

Atmosphere and Local Environment

Development of a time extension notification for NO₂

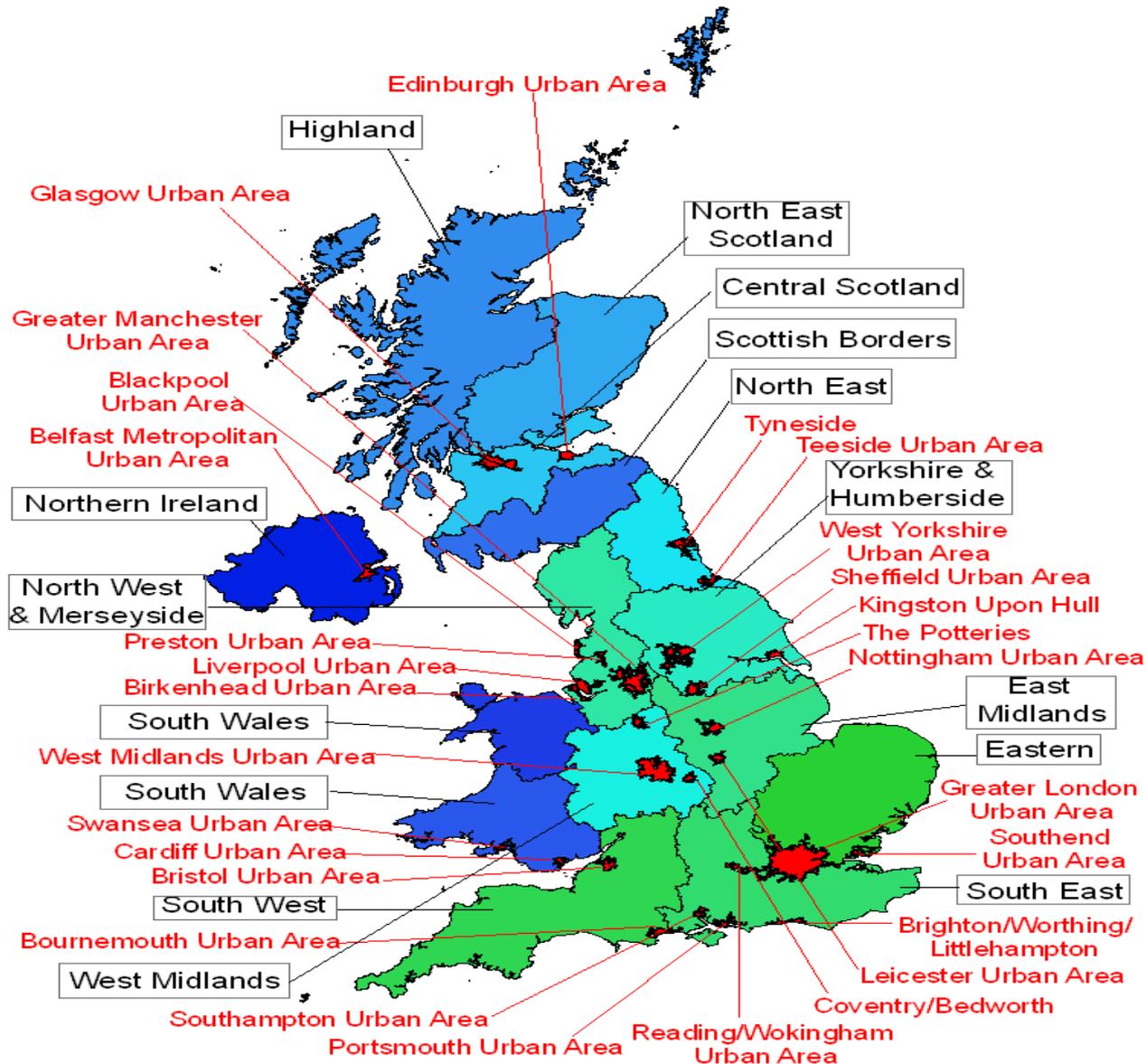
Tim Williamson



What I will cover:

- How the UK is organised to assess and deliver EU air quality requirements;
- The extent of the NO₂ problem in the UK;
- Development of measures to improve NO₂ concentrations;
- Delivery issues: our shared responsibility;
- Things to take home.

UK Agglomerations (red) and Non-Agglomeration Zones



The delivery chain has a number of key components



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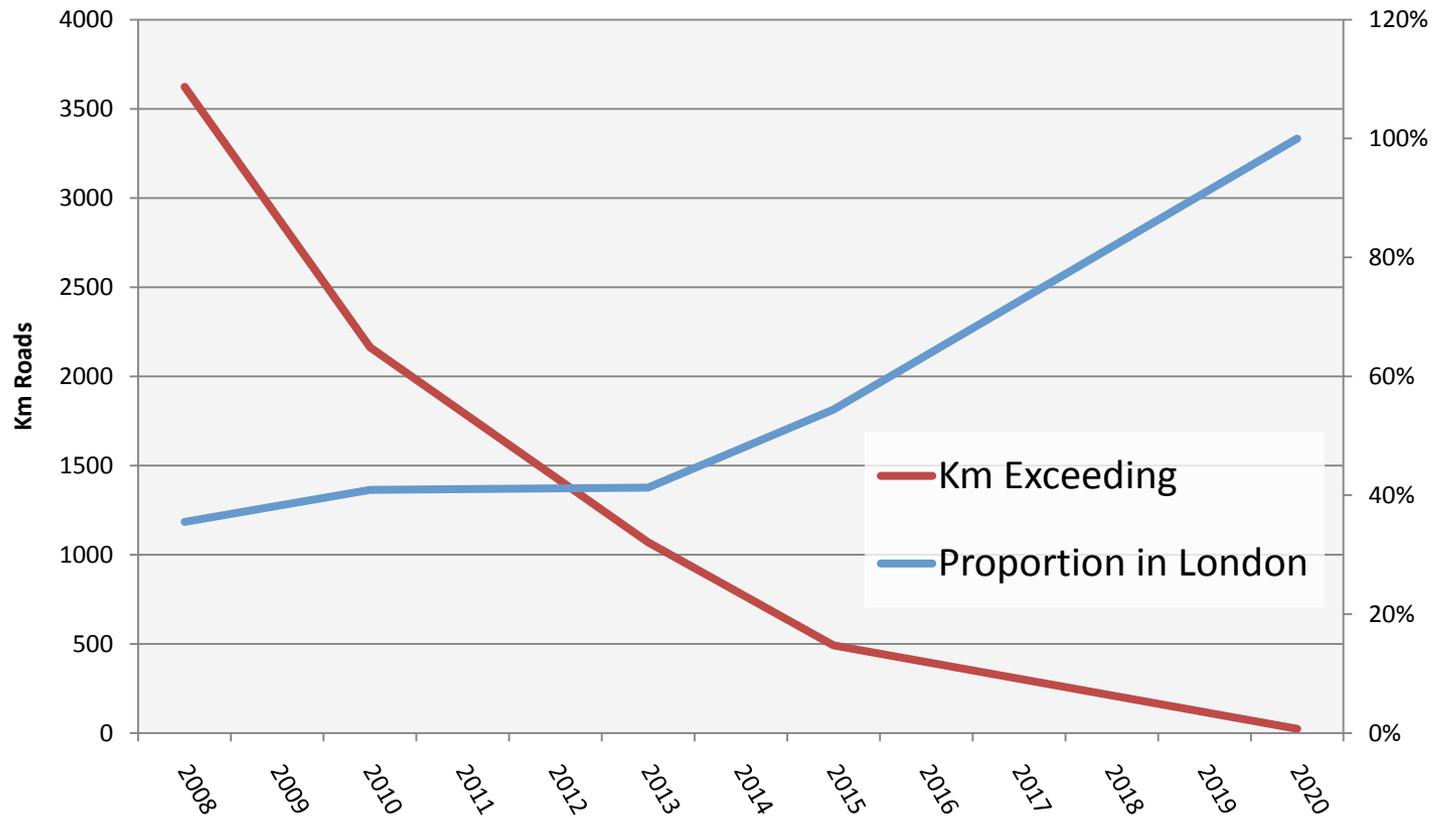
- UK Government and Devolved Administrations have responsibility for meeting limit values;
- National air quality strategy, 2007 sets policy framework;
- Local authorities must work toward air quality objectives;
- Mayor of London required to produce an air quality strategy;
- Pollution from industrial installations controlled by national environment agencies and local authorities.

NO₂ Exceedences in the UK are projected until 2020 and beyond

Year	2008, reported	2010, projected	2015, projected	2020, projected
Km road length exceeding annual average (% of total assessed)	3623 (27%)	2163 (16%)	492 (4%)	24 (0.2%)
Number of zones exceeding annual average (out of 43)	40	37	20	1

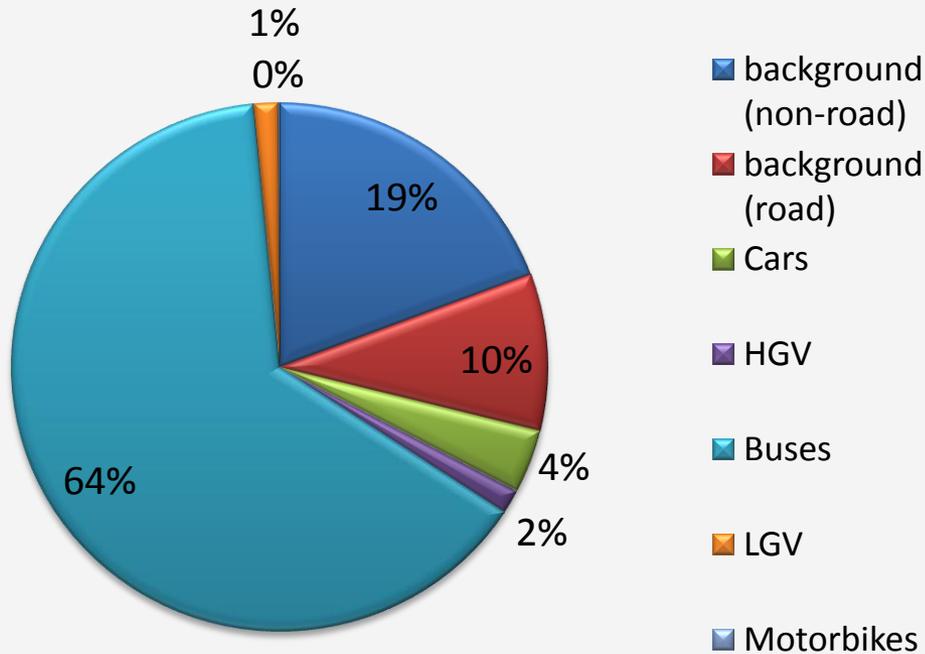
Exceedences in London dominate

Projected exceedences of the NO₂ annual average limit value in the UK



Source apportionment varies depending on location

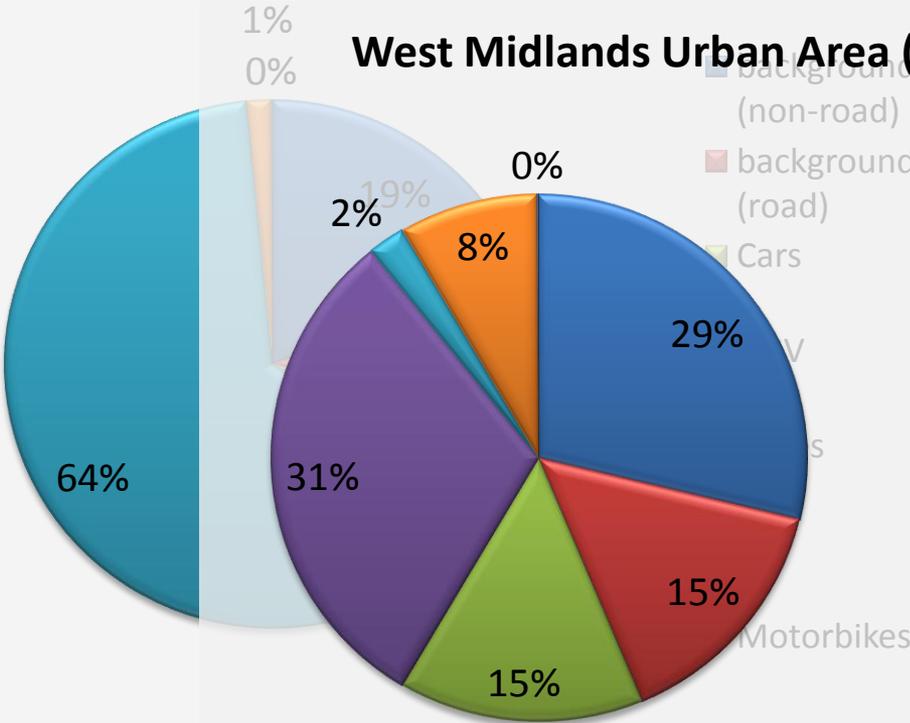
Greater London Urban Area (1287 Km)



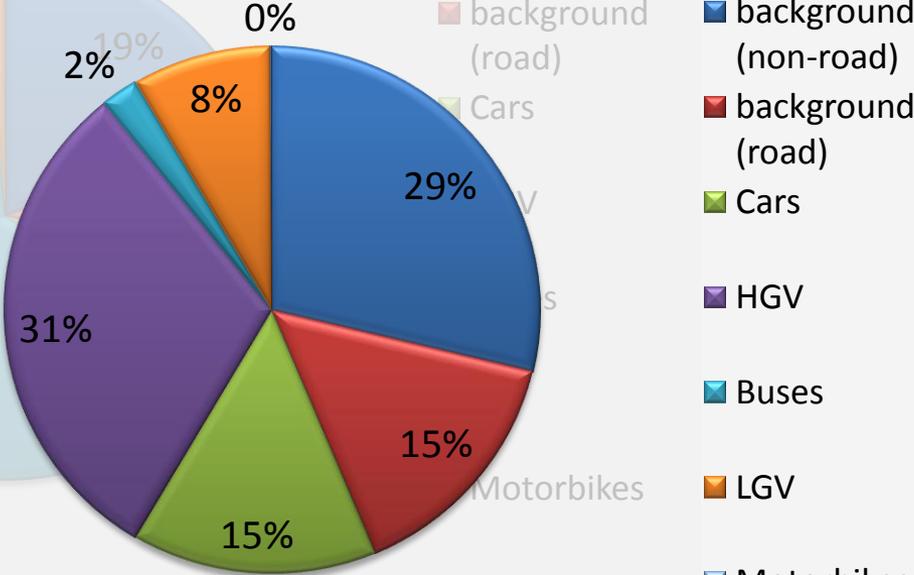
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Greater London Urban Area (1287 Km)



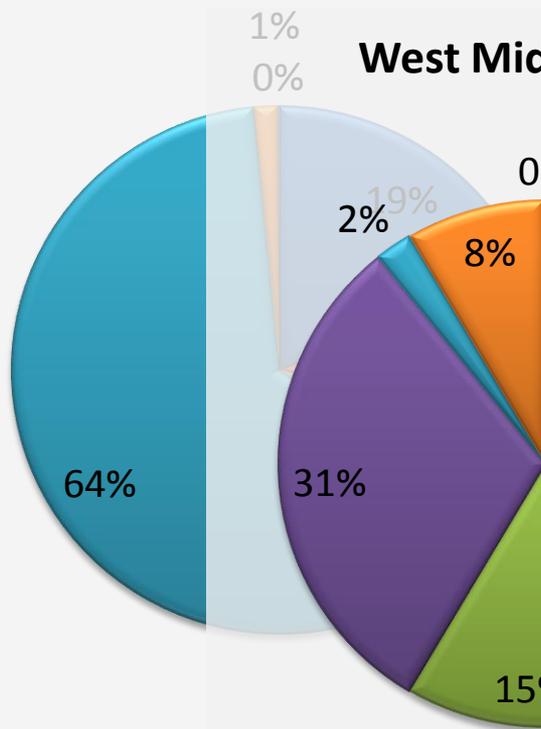
West Midlands Urban Area (265 Km)



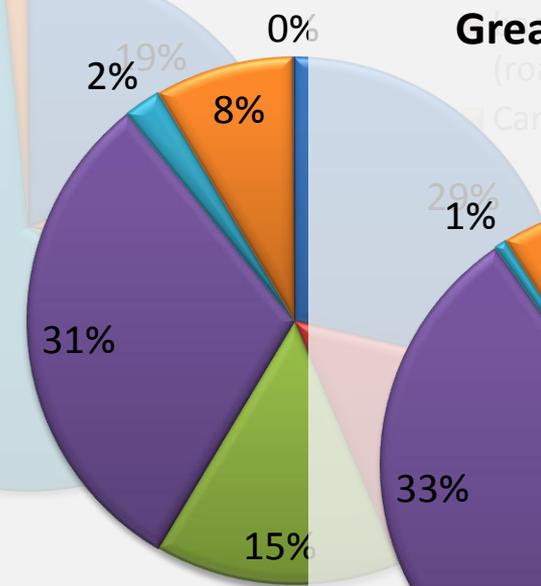
- background (non-road)
- background (road)
- Cars
- HGV
- Buses
- LGV
- Motorbikes

Source apportionment varies depending on location

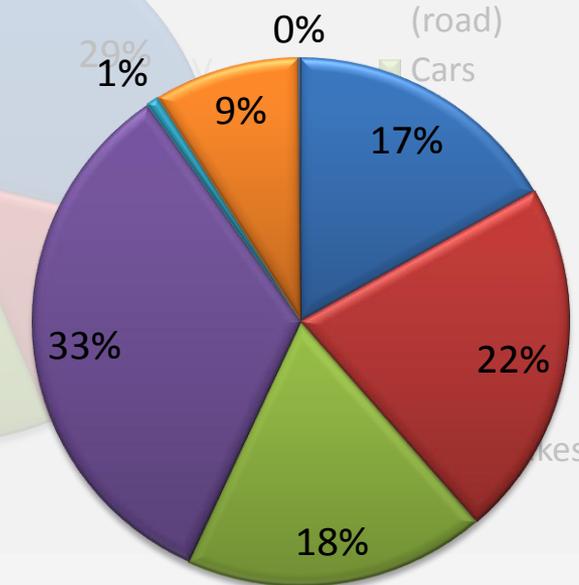
Greater London Urban Area (1287 Km)



West Midlands Urban Area (265 Km)



Greater Manchester Urban Area (260 Km)



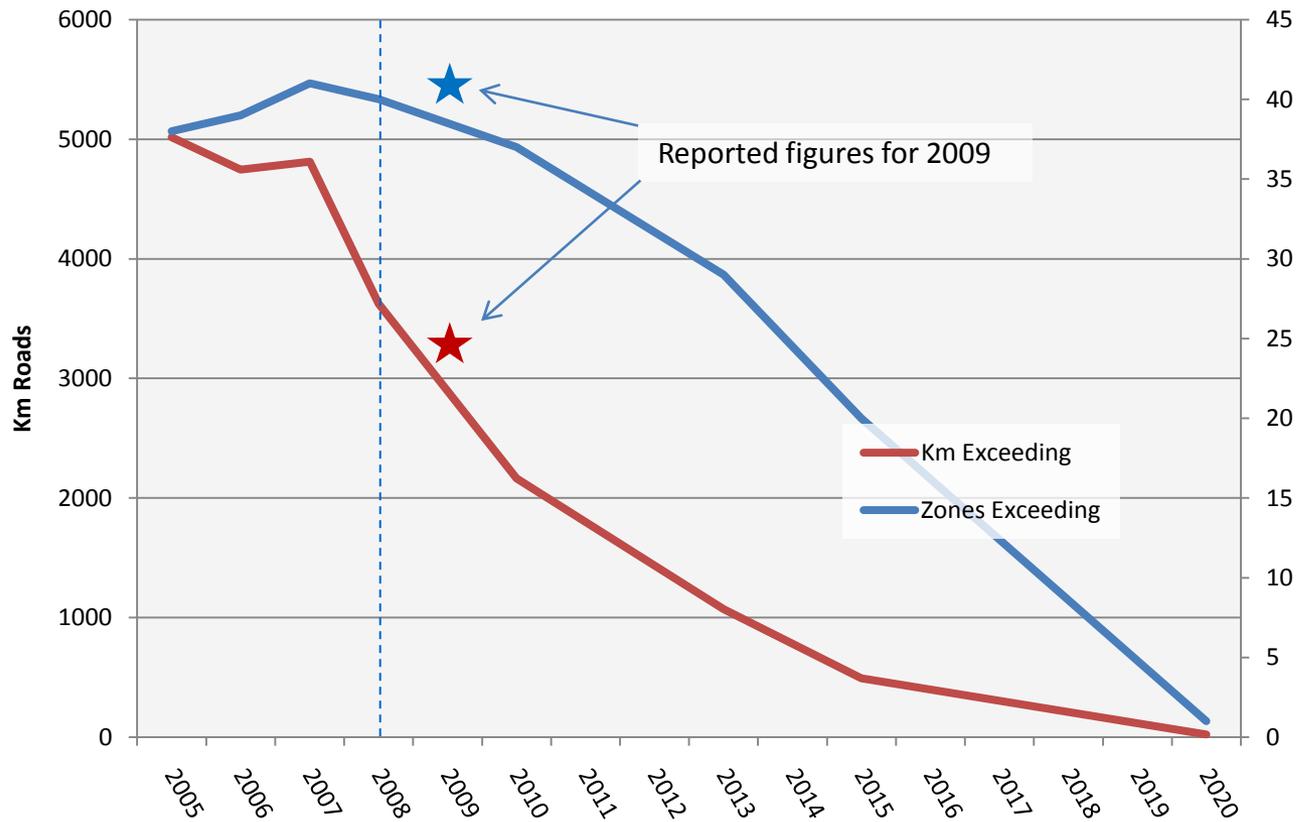
- background (non-road)
- background (road)
- Cars
- HGV
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- LGV
- Motorbikes

Trends in reported exceedences are clearly downwards...

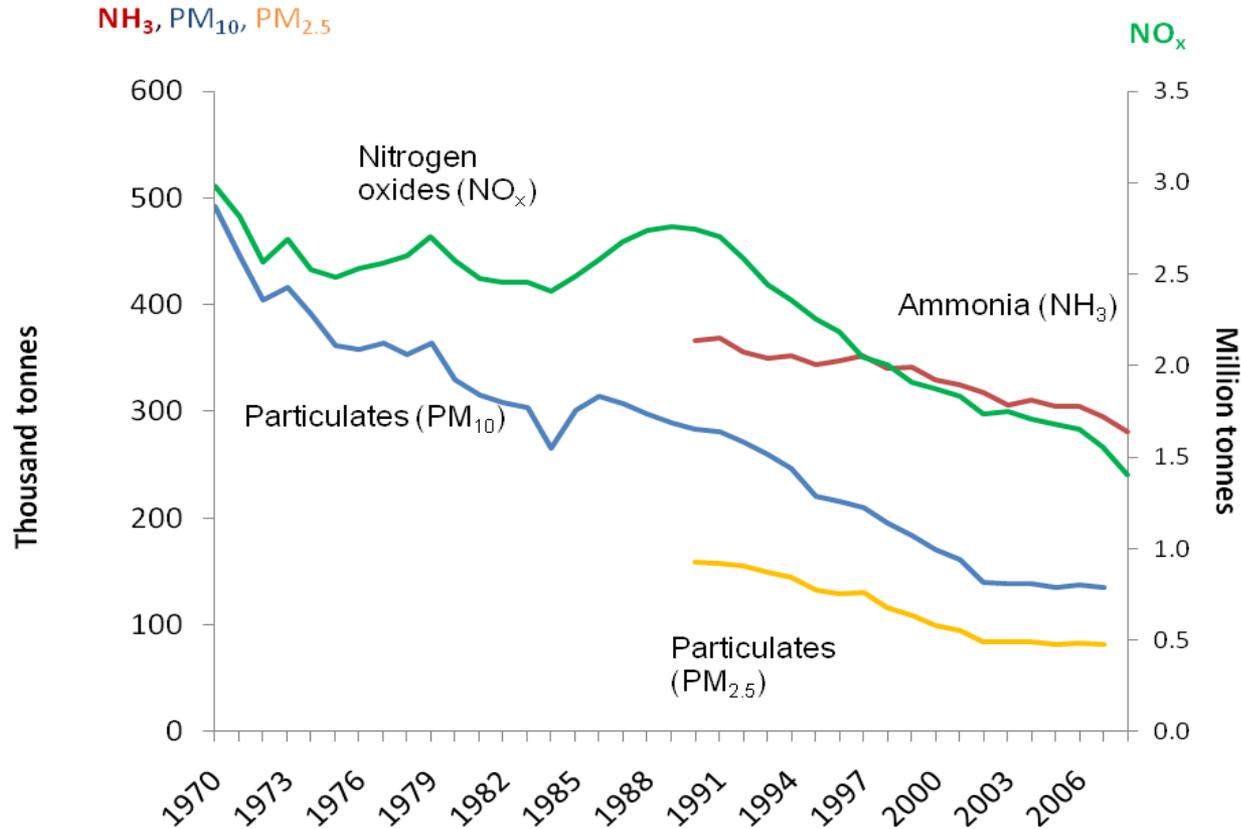
Year	2005	2006	2007	2008
Km road length exceeding annual average (% of total assessed)	5015 (36%)	4745 (35%)	4812 (35%)	3623 (27%)
Number of zones exceeding annual average (out of 43)	38	39	41	40

...and are projected to continue downwards...

Exceedences of the NO2 annual average limit value in the UK

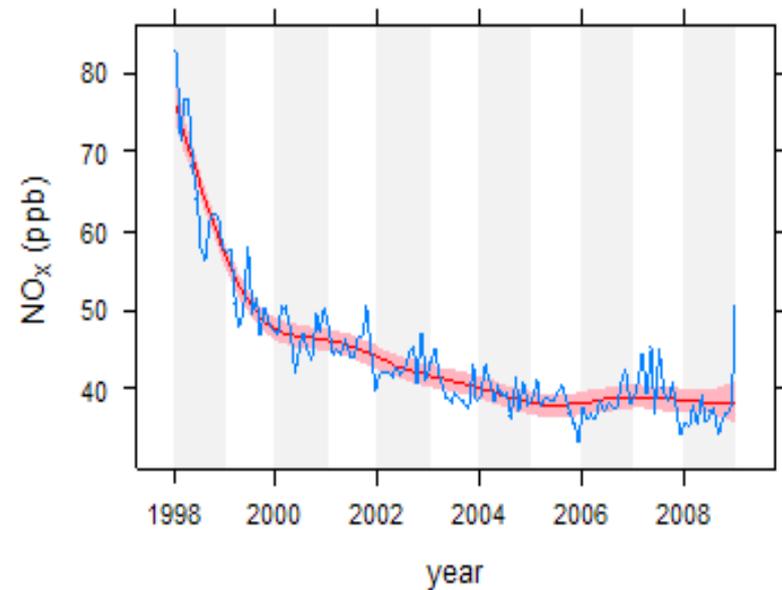
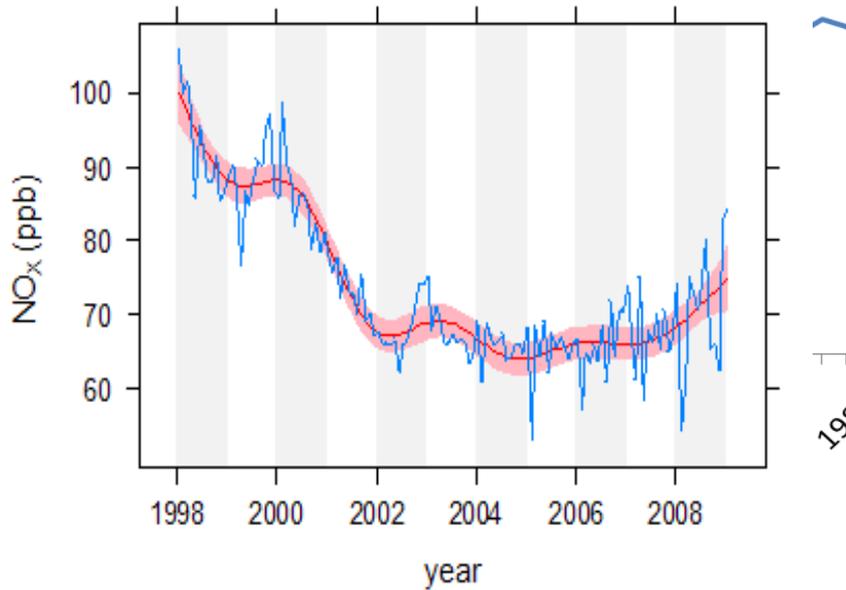
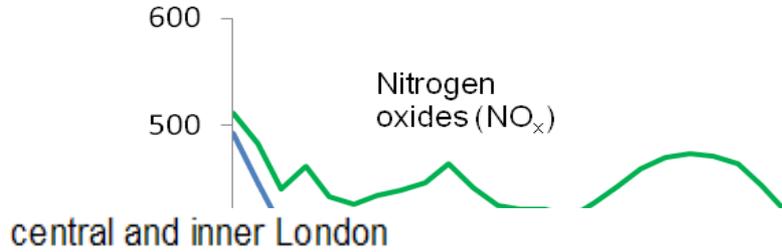


...a picture backed up by emissions trends

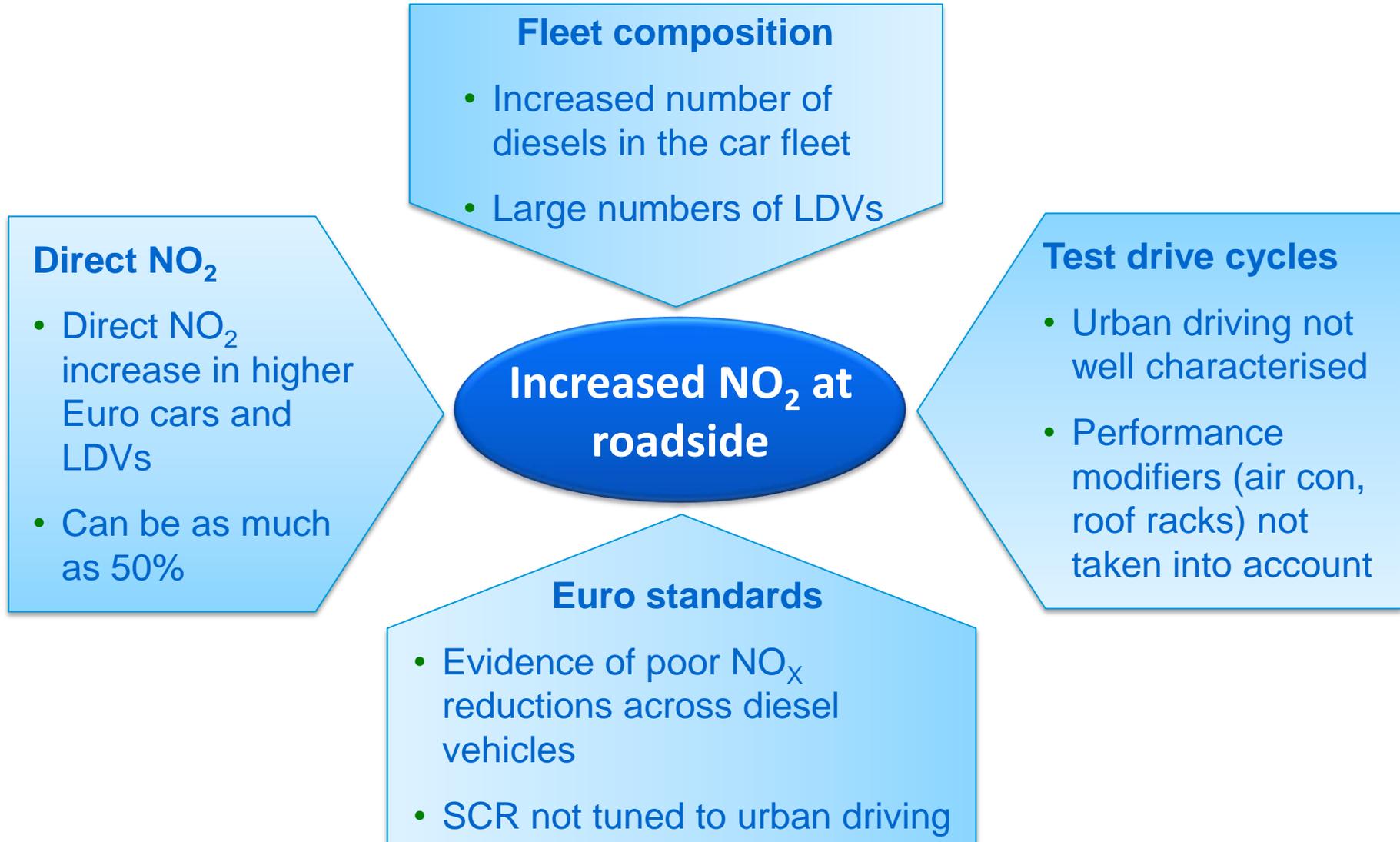


But this picture is hard to match up to real world trends

NH_3 , PM_{10} , $\text{PM}_{2.5}$



The key difference is in diesel vehicles



Development of measures for time extension will need joint effort...

- ▶ Review Geographical distribution of NO₂ exceedences and source apportionment;
- ▶ Categorise options according to source and regional/local features
- ▶ Discuss national and local measures with **Local authorities** and Responsible Departments to identify best fit of measures to area and sources
- ▶ Model the impact of these measures on roadside NO₂
- ▶ Consult on measures to support application and to achieve on-going improvements and submit application by September 2011

...and some steps have already been taken

- ▶ Budget commitments to
 - ▷ Introduce Reduced Pollution Certificate Scheme for Euro VI when available
 - ▷ Incentivise Ultra Low Carbon Vehicles and support for infrastructure
- ▶ Considering focused measures to facilitate local action might include
 - ▷ Targeted technology improvements especially for buses and HGVs (need to achieve minimum of Euro IV standard)
 - ▷ Feasibility of Low Emission Zones outside London – what evidence is there for effectiveness of LEZs for NO₂?
 - ▷ Link to climate change measures on modal shift and very low carbon vehicles where appropriate
- ▶ Take account of measures in London Air Quality Strategy and in other local authority air quality action plans where necessary.

We need to look at our delivery and governance arrangements...

- ▶ National duty to meet EU Limit Values
- ▶ Defra use national network and models
- ▶ Local authorities “work towards” UK AQ Objectives
- ▶ Often use own models and monitoring which may not meet EU siting requirements

- ▶ Local authorities are often not clear on their crucial role in meeting EU requirements
- ▶ Outside the UK, the national/local distinction is not understood

We need a streamlined system with shared responsibility

..which will be part of a package to help improve air quality



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- ▶ Clearly articulate the air quality “story”
- ▶ Re-connect national and local policy and remove distinction between Limit Values and UK objectives
- ▶ Local authorities need to be treated as delivery partners, playing a full part in meeting air quality obligations
- ▶ Work together to develop the right tools and skills
- ▶ Be clear about different data streams and status
- ▶ **We all need to raise our game!**

So what do we need?

- ▶ Recognise the value, and limits, of local authority action
 - ▷ Low emission strategies and zones
 - ▷ retrofit of HGVs and Busses
 - ▷ integrated action on CO₂, PM₁₀ and NO₂
- ▶ Clear communication with members, business and public
- ▶ Clear, common goals, reflecting wider priorities
- ▶ New ways of working and delivery

- ▶ The NO₂ compliance problem is spread across the country, although London is key;
- ▶ Evidence is getting stronger that Euro standards haven't delivered NO_x reductions from diesel vehicles so far;
- ▶ We have a joint responsibility to deliver good air quality; we all need to raise our game!
- ▶ Delivering good air quality is fundamentally about health, not just legal obligations