

Cleaner, greener, faster: The role of mass transit

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Midlands Transport Summit 2019

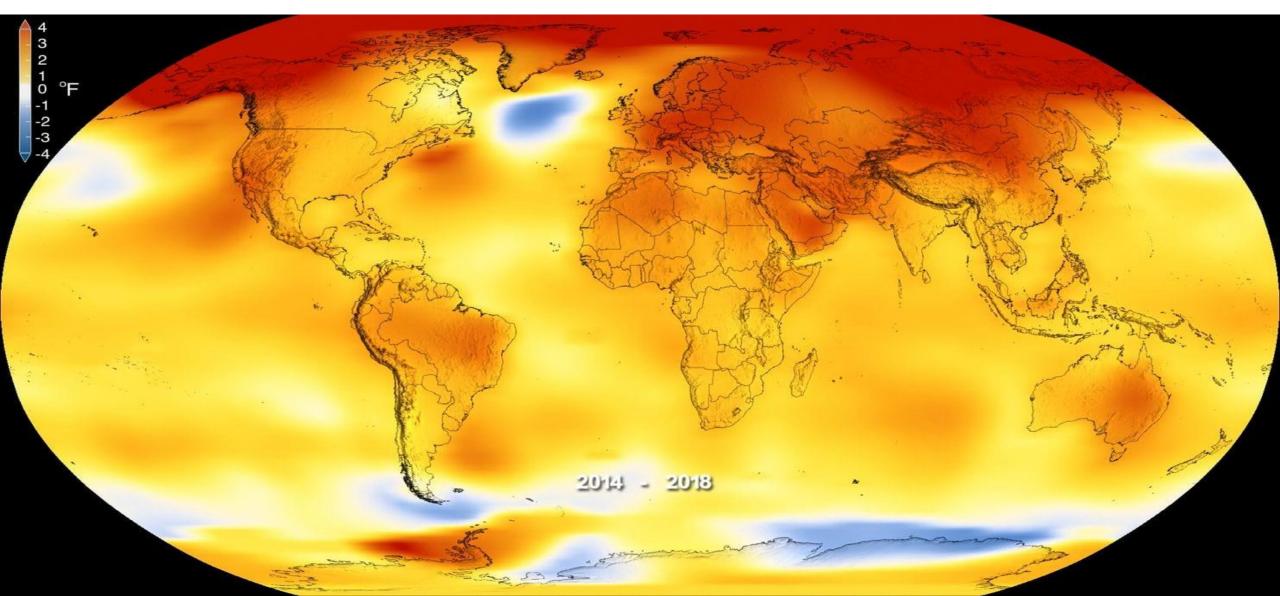


Why do we need cleaner, greener, faster mass transit?

- To tackle climate change
- To improve air quality
- To reduce congestion

Five warmest years since 2010





40,000-50,000 early deaths every year in UK caused by air pollution





Congestion forecast to cost UK economy £21bn per year by 2030













INDUSTRIAL

Future of Mobility: **Urban Strategy**

Moving Britain Ahead

Department for Transport



Road transport leading contributor to UK GHG emissions and air pollution

- Transport highest emitting sector road transport 90% of transport GHG emissions
- 2018 new car emissions rose for first time since 2000
- Road transport constitutes 80% of nitrogen oxides concentrations at roadside

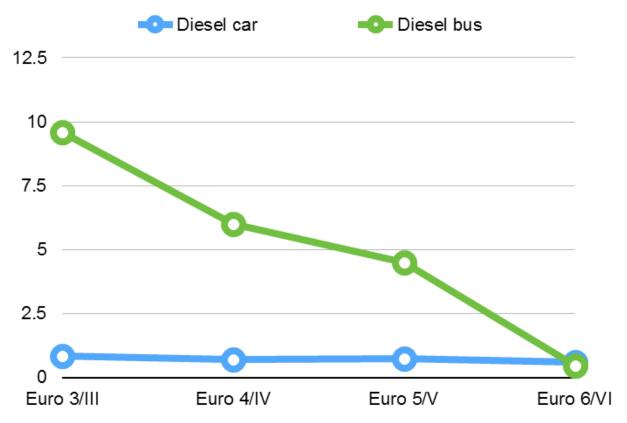


Cleaner, greener buses are delivering on air quality and climate challenges

- 7,000 Low Carbon Emissions Buses in Great Britain
- Buses leading the way on road to zero 4.2% of new buses registered zero emission at the tailpipe in 2018, compared with 0.7% pure battery electric cars
- Euro VI bus emits 95% less NOx than Euro V



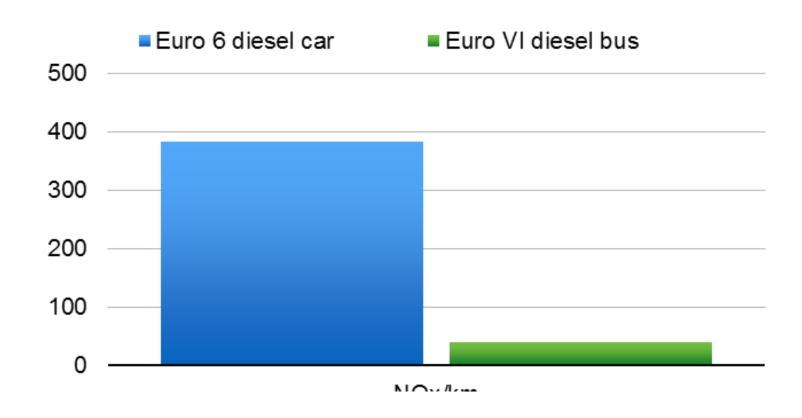




NOx emissions at 25 kmph for urban driving per vehicle

A Euro 6 diesel car emits 10 times more NOx per passenger/km than a Euro VI diesel bus





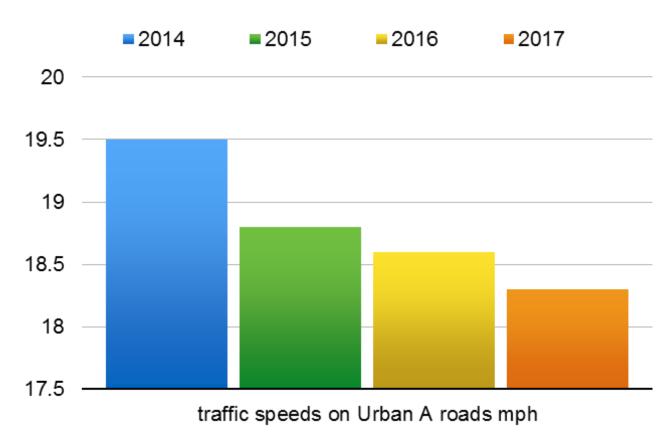


Congestion must be tackled if we are to reduce emissions

- In nose to tail traffic tailpipe emissions are four times greater than in free flow traffic
- Halving average city traffic speeds leads to a 50% increase in NOx emissions from larger vehicles
- A fully loaded bus can take 75 cars off the road

Average traffic speeds are falling in our towns and cities

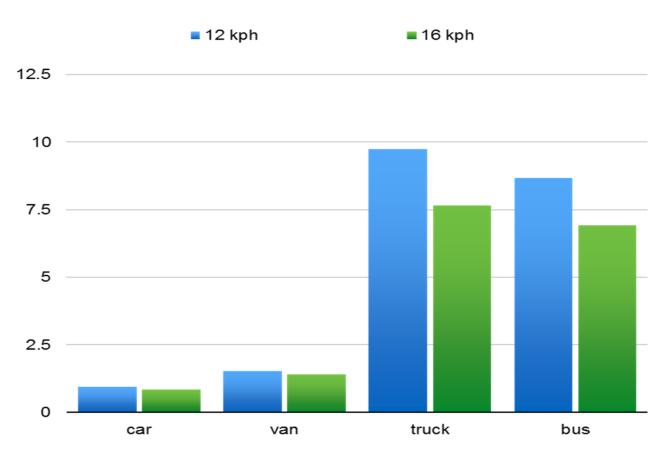




Urban A Roads average traffic speeds (mph)

Falling traffic speeds causes emissions to rise across all vehicle types

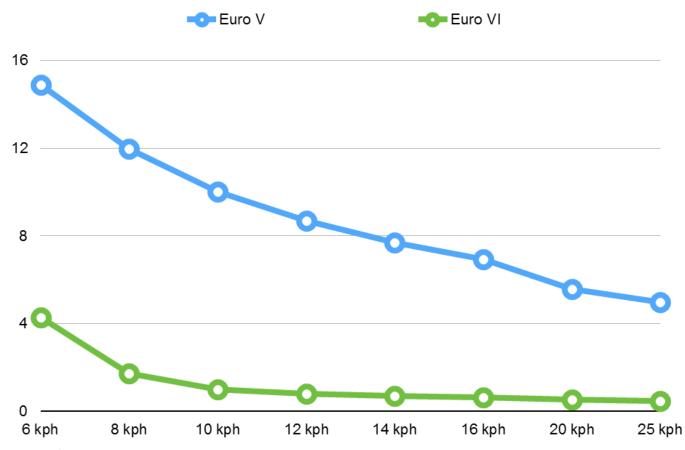




NOx g/km from Euro 5/V diesel vehicles for speeds of 12 kmph and 16 kmph

Huge reductions in emissions can be achieved by improving bus speeds





NOx g/km at different speeds for Euro V and Euro VI buses



Mass transit also delivers significant social and economic benefits

- 10% improvement in bus service connectivity delivers 3.6% reduction in social deprivation
- Investment in bus infrastructure can deliver £8 wider economic benefit for every £1 spent
- 80% of urban buses sold in the UK built in UK compared with 13% new cars
- 400,000 bus commuters in more productive jobs as a result of bus
- Bus vital role in tackling loneliness and creating more cohesive society



We must maximise role of mass transit: national bus investment strategy

- 1. Protect bus revenue funding
- 2. Deliver step change in funding for local transport
- 3. Increase investment in local bus infrastructure
- 4. Modal switch from car to sustainable transport
- 5. Embrace demand management





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