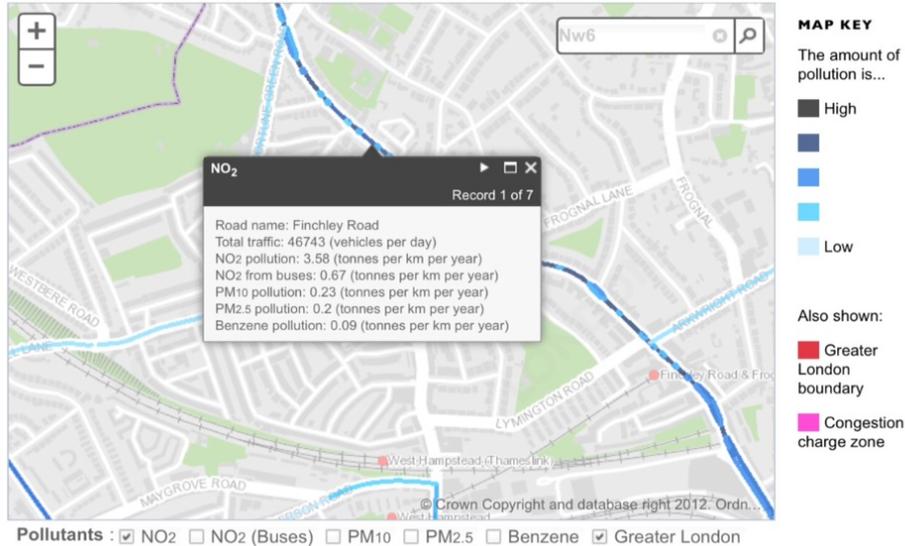
How polluted is my road?

A publication by [Jenny Jones](#), Green Party Member of the London Assembly. This web page reflects my views as an individual Assembly Member and not those of the London Assembly.



Tweet 158 +1 6 Share 40

You can use this map to see the levels of pollutants emitted by vehicles on different stretches of road in London. Pan around the map, or put in your postcode, to find where you live, work or study. Click on any section of road to see the exact quantities of pollution emitted each year, and the numbers of vehicles that travel on that stretch of road every day.



West Hampstead

Schools near busy roads

How polluted is my school?

A publication by [Jenny Jones](#), Green Party Member of the London Assembly. This web page reflects my views as an individual Assembly Member and not those of the London Assembly.



Tweet 69

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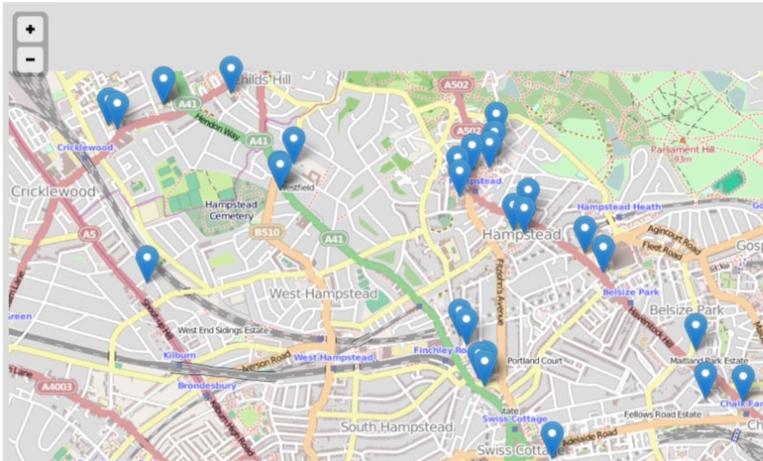
Share 4

Research by the [Campaign for Clean Air](#) found that 1,148 schools in London are within 150 metres of roads carrying 10,000 or more vehicles per day, and a total of 2,270 schools are within 400 metres of such roads.

I have estimated, based on the Mayor's projections for pollution levels, that in 2020 there will still be 928 schools near polluted roads. That means that many children will go the whole way through primary school near polluted roads.

[Scientific research](#) indicates that children exposed to higher levels of traffic-related air pollution at school and home may be at increased risk of developing asthma. Scientists say living near roads travelled by 10,000 or more vehicles per day could be responsible for some 15-30 per cent of all new cases of asthma in children; and of COPD (chronic obstructive pulmonary disease) and CHD (coronary heart disease) in adults 65 years of age and older.

This map shows those schools within 150m of roads with over 10,000 vehicles a day. Click on a number to zoom in and see all the schools in that area.



Clean Air in London achievements

- Over 25,000 unique visitors to website. Over 16,000 Facebook fans and nearly 7,000 followers on Twitter
- 200 publications. Quoted in some 500 media items
- Campaigned for disclosure of 'attributable deaths'
- Found 1,148 schools near busy roads
- Disclosed diesel exhaust on 40,000 road links in London
- Uncovered numerous scandals and wrong-doing
- Offered 45 solutions at the last Mayoral election
- 'Clean Air in Cities' app downloaded by 1,900+ people
- Other NGOs: ClientEarth legal case referred to CJEU

Schools within 150 metres of roads carrying over 10,000 vehicles per day

How polluted is my school?

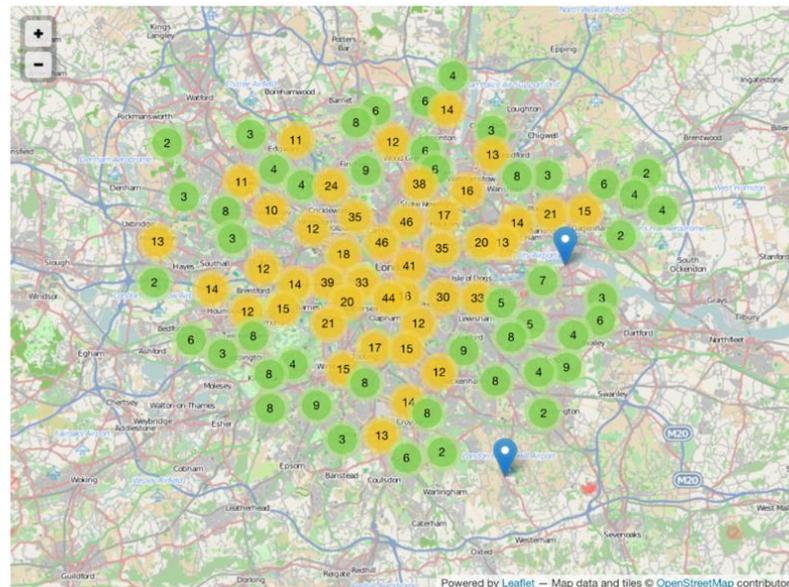
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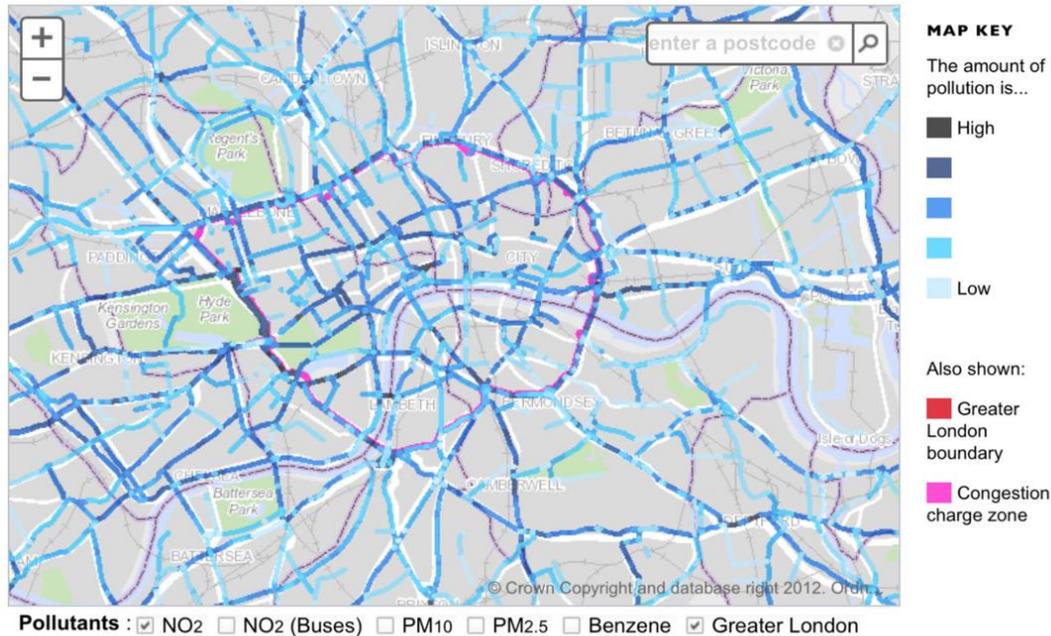
Diesel exhaust along 40,000 road links

How polluted is my road?

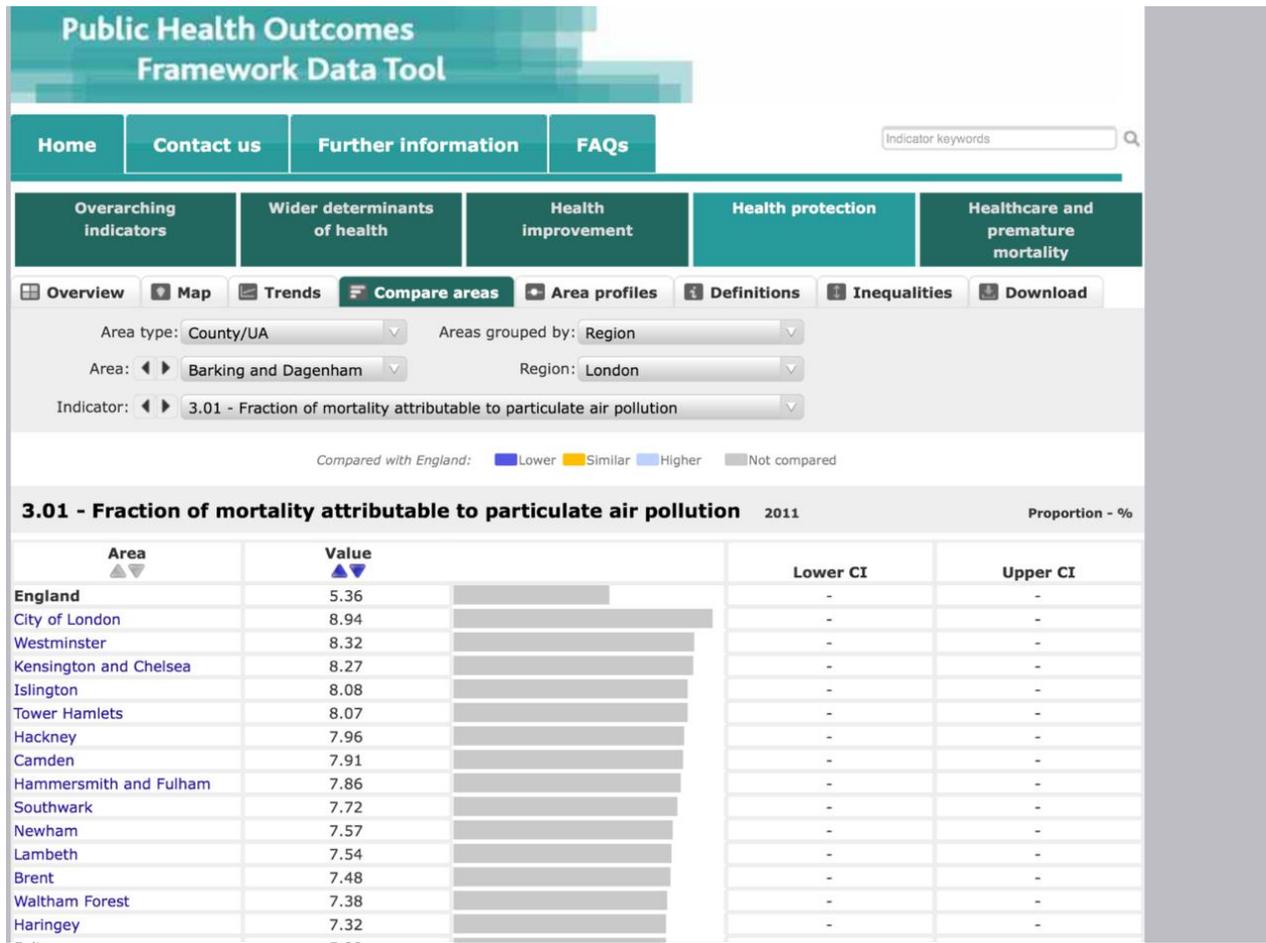
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Deaths attributable to annual mean PM_{2.5} now published for all local areas in England



Communicating long-term health risks.

'Clean Air in Cities' app itun.es/i6xj69k

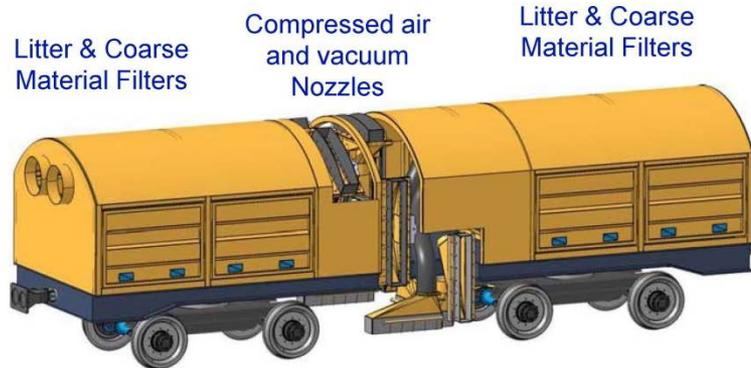


Uncontrolled dust outside the European Commission

2 October 2013

What are we getting?

MPU + TCU + MPU



13



Tunnel Cleaning Train

Levels of so-called 'tube dust' over $1,000 \mu\text{g}/\text{m}^3$ have been measured in the London Underground. See <http://cleanairinlondon.org/hot-topics/tube-dust-is-not-safe/>

We reduce our exposure to indoor and outdoor air pollution



Photo of soot particles in air filter

Photo: Lennart Nilsson

If your office has a mechanical ventilation (i.e. it is likely to contain the necessary ducting) please ask your employer:

“Does our ventilation system include regularly maintained air filters that comply fully with British and European standard EN 13779?”

Any questions: visit
<http://www.keepthecityout.co.uk/>
or call 01706 238 000

Priorities following the 'Year of Air'

We want(ed) continuity and the further tightening of health and legal protections. Specifically:

- Campaign to build public understanding of air pollution
- Enforcement of existing legal standards
- New legislation to reduce emissions at their source
- Continuity and the further tightening of health and legal protections

Commissioner Potočník presented his 'Clean Air Policy Package' delivering on all these asks on 18 December 2013

Commissioner Potočník's package from 'Year of Air'

EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT

Objectives

The long-term strategic objective is to attain air quality levels that do not give rise to significant negative impacts on, or risks for, human health and the environment. There are two general objectives:

- To ensure compliance with present air quality policies, and coherence with international commitments, by 2020 at the latest.
- To achieve substantial further reduction in health and environmental impacts in the period up to 2030.

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:DKEY=746726:EN:NOT>

Challenges

- Highest NO₂ of any capital city in Europe
- Most vulnerable are:
 - Young and old, poor and often ill
- Traffic. Diesel exhaust but increasingly Non-Road Mobile Machinery, biomass, CHP and shipping
- Legal limits apply everywhere. Improving average exposure alone would worsen inequalities
- Need to reduce 'dust' in workplaces and public places including metros. Indoor air quality

Sources of air pollution in London

Mayor's Air Quality Strategy 2010

- Emissions (not concentrations). Based on 2008 estimates
- PM₁₀ (Central London)
 - Road transport 79%. Cars 23%; taxis 20%; LGVs 10%. Buses <10%
 - Tyre and brake wear 35%
- PM_{2.5} (Greater London)
 - Road transport 80%; industrial and commercial gas combustion
 - LGV, cars and taxis 20% each. Buses 5%
 - Tyre and brake wear 25%
- Oxides of nitrogen
 - Road transport 46%; domestic gas 22%
 - Commercial gas, industry, airport and rail 7-8%
 - Cars 35%; HGVs 30%; buses 21%
- DfT 2009: Diesel versus petrol cars (g/mile): 21.7x PM₁₀; 2.1x NO_x

Solutions

Clean Air in London's 'manifesto' proposes 45 measures

Protect yourself (i.e. adapt) and reduce pollution for yourself and others (i.e. mitigate)

- Political leadership
- Massive campaign to build public understanding e.g. smog warnings
- Clean up transport
- Build low emission cities including buildings
- Technology and behavioural change
- Protect the most vulnerable

Expected increases in unlawful air pollution must be mitigated fully and limits not exceeded once attained. Also use environmental information laws

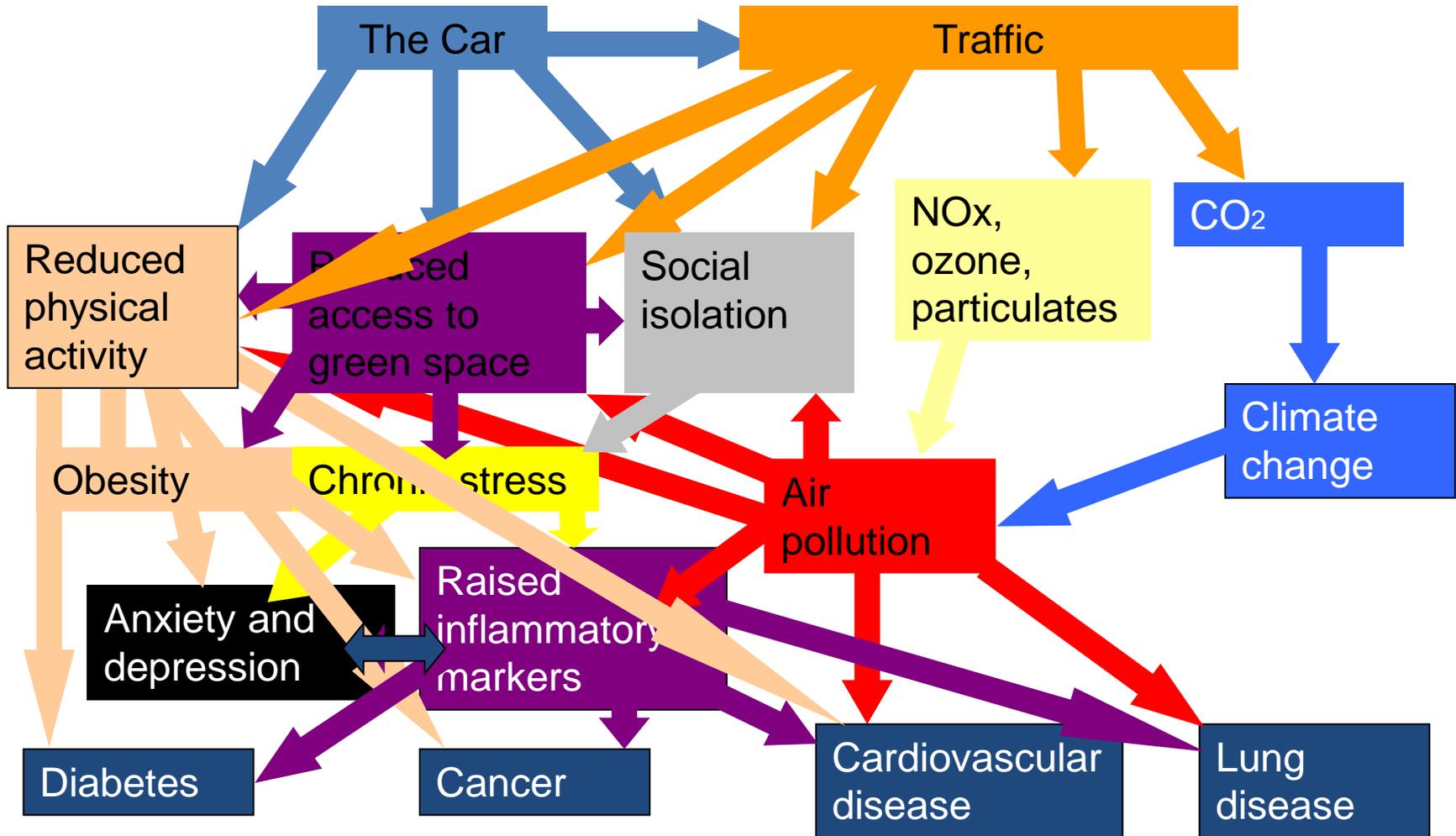
10 steps for 'Clean Air in Cities'

We need to protect public health and encourage sustainable development

1. Investigate
2. Protect yourself (i.e. adaptation)
3. Reduce pollution for yourself and others (i.e. mitigation)
4. Research
5. Lobby
6. Campaign
7. Oppose unlawful developments and situations
8. Spread the word
9. Support WHAT and 'Clean Air in London'
10. Feedback your ideas

<http://cleanairinlondon.org/solutions/10-steps-for-clean-air-in-london/>

Air pollution among other public health risks



From a presentation by Dr William Bird of Natural England



Early morning smog in London

19 February 2013

Summary

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