

*Atmosphere and Local Environment*

# Development of a time extension notification for NO<sub>2</sub>

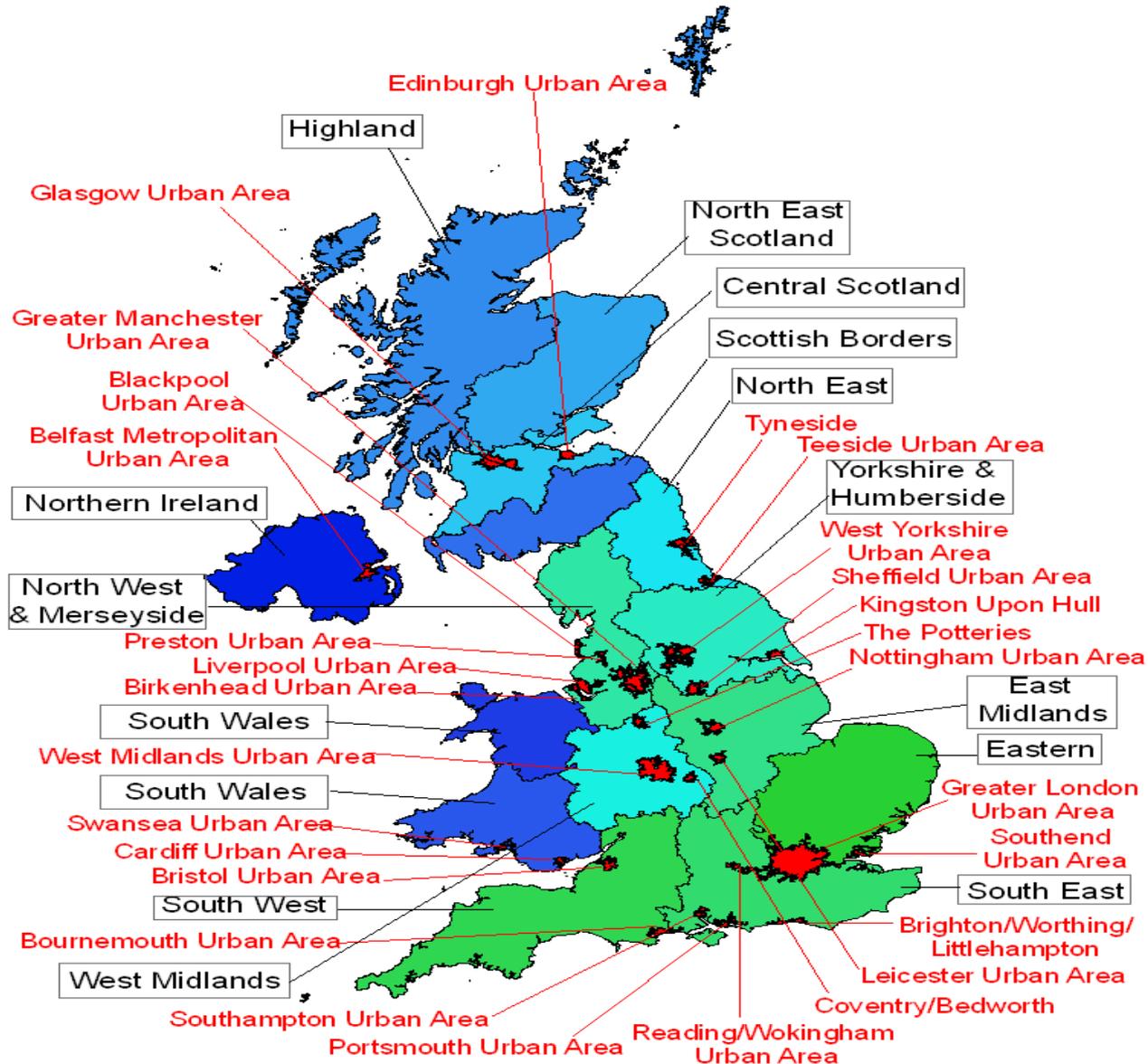
Tim Williamson



# What I will cover:

- How the UK is organised to assess and deliver EU air quality requirements;
- The extent of the NO<sub>2</sub> problem in the UK;
- Development of measures to improve NO<sub>2</sub> 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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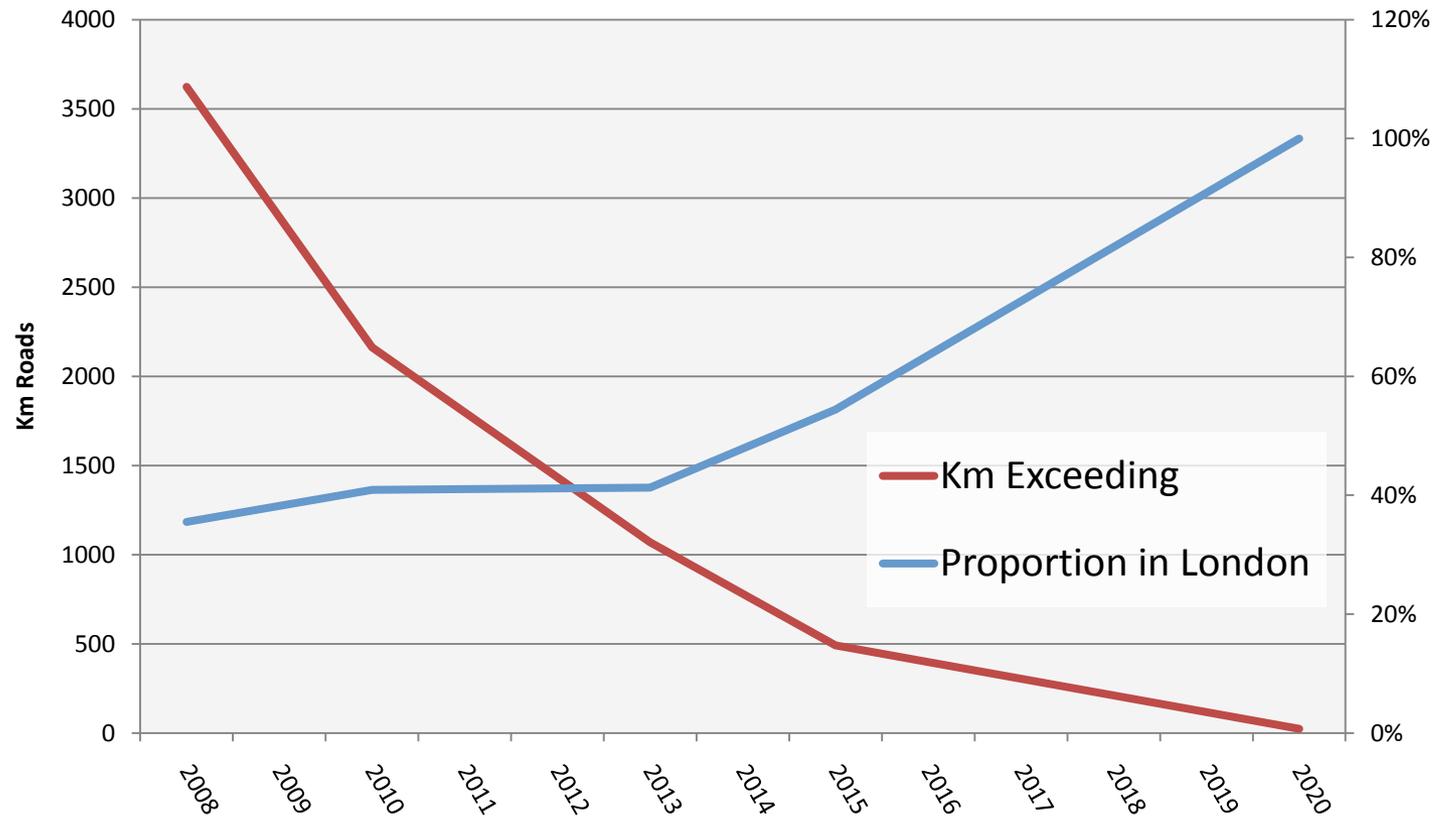
- UK Government and Devolved Administrations have responsibility for meeting limit values;
- National air quality strategy, 2007 sets policy framework;
- Local authorities must work toward air quality objectives;
- Mayor of London required to produce an air quality strategy;
- Pollution from industrial installations controlled by national environment agencies and local authorities.

# NO<sub>2</sub> 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

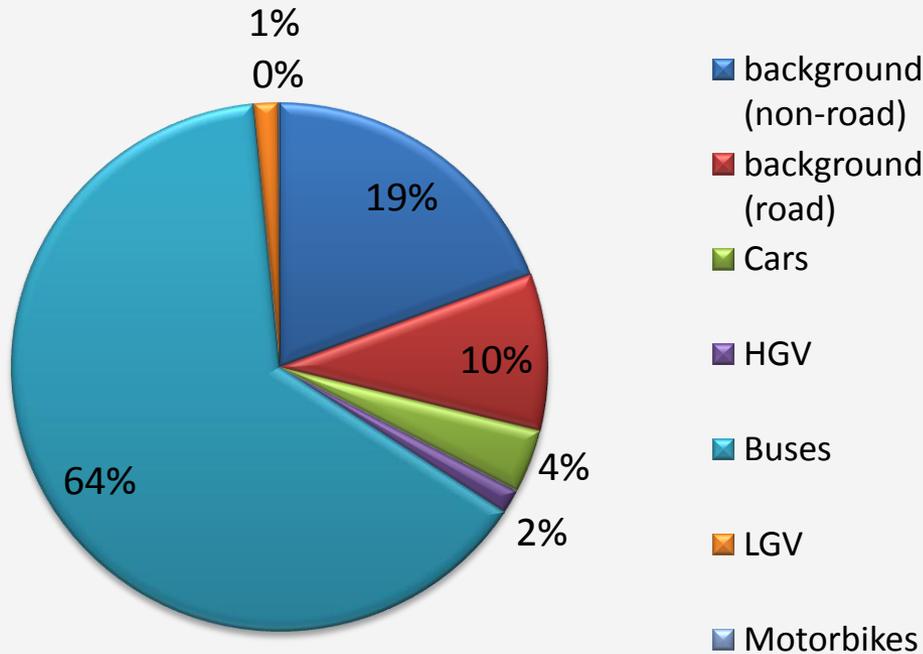
# Exceedences in London dominate

## Projected exceedences of the NO<sub>2</sub> annual average limit value in the UK



# Source apportionment varies depending on location

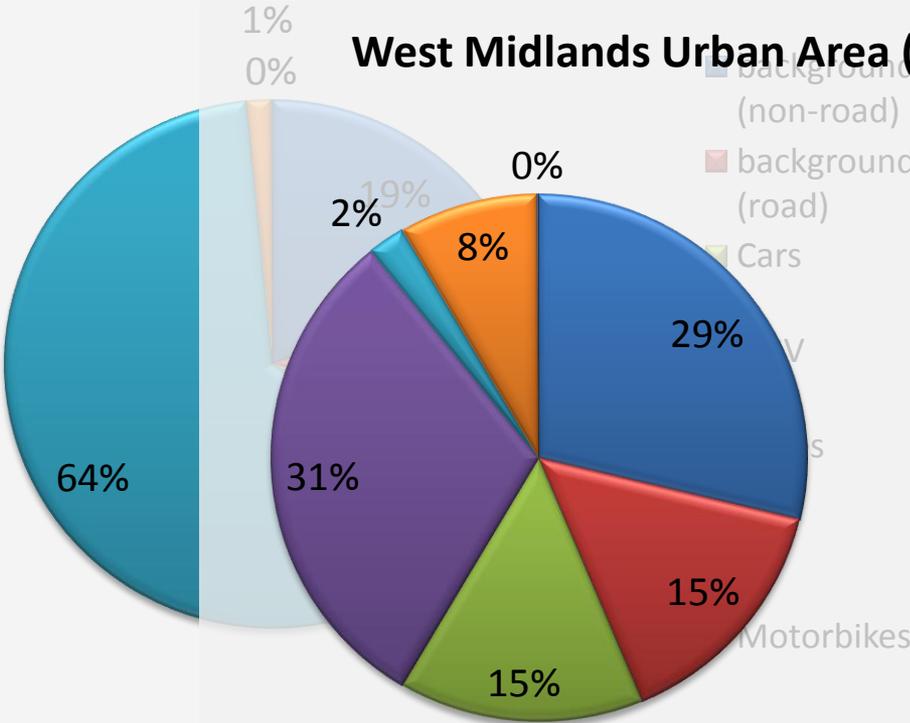
### Greater London Urban Area (1287 Km)



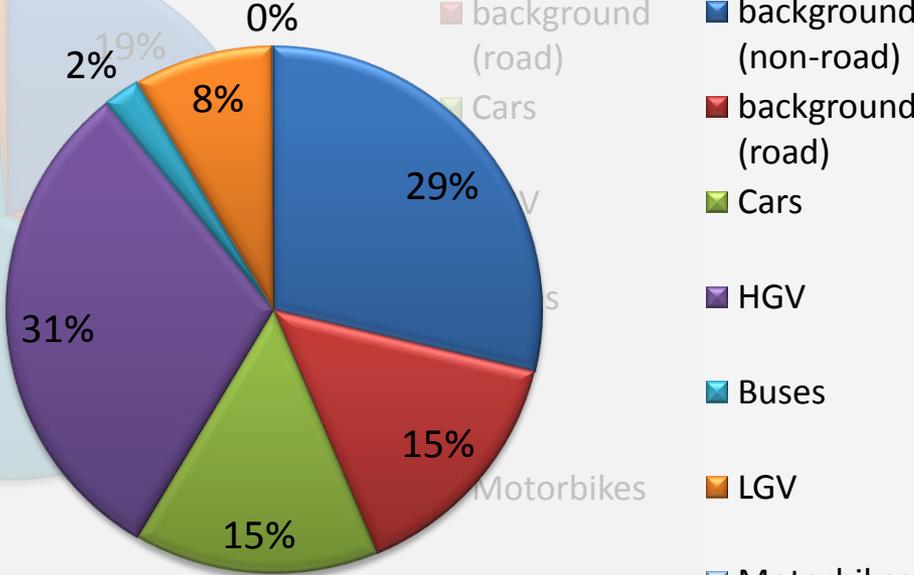
# Source apportionment varies depending on location



**Greater London Urban Area (1287 Km)**



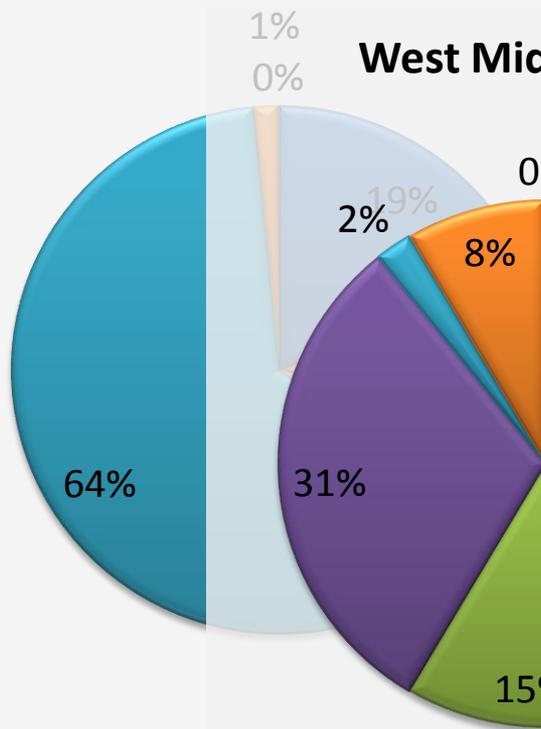
**West Midlands Urban Area (265 Km)**



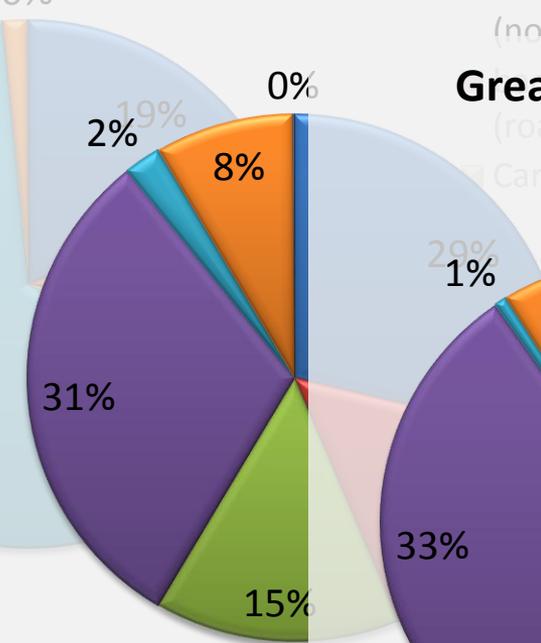
- background (non-road)
- background (road)
- Cars
- HGV
- Buses
- LGV
- Motorbikes

# Source apportionment varies depending on location

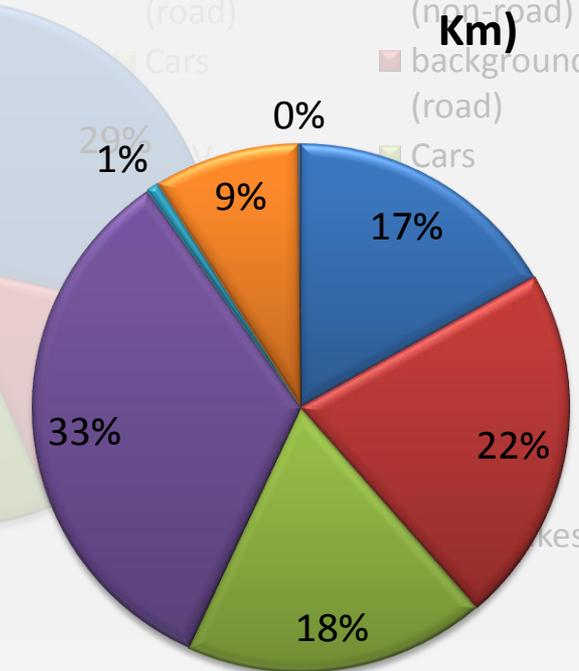
### Greater London Urban Area (1287 Km)



### West Midlands Urban Area (265 Km)



### Greater Manchester Urban Area (260 Km)



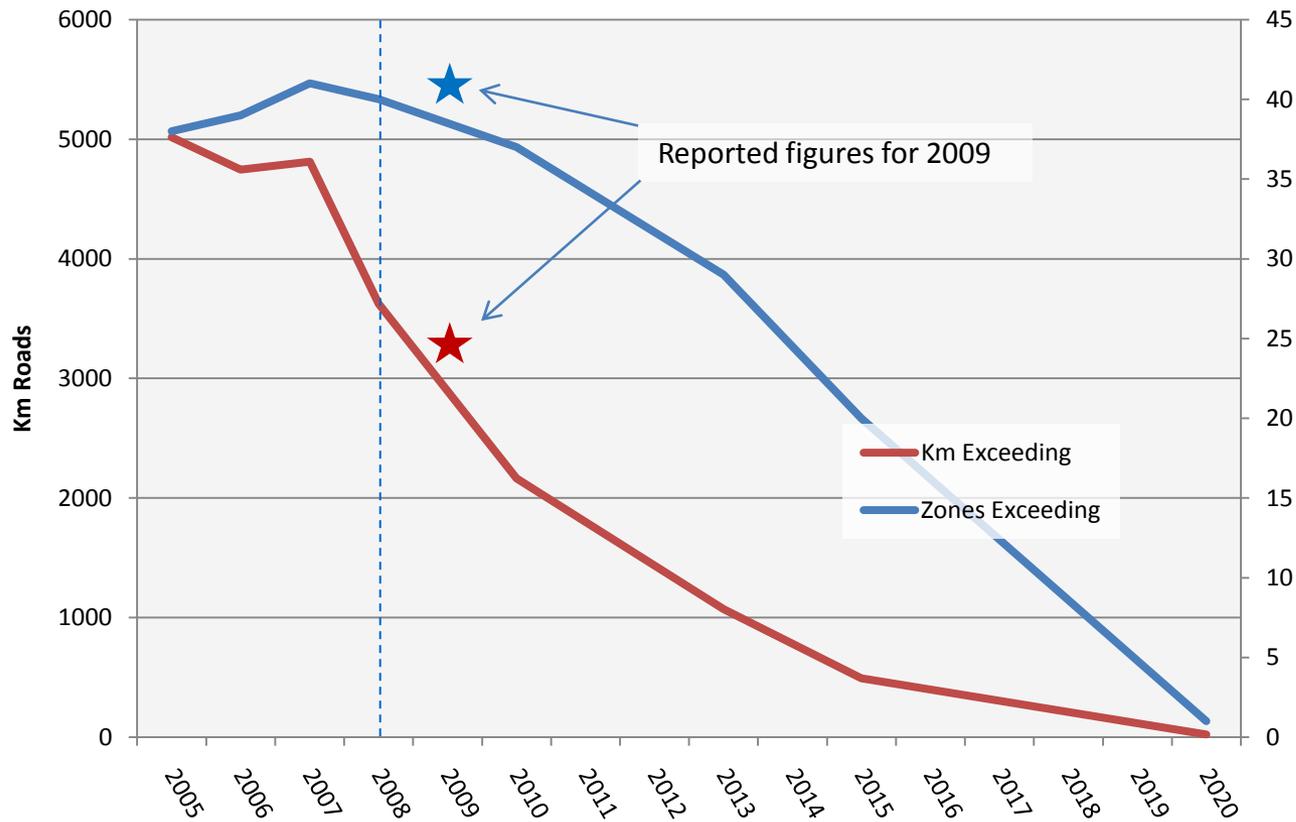
- background (non-road)
- background (road)
- Cars
- LGV
- Motorbikes

# Trends in reported exceedences are clearly downwards...

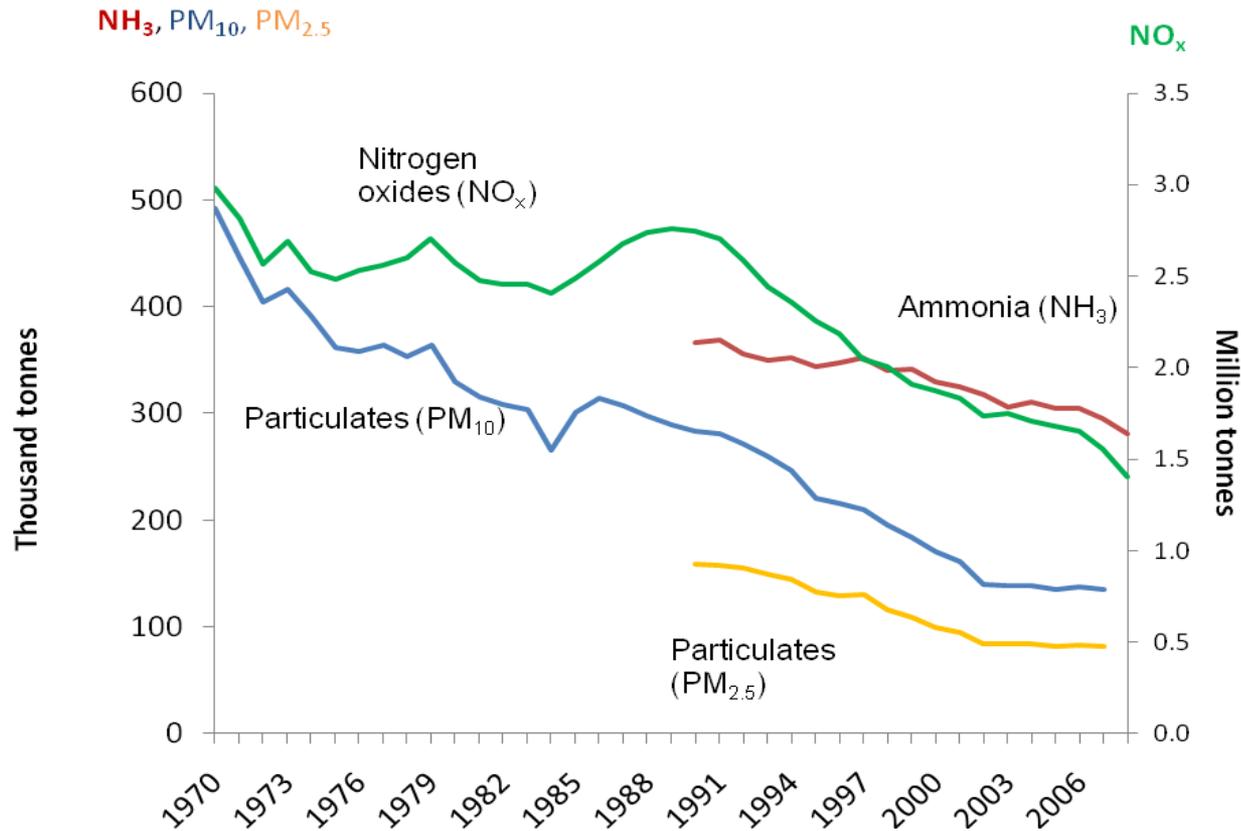
Year	2005	2006	2007	2008
Km road length exceeding annual average (% of total assessed)	5015 (36%)	4745 (35%)	4812 (35%)	3623 (27%)
Number of zones exceeding annual average (out of 43)	38	39	41	40

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

## Exceedences of the NO2 annual average limit value in the UK

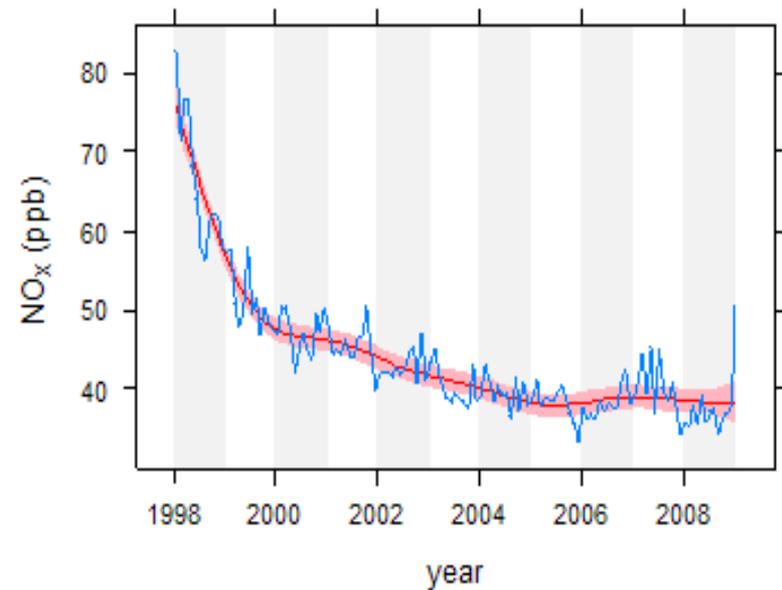
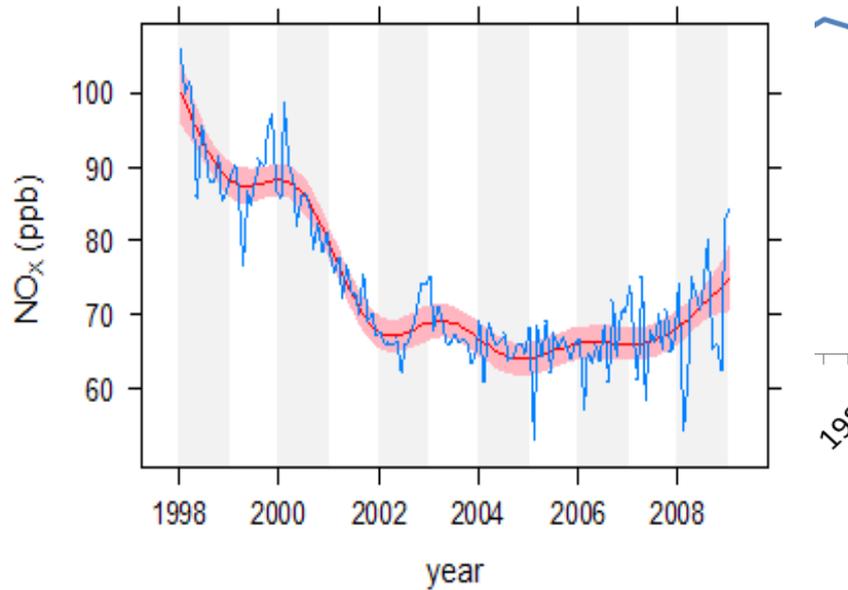
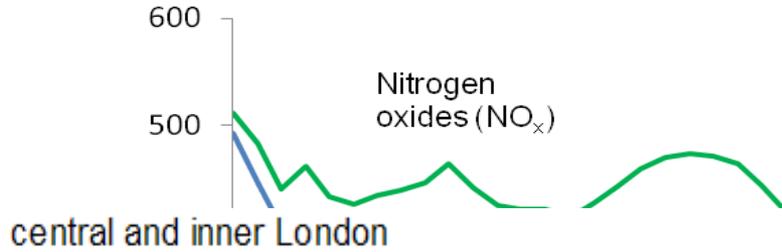


# ...a picture backed up by emissions trends

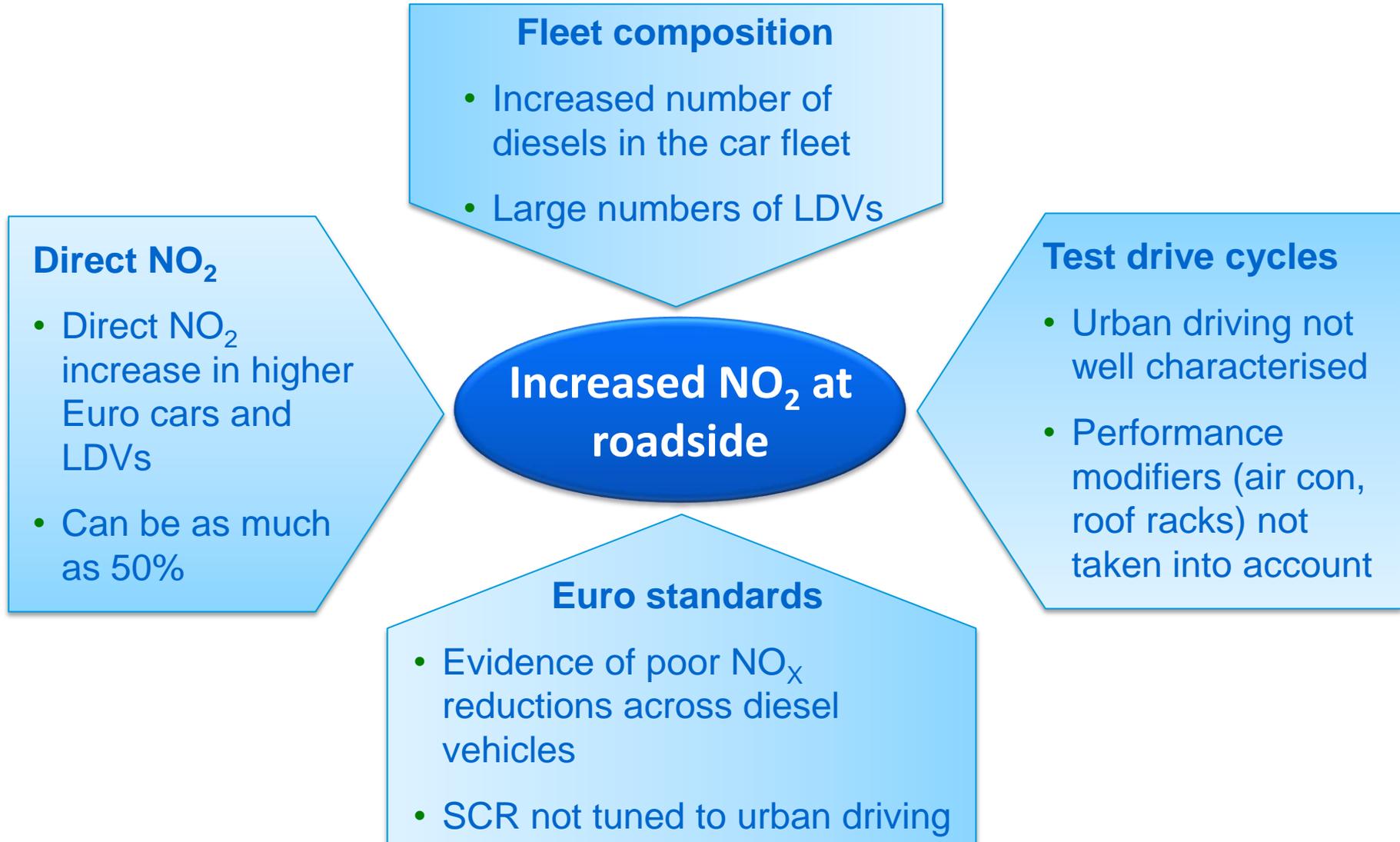


# But this picture is hard to match up to real world trends

$\text{NH}_3$ ,  $\text{PM}_{10}$ ,  $\text{PM}_{2.5}$



# The key difference is in diesel vehicles



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

- ▶ Review Geographical distribution of NO<sub>2</sub> 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 NO<sub>2</sub>
- ▶ 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 NO<sub>2</sub>?
  - ▷ 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 CO<sub>2</sub>, PM<sub>10</sub> and NO<sub>2</sub>
- ▶ Clear communication with members, business and public
- ▶ Clear, common goals, reflecting wider priorities
- ▶ New ways of working and delivery

- ▶ The NO<sub>2</sub> compliance problem is spread across the country, although London is key;
- ▶ Evidence is getting stronger that Euro standards haven't delivered NO<sub>x</sub> 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