Strategic Road Network Statistics

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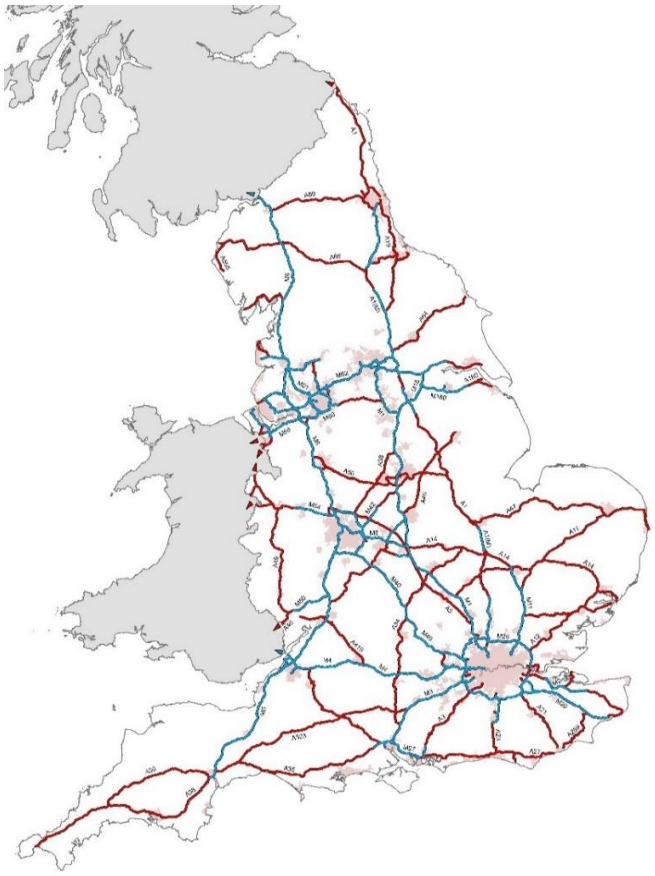
Department for Transport

Introduction

This paper brings together statistics and analysis on a range of topic areas relating to the Strategic Road Network, or "SRN". The SRN is made up of the motorways and major trunk roads in England that are managed by the Highways Agency. It comprises approximately 4,400 miles of road and provides the capacity and connectivity to support national and local economic growth, effectively linking communities and allowing us to commute to work, transport goods and visit friends and family.

Map of the SRN



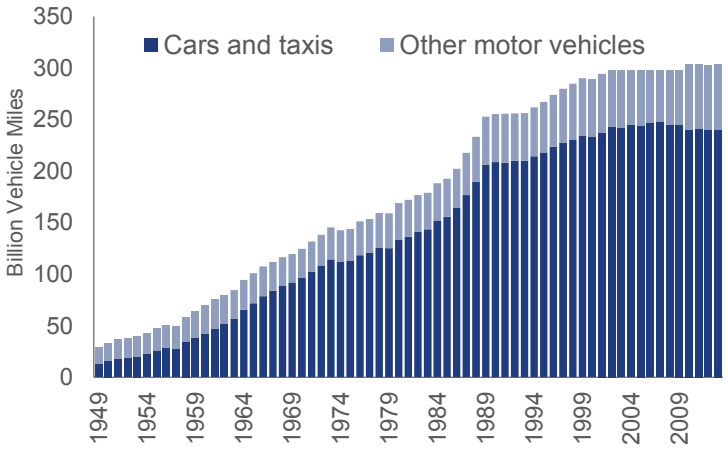
Total length of the SRN

1,865 miles of motorway 2,571 miles of trunk A-roads

Key facts

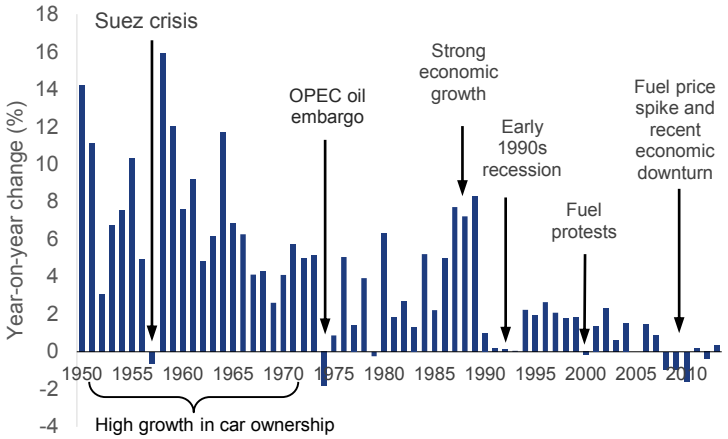
Traffic levels on all roads in Great Britain

All motor vehicle traffic in Great Britain from 1949 (1)



Motor vehicle traffic grew by 50% during the 1980s, 14% during the 1990s and 6% between 2000 and 2009. Traffic reached its highest level yet in 2007, following which it fell for three consecutive years. In 2013, overall traffic has shown a small increase of 0.4% compared with 2012, but is still 3.3% below its 2007 high.

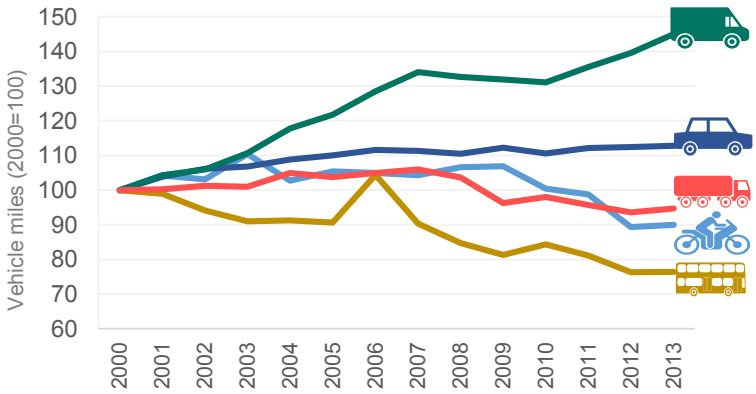
Year-on-year growth in motor vehicle traffic in Great Britain, from 1949 (1)



Slowing rates of traffic growth in recent years may in part be attr buted to economic performance and a rising cost of driving. It also reflects other issues to varying degrees such as technological developments, changes to company car use, social trends and demographic shifts such as urbanisation. However, there is more limited evidence on these issues and current evidence suggests that there is scope for further growth in traffic, particularly amongst women, the elderly and on motorways.

Traffic levels on the Strategic Road Network

SRN motor vehicle traffic by vehicle type: 2000 - 2013 (1)



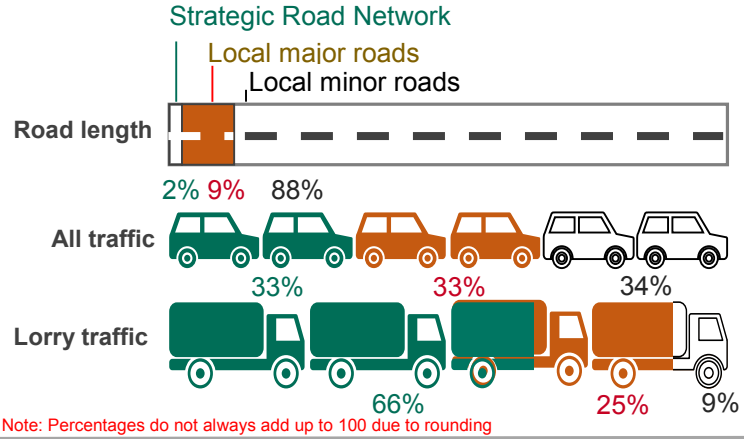
Use of the SRN by Light Goods Vehicles (LGVs) has increased by 45% since 2000. Long term increases in LGV traffic have also been observed on all GB roads over the same period. (1)

45%

Heavy Goods Vehicles' (HGVs) use of the SRN fell by 11% since the peak in 2007. A similar level of decline has been observed with HGV traffic on all roads in England. However, HGV traffic increased by around 1% on the SRN in the last year. (1)

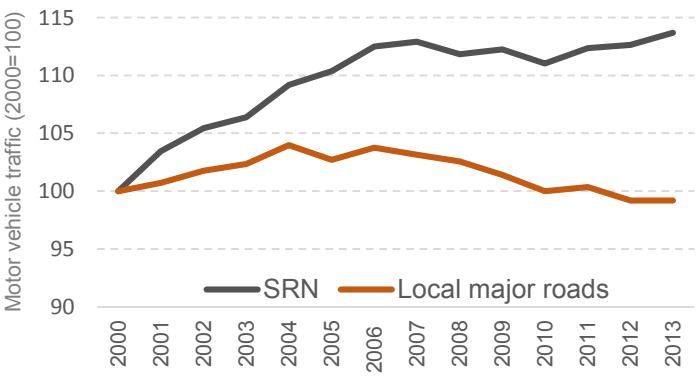
11%

Heavy Goods Vehicles are the only vehicle type to travel more distance on SRN roads (8.8 billion vehicle miles) than on locally managed roads (4.6 billion vehicle miles).



Note: Percentages do not always add up to 100 due to rounding

All motor vehicle traffic: SRN* and local major roads (1)



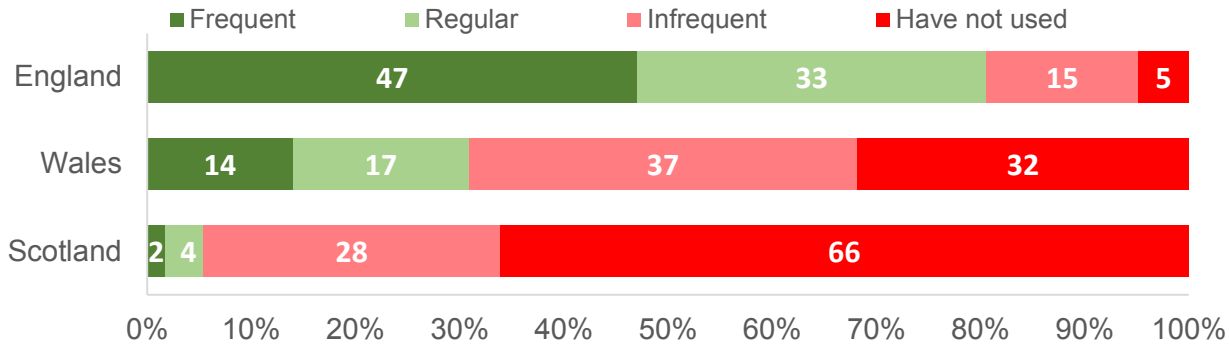
* based on static network management status to remove the effects of de-trunking

Despite overall traffic declining during the recession years of 2008 and 2009, traffic on the SRN remained broadly stable, and has increased since 2010. Motorway traffic is now at its highest level since recording began in 2000. In contrast, traffic on locally managed major roads has declined by around 5 per cent since 2007.

1. Department for Transport Road Traffic Statistics

Use of the Strategic Road Network

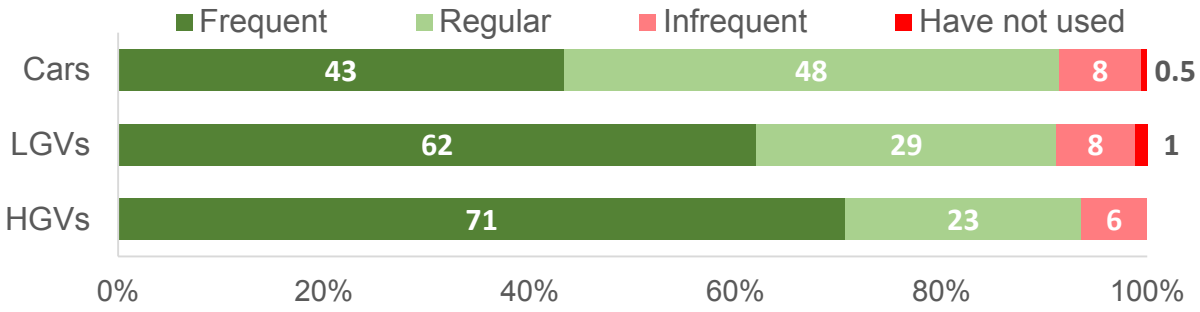
Frequency of use (*) of the SRN for residents of Great Britain, by country (2)



95% of England residents use the SRN at least once a year.

Although the SRN is located entirely in England, many residents of Wales make regular use of it.

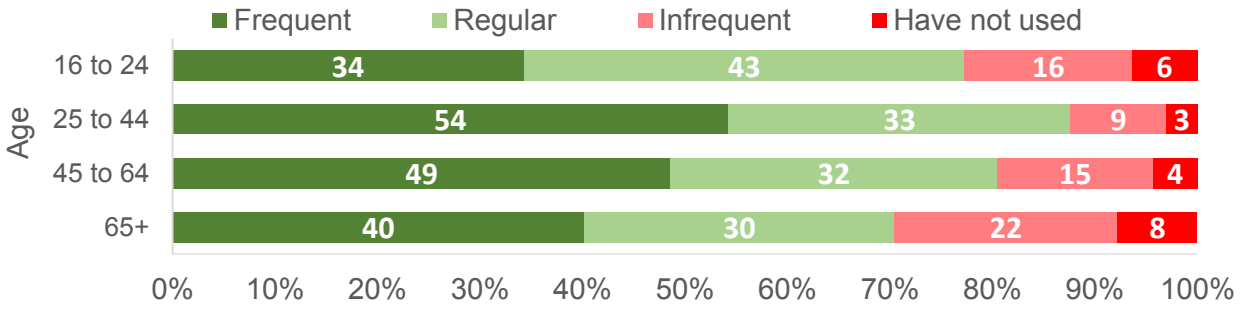
Frequency of use (*) of the SRN by vehicle type (3)



99% of vehicles use the SRN at least once a year.

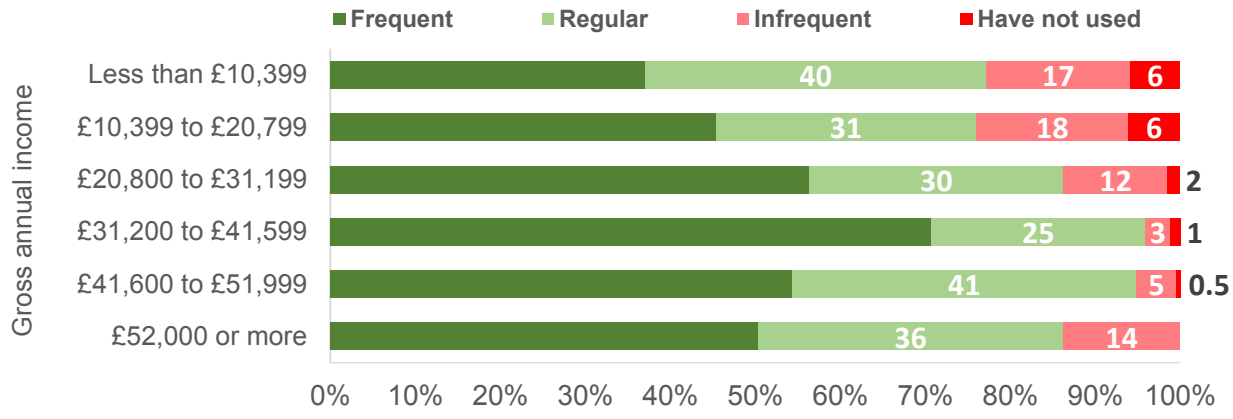
Although HGVs made more frequent use of the SRN than cars and LGVs, over 90% of users of all three vehicle types used it at least once per month.

Frequency of use (*) of the SRN by age; England respondents only (2)



In England, those aged 25 to 64 use the SRN more frequently than the younger (16-24), and older (65+) age groups. This is likely to be associated with work related journeys.

Frequency of use (*) of the SRN by gross annual income; England respondents only (2)



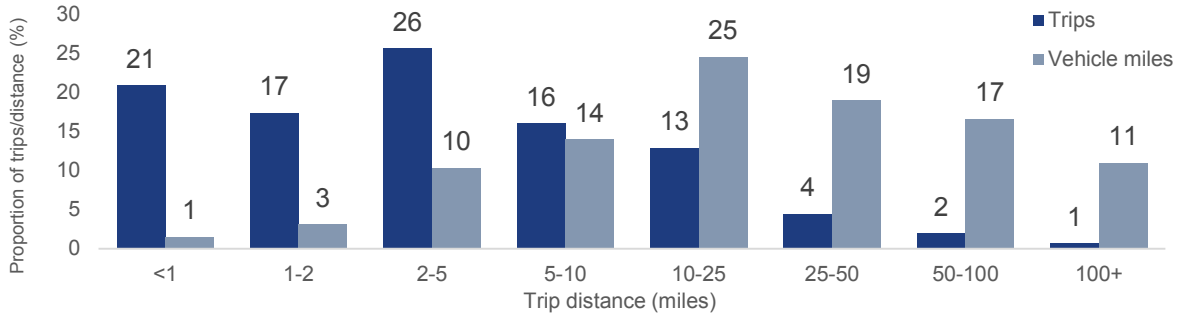
Frequency of SRN use increased with respondents' income level, peaking at those earning between £31.2k and £41.6k. Frequency then decreased for those on the highest incomes.

(*)
Frequent – At least twice per week
Regular – At least once per month, but less than twice per week
Infrequent – At least once per year, but less than once per month
Have not used – Less than once per year, or not used at all
Note: Percentages do not always add up to 100 due to rounding

2. ONS Opinions and Lifestyle Survey 2013
3. Department for Transport in-vehicle GPS data (2011-12)

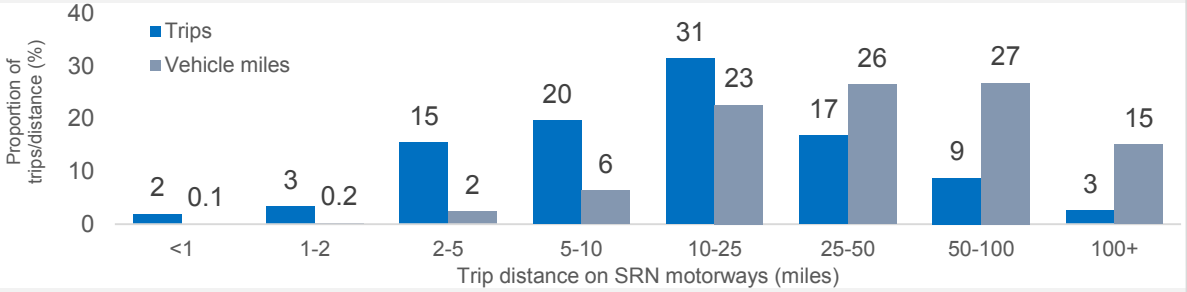
Use of the Strategic Road Network

Trip distance for all trips, across **all road** types [3]



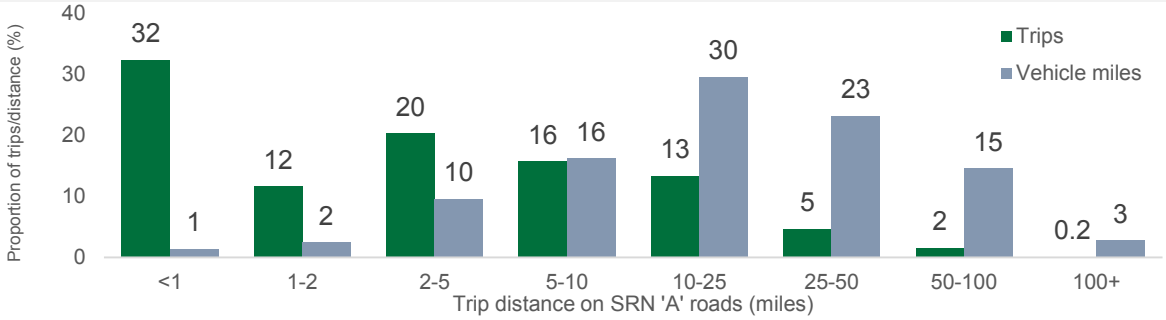
The majority of trips across **all roads** were short journeys - almost two-thirds (64%) of trips were less than 5 miles in length. However, nearly half (47%) of the vehicle miles driven were covered by vehicles making trips of more than 25 miles.

Trip distance on SRN motorway sections of the trip (for trips that used SRN motorways at some point) [4]



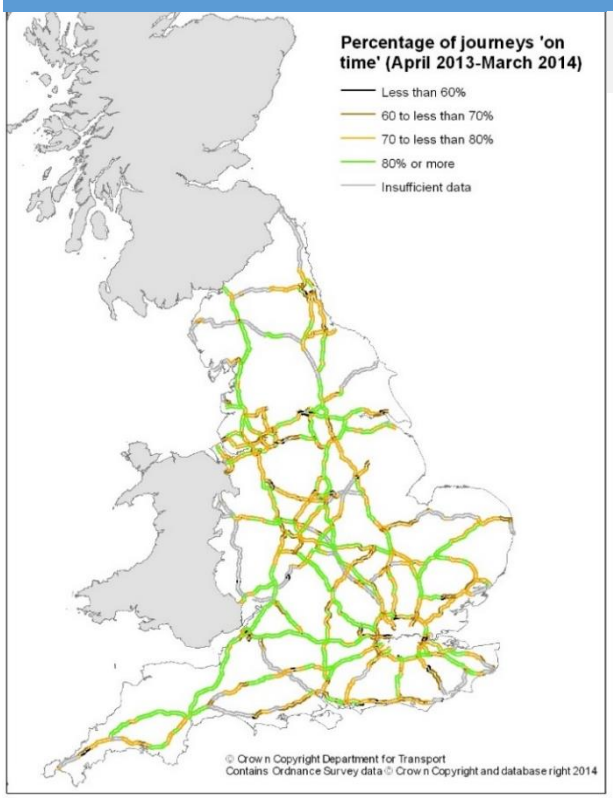
Just looking at trips that used SRN motorways at some point. More than one in four of these trips (28%) used these roads for more than 25 miles. These trips accounted for around two-thirds (68%) of the vehicle miles (traffic) on SRN motorways.

Trip length distribution on SRN 'A' road sections of the trip only (for trips that used SRN 'A' roads at some point) [4]



Almost two-thirds of trips (64%) involving SRN 'A' roads used these roads for less than 5 miles.

Reliability on the Strategic Road Network



Percentage of journeys on the SRN that are 'on time'

Around 78% of journeys on the SRN were considered to be 'on time' in the year ending September 2014 [4]

3. Department for Transport in-vehicle GPS data (2011-12)

4. Department for Transport: Highways Agency road network reliability statistics

p = provisional

Road user satisfaction

The National Road Users' Satisfaction Survey (NRUSS) is an 'at home' survey of around 2,000 people and is undertaken on a rolling programme throughout the year. Respondents are asked a number of questions about their last journey on HA's network, covering safety, journey reliability, the environment, delays encountered, the electronic message signs, the Highways Agency's Traffic Officers and their awareness of the Agency.

The current road user satisfaction level is around 90 per cent. (5)

Satisfaction fell slightly in 2013-14 to 89.6 per cent from 90.7 per cent in 2012-13.

Customers like…

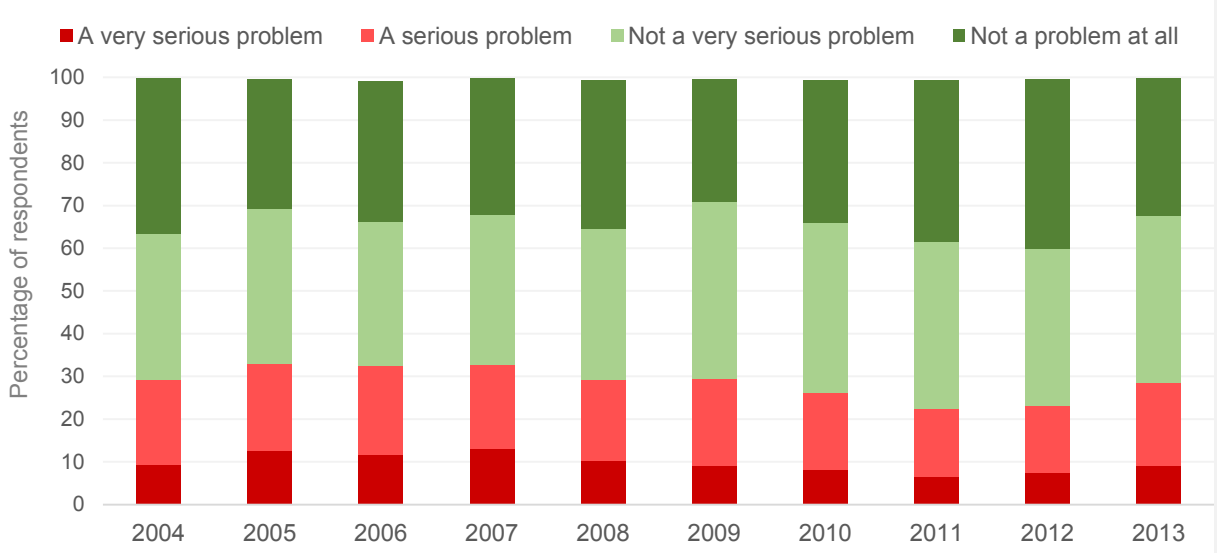
- Motorways being clear of litter and debris.
- Local exhibitions to explain proposals.
- Comprehensive and appropriate responses to complaints and enquiries.
- Sensitive management of roadside verges.
- The fact the Agency works with stakeholders and residents to minimise disruption during road schemes.

But dislike…

- Missing connections for holidays due to unexpected delays on the network.
- Overgrown verges restricting visibility at junctions and obstructing signs.
- Litter on the network and debris left on verges.
- Potholes and poor road surfaces.
- Trees being removed in association with improvement works.
- Incorrect or out of date information on Variable Message Signs.

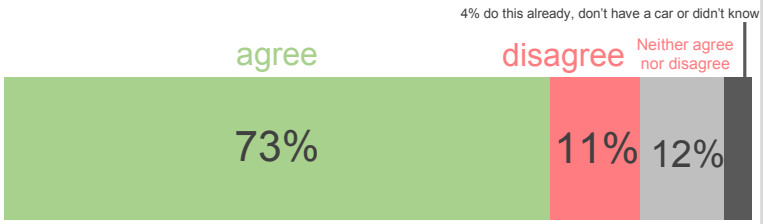
British Social Attitudes survey

The perception of motorway congestion as a problem (6)

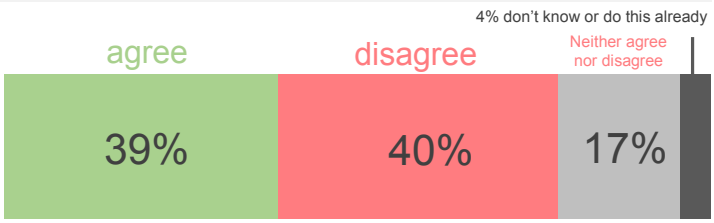


In 2013, 28% of Britons considered congestion on motorways to be a serious problem for them (with the remaining 72% who did not consider it to be a serious problem).

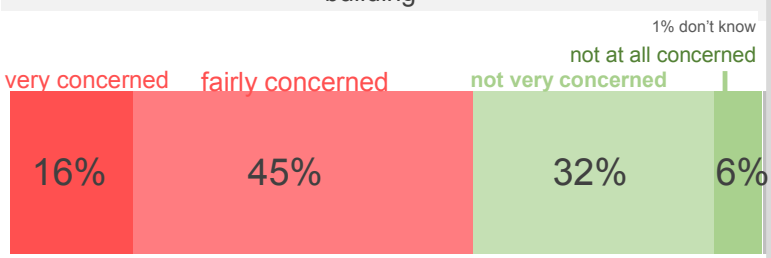
Willingness to buy a car with lower CO2 emissions (6)



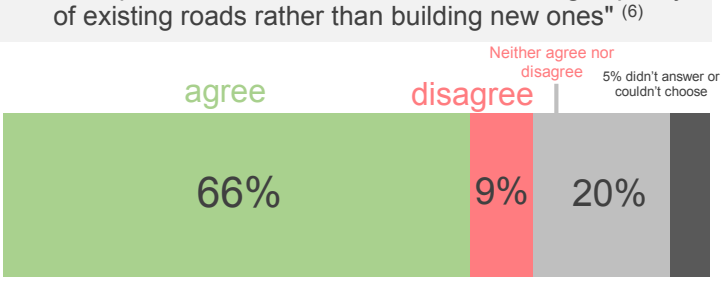
Willingness to reduce the amount travelled by car (to help reduce the impact on climate change) (6)



Concerns about damage to the countryside from road building (6)



"Road improvements should focus on increasing capacity of existing roads rather than building new ones" (6)

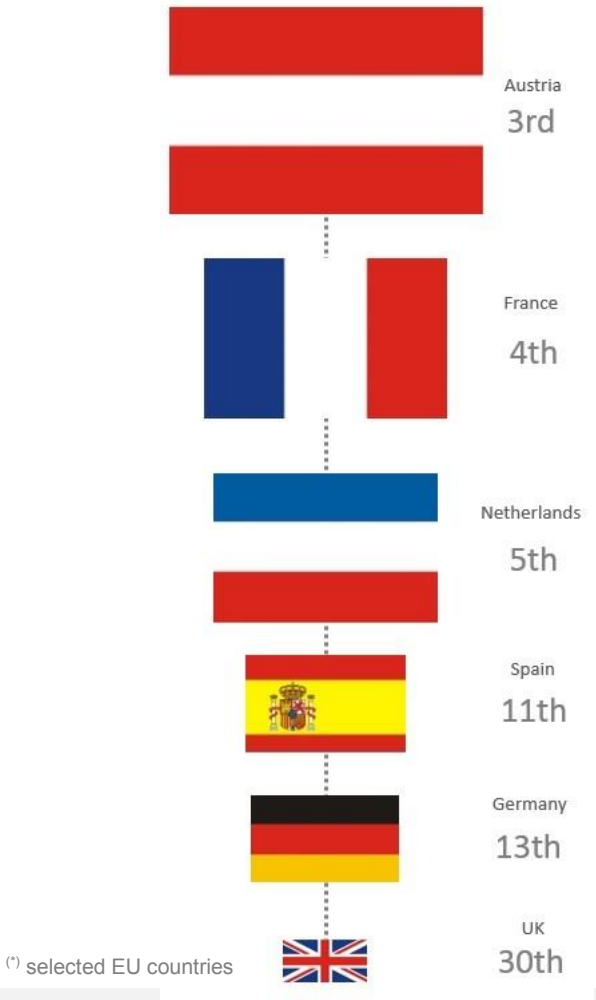


5. Highways Agency Annual Report 2013-14
6. British Social Attitudes survey (various years)

Note: Percentages may not add up to 100 due to rounding

Global Competitiveness Index 2014-15 (7)

Rankings for road transport infrastructure (*)



(*) selected EU countries

In **2008-09** the UK's roads were ranked **24th** in the world

6 places

In **2009-10** the UK's roads were ranked **30th**

5 places

In **2010-11** the UK's roads were ranked **35th**

9 places

In **2011-12** the UK's roads were ranked **26th**

2 places

In **2012-13** the UK's roads were ranked **24th**

4 places

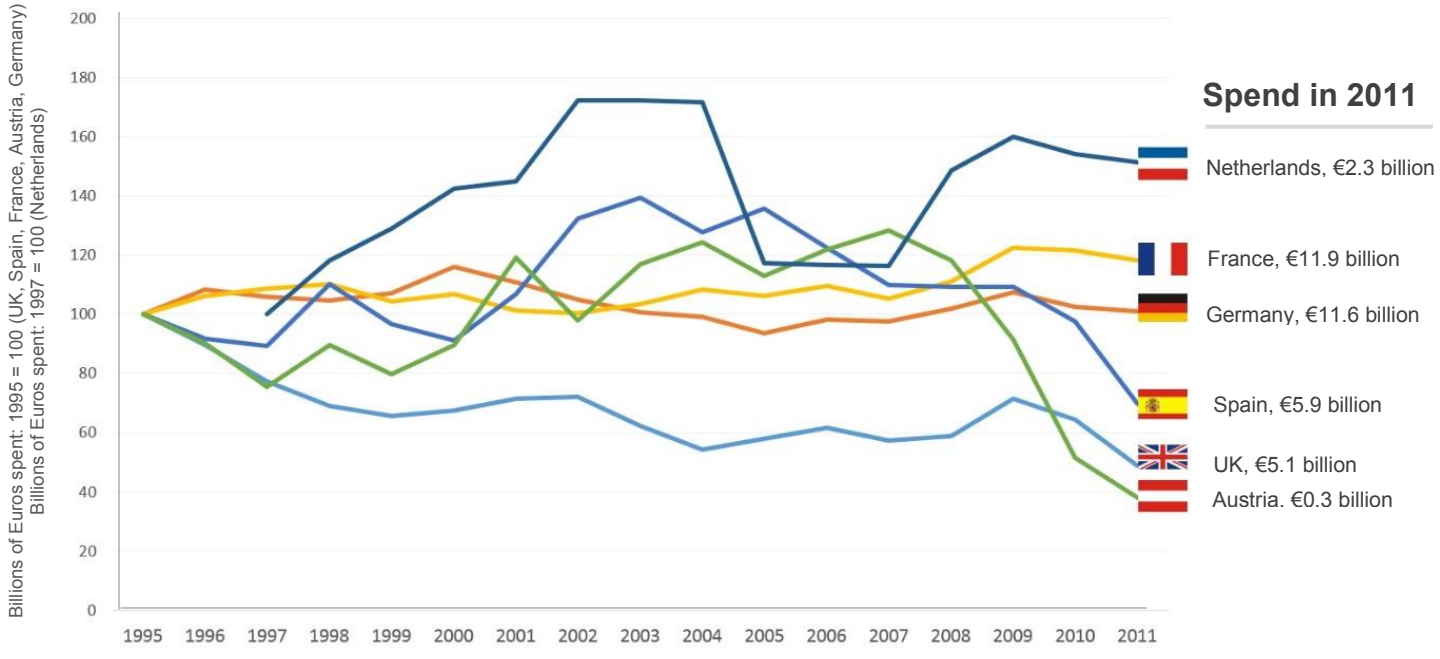
In **2013-14** the UK's roads were ranked **28th**

2 places

In **2014-15** the UK's roads were ranked **30th**

The Global Competitiveness Index, run by the World Economic Forum, surveys 15,000 business executives from over 160 partner institutes and ranks 148 economies using 114 indicators.

Levels of road infrastructure investment across selected European countries (8)

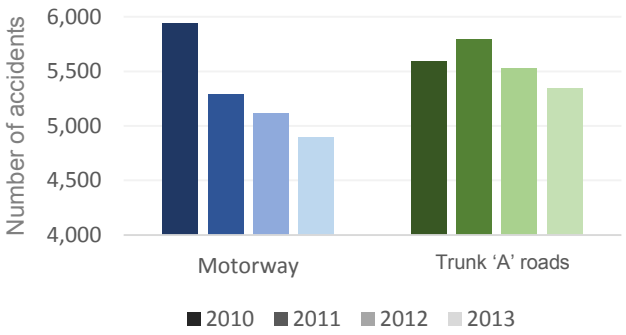


7. World Economic Forum: The Global Competitiveness Report 2014 - 2015
8. International Transport Forum

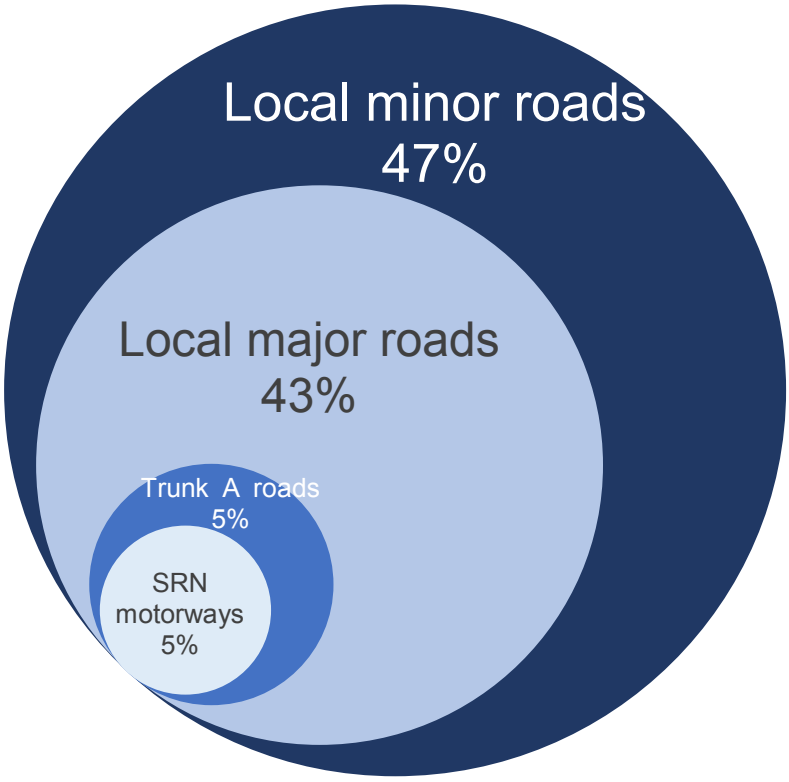
Although SRN motorways and trunk 'A' roads carry around a third of all traffic in England, reported accidents on the SRN in 2013 accounted for just 8% of all accidents in England.

In comparison, locally managed 'A' roads also carry a third of English traffic, but accounted for 42% of accidents in 2013. 49% of accidents occurred on minor roads in 2013, which carry the remaining third of traffic in England.

All reported accidents on the SRN; 2010 – 2013 (9)

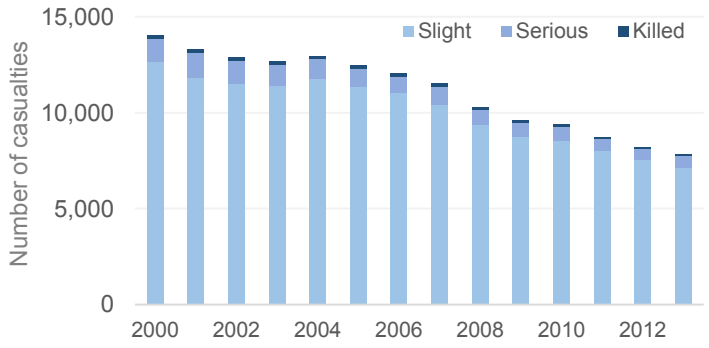


Reported casualties in England by road type; 2013 (9)
Percentage of all casualties

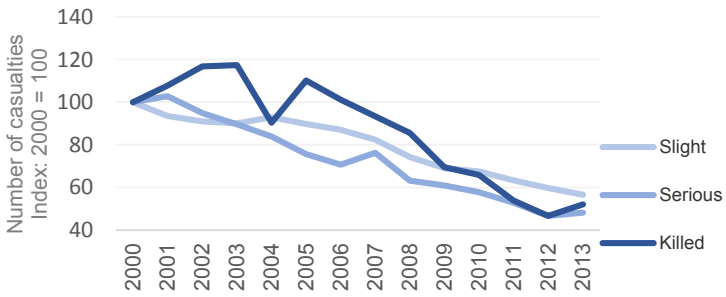


Motorways

Reported casualties by severity on SRN motorways (9)

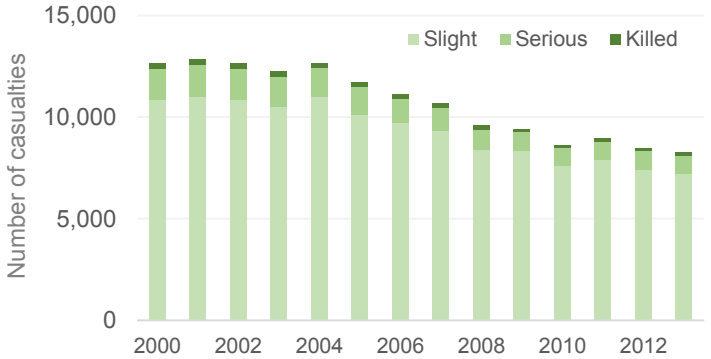


Levels of casualties on SRN motorways, by severity

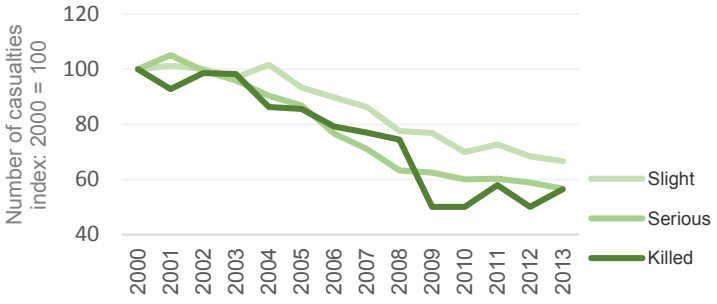


Trunk 'A' roads

Reported casualties by severity on trunk 'A' roads (9)



Levels of casualties on trunk 'A' roads, by severity



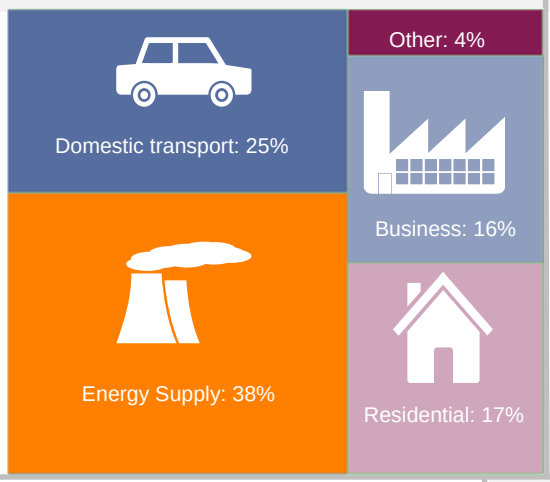
The decline in the number of accidents on motorways and trunk 'A' roads between 2000 and 2013 continues a long term downward trend in road traffic accidents. As well as economic factors, technological and engineering improvements to vehicles and highways will have played a role in reducing the number of accidents. Finally, improvements in trauma care will also have helped to save lives once an accident has occurred.

9. *Department for Transport Road Accidents and Safety Statistics*

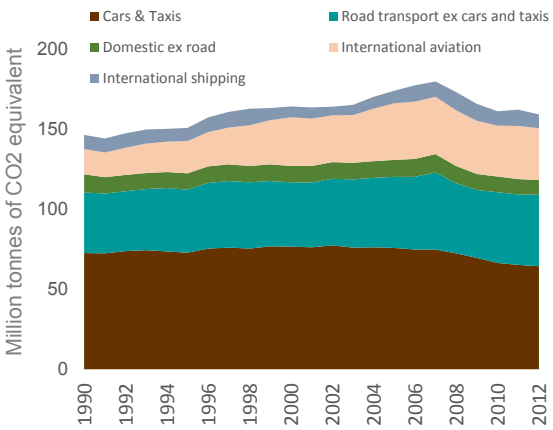
Environment

Domestic Greenhouse Gas emissions by source sector, 2013p [10]

CO2 is the dominant Greenhouse Gas (GHG) emitted by the transport sector, making up 99% of transport GHG emissions.

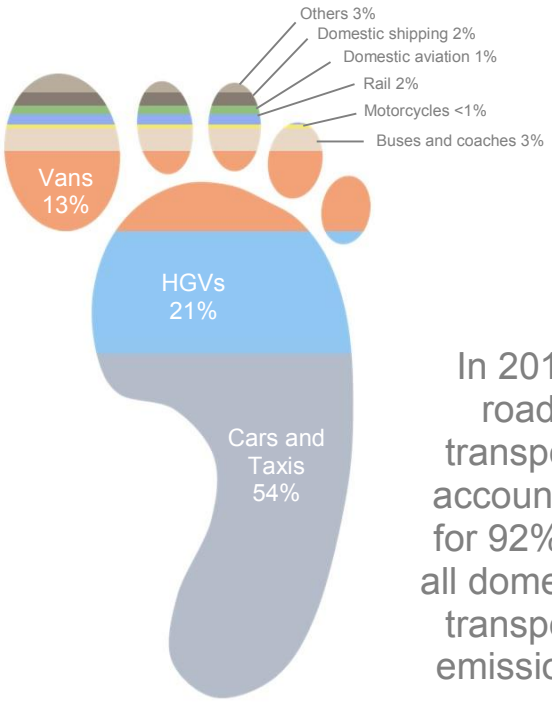


UK transport Greenhouse Gas emissions by mode [10]



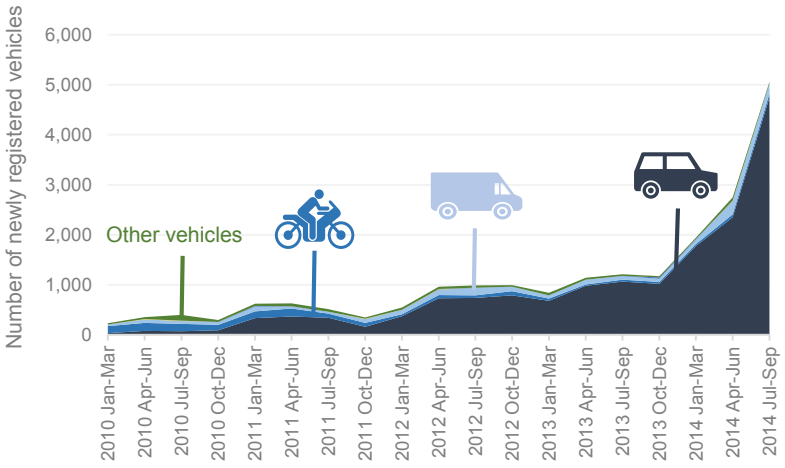
GHG emissions from road transport increased by 11.3% between 1990 and 2007. From 2007 to 2012, however, they fell by 11.6%. This reflects improved efficiency of the vehicle fleet, and reduced travel caused by the recession.

UK domestic transport Greenhouse Gas emissions, 2012 [10]



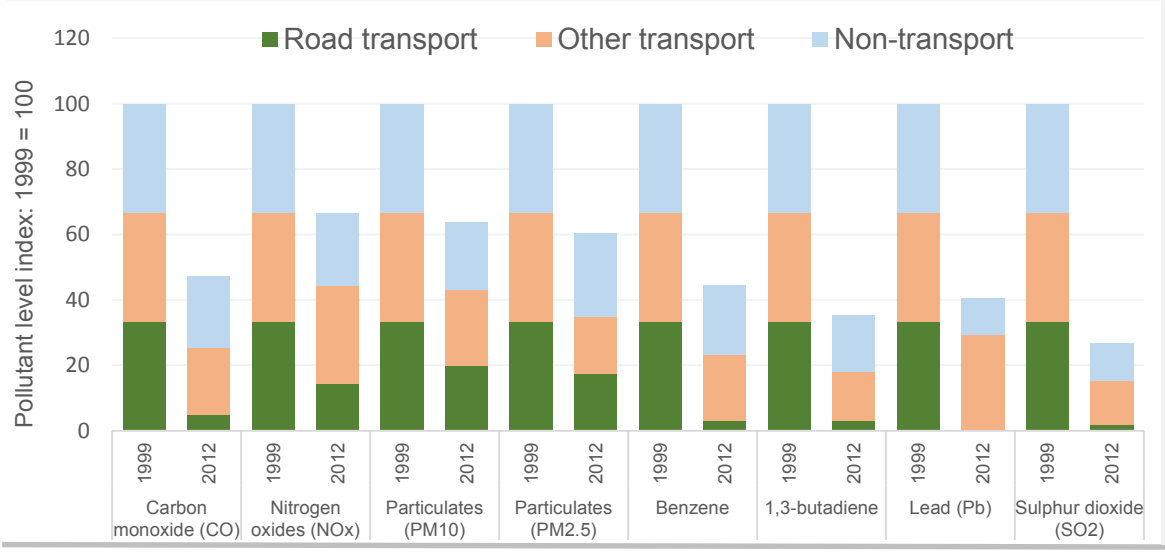
In 2012 road transport accounted for 92% of all domestic transport emissions

Ultra-low emission vehicles (ULEV) registered for the first time, UK [11]



Cars with lower carbon dioxide (CO2) emissions fall in cheaper Vehicle Excise Duty (car tax) bands. Cars with smaller engines and / or cars which use diesel rather than petrol tend to have better fuel efficiency. In addition, legally binding EU-wide CO2 emission targets for manufacturers give them added incentives to bring lower emission vehicles to the market.

Air pollutant emissions in the UK by emission type, 1999 and 2012 [10]

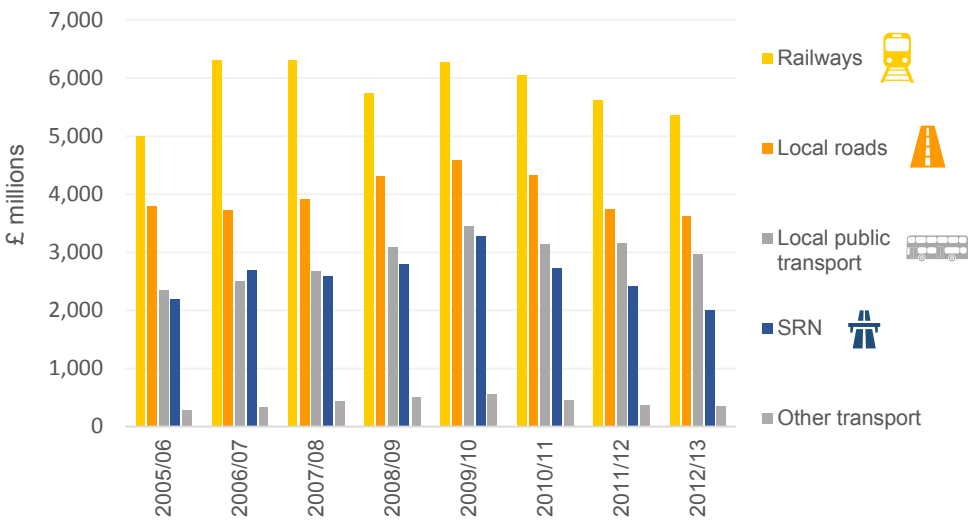


The ban of the sale of leaded petrol in 1999 and removing sulphur dioxide from road fuel and catalytic converters has greatly reduced the level of these air pollutants accounted for by road transport.

10. Ricardo-AEA/DECC – Published by Department for Transport
11. Department for Transport Vehicle Licensing Statistics
p = provisional

Expenditure on the Strategic Road Network

Public expenditure on transport in England (includes capital and resource) [12]



Maintenance expenditure in 2012/13 [13]

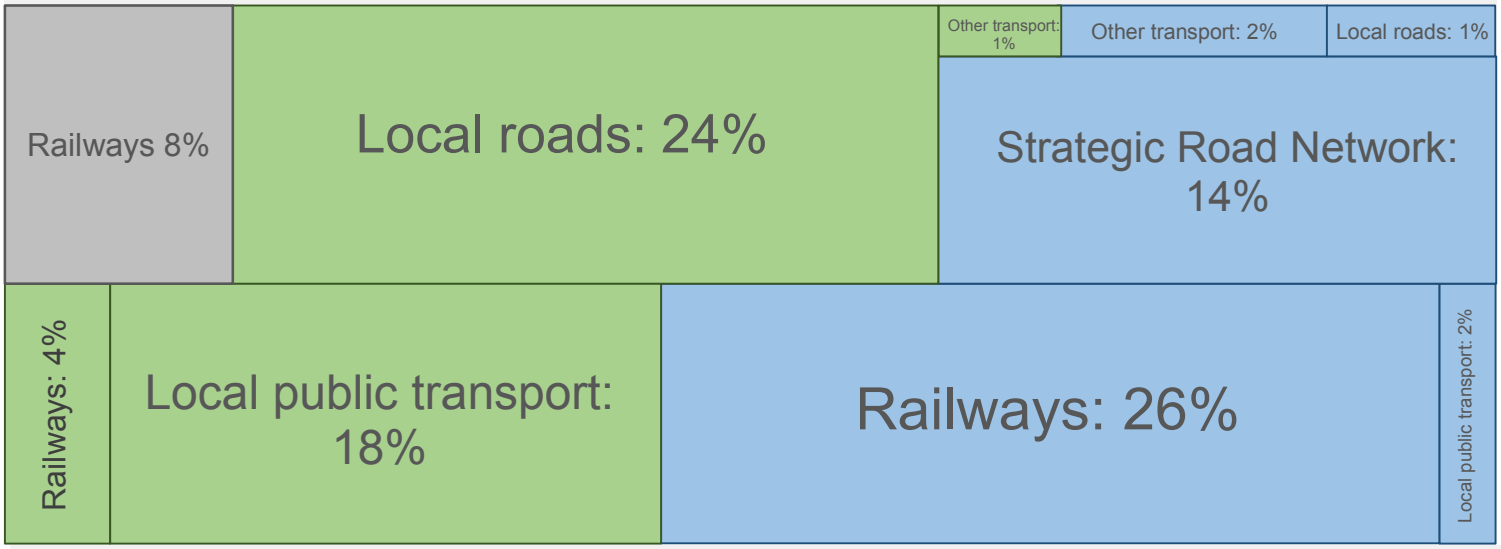
£1.8bn was spent on maintaining local authority minor roads

£1.0bn was spent on local major roads

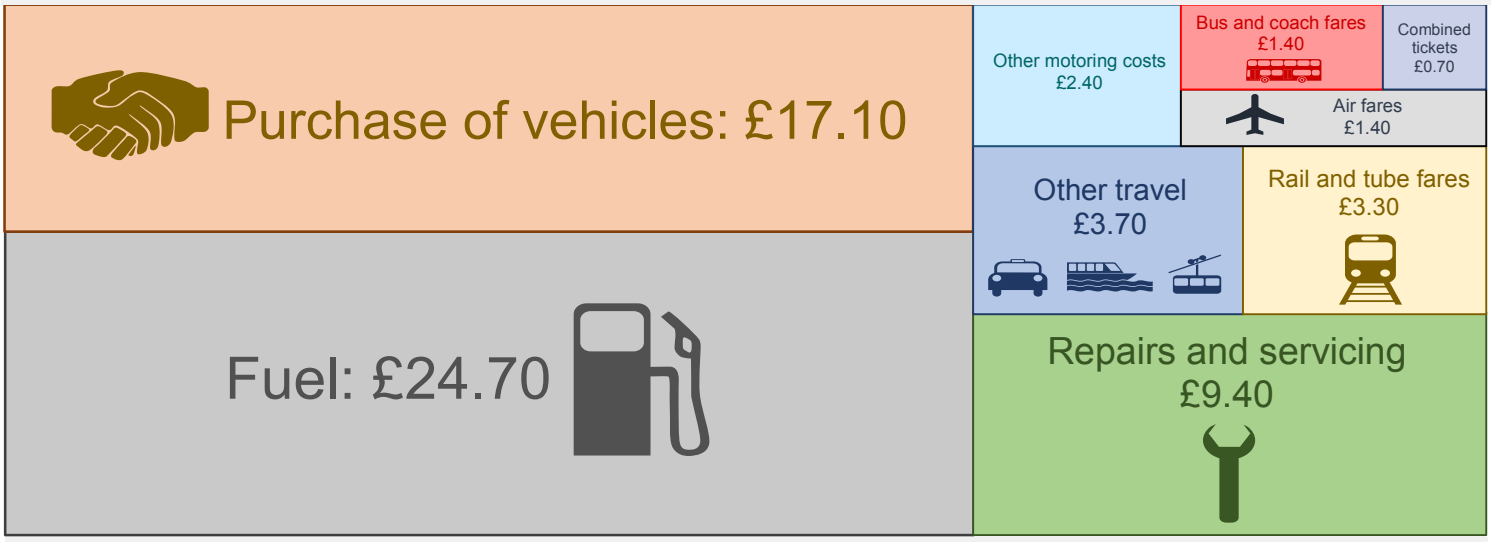
£0.7bn was spent on the SRN

Public expenditure on transport in England; 2012/13R [12]

Green = Local Government expenditure, Blue = Central Government expenditure, Grey = Public corporation expenditure



Household transport expenditure, 2012 [14]



Just over 13% of all household expenditure was on transport.

12. HM Treasury
13. Department for Transport: Network size and Condition Statistics
14. Living Costs and Food Survey, Office for National Statistics

R Revision: A minor correction was made on 31.03.2015

Connectivity

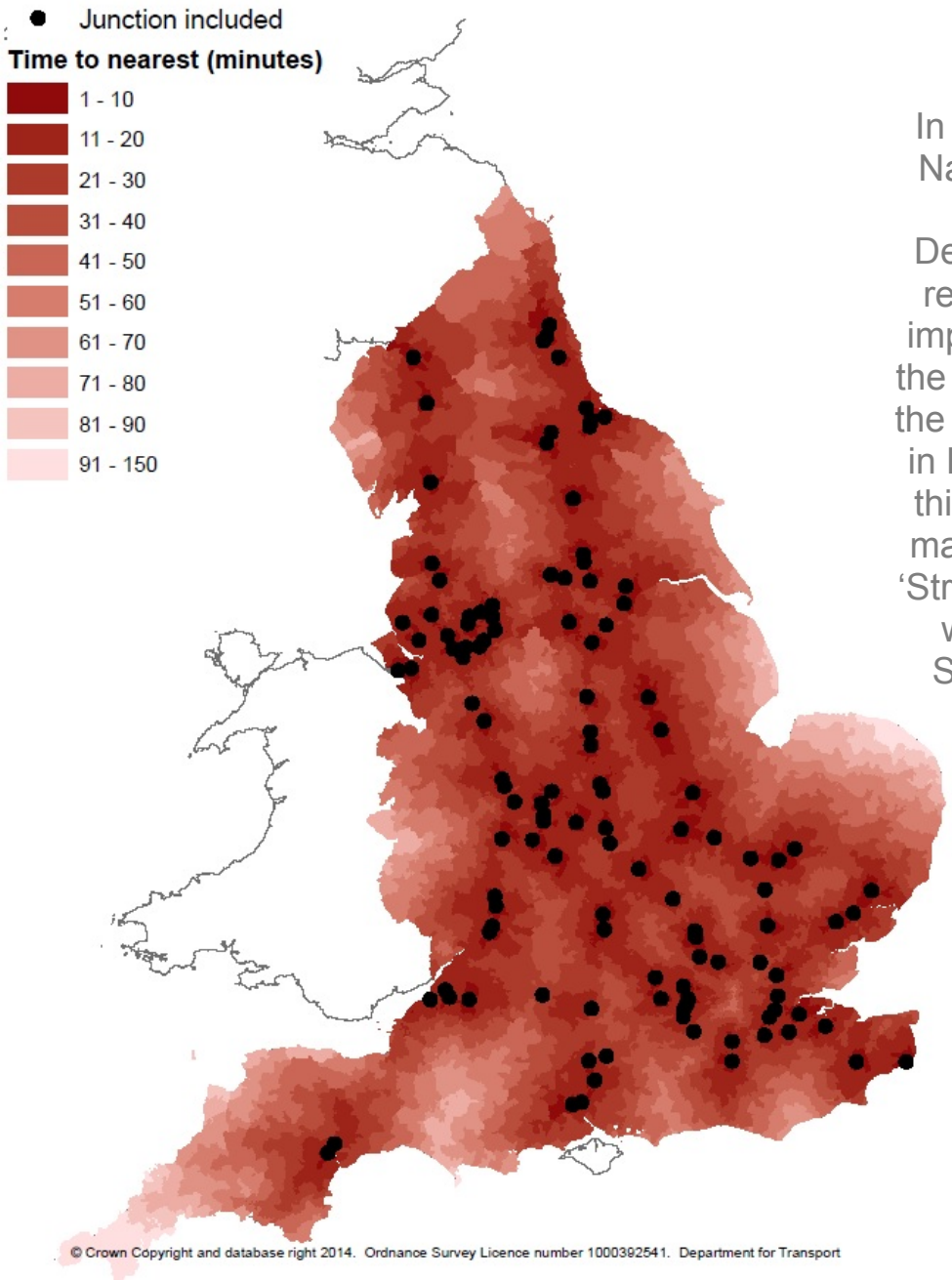
Population of England **within an hour** of selected transport destinations by car during the morning peak, 2011 (15)

Nearest 'large' airport	Nearest national hub or regional interchange rail station	Nearest 'major' road junction
94%	95%	96%

Average travel times to selected transport destinations by car during the morning peak, 2011 (15)

Nearest 'large' airport	Nearest national hub or regional interchange rail station	Nearest 'major' road junction
48 minutes	43 minutes	25 minutes

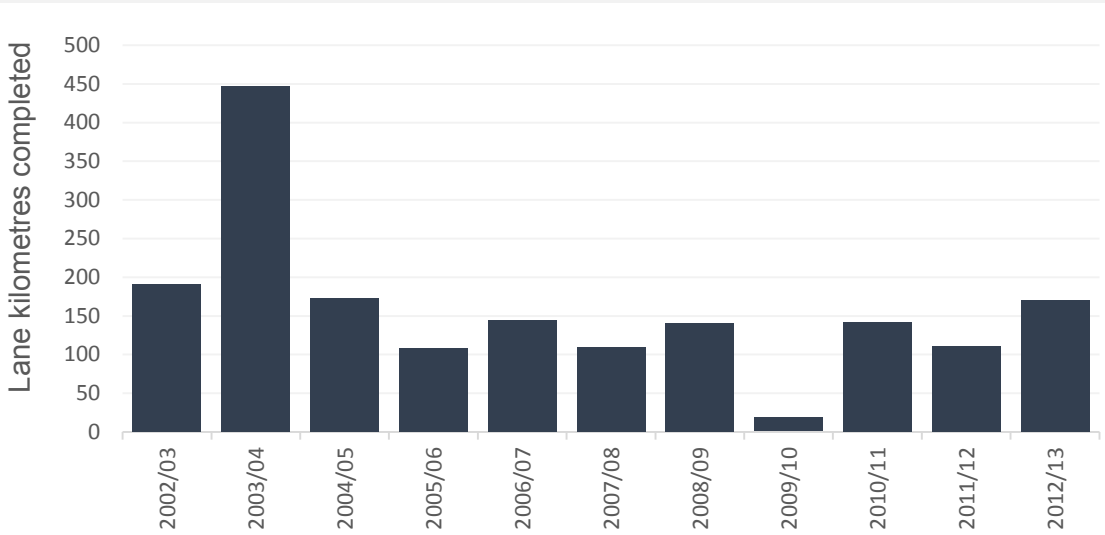
Major road junction connectivity: time to nearest junction (15)



In 2009, fourteen Strategic National Corridors (SNCs) were identified by the Department for Transport - recognising the economic importance of routes linking the largest English cities with the busiest ports and airports in England. The statistics in this map are based on 122 major road junctions on the 'Strategic National Corridors' which intersect with the Strategic Road Network.

15. Department for Transport: Transport connectivity Statistics

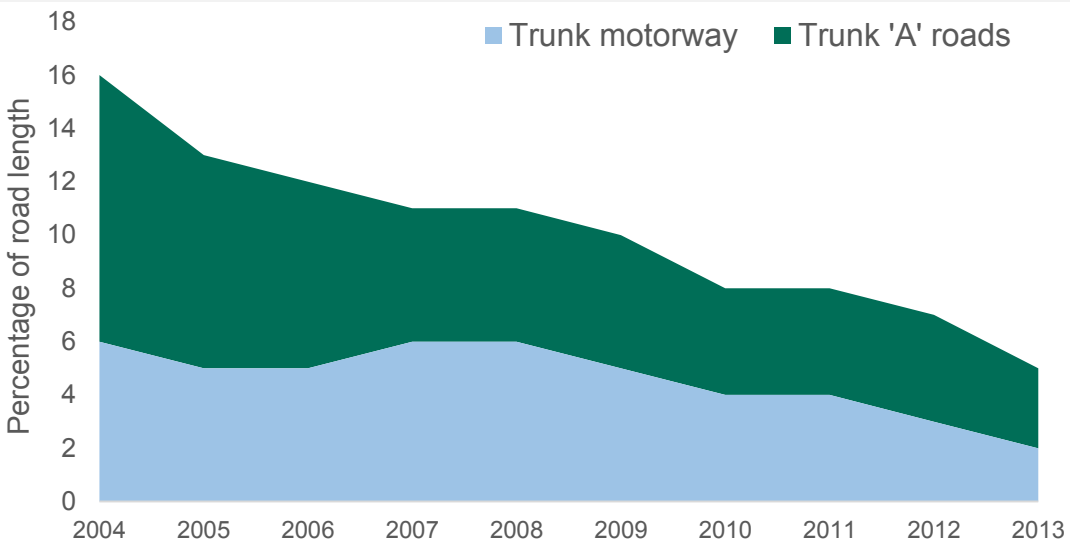
New road construction and improvement on the SRN [13]



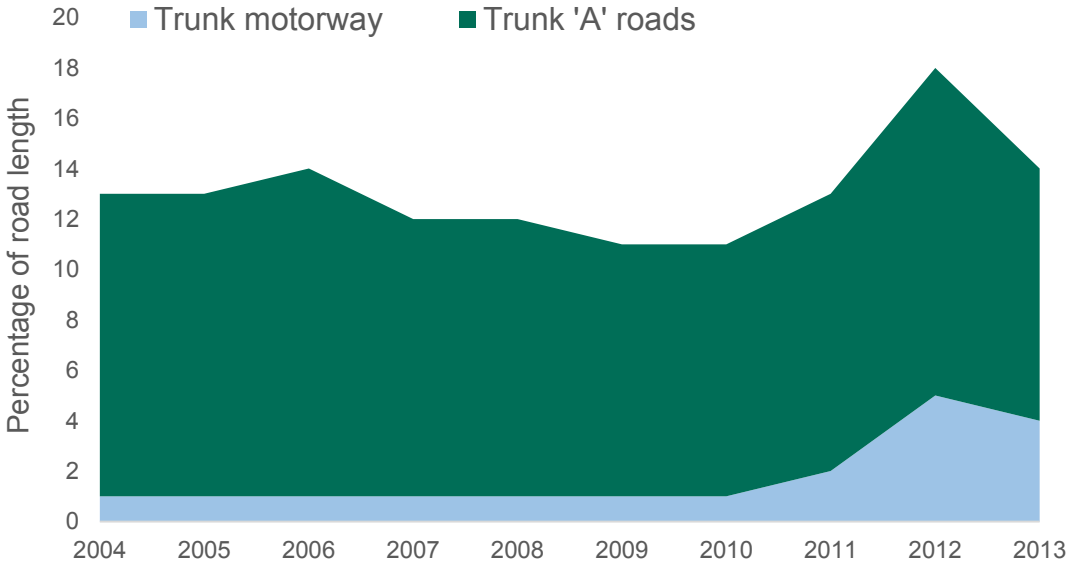
The lane kilometre figures from 2010/11 onward include schemes to introduce different designs of actively controlled motorways known as 'smart motorways'. These motorways use technology to convert the hard shoulder into a running lane, thus increasing capacity.

Percentage of trunk motorway and trunk 'A' roads where maintenance should be considered [13]

These statistics are drawn from Traffic-speed Condition Surveys (TRACS) of the Highways Agency's network.



Skidding resistance: Percentage of trunk motorway and trunk 'A' road requiring further investigation [13]



Skidding resistance is a measure of the road surface contribution to the frictional forces developed between a vehicle's tyres and the road when accelerating, braking or cornering.

13. Department for Transport: Network size and Condition Statistics