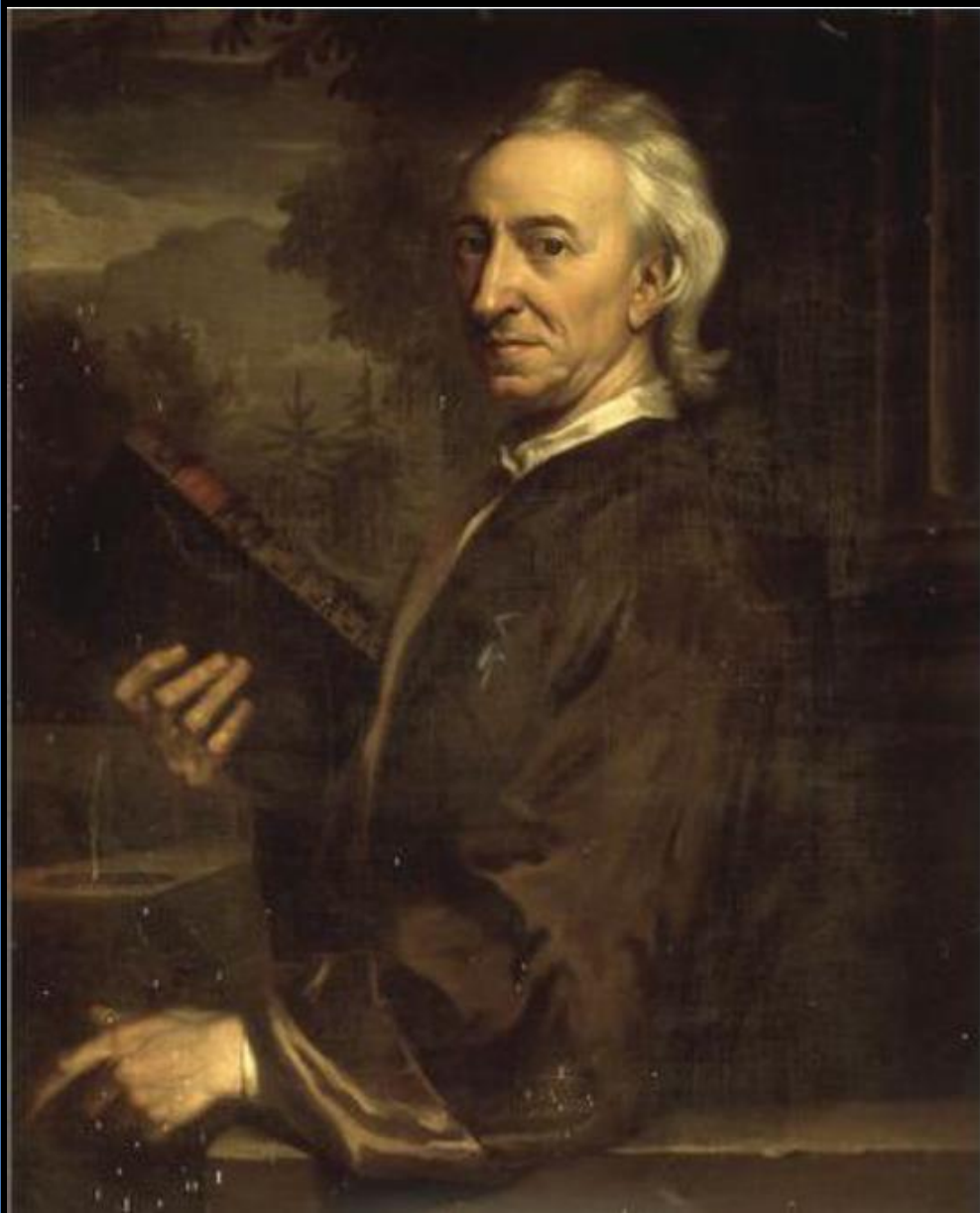


# CREATING AN ULTRA LOW EMISSION LONDON

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**MAYOR OF LONDON**



# FUMIFUGIUM:

OR

The Inconveniencie of the AER  
AND  
SMOAK of LONDON  
DISSIPATED.

TOGETHER

With some REMEDIES humbly  
PROPOSED

By J. E. Esq;

To His Sacred MAJESTIE,  
AND  
To the PARLIAMENT now Assembled.

---

*Published by His Majesties Command.*

---

Lucret. l. 5.

*Carbonumque gravis vis, atque odor insinuat  
Quam facile in cerebrum? —*

---

LONDON,

Printed by W. Godbid for Gabriel Bedel, and Thomas Collins,  
and are to be sold at their Shop at the Middle Temple Gate  
near Temple-Bar, M. D C. L X I.



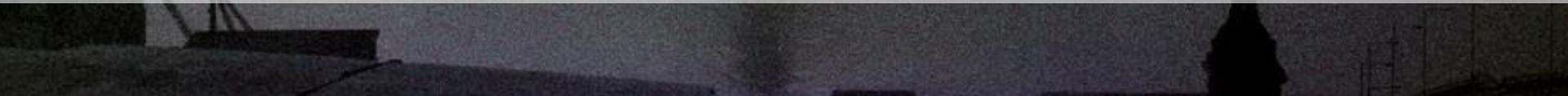


Claude Monet 1903





1952

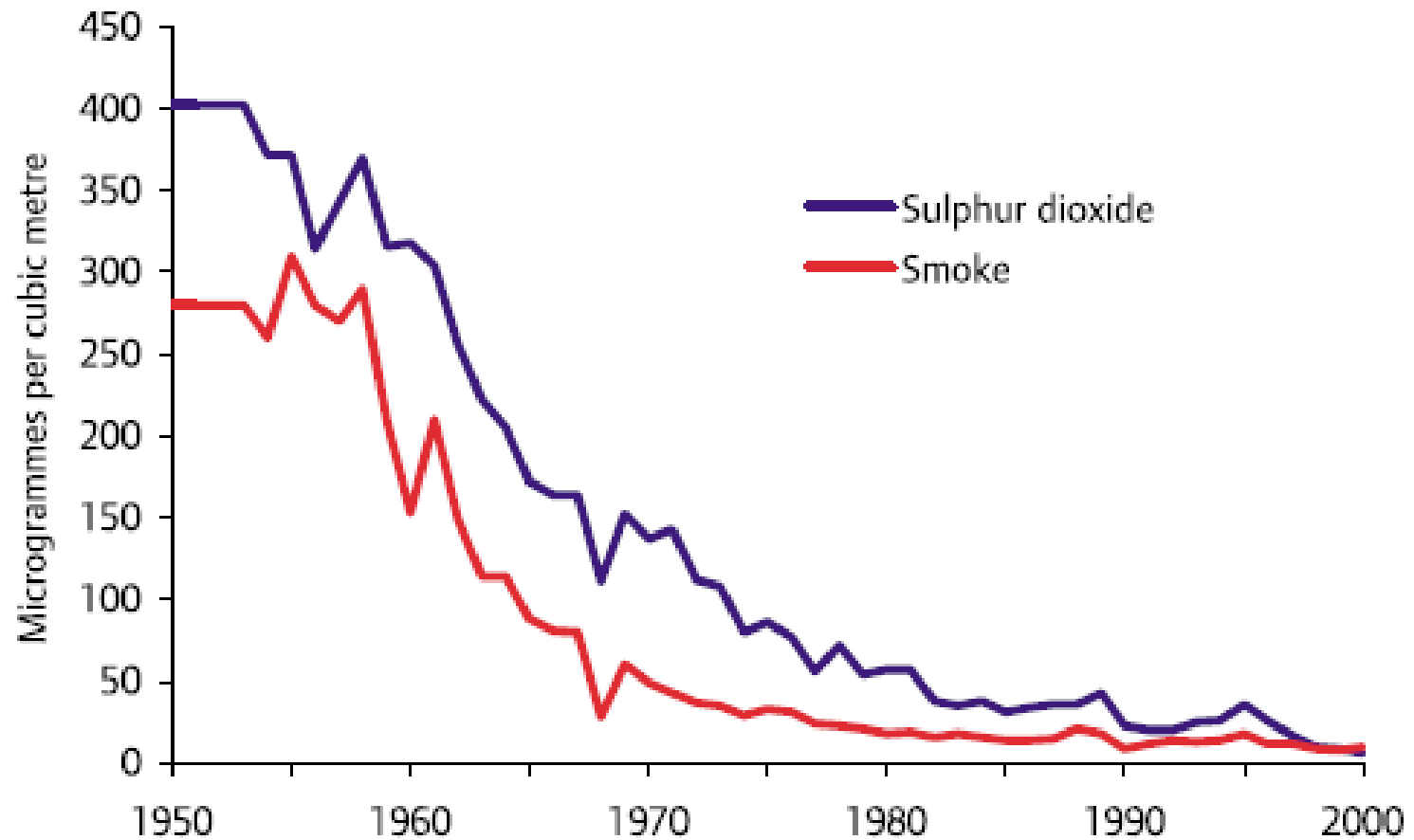




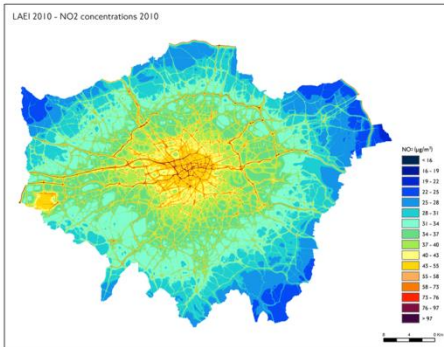


TODAY

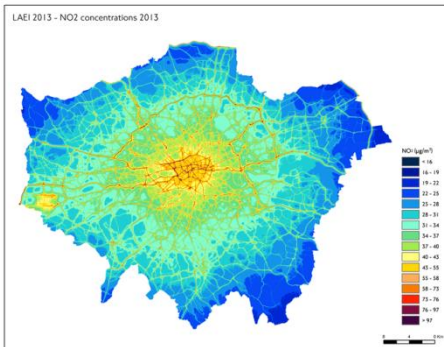
# HISTORIC POLLUTION



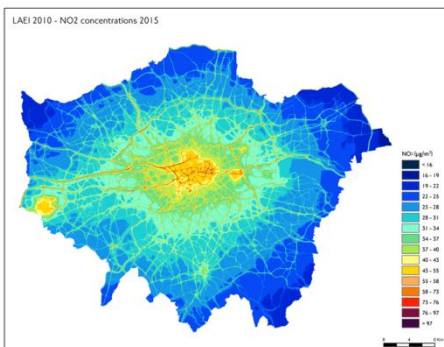
# TRENDS IN POLLUTION



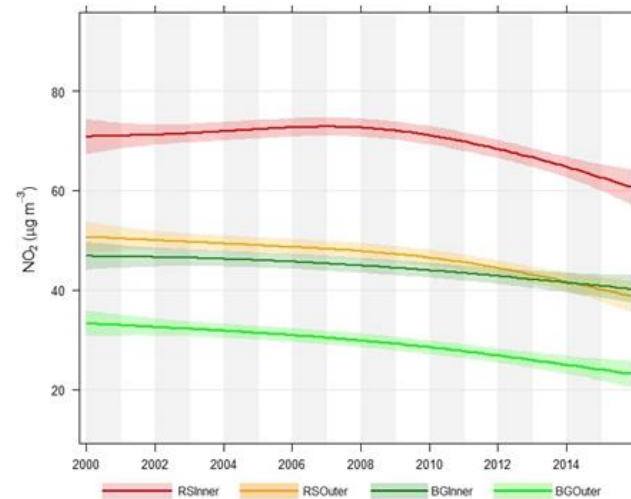
NO<sub>2</sub>  
2010



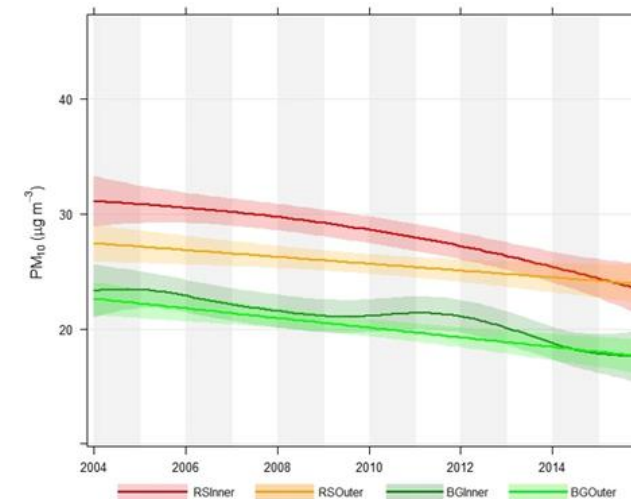
NO<sub>2</sub>  
2013



NO<sub>2</sub>  
2015



NO<sub>2</sub>  
trend  
2000-  
2015



PM<sub>10</sub>  
trend  
2004-  
2015



# HEALTH AND EQUALITIES

## Health

- We estimate an equivalent of up to around 9,400 deaths were caused by long-term exposure to air pollution.
- A baby born in 2010 and exposed to that same level of air quality for its entire life would lose 2.2 years (if male) and 2 years (if female) of life expectancy.

## Fairness

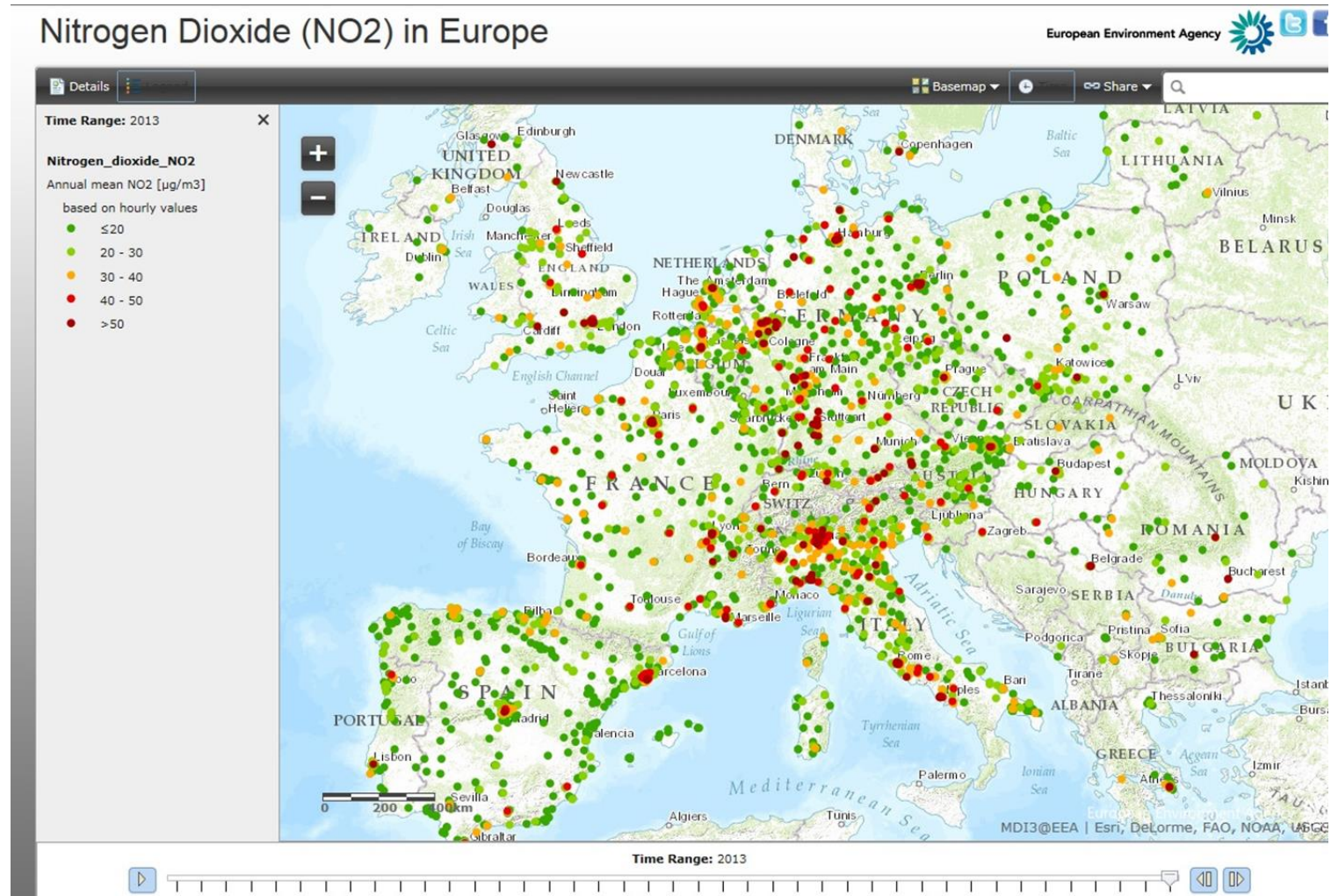
- The health impacts associated with air pollution fall disproportionately on our most vulnerable communities, affecting the poorest and those from minority ethnic groups more acutely.
- Tackling air pollution is about social justice and there is an urgent need to do more to tackle public health inequalities.

## Legal compliance

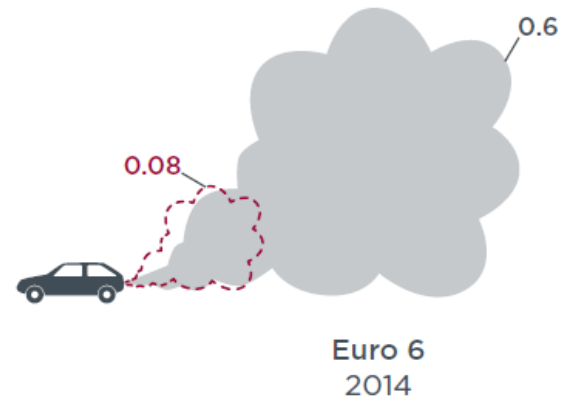
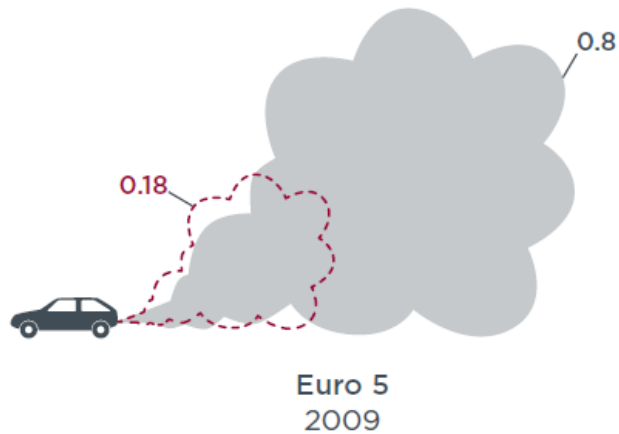
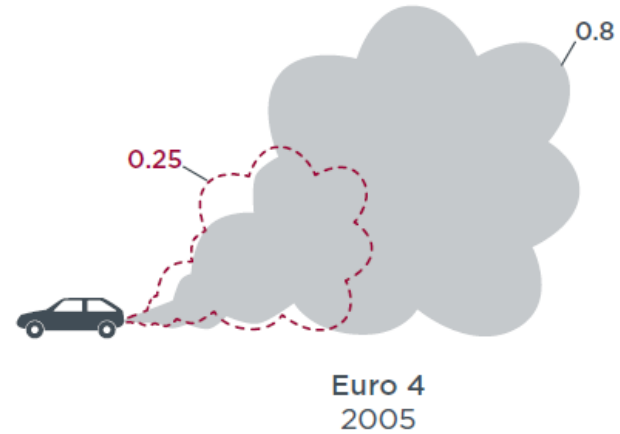
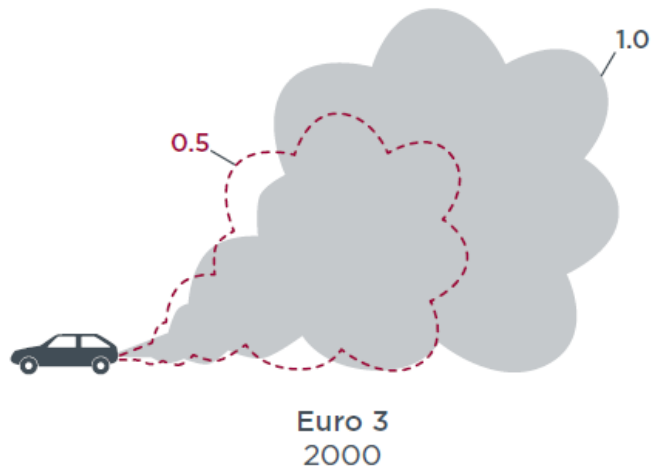
- Like most major European cities, London does not meet the legal requirements for some pollutants (mainly Nitrogen Dioxide (NO<sub>2</sub>) but issues remain with Particulate Matter).



# NO<sub>2</sub> – A EUROPE WIDE CHALLENGE



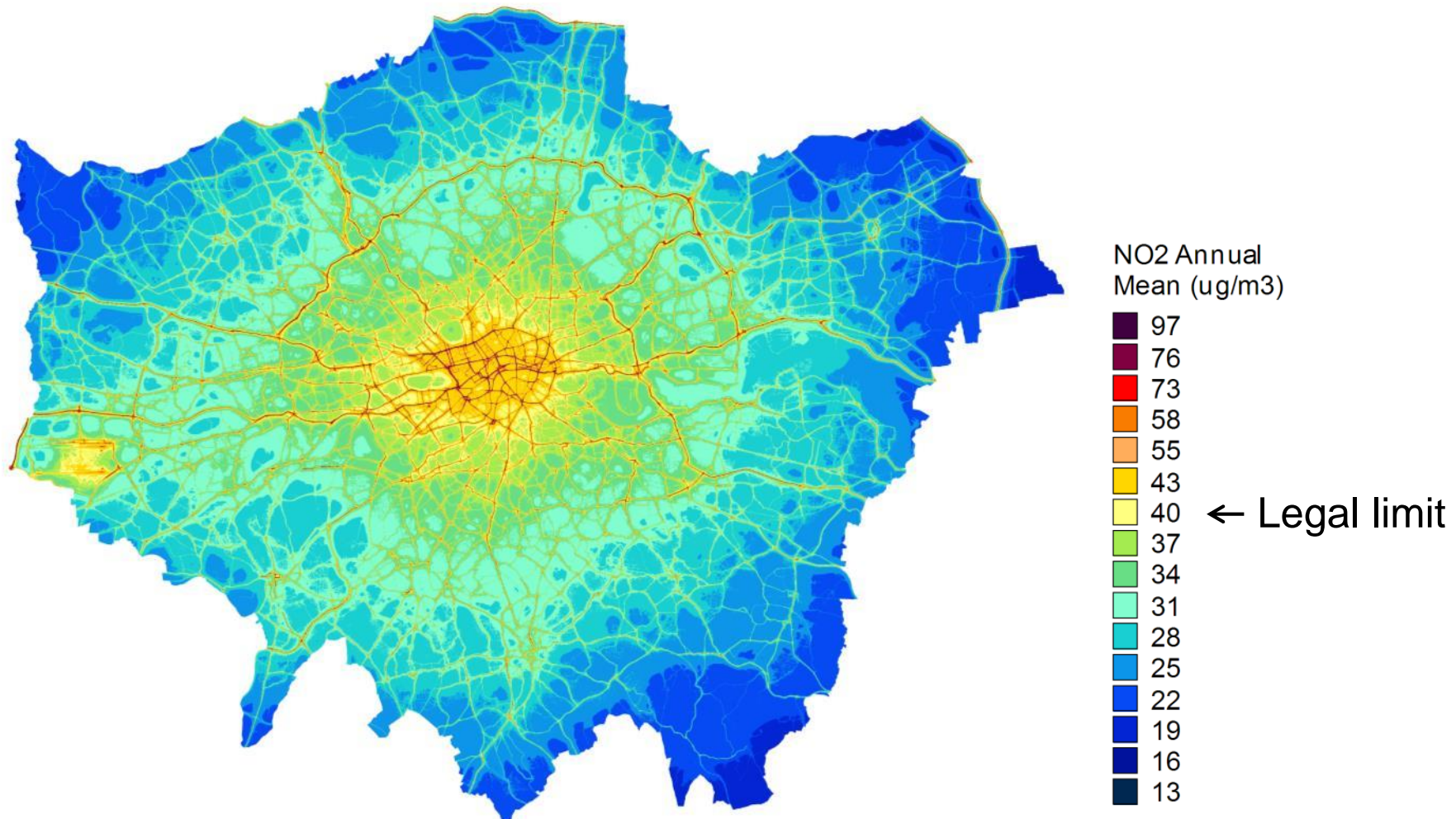
# DIESEL CARS



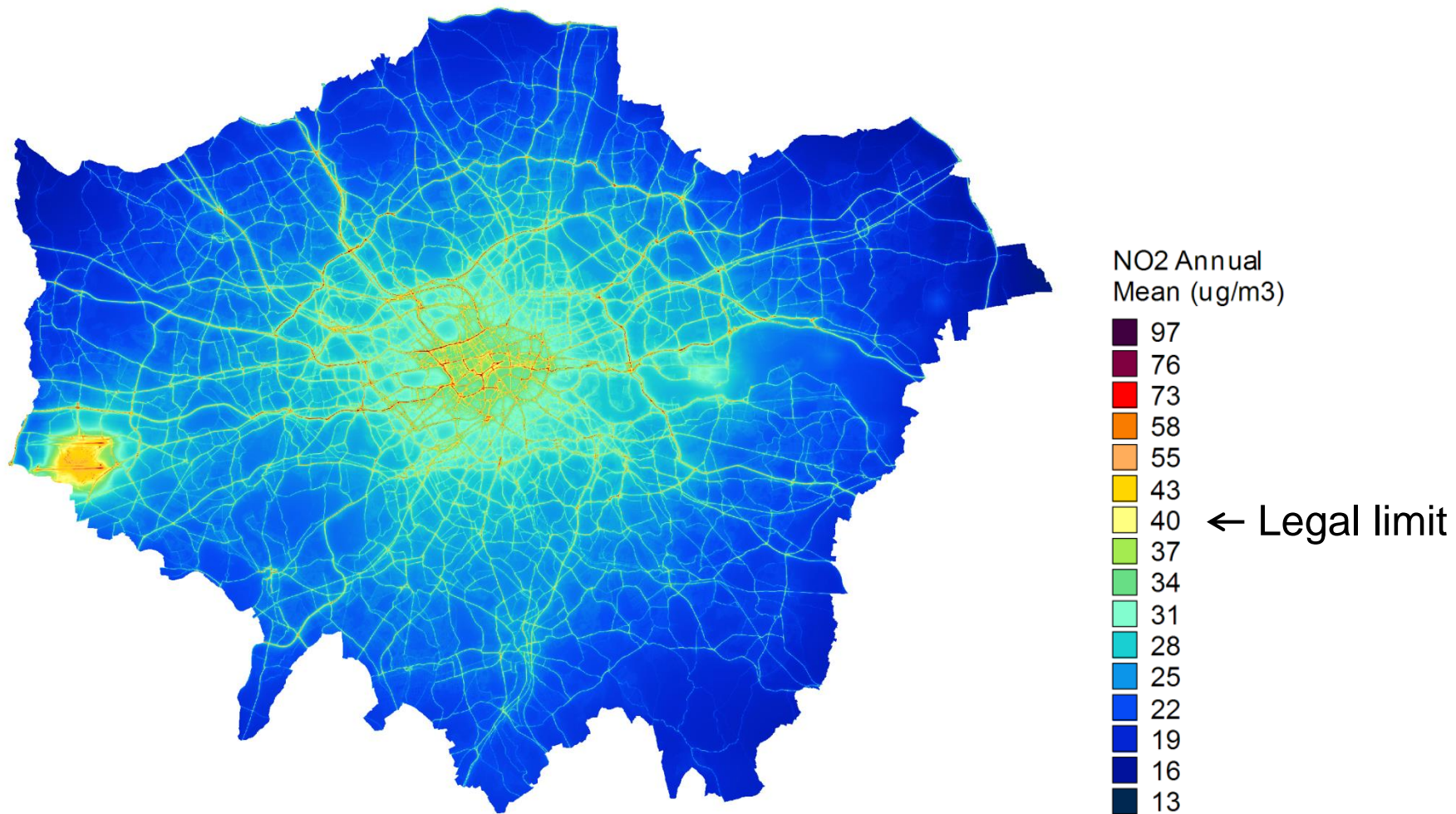
■ On-road measured value (Carslaw, 2011) / (ICCT, 2014)  
--- Euro emission limit



# NO<sub>2</sub> CHALLENGE IN 2013

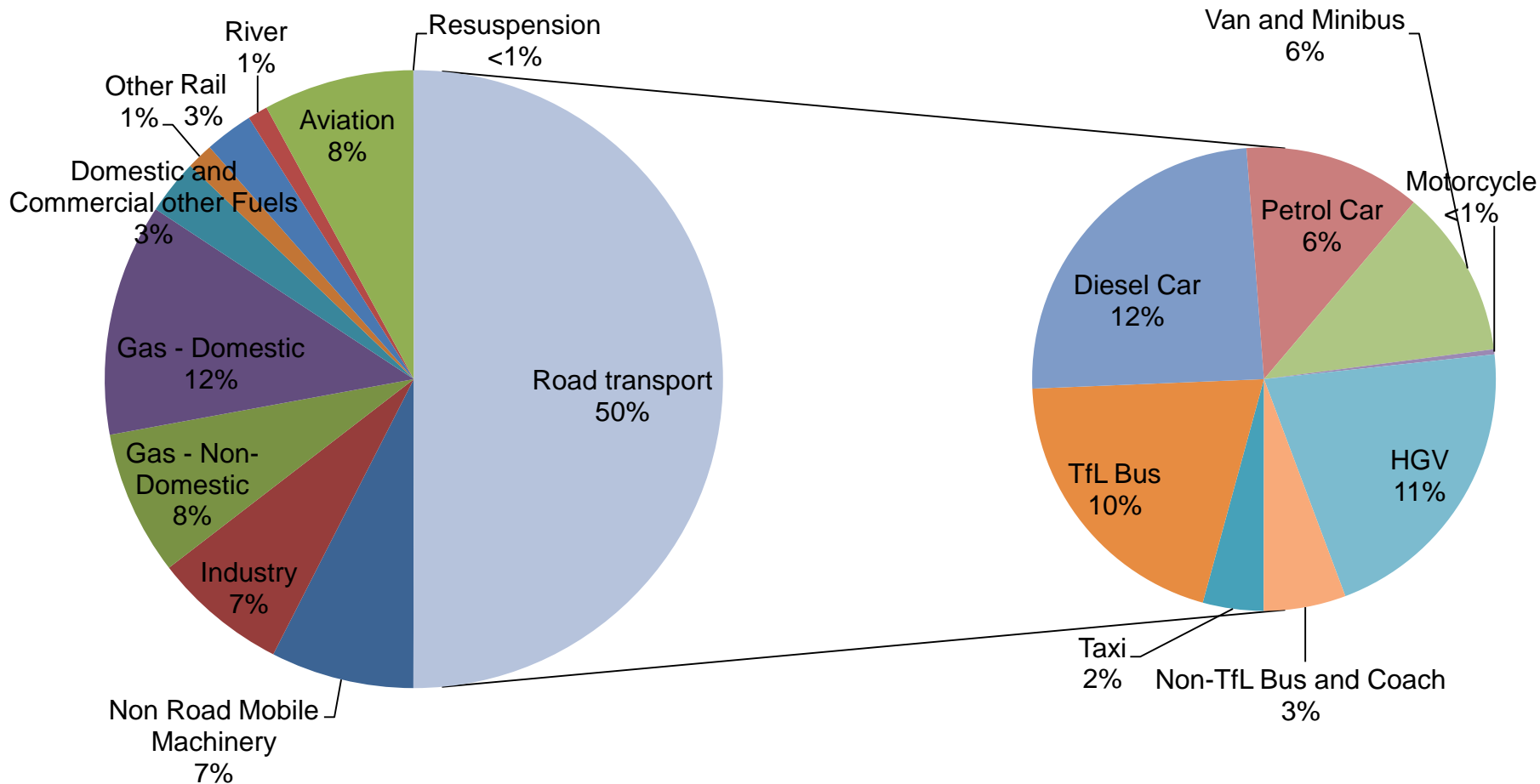


# NO<sub>2</sub> CHALLENGE IN 2025





# NO<sub>x</sub> EMISSIONS IN 2013



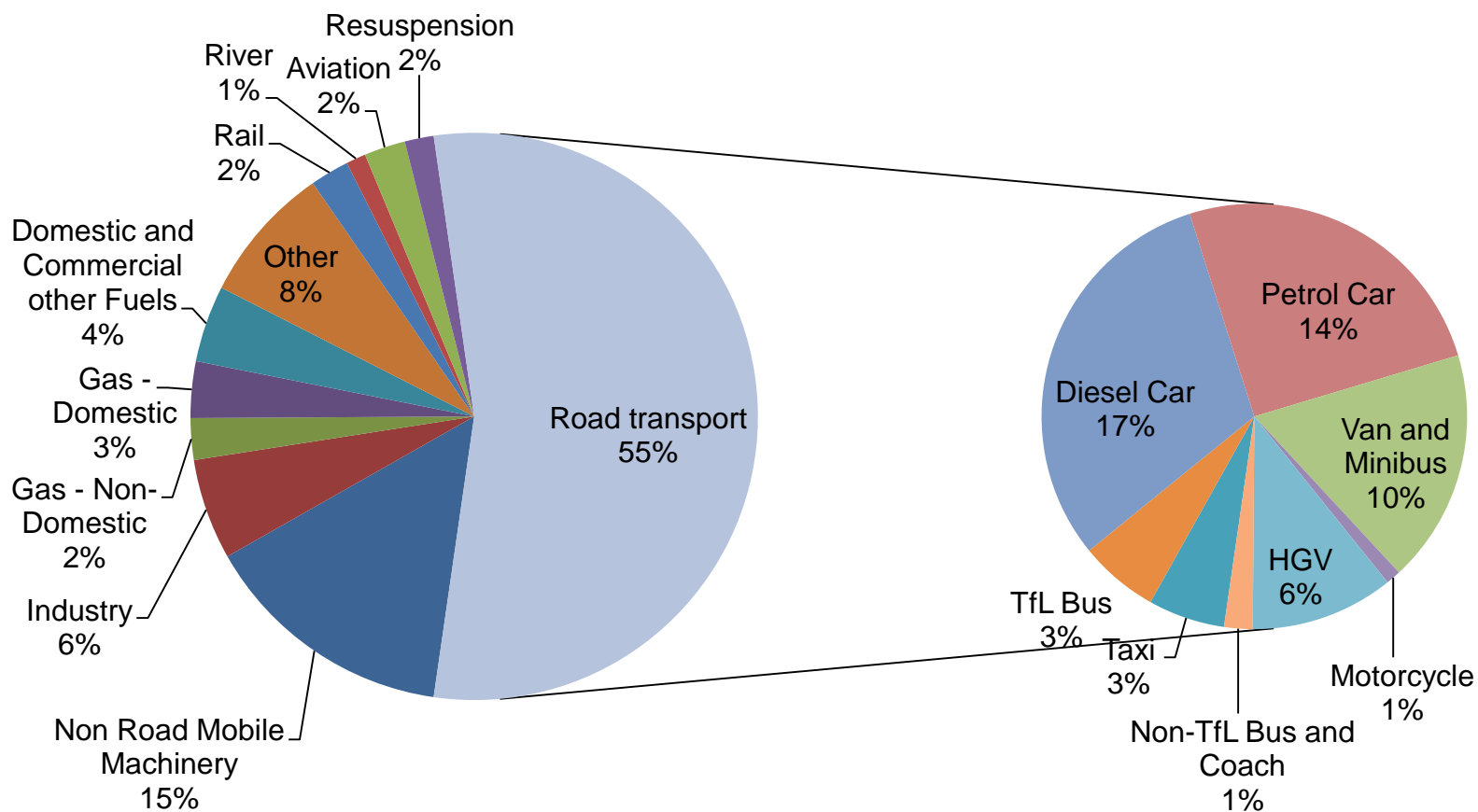
# PARTICULATE MATTER

- London has met legal requirements for  $PM_{10}$  since 2011. However, it remains a localised issue requiring a targeted approach.

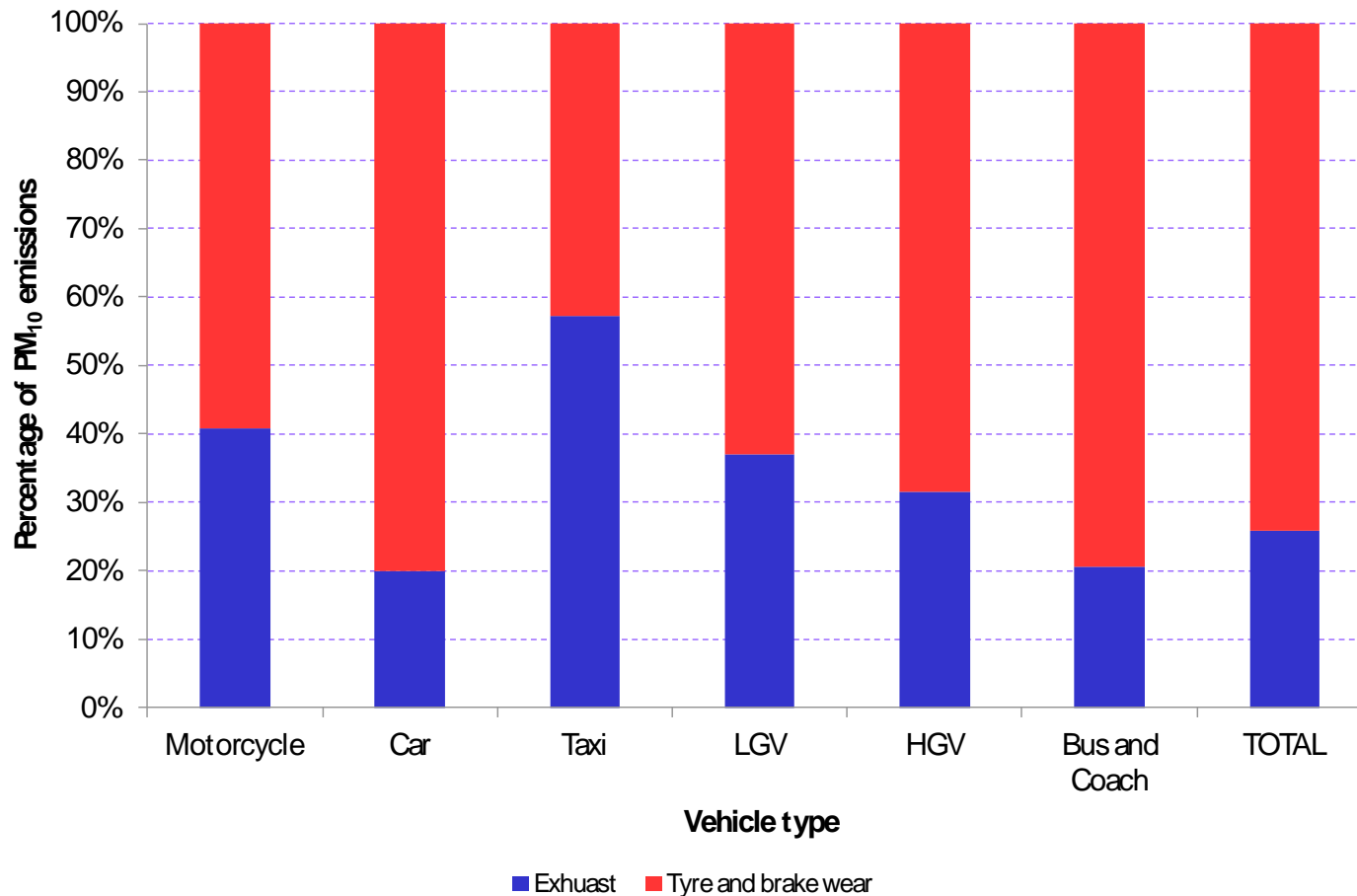




# PM<sub>2.5</sub> EMISSIONS IN 2013



# PARTICULATE MATTER – NON-EXHAUST EMISSIONS





# A GAME OF TWO HALVES...

***‘Clean’ Motorised Transport + Reduce Demand For It***





**New double decks will be hybrid, hydrogen or electric from 2018; all single decks will be zero emission at tailpipe in central in 2020**

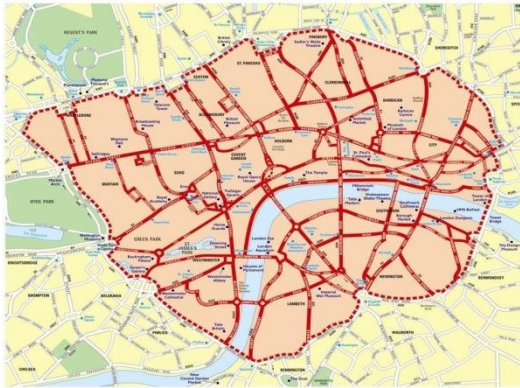






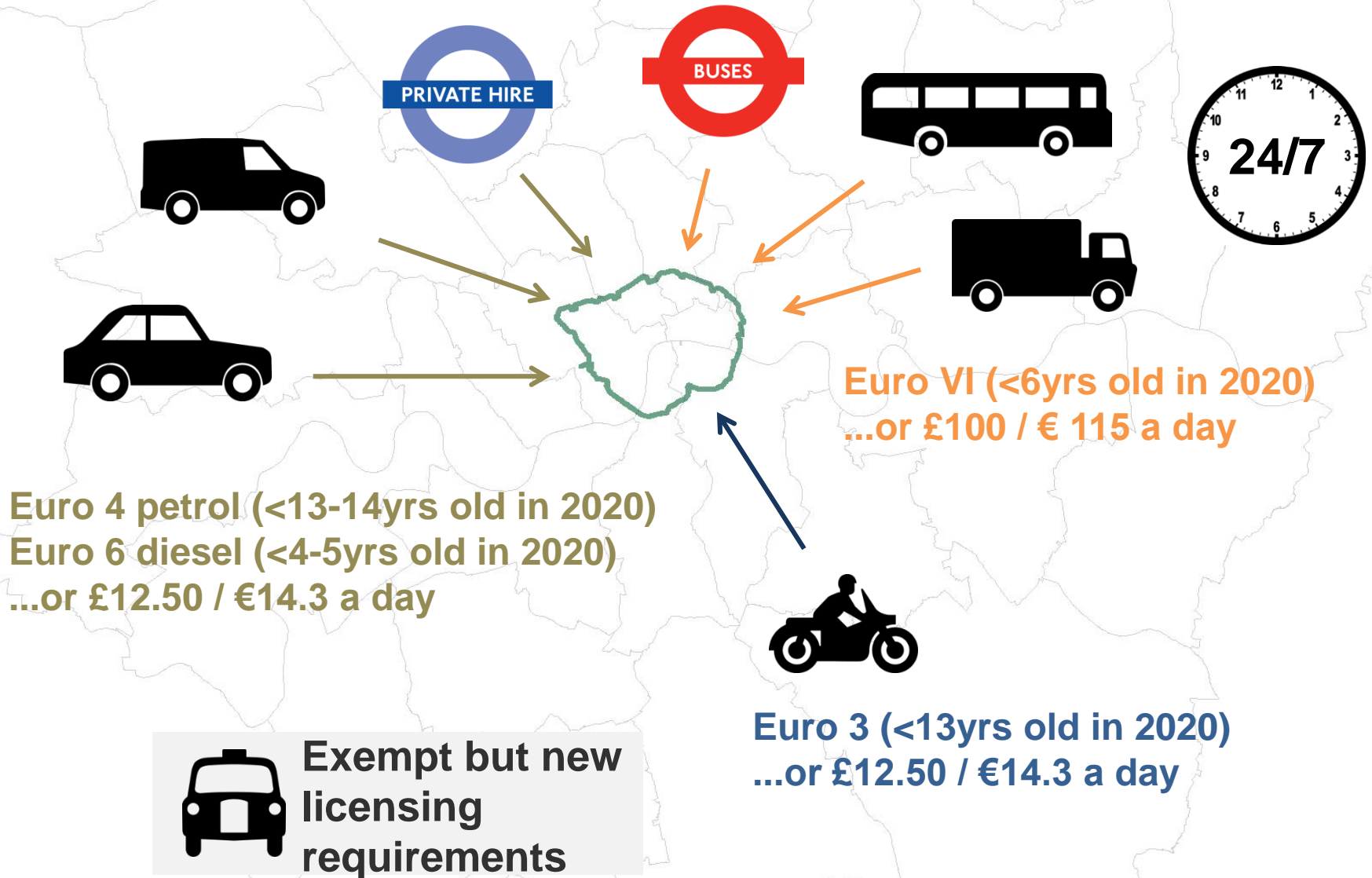
**Zero Emission Capable  
(ZEC) licencing  
requirements for taxis  
and PHVs from 2018  
and 2020, achieving a  
fully ZEC fleet by 2033**

# LOW EMISSION ZONE





# ULTRA LOW EMISSION ZONE



# NEW ULEZ PROPOSALS



## Central London ULEZ in 2019 (all vehicles)



£12.50 per day



£100 per day



## London-wide ULEZ in 2020 (heavy vehicles)



Up to £100 per day



## Inner London ULEZ in 2021 (all vehicles)



Up to £100 per day



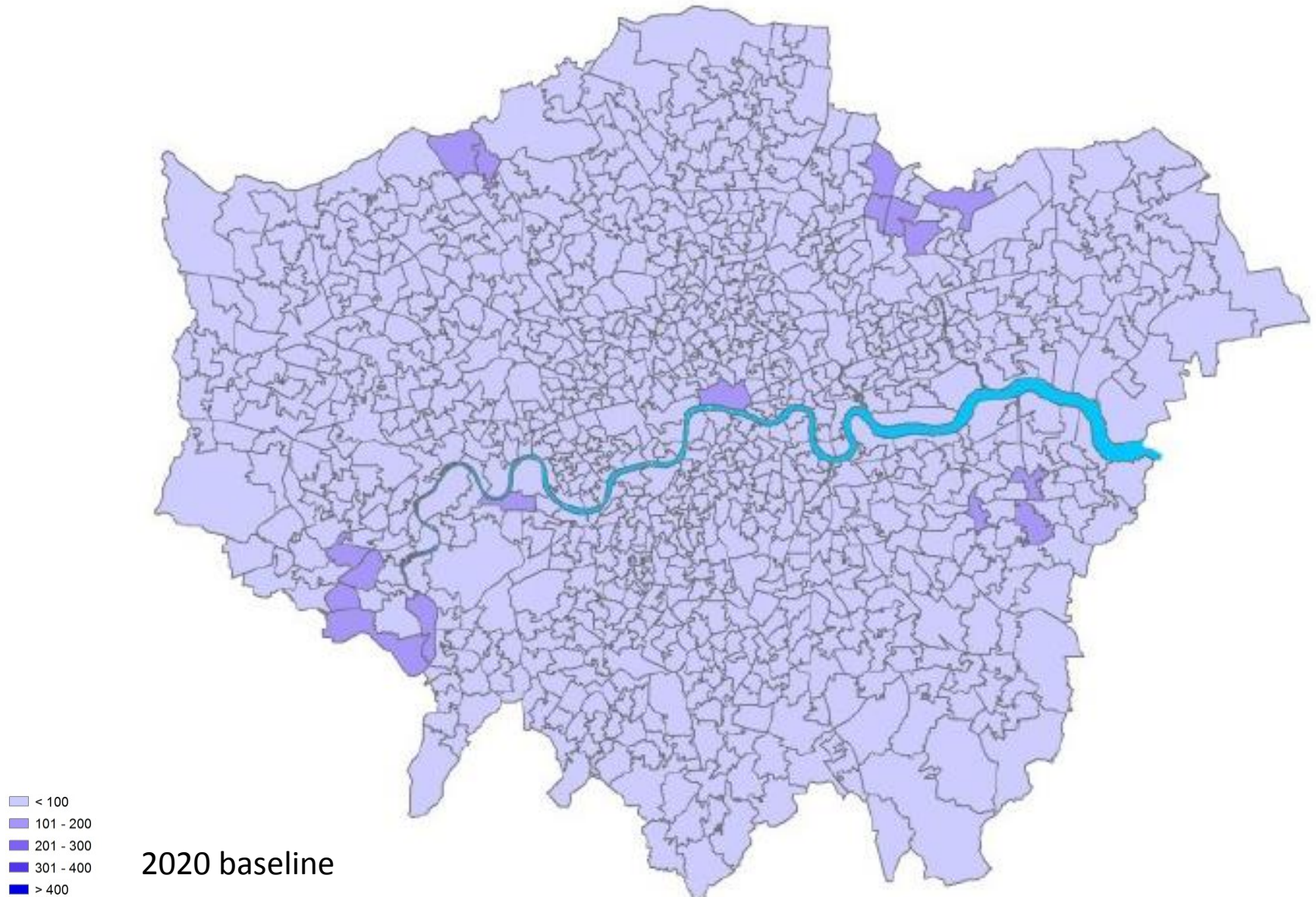
Up to £12.50 per day

## ULEZ standards

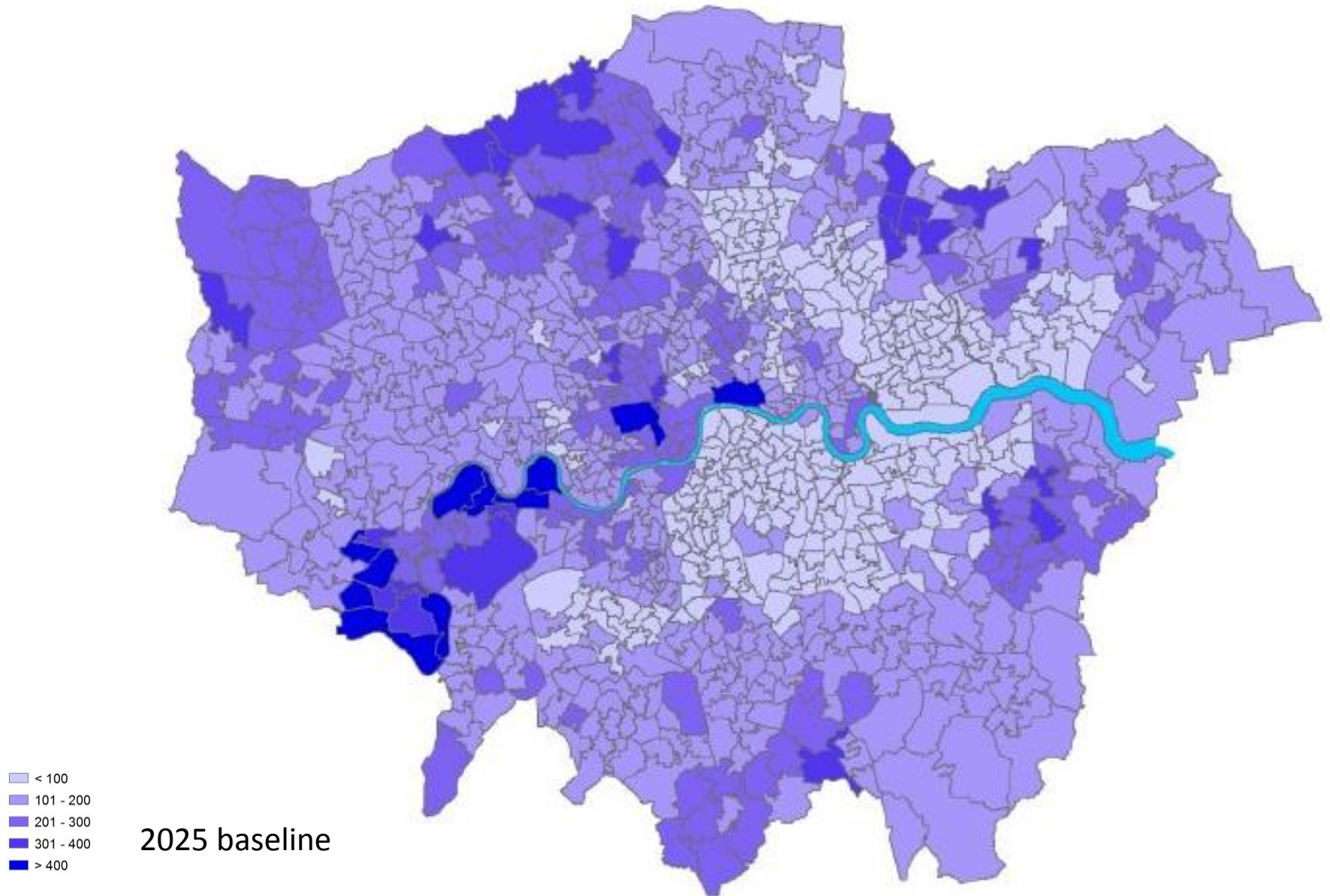
- Petrol:  
Euro 4
- Diesel:  
Euro 6
- Motorcycle  
and L-Cat:  
Euro 3



# ELECTRIC VEHICLE UPTAKE



# ELECTRIC VEHICLE UPTAKE





# SUPPORTING INFRASTRUCTURE

Unlocking the switch to electric vehicles depends on the provision of suitable charging infrastructure. A variety of different infrastructure solutions are needed to support the uptake of electric vehicles:

On-street residential charging for those who do not have access to a garage or off-street charge point, for charging overnight and while the vehicle is parked for longer periods.



c. 66% of Londoners have no access to off-street parking; around £8 million in funding

Top-up/destination charging at supermarkets, public car parks, and on-street locations, for charging on the go and providing reassurance against range anxiety.



1,400 installed as part of Source London but many more are needed

Rapid charging at key on-street locations, air ports, and train stations for taxis, PHVs, and commercial vehicles who need to charge up quickly with minimal interruption to their duty cycle.



300 are planned for delivery by 2020 but finding locations and delivery is challenging



# NON-TRANSPORT MEASURES

AQ ~~Neutral~~ *Positive?*



Retrofit



Construction



Local measures



Mayor's AQ Fund



Health

AIR QUALITY IN  
WANDSWORTH:  
A GUIDE FOR  
PUBLIC HEALTH  
PROFESSIONALS

MAYOR OF LONDON





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