1952
PM$_{2.5}$
(LAEI 2013 UPDATE)

WHO limit
NEW STRATEGIES
NEW STRATEGIES

London Environment Strategy:
- Focus on cross cutting policies
- Includes policies to ensure that reductions in climate change gas emissions, increased green space etc also benefit air quality

Mayor’s Transport Strategy:
- Focus on transport policies
- Includes ambitious targets to improve Air Quality and reduce the need car use generally

The London Plan:
- Focus on the spatial policies needed to deliver London’s ambitions.
- Key policies on “good growth” and design led solutions
OUR OBJECTIVES

- **Reducing exposure** of Londoners to harmful pollution across London – especially at priority locations like schools – and tackling health inequality;

- **Achieving legal compliance** with UK and EU limits as soon as possible, including by mobilising action from the London boroughs, government and other partners;

- Establishing and **achieving new, tighter air quality targets** for a cleaner London, meeting World Health Organisation (WHO) health-based guidelines by 2030 by transitioning to a zero emission London.
MONITORING AIR QUALITY

• London has one of the most comprehensive monitoring networks of any world city, funded primarily by local authorities.

• There are approximately 140 high-accuracy automatic monitoring sites across the city, monitoring NO$_2$ and/or PM$_{10}$. 
We will soon be trialling a new £750,000 sensor air quality monitoring system with C40 cities which will be used to analyse pollution in up to 1,000 hot spots across the city including near schools, hospitals, construction sites and busy roads.

Around 100 sensors will be fitted to lampposts and buildings and sensitive locations, and two dedicated Google Street View cars will be driving across the city, mapping pollution in detail.
During and on the day before high and very high air pollution days, air quality alerts will be displayed at:

- **2,500 bus countdown signs** and river pier signs.
- **140 road signs**, with instructions to switch engines off when stationary to reduce emissions.
- The entrance of **all 270 London Underground stations**.
MODELLING AIR QUALITY

- Update to the London Atmospheric Emissions Inventory (LAEI), a full inventory of emissions, by source and by location
- Presented as excel spreadsheets, tables / maps.
- Strategic emissions and concentration modelling to inform policy, plans and proposals.
SCHOOL AUDITS

• We have identified that 360 primary schools located in areas exceeding legal pollution limits.
• The Mayor has completed ‘air quality’ audits at 50 schools that will identify new measures to protect pupils from toxic air.
• Grants are being made available to schools so they can take action.
HEALTHY STREETS

• Car dependency has contributed to an increase in poor public health across our city.

• By 2041, the Mayor aims for:
  - 80 per cent of Londoners’ trips to be on foot, by cycle or by using public transport (from 64%);
  - London’s total traffic to have reduced by 10-15%;
  - All deaths and serious injuries from road collisions to be eliminated.
Transport for London

Low emission
ZONE

Photo: http://www.commercialmotor.com/
LOW EMISSION ZONE

• Started in 2008 to target oldest and most polluting HGVs, buses and coaches
• Covers the whole of Greater London (1,580 km²) operates 24/7, 365 days pa.
• Daily charge £100 – £200
• Compliance with current standards high at around 96 per cent for lorries, buses and coaches, and 98 per cent for vans and minibuses.
• Helped reduce PM emissions.
- £10 charge during Congestion Charge hours for older polluting vehicles
- On top of existing £11.50 Congestion Charge
- For pre-Euro 4/VI – toughest standard of any world city.
The first LEBZ along Putney High Street has reduced the number of hours breaching legal limits by more than 90 per cent (vs 2016).
ULTRA LOW EMISSION ZONE

Central London ULEZ in 2019 (all vehicles)
- £12.50 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

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

Exempt but new licensing requirements
IMPACT OF EXPANDING THE ULEZ

• Expanding the ULEZ will lead to approximately 100,000 people no longer living in areas exceeding legal limits.

• In outer London there will be a 28 per cent reduction in NO$_x$ road transport emissions, and in inner London there will be around a 31 per cent reduction in NO$_x$ road transport emissions in 2021.

• Over 3,000 primary school children in polluted areas of London and Luton will have their lung health monitored over a four-year period in a new international study led by Queen Mary University of London.
New double decks will be hybrid, hydrogen or electric from 2018; new single decks will be zero exhaust emission from 2020

Target: Zero emission bus fleet by 2037 at the latest
ZERO EMISSION VEHICLES

• New requirements for GLA fleets such as the Fire Brigade and Police force

• ‘ULEV only’ streets being brought in this year

• Zero Emission Zones to be introduced in town centres from 2020 and in central London from 2025
No more diesel taxis from 2018 and new taxis will need to be zero emission capable

Target: Zero emission capable taxi fleet by 2033 at the latest
EV INFRASTRUCTURE

On-street residential charging

Top-up/destination charging

Rapid charging

Most important for commercial vehicles such as PHVs and taxis – target is 150 by end 2018
Covers NRMM on construction sites between 37 and 560 kW

**Now:** Stage IIIB in the Central Activity Zone (CAZ) plus Canary Wharf area (yellow zones), Stage IIIA everywhere else

**2020:** Stage IV in CAZ plus Opportunity Areas (where we are planning the most construction), Stage IIIB everywhere else.

**2025:** Stage IV throughout London

**2030:** Stage V throughout London

**2040:** Zero emissions throughout London

We are also working with industry as they develop hybrid and zero emission technology as well as retrofit solution for existing machinery.
ANNUAL MEAN NO₂, 2025

LONDON ENVIRONMENT STRATEGY (2018)
ANNUAL MEAN
PM$_{2.5}$, 2013

LAEI 2013
UPDATE (2017)
ANNUAL MEAN
PM$_{2.5}$, 2030

LONDON
ENVIRONMENT
STRATEGY
(2018)
OUR GOALS

• London to have the best air quality of any major world city by 2050, going beyond the legal requirements to protect human health and minimise inequalities and;
• London to be a zero carbon city by 2050, with energy efficient buildings, clean transport and clean energy.
• Deliver policies that support phasing out fossil fuels, especially diesel, encourage the take up of zero emission vehicles and a mode shift towards sustainable travel.