



Cleaner, greener mass transit

Claire Haigh, CEO Greener Journeys

Low Carbon Vehicle Partnership Annual Conference 2017

Why do we need cleaner, greener mass transit?

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

Global consensus on tackling climate change



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



**By 2050 70% of the world's population
will be urban**



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

- **4,000 Low Carbon Emissions Buses in Great Britain – 40% of all new buses sold last year**
- **Cutting carbon emissions by 55,000 tonnes a year**
- **Saving £8 million in health and environmental benefits**

A revolution in clean bus technology – Euro VI bus emits 95% less NOx than Euro V



LowCVP
Low Carbon Vehicle Partnership

The Journey of the Green Bus

A revolution in the introduction of greener, cleaner buses in the UK is helping deliver on climate and air quality objectives



LowCVP
Low Carbon Vehicle Partnership

A Green Bus For Every Journey

Case studies showing the range of low emission bus technologies in use throughout the UK



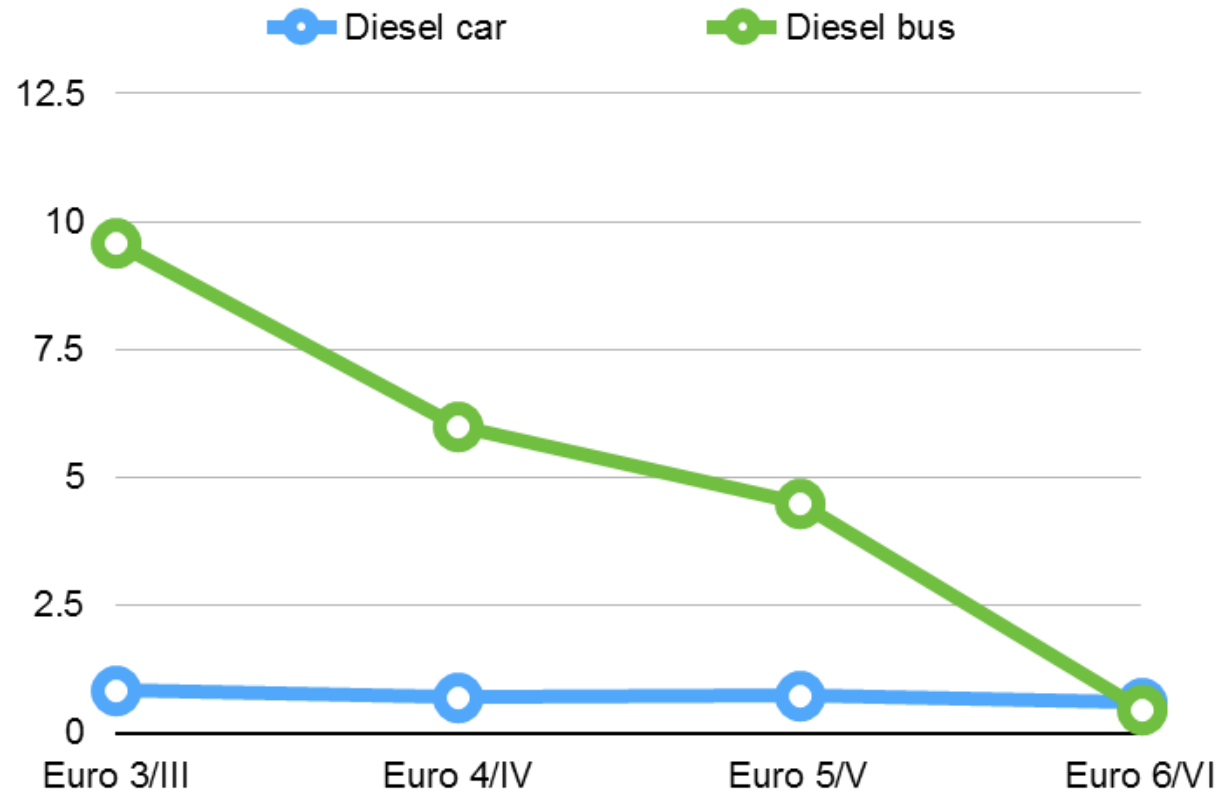
LowCVP
Low Carbon Vehicle Partnership

Any Journey is Greener by Bus

Passenger experiences of modern bus services

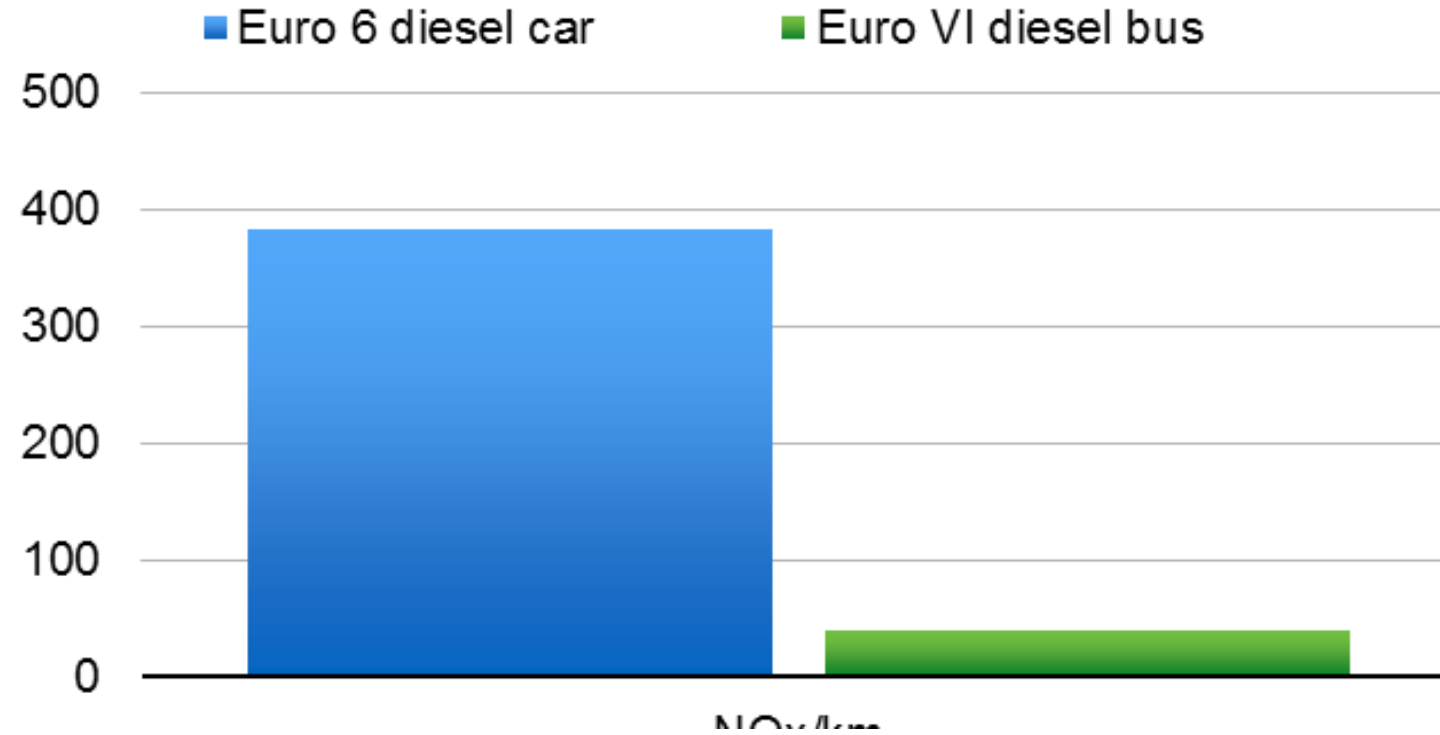


Progress in clean bus technology has outstripped progress in car technology



NOx emissions at 25 kmph for urban driving per vehicle

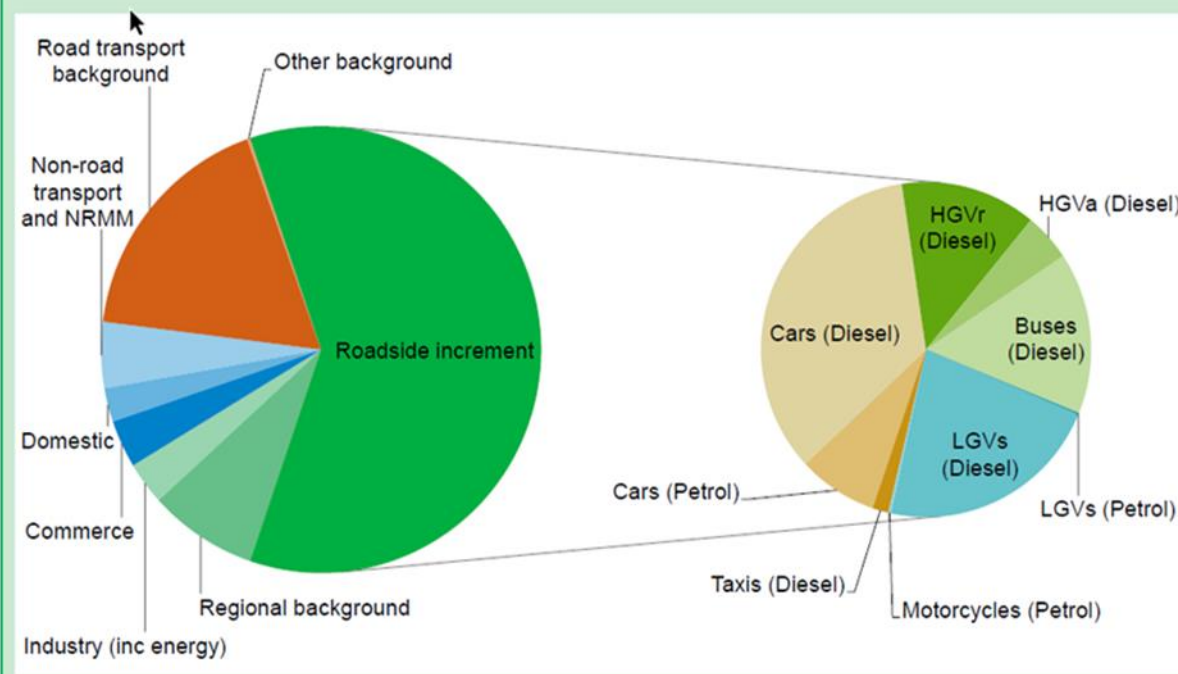
A Euro 6 diesel car emits 10 times more NOx per passenger/km than a Euro VI diesel bus



Diesel cars = biggest contributor responsible for 41% of NO_x emissions from road transport

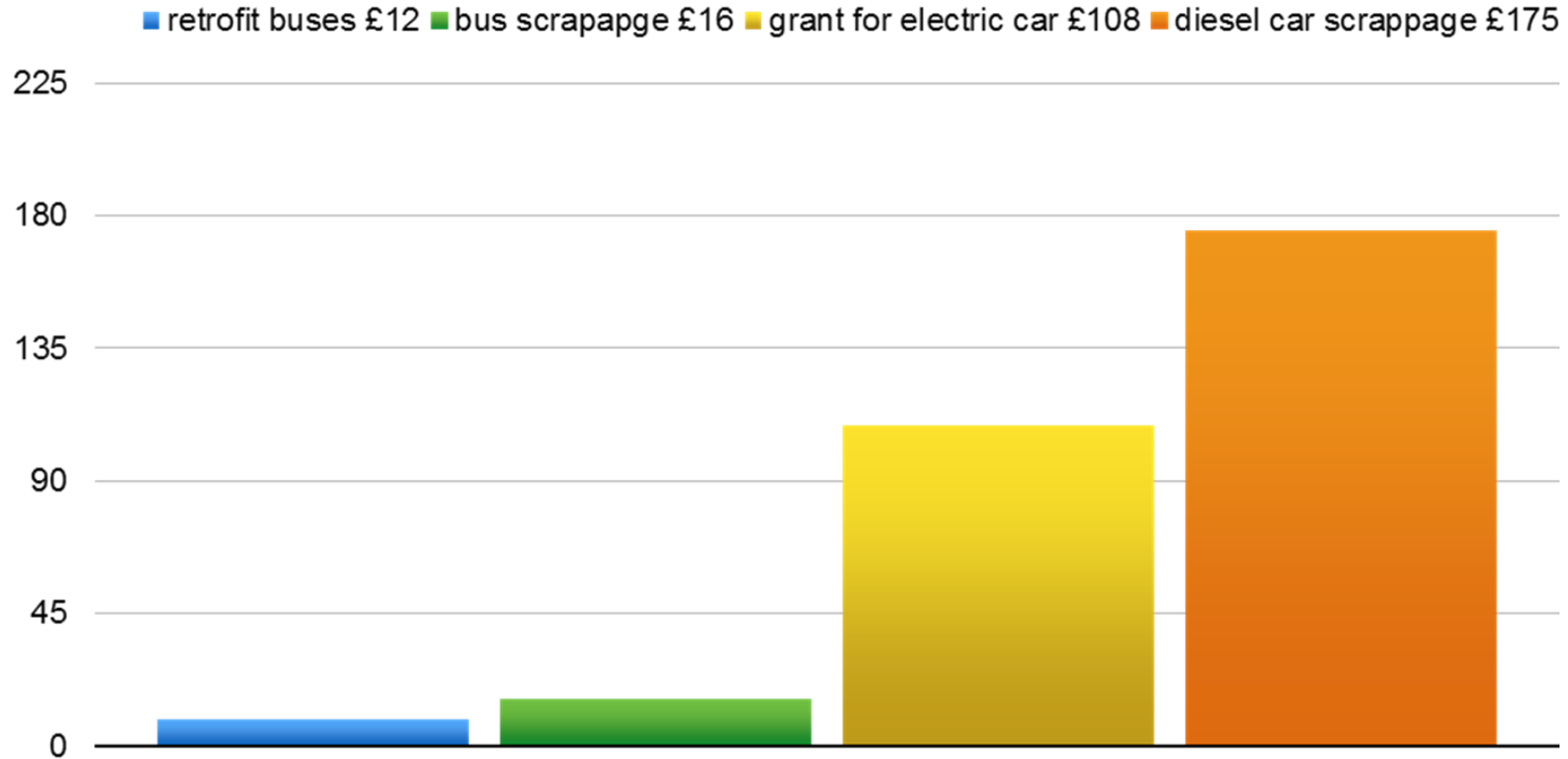


Figure 3a: Breakdown of UK national average NO_x roadside concentration into sources, 2015



Note: The 'Roadside increment' in the large pie chart is the estimate of the proportion of NO_x roadside concentrations contributed by local traffic, which is shown in greater detail in the smaller pie chart. NRMM = Non-Road Mobile Machinery; LGV = Light Goods Vehicles; HGv = Rigid Heavy Goods Vehicles; HGv = Articulated Heavy Goods Vehicles.

Buses must be an integral part of the solution to our air quality challenge



Cost (£) to Treasury for saving 1kg of NOx

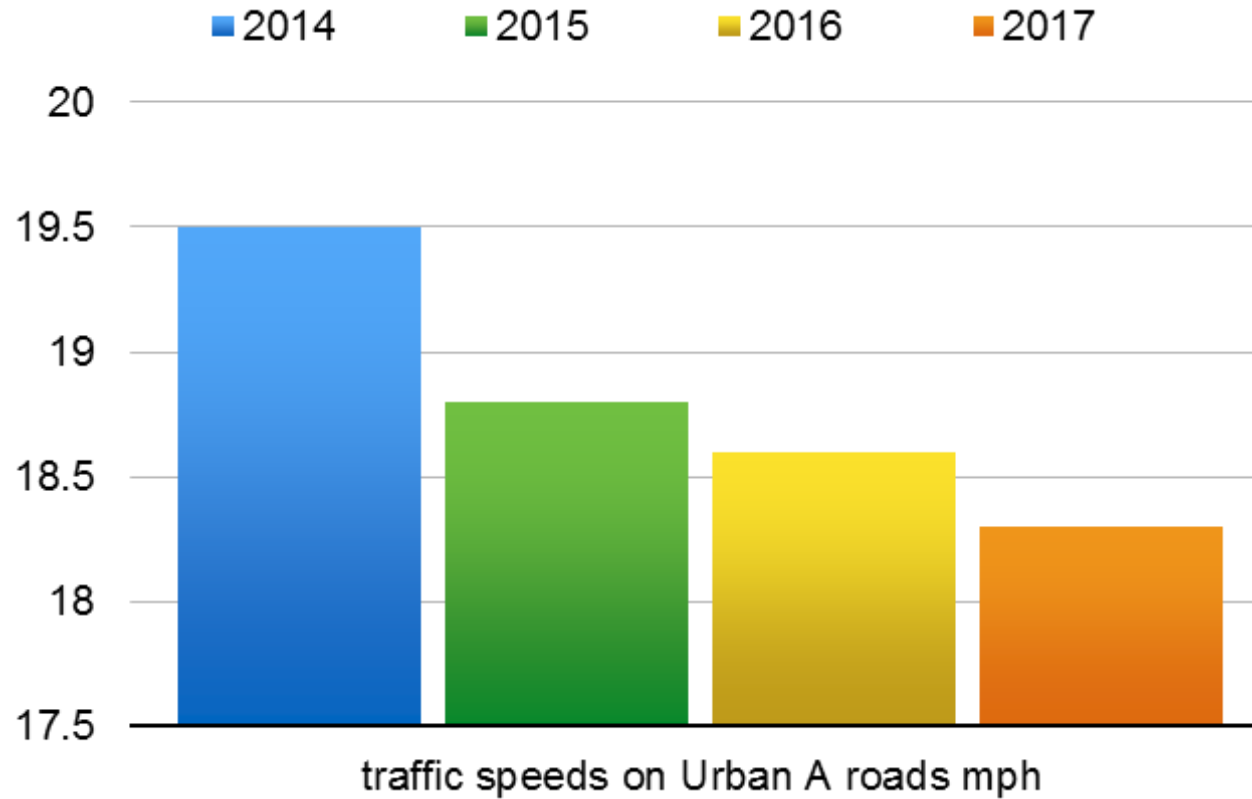
Why congestion must be tackled if we are to reduce emissions

- 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

Congestion in UK's largest cities is 14% worse than five years ago

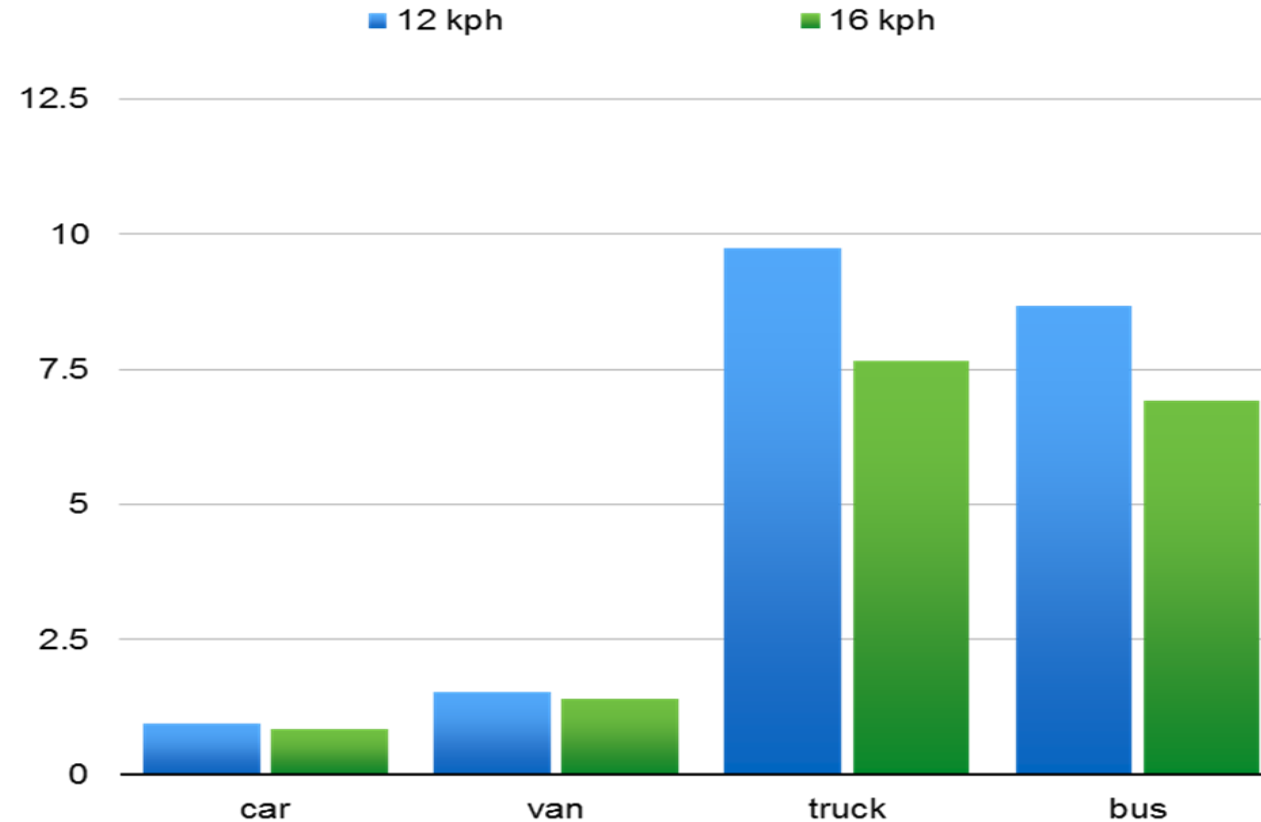


Average traffic speeds are falling in our towns and cities



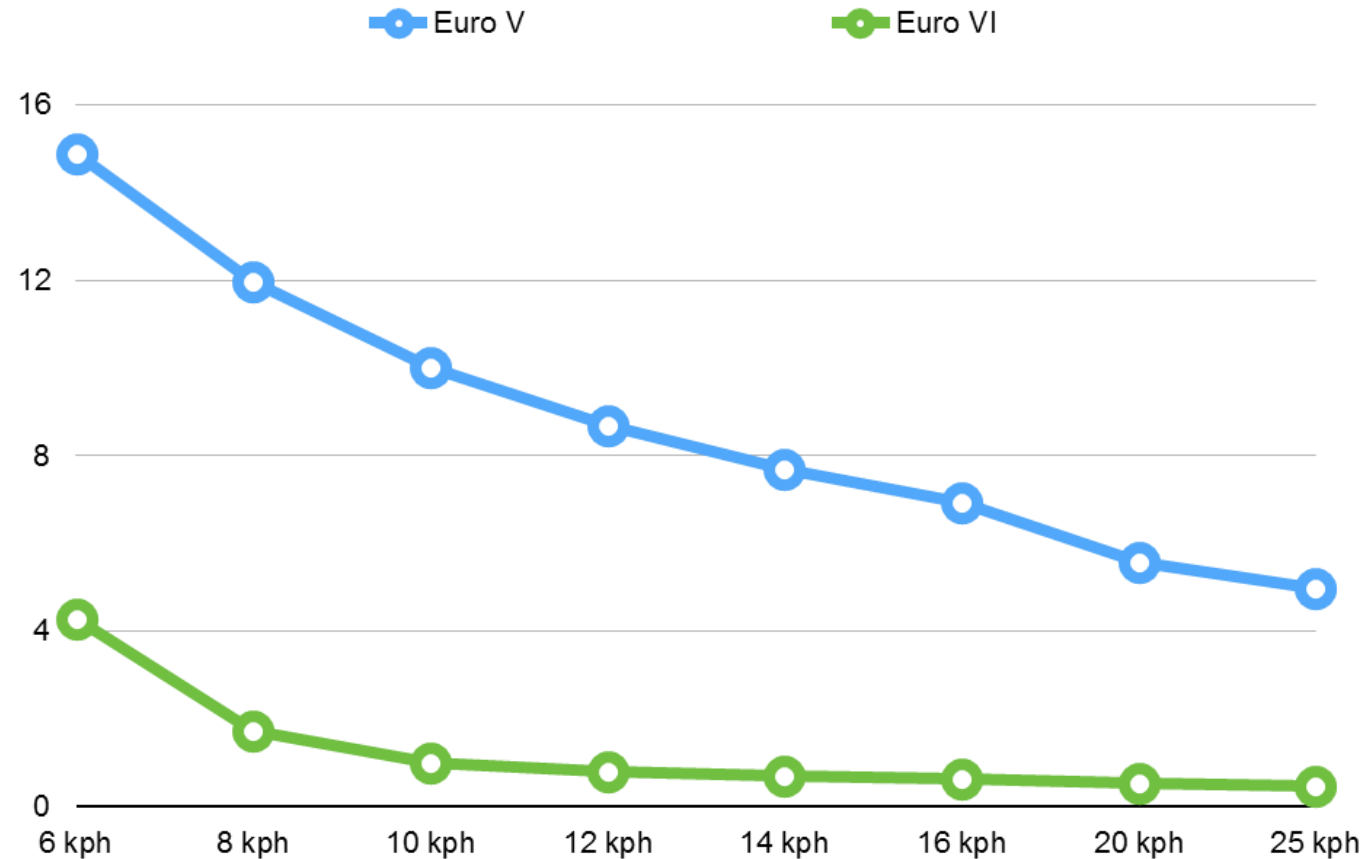
Urban A Roads average traffic speeds (mph)

Falling traffic speeds causes emissions to rise across all vehicle types



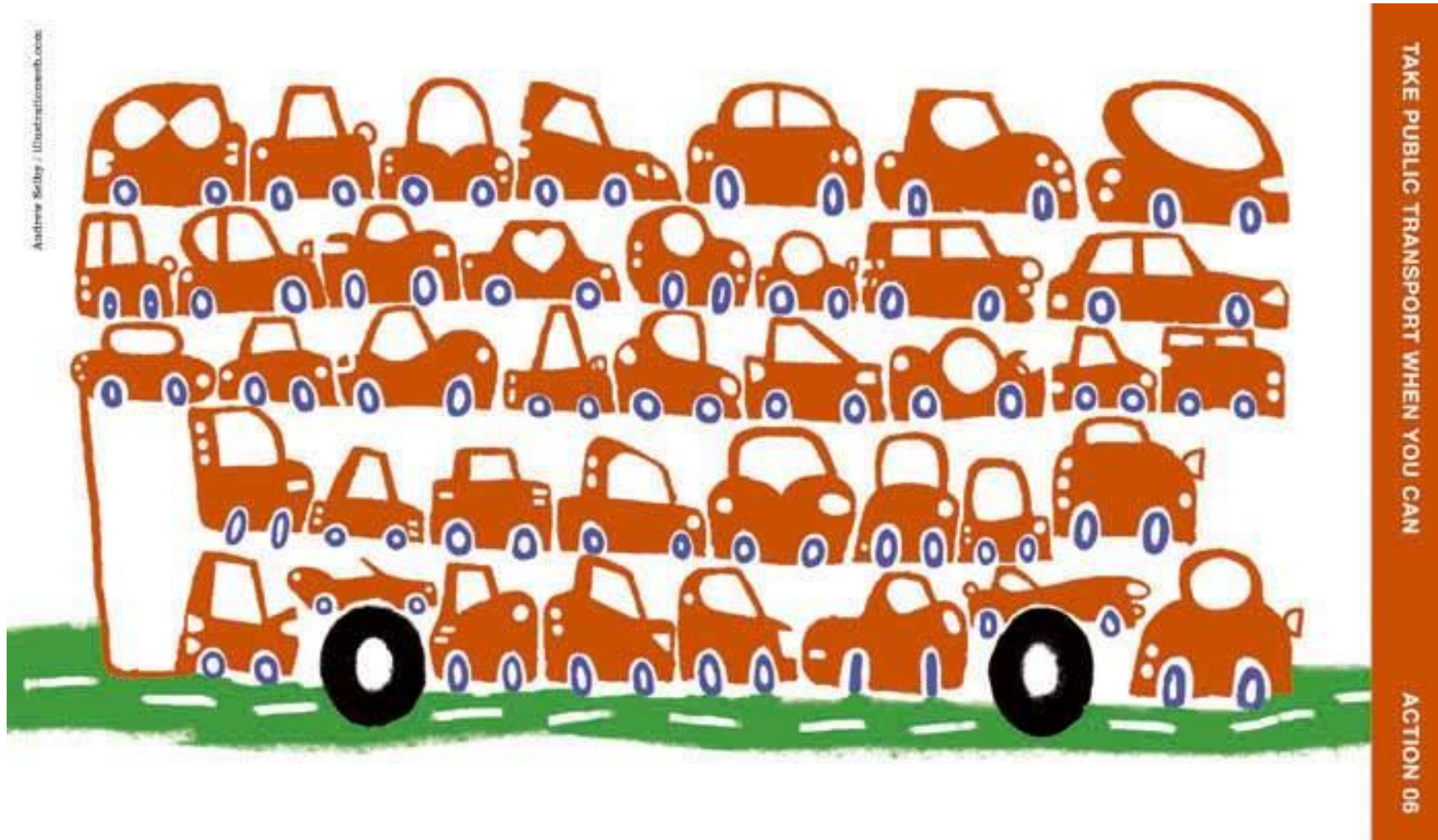
NOx g/km from Euro 5/V diesel vehicles for speeds of 12 kmph and 16 kmph

Huge reductions in emissions can be achieved by improving bus speeds



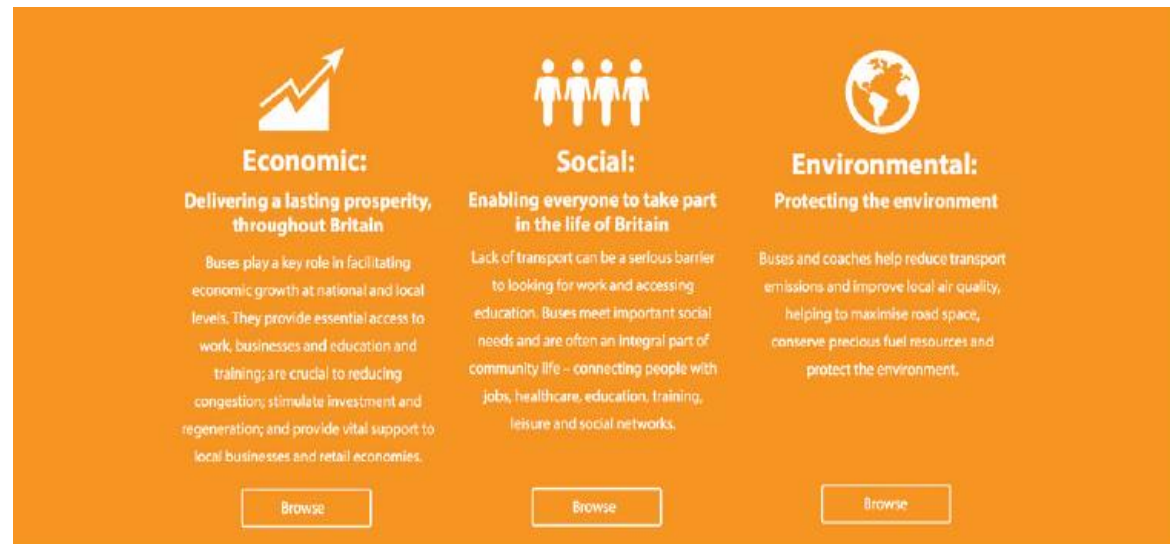
NOx g/km at different speeds for Euro V and Euro VI buses

A fully loaded bus can take 75 cars off the road



In conclusion, cleaner, greener mass transit will be essential if we are to

- **Tackle climate change**
- **Improve air quality**
- **Reduce congestion**

A large orange rectangular block containing three columns of text. Each column is headed by an icon (a line graph for Economic, three people for Social, and a globe for Environmental) and a bold title. Below each title is a paragraph of text and a "Browse" button.

Economic:
Delivering a lasting prosperity, throughout Britain
Buses play a key role in facilitating economic growth at national and local levels. They provide essential access to work, businesses and education and training; are crucial to reducing congestion; stimulate investment and regeneration; and provide vital support to local businesses and retail economies.

Social:
Enabling everyone to take part in the life of Britain
Lack of transport can be a serious barrier to looking for work and accessing education. Buses meet important social needs and are often an integral part of community life - connecting people with jobs, healthcare, education, training, leisure and social networks.

Environmental:
Protecting the environment
Buses and coaches help reduce transport emissions and improve local air quality, helping to maximise road space, conserve precious fuel resources and protect the environment.

www.greenerjourneys.com
contact@greenerjourneys.com