

Rapid charging and other charging Infrastructure in London

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² Mayors Transport Strategy

Air Quality

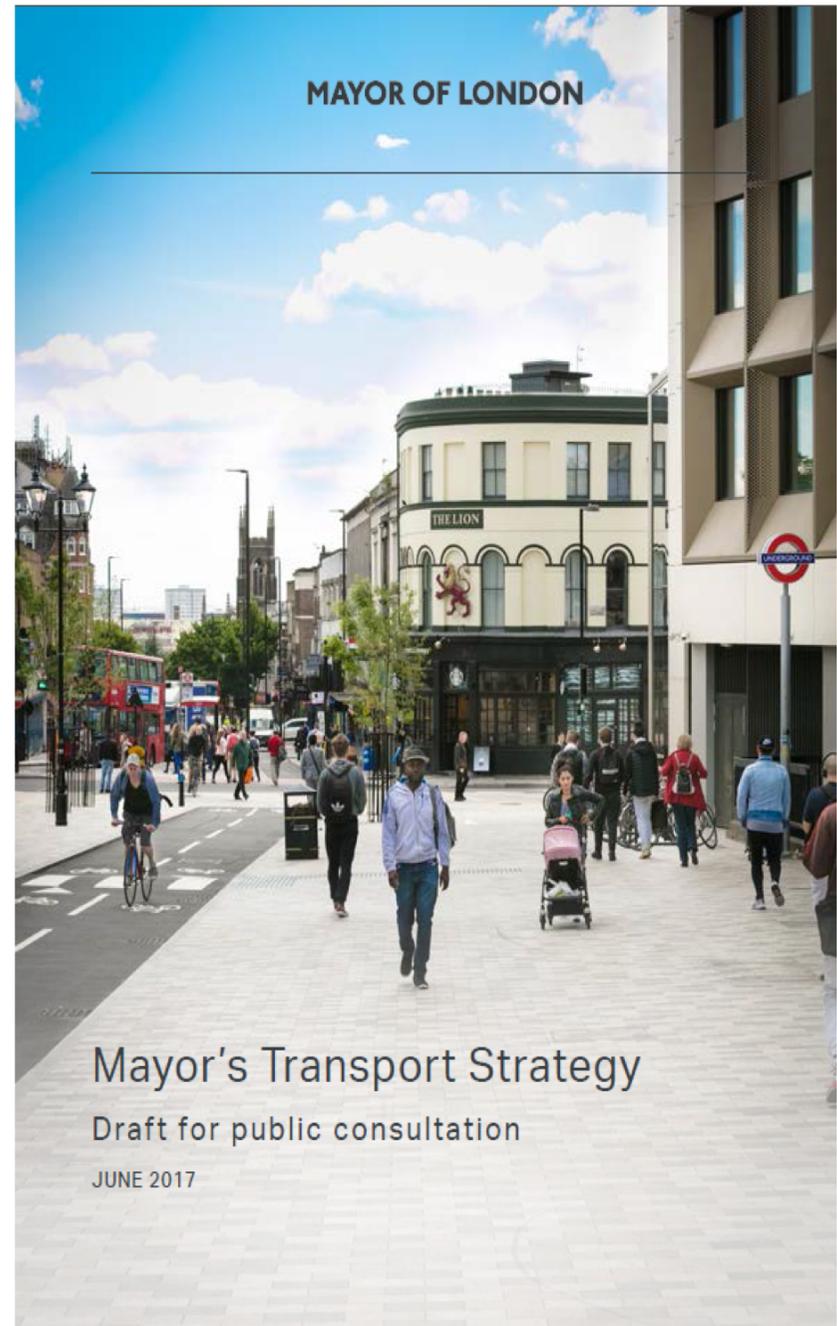
- Zero carbon by 2050
- Central London and town centre zero emission zones from 2025

Healthy Streets agenda

- Re-allocation of road space
- Better planning and operation of freight and servicing trips

Safety

- Vision Zero
- Direct Vision Standard



The Mayor and TfL are committed to tackling London's emissions challenge



Cleaning up London's air as soon as possible is one of the Mayor's top priorities (NO₂ and PM)

His goal is for London to be a 'Zero Carbon City' by 2050



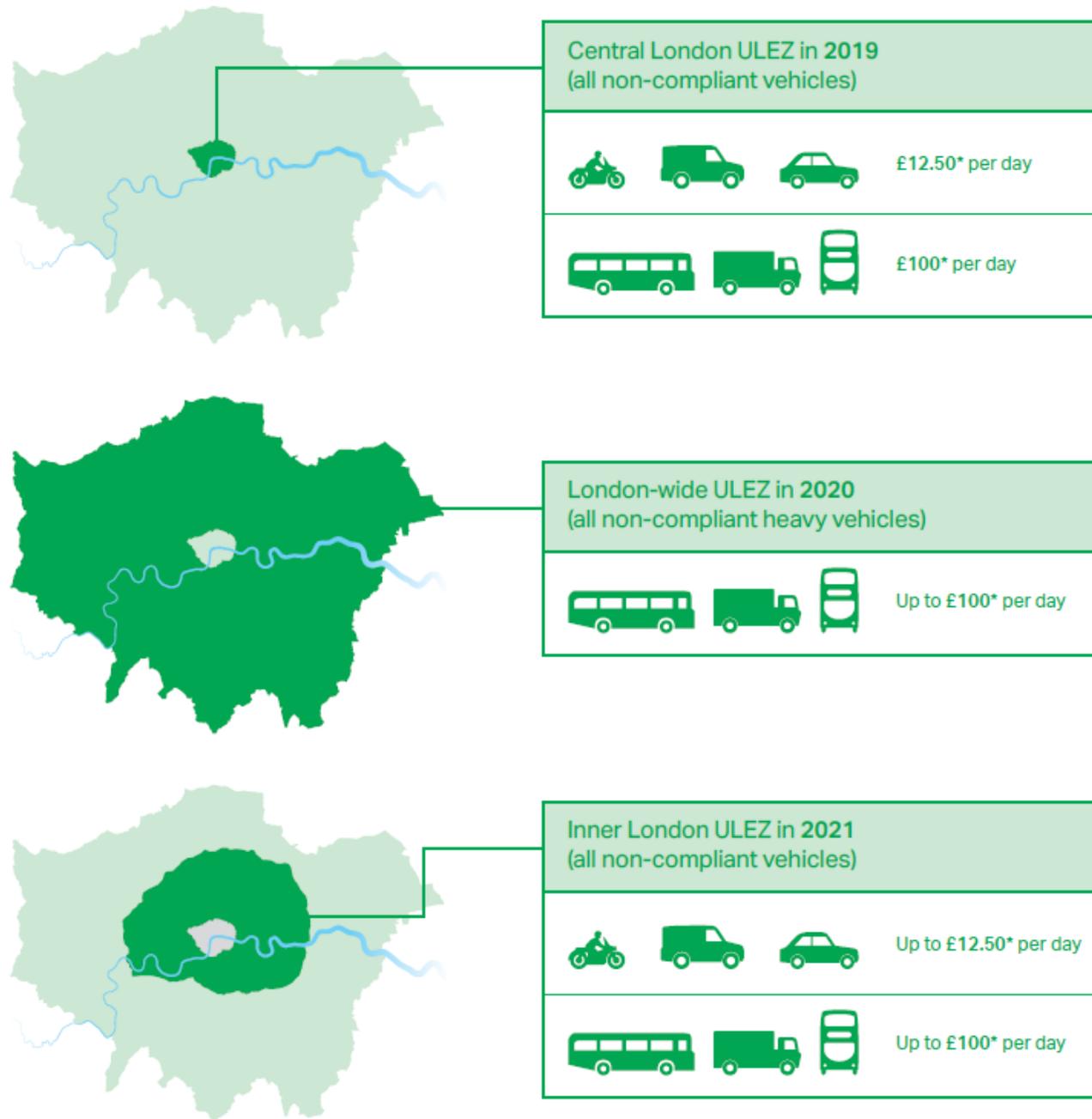
Action is needed on two fronts:

1. Reduce **total vehicle kilometres** through mode shift and land use planning
2. Reduce our use of **fossil fuels** and accelerate the **switch to ultra low emission vehicles**

Discouraging the dirtiest vehicles e.g. through the **Ultra Low Emission Zone (ULEZ)**

Encouraging the cleanest vehicles e.g. EVs

4 For road transport, the immediate focus is on reducing NOx and PM emissions



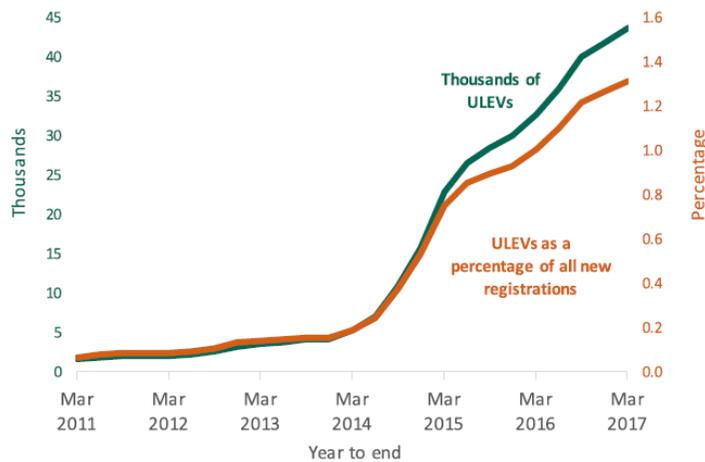
ULEZ standards

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

5 The electric vehicle market

Growth in the electric vehicle market is strong in many areas of London and outpaces the national average of 1.3 per cent of all new vehicle registrations.

Figure 4: New Ultra Low Emission Vehicle registrations, UK: 2011 Q1 - 2017 Q1



- There are currently almost 10,000 electric vehicles registered in London
- Government grants reduce EV purchase price and help enable domestic and workplace charge point installation

Challenges

- There is a lack of electric vehicles suited to freight and servicing
- EV uptake to date has been limited to those with off-street parking facilities



TfL is using its influence to increase the number of all types of ULEVs on London's streets

Leading by example: All single deck buses in central London will be zero emission by 2020



Technology trials: wireless bus charging and new electric double deck buses



Regulation: New licencing requirements for zero emission capable taxis and private hire vehicles

Funding: Supporting innovation e.g. through Mayor's Air Quality Fund



Stakeholder engagement: LoCITY programme to help the freight industry adopt ULEVs



Infrastructure: Charge point delivery in partnership with boroughs and private sector



A variety of infrastructure is needed

On-street residential charging:

For residents to charge on-street (overnight and while parked for longer periods)



Approx. 66% of London households have no access to off-street parking

Top-up/destination charging:

E.g. at supermarkets & public car parks. Charging on-the-go to reduce range anxiety



1,400 in Source London but more are needed. Needs high usage to be commercially viable

Rapid charging:

On main routes, airports and train stations. High mileage users can charge up quickly



At least 300 are planned for delivery by 2020 but finding sites is challenging

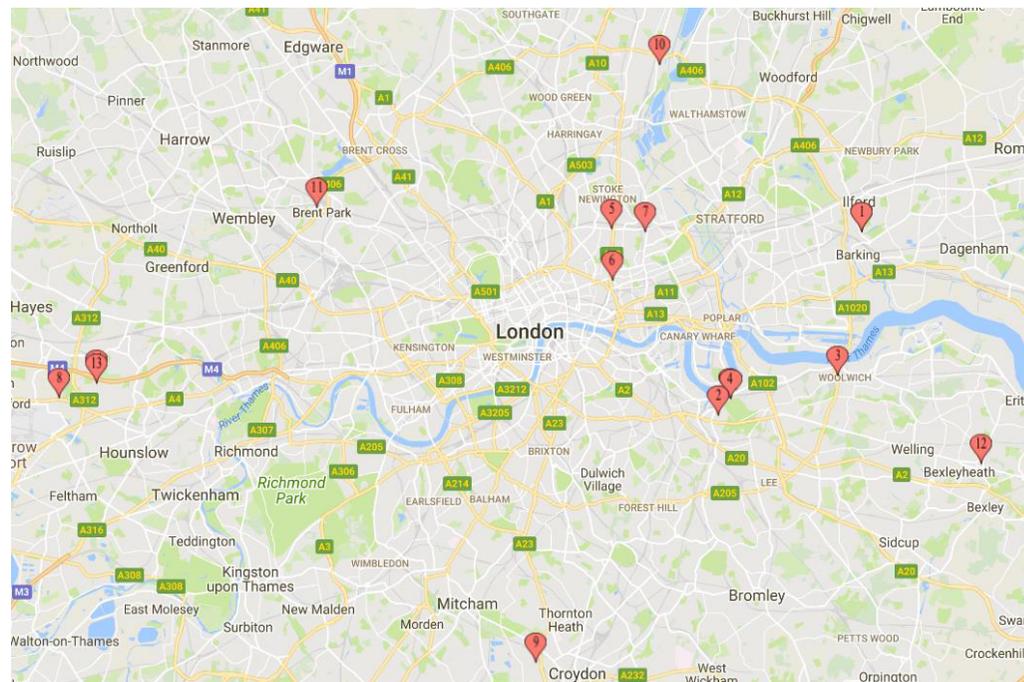
We are facilitating a market-led, sustainable approach to infrastructure delivery

Rapid Charging Project:

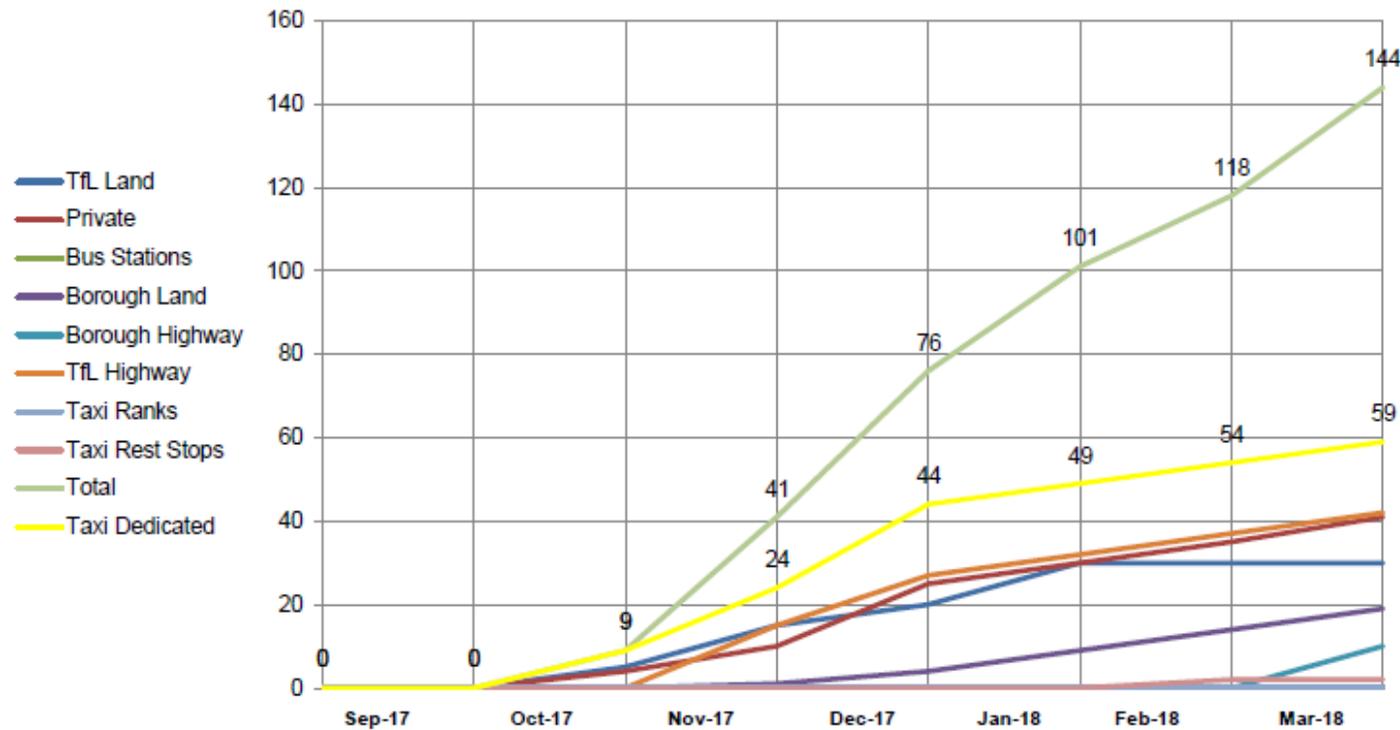
- £18 million funding to 2020
- We will find sites, pay for electricity upgrades and set up a framework of trusted suppliers
- Private sector partners will fund, install, operate and maintain the charge point network

Go Ultra Low City Scheme:

- £13 million funding to 2020
- Cooperation to develop a pan-London solution
- ~2,000 new on-street charge points for residents and car sharing
- Neighbourhoods of the Future demonstrators



We will deliver at least 300 rapid charge points by 2020 for high mileage drivers, but more will be required...



First rapid charge points will be operational within weeks.

Initial focus on supporting taxi electrification.

Focus on working with private landowners to identify future sites suitable for charging.

To reach a zero carbon city in 2050, we are testing technology, incentives and regulatory measures:

A loan scheme for local businesses to try EV vans

'Zero emission only' taxi ranks with rapid charging facilities

Upskilling mechanics to work on EVs

Low Emission Neighbourhoods & Neighbourhoods of the Future



Zero emission zone in a busy town centre

Exemplar 'Electric Streets' with innovative charge points and EV priority parking

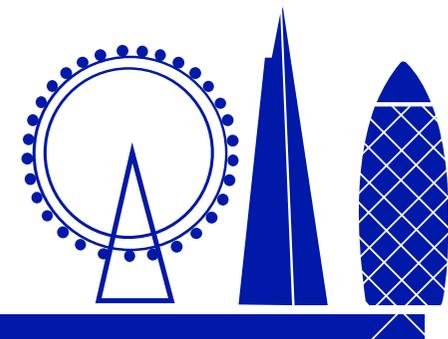
EV-only access to streets /loading bays and no idling zones

Electrifying car club fleets

Keeping the city growing and reducing transport emissions

Ultra low emission vehicles can help achieve the Mayor's goals for better air quality, healthy streets and a zero carbon city

- We will be delivering new, high quality charging infrastructure on-street before Christmas
- Six new Neighbourhoods of the Future will open in 2020 to demonstrate new EV measures
- Consultations on new air quality measures to discourage the most polluting vehicles will continue in 2017





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