transform
scotland

GO

WARNING SIGNS 2014:
Is Scotland moving towards sustainable transport?

About the authors

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Jolin has been a transport researcher at Transform Scotland for eight years and is currently Head of Research. He has in-depth knowledge of the sustainable transport sector in Scotland, together with extensive experience in leading research projects to provide evidence for transport investment, evaluate performance and advise on best practice. Jolin's recent work includes: ground-breaking research to calculate the economic benefits that would result from increasing in cycling rates; an analysis of the business benefits of rail travel between Scotland and London; an audit of cyclist facilities at transport interchanges across the country; a report on what leading European cities did to reach high levels of active travel and lessons Scotland could learn; and a feasibility study of improvements to the public transport network in the West Highlands. Jolin has also led research projects for organisations including the National Trust for Scotland and Scottish Environment LINK, helping them to collect and analyse data to improve their environmental performance.

Colin Howden

Colin has managed Transform Scotland since 1998 and has, in that time, published widely on all aspects of sustainable transport policy and practice. He was Board member and Treasurer of the European Federation for Transport and Environment (T&E), our European umbrella body, from 2009 to 2012. Colin has been active in the environmental movement for over twenty years, and was until recently a Board member of Friends of the Earth Scotland. Prior to joining Transform Scotland, he studied economics at Aberdeen and Manchester universities.

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In 2013 Ana graduated from Gray's School of Art in Aberdeen with First Class Honours in Visual Communications. Since then she spent a year working as a graphic designer for the Gordon Castle Estate in Fochabers, helping to create and launch their brand. Her photography work was purchased by the Robert Gordon University and exhibited in London and Aberdeen. She has also been 'Highly Commended' for the BP Design Award. As Communications Officer, Ana will be putting together the brand guidelines for Transform Scotland, delivering visuals and helping create media strategy for all the ongoing projects.

INTRODUCTION

In September 2012 we published our first *Warning Signs* report, which was also the first in our series of annual sustainable transport reports. The report set out a comprehensive, yet summarised, picture of the state of sustainable transport in Scotland. Two years on we are publishing an update to assess whether or not Scotland is making progress on sustainable transport.
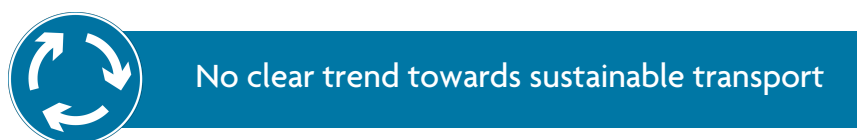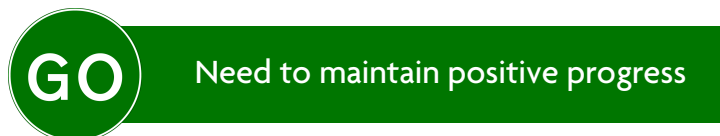
Transform Scotland campaigns for a society where everyone can have their travel needs met within the limits of a transport system that is environmentally sustainable, socially inclusive and economically responsible. It is this vision which provides the chapter headings 'Sustainable', 'Civilised', and 'Productive'. We commence the report with a consideration of overarching themes in 'The Big Picture'.

Under these headings, we isolate a set of progress indicators with which we can measure whether we are moving towards or away from sustainable transport. These progress indicators are largely the same as those used in *Warning Signs 2012*.

Our determination of whether progress is being made against the indicators was carried out in both quantitative and qualitative terms. While the report features some primary research, we mainly focused on evaluating and presenting official statistics attractively, clearly, and with appropriate context to make them easy to comprehend. Progress against each indicator is then rated using 'road sign' symbols to summarise the current situation and extent of measures needed. In the sidebar underneath the road sign symbol, we have also summarised the indicator's change compared with what we found in *Warning Signs 2012*. We conclude the report with a set of recommendations for action by local and national government and other bodies.

It has obviously been a large undertaking to attempt to comment on all aspects of sustainable transport in so few pages, and we accept that some people may feel that certain topics have not been covered, or not covered in enough detail. As such we would very much welcome your views on how these could be improved in future years, as well as how existing indicators could be improved. In a couple of cases, we have already identified the need for better data and we are receptive to any suggestions of where this could be obtained. Indeed, we would welcome any comments and we will consider them carefully for future versions of this report.

KEY TO THE SYMBOLS

GO — Need to maintain positive progress

No clear trend towards sustainable transport

Drastic measures needed to change unsustainable position

EXECUTIVE SUMMARY

The Big Picture

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Unsustainable modes still dominate though there has been some progress in journeys to other parts of the UK. Page 6

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Clear evidence for road traffic stabilisation – small increase in distance travelled due to non-car modes. Page 7

Sustainable

2.1. REDUCING OIL DEPENDENCY
Motorised transport remains essentially 100% oil dependent. Page 8

2.2. TACKLING CLIMATE CHANGE
Emissions targets failed and key measures remain unfunded. Page 9

2.3. GREENING THE VEHICLE FLEET
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2.4. SHARING TRANSPORT RESOURCES
Car clubs and bike sharing schemes growing but average car occupancy continues to drop. Page 11

Civilised

3.1. CIVILISING THE STREETS
Walking and cycling rates increasing, but more local and national investment needed to accelerate pace. Page 12

3.2. IMPROVING PUBLIC TRANSPORT
Punctuality good, but bus users underrepresented and almost no progress on smartcards. Page 13

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Prevarication continues at the expense of human health. Page 14

Productive

4.1. INVESTING SUSTAINABLY
Government budgets reinforcing car use. Page 15

4.2. GETTING THE PRICES RIGHT
Public transport fares continue to rise ahead of motoring costs. Page 16

4.3. MAKING THE POLLUTER PAY
Zero progress on the polluter pays principle. Page 17

THE INDICATORS

1.1. MOVING TO SUSTAINABLE MODES

The share of trips undertaken by the various transport modes is largely unchanged in the last two years (Figure 1.1a). Car and rail use have seen small increases – by 2% and 1% respectively – but the overall picture shows that the car still dominates. There has been no progress on overall mode share for walking and cycling, the least polluting and healthiest modes of travel. This is underlined by the long-term trend of car versus walking trips (Figure 1.1b). While in 1985 more trips were completed on foot (43%) than by car (39%), there was a dramatic change in the late '80s and early '90s and recent years have seen these two modes hold steady at 23% and 63% respectively.[1]
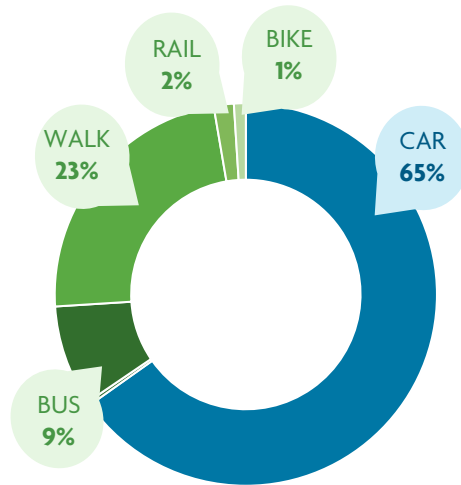
RAIL 2%
BIKE 1%
WALK 23%
CAR 65%
BUS 9%

Figure 1.1a

Modal Share of all journeys

CHANGE SINCE 2012 REPORT

Share of passenger journeys in Scotland:

Car	⬆ 2%
Walking Bicycle	↔
Rail	⬆ 1%
Bus	↔

GO

Share of passenger journeys to/from rest of UK:

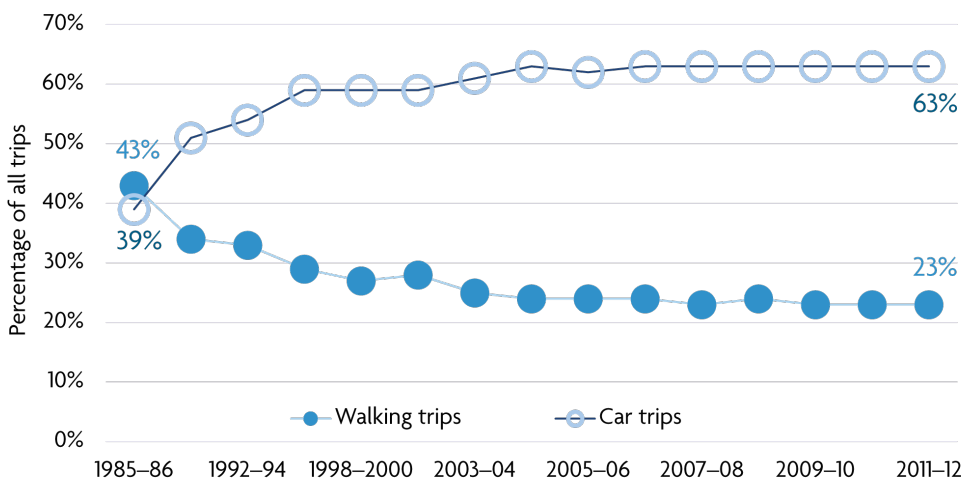|	
Air	⬇ 5%
Rail	⬆ 5%
Ferry	↔

Figure 1.1b

Walking vs. Car trips in Scotland 1985–2012

One area for cautious optimism with this indicator is in the way people travel between Scotland and the rest of the UK (Figure 1.1c). Five per cent of journeys have switched from air to rail since our assessment two years ago. This is a promising start, but more significant change is needed. It is disappointing to see that more than half of travel to other parts of the UK is still carried out using "the most carbon-profligate activity (per hour) humankind has thus far developed."[2]
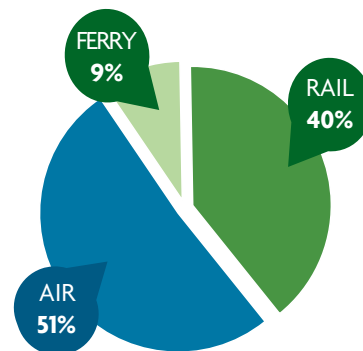
FERRY 9%
RAIL 40%
AIR 51%

Figure 1.1c

Modal shares of non-car passenger journeys to/from other parts of the UK

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[1] The slight variation between the car percentages in Figure 1.1a and Figure 1.1b is due to differences in how the data series are complied by Transport Scotland.
[2] Kevin Anderson, professor of energy and climate change in the School of Mechanical, Aeronautical and Civil Engineering at the University of Manchester. <http://kevinanderson.info/blog/hypocrites-in-the-air-should-climate-change-academics-lead-by-example/>

THE BIG PICTURE

1.2 REDUCING TRAFFIC

While it is important that the modal share of sustainable transport increases, we must also consider the overall volume of transport. If travel increases significantly, then the number of cars, and their impact, will increase even if the relative share of sustainable modes improves.

As shown in Figure 1.2a, after an increase in the late 1980s and 1990s, average distance travelled by all modes remains down from its peak at the turn of the century when it was 7,550 miles/year. However, at 7,161 miles/year it has increased by 150 miles/year since we published *Warning Signs 2012*. In a tentatively positive sign, this increase is almost entirely attributed to non-car modes, which have increased their distance travelled by 142 miles/year. This has resulted in the share of travel by car dropping slightly from 76% to 74% of miles travelled (Figure 1.2b).[1] We will watch with interest to see whether this becomes a trend in future years.
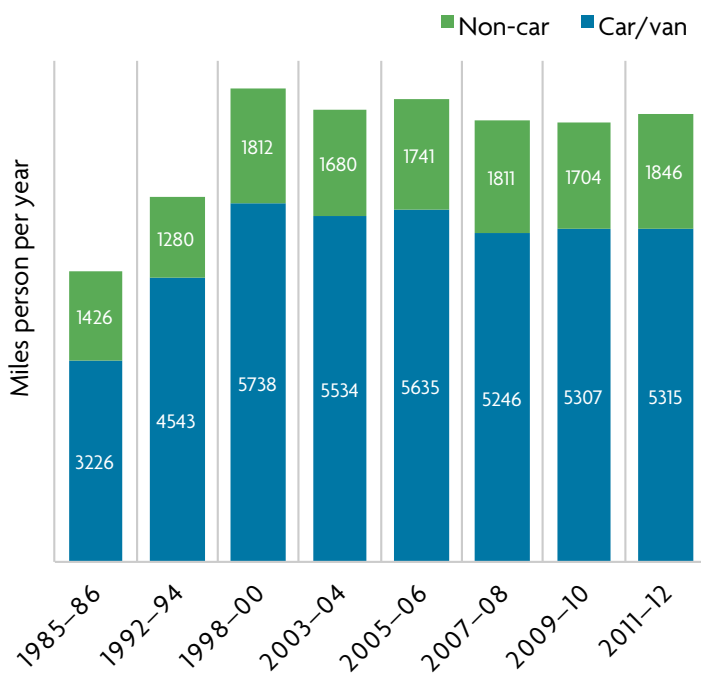
GO

CHANGE SINCE
2012 REPORT

GO

Total miles:

| Car | ↔ |
| Non-car | ↑ 8% |

GO

Share of travel by:

| Car | ⇓ 2% |
| Non-car | ↑ 2% |

Figure 1.2a

Average distance travelled
per person per year

Legend: ■ Non-car ■ Car/van

Period	Non-car	Car/van
1985–86	1426	3226
1992–94	1280	4543
1998–00	1812	5738
2003–04	1680	5534
2005–06	1741	5635
2007–08	1811	5246
2009–10	1704	5307
2011–12	1846	5315

Y-axis: Miles person per year
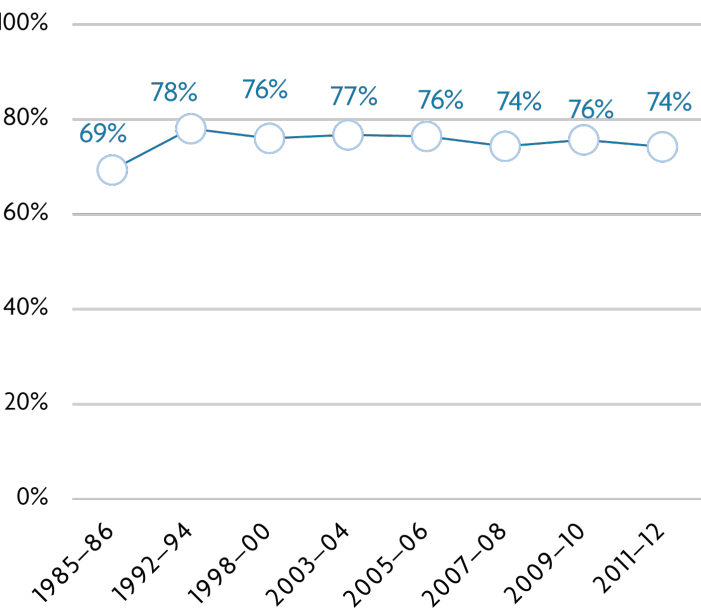
Figure 1.2b

Share of miles travelled by car

1985–86	1992–94	1998–00	2003–04	2005–06	2007–08	2009–10	2011–12
69%	78%	76%	77%	76%	74%	76%	74%

[1] Note that the historical data does not match the chart published in *Warning Signs 2012* as Transport Scotland have revised these figures in their most recent publication.
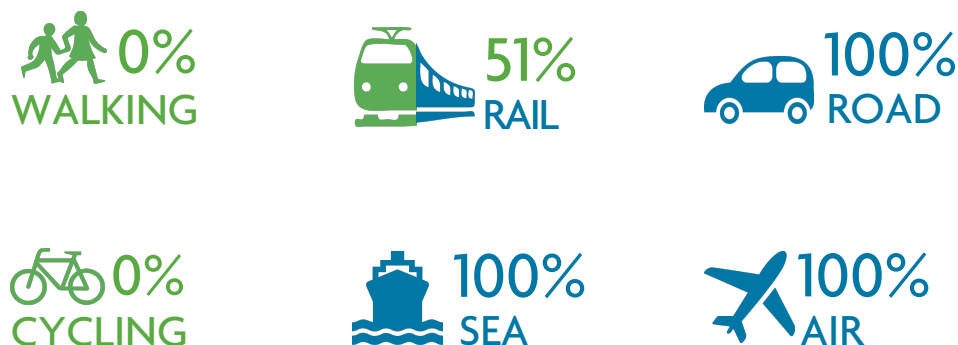
SUSTAINABLE

2.1. REDUCING OIL DEPENDENCY

0% WALKING

51% RAIL

100% ROAD

0% CYCLING

100% SEA

100% AIR

CHANGE SINCE 2012 REPORT

Oil dependency:

All modes

Figure 2.1a

Oil dependency in Scottish transport:
A cross-modal comparison

There has been little change in the oil dependency of Scottish transport since the publication of *Warning Signs 2012*. We have revised the rail figure significantly based on data from Transport Scotland which shows that 49% of passenger train vehicle miles and 12% of freight kilometres in Scotland are powered by electric traction.[1] As we did not have the data for electric rail use previously, we cannot assess how this compares to two years ago. However, according to Network Rail's *Annual Return 2014*, in the past two years 46 km of track have been electrified and 19 km of new electrified track has been added to the network in Scotland. The electrification contained within the Edinburgh-Glasgow Improvement Programme (EGIP) will make a very useful contribution. However, once this is complete we need to see further electrification on key inter-city routes to the north of Scotland. The Government's objective as expressed in this year's finalised National Planning Framework (NPF3) is that rail should compete with the car on these routes. If this is to be realised then such a programme needs to be a priority alongside major doubling of single track sections.

Research should also be undertaken into alternative sustainable fuel sources for trains on rural routes which will not be electrified. A new generation of trains will be required for these routes. It is essential that they are not only fit for purpose but also able to promote a clean and sustainable image for such scenic routes.

Increasing the use of rail freight would make a significant contribution to decarbonising logistics in Scotland. For each tonne-mile switched from road to rail, carbon emissions are typically cut to a third of their previous level.[2] A move to rail freight would lower the oil intensity of logistics whilst providing further incentives for route electrification – which in turn would create opportunities to attract yet more freight to rail, moved efficiently and sustainably across Scotland.

A crucial way to reduce the oil dependency of the road sector is by increasing the efficiency of the vehicle fleet, and progress against this is considered in indicator 2.3. There are also opportunities to move to completely different power sources for road, such as hydrogen or sustainable biofuels. Currently the most widely available alternative is the electric car.

Road transport in Scotland has seen a four-fold increase in electric vehicles – from 132 electric cars at the end of 2011 to 657 today. However this is dwarfed by the addition of 96,071 new non-electric cars in the same time and the overall fleet of 2.4 million cars in Scotland. The freight fleet in Scotland also has some electric vehicles with nine electric HGVs and 200 electric LGVs, but this is a tiny fraction of the 291,481 goods vehicles on the road. The result is that for both passenger and freight, electric vehicles only show up as a few hundredths of a percent and so road transport is still essentially 100% oil dependent. Aviation and shipping have no alternative fuel options at present and remain fully oil dependent (although investigation into biofuels is currently underway).

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[1] A vehicle mile is one mile travelled by an individual coach (so a train with three coaches travelling one mile would equal three vehicle miles) and is an approximation of the relative share of electric traction with regards to passenger miles.

[2] Rail Delivery Group (2014). *Keeping the lights on and the traffic moving: Sustaining the benefits of rail freight for the UK economy*. 14 May 2014. <http://www.raildeliverygroup.com/what-we-do/our-reports-presentation-speeches/>

SUSTAINABLE

2.2 TACKLING CLIMATE CHANGE

Transport's share of Scotland's climate change emissions has levelled off since our report two years ago; however it still accounts for a quarter of all emissions (Figure 2.2a). Given the vast reductions that are necessary for Scotland to meet its climate change targets, as a major contributor transport must play its part. Unfortunately, there is still no systematic programme of action to make reductions in transport emissions on the necessary scale. While in absolute terms, road transport emissions have decreased slightly since our *Warning Signs 2012* report, we need to see much larger decreases to meet our climate change targets.

While passenger cars still contribute the bulk of road transport emissions, they have dropped both in absolute terms and also as a share of road transport's emissions, from 58.7% in 2009 to 56% in 2011. In fact, the only road transport modes to increase their emissions are freight: LGVs saw a modest increase, while HGVs have significantly increased their emissions since 2009 both in absolute terms and as a percentage (from 19.9% to 22.9%). This is disappointing as road freight vehicles are highly managed fleets which could therefore benefit from hybrid and electric technologies. This also underscores the need, discussed earlier, to shift more freight to rail which has much lower carbon emissions and an existing electric traction option.

CHANGE SINCE
2012 REPORT

Transport:

Share of climate change emissions ↔

Relative share of road emissions:

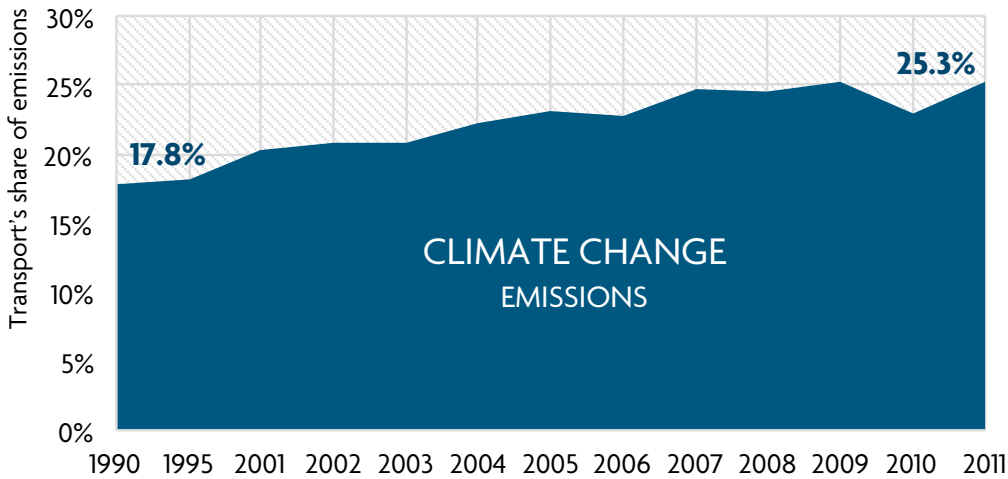|	
Buses	⇩ 0.8%
Cars	⇩ 2.7%
HGVs	⬆ 3.0%
LGVs	⬆ 0.6%

Figure 2.2a

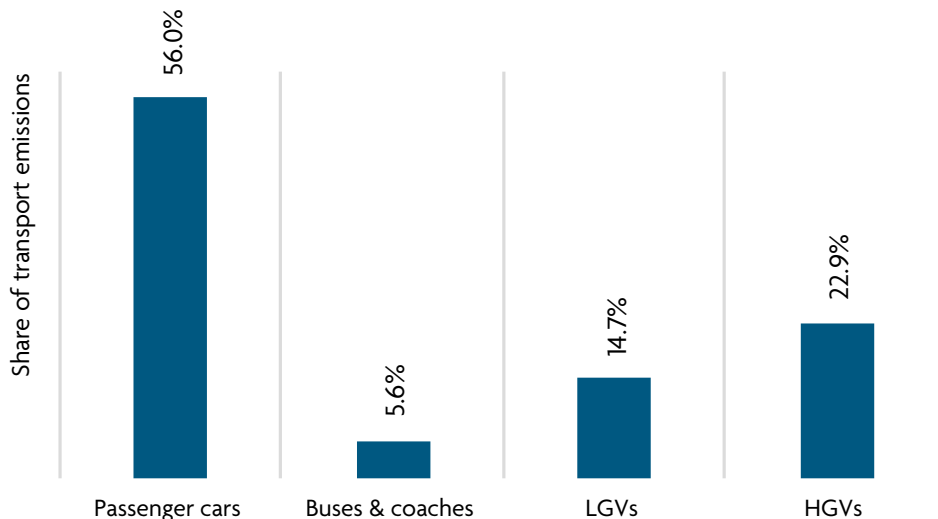**Transport % of total Scottish emissions**

Figure 2.2b

Climate change emissions
by transport mode for road transport 2011

SUSTAINABLE

2.3. GREENING THE VEHICLE FLEET

The number of low carbon vehicles in Scotland (LCVs – cars emitting less than 95 g/km of carbon) have increased substantially since our report two years ago; however at 29,493 vehicles they are still a tiny number of the total 2.4 million cars on the road (and are indistinguishable from zero in Figure 2.3b). The number of cars has increased by 96,596 since the end of 2011 which on its own is problematic. But disturbingly, the increase in the non-LCVs was more than five times that of cars emitting less than 95g/km.

Immediate progress in shifting Scotland's vehicle fleet to LCVs is necessary for early action to reduce emissions. Yet the Scottish Government failed to take the opportunity presented by the Procurement Reform Bill earlier this year to ensure that cars bought by the public sector are LCVs. There should be a requirement for the average fleet emissions of public agencies to be less than 95g/km as a way of driving uptake of LCVs. Scotland could be a leader in emissions from road transport, and contribute to our climate change goals, by shifting to a greener vehicle fleet.
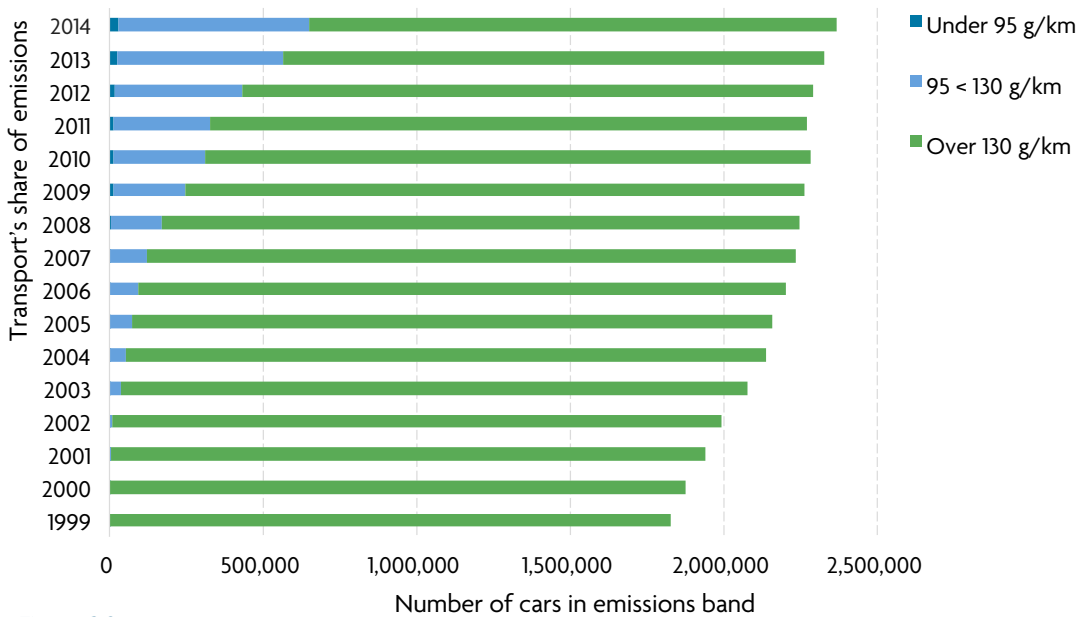
CHANGE SINCE
2012 REPORT

GO

Cars by emissions:

<95 g/km	↑	0.65%
95<130 g/km	↑	99%
>130 g/km	⇓	12%

Cars on the road:

↑ 4%

Figure 2.3a

Total licensed cars in Scotland
according to their emissions
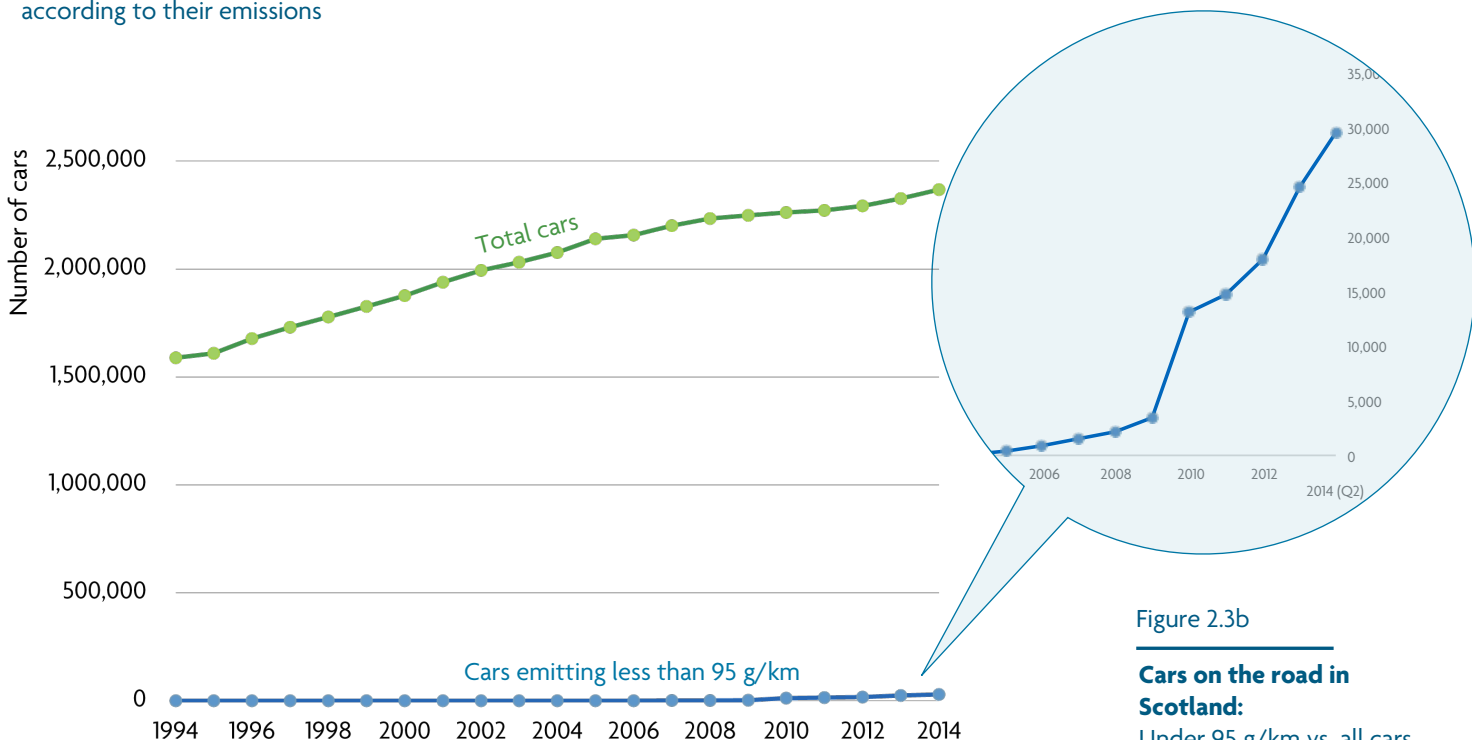
Figure 2.3b

Cars on the road in Scotland:
Under 95 g/km vs. all cars

SUSTAINABLE

2.4 SHARING TRANSPORT RESOURCES

Car clubs are now well entrenched in Scotland, in 24 locations across the country, as shown in Figure 2.4a, a doubling in numbers since 2012. These are a great way to enable the more efficient use of cars and road space, and their growing popularity is helping to shift the role of cars to one that is supportive instead of dominating. Bike sharing schemes in Scotland have also increased, with new ones launched in both Stirling and Glasgow.

However in spite of this there has been a continued rise in the number of cars on the road in Scotland (as shown in Figure 2.3b). More disturbingly, single car occupancy continues to rise and the average car occupancy in Scotland has fallen to barely more than 1.5 people (Figures 2.4b, 2.4c). This hugely inefficient use of scarce road space and contributes to road congestion. The downward trend in car occupancy means that more cars and more road space are needed to transport the same number of people over the same distance.
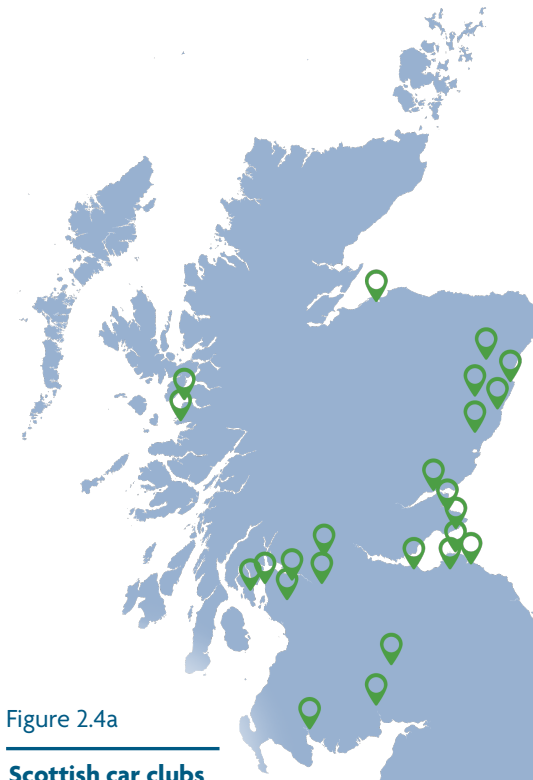
Figure 2.4a

Scottish car clubs

CHANGE SINCE 2012 REPORT

Single car occupancy:
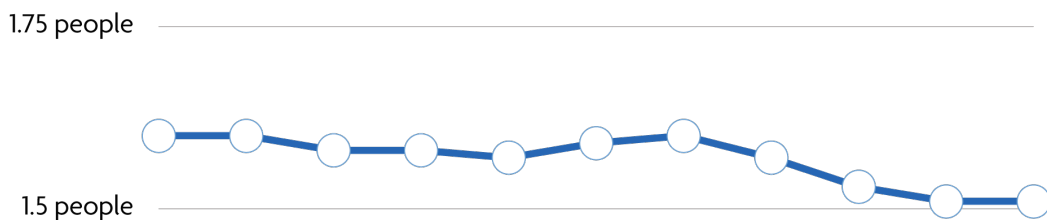
↑ 2%

Average car occupancy:

⇩ 1%

GO

Car clubs:

↑ 100%

Figure 2.4b

Average occupancy of cars in Scotland

Figure 2.4c

Percentage of cars with no passengers in Scotland

CIVILISED

3.1 CIVILISING THE STREETS

Streets that prioritise people and create social space provide health, well-being, and economic benefits.[1] It would therefore be useful to have statistics on the percentage of Scottish streets that are 'people-friendly' (*e.g.* through pedestrianisation, traffic calming, or home zones). Unfortunately no such metric appears to exist. We therefore present walking and cycling rates in Scotland and its four largest cities as a proxy. Commuter rates for walking and cycling are used as there is sufficient historical data. However, we have presented the data as linear trendlines to smooth out variations due to small sample sizes. In the future we hope to use data showing walking and cycling rates for all travel (rather than only commuting).[2]

The trend in commuter walking rates in Scotland over the last ten years is flat, with the rate at 13.2% in both 2001–02 and 2012–13. Fortunately the trend in the four largest cities is positive, with walking rates increasing since 1999–2000, reaching their highest in Edinburgh at 23.4% in 2012–13. These most recent figures show walking rates in Aberdeen and Edinburgh are comparable to most of the European cities studied for our *Civilising the Streets* report in 2010. However, those in Dundee, Glasgow, and Scotland as a whole are far too low.
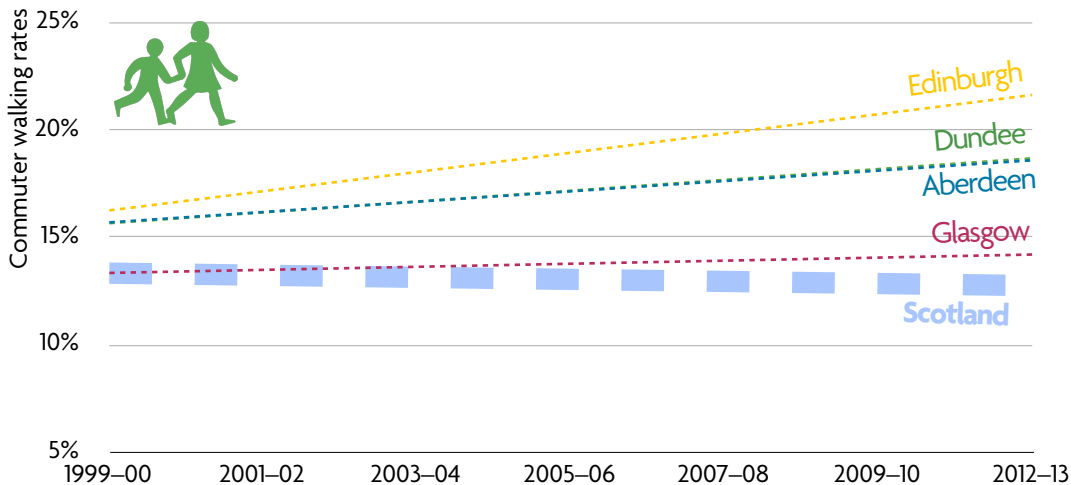

Figure 3.1a

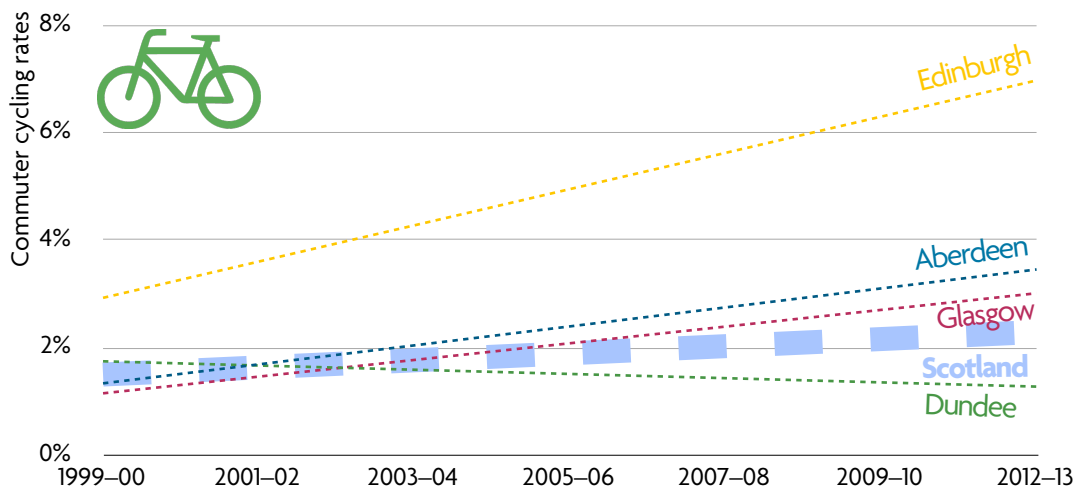**Commuter Walking Trends** in Scotland 1999–2013

Figure 3.1b

Commuter Cycling Trends in Scotland 1999–2013

GO

CHANGE SINCE 2012 REPORT

Commuter walking rate:

Scotland	↑	1%
Aberdeen	↑	7.3%
Dundee	⇩	2.1%
Edinburgh	↑	3.3%
Glasgow	↔	

Commuter cycling rate:

Scotland	↑	0.3%
Aberdeen	⇩	0.5%
Dundee	⇩	1.0%
Edinburgh	↑	0.6%
Glasgow	↑	0.7%

	🚶	🚲
Aberdeen	21.3%	3.0%
Dundee	16.5%	1.0%
Edinburgh	23.4%	6.6%
Glasgow	14.0%	2.9%
Scotland	13.2%	2.3%

Figure 3.1c

Commuter rates in 2012–2013

[1] For instance, a recent study found that walking and cycling projects can increase retail sales by up 30%. Living Streets (2013) – *The pedestrian pound: The business case for better streets and places* <http://www.livingstreets.org.uk/pedestrianpound>

[2] Transport Scotland only started publishing data on the mode share for all personal travel in 2011 so we did not have enough historical data for this report.

CIVILISED

3.2 IMPROVING PUBLIC TRANSPORT

Whether a service runs (reliability) and whether it is on time (punctuality) are often identified as the most important of several factors that influence whether people use and enjoy public transport. Punctuality on both bus and rail has held steady since our *Warning Signs 2012* report (Figures 3.2a & 3.2b). However, while Passenger Focus continues to represent rail users in Scotland, bus users do not benefit from their research and advocacy. We continue to believe that Passenger Focus's bus representation remit should be extended to cover buses (as in England). The large number of bus operators result in a wide variety of quality standards. Robust representation of user needs will help to raise standards where needed.

The upgrade of Scotland's buses to accessible and low-floor vehicles continues with an increase to 84% of the fleet since our last report. However, we need to see the remaining 16% upgraded as well so that buses across Scotland serve all customers. It is also important that local authorities ensure bus stops remain clear of parked vehicles so that low-floor buses can pull up to the stop properly.

Finally, there has been almost no progress on a flexible smartcard for public transport users in Scotland. While several electronic tickets exists, they are generally limited to a specific operator and only allow the traveller to load specific tickets (such as a season ticket or several single tickets). A true smartcard should work across multiple operators in a region and allow a cash balance to be loaded so that the cost of tickets can be deducted on demand, instead of needing to decide which tickets to purchase in advance. Such a smartcard will also limit the balance deduction to the cost of a day ticket so that no matter how many journeys are taken in a day, the smartcard traveller never spends more than the cost of a day ticket. The only true smartcard in Scotland is the one for the Glasgow Subway, and we would hope that this is expanded to cover the entire SPT travel area.

93% ON TIME

- On time
- 5–10 minute delay
- 10–20 minute delay
- Over 20 minute delay
- Cancelled

Figure 3.2a

Rail punctuality

89% ON TIME

- Delayed
- On-time

Figure 3.2b

Bus punctuality

CHANGE SINCE 2012 REPORT

Bus punctuality:
↔

Rail punctuality:
⇩ 1%

GO

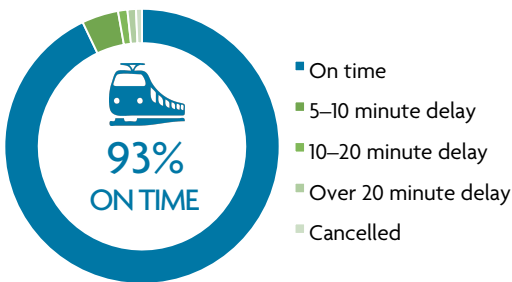Accessible and low-floor buses:
↑ 2%

Smartcard schemes:
↑ from 0 to 1

Figure 3.2c

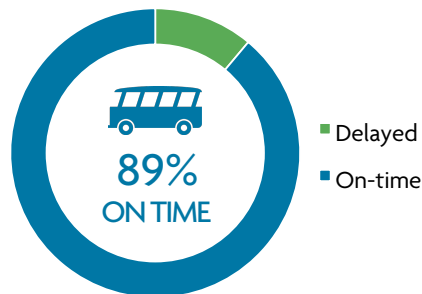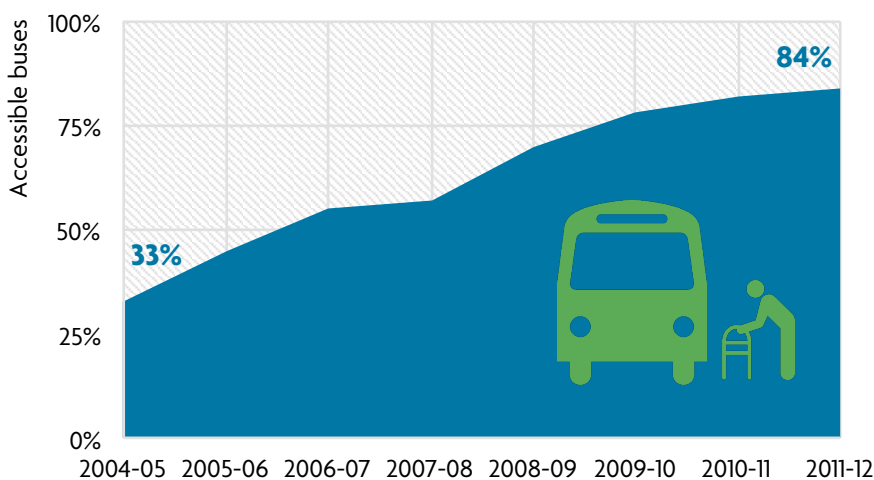**Accessible and low-floor buses**
in Scotland

2012   2014

Figure 3.2d

Smartcard schemes in Scotland
which can carry a cash balance and impose a daily fare cap

CIVILISED

3.3 CLEANING THE AIR

The toxic air pollutants generated by fossil-fuel vehicles have a significant impact on public health. Small particulate matter ($PM_{2.5}$) and nitrogen dioxide (NO_2) can cause respiratory problems and are linked to premature deaths. Although transport is not the only source of this pollution, cars and other vehicles are mostly responsible and the leading domestic contributor. Therefore meaningful progress on improving air quality cannot be made without a significant shift to sustainable transport and lowering the per capita pollutant emissions resulting from transport.

As can be seen in Figure 3.3a, over two thousand deaths were attributed just to $PM_{2.5}$ emissions in Scotland in 2010. Even though the figure excludes the impact of NO_2, it is more than an order of magnitude greater than the 189 road fatalities in the same year.[1] Despite the significant loss of life due to air pollution, there are still no Low Emissions Zones (LEZs) in Scotland. Implementation of LEZs should be a priority for local authorities and we hope that the Scottish Government will also consider what they can do to address this public health issue.

There is a lack of useful data for this indicator, and we would like to see further statistics published in this important area. There would be value in regularly published figures on deaths due to anthropogenic $PM_{2.5}$ and NO_2.[2] Furthermore, as well as showing absolute health impacts from transport we would also like to be able to evaluate the impacts from a social justice perspective (for instance, the pollution rates correlated with income areas).
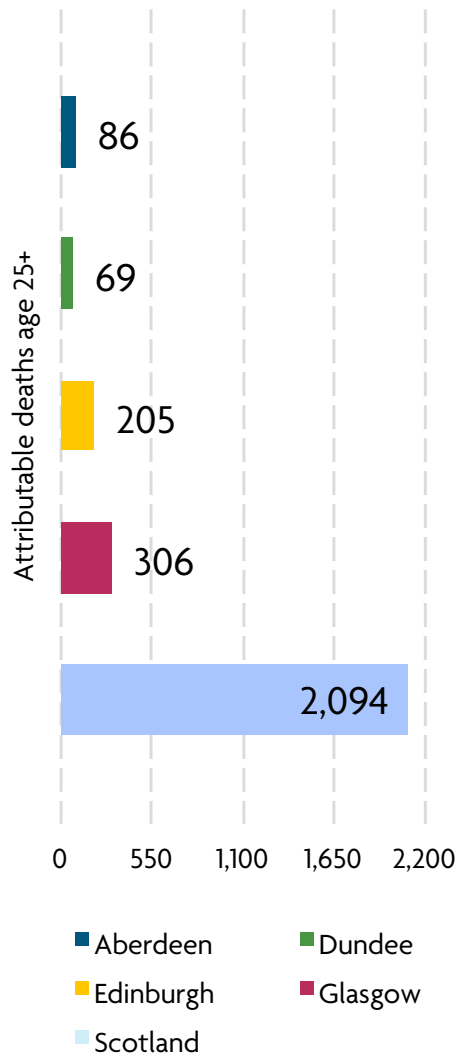
Figure 3.3a

Deaths attributable to anthropogenic PM2.5 air pollution in 2010

Legend:
- Aberdeen: 86
- Dundee: 69
- Edinburgh: 205
- Glasgow: 306
- Scotland: 2,094

Figure 3.3b

Low Emission Zones in Scotland

(None 2012 — Still None 2014)

[1] Transport Scotland (2014). *Key Reported Road Casualties Scotland 2013*. Edinburgh: 25 June 2014. <http://www.transportscotland.gov.uk/report/j326395-00.htm>

[2] The data for *Figure 3.2a* come from a one-off report by Public Health England. It should be possible to use their methods to calculate future statistics on deaths due to $PM_{2.5}$ but we are not aware of any plans by the Scottish Government to do so.

PRODUCTIVE

4.1 INVESTING SUSTAINABLY

There has been no significant move towards investing in walking and cycling (also see indicator 3.1, above). The Scottish Government has a 'vision' that 10% of all trips should be by bike in 2020, and a further vision for most local trips to be by active travel in 2030. Government active travel funding should aim realistically to fulfill these visions, following the Association of Directors of Public Health report calling for 10% of all transport budgets to be allocated to active travel.

Meanwhile, while substantial investments are being made in Scotland's rail network, these are dwarfed by the vast sums of money committed to building new roads. While expensive plans to dual the A9 and A96 are firmly in place, there remains no concrete plans for upgrading the parallel rail routes. Our *Inter-City Express* campaign has set out a clear programme of upgrades that could be implemented across the Scottish rail network to improve journey times, reliability, and connections.

Furthermore, the split in the Government's expenditure between road maintenance and new road construction is extremely concerning. Historically, maintaining the existing, extensive, road network has received the majority of funds, as it should. Keeping the roads in a good state of repair ensures the network provides the maximum economic benefit at the lowest environmental cost. However, as Figure 4.1a shows, recent years have seen a significant increase in spending on building new roads and a reduction in maintenance. Since *Warning Signs 2012*, spending on new roads has increased by 39% while spending on maintenance has decreased 30%. And compared to ten years ago, spending on building roads has increased an astonishing 448%. The Government should focus its budget on maintaining the existing road network in excellent condition instead of encouraging more driving by building new roads.

Making road maintenance the focus of the Government's roads policy would have a greater impact in supporting Scottish companies and public bodies. Tackling the road maintenance backlog rather than building new roads would (i) provide employment for the Scottish construction industry and local authorities' Direct Labour Organisations; (ii) support Scottish local authority finances rather than the profits of foreign construction companies; (iii) spread investment across Scotland; (iv) would not generate new road traffic and hence would make a contribution to reducing climate emissions; and (v) would benefit pedestrians, cyclists and bus users as well as private vehicle users.

CHANGE SINCE
2012 REPORT

Spending on
maintaining roads:

⇩ 30%

Spending on
new roads:

⬆ 39%
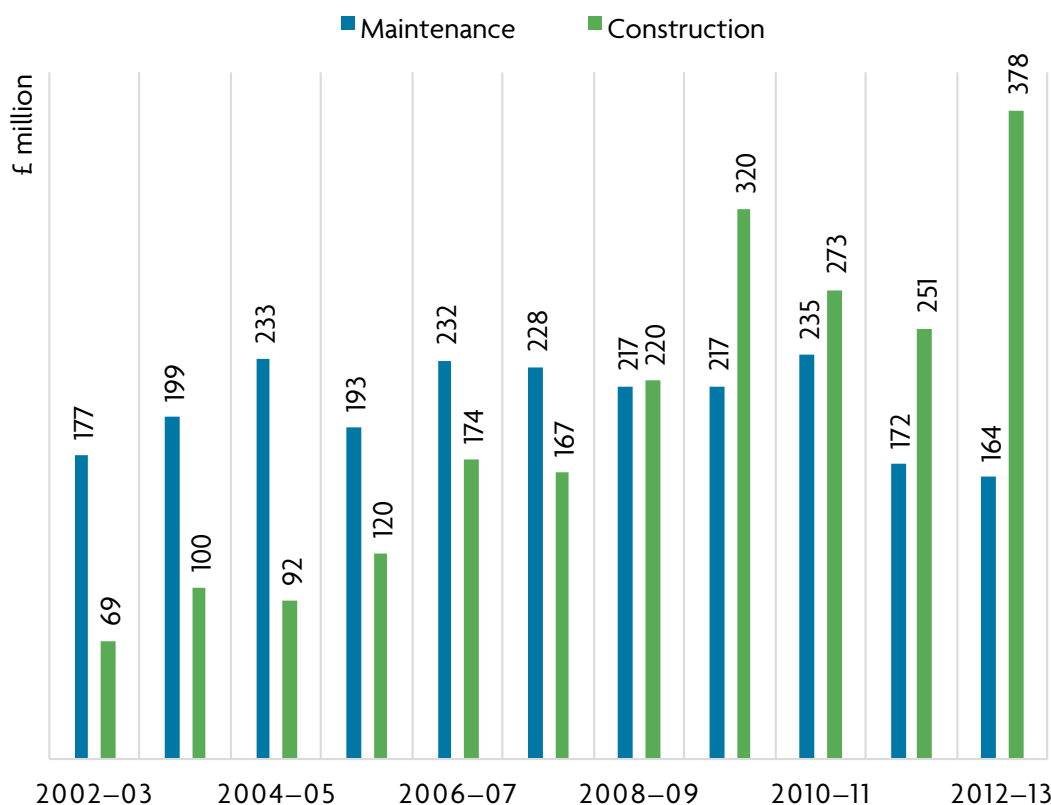
Figure 4.1a

Scottish Government expenditure on motorways and trunk roads
maintenance/ construction comparison

£ million

■ Maintenance ■ Construction

2002–03: 177, 69
2004–05: 199, 100 / 233, 92
2006–07: 193, 120 / 232, 174
2008–09: 228, 167 / 217, 220
2010–11: 217, 320 / 235, 273
2012–13: 172, 251 / 164, 378

PRODUCTIVE

4.2 GETTING THE PRICES RIGHT

Despite frequent protests from the motoring lobby that motorists are being priced off the road, it is in fact public transport users who have seen massive real term fare increases over the past fifteen years. While motoring costs have fallen in real terms since 1999 – down by 6% – rail users have seen real term price increases of 18% while bus users have had to absorb a 26% increase. Given that those in the lowest income brackets rely disproportionately on public transport, these price trends are socially regressive, as well as being environmentally unsustainable. Public transport should be less expensive than taking the car.

When we published *Warning Signs 2012*, motoring costs had risen for the first time since 1999. However in the last year for which data is available, costs have dropped again. While motoring costs in 2012 were 1.1% higher than in 2010, bus and rail fares increased more than three times as much. We need to see road traffic demand management measures implemented to ensure motoring is priced appropriately and to reduce congestion on the roads. If anything we've seen the opposite in recent years, with the abolition of bridge tolls and hospital parking charges. Instead, we need the introduction of measures such as the successful workplace parking levy in Nottingham. This would cut congestion, and its economic costs, by reducing unnecessary car commuting. Focus on measures such as this will also improve car occupancy rates (Figure 2.4b) by reducing the large number of single person cars (Figure 2.4c).
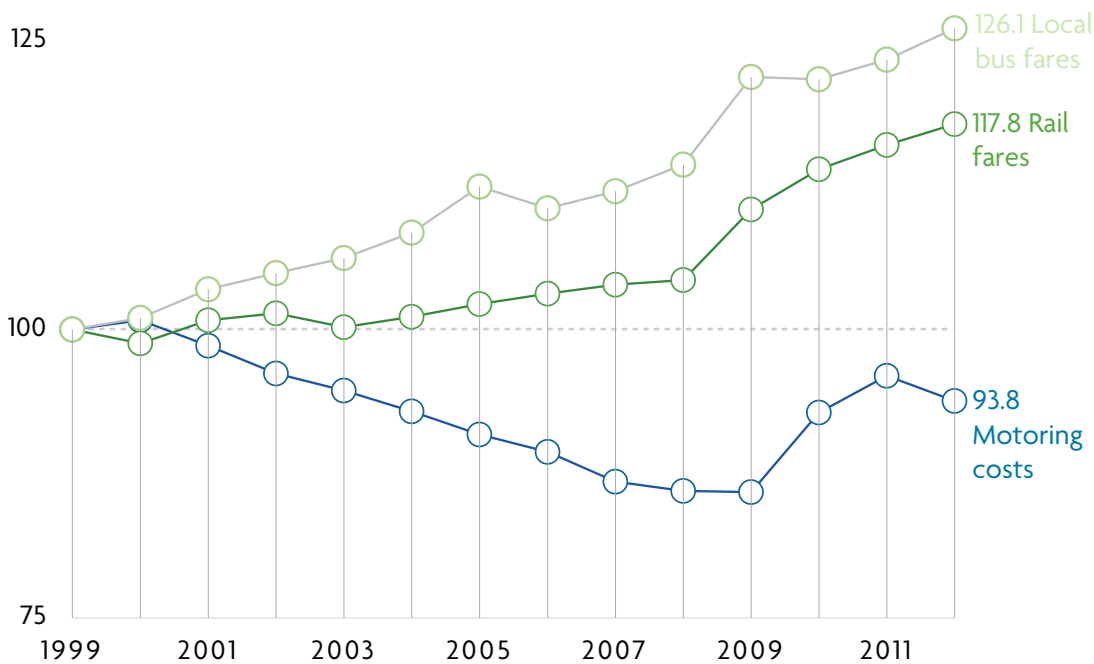
CHANGE SINCE
2012 REPORT

Motoring cost:
⬆ 1.1%

Rail fares:
⬆ 3.4%

Bus fares:
⬆ 3.6%

126.1 Local bus fares

117.8 Rail fares

93.8 Motoring costs

125

100

75

1999   2001   2003   2005   2007   2009   2011

Figure 4.2a

Price indices for transport mode, constant prices (1999 = 100) GB data

PRODUCTIVE

4.3 MAKING THE POLLUTER PAY

It is well known that transport imposes a range of external costs such as environmental (e.g. climate change, air and noise pollution), social (e.g. community severance, road crashes), or economic (e.g. congestion, road damage). However while research has previously been carried out into quantifying the external costs, no figures are produced on a regular basis to track these costs and whether they are being adequately covered by charges to users. These costs are not theoretical – they are paid by everyone in Scotland, whether they travel or not. But if they are not included in the cost of transport it means transport users are not making their decisions based on accurate information.

The Technical University of Dresden conducted a comprehensive study of external costs in EU countries and found that in the UK alone, cars incurred external costs of £47 billion in 2008. They were able to determine that each car costs society £1,590/year mainly due to accidents and climate change (but also air pollution and noise).[1] Even though 29% of Scottish households don't have a car, this results in every resident in Scotland paying £707 per year (through their taxes) to cover these external costs. As the European Parliamentary Research Service summarise:

> "The study's message is: Car use is expensive. There are 'hidden external costs'. From the fact that these costs are 'hidden', road transport appears cheap to users, where in fact it is not. Therefore the choices transport users make are ill informed and based on an incorrectly 'cheap' perception of car use. By making these costs known and 'internalising them', transport choices can become more rational and self-regulating market mechanisms will be allowed to apply themselves. This will ultimately make road transport use cheaper, as external costs will decrease!"[2]

Looking at Scotland specifically, the 2.4 million cars are costing taxpayers £3.8 billion per year. In 2013 the UK Government revenues raised £32.8 billion from Fuel Duty and Vehicle Excise Duty, hence based on population the share attributed to Scotland may be estimated as £2.6 billion. Motorists are clearly not paying their costs even before road construction and maintenance are factored in. Transport Scotland needs to start including cost externalities of all transport modes in their annual statistics so that policy decisions can be made based on the true costs to society.
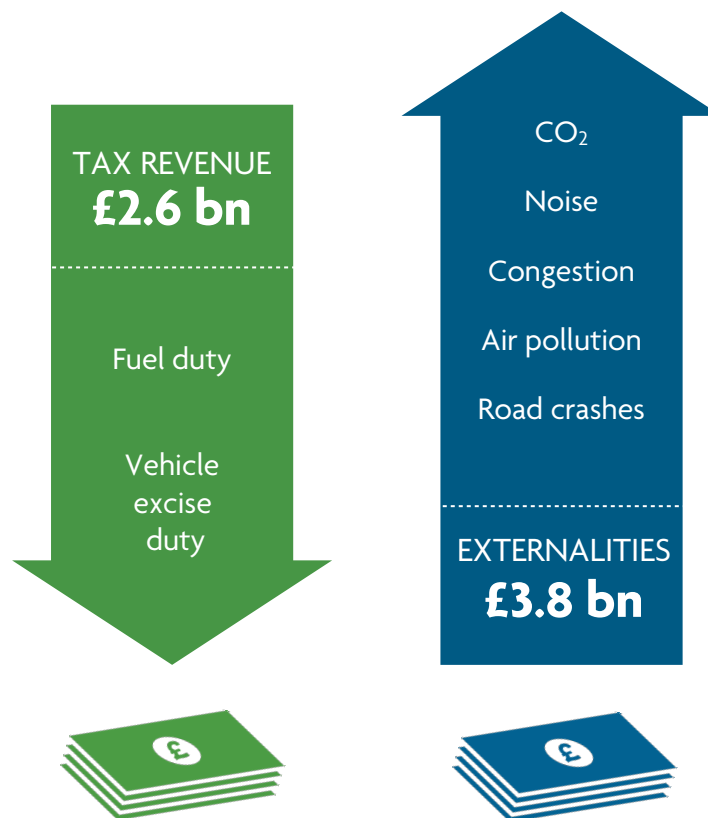

CHANGE SINCE 2012 REPORT

No data available

TAX REVENUE
£2.6 bn

Fuel duty

Vehicle excise duty

CO_2

Noise

Congestion

Air pollution

Road crashes

EXTERNALITIES
£3.8 bn

Figure 4.3a

True cost of transport

[1] Becker, U., Becker, T., and Gerlach, J. (2012). *The True Costs of Automobility: External Costs of Cars Overview on existing estimates in EU-27*. Dresden: Technical University of Dresden <http://www.greens-efa.eu/the-true-costs-of-automobility-8787.html>
[2] <http://epthinktank.eu/2012/12/12/a-fair-deal-for-cars-what-do-cars-really-cost-us-who-pays-for-those-costs/>

RECOMMENDATIONS

RECOMMENDATIONS

1.1. MOVING TO SUSTAINABLE MODES

Scottish Ministers should instruct Public Bodies to put in place robust travel policies that rule out air travel, except in exceptional circumstances, for travel between the Scottish Central Belt and London. For these trips, rail emits around a quarter of the emissions from equivalent journeys by air; it also offers significant productivity benefits as it offers a high-quality environment for working while on the move. This would build upon the positive trend observed regarding the switch from air to rail for travel between Scotland and the rest of the UK.

1.2 REDUCING TRAFFIC

Transport Scotland should revise its out-of-date forecasts for road traffic growth. Scottish Ministers are still making investment decisions based upon erroneous assumptions that road traffic growth is projected to rise significantly. Evidence from the past decade clearly indicates that, at least on the trunk road network, traffic levels are no longer rising. Ministers need to take account of the evident stabilisation of road traffic levels in making its investment decisions.

2.1. REDUCING OIL DEPENDENCY

Scottish Ministers should set out a detailed programme for the electrification and dualling of the rail routes from the Central Belt to Aberdeen and Inverness. These investments were promised by the Scottish Government in December 2008 but there remains, as yet, no firm programme or timescales for this work to be carried out. In marked contrast, the Government has fast-tracked dualling schemes for the A9 and A96 roads at a combined price tag of £6 billion.

2.2 TACKLING CLIMATE CHANGE

Scottish Ministers should instruct all Public Bodies to prepare a Travel Plan setting out how they will deliver emissions reductions, a power that Ministers hold but are failing to exercise. Our research has found that over 60% of Public Bodies have no plans for reducing their travel, despite the low-cost, high emissions-saving offered by travel planning.[1] If Ministers are not prepared to instruct those organisations whose budgets they control to take action to cut emissions, it will be difficult for them to meet the national climate targets that they are already failing upon.

2.3. GREENING THE VEHICLE FLEET

Public Bodies should be required to have an average fleet emissions of less than 95g/km by 2020 through both procurement of lower-emission vehicles and better maintenance of existing fleet vehicles in order to maximise their fuel efficiency. The Scottish Public Sector needs to provide a role model in the uptake of low emission vehicles. While there is evidence of a move to lower-emission vehicles across the Scottish vehicle fleet, it is presumed that this is largely as a result of European law rather than domestic action in Scotland.

2.4 SHARING TRANSPORT RESOURCES

Local Authorities and Regional Transport Partnerships, with the active assistance of Transport Scotland, should continue work to establish car clubs and bike-sharing operations in every large town and city. Work should concentrate on areas with high population density which bring the greatest benefits in terms of reduced congestion and carbon savings, and around railway stations and other transport hubs where shared cars/bikes can be used to complete the last leg of a journey.

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[1] Transform Scotland (2013). *Doing their Duty?: Is the Scottish public sector helping deliver sustainable transport?* Edinburgh: November 2013. <http://www.transformscotland.org.uk/GetFile.aspx?ItemId=703>

RECOMMENDATIONS

GO 3.1 CIVILISING THE STREETS

Local Authorities must invest in walking and cycling from within their own transport budgets. Research by Spokes has found that one-third of Local Authorities invest none of their own transport capital in cycling. Local Authorities should follow the leadership example provided by The City of Edinburgh Council, who over recent years have committed at least 5% of their transport budgets to cycling, increasing 1% per year. To incentivise investment, the Scottish Government should prioritise its own cycle investment into match-funding those Local Authorities who are prepared to invest in active travel from within their own transport budgets.

3.2 IMPROVING PUBLIC TRANSPORT

Scottish Ministers need to set out a firm timetable for delivery of a Scotland-wide smartcard that can be used on all public transport across Scotland. Since Nicola Sturgeon's October 2012 promise of a 'Saltire Card', there has been no progress towards a national smart ticketing scheme, with the Glasgow Subway having the only genuine smartcard in Scotland. London has enjoyed its Oystercard for over a decade, the Netherlands have moved to an entirely 'smart' system, yet progress by the Scottish Government towards delivering a national smart, integrated ticketing scheme has stalled.

3.3 CLEANING THE AIR

Local Authorities should establish Low Emission Zones (LEZs) in areas with long-standing air pollution problems in order to take action to stop human health being harmed and reduce deaths. The Scottish Government, as part of its forthcoming Low Emissions Strategy, should provide financial incentives to Local Authorities by assisting with the setup costs of LEZs.

4.1 INVESTING SUSTAINABLY

Scottish Ministers should redirect their expenditure plans for roads to tackle the £2.25 billion road maintenance backlog. This would benefit all road users and have a greater impact in supporting the Scottish economy. It would also attract huge public support: our research has found that the vast majority of Scots want the Scottish Government to prioritise the repair of the existing road network over building new roads. When asked the question "Do you think the Scottish Government should give priority to fixing the existing road network before building new roads?", 84% of respondents agreed, with only 7% disagreeing.[1]

4.2 GETTING THE PRICES RIGHT

Scottish Ministers should instruct Transport Scotland to work in conjunction with the relevant local authorities and RTPs to develop road traffic demand management options for Scotland's four major cities (e.g. workplace parking levies, sharing lanes, road pricing) with funds raised to be reinvested in local transport improvements. This would not only reduce transport externalities, but would improve public health and quality of like in our cities, provide economic benefits, help contribute to national climate targets, and raise revenue for infrastructure improvements.

4.3 MAKING THE POLLUTER PAY

Transport Scotland needs to start including cost externalities of all transport modes in their annual statistics so that policy decisions can be made based on the true costs to society.

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[1] Transform Scotland (2014). *Vast Majority Want Scottish Government To Prioritise Repair Of Existing Roads Over Building*. Edinburgh: 9 June 2014. <http://www.transformscotland.org.uk/vast-majority-want-scottish-government-to-prioritise-repair-of-existing-roads-over-building-.aspx>

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Data Used in Figures

1.1 Moving to sustainable modes
Figure 1.1a: Transport Scotland (2014c), Table SUM1 (p18)
Figure 1.1b: Transport Scotland (2014a), Table 4
Figure 1.1c: Transport Scotland (2014c), Table S4 (p53)

1.2 Reducing traffic
Figures 1.2a, 1.2b: Transport Scotland (2014a), Table 1

2.1 Reducing oil dependency
Figure 2.1a: Transport Scotland responses to FOI requests

2.2 Tackling climate change
Figures 2.2a, 2.2b: Transport Scotland (2014b), Table 13.2 (p279)

2.3 Greening the vehicle fleet
Figures 2.3a, 2.3b: Transport Scotland response to FOI request

2.4 Sharing transport resources
Figure 2.4a: Car club locations provided by CarPlus
Figures 2.4b, 2.4c: Transport Scotland (2014c), Table TD9 (p46)

3.1 Civilising the streets
Figures 3.1a, 3.1b, 3.1b: Transport Scotland (2001–2014), Table 1

3.2 Improving public transport
Figure 3.2a: Transport Scotland (2014b), Table 7.10 (p157)
Figure 3.2b: Transport Scotland (2013b), Table 11 (p21)
Figure 3.2c: Transport Scotland (2013a), Table 13 (p11)
Figure 3.2d: Transform Scotland internal research

3.3 Cleaning the air
Figure 3.3a: Public Health England CRCE (2014), Table 3 (p20)
Figure 3.3b: Transform Scotland internal research

4.1 Investing sustainably
Figure 4.1a: Transport Scotland (2014b), Table 10.1 (p221)

4.2 Getting the prices right
Figure 4.2a: Transport Scotland (2013a), Table 7 (p8)

4.3 Making the polluter pay
Numbers in the text and Figure 4.3a calculated from:
Becker, U. et al. (2012), Table 4 (p34) & Figure 13 (p37)
Exchange rate from Oanda for 1 December 2014
National Records of Scotland (2014), Table 1 (p30)
Office for National Statistics (2014), Chapter 11
Transport Scotland (2014b), Table 1.18 (p60)
Transport Scotland response to FOI request

About Transform Scotland

Transform Scotland campaigns for a society where everyone can have their travel needs met within the limits of a transport system that is environmentally sustainable, socially inclusive and economically responsible.

We are the only organisation in Scotland making the case for sustainable transport across all modes. We have a membership of over 60 organisations across Scotland, including public transport operators, local authorities and sustainable transport voluntary organisations. Transform Scotland is a registered charity, politically independent, science-based and strictly not-for-profit.

Transform Scotland Limited is a registered Scottish charity (charity number SC041516). Our Board of Directors is elected by our member organisations in accordance with the rules set out in our Articles of Association.

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