

Drivers for change

Remarketing EVs & PHEVs - challenges and opportunities

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23/01/2019

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Background

- Provide advice to fleets to help them reduce emissions and costs, better manage grey fleet and transition to ULEV
- Eco-driving training schemes for fleet drivers
- Manage incentives and programmes to enhance uptake of ULEVs, installation of chargepoints and clean vehicle retrofit.
- **Support low emission transport skills, to build expertise and best practice across the automotive supply chain.**

Independent

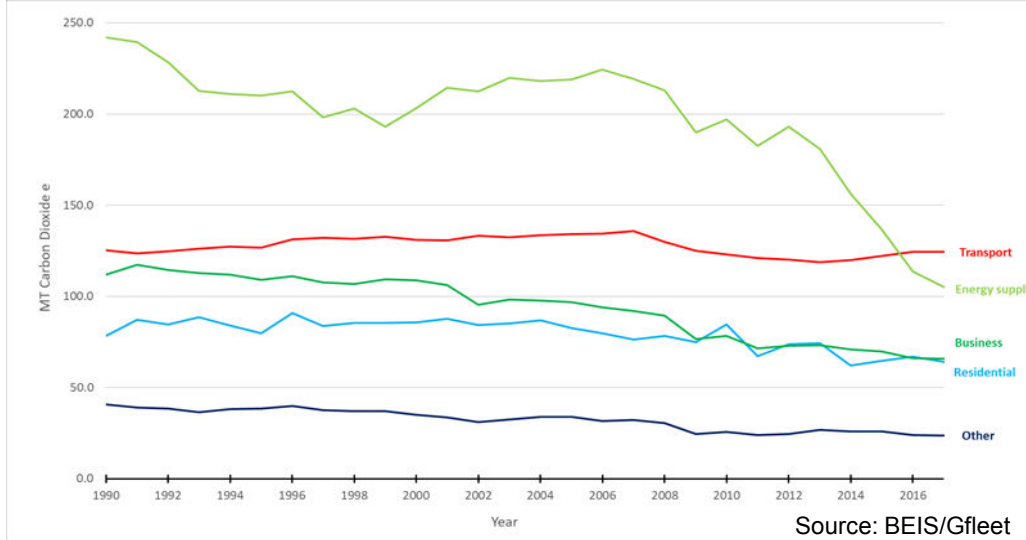
Impartial

Pragmatic

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Drivers for change - UK Carbon Emissions

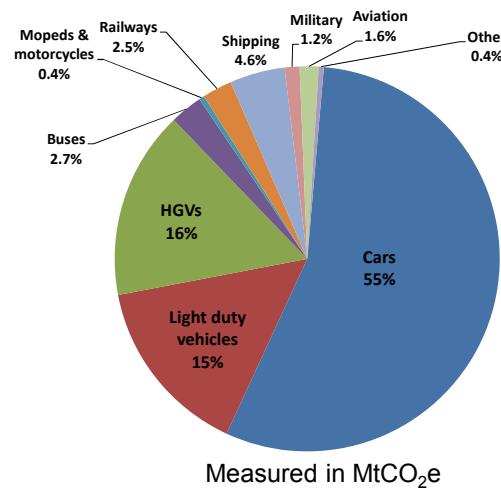


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Drivers for change – transport greenhouse gas emissions

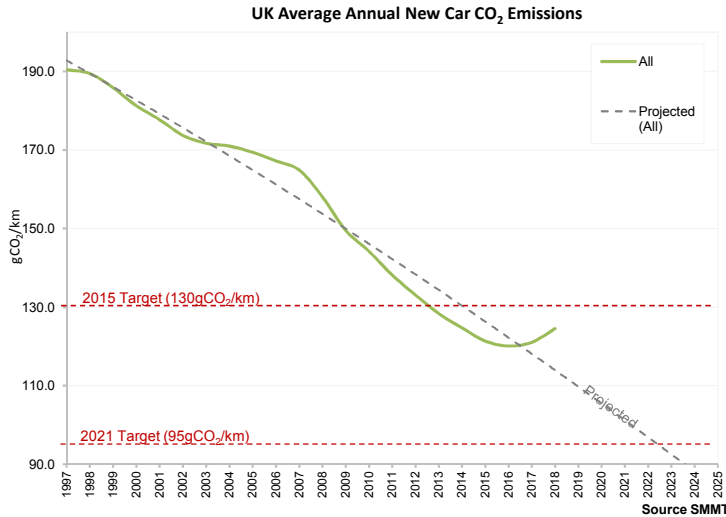
- 33% of greenhouse gas emissions were from transport in 2016 (BEIS 2018)
- Cars emit >55% of CO₂
- Transport emissions are a priority to meet EU CO₂ targets
 - 20% reduction in GHG by 2020 (from 1990 levels)
 - 80-95% reduction by 2050



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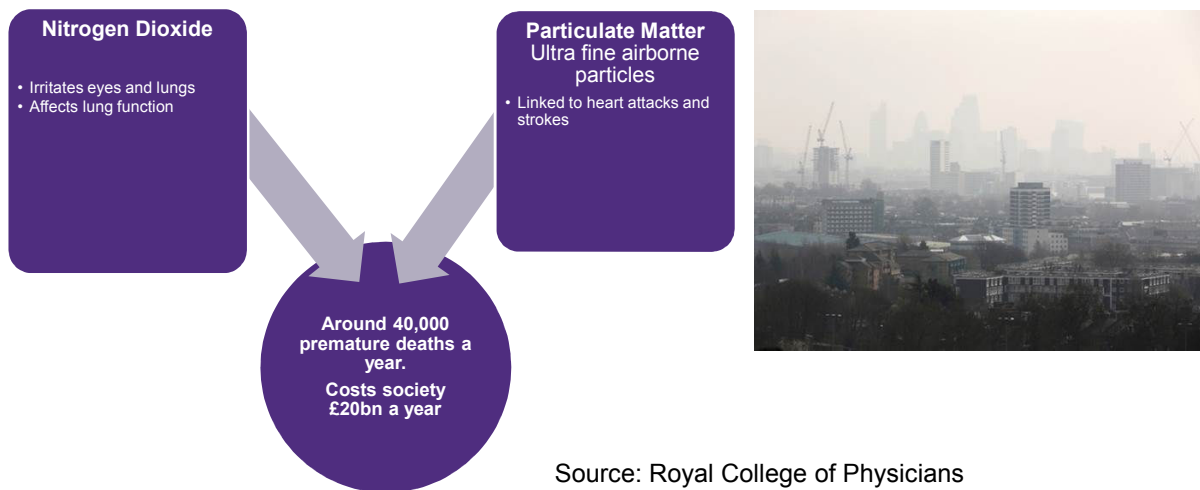
Drivers for change - EU CO₂ Emission Targets



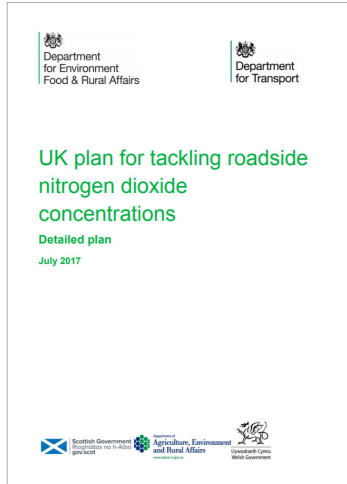
2030 Agreement (December 2018)

- 37.5% reduction by 2030 (31% for vans)
- Compromise of Commission @30% & Parliament @40%
- Based on 2021 levels, intermediate 15% cut for both cars and vans by 2025

Drivers for change – air quality



Government response - Air Quality Plan & Clean Air Strategy








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Government response - Clean Air Zones



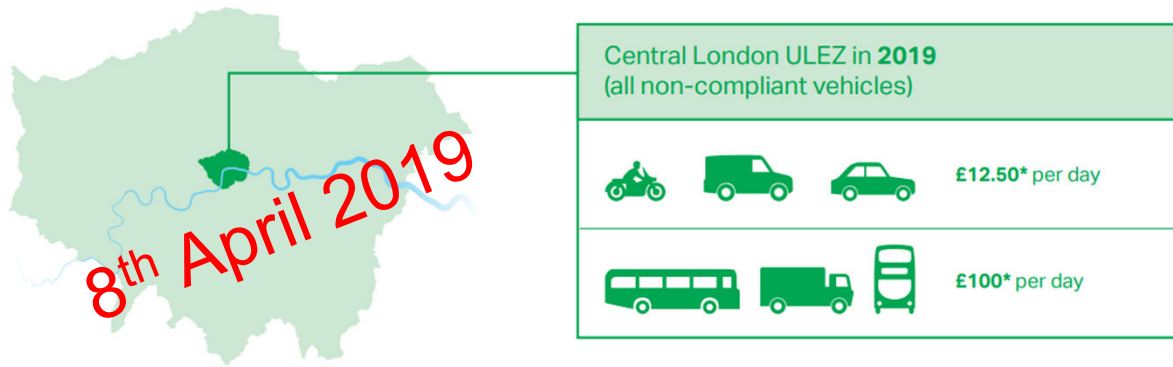
The **CAZ** standard is:
 Euro 3 for motorcycles (13 years old in 2020)
 Euro 4 for petrol cars, vans and minibuses (<13-14 yrs old in 2020)
 Euro 6 for diesel cars, vans and minibuses (<4-5 years old in 2020)
 Euro VI for lorries, buses and coaches (<6 years old in 2020)

					
Birmingham: D	✓	✓	✓	✓	✓
Derby: none (or D?)	✗	✗	✗	✗	✗
Leeds: B	✓	✓	✓	✗	✗
Nottingham: none	✗	✗	✗	✗	✗
Southampton: A or B	(✓)	(✓)	✓	✗	✗

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Government response - London ULEZ



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Government response - London ULEZ for Heavy Vehicles



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Government response- London ULEZ extension



Inner London ULEZ in 2021 (all non-compliant vehicles)	
	Up to £12.50* per day
	Up to £100* per day

Government response - Others consulting

Zero emission zone proposals

Walton Street
High Street
Botley Road
Maddalena

250 metres

BBC NEWS

Charging Clean Air Zone proposed for Bath

Bath & North East Somerset council has outlined the three options it is considering for the implementation of a charging Clean Air Zone in the city, in a bid to tackle illegal levels of air pollution.

The council was one of 28 identified within the government's July 2017 'NO2 plan' as an authority where nitrogen dioxide levels are projected to exceed national air quality objectives beyond 2022.

Bath and North East Somerset council has outlined plans for the potential introduction of a charging Clean Air Zone.

www.slough.gov.uk

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Low Emission Strategy 2018-2025

A draft strategy document has been prepared. The public consultation finished on the 5th February 2018. A document summarising the consultation responses for the LES has been prepared and can be viewed/downloaded from the Downloads section of this page.

The final Strategy will be prepared in the summer for Council approval.

For any comments, suggestions or thoughts regarding the draft strategy, please contact the Environmental Quality Team directly.

Navigation

- Air quality
- Air quality reports
- Low Emission Strategy 2018-2025
- Air Quality Management Areas

LES Survey
Make your views heard - complete the LES survey

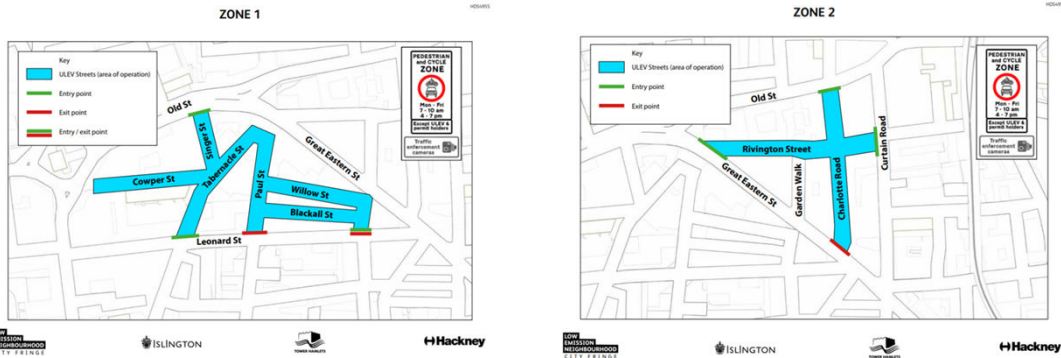
Downloads

- LES Strategy Plan Maps (PDF)
- LES Air Quality Mitigation Zones (PDF)

Government response - Ultra-low emission streets

In operation Monday- Friday, 7-10am & 4-7pm

Started 3rd September 2018



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Vehicle and charging developments - vehicles



2011	2016	2017	2018
109 miles NEDC	174 miles NEDC	250 miles NEDC	300 miles WLTP
24kWh	33kWh	40kWh	64kWh

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Vehicle and charging Developments - charging



2010	2011	2012	2018 →
< 3kW	3.7-22kW	50 kW	150-350 kW
12 + hours	2-9 hours	20-30 minutes	5-20 minutes

Time on charge to gain c.80 miles range

Vehicles and charging developments - vehicles

The screenshot shows the electrive.com website with several news articles. Key headlines include:

- Every car from PSA brand...** (dated May 2, 2018)
- Volkswagen ID hatch to stay true to concept, says design boss**
- DAIMLER Global Media Site**
- Plans for more than ten 2022: A...**
- Smart is going it all-electric in Europe too**
- VW plans 27 electric cars by 2022 on new platform**
- Green Car Reports**
- Take Us With You!**
- The All-New Kia Ceed Nice move**

Industry engagement - why promote used EVs?



Wider choice of cars for used buyers, & opportunities for those unable to afford a new vehicle to benefit from EV ownership

Wider ownership leads to less pollution in towns and cities (& broader acceptance of measures to tackle the issue?)

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Industry engagement - UK market

2016	2017	2018	2019
c.6,000	10,199*	26,000?	39,000?

*Source: SMMT

Growing market, but still tiny compared to c. 8 million used car market in UK

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Industry engagement - participants

Industry engagement through trade bodies and contacts:



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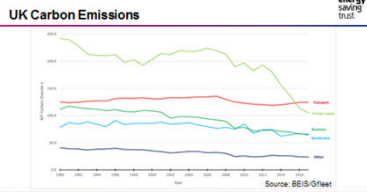
Industry engagement - content

Module	Content
1	The vehicle emissions agenda
2	Vehicle technology
3	Vehicle charging and infrastructure
4	Current landscape – future developments
5	EVs & PHEVs Checklists
6	ULEV myths – Quiz

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Industry engagement - content



The issue with air quality

Summary- Types of ULEVs

- Battery electric vehicle or pure EV (BEV or EV)**
 - Powered only by electricity.
 - Zero tailpipe emissions.
 - Little running costs: Fuel and OMR.
 - Overall emissions will reduce with greater use of renewables.
- Extended range electric vehicle (E-REV)**
 - Combines a battery, electric drive motor and an ICE generator.
 - Similar to pure EV but with added range.
- Plug-in hybrid electric vehicle (PHEV)**
 - Combines a battery, electric drive motor and an internal combustion engine.
 - Driver knowledge and selection important.
 - Only work if regularly stopped in.

Charging times

Three-pin socket	Type 2	Rapid
2.3kW	3.7 - 22kW	50kW
12+ hours	2-9 hours	80% in 20-30 minutes

Domestic charging

Electric Vehicle Homecharge Scheme

- Available for householders who own, lease or have primary use of an eligible EV
- Up to 75% capped at £500 inc. VAT of the cost of one chargepoint and it's installation
- Tethered or socket?

Charging Infrastructure Development

2010	2011	2012	2017-2020
<3kW	3.7-7kW	50kW	150-350kW
12 hours	4-8 hours	20-30 minutes	5-20 minutes

Times quoted are for range of c.80 miles

Industry engagement – hot topics



Air Quality: London ULEZ and Clean Air Zones

Vehicle specifications: Battery size, model identification



	Domestic	Type2	CHAdeMO	CCS
Slow	2.3kW (10A) 10 miles/hr	3.7kW (16A) 15 miles/hr		
Fast		7.3kW (32A) 30 miles/hr		
		22kW (3ph) 80 miles/hr		
Rapid		43kW (3ph) 70-80 miles/30 mins	50kW (3ph) 70-80 miles/30 mins	50kW (3ph) 70-80 miles/30 mins

Charging: Speeds, connectors, No. of chargepoints

Industry engagement - concerns

Difficult to identify vehicle specifications

Only identified as "Electric Vehicle" on the V5 (vehicle registration document)
Battery size & charging rates not obvious

Battery leases

Uncertainty around lease transfers
Cost as vehicle ages

Funding

Finance companies not always willing to fund ULEVs

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Industry engagement - concerns

Cost of delivering vehicles by transporter

Delivery drivers not confident to drive BEVs in particular

Dealing with depleted batteries

Movement on site & loading onto transporters

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Industry engagement - opportunities

Local market leadership

Emerging market providing growth

Source of expert advice

Increased margins

Customer retention

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Industry engagement - opportunities



"Stock levels have been steadily increasing year on year and now 4-5% of our stock is alternative fuel vehicles"

Unbeatable car supermarket Crawley

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energy[®]
saving
trust

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