



# Motoring Towards 2050

## The Transport Challenges: The Road network

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# Some principles

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Rail and road face the SAME problems

They should be treated  
together  
consistently and even-handedly

It is not “public transport versus roads”!

**You've got to do the sums!**

# The problems are:

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Capacity and crowding  
economic recovery  
population growth

UK pop 61.4m rise to 71.6m by 2033

Carbon

Safety

Public expenditure



# National Networks Study Programme (Delivering a Sustainable Transport System)

Lot 7: London to Haven Ports (DfT)

Study Brief

25<sup>th</sup> November 2009

“Non-transport measures, including fiscal and those involving longer term changes to land use or changes to regulation, should also be considered.

**The focus of the study, particularly in the short to medium term, should not be on generating major new road capacity.”**

(emphasis in the original)

# Conservative policies

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**Rail** (Less than 10% of passenger and freight)

Reduce fares

Reduce crowding



implies more capacity?

Invest heavily in High Speed Rail network

**Road** (More than 90% of passenger and freight)

New road projects only “where ... consistent with a responsible approach to the public finances”.



# The objectives:

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to improve quality of life  
to meet needs for mobility

whilst recognising carbon, congestion, pollution,  
noise, severance etc. equity

Not “to get people out of their cars” or  
“to promote rail use”



# Shortage of public funds

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How to spend **reducing** public funds most effectively?

The economics and politics of rail pricing mean that rail schemes will usually **increase** public funding

But we can improve roads **and reduce** public funding?



# Funding vs social benefit

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There is a fundamental difference between:

“this will generate benefits greater than the costs”

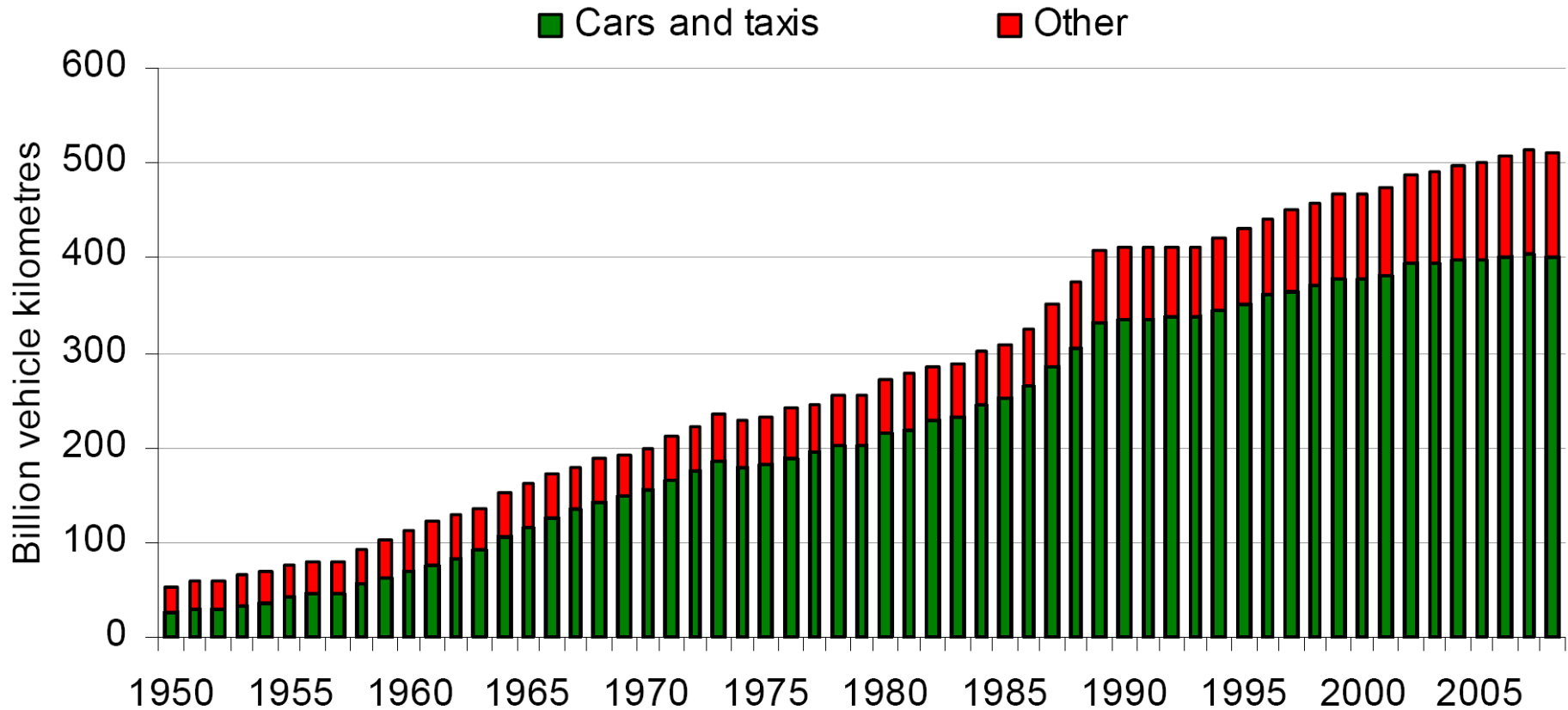
“this will not increase the demands on the taxpayer”

E. g. “... study after study shows that over time high speed rail will pay for itself” (Mrs Villiers, 12 January)

# Past road traffic growth

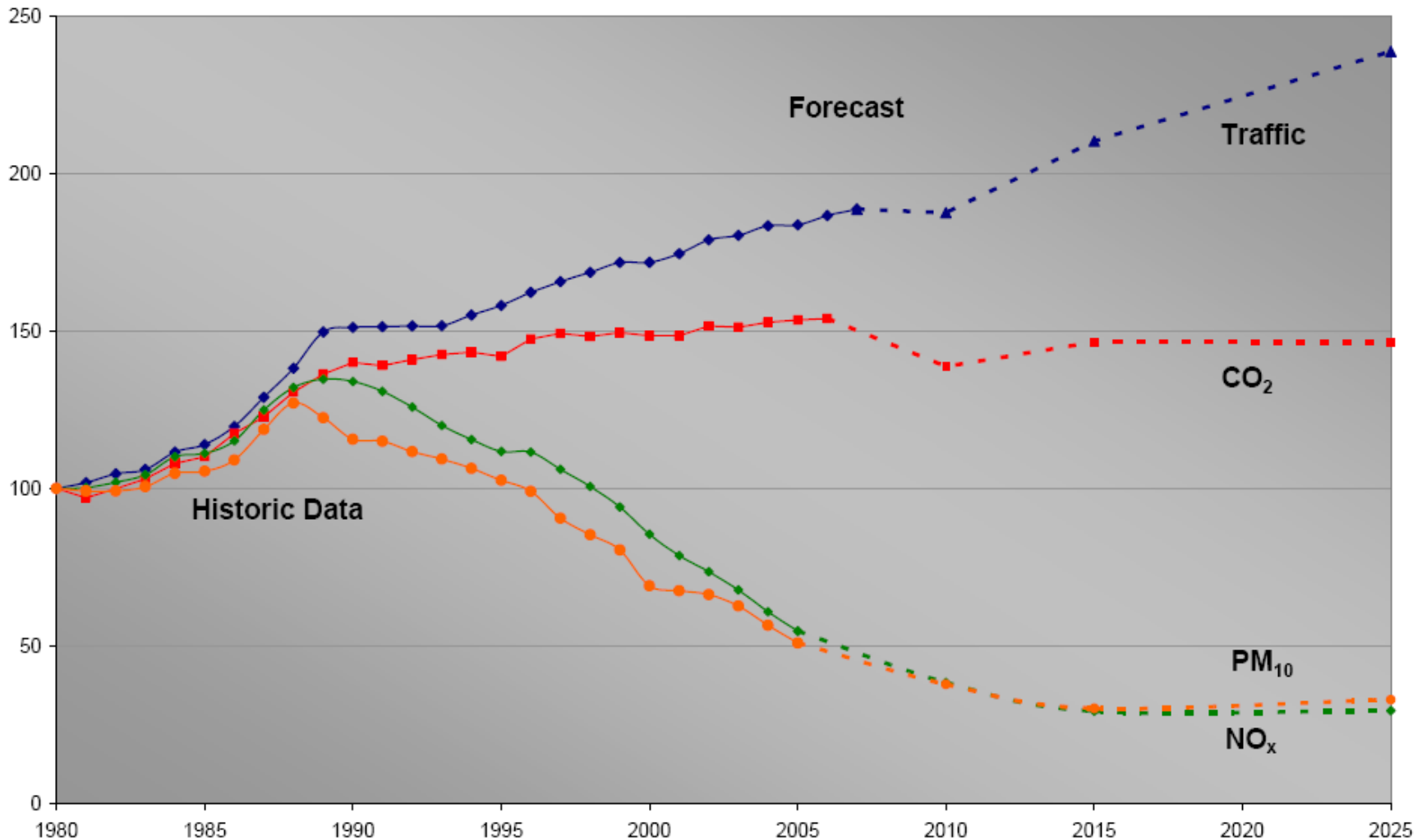
(source: Road Statistics 2008, DfT)

## 2.1 - All motor vehicle traffic, Great Britain: 1950 to 2008



# National Traffic Forecast (DfT, 2008)

Figure 1: Road Traffic and Road Transport Emissions, Past and Forecast



Source: Historic traffic data from DfT (2007); Historic emissions data from DECC (2007); forecasts from the NTM



# Government Plans on roads to 2015

January 2009

Hard shoulder running alternative to motorway widening,

520 additional lane miles to the national strategic road network, of which 340 lane miles through hard shoulder running.

£6bn investment announced in July 2008

(£1 bn. pa; c.f. £3 bn pa public funds on the railways)

Not much new capacity for local roads?

# What would High Speed Rail achieve?



Greengauge21,  
September 2009

## Appraisal results: full HSR network

	£ million Present values, 2002 prices
<b>Revenues</b>	
HSR revenue	£50,860
Change in classic revenue	-£28,327
<b>Net rail revenue</b>	<b>£22,533</b>
<b>Benefits: users</b>	
Journey time	£68,380
Accident savings	£160
Crowding	£9,942
<b>Total user benefits</b>	<b>£78,482</b>
<b>Benefits: non-users</b>	
Highway decongestion	£1,733
Reduction in greenhouse gases	£1,757
Capacity released on classic rail	£6,914
<b>Total non-user benefits</b>	<b>£10,404</b>
<b>Wider economic benefits</b>	<b>£13,968</b>
<b>Total benefits (excl. WEBs)</b>	<b>£111,420</b>

### Costs

Capital: infrastructure / rolling stock	£31,701
HSR maintenance / operations	£27,480
Classic rail operating costs	-£11,098
<b>Total costs</b>	<b>£48,083</b>

### Economic indicators (excl.WEBs)

Net Present Value (NPV)	£63,337
Benefit : Cost Ratio	3.48 : 1

Benefits:costs = 3.48:1

The cost to the taxpayer is £26.5 billion  
(£400 per head of population)



## HSR generates a lot of long distance rail travel

Currently, all rail trips in the country of over 80 km

15 billion passenger km pa.

moving all over the country,

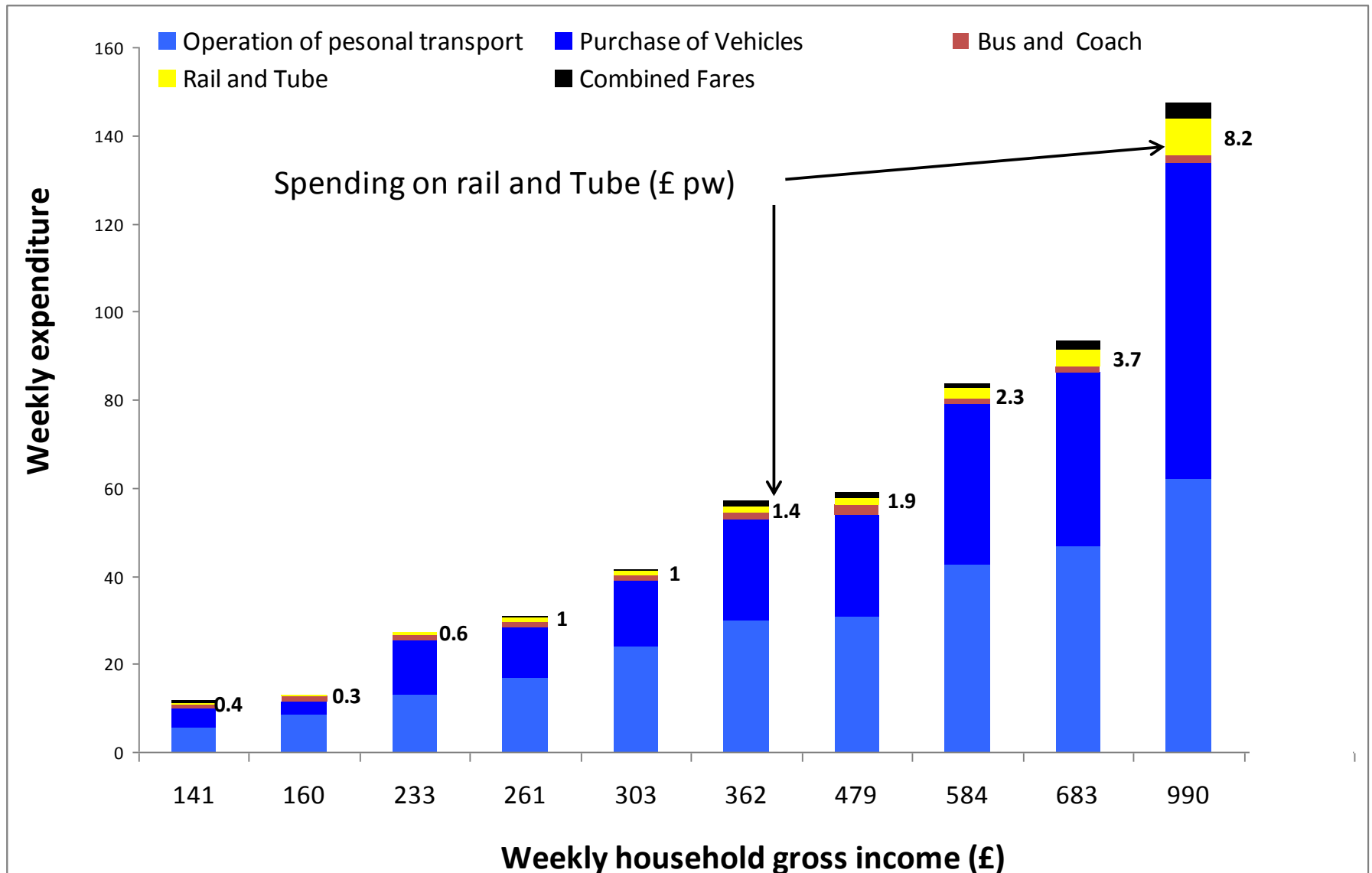
Greengauge21:

53 billion passenger km pa (average length of 300 km) by 2055

on their new high speed railway

# Railways are mainly used by the rich

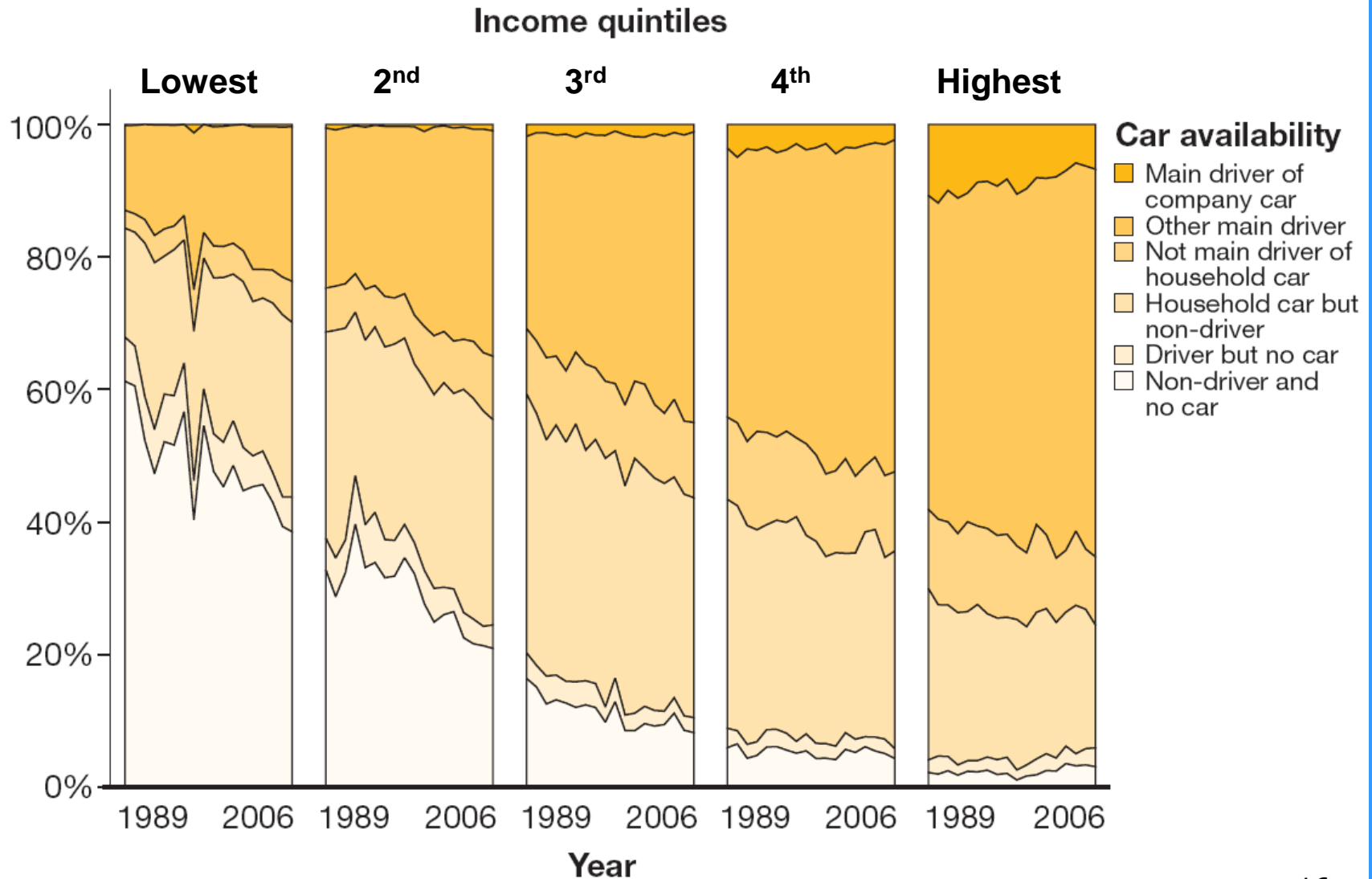
Family Spending (2006) £ per week



# The car is used by rich and poor

The Car in British Society, RAC F (2009)

**Figure 3.8:** Car availability by income group, 1989-2006





# What problems is HSR a solution to?

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Reducing carbon emissions?

Capacity shortages on classic rail?

Faster journeys to Midlands and Scotland?

Regional economic development?

Helping the poor – “social inclusion”?

HSR proposals are “predict and provide”

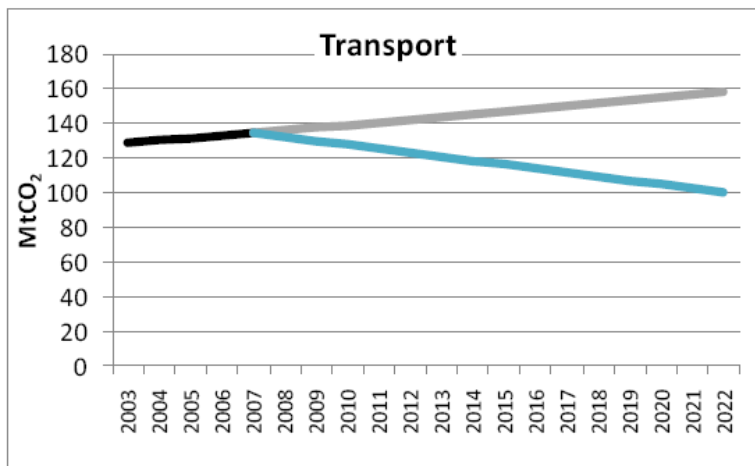
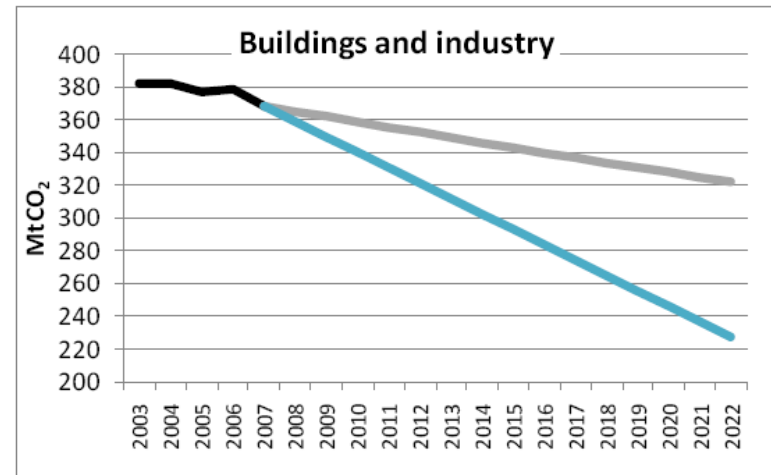
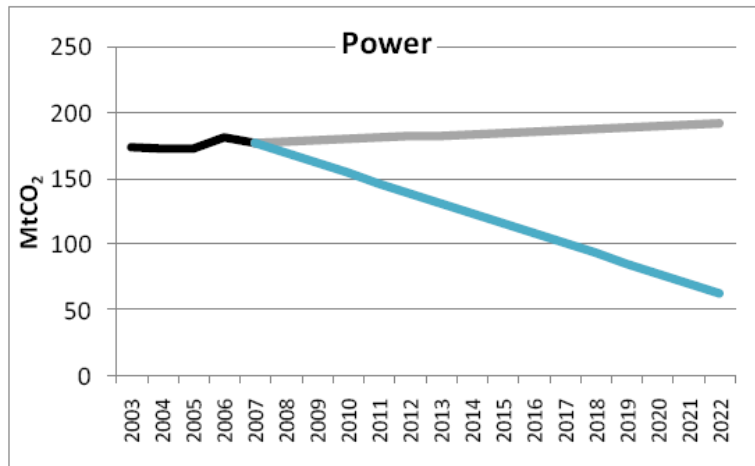
There is nothing wrong with this! ...

... providing it is good value for money  
and can be funded

There are many road schemes showing good  
value for money: so do those too!

# Deal with carbon

## ii) Required progress in major sectors



— Historic  
— Extrapolation  
— Required path

## iv) Road transport

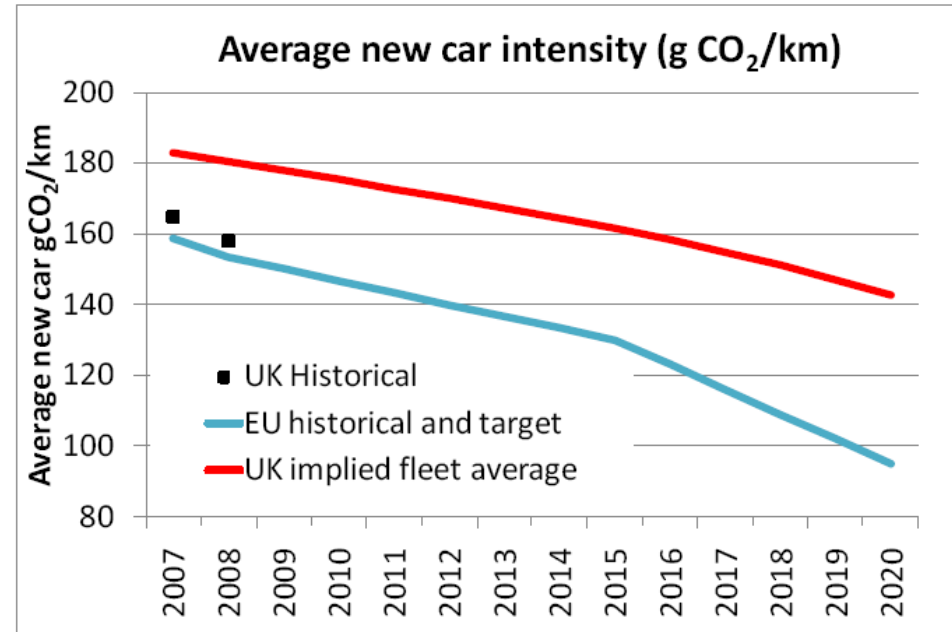


### Consumer behaviour change (total savings over 13 MtCO<sub>2</sub>)

- Roll out of **Smarter Choices** based on Sustainable Travel Town pilots (3 MtCO<sub>2</sub>)
- 4 million drivers trained and practising **eco-driving** by 2020 (1 MtCO<sub>2</sub>)
- Enforce **speed limit** at 70 mph (1.4 MtCO<sub>2</sub>)
- Integrated **transport and land use planning** strategy (2 MtCO<sub>2</sub>)
- Road pricing could save additional 6MtCO<sub>2</sub> in 2020

### Improving the car fleet

- Meet EU target for new car emissions of **130g/km** in 2015 and **95g/km** in 2020
- Would save **11MtCO<sub>2</sub>** in 2020





# Attack the problem directly!

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To reduce carbon from roads you need to attack the problem directly

Policies on public transport will make very little difference

(Similarly for congestion)

## Picture is of more traffic

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On current values

road congestion is a much bigger problem than carbon

Carbon in transport will be reduced by

- Implementation of better technology
- Decarbonising surface transport
- More sensible pricing

Carbon **does not remove the need**  
**for more road capacity!**

How do we pay for it?

Increase fuel duty or VED?

Politically difficult?

Why tax an already over-taxed sector?



# National Road Charging

NOT essential, but it helps!

A means to manage demand  
more efficient use of existing network

A good way of dealing with carbon

A way of generating more funds  
in order to enhance the network  
safety, management, physical capacity

# The alternatives

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Let congestion continue to grow

More road capacity without reforming charging

Reform charging and heavily restrain demand

**Reform charging to improve efficiency**

**AND additional capacity to preserve mobility**



# Institutions and governance matter!

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With or without national road charging ...

... change will require change in the  
institutions



## For Rail there is a coherent strategy

High Level Output Specification (HLOS) }  
Statement of Funds Available (SoFA) }

Network Rail to promote railways

Independent Regulator to adjudicate that it all adds up

High Speed Rail proposals should fit within this framework

This is all missing for roads!



# Water industry has many lessons?

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Massive investment funded by charges to users

Improvement in water quality

Gradual acceptance of domestic metering

Benchmarking an important driver of efficiency

Statutory users' representation

Industry has a duty to supply



# Governance reform

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Some lessons taken from the other public utilities ?

New and independent authorities could be a useful part of future reform.

We need better measures of quality of service

This would facilitate the necessary rebuilding of trust between accountable bodies and users.

But it must be national



# Corporate governance options for roads

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More independence for HA?

Public Benefit Corporation or public trust?

Regulated private provider?



# Geographical scope?

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There is no well-defined “strategic road network”

The National Policy Statement for Roads will be interesting!

What will happen to the RDA-funded roads?

What should be the scope of a new roads body?

Motorways?

Current HA-funded roads?

HA’s “roads of national significance”?



# Conclusions

Do nothing??

New user charges on selected roads + tax reductions?

Government “HLOS and SoFA” for roads?

Enlarged Highways Agency given [what?] corporate status?

An independent regulator for roads and road safety?



## To progress, a scheme ...

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... must offer a “deal”, including reduction of existing taxes

Understandable

Broadly “fair” (spell out winners and losers)

Credible (the arithmetic stacks up)

Technologically robust

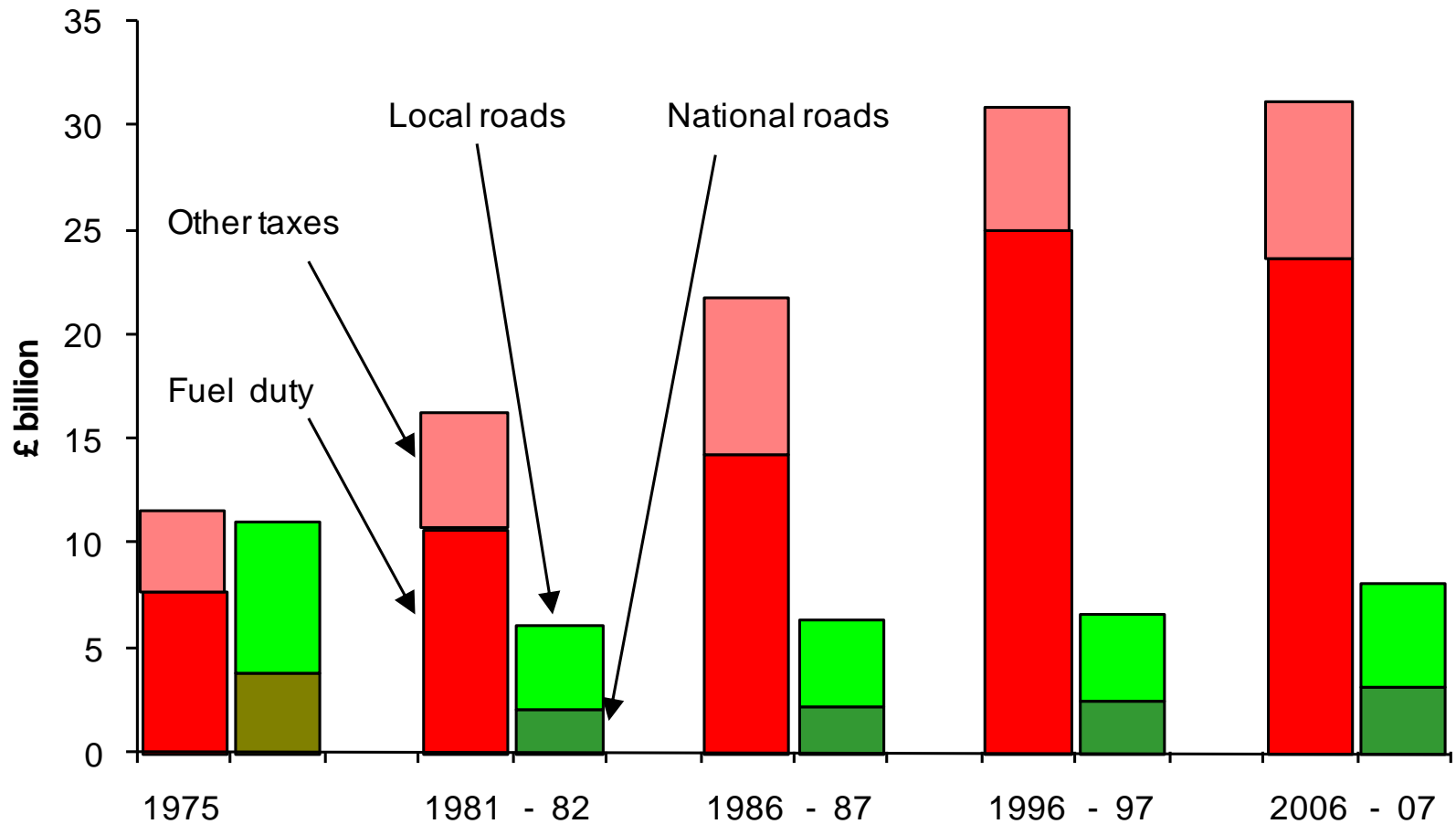
Worthy of trust (can check if it's delivered)

New charging scheme has to be national  
except London, (Cambridge)....?

# Roads taxation is controversial!



GB Roads: taxes (ex VAT) and government spending (2006 prices)



# Railways are mainly used by the rich

Family Spending (2006) £ per week

