

# SUSTAINABLE TRANSPORT TO 2031

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## Structure of Presentation

- A look at Transport and Travel
- Delivering a Sustainable Transport System
- The King Review of Low carbon Cars
- A taste of transport in 2031

# Transport and travel



# The travel context

## National travel statistics

- Car travel has increased by more than 10 times since the 1950's
- Passenger car CO2 emissions have doubled from 12M tonnes in 1970
- Transport contributes 25% of CO2 emissions
- Bus and coach travel has nearly halved
- Between 1952 and 1972 pedal cycle use dropped from 23 to 6 billion km annually

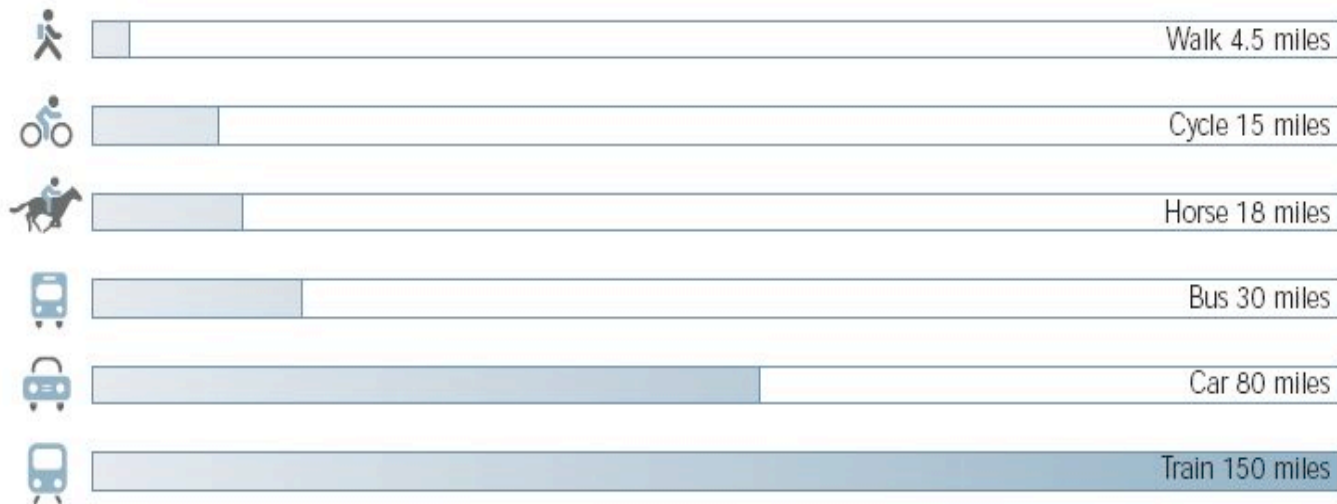
## Sustainable Travel Demonstration Towns

- 90% of people favour improvements in public transport, cycling and walking
- On average 47% of car trips could be replaced
- Cycling is viable for 39% of trips

## Travel

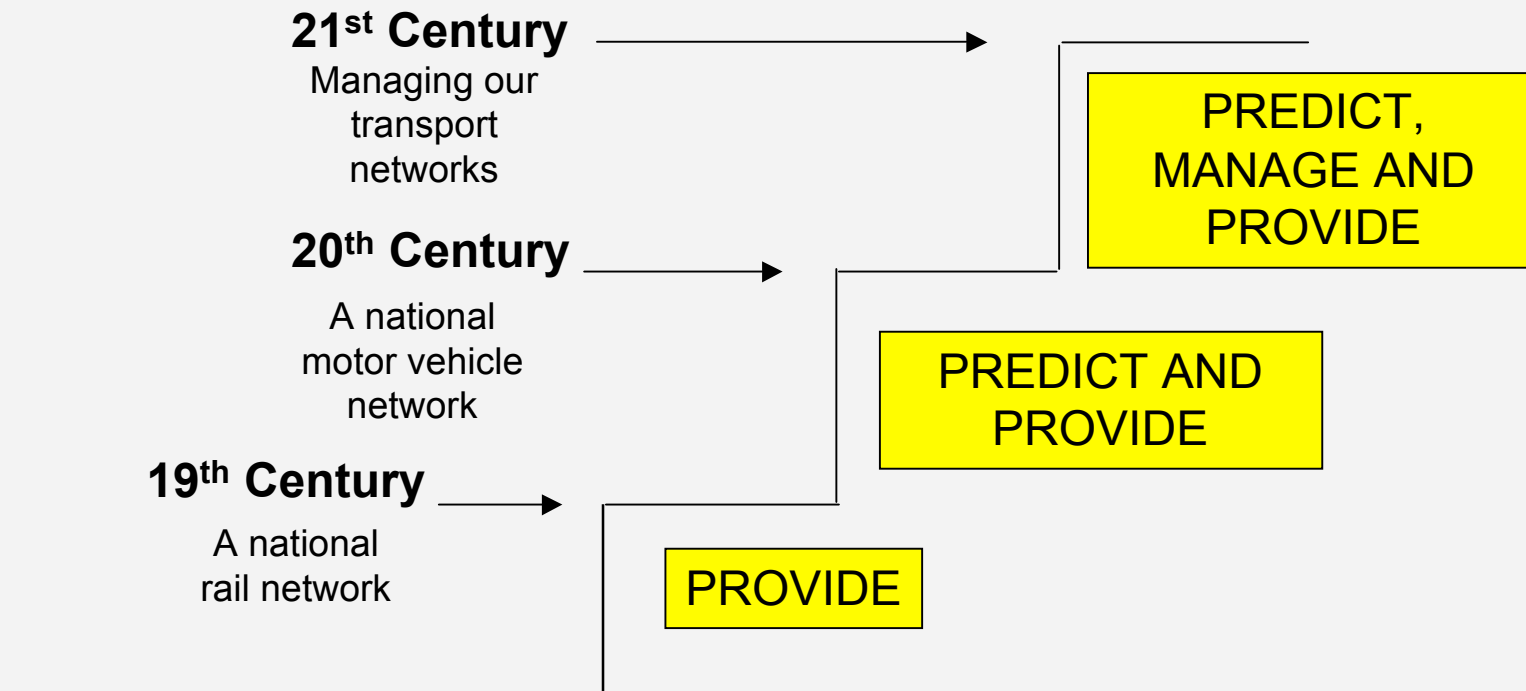
- A good thing
- Foundation of civilisation
- Development of trade routes
- 1 to 1 ½ hours per day

Throughout history and in all economic conditions people spend around 90 minutes per day on travel. In 90 minutes we can:



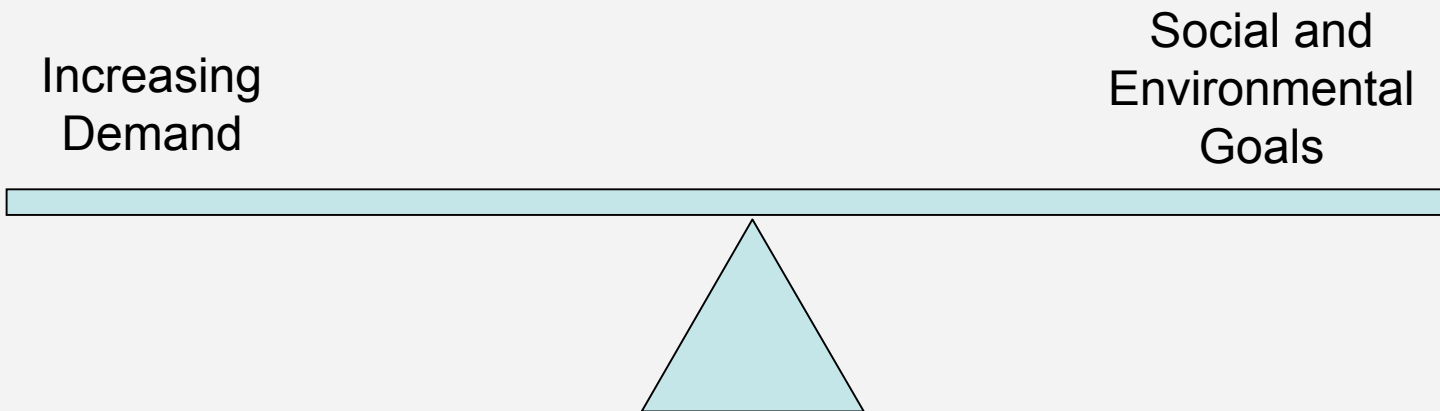
Reference: Travel is Good (CSS 2008)

# An increasing role for transport planning?



# The Transport System

- Prosperous Economy
- Access and Mobility
- Transport contributes 25% of CO<sub>2</sub> emissions
- Transport system generally works well most of the time
- Infrastructure networks in the right place
- Issues of competing demand and overload
- Better use of transport assets



## So where has transport policy been taking us?

- Encouraging public transport, cycling and walking
  - Active travel for health objectives
  - Looking at rail expansion
  - More bus based schemes
- Reducing the need to travel
  - Internet revolution – a new highway!
  - Smarter working practices
- Reducing car dependency
- Tackling climate change
  - Transport sector a problem!

## Changing emphasis on transport planning and particularly for development

- **Addressing predict and get it wrong**
  - Traffic Growth
  - Increasing Demand
  - Climate change demands we get it right
- **Moving away from predict and forget!**
  - Transport Assessment process
- **Moving towards predict and get it right!!!!**
  - Increasing prominence of travel planning
  - Monitoring and Evaluation
- **Eco-town transport guidance – shape of things to come?**
  - Travel planning principles central
  - Establishing future mode shares
  - Highway capacity last

## A smarter travel revolution?

- Travel Demand Management
  - Intelligent Transport Solutions (ITS)
  - The smarter choices
- Smarter working practices (reducing the need to travel)
  - Flexible working
  - Working at home
  - Video conferencing
  - Teleconferencing/webcasting

## Delivering a Sustainable Transport System: Main Report



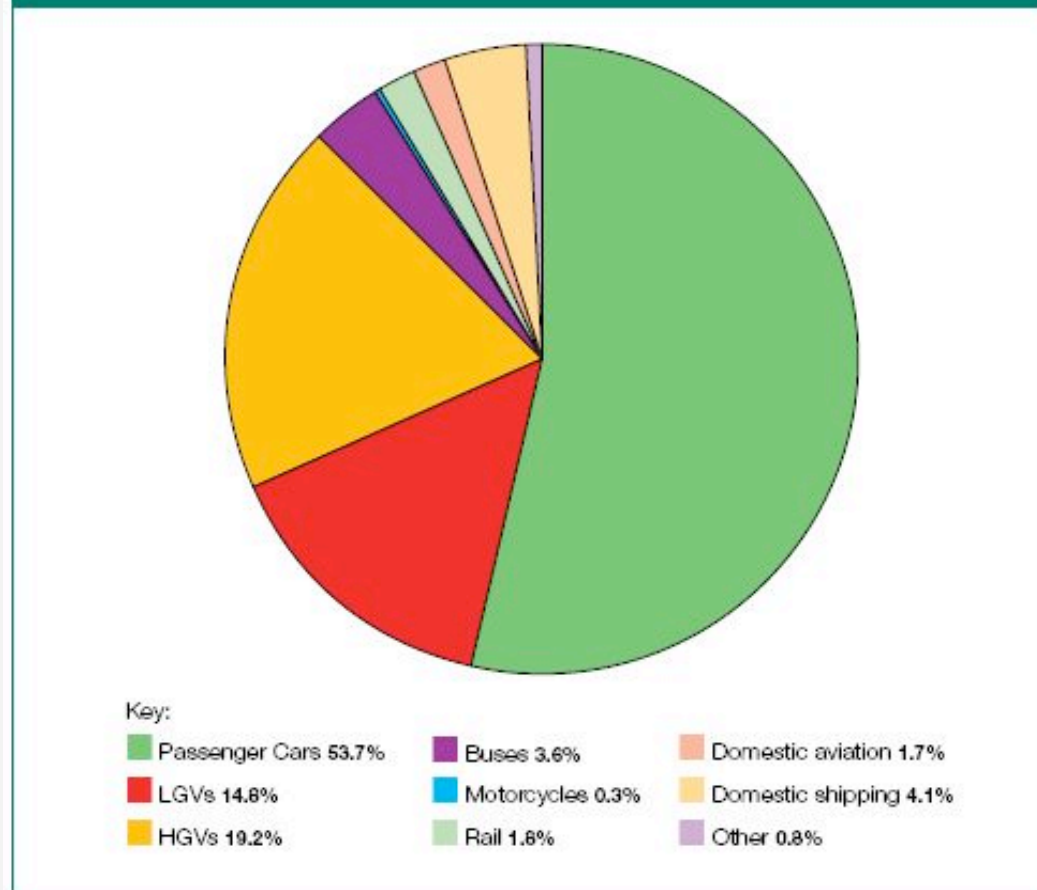
November 2008

## Five goals for transport

- To **support** national **economic** competitiveness and growth, by delivering reliable and efficient transport networks
- To reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of **tackling climate change**
- To **contribute to better safety, security and health** and longer life expectancy by reducing the risk of death, injury or illness arising from transport and by promoting travel modes that are beneficial to health
- To **promote** greater **equality of opportunity** for all citizens, with the desired outcome of achieving a fairer society
- To **improve quality of life** for transport users and non-transport users, and to promote a **healthy natural environment**

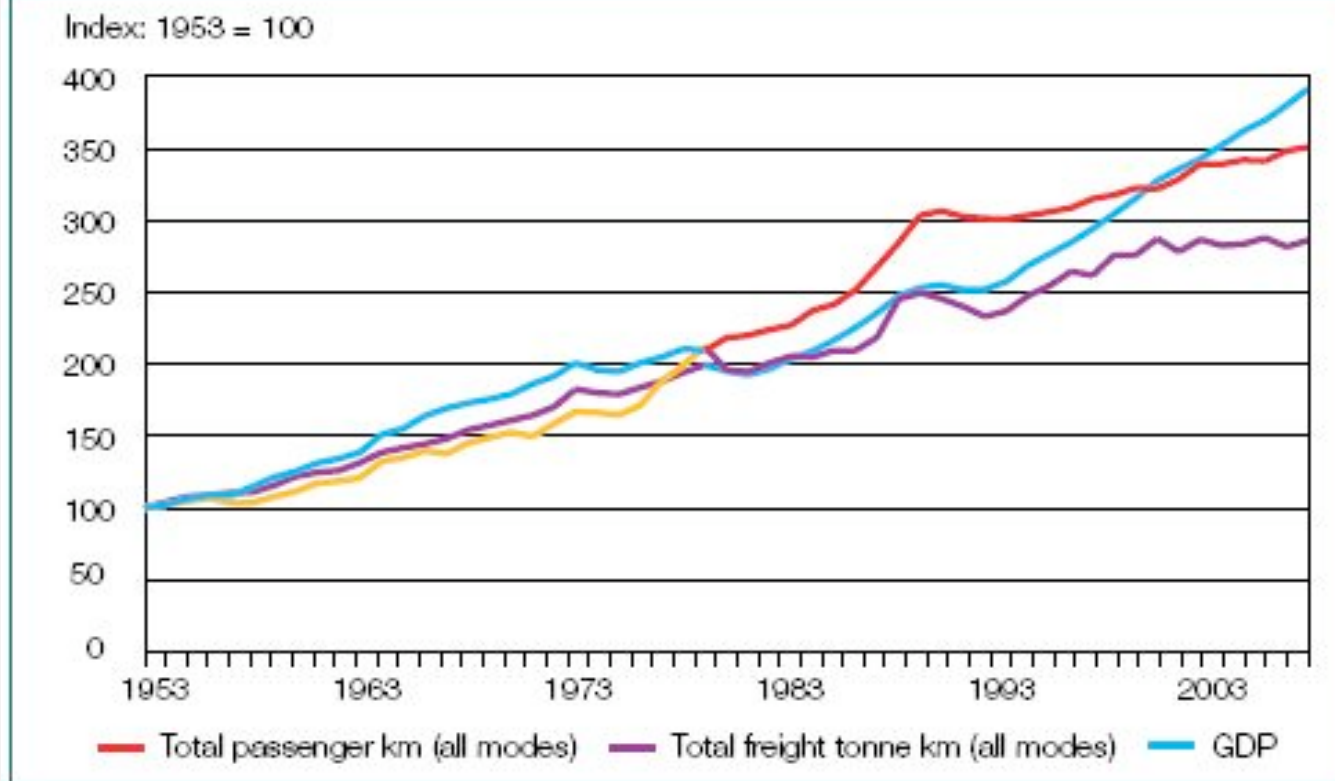
# Transport required to contribute to the target of 80% reduction in greenhouse gases on 1990 levels by 2050

Figure 1.1 Greenhouse gas emissions from domestic transport



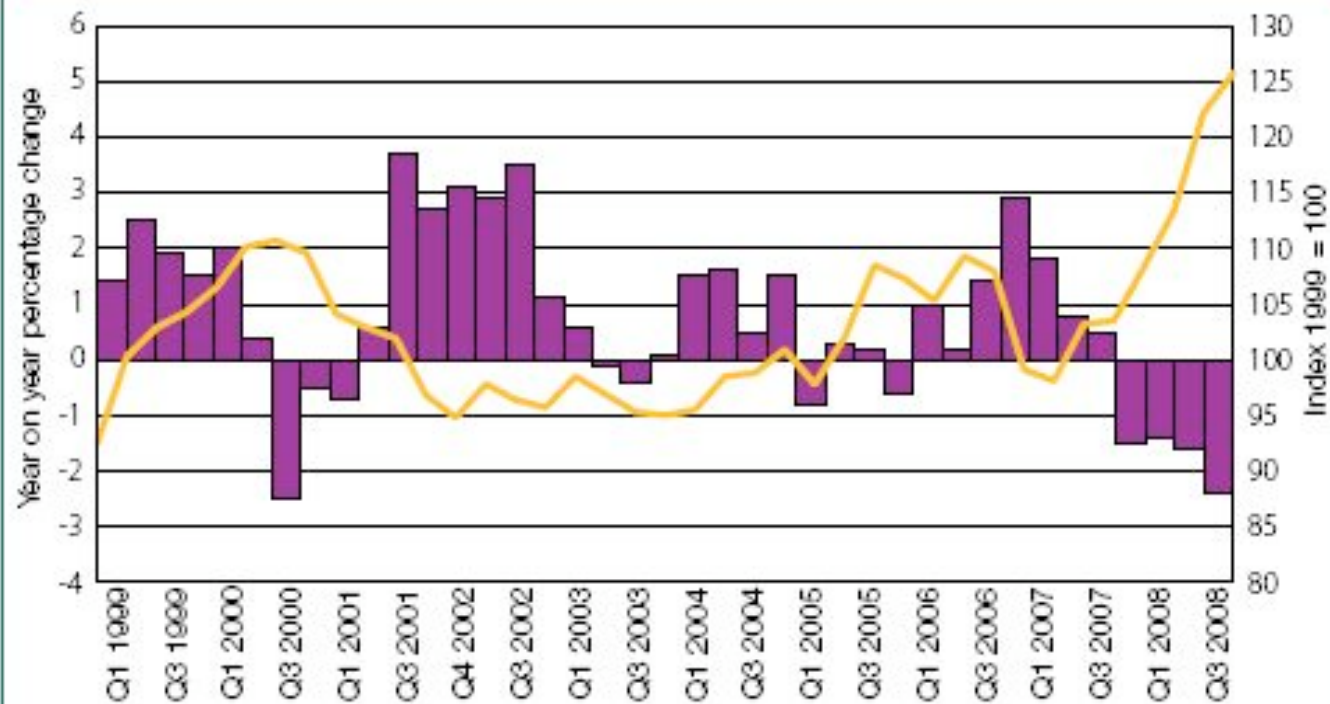
# Correlation between GDP and traffic growth weakened over recent years

Figure 3.1: Passenger and freight traffic versus GDP 1953–2006



# Price of petrol affects demand

Figure 3.2: Impact of petrol pump prices on demand

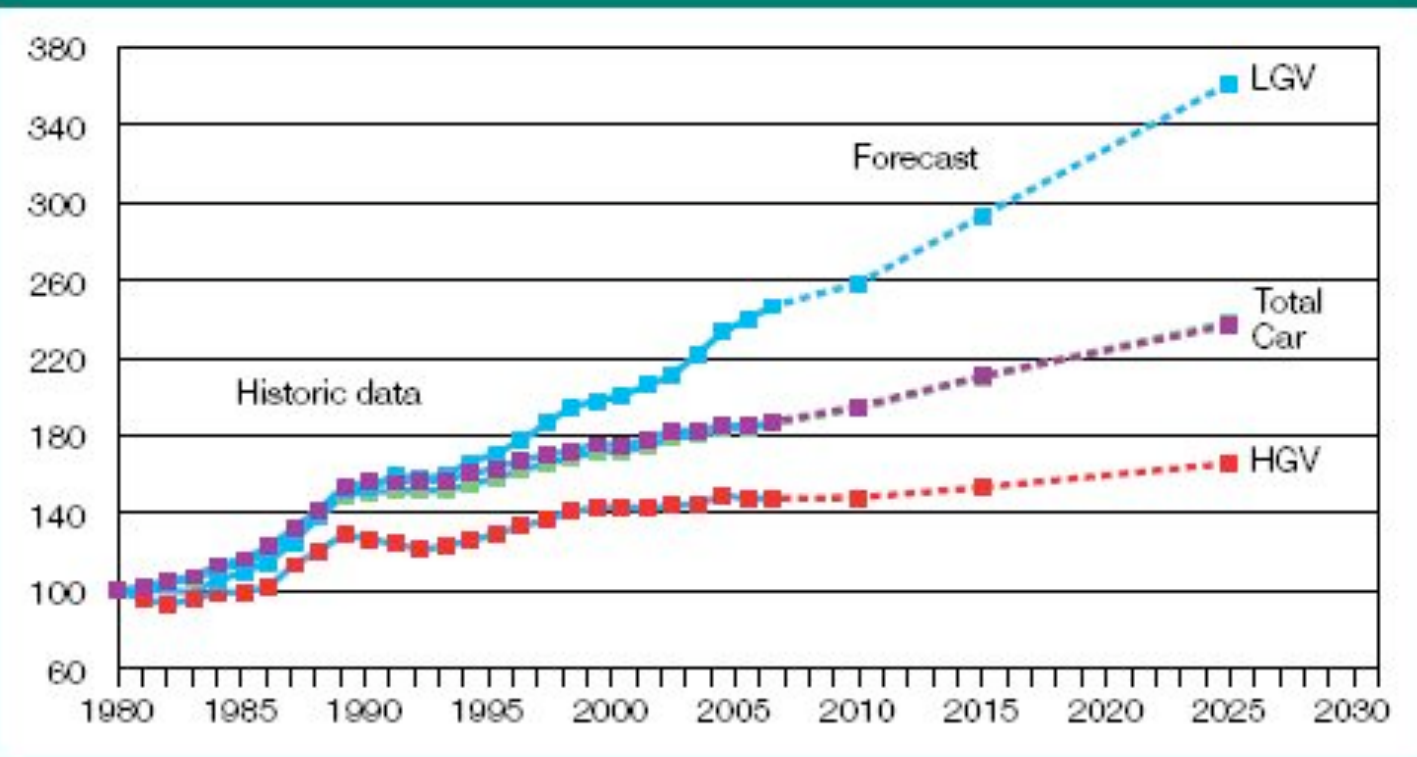


\* Quarterly car traffic estimates for 2008 are provisional.

+ The fuel price is produced by scaling down the real price of diesel to reflect its greater efficiency and weighting real fuel prices by national consumption of each fuel type.

# Transport demand is expected to continue to grow

Figure 3.3: Growth in demand for different road transport modes in vehicle kilometres



## Some messages.....

- People and businesses to have choice about the transport they use
- ..but face the full cost of their choices
- Encourage low carbon technology
- Improve efficiency of all modes of transport
- Better planning to reduce the need for travel
- Increasing efficiency of vehicles supports freedom of choice
- Improving the carrying capacity of transport networks – focussing on lowest carbon modes
- £100m support for trialling low emission and electric drive vehicles
- Rail electrification
- Importance of international gateways, airports and ports global matter

## Putting Strategy into action

- Policy Statements
- To 2014
  - ....making better use of what we have
  - Regional Funding Allocations
  - International gateway schemes (road and rail improvements)
  - More rail rolling stock
  - £6bn road improvements
- Beyond 2014
  - Generating options this year
  - Rail growth continues at 2.5% annually – cater for this

## In summary

- Increasing travel
- Technology coming to the rescue
- Behavioural change also important
- Not much on not travelling

# The King Review of Low Carbon Cars Part 1 2007

- Decarbonisation of transport
  - Urgent and sizeable challenge
  - Looks achievable by 2050
- In 5 to 10 years time we could be driving equivalent cars but emitting 30% less CO<sub>2</sub>
- By 2030 reductions of 50% are achievable
  - Battery electric hybrids
  - Biofuels

# The King Review of Low Carbon Cars Part 2 2008

- Short to medium term
  - Bringing existing low emission technologies from shelf to showroom as quickly as possible
  - Ensuring a market for low emission vehicles
  - Short term focus from biofuels to automotive technology
  - Biofuel developments based on indirect effects
  - Ensuring automotive industry can deliver step-change technologies
- Longer term – electricity and hydrogen
- UK to play leading role
- A policy framework is set out
- Importance of greener driving

## Greener Driving

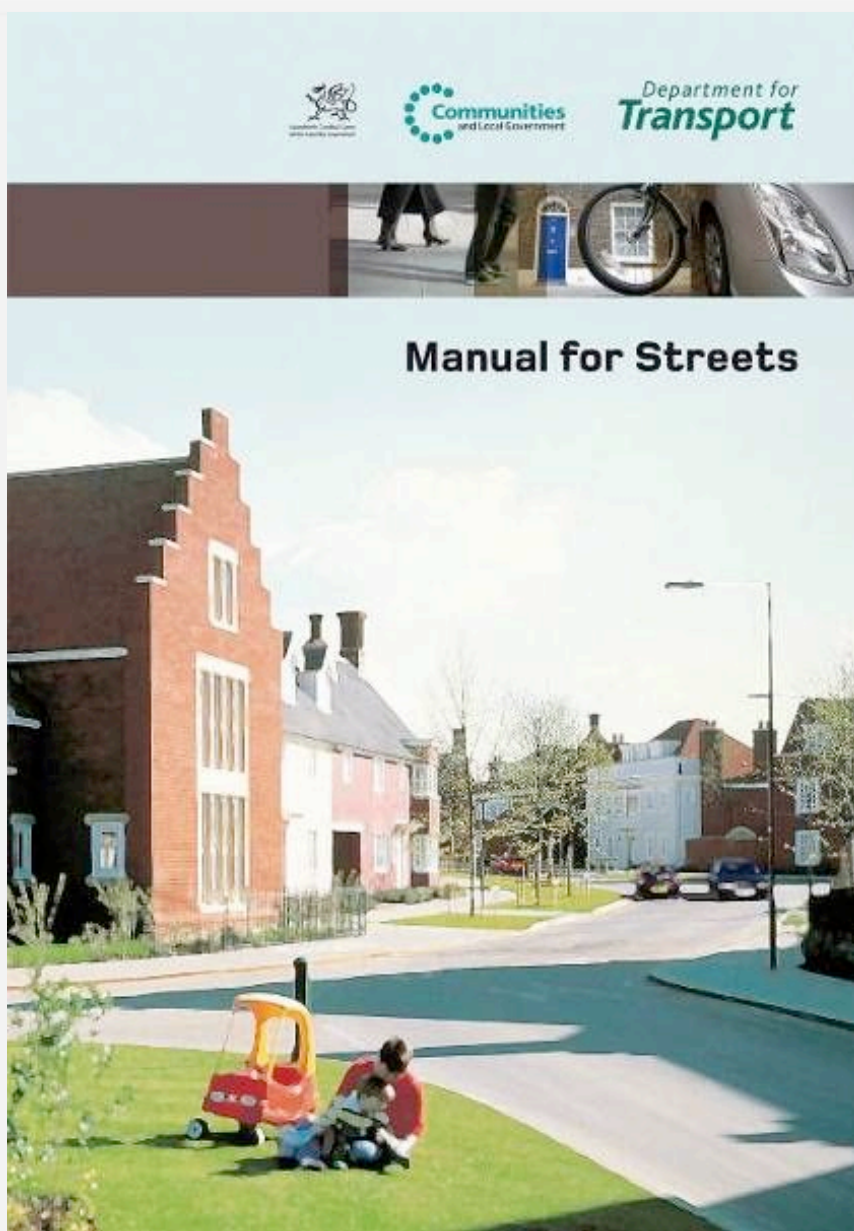
- checking engine revs (changing up before 2,500 revs),
- driving smoothly reducing sharp acceleration and heavy braking,
- using air conditioning sparingly to reduce fuel consumption,
- avoiding idling and removing a roof rack when not in use.
- avoiding short journeys as a cold engine uses twice as much fuel as one that has warmed up and a catalytic converter usually takes 5 miles to become effective
- Driving at 85mph rather than 70mph on motorways uses 25% more fuel, so there is also an environmental reason for sticking to the speed limit
- Poor tyre pressure increases fuel consumption by 3%
- Plan journeys to avoid congestion, roadworks and needless travel distance

## The Car

- Door to door travel and personal freedom in comfort, but.....
- Car journeys are growing in number and length
- Environmental impact of road building
- Road maintenance costs
- Extra road capacity fuels demand
- Road casualties – 3500 deaths per year
- Causes problems in our towns and cities
  - Congestion
  - Parking pressures
  - Pedestrian amenity
  - Pollution
  - Space hungry
  - Streets have become roads



**Honda FCX Fuel Cell Car**



**Supersedes  
DB32/Places Streets and  
Movement in England  
and Wales**

**Does not set out new  
policy, complements  
existing planning policy**

**Does not apply to the  
Trunk Road network**

**Technical guidance for  
residential streets**

## Transport 2031

- More expensive to travel
- People thinking more about their travel choices
- Contraction of commuting distances
- Solutions to carbon emissions from the motor car, but not congestion
- Transport planning for development
  - More challenging
  - New tools
- A more informed public
- Delays and increasing costs affecting delivery of major development
- More car share lanes
- A more managed motorway network
- Road pricing and toll lanes
- Driverless bus systems

## What about PRT?



# Eco-towns built?

## Green living?

The eco-town locations under consideration

- 1** Leeds City Region, Yorkshire  
Several locations in area still being considered
- 2** Rossington, South Yorkshire  
Up to 15,000 homes at former colliery
- 3** Manby and Strubby, Lincolnshire  
5,000 homes on two sites, including former RAF base
- 4** Rushcliffe, Nottinghamshire  
Site yet to be finalised
- 5** Curborough, Staffordshire  
5,000 homes on former airfield
- 6** Pennbury, Leicestershire  
Up to 15,000 homes on brown and greenfield sites
- 7** Coltishall, Norfolk  
5,000 homes on former RAF airfield
- 8** Middle Quinton, Warwickshire  
6,000 homes at unused army depot
- 9** Hanley Grange, Cambridgeshire  
8,000 homes adjacent to A11
- 10** Marston Vale and New Marston, Bedfordshire  
Series of sites for 15,400 homes
- 11** Weston Otmoor, Oxfordshire  
Site for 10-15,000 homes includes former airstrip

The Government's schedule:  
**5** to be built by **2016**  
**10** to be built by **2020**



- 12** Elsenham, Essex  
5,000 houses close to M11
- 13** Bordon-Whitehill, Hampshire  
Up to 8,000 homes at MoD-owned site
- 14** Ford, West Sussex  
5,000 homes on site including brownfield land
- 15** Imerys China Clay Community, Cornwall  
5,000 homes at former china clay works

Source: The Independent

# Look to innovation and best practice!

- Groningen, Holland
  - 60% of town trips by cycle
  - Filtered Permeability
- Freiburg, Germany
  - Car Free Development
- UK Examples



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