Scottish Executive: an overview of the performance of transport in Scotland

Prepared for the Auditor General for Scotland

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AUDIT SCOTLAND

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Summary

The Executive has performed well against most of its transport targets but some do not provide a full picture of whether objectives are being achieved.

Introduction

1. This report provides an overview of the performance of transport in Scotland. It is the first of its kind to look at an area of Scottish Executive policy in the round. As such, it is intended to contribute towards the development of public performance reporting. Audit Scotland, with input from the Scottish Executive, intends to review the lessons learned from this pilot to determine how similar exercises on other policy areas may be developed in the future. Although the report focuses on the Scottish Executive (the Executive),[1] most transport activity is delivered by third parties with financial support from the Executive. Where appropriate, therefore, we also refer to the activities and performance of other organisations in delivering transport infrastructure and services.

2. Transport is an area of topical, public and parliamentary importance. The Executive's expenditure on transport amounted to £1.5 billion in 2005/06 and it is expected to rise to £2.3 billion in 2007/08. Our transport system can help facilitate economic growth by allowing people to get to work and by ensuring the swift transport of goods to market. It can also help promote social inclusion by allowing people to access schools, shops and services and take part in social and leisure activities.

3. But the provision of transport infrastructure also brings with it risks and problems. In 2005, there were 32 per cent more cars on Scotland's roads than ten years earlier, and the latest forecasts estimate that traffic will grow by 27 per cent between 2004 and 2021. More traffic means more congestion, slowing down our cities and trunk roads. Pollution from transport leads to serious environmental and health problems. Transport accidents are responsible for a large number of fatalities each year, and the higher use of motorised transport has led to a decline in health-improving activities such as walking and cycling.

4. The Executive's vision for transport[2] is:

'An accessible Scotland with safe, integrated and reliable transport that supports economic growth, provides opportunities for all and is easy to use; a transport system that meets everyone's needs, respects our environment and contributes to health; services recognised internationally for quality, technology and innovation, and for effective and well-maintained networks; a culture where fewer short journeys are made by car, where we favour public transport, walking and cycling because they are safe and sustainable, where transport providers and planners respond to the changing needs of businesses, communities and users, and where one ticket will get you anywhere.'

5. This report looks at progress towards this vision. The report is organised into six parts:

- Part 1 briefly outlines how transport in Scotland is organised and funded.
- Part 2 looks at the Executive's transport objectives and how it measures performance against these objectives.
- Part 3 examines the Executive's contribution to economic growth by investing in transport.
- Part 4 looks at what the Executive is doing to promote social inclusion by improving access to public transport.
- Part 5 reviews the impact of transport on the environment and what the Executive is doing to protect the environment and improve health through more sustainable transport.
- Part 6 looks at the Executive's progress in promoting road safety and reducing accidents.

Key findings

Organisation, objectives and performance measurement

6. The Scottish Executive Enterprise, Transport and Lifelong Learning Department (the Department) has overall responsibility for devolved transport matters within the Executive, but it relies on a wide variety of public and private organisations to deliver transport infrastructure and services. The remit of its new executive agency, Transport Scotland, established in January 2006, is to oversee delivery of the Executive's major transport commitments and to implement parts of a National Transport Strategy for Scotland which is expected to be published toward the end of 2006. Local authorities are required to work together in newly established Regional Transport Partnerships (RTPs), which have a key role to develop regional transport strategies by April 2007 which complement the National Transport Strategy.

7. The Executive has established clear objectives for transport and developed a range of performance measures to monitor progress against these objectives. The

1 Throughout this report, the Scottish Executive is referred to when discussing transport policies or objectives. The Enterprise, Transport and Lifelong Learning Department (ETLLD) is referred to when discussing transport funding or monitoring of performance.
2 *Scotland's Transport Future: the Transport White Paper*, Scottish Executive, June 2004.

Executive published transport objectives and targets in both the 2002 and 2004 Spending Reviews. The achievement of national targets, such as increasing the number of local bus passenger journeys, may mask wide differences between local areas. Some targets are proxy measures and do not provide a full picture of whether the associated objectives are being achieved, and other targets only provide measures of activity rather than the outcome of activity in achieving the objective. For some measures, the later targets either differ from the earlier targets (for example, the performance of lifeline ferries) or have been excluded altogether (for example, travel information services). One objective, to improve transport integration by making journey planning and ticketing easier and to ensure smoother connections between different forms of transport, has no performance measures with which to assess progress against the objective.

On contributing to economic growth

8. Road congestion is largely a localised problem on most of Scotland's trunk roads. There are little available data on the level of congestion on local authority roads and attempts to get local authorities to develop plans and targets to reduce road traffic have not been overly successful. The Department is now considering whether its traffic stabilisation aspirations are achievable.

9. The Department, and since its creation, Transport Scotland, is responsible for maintaining the trunk road network. There has been mixed progress against targets to reduce the proportion of the trunk road network requiring close monitoring, and the proportion of the sampled trunk road network which requires close monitoring has increased in recent years. An estimated £325 million is required to bring the trunk road network up to an acceptable standard (defined in the Design Manual for Roads and Bridges as being above the threshold requiring close monitoring). Local authorities are responsible for non-trunk roads. The condition of the local authority road network is variable and around £1.5 billion may be needed to bring it up to standard.

10. The Executive considers that increasing the number of rail passenger journeys contributes to promoting economic growth. The Executive looks set to achieve targets to increase the numbers of rail passengers on ScotRail services.

11. The Executive considers that investment in new road and rail projects can be a key factor in promoting economic growth. It has developed a robust system for appraising transport proposals. Most infrastructure projects require significant planning and development before construction begins. A number of factors, such as inflation, increases in land and property values, and changes in design result in many projects being completed later than originally planned and at a higher cost than initially estimated. Once construction begins, however, most projects are delivered in line with tendered cost estimates.

On promoting social inclusion

12. Public transport has an important part to play in removing barriers to social inclusion. Use of bus services is increasing in line with targets and user satisfaction is high. The new national concessionary travel scheme, introduced in April 2006, is proving popular with older and disabled people. The cost of the new scheme is capped, and there is a risk that higher than expected usage will result in the reimbursement rate to bus operators being reduced. The introduction of new technology to reduce the opportunity for fraud and irregularity has been delayed until the end of 2007.

13. The Department has targeted funding at the transport problems faced by people in rural areas by supporting community transport, rural petrol stations and rural buses. It also subsidises 'lifeline' air and ferry services for the Highlands and Islands area to allow remote communities to maintain social and economic links with other areas in order to remain viable. The numbers of passengers using these services has increased in recent years.

On protecting the environment and improving health

14. In 2003, the transport sector accounted for 17 per cent of all Scottish greenhouse gas emissions. The Department is taking steps to reduce traffic emissions through a range of measures including grants to encourage the transfer of freight from road to rail or water, encouraging walking and cycling and supporting the development of fuel-efficient driving techniques and cleaner vehicles and fuels. It has reported achieving targets for removing lorry mileage from Scotland's roads but the mileage removed amounts to less than two per cent of total heavy goods vehicle traffic and HGV traffic volumes continue to grow.

15. Transport is also a major contributor to six of the ambient air quality pollutants. Air quality in Scotland is generally good but there are hot spots of poorer quality. Local authorities have declared ten Air Quality Management Areas in Scotland and are developing action plans where targets for air quality have not been met.

On promoting road safety

16. Since 1990, there has been a decrease in the number of road accidents in which someone was killed or seriously injured. The Department's targets to reduce the number of serious and fatal road accident casualties have been achieved ahead of schedule. Road Safety Scotland's publicity campaigns and other initiatives to improve road safety awareness are targeted at the main causes of accidents and groups at particular risk of being involved in accidents.

Conclusions and recommendations

17. The Executive faces a significant challenge in developing a sustainable transport network which strikes an appropriate balance between maximising the benefits of transport's contribution to the promotion of economic growth and social inclusion, and minimising the problems of congestion and environmental damage. A key factor in striking this balance is the provision of an integrated transport system which provides genuine choice between the private car and alternative forms of transport such as the bus or train.

18. The Executive has performed well against most of its transport targets but some do not provide a full picture of whether objectives are being achieved and it is not clear which performance measures have priority. The Executive is committed to reviewing its suite of performance measures as part of the National Transport Strategy, to allow progress against the Strategy to be monitored and reported. It is particularly important that the Executive develops performance measures which enable progress to be assessed against its objective to improve transport integration.

19. The Executive expects that the National Transport Strategy will guide transport policy formulation and investment over the next 20 years. Its success is, to some extent, dependent on RTPs and the development of regional transport strategies which complement and support the national strategy.

20. The Executive is making significant investment in transport infrastructure to help achieve its transport objectives. There is scope to improve the public reporting of transport achievements in general and the progress of road and rail projects in particular. It is also important that the Department continues to develop its approach to the evaluation of completed projects to determine whether expected benefits are being achieved.

Part 1. How transport in Scotland is organised and funded

Introduction

1.1 This part of the report describes the roles and responsibilities of those involved in the provision of transport in Scotland. It also gives details of the Executive's transport expenditure.

The Scottish Executive is responsible for overall transport policy: it relies on a wide range of bodies for its delivery

1.2 Transport in Scotland is largely a devolved matter.[3] The Department is responsible for overall transport policy and strategy covering roads, ferries, public transport services such as railways and buses, some aspects of air services, ports and freight. The Department is expected to publish the Executive's National Transport Strategy for Scotland in autumn 2006.

1.3 Transport Scotland was created as an executive agency of the Department in January 2006. Its remit is to oversee delivery of the Executive's major transport projects and to implement parts of the National Transport Strategy by:

- delivering major infrastructure projects (including new trunk roads and railway lines)
- overseeing the maintenance of Scotland's trunk roads via operating companies acting under contract
- overseeing the passenger rail service by letting and managing the ScotRail franchise
- funding and specifying where resources are targeted by Network Rail on track maintenance and investment in Scotland
- delivering national concessionary travel schemes.

1.4 The Department works with others to deliver transport policy objectives. It provides guidance and funding to a range of organisations, including:

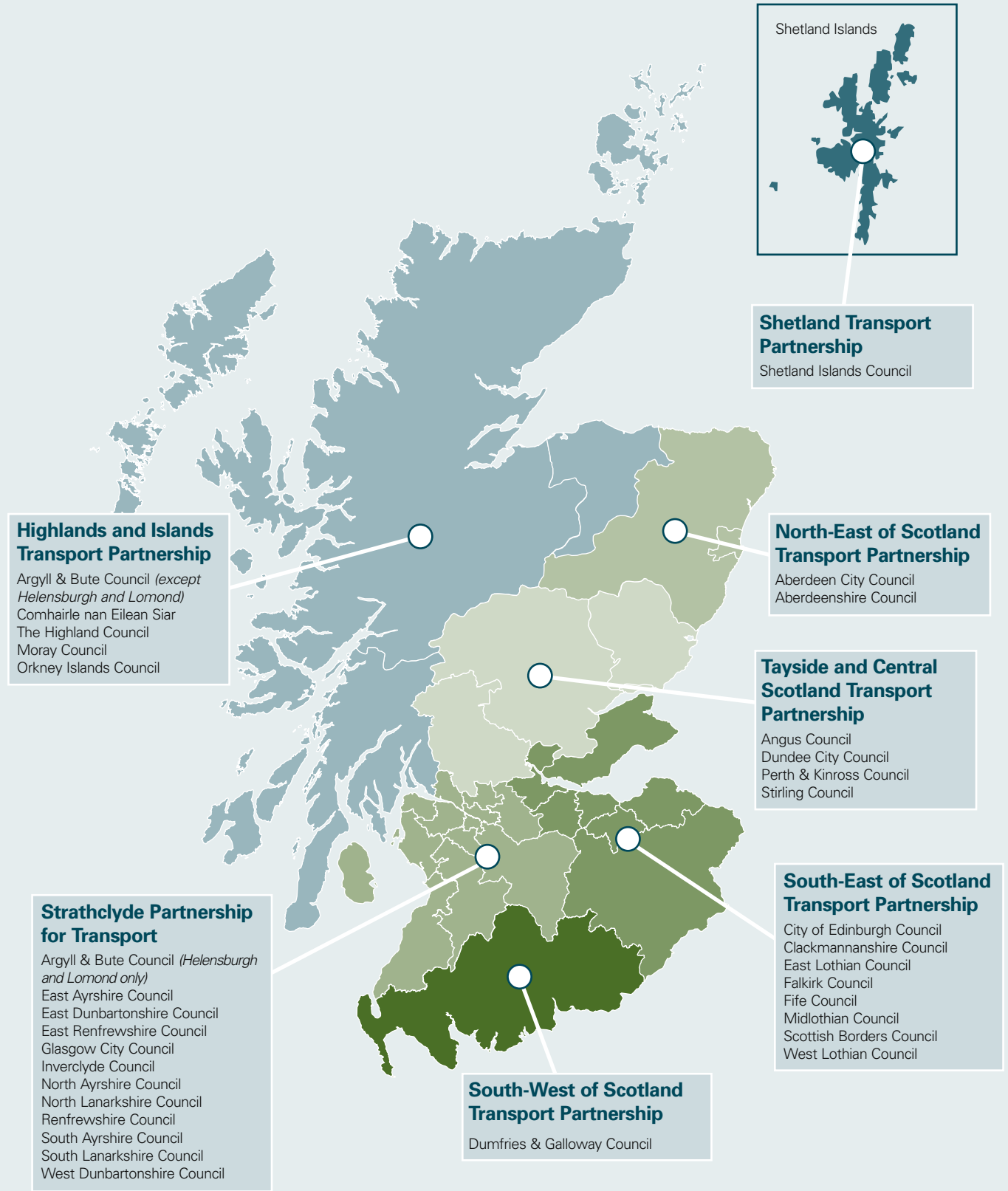
- Local authorities, who are provided with funding under the Grant Aided Expenditure (GAE) arrangements[4] for transport services, such as local roads maintenance, and grants for specific transport schemes. Local authorities' transport responsibilities include local roads, subsidising socially-necessary bus services, street lighting, taxi regulation and land-use planning, and they may promote various large-scale transport schemes, such as trams, railway lines, ports (where they are under local authority

3 The main reserved areas include: matters relating to transport security; safety and regulation of aviation and shipping; regulation of rail services, including rail safety; and aspects of road traffic regulation.

4 Grant Aided Expenditure is used to finance about 80 per cent of local authorities' net current expenditure (excluding expenditure in relation to local authority housing which is expected to be financed wholly from rental income). GAE is mainly allocated to individual local authorities, largely on a formula basis linked to population and other factors, but it is up to local authorities to determine how they spend the money according to local priorities.

Exhibit 1

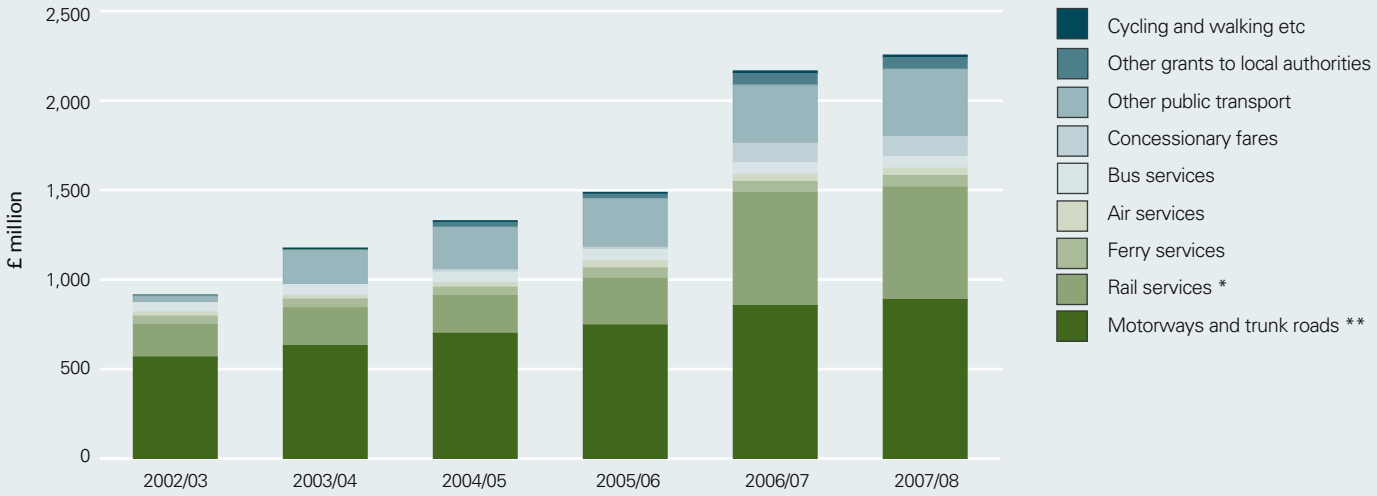
Regional Transport Partnerships – member local authorities



Source: *Scotland's National Transport Strategy: A Consultation*, Scottish Executive, April 2006

Exhibit 2

Scottish Executive transport expenditure: actual (2002/03 to 2004/05) and planned (2005/06 to 2007/08)



Notes:
* From 2006/07, includes £360 million which accompanied the transfer of rail powers to Scottish ministers.
** Includes notional depreciation and cost of capital.

Source: Scottish Executive Draft Budget 2006/07

ownership) and airports. They are required to work together in seven statutory Regional Transport Partnerships (RTPs) (Exhibit 1) to produce regional transport strategies by April 2007 which complement the National Transport Strategy and act as a framework for local transport strategies.[5] The Department expects local authorities to deliver the partnership's Regional Transport Strategy, and has encouraged local authorities to develop (non-statutory) local transport strategies which complement the national and regional ones.

- Private companies receive grants and subsidies to ensure delivery of public transport and to encourage changes to working practices in line with Executive policy.

- The UK Railways Act 2005 increased Scottish ministers' responsibilities for the management of passenger rail franchises and rail infrastructure in Scotland. The transfer of these powers was accompanied by an additional annual block grant of around £360 million to operate and maintain the network and fund a range of enhancements to Scotland's railways.[6] Around 90 per cent of passenger rail services in Scotland are provided by First ScotRail under a seven-year franchise agreement awarded in 2004. Transport Scotland expects to provide a subsidy of around £280 million in 2006/07 to enable First ScotRail to meet performance targets and standards for the reliability and punctuality of journeys. First ScotRail is also committed to a £40 million programme of capital improvements.

- Following the Transport Act 1985, bus services in Scotland were deregulated and are now provided mainly by private-sector operators on commercial terms. Around 90 per cent of the Scottish market is held by large operators (those with 150 or more vehicles). Three operators (First, Stagecoach and the publicly-owned Lothian Buses) account for over 80 per cent of the total market. The Department supports the bus industry through a number of dedicated schemes, such as the Bus Service Operators Grant, the Bus Route Development Grant and the Rural Public Passenger Transport Grant.

- Private and publicly-owned companies receive subsidies to secure the delivery of lifeline services. Ferry services in Scotland are provided by a mixture of public and private-sector operators, working routes on either commercial or subsidised terms. The Department provides grants to ferry operators to subsidise the provision of services in the

5 *Scotland's Transport Future: Guidance on Regional Transport Strategies*, Scottish Executive, March 2006.
6 Scottish Executive News Release, 17 October 2005.

Highlands and Islands area to maintain economic viability and to retain populations in island communities. The subsidies are increasingly awarded through tenders. A new contract for services on Northern Isles (Orkney and Shetland islands) routes was awarded in July 2006. The contract for services on the Clyde and Hebridean Isles routes will be tendered in the second half of 2006. The Department also provides financial assistance to Highlands and Islands Airports Ltd (HIAL) towards the cost of operating ten airports in the Highlands and Islands.

Spending on transport in Scotland is expected to more than double between 2002/03 and 2007/08

1.5 The Department's expenditure on transport is increasing. In 2002/03 it spent around £900 million on transport, including notional depreciation and capital costs associated with the trunk road network. By 2004/05, spending had increased to £1,300 million and it is expected to rise further to £2,300 million by 2007/08 (Exhibit 2).

1.6 Expenditure is increasingly targeted towards public transport. The proportion of transport expenditure spent on public transport was less than a quarter in 1998/99 (23 per cent) but the Department intends that 70 per cent of its transport budget will be spent on public transport in the nine years to 2010/11.[7]

1.7 While most areas of transport spend will increase in the short term, the most significant planned increases from 2005/06 to 2007/08 will be:

- £143 million for motorways and trunk roads
- £60 million for concessionary travel schemes (see Part 4)
- £35 million each year for 2006/07 and 2007/08 for the RTPs
- £91 million for major public transport projects
- £60 million for the maintenance of local roads (within the local government settlement)
- £360 million which accompanied the transfer of rail powers from the UK Department for Transport to Scottish ministers as a result of the UK Railways Act 2005.

7 *Building a Better Scotland Infrastructure Investment Plan: Investing in the Future of Scotland*, Scottish Executive, 2005.

Part 2: Scottish Executive transport objectives and performance measurement

Introduction

2.1 This part of the report examines the Executive's transport policies and objectives, its range of performance measures and how it monitors and reports on performance against these measures.

The Executive has established a clear vision and objectives for transport which are interlinked

2.2 The transport White Paper *Scotland's Transport Future* published in June 2004 set out the Executive's vision for transport as:

'An accessible Scotland with safe, integrated and reliable transport that supports economic growth, provides opportunities for all and is easy to use; a transport system that meets everyone's needs, respects our environment and contributes to health; services recognised internationally for quality, technology and innovation, and for effective and well-maintained networks; a culture where fewer short journeys are made by car, where we favour public transport, walking and cycling because they are safe and sustainable, where transport providers and planners respond to the changing needs of businesses, communities and users, and where one ticket will get you anywhere.'

2.3 The 2002 Spending Review provided objectives for the three years 2002/03 to 2005/06 covering economic growth, social inclusion, environmental sustainability and safety. The 2004 Spending Review replaced the objectives for 2005/06 and provided new objectives for 2006/07 and 2007/08 covering the same themes but included an additional objective to improve integration (Exhibit 3).

Action taken in pursuit of one objective can contribute to the achievement of others

2.4 The Department's transport funding generally addresses more than one of its objectives. For example, funding to support or develop public transport can promote economic growth by reducing congestion and linking people to jobs, shops and leisure facilities. At the same time, it can promote social inclusion by ensuring everyone can get the transport they need to access services, and it helps protect the environment and improve health by reducing traffic volumes and emissions.

2.5 In some cases, action taken in pursuit of one objective may adversely affect other objectives. For example, the promotion of international air routes to and from Scotland can help promote economic development but increasing the amount of air traffic will be detrimental to the environment.

8 *Building a Better Scotland: Spending Proposals 2003-2006: What the money buys*. Scottish Executive, 2002. *Building a Better Scotland: Spending Proposals 2005-2008: Enterprise, Opportunity, Justice*. Scottish Executive, 2004.

Exhibit 3
Scottish Executive transport objectives

Building a Better Scotland: Spending Proposals 2003-2006	Building a Better Scotland: Spending Proposals 2005-2008
• To promote economic growth by enhancing the effectiveness of the transport network and reducing congestion.	• To promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency.
• To promote social inclusion by improving access to public transport and by maintaining and enhancing the lifeline links.	• To promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network.
• To support sustainable development by promoting more efficient transport networks and more sustainable modes of transport, having regard to the overarching principles of minimising resource use, energy and travel.	• To protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy.
• To improve road safety and reduce road accident casualties.	• To improve safety of journeys by reducing accidents and enhancing the personal safety of pedestrians, drivers, passengers and staff.
	• To improve integration by making journey planning and ticketing easier and working to ensure smooth connection between different forms of transport.

Source: Scottish Executive

The Executive has developed a series of measures to assess performance against its objectives

Targets have been set for most objectives but some do not provide a full picture of whether the objective is being achieved

2.6 The Executive has developed a range of performance measures to monitor progress against its transport objectives:

- The 2002 report *Scotland's Transport: Delivering Improvements* (Exhibit 4 overleaf) included an analysis of trends for 11 transport indicators. The Department expected to use the indicators as measures of progress rather than expected outturns. For example, the indicator measuring walking time to the nearest bus stop is an indicator of the accessibility of local bus services which contributes to the objective to promote social inclusion, but it provides no measure of the contribution made.
- The 2002 and 2004 Spending Review proposals (Exhibit 4 overleaf) included targets for all but one of the transport objectives. The achievement of national targets, such as increasing the number of local bus passenger journeys, may mask wide differences between local areas. Some targets, such as those associated with transport's contribution to promoting economic growth, are proxy measures which do not provide a full picture of whether the objective is being achieved. Other targets, such as the number of enquiries answered by Traveline Scotland, provide measures of activity rather than the outcome of activity in achieving the objective.
- The 2003 Labour-Liberal Democrat coalition Partnership Agreement *A Partnership for a Better Scotland* sets out 46 transport priorities and commitments (Appendix 1).

2.7 For some performance measures, such as the condition of the road network, there is coherence between the respective transport indicators and subsequent targets. But for other measures, the 2004 Spending Review targets either differ from the 2002 targets (for example, the performance of lifeline ferries) or are absent altogether (for example, travel information services). As part of its development of a National Transport Strategy, the Department is reviewing its use of targets and performance indicators to measure progress against the strategy.

The Department monitors progress against transport objectives but there is scope to improve public reporting of performance

2.8 The Department regularly monitors and reports on performance internally against transport targets and Partnership Agreement commitments. Monitoring covers:

Exhibit 4

Executive transport targets and indicators

Objectives	2002 Transport Indicators	2002 Spending Review Targets	2004 Spending Review Targets
To promote economic growth	• Road traffic volumes. • Road traffic congestion. • Condition of the road network.	• Reduce the time taken to undertake trunk road journeys on congested/heavily-trafficked sections of the network by 2006. • Achieve best value for money by reducing the proportion of the trunk road network that requires close monitoring to six per cent for motorways and eight per cent for dual carriageways by 2006.	• Increase rail passenger journeys on the Scottish rail network by an average of two per cent each year. • Reduce the time taken to undertake trunk road journeys on congested/ heavily-trafficked sections of the network by 2008. • Improve the condition of the trunk road network over a ten-year period against measurable milestones. • Achieve key milestones each year in the delivery of the major infrastructure projects set out in the long-term investment plan, subject to projects receiving the necessary public or Parliamentary approval.
To promote social inclusion	• Passenger journeys by public transport. • Accessibility of local bus services. • Access to public transport information.	• Traveline Scotland to answer at least one million enquiries per annum by 2006; Transport Direct portal to achieve at least one-and-a-half million visits per annum by 2006; and for performance and output standards to be met. • Increase passenger numbers passing through HIAL airports by five per cent by 2006. • Increase the quality and quantity of lifeline ferry services and ensure 98 per cent of planned sailings actually sail and 98 per cent arrive on time by 2006.	• Increase local bus passenger journeys by an average of one per cent each year. • Increase passenger numbers through the network of lifeline airports operated by HIAL, by an average of one-and-a-half per cent each year. • Increase passenger numbers on the network of lifeline ferries subsidised by the Scottish Executive on the Clyde to and between the Hebridean Isles and to the Northern Isles by an average of two per cent each year.
To support sustainable development	• Transport emissions. • Freight lifted. • Modal shift on short journeys. • Modal shift on travel to work and school journeys.	• Increase rail passenger journeys on the Scottish rail network by a further five per cent by 2006. • Increase local bus passenger journeys by five per cent by 2006.	• Seventy per cent of Scottish Executive transport spending to go on public transport over the period of the long-term investment plan. • Transfer a further two million lorry miles per year from road to rail or water.
To improve road safety	• Road accident casualties.	• Reduce the number of serious and fatal road accident casualties by 40 per cent by 2010 and by 50 per cent for children over the same period, compared with the 1994-98 averages.	• Reduce the number of serious and fatal road accident casualties by 40 per cent by 2010 and by 50 per cent for children over the same period, compared with the 1994-98 averages.
To improve integration	• No indicators set.	• Not an objective in 2002.	• No targets set.

Source: Scottish Executive

- annual reporting of progress against Spending Review targets to the Transport Management Board, comprising the Head of the Scottish Executive Transport Group and the Heads of Division within the group

- quarterly reporting of progress against Partnership Agreement commitments to the Transport Management Board and the ETLLD Management Board

- biannual reporting of progress against all Partnership Agreement commitments to Cabinet.

2.9 The Department also publishes a wide range of transport data in its annual Scottish Transport Statistics report. Transport issues, such as the level of access to private cars, are also included in surveys used to compile reports such as the annual publications of Scottish Household Survey results. There is, however, scope to make the Department's public reporting of transport achievements more comprehensive. Apart from progress against Spending Review targets in the evaluation report presented to the Scottish Parliament during the annual budgeting process, there has been no comprehensive public reporting of performance against transport objectives. Transport Scotland's *Business Plan 2006/07* includes a commitment to develop a communication plan for the agency to 'ensure internal and external messages are clearly and effectively conveyed'.

Part 3: Promoting economic growth by investing in transport

Introduction

3.1 Growing the economy is the Executive's top priority.[9] Transport funding contributes to economic growth by improving the transport network to help businesses stay competitive and to ensure individuals have access to the transport services they need to get to work and education. The Department has not systematically evaluated the contribution that improving the transport network has made. This part of the report considers performance against the measures of progress available for a range of transport activities associated with economic growth. These include:

- The level of traffic congestion on Scotland's trunk roads.
- The condition of the road network.
- The numbers of passengers on ScotRail services.
- How the Executive decides which new road and rail infrastructure projects to invest in.
- Performance against cost and time budgets in delivering these infrastructure projects.
- Efforts to promote international air connectivity.

Road traffic congestion is largely a localised problem but efforts to reduce it through stabilising traffic growth are unlikely to succeed

Average time lost to congestion on trunk roads is a few seconds per vehicle per kilometre

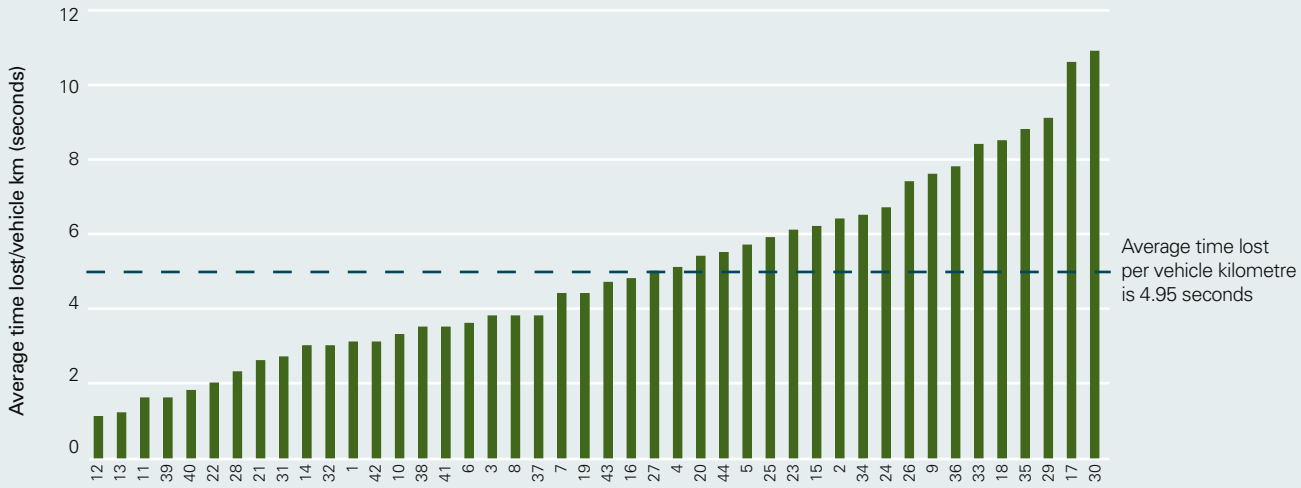
3.2 Road congestion affects our economy by making journeys to get goods to market and people to their jobs slower and less reliable. Tackling road congestion is one of the Executive's principal transport challenges.[10] In 2003, it established a congestion monitoring system to monitor sections of the trunk road network which are, or are likely to, experience congestion but the Department has yet to report progress against the target to reduce journey time on congested or heavily trafficked sections of the trunk road network. In 2005, it published the first data to be generated from the system as a baseline[11] against which congestion-related improvements can be measured in subsequent years.

3.3 The baseline report established a number of measures of the time congestion adds to journeys and its associated cost. The overall average time lost per vehicle kilometre recorded in 2003 was 4.95 seconds although in some cases, such as on the northbound approach to the Kincardine Bridge, the time lost was twice the average (Exhibit 5). The annual cost of trunk road congestion was calculated at £71 million. Eight of the 44 routes monitored experienced serious or severe congestion for more than one hour per day (Exhibit 6, page 16).

9 *A Partnership for a Better Scotland*, Labour-Liberal Democrat Partnership Agreement, 2003.
10 *Scotland's Transport: Delivering Improvements*, Scottish Executive, 2002.
11 *Congestion on Scottish Trunk Roads 2003*, Scottish Executive, 2005.

Exhibit 5

Time lost as a consequence of road congestion



Aberdeen

1. A90 Muggiemoss Rbt to Stonehaven (N)

2. A90 Muggiemoss Rbt to Stonehaven (S)

3. A90 Balmeddie to Muggiemoss Rbt (N)

4. A90 Balmeddie to Muggiemoss Rbt (S)

5. A96 Muggiemoss Rbt to Blackburn (E)

6. A96 Muggiemoss Rbt to Blackburn (W)

Dundee

7. A90 Forfar Rd via Tay Bridge to Forgan Rbt (N)

8. A90 Forfar Rd via Tay Bridge to Forgan Rbt (S)

9. A90 Inchture to Forfar Rd jcn (E)

10. A90 Inchture to Forfar Rd jcn (W)

Perth

11. A90 from jcn with B934 to Luncarty (N)

12. A90 from jcn with B934 to Luncarty (S)

13. M90 Bridge of Earn to Friarton and to Broxden (N)

14. M90 Bridge of Earn to Friarton and to Broxden (S)

Forth Bridge approaches

15. A92 Cowdenbeath jcn and M90 Jcn 4 to Forth Bridge (N)

16. A92 Cowdenbeath jcn and M90 Jcn 4 to Forth Bridge (S)

Kincardine Bridge approaches

17. A977, A985 and A876/M876 to M9 Jcn 7 (N)

18. A977, A985 and A876/M876 to M9 Jcn 7 (S)

Erskine Bridge approaches

19. M898/A898 (N)

20. M898/A898 (S)

Edinburgh

21. A1 Macmerry to jcn with A720 (N)

22. A1 Macmerry to jcn with A720 (S)

23. A720 city bypass between jcns with A1 and M8 (E)

24. A720 city bypass between jcns with A1 and M8 (W)

25. M9 from M8 jcn at Claylands to M9 spur (N)

26. M9 from M8 jcn at Claylands to M9 spur (S)

Glasgow

27. M77 Greenlaw jcn to jcn with M8 (N)

28. M77 Greenlaw jcn to jcn with M8 (S)

29. M8 St James interchange to Baillieston (E)

30. M8 St James interchange to Baillieston (W)

31. M73/M74 Jcns 4 to 7 (N)

32. M73/M74 Jcns 4 to 7 (S)

33. M80 Steppes bypass/A80 to M80 Jcn 4 (N)

34. M80 Steppes bypass/A80 to M80 Jcn 4 (S)

35. A725 (N)

36. A725 (S)

Glasgow/Edinburgh

37. A8/M8 Baillieston to Hermiston Gate (E)

38. A8/M8 Baillieston to Hermiston Gate (W)

Ayrshire

39. A77 Fenwick to Dutch House Rbt (N)

40. A77 Fenwick to Dutch House Rbt (S)

41. A78 Stevenson to Dutch House Rbt (N)

42. A78 Stevenson to Dutch House Rbt (S)

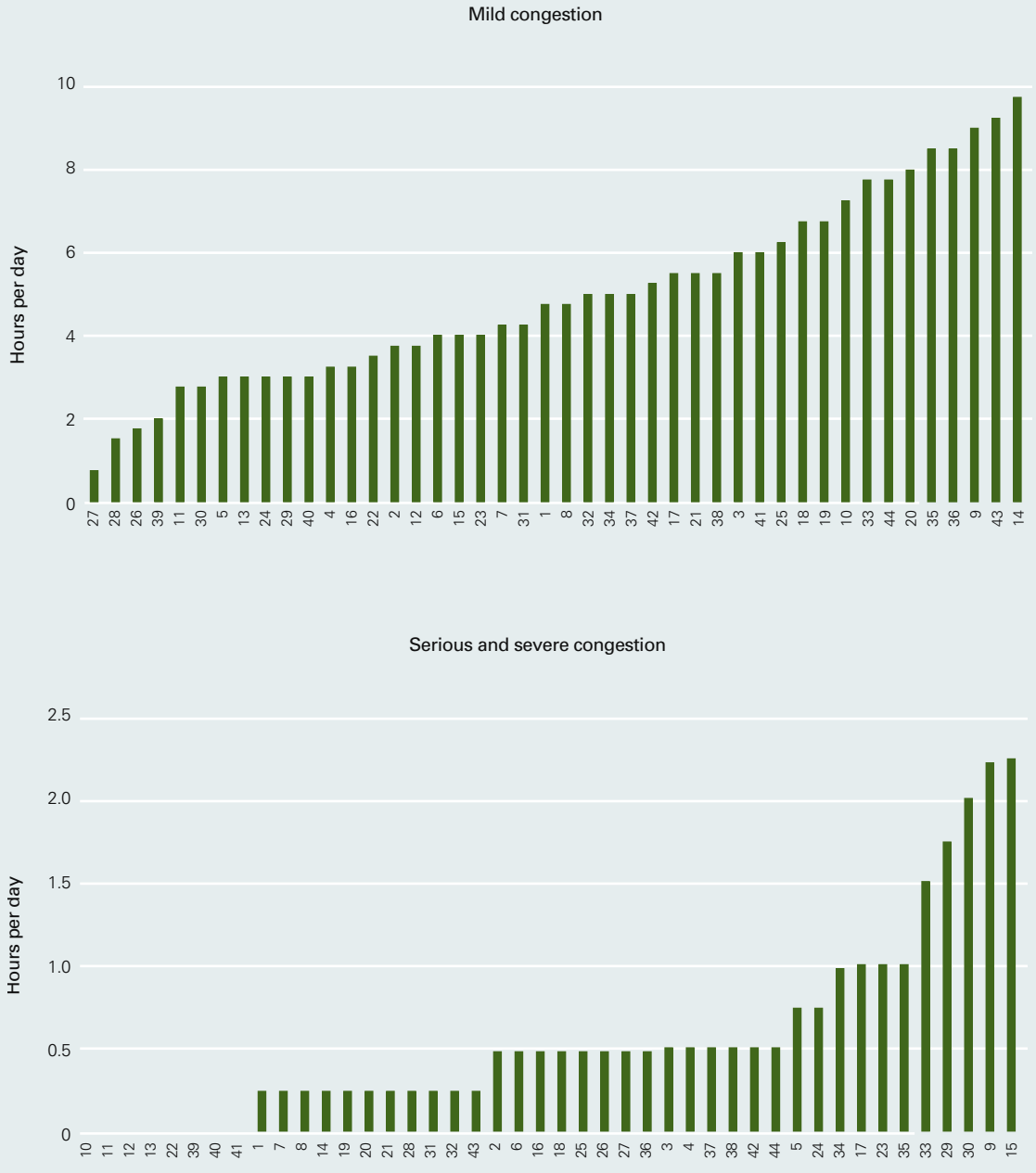
43. A77 Dalrymple to Dutch House Rbt (N)

44. A77 Dalrymple to Dutch House Rbt (S)

Source: *Congestion on Scottish Trunk Roads 2003*, Scottish Executive, 2005

Exhibit 6

How often road congestion is encountered



Notes:
1. If the average speed in any 15 minute period is below the free flow speed by between 10% and 25% then that 15 minute period is defined as exhibiting mild congestion. If the free flow speed is reduced by between 25% and 50% it constitutes serious congestion. A reduction of over 50% in the free flow speed is defined as severe congestion.
2. The number assigned to each section of monitored trunk road is the same as that in Exhibit 5 on the previous page.

Source: *Congestion on Scottish Trunk Roads 2003*, Scottish Executive, 2005

3.4 The level of congestion varies according to the time of day and can be affected by other factors such as road works, accidents or weather conditions. A 2004 survey[12] of car drivers found that, overall, 12 per cent of journeys were said to have been delayed by traffic congestion. Most congestion occurred during the morning and evening rush hours (when about 25 per cent of journeys were affected) and least during the early hours of weekdays (no journeys affected).

The Executive is considering whether to replace its aspiration to control traffic congestion through stabilising traffic growth

3.5 In 2002, the Executive aspired to stabilise road traffic at 2001 levels by 2021. Stabilising road traffic was expected to help maximise economic potential by minimising road congestion and help control the environmental damage done by road traffic. Since 2002, traffic volumes have continued to increase. The total volume of traffic on Scotland's roads in 2005 was about 43 billion vehicle kilometres, 19 per cent more than in 1994, and latest forecasts estimate that traffic will grow by a further 27 per cent by 2021.

3.6 The Executive requires each local authority to set targets to reduce road traffic for their local areas. In 2006, a report commissioned by the Department[13] found that there was little buy-in by local authorities to the concept of using road traffic reduction to achieve transport objectives. In particular:

- There were fears that attempts to reduce road traffic volumes could adversely affect local economic development.
- The majority of local authority targets to reduce road traffic volumes were weakened by limited available data, difficulties in quantified forecasting and unclear relationships between these targets and local authorities' wider local transport strategies.
- The targets lacked credibility and support among local authorities. There was little monitoring of progress against targets and they had limited influence on decision-making.
- There was a lack of incentive for local authorities to develop robust targets, with many recognising that the delivery of plans to reduce traffic volumes was not wholly in their control. For example, some local authorities were reluctant to take action without similar support from the Executive in respect of trunk roads.

3.7 The report concluded there was no evidence to suggest that the Executive's aspiration to stabilise road traffic growth was on track. The Executive is now considering whether to replace its traffic stabilisation aspiration with targets which better focus on the transport outcomes it wishes to see.[14] In the context of road traffic reduction, these are principally less congestion, fewer carbon dioxide emissions and better local air quality.

There has been mixed progress against targets to reduce the proportion of trunk roads requiring close monitoring and around £325 million may be needed to bring the network up to standard

3.8 Well-maintained roads are important for economic growth. Poorly maintained roads slow the transport of goods and people and can be dangerous. Road maintenance ranges from running repairs such as filling in potholes, to major rebuilding of the highway (structural maintenance), and from road gritting to the maintenance of lighting and bridges.

3.9 Trunk roads represent about six per cent (3,500km) of the public road network. Their physical condition is monitored by annual surveys which are designed to provide information about the condition of the road surface and to assess how long it will last. It is most economic to replace a worn out carriageway at the end of its useful life. When the road surface is assessed as having no residual life, the road requires close monitoring to ensure no further significant deterioration before it is replaced.

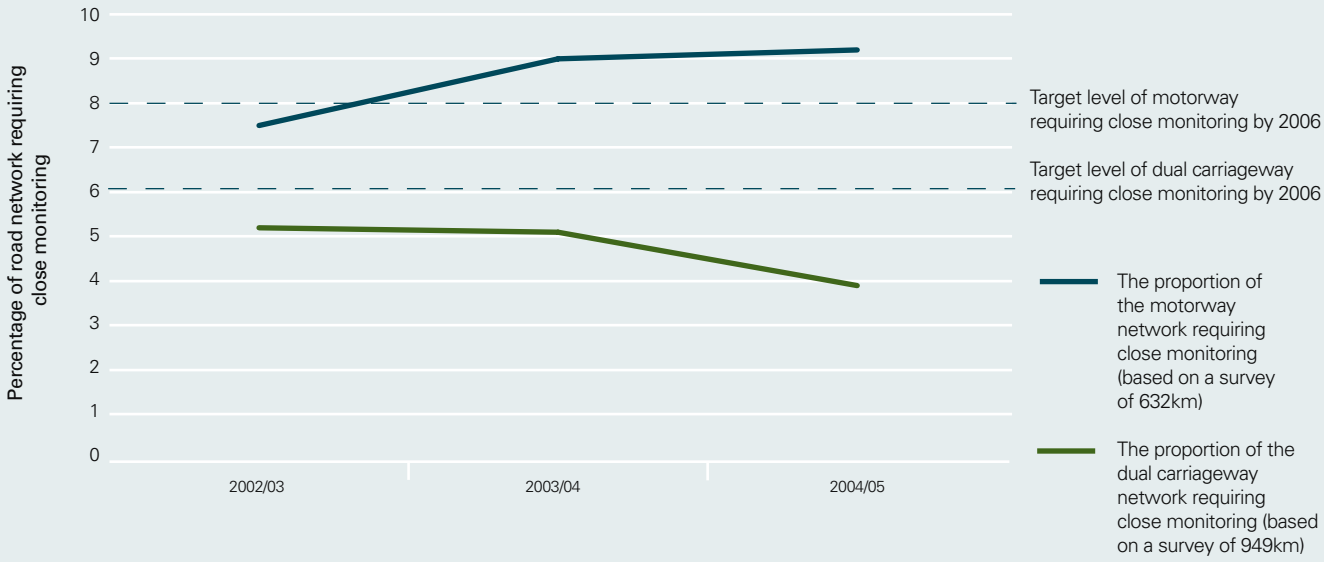
3.10 Between 1994/95 and 1999/2000, the proportion of a sample of the trunk road surface with a residual life of less than five years increased from 11.6 per cent to 15.5 per cent. The Executive subsequently allocated increased resources to maintenance and repair, and set targets to reduce the proportion of the trunk road network requiring close monitoring to six per cent for motorways and eight per cent for dual carriageways by 2006. By 2004/05, the target was achieved in respect of dual carriageways but not motorways (Exhibit 7 overleaf). Despite the additional funding, the proportion of the sampled trunk road surface with a residual life of less than five years had increased to 22.4 per cent by 2004/05.

3.11 In November 2004, Audit Scotland published a report on

12 Results of the Scottish Household Survey, reported in Scottish Transport Statistics No.24 2005 Edition, Scottish Executive, 2005.
13 Term Commission for the Evaluation and Review of Local Authority Road Traffic Reduction Targets, Scottish Executive, 2006.
14 *Scotland's National Transport Strategy: A Consultation*, Scottish Executive, April 2006.

Exhibit 7

The proportion of the trunk road network requiring close monitoring



Source: *Scottish Transport Statistics No.24 2005 Edition*, Scottish Executive, 2005

maintaining Scotland's roads. The report found that expenditure on trunk road maintenance has kept pace with traffic growth. In 2003/04, the Department spent £199 million on trunk road maintenance, equivalent to about £57,000 per kilometre. In August 2006, the Department estimated the cost of bringing the trunk road network up to an acceptable standard (defined in the Design Manual for Roads and Bridges as being above the threshold requiring close monitoring) to be about £325 million.

3.12 The trunk road network is currently divided into four geographic areas with operating companies responsible for its management and maintenance under contract to the Department (now Transport Scotland). Annual independent audits[15] of the financial and technical performance of the operating companies have found they are generally performing well against the terms of the contracts. The operating companies have managed their work well to minimise disruption and road closures, and traffic management at roadworks is good. The 2004/05 audit report indicated, however, that the Executive would seek further improvement in the prompt repair of serious road defects during 2005/06.

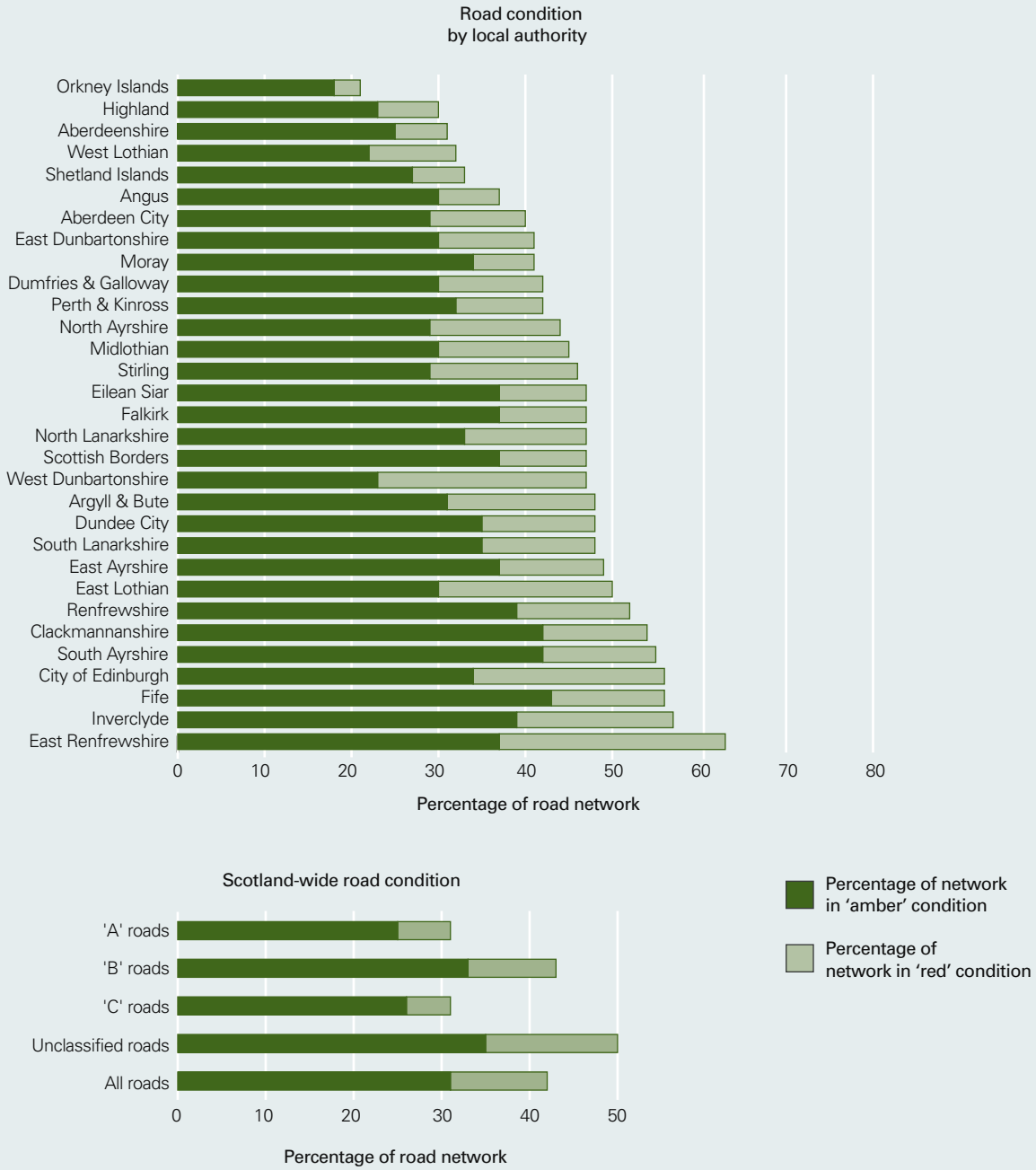
The condition of local authority roads is variable and around £1.5 billion may be needed to bring them up to standard

3.13 Local authorities in Scotland maintain 51,000 km of public roads other than trunk roads. Local authorities introduced a new survey system in 2003/04 to monitor road condition. It aims to cover all local authority 'A' roads annually, all 'B' roads every two years and all other roads every four years. The 2004/05 survey showed wide variations in the condition of local roads. The proportion of roads which had deteriorated to the point at which repairs to prolong future life should be considered ranged from three per cent to 26 per cent between authorities. Overall, around 40 per cent of all local roads and a third of local authority 'A' roads may require some form of maintenance or further investigation to establish if further treatment is required (Exhibit 8).

3.14 The 2004 Audit Scotland report found that expenditure on local authority roads fell sharply during the mid-1990s and despite an increase in 2002/03, is still below 1994/95 levels. In 2003/04, local authorities spent £249 million on local road maintenance, equivalent to about £4,900 per kilometre. In August 2006, local authorities estimated that the cost of bringing the local road network up to standard was about £1.5 billion. The Department provided local authorities with an additional £60 million per annum under the GAE settlement for local road maintenance in the 2004 Spending Review.

15 The current Performance Audit Group, which comprises Halcrow in association with PwC and Scott Wilson, was re-appointed by the Scottish Executive for a second seven-year term from December 2002.

Exhibit 8
Local authority road network condition

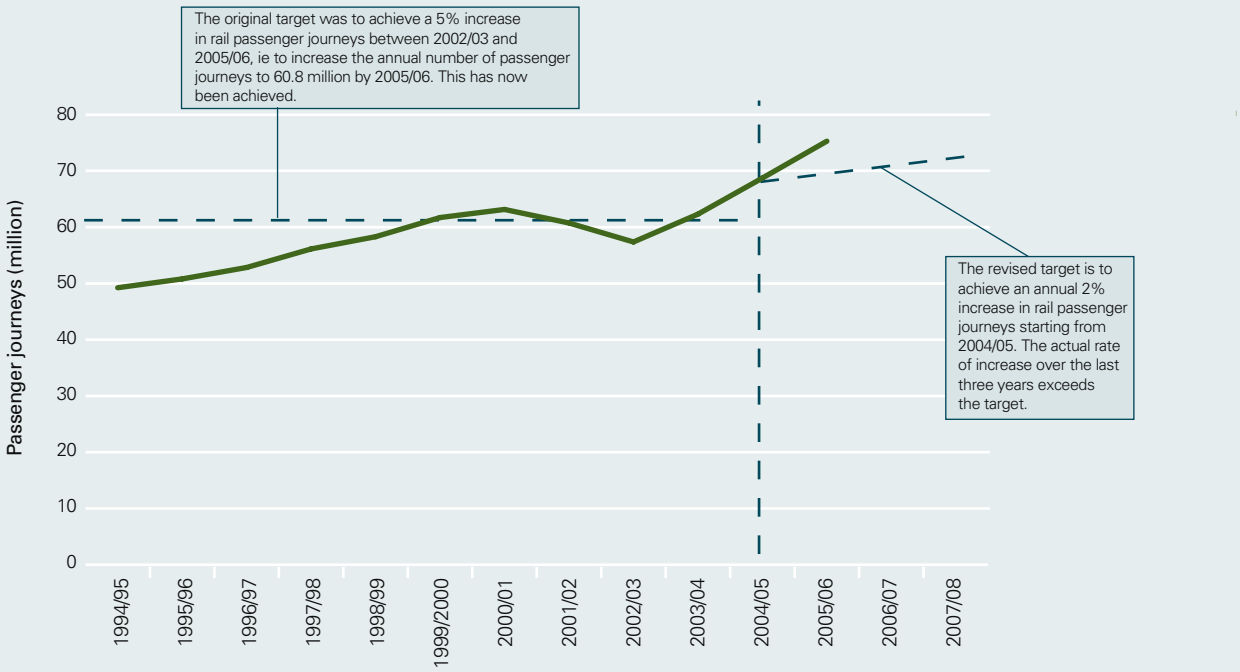


Notes:
1. Local authority road condition is assessed using a traffic light system. 'Green' indicates that the road is in an acceptable condition. 'Amber' means that further investigation should be undertaken to establish if treatment is required. 'Red' means that the road has deteriorated to a point at which repairs to prolong its future life should be considered.
2. The condition of the City of Glasgow Council's roads was assessed using a different approach to that of other local authorities and the data are not comparable.

Source: *Scottish Transport Statistics No.24 2005 Edition*, Scottish Executive, 2005

Exhibit 9

Passenger journeys on the Scottish rail network



Source: *Scottish Transport Statistics No.24 2005 Edition*, Scottish Executive, 2005

The Executive is on course to achieve targets to increase the numbers of rail passengers

3.15 The Executive aims to promote economic growth by investing in the rail network in order to increase the number of rail passengers. Transport Scotland provides First ScotRail with annual funding of around £280 million under a franchise agreement awarded in October 2004 to maintain the rail network and to subsidise passenger services. In 2002 the Executive set a target to increase rail passenger journeys on the Scottish rail network by five per cent by 2006. The target was revised in 2004 to increase rail passenger journeys by an average of two per cent each year.

3.16 The number of rail passenger journeys on ScotRail services has increased by 48 per cent over the last ten years and reached 75.1 million in 2005/06.[16] Numbers have increased each year except in 2001/02 and 2002/03 when some services were reduced due to a drivers' pay dispute. In 2005/06 journeys were 30.9 per cent higher than the 2002/03 baseline year, indicating that the five per cent growth target has been achieved. While the baseline year was affected by the drivers' pay dispute, passenger rail journeys were still 19 per cent above the previous peak in 2000/01. It is too early to say whether the annual two per cent growth target has been achieved but the rate of increase over the last three years has exceeded the target (Exhibit 9).

3.17 The number of services operating in 2004/05 (667,000) was 18 per cent more than in 1997/98, but in the same period the proportion of trains arriving on time decreased from 93.9 per cent in 1997/98 to 83.1 per cent in 2004/05. Despite this, overall satisfaction with rail services in Scotland has been maintained. Surveys indicate that about 85 per cent of passengers are satisfied or better with their overall journey, although there is scope to improve value for money and how delays are dealt with. Punctuality and overall passenger satisfaction in Scotland are higher than in other parts of Great Britain (Exhibit 10).

Transport infrastructure investment is costly and project costs can be difficult to forecast accurately

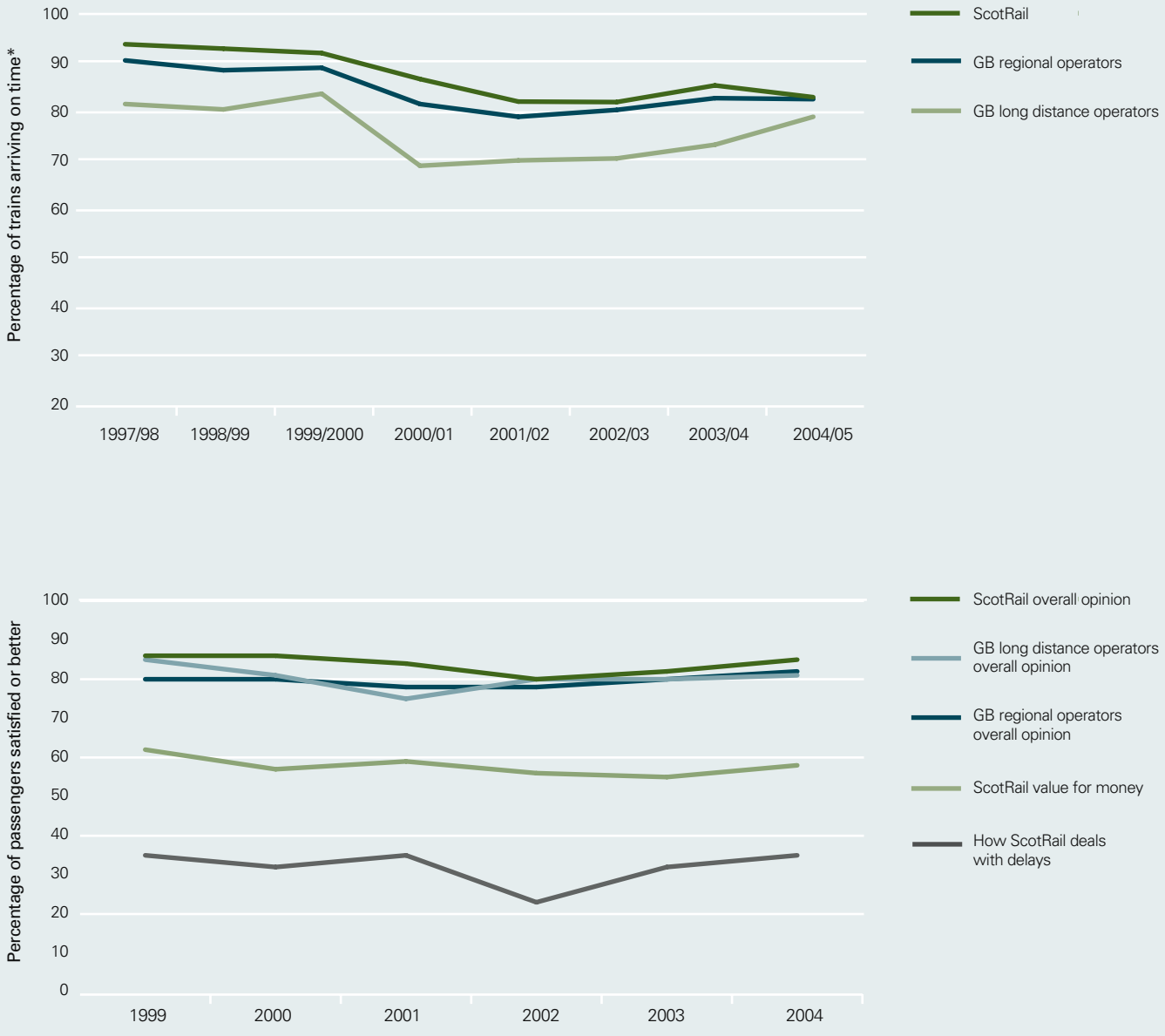
3.18 Investment in new road and rail projects is a key factor in promoting economic growth and can contribute to other transport objectives. But building new roads and railway lines is costly so it is important that:

- a robust project appraisal system is in place to ensure that projects providing the highest benefits are selected
- individual projects are managed well to ensure they are delivered to cost and time budgets
- post-project evaluation is carried out to measure whether expected benefits are delivered and to improve future projects.

16 *Main Transport Trends*, Scottish Executive Statistical Bulletin (Trn/2006/05), 2006.

Exhibit 10

Rail punctuality and passenger satisfaction



Note:
* On time is defined as arriving at the final destination within five minutes of the timetabled time in respect of regional operators (including ScotRail) and ten minutes in respect of long-distance operators.

Source: *Scottish Transport Statistics No.24 2005 Edition*, Scottish Executive, 2005

The Department has developed a robust system for appraising transport projects

3.19 The Department's current project appraisal system was introduced in September 2003. The Scottish Transport Appraisal Guidance (STAG) provides an evidence-based appraisal methodology which allows project options to be appraised against each of the Executive's transport objectives. The appraisal system identifies and evaluates options to address identified transport problems, which form the basis of recommendations to ministers. The system is mainly used for appraising potential road and rail infrastructure schemes, but can also be used to assess other transport initiatives, including policy development and new grant schemes.

3.20 We reviewed how a sample of 22 road and rail projects were appraised (Appendix 2). The initial planning and assessment of five of these projects pre-dated the introduction of STAG and their costs and benefits were appraised using the methodology then in use. Of the remaining 17 projects, 16 were subject to some form of STAG appraisal, but the degree to which it was applied differed depending on the size of the project and the stage of the project when STAG was introduced. The extent of the appraisal ranged from identifying the need for a scheme within a transport corridor (Airdrie-Bathgate rail link) to detailed investigation of a single preferred option (Waverley Infrastructure Works). In the remaining case (M74 Raith Interchange), STAG was not applied because the project was an offshoot from the M8 upgrade which was the subject of an extensive multi-modal corridor study. The Department considered that it was inappropriate to subject a relatively small project to a separate STAG analysis.

It is sometimes difficult to forecast accurately when projects will be completed and at what cost although cost outturn is usually close to tendered estimate

3.21 Infrastructure projects require significant planning and development before construction begins. Detailed design work, surveys of ground conditions, the need to obtain planning permission, to take account of objections from the local population and, in some cases, Parliamentary approval[17] mean that it can sometimes be difficult to forecast accurately when projects will complete. Project cost estimates can also be affected by unexpected difficulties in ground conditions, compensation payments for land required for the project which can only be assessed accurately once detailed negotiations with landowners begin, and inflation (Exhibit 11).

3.22 We analysed 15 major road and rail projects either in development or under construction (Appendix 3) and found that:

- Of the eight road projects examined, completion dates had yet to be set for two projects and one project (A68 Dalkeith Bypass) did not have an initial completion date. Two projects were currently planned to complete in the same year as the original estimate. Of the remaining three projects, two (Aberdeen Western Peripheral Road, A8 Baillieston-Newhouse) were currently due to be completed at least a year after the original estimated completion date and one (M74 completion) two years after the original estimated completion date.

- Of the seven rail projects examined, three projects were currently planned to complete in the same year as originally estimated by the schemes' promoters. Of the remaining four projects, one (Glasgow Airport Rail Link) was currently due to be completed a year after the original estimated completion date, two (Stirling-Alloa-Kincardine rail link, Edinburgh Trams Phase 1) about 18 months after the original estimated completion date and one (Borders rail line) three years after the original estimated completion date.

- Of the 13 projects where an original cost estimate had been determined, estimated costs had increased in respect of nine projects (Exhibit 12). For road projects, increases were due to various factors including inflation, increases in land and property values, and changes in design. For rail projects, the increases were largely due to inflation.

3.23 We also analysed six road projects completed between February 2003 and November 2005 (Exhibit 13, page 24) which found that the tendered construction costs and actual construction costs exceeded pre-tender estimated costs by up to 30 and 33 per cent, respectively. However, the actual costs of construction for these six projects were within four per cent of the tendered costs. The Department's own analysis shows

17 In cases of major rail projects, approval of the Scottish Parliament is sought to go ahead with the project through a Private Bill eg, Edinburgh Airport Rail Link Bill. The Scottish Executive, however, considers the current Bill approach to be unduly burdensome, complex and intimidating for promoters and objectors. It is currently consulting on proposals to simplify the process.

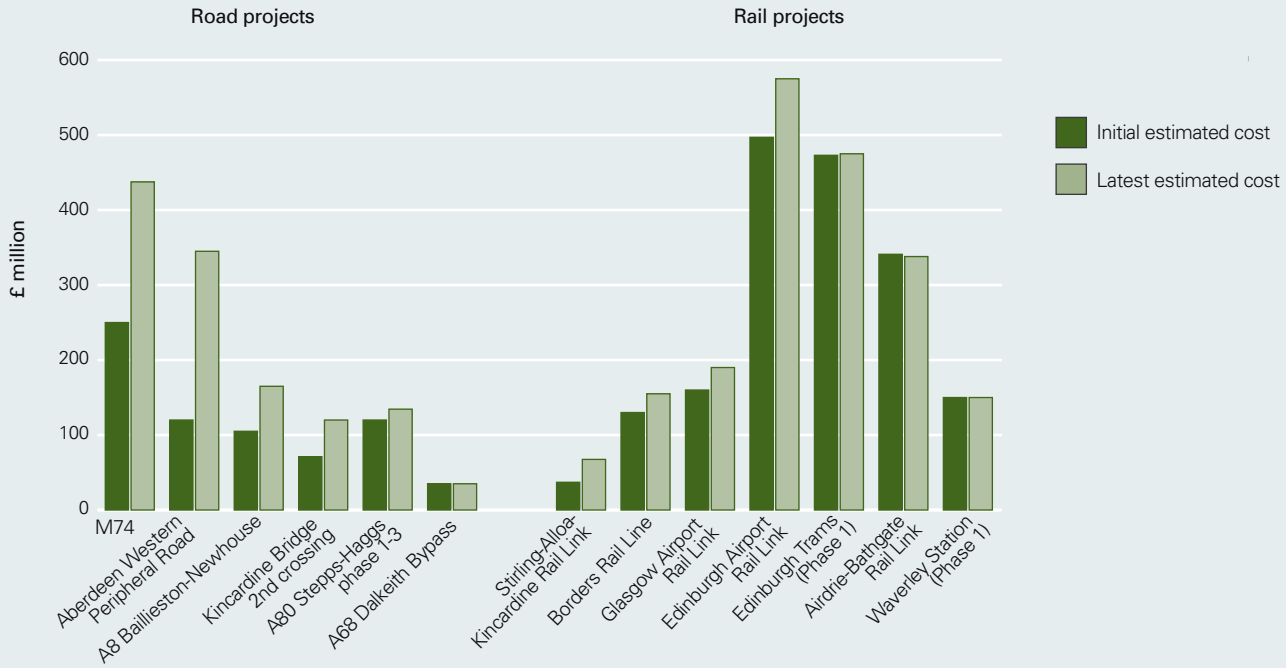
Exhibit 11
Project planning and development – M74 Completion project

The Scottish Executive took over the promotion of the M74 Completion project from local authorities in 2001. Glasgow City, South Lanarkshire and Renfrewshire councils had prepared cost estimates of £250 million at 2000 prices, with a completion date of 2008. The Scottish Executive undertook a detailed investigation of the site when revising its cost and completion date estimates. This investigation found that ground conditions were more difficult and contamination more extensive than previously thought. The level of compensation to be paid to acquire land could only be assessed after negotiations with individual landowners had begun.

Costs are estimated to be in the range of £375-£500 million at 2008 prices. The opening date of the route was subject to further delay as a result of an appeal to the Court of Session against the decision to proceed with construction following a public local inquiry. The appeal was abandoned in July 2006 and current estimates are that construction will start in 2007/08 with the route open in 2010.

Source: Scottish Executive

Exhibit 12
Project actual costs compared with initial estimates

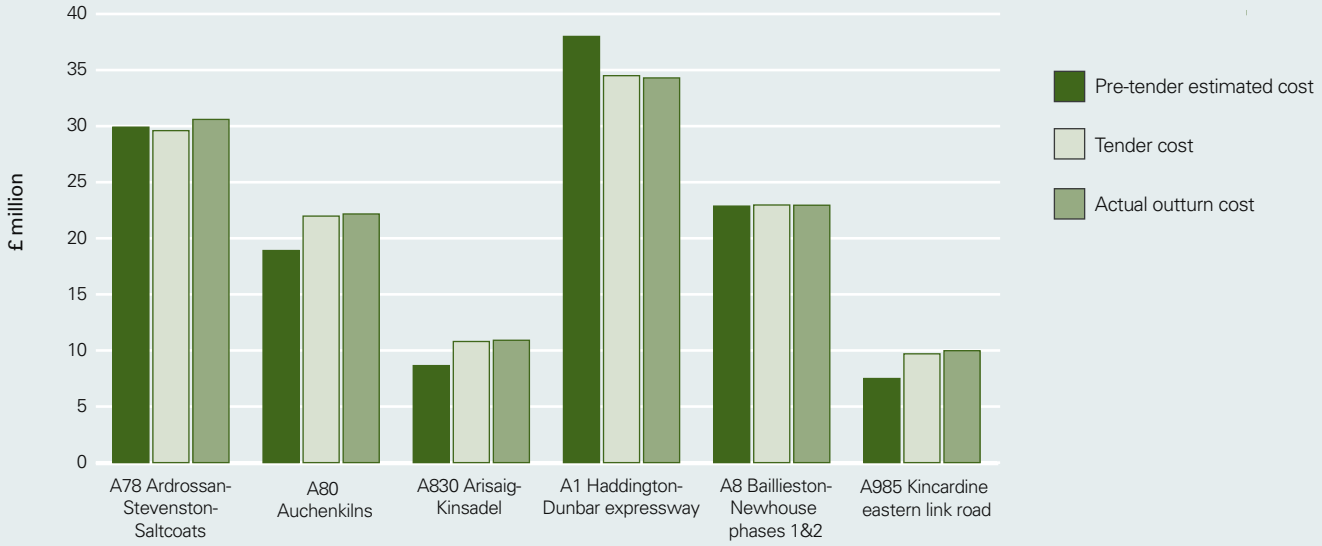


Note:
Initial cost estimates for road projects are those in place when ministers announced them as committed schemes. Initial cost estimates for rail projects are those in place when the Bill seeking their approval is presented to Parliament. Initial cost estimates for rail projects are therefore often further developed than those for road projects.

Source: Scottish Executive

Exhibit 13

Project actual costs compared with tenders and pre-tender estimates



Source: Scottish Executive

that overall, projects are delivered with low cost overruns (on average about five per cent) once contracts are let, although some may still be subject to delay for a variety of reasons such as poor weather.

3.24 Overall, we found the Department had adequate systems for monitoring the progress of each project. Progress of trunk roads projects, including updated cost estimates and timescales, is monitored at Quarterly Scheme Progress Meetings. Rail projects are reviewed every four weeks to monitor each scheme's costs and other contractual issues.

There is scope to improve the evaluation of rail projects to match the approach for roads

3.25 Transport Scotland evaluates completed road projects to determine whether each scheme's objectives have been achieved. Its most recent report covering 85 schemes opened to traffic up to 2004/05 found:

- Actual traffic flows on over two-thirds of schemes (62 out of 85) were within the +/- 20 per cent range predicted during the scheme's preparation. Traffic flows are used as a proxy measure for economic growth and if actual traffic flows are not more than 20 per cent less than predicted, Transport Scotland considers the project has met its objective of contributing to economic growth.

- There was an overall 30 per cent reduction in accidents in the three years after schemes were completed compared with the three years before.

- The evaluations of five projects examined whether plans to limit the environmental damage caused by the roads' construction had been carried out. These assessments indicated that environmental measures, such as planting trees and shrubs, had been successfully completed. Transport Scotland has summarised the proposed measures for a number of other schemes and plans to carry out site visits in summer 2006.

3.26 The Larkhall-Milngavie rail link, which opened in December 2005, is the only major rail line to be opened in Scotland since devolution. A further seven projects are expected to be delivered in the next five years. Transport Scotland expects each scheme's promoters to develop evaluation plans which link to the objectives of each scheme.

The Air Route Development Fund has helped to launch over 40 new air routes from Scotland

3.27 The Department promotes the Air Route Development Fund to improve international connectivity and enhance economic growth. The Fund is part of the Executive's 'Smart Successful Scotland' and 'Global Connections' strategies and supports airlines in the establishment of new direct routes from Scottish airports. It was launched in November 2002,

with the first routes established in 2003-04. By March 2006, a total of £3.6 million had been spent on the scheme. The fund is managed by Scottish Enterprise.

3.28 At June 2006, a total of 47 routes had been supported since the inception of the Fund although 12 of these routes have since stopped operating due to various factors including low passenger numbers, competition and an operator going into administration. Three routes are continuing to operate but without financial assistance; one route is now included with the Air Discount Scheme (see paragraph 4.20); and a further three routes will start operating in 2006. There are no specific targets for the fund. However, in the next 12 months the Department plans to evaluate the economic impact of the routes supported so far.

Part 4. Promoting social inclusion by improving access to public transport

Introduction

4.1 This part of the report examines progress against the Executive's objective to improve social inclusion by improving access to public transport. The provision of public transport is important to social inclusion because it helps remove barriers which make it difficult or impossible for certain groups of people to participate fully in society. Public transport provides access to services and enables people to get to work, to visit friends and relatives and to engage in leisure pursuits. Key funding in this area covers:

- the provision and usage of local bus services[18]
- the introduction of a national concessionary travel scheme for certain disadvantaged people
- the provision of public transport services in rural areas
- the provision of travel information services.

Support for bus services has contributed to their increased usage

The Department supports the provision of bus services in a number of ways

4.2 The Department provides a range of financial support to bus services with the overall aim of increasing access and usage:

- The Bus Service Operators Grant of around £50-55 million per annum reimburses operators 70-80 per cent of the cost of fuel duty incurred to keep fares down.
- The Public Transport Fund (PTF) and Integrated Transport Fund (ITF) provide funding for infrastructure investment by local authorities and regional transport bodies to improve access to services and make journeys faster and more reliable. The PTF ran for three years from 1999 and provided £243 million to 106 projects to encourage the use of public transport. Exhibit 14 provides examples of typical projects funded from the PTF. The ITF has largely been used to fund the current rail projects (see paragraph 3.22 and Appendix 3).
- The Bus Route Development Grant (BRDG) was introduced in 2004 to develop new or underused bus services. By June 2006, £16.8 million had been allocated to 39 projects. Each project is funded for three years, after which the service is expected to be commercially viable.

4.3 Bus quality partnership agreements between local authorities and bus operators require each party to commit to deliver improvements to bus services in an area or along a bus corridor. Typically, this involves the local authority providing better infrastructure, such as bus stops, while the bus operator provides better vehicles or service improvements. Local authorities

18 Local bus services are ones which are available to the general public, where passengers pay separate fares and travel a radial distance no greater than 15 miles/24km from the point of boarding.

Exhibit 14
Examples of projects funded from the Public Transport Fund

Recipient	Total allocation (£ million)	Project description
City of Edinburgh Council	6.6	The Fastlink project included bus lanes, improved bus stops and a dedicated bus-only road to improve the speed and reliability of bus services between the west of Edinburgh and the city centre.
North Lanarkshire Council	1.8	The reopened railway station at Gartcosh in May 2005 included modern facilities and a 100-space car park to encourage motorists to travel by rail into Glasgow.
Argyll & Bute Council	2.5	A breakwater to protect the 100-year-old pier at Dunoon harbour from the full impact of waves was completed in March 2005.
Fife Council	1.0	Improved interchange at Inverkeithing station between rail and bus, including waiting shelters and electronic passenger information completed in December 2005. Funding was also allocated to new buses to support a dedicated bus link to Edinburgh Airport.

Source: Scottish Executive

consider the bus quality partnerships to have been successful in providing improvements to bus services.[19]

Use of bus services is increasing in line with targets and user satisfaction is high

4.4 A third of Scottish households do not have access to a car. Disadvantaged groups are more likely to walk or travel by public transport, with buses the most commonly-used mode.[20] In 2004/05, there were 92 bus journeys per head of population in Scotland, 16 per cent higher than the figure for the UK as a whole.[21]

4.5 Overall, the annual number of passengers travelling on local buses in Scotland has increased by 23 million since 1999/2000 (Exhibit 15 overleaf). The annual rate of increase has averaged just over one per cent in line with the Executive's 2004 target. However, there was variability between regions over this period: annual local bus passenger numbers have increased by 19 million in Lothian and 17 million in Strathclyde since 1999/2000, but they fell by six million in both Fife and Highlands and Islands.

4.6 In 2005, 87 per cent of bus users were satisfied or very satisfied with the overall service.[22] The highest levels of satisfaction were found in accessibility of bus stops (87 per cent) and the ease of paying fares (87 per cent). The lowest ratings were for information at bus stops (75 per cent) and the condition of the roads (76 per cent).

A new national concessionary travel scheme has proved popular but its use will require careful monitoring

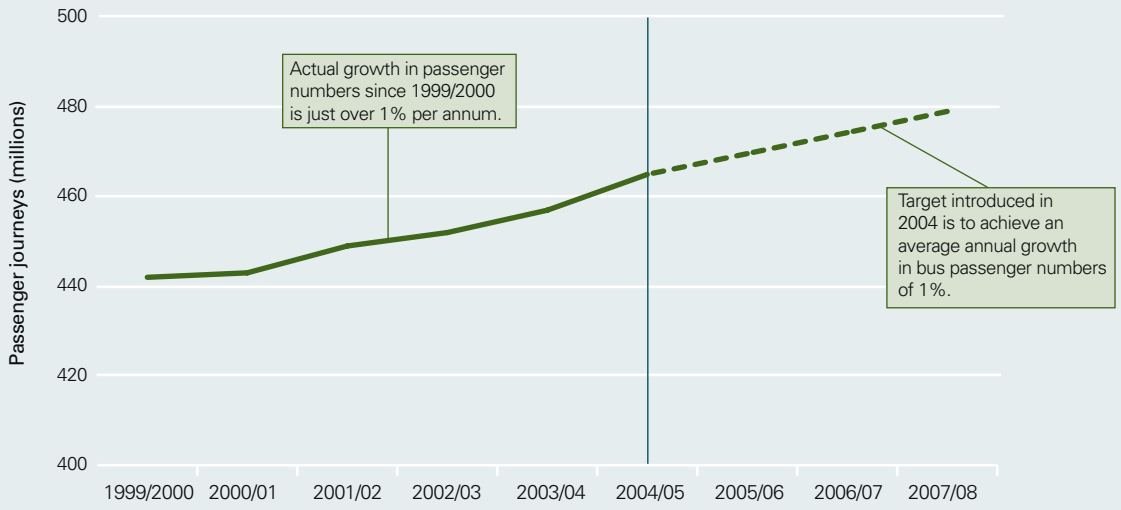
A national concessionary travel scheme was introduced in April 2006

4.7 Concessionary travel schemes promote social inclusion by making public transport more affordable for disadvantaged groups. Schemes entitle those eligible to reduced fares, and the operator is reimbursed to compensate for the loss of revenue.

4.8 In September 2002, the Department introduced national minimum standards for the provision of concessionary travel, allowing older and disabled people free local bus travel in 16 defined local areas from 9.30am on weekdays and all day at weekends. The scheme replaced other schemes operated previously by local authorities. In the first year of the scheme (2003/04) around 140 million local bus journeys were made, some 30 per cent of total bus journeys. A number of local areas operated more generous concessionary arrangements than the minimum standards set by the Department. Each local area also set its own rate of payment and method of reimbursing bus operators.

19 *Quality Partnerships and Quality Contracts: A review of current practices and future aspirations*, ATCO (2004).
20 *The role of transport in social exclusion in urban Scotland*, Scottish Executive Central Research Unit, 2001. *Women and transport: moving forward*, Scottish Executive Central Research Unit, 2000.
21 *Bus and Coach Statistics: 2004-05*, Scottish Executive Statistical Bulletin (Trn/2006/06), February 2006.
22 *Bus Passenger Satisfaction Survey 2005*, Scottish Executive, 2006.

Exhibit 15
Bus passenger usage in Scotland



Source: *Scottish Transport Statistics No.24 2005 Edition*, Scottish Executive, 2005

4.9 In April 2006, the Department introduced a single national concessionary fares scheme. The new scheme, administered by Transport Scotland, will run for seven years and has no area or time restrictions. It also allows two free return ferry trips to the mainland each year for older and disabled residents of the Western Isles and the Orkney and Shetland islands. Transport Scotland plans to introduce a concessionary travel scheme for young people from April 2007.

The cost of the new scheme is capped and there is a risk that higher than expected usage could exhaust its budget

4.10 The Department has capped the cost of the new scheme at £159 million in 2006/07 and £163 million in 2007/08. The reimbursement rate for bus operators has been set at 73.6 per cent of the average adult fare so that operators will be no better or worse off through participation in the scheme. By August 2006, some 923,000 people (over 95 per cent of those eligible) had obtained free travel passes, exceeding the 830,000 people who had concessionary passes under the 2002 scheme.

4.11 Higher than expected usage of free travel may exhaust the new scheme's budget. Bus operators have, in principle, agreed to allow the reimbursement rate to be reduced in this case, but if the reduction in the reimbursement rate is significant the objective of reimbursing operators such that they are no better or worse off could be at risk.

The scheme will use new technology to reduce the opportunity for irregularity or fraud

4.12 The new scheme will use Smartcard technology and an associated administrative system to reduce the opportunity for irregularity or fraud but the full introduction of the Smartcard technology has been delayed. Transport Scotland expects the new technology will be in place by the end of 2007. Until then, Transport Scotland will use a number of systems, such as on-bus surveys, to minimise irregularity or fraud.

The Executive has targeted funding at the specific transport problems faced by people in rural areas

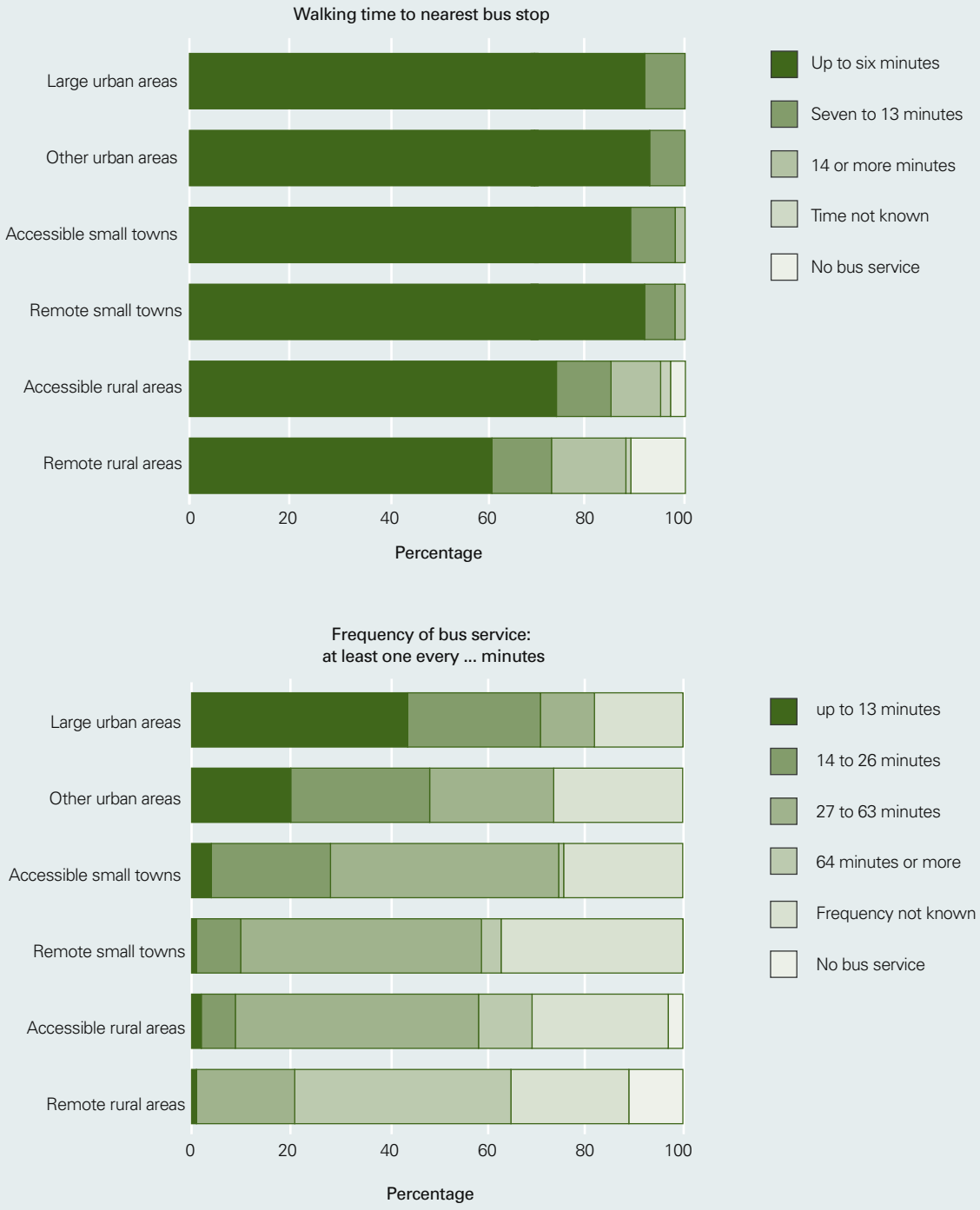
4.13 Significant numbers of people living in rural areas in Scotland do not have access to a private vehicle and for those who do, fuel prices are higher than elsewhere. Transport-related problems are exacerbated in rural areas by low coverage and frequency of bus services, and walking distances to bus stops are longer than in urban areas (Exhibit 16). As a result, the Department has targeted funding to support transport services in rural areas.

The Rural Transport Fund aims to support rural transport in three ways

4.14 The Department has made £58 million available over nine years (1999 to 2007) from the Rural Transport Fund (RTF) to support rural transport through three separate measures:

Exhibit 16

Frequency of bus services and average walking times to the nearest bus stop



Notes:
'Remote rural areas' are settlements of less than 3,000 people which are not within 30 minutes drive of a settlement of 10,000+ people.
'Accessible rural areas' are settlements of less than 3,000 people which are within 30 minutes drive of a settlement of 10,000+ people.
'Remote small towns' are settlements of between 3,000 and 9,999 people which are not within 30 minutes drive of a settlement of 10,000+ people.
'Accessible small towns' are settlements of between 3,000 and 9,999 people which are within 30 minutes drive of a settlement of 10,000+ people.
'Other urban areas' are settlements with populations of 10,000 or more.
'Large urban areas' are settlements with populations of 125,000 or more.

Source: *Scottish Transport Statistics No.24 2005 Edition,* Scottish Executive, 2005

Exhibit 17

Examples of activities funded by the Rural Community Transport Initiative

Recipient	Total allocation	Project description
Buchan Community Dial-a-Bus	£0.56m over nine years	The organisation provides demand responsive transport (DRT) services for a number of groups in Aberdeenshire, including elderly, disabled and young people. DRT services use vehicles running on flexible routes and at times which are booked by passengers in advance.
Dumfries and Galloway Accessible Transport Forum	£0.368m over ten years	The organisation was set up in 1996 to establish the transport needs in the area, assess whether provision met demand and work with others to increase transport provision. The group includes representatives from the council, NHS and community transport organisations.
Bute Community Links Bus Users' Group	£0.02m one off payment	Funding used to replace an old minibus. The new vehicle provides transport for elderly and disabled residents on Bute to access day centres, hospital and shopping facilities. It also transports disabled visitors who arrive on the island by ferry to their destination.

Source: *Rural Community Transport Initiative Study*, Scottish Executive Social Research, 2004

- The Rural Community Transport Initiative (RCTI) encourages the growth of community transport in rural areas with no scheduled bus services or where services are very limited.

- The Rural Petrol Stations Grant Scheme (RPSGS) helps to maintain a network of fuel supply in rural Scotland, where car ownership may be a necessity.

- The Rural Public Passenger Transport Grant (RPPTG) assists local authorities to provide rural bus services.

4.15 In 2004, evaluations of the RCTI[23] and RPSGS[24] found both schemes had successfully delivered their objectives. By April 2006, 161 projects had been supported with grants totalling £15.5 million under the RCTI (see Exhibit 17 for examples of RCTI-funded activities). The RPSGS has provided £1.7 million to support 91 rural petrol stations, saving 280,000 miles per year. No recent evaluation of the RPPTG has been carried out but the £36.7 million allocated under the scheme has helped to introduce over 400 new or enhanced services.

The Executive subsidises 'lifeline' transport services to improve access for remote communities

4.16 The viability of remote communities depends on good transport links. The Department provided subsidies of some £76 million in 2005/06 to lifeline services to remote communities to secure adequate levels of service throughout the year, at a fair and affordable price, and adequate quality. Lifeline services comprise:

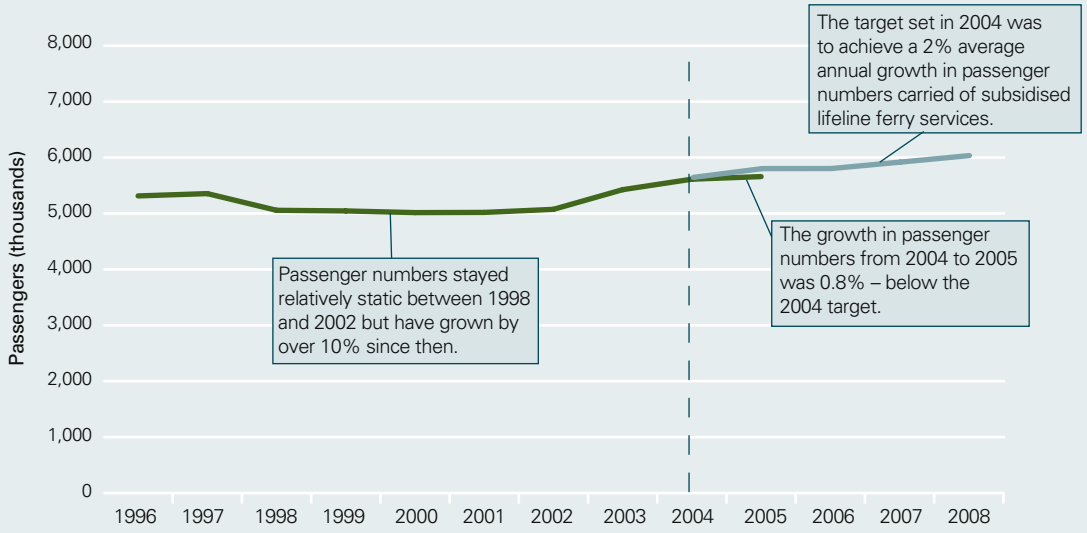
- **Ferry services on 26 routes in the Clyde and Hebridean Islands area.** Caledonian MacBrayne Ltd (Cal Mac) received deficit funding of £31.4 million in 2005/06 to provide these services. In order to comply with EU state aid and maritime transport service rules, the Department is tendering for the provision of these routes during 2006. The existing Cal Mac will become a vessel owning company with the winning service provider leasing ferries from it. The Department expects that the new tendered contract will become operational during 2007.

- **Ferry services operating between the mainland and Orkney and Shetland Islands (the Northern Isles).** NorthLink – a joint venture between Cal Mac and the Royal Bank of Scotland – provided these ferry services under contract between October 2002 and summer 2006. NorthLink received deficit funding of £23.8 million in 2005/06 to provide these services. Following financial difficulties experienced by NorthLink (the subject of a report to the Scottish Parliament by the Auditor General)[25] the Department re-tendered the ferry

23 *Rural Community Transport Initiative Study*, Scottish Executive Social Research, 2004.
24 *Review of the Rural Petrol Stations Grant Scheme*, Scottish Executive Social Research, 2004.
25 *The NorthLink ferry services contract*, Auditor General for Scotland, December 2005.

Exhibit 18

Passenger numbers on lifeline ferry services



Source: Scottish Executive

contract. NorthLink Ferries Ltd, a subsidiary of David MacBrayne Ltd, was awarded the new contract in July 2006.

- **Airport services provided by HIAL.** HIAL operates ten airports in the Highlands and Islands of which all except Inverness airport are designated as lifeline airports. The Department provided subsidy of £21 million in 2005/06 to HIAL for the purposes of reducing landing charges and hence passenger fares.

4.17 The Executive has set a number of targets for lifeline ferry and air services:

- Targets set in the 2002 Spending Review:

- To increase the quality and quantity of lifeline ferry services and ensure 98 per cent of planned sailings actually sail and 98 per cent arrive on time by 2006.

- To increase passenger numbers passing through HIAL airports by five per cent by 2006.

- Targets set in the 2004 Spending Review:

- To increase passenger numbers on the network of lifeline ferries by an average of two per cent each year.

- To increase passenger numbers passing through the nine lifeline airports (excluding Inverness) by an average 1.5 per cent each year.

4.18 Passenger numbers carried on lifeline ferries stayed relatively static between 1998 and 2002 but growth in the two years since then has been over five per cent per annum. However, the increase from 2004 to 2005 was 0.8 per cent, below the Executive's 2004 target of two per cent (Exhibit 18). Reliability and punctuality targets have been achieved.

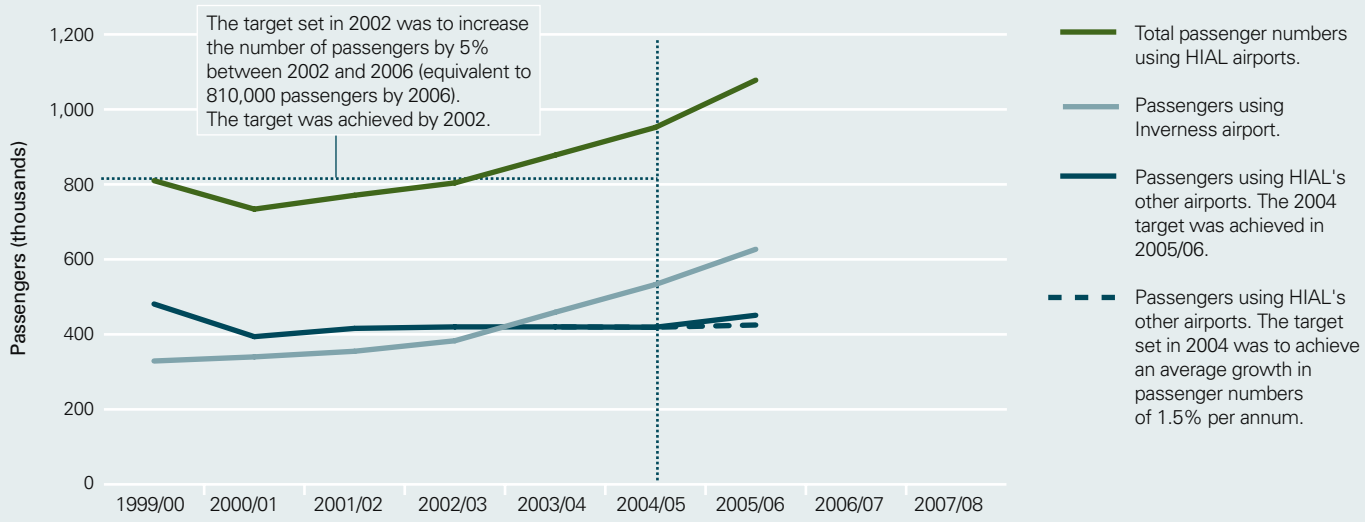
4.19 Since 1999/2000, the number of passengers passing through HIAL airports has increased by 33 per cent. The target to generate five per cent growth in passenger numbers between 2002 and 2006 was met, largely because of increased activity at Inverness airport. The 2004 target to achieve an annual growth of one-and-a-half per cent in passenger numbers at the nine lifeline airports was met in 2005/06 (Exhibit 19, overleaf).

4.20 Usage of HIAL's airports is likely to grow following the introduction of the Air Discount Scheme in May 2006. The scheme will provide discounts of 40 per cent on core air fares for residents of the Northern Isles, the Western Isles, Islay, Jura, Caithness and North West Sutherland flying to Inverness, Glasgow, Aberdeen and Edinburgh. Its aim is to promote social inclusion and access to services for local residents, but it may also provide economic benefits to the supported areas. An annual budget for the scheme of £11.2 million has been set for 2006/07 and 2007/08.

There has been increased use of travel information services funded by the Department

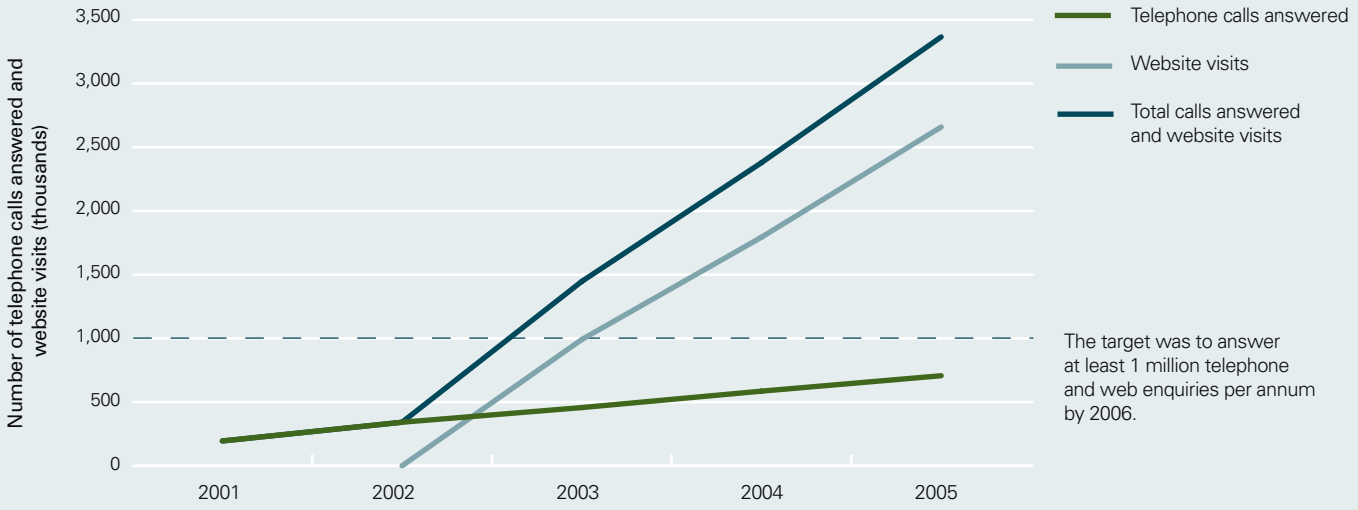
4.21 Good quality travel information helps promote social inclusion and may also help protect the environment by allowing people to

Exhibit 19
HIAL passenger numbers



Source: Highlands and Islands Airport Ltd

Exhibit 20
Enquiries to Traveline Scotland



Source: *Scottish Transport Statistics No.24 2005 Edition*, Scottish Executive, 2005

make more informed decisions about alternatives to private car travel. The Department supports two services which provide information about transport services:

- Traveline Scotland – a telephone and internet journey planning service giving information on public transport routes and timetables. The service, which is part of Traveline UK, is a partnership between public transport operators and the Department, who contribute around £1 million annually.

- Transport Direct – a UK-wide internet journey planning and information portal launched in December 2004. It can help plan journeys across all modes of transport and allows online ticket purchase. The Scottish Executive, the UK Department for Transport and the Welsh Assembly jointly fund the service, with the Executive providing £1.3 million in 2004/05.

4.22 Traveline Scotland met the Executive's 2002 target to answer at least one million enquiries per year by 2006 (Exhibit 20). The national concessionary travel scheme has contributed to increased numbers of enquiries which, on average, are now about twice that of England and Wales per head of population. According to 'mystery shopping' exercises,[26] Traveline Scotland also provides a better quality of service (using 15 satisfaction criteria) than its equivalents in England and Wales.

4.23 Transport Direct has also performed well. Its portal had over two million user sessions in 2005, exceeding the Executive's target of 1.5 million visits per annum by 2006. A new target has now been set to exceed ten million user sessions over the two years to the end of 2006. An independent evaluation of customer value and satisfaction with the service is planned for 2006/07.

26 Two surveys per year carried out by Mystery Shoppers Ltd.

Part 5. Protecting the environment and improving health through more sustainable transport

Introduction

5.1 This part of the report examines progress against the Executive's objective to protect the environment and improve health through more sustainable transport. The Department is responsible for action to reduce transport emissions. The Scottish Executive Environment and Rural Affairs Department is responsible for air quality issues and climate change policy in Scotland. In each case, they work closely with the relevant UK government departments.

The increase in travel has increased transport's contribution to greenhouse gas emissions

5.2 Emissions from transport impact on the global environment through their contribution to climate change. Between 1990 and 2003 transport related greenhouse gas emissions (mainly carbon dioxide (CO_2)) increased from 2.8 million tonnes of carbon (MtC) to 3.0MtC and by 2003 transport accounted for 17 per cent of all Scottish greenhouse gas emissions. The transport sector has an important role in contributing to the achievement of the Executive's 2010 carbon saving target.[27] The Executive considers that reducing emissions in the transport sector poses a number of challenges including:

- The requirement to break the link between economic activity and rising transport demand.
- Changing our approach to the private car, and making alternatives such as public transport, walking and cycling available and attractive to users.
- Many of the levers which are most likely to effect change are reserved policy, such as vehicle taxation and fuel duty.

Air quality in Scotland is generally good but there are hotspots of poorer quality

5.3 While CO_2 contributes to global warming it has little direct effect on health. Many of the other products of combustion, however, have significant effects on health and local air quality. Under the Environment Act 1995, the UK government and the devolved administrations are required to produce a national strategy containing standards and objectives for improving ambient air quality. The resultant Air Quality Strategy for England, Scotland, Wales and Northern Ireland set maximum ambient concentration targets in respect of eight pollutants of particular concern to human health. Transport is considered to contribute significantly towards six of these pollutants (Exhibit 21).

5.4 Air quality in Scotland is monitored at eight urban and four rural automatic monitoring stations

27 *Changing our ways: Scotland's Climate Change Programme*, Scottish Executive, March 2006. The Executive has set itself a target to exceed Scotland's share of carbon savings from all devolved policies in the UK Climate Change Programme (the Scottish Share) by one million tonnes of carbon.

Exhibit 21

Targets for transport related air pollutants

Pollutant	Target		Date to be achieved by
	Concentration	Measured as:	
Benzene – A genotoxic human carcinogen. Road transport's share of UK benzene emissions fell from 65% prior to 2000 to 33% in 2002 due to the reduction in the benzene content of petrol.	3.25µ/m^3	Running annual mean	31 Dec 2010
Carbon monoxide – Carbon monoxide produced from road transport accounted for 49% of UK emissions in 2003. Emissions have been declining due to the installation of catalytic converters in vehicles.	10mg/m^3	Running eight-hour mean	31 Dec 2003
Lead – Additives in petrol have been the primary source of atmospheric lead. Urban lead levels have reduced significantly following the introduction of unleaded fuel in 1986.	500ng/m^3	Annual mean	31 Dec 2004
	250ng/m^3	Annual mean	31 Dec 2008
Nitrogen dioxide – Road transport accounts for about half of all emissions of oxides of nitrogen in the UK.	40µg/m^3	Annual mean	31 Dec 2005
	200µg/m^3	Hourly mean not to be exceeded more than 18 times a year	31 Dec 2005
Particles – The greatest source of PM_{10} – particulate pollution less than 10um in diameter – is combustion. Road transport accounts for about 30% of UK emissions of PM_{10}.	40µg/m^3	Annual mean	31 Dec 2004
	50µg/m^3	24-hour mean not to be exceeded more than 35 times a year	31 Dec 2004
	18µg/m^3	Annual mean	31 Dec 2010
	50µg/m^3	24-hour mean not to be exceeded more than seven times a year	31 Dec 2010
Ozone – Largely arises from the chemical reaction of other pollutants such as oxides of nitrogen and volatile organic compounds produced by road transport, industrial processes and solvent uses.	100µg/m^3	Daily maximum (measured as an eight-hour annual mean) not to be exceeded more than ten times a year	31 Dec 2005

Source: *The Air Quality Strategy for England, Scotland, Wales and Northern Ireland* published in 2000 and its addendum published in 2003

which are part of a UK-wide network operated by the Department for Environment, Food and Rural Affairs and the devolved administrations. Some local authorities also operate their own monitoring sites. Not all of the stations monitor all the pollutants set out in the strategy. With the exception of nitrogen dioxide (NO_2) and particulates (PM_{10}) in central Glasgow and Edinburgh, pollutant concentrations at the Scottish monitoring sites have largely been within target levels (Exhibit 22, page 38).

5.5 The Air Quality Strategy also requires local authorities to monitor air quality within their area and to take action where air quality targets are unlikely to be met within the set timescales. In such cases the local authority must declare an Air Quality Management Area (AQMA) and draw up an action plan in order to work towards the targets. AQMAs were initially declared and action plans developed in respect of traffic-related NO_2 emissions in Aberdeen, Edinburgh and Glasgow (Exhibit 23, page 40). As a result of the introduction of tighter targets for some pollutants in 2003, further transport-related AQMAs have been established in Bishopbriggs, Dundee, Paisley, Perth and three sites in North Lanarkshire. The Executive, however, expects that most local authorities will be able to meet all pollutant targets without declaring AQMAs and has a target that only one AQMA will still be in place in 2010.

The Department is taking steps to reduce traffic emissions through a range of measures

5.6 The Department is taking action to reduce emissions of greenhouse gases and air pollutants caused by transport by promoting energy-efficient and sustainable modes of transport. In addition to the investment in public transport set out in Part 4 of this report, it is also:

- paying grants to encourage the transfer of the carriage of freight from road to rail or water
- supporting initiatives to encourage more walking and cycling especially for shorter journeys
- supporting the development of more fuel-efficient driving techniques and cleaner vehicles and fuels.

Transferring freight from road to rail or water

5.7 Since 1997, the Department has awarded £65.3 million to 28 projects under the Freight Facilities Grant (FFG) scheme. The scheme encourages the removal of lorries from the Scottish road network by helping applicants to make capital investments in rail or water freight facilities. The amount of grant depends on the environmental benefits the project will generate and a financial appraisal of the need for grant support.

5.8 The Executive has set a series of targets for the award of FFG. The Department has reported achieving these targets based on the number of lorry miles grant recipients have committed to remove from the roads once supported projects are fully implemented. There is, however, a time lag between the award of FFG and projects delivering their expected outcomes, and the actual number of lorry miles removed from Scotland's roads as a consequence of FFG has yet to reach the levels committed to (Exhibit 24, page 40).

5.9 While the FFG scheme has had some success, the lorry mileage removed from the roads amounts to less than two per cent of total heavy goods vehicle (HGV) traffic and the number of miles driven by HGVs continues to grow. Between 1994 and 2004, HGV mileage increased from 1.37 billion miles to 1.62 billion miles, an increase of 19 per cent. The volume of freight carried by road has, however, shown a fall from 155.8 million tonnes in 1994 to 153.4 million tonnes in 2003 (figures for 2004 and later are not comparable due to changes in calculation methodology). About 80 per cent of the total volume of freight transported is carried by road, over half of it on journeys of less than 30 miles where there is less scope to transfer to other forms of transport.

Encouraging walking and cycling

5.10 Encouraging a shift away from the private car to walking and cycling for shorter trips can help reduce traffic emissions and congestion, and improve health. About 80 per cent of journeys of under a mile are undertaken on foot, but 19 per cent are undertaken by car. For journeys of between one and two miles, the figure for walking falls to about a third and car use rises to 53 per cent. The average number of walking journeys per person in Scotland has declined by a third since 1985/86 and the average distance walked per year has declined by a quarter over the same period.

5.11 Walking is a key part of the Executive's 2003 physical activity strategy. The strategy established four implementation plans to increase physical activity in the workplace, in school, at home and in the wider community and sets targets for 50 per cent of adults and 80 per cent of children to meet the minimum recommended levels of physical activity by 2022. Although no specific targets have been set in relation to walking, this is the primary focus of the recently established Scottish Physical Research Collaboration.

5.12 The Executive has a target, taken from the UK National Cycling Strategy, to quadruple by 2012 the average annual number of bicycle trips made in 1996. At the start of the period an average eight cycle trips per person were made and this figure has not changed significantly since then. The Executive accepts that the target will not be met and, in light of the UK government's move away from a single national target, is considering whether to adopt more local targets.

5.13 The Executive remains committed to walking and cycling as sustainable, healthy modes of transport. Funding allocated to walking and cycling is at a record high and includes:

- Grants of £9.5 million over three years to cycle charity Sustrans to support the development of the 2,000 mile long National Cycle Network in Scotland.
- Core funding of around £0.4 million per year to Cycling Scotland to promote cycling events and to work with other cycling stakeholders to increase public participation in cycling.
- £18 million provided to local authorities from the Public Transport Fund for cycling/walking projects or projects with a large cycling/walking element in them.
- Other projects specifically aimed at increasing the number of children walking and cycling to school (Exhibit 25, page 41).

5.14 The Department has also supported a number of travel and environmental awareness campaigns, such as the Choose Another Way campaign (formerly Learn to Let Go), to increase the number of journeys made by walking, cycling and public transport and to encourage more sensible use of the car. A January 2005 survey[28] found that public awareness is increasing and that many people would like to use their car less. The same survey found that 77 per cent of respondents had not heard of the Choose Another Way campaign and of those who had, almost half said that the campaign had not encouraged them to reconsider their travel arrangements.

Developing more fuel-efficient driving techniques and cleaner vehicles and fuels

5.15 The Department expects that roads will continue to be the primary means by which freight is transported around the country, but it also recognises that the way people drive can influence the amount of transport pollutants which are emitted to the atmosphere. It has used the Scottish Road Haulage Modernisation Fund to provide fuel-efficient driving training to HGV drivers. The scheme will run until March 2007 by which time 1,400 HGV drivers are expected to have been trained. Driver training is expected to lead to fuel savings averaging ten per cent and reduced emissions. A similar project, launched in September 2005, is designed to evaluate the use of truck simulator technology to provide safe and fuel-efficient driver training. 700 truck drivers received simulator training up to March 2006.

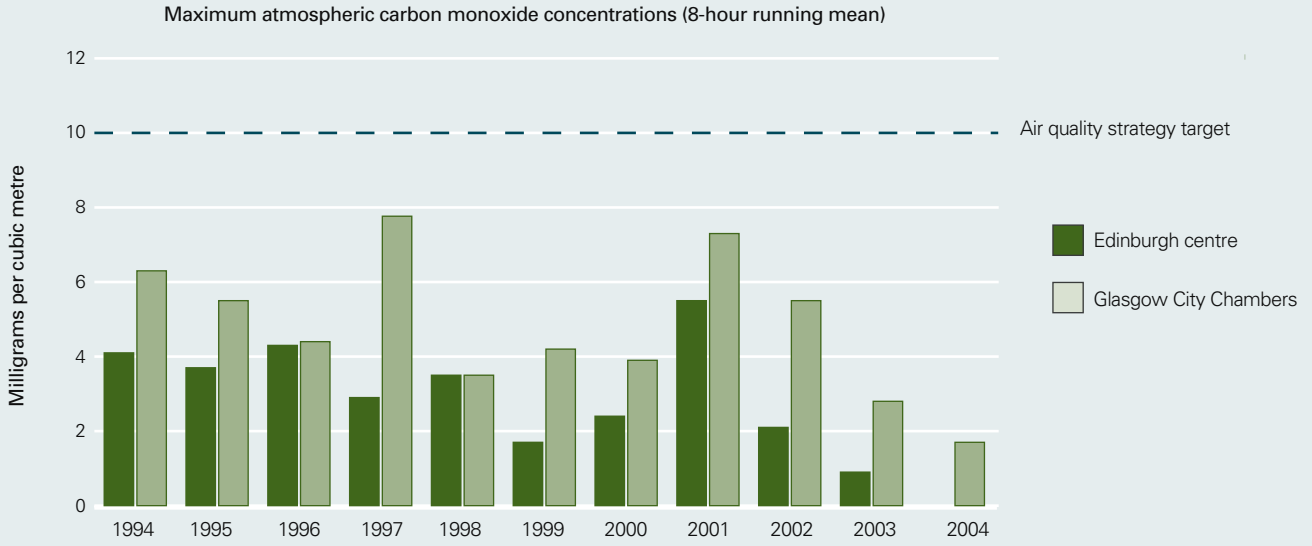
5.16 Vehicle standards are a reserved matter and the UK Department for Transport takes the lead in most government-backed initiatives to promote cleaner vehicles and fuels. The Scottish Executive has provided grants totalling some £4 million over the three years to March 2006 to contribute towards the cost of fitting vehicles with emission reduction equipment (CleanUp programme) or converting them to run on liquid petroleum gas (Powershift and Autogas+ programmes). Over 2,500 vehicles were supported under these grant schemes. Following a financial and environmental review of the schemes' effectiveness, the schemes were put on hold in 2005 and may be replaced by new initiatives later in 2006 which the Executive expects will better deliver its air quality and climate change objectives.

5.17 Biofuels produced from animal bio-products or plant matter offer savings of over 40 per cent in CO_2 emissions over conventional petrol or diesel.[29] The Executive is participating in the UK-wide target to increase biofuel sales to five per cent of total fuel sales by 2010. At the moment sales of biofuels account for less than one per cent of total fuel sales. The Executive and the UK Department for Transport expect that the 2010 target will be achieved through the introduction of a Renewable Transport Fuels Obligation (RTFO) from 2008 which will place an obligation on suppliers to ensure that a specified percentage of their fuel sales are biofuels. The introduction of a RTFO is a reserved matter (although implementation is devolved) and decisions have yet to be made as to how they would work in practice. In the meantime, Scotland lags behind England and Wales in terms of the number of biofuel production plants and retail points, although the UK's first large scale biodiesel plant opened near Motherwell in January 2005, supported by a £1.2 million grant from the Executive.

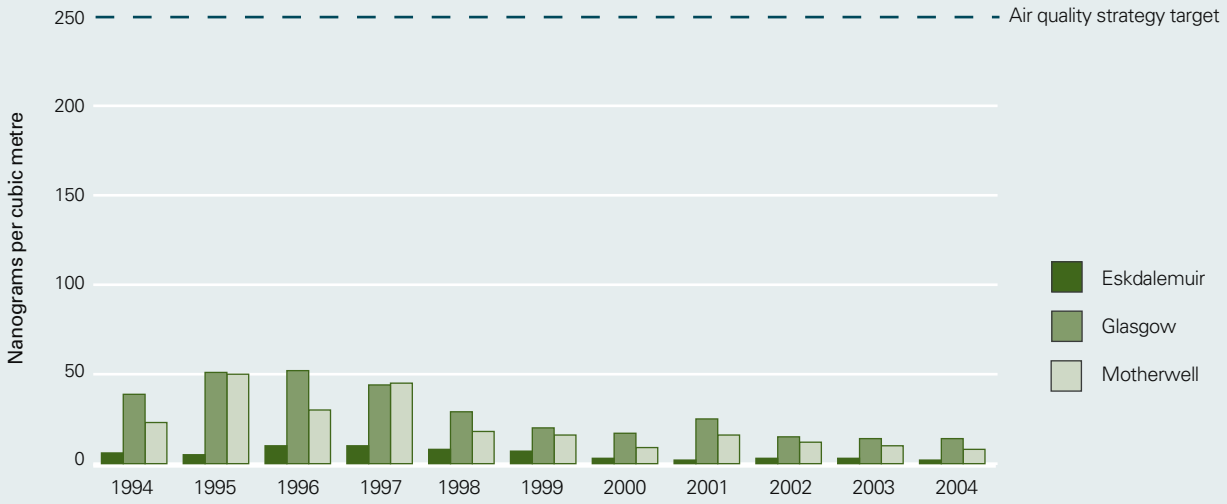
28 *Public Perceptions of Travel Awareness – Phase 3*, Scottish Executive Transport Research Planning Group, January 2005.
29 *Towards a UK Strategy for Biofuels – Public Consultation*, Department for Transport, April 2004.

Exhibit 22

Concentrations of selected transport related pollutants against targets



Annual mean lead concentrations



Annual mean atmospheric particulates (PM_{10})

Note: The Edinburgh site ceased recording in October 2003.

Source: *Scottish Transport Statistics No.24 2005 Edition*, Scottish Executive, 2005

Exhibit 23

How Glasgow City Council is tackling local air quality problems

The Glasgow AQMA was declared in 2002 and covers the city centre bounded broadly by the M8 motorway to the north and west, the River Clyde to the south, and the High Street and Saltmarket to the east.

The action plan was developed in response to air quality assessment which indicated that concentrations of NO_2 exceeded acceptable levels at a number of locations. More than 70 per cent of oxides of nitrogen within Glasgow were attributed to road traffic emissions and the action plan therefore concentrates on reducing traffic numbers and congestion. Actions highlighted include:

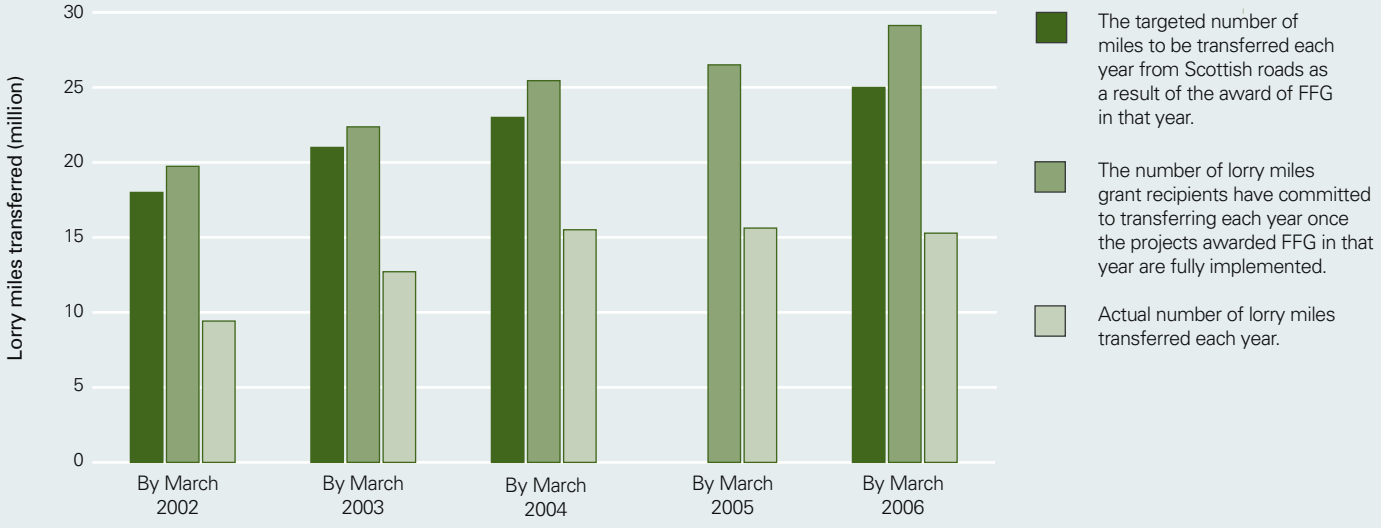
- The proposed M74 extension to reduce travel times and relieve pressure on the congested northern flank of the M8 and strategic local roads.
- The development of an east end regeneration route to improve access to the area and relieve congestion on existing roads.
- Improved message signing to provide up-to-date information on car park capacity on the approach to the city to avoid car drivers trying to get into car parks which are already full, leading to less city centre congestion.
- The development of quality bus corridors, bus information and signalling systems so as to encourage people to make greater use of public transport and reduce the use of private cars.
- The provision of more park and ride facilities to reduce car dependency while improving access to work, services, etc.
- Increased roadside testing of vehicles to ensure they do not exceed prescribed exhaust emission limits.

Subsequent air quality monitoring has indicated that levels of NO_2 have fallen since the introduction of the AQMA although the target to reduce NO_2 emissions to 40µg/m3 by the end of 2005 was unlikely to be met at all city centre locations in the short term.

Source: Glasgow City Council

Exhibit 24

Department performance against target to transfer lorry miles from road to rail or water



Notes:
1. The first target for FFG was set in 1999. This was amended in 2001 to award grants by March 2002 which, once fully implemented, would result in the transfer of 18 million lorry miles from Scottish roads. Subsequent targets have been to award grants in the year to March 2003, the year to March 2004 and the two years to March 2006, which would result in the transfer of an additional three million, two million and two million lorry miles respectively.
2. 2005/06 actual figures are the Scottish Executive's latest estimates.

Source: Audit Scotland analysis of Scottish Executive figures

Exhibit 25

Initiatives aimed at increasing the number of children who walk or cycle to school

How our children get to school has changed over the last 20 years. In 1985/86, 70 per cent of children either walked (69 per cent) or cycled (one per cent) to school but by 2002/03 only about half did so.

The Safer Routes to School Project forms part of the £50 million being made available to local authorities between 2003 and 2008 under the Cycling, Walking and Safer Streets initiative. The Safer Routes to School Project enables local authorities to identify and implement measures designed to reduce the number of cars on the 'school run' and to encourage more children to walk and cycle to school. Projects supported include:

- new 20mph speed zones in residential areas around schools
- new pedestrian and cycle crossing facilities
- schemes for accompanying children who walk to school e.g. walking bus schemes
- new bike sheds and secure locker facilities
- classroom activities on road and personal safety.

The Scottish Executive has also provided some £1 million a year to establish school travel coordinators (STC) within each local authority. STCs are expected to promote the health and environmental benefits of walking and cycling to school, spread best practice in individual schools on safe walking and cycling to school and help coordinate work across local authority departments. An evaluation of STCs in September 2005 found they were working in 265 secondary and over 1,700 primary schools. It was difficult to separate the impacts of STCs from the impact of partners such as Road Safety Officers but awareness of the STC role and its aims is generally high among partner professions.

Source: Scottish Executive

Part 6. Improving the safety of journeys

Introduction

6.1 This part of the report examines progress against the Executive's objective to make transport systems safe for users. It concentrates on road safety and, in particular, performance against accident reduction targets, the development of safer roads and efforts to promote road safety awareness. Other matters, such as driver training and vehicle standards, are the responsibility of the Department for Transport and are not considered (Exhibit 26).

Road casualty reduction targets have been achieved ahead of schedule

6.2 Road accidents in Scotland involving death or injury cost society about £1.1 billion each year.[30] The Executive set a number of targets in 2000 to reduce road casualties in the period to 2010.[31] Compared to the average between 1994 and 1998, the Executive wanted to achieve:

- a 40 per cent reduction in the total number of fatal and serious injury casualties
- a 50 per cent reduction in the number of children killed and seriously injured
- a ten per cent reduction in the slightly injured casualty rate, expressed as the number of people slightly injured per 100 million vehicle kilometres.

6.3 Between 1994 and 1998 an average of 378 people a year were killed on Scotland's roads with a further 4,460 suffering serious injury. Since then the number of people killed and seriously injured has fallen by 40 per cent so the target has been achieved five years ahead of schedule (Exhibit 27, page 44).

6.4 Good progress has also been made with respect to reducing the number of child accident casualties. Between 1994 and 1998, an average of 30 children each year were killed on Scotland's roads and 812 seriously injured. Since then, killed and seriously injured casualty rates have fallen by 57 per cent so that the Executive's target to reduce child accident casualties has now been achieved (Exhibit 28, page 44).

6.5 An average of 17,478 people each year were slightly injured on Scottish roads between 1994 and 1998, equivalent to 46.42 casualties per 100 million vehicle kilometres. In 2005, this figure had fallen to 14,621[32] slightly injured casualties, equivalent to 34.23 casualties per 100 million vehicle kilometres. There has therefore been a reduction in the number of casualties per 100 million vehicle kilometres of over 25 per cent, indicating that this target has also now been achieved.

Action is being taken to develop safer roads

6.6 The Department is responsible for trunk roads and can therefore

30 *Road Accidents Scotland 2004.* Scottish Executive, January 2006. The cost of casualties includes both human cost and direct economic cost. Human cost includes the pain, grief and suffering to the casualty, relatives and friends and, for fatal accidents, the intrinsic loss of enjoyment of life. The economic cost covers loss of output, medical costs, cost of damage to vehicles and property, and costs to the police and insurance administration.

31 *Tomorrow's roads: safer for everyone,* a joint strategy produced in 2000 by the Department of the Environment, Transport and the Regions, the Scottish Executive and the National Assembly for Wales.

32 *Main Transport Trends*, Scottish Executive Statistical Bulletin (Trn/2006/05), 2006.

Exhibit 26
Responsibilities for road safety

The Executive is responsible for:

- national road safety education and publicity initiatives
- safety measures on trunk roads, including speed limits and pedestrian crossings
- legislation on traffic calming and road humps
- guidance to local authorities on a range of road safety issues.

Local authorities are responsible for road safety on local roads in their area. They can introduce a wide range of measures including:

- speed limits
- traffic calming and road humps
- school crossing patrols
- pedestrian crossings
- local road safety education and publicity initiatives.

The UK Department for Transport is responsible for:

- driver training and testing
- driver and vehicle licensing
- vehicle standards
- drink and drug driving
- national speed limits
- road traffic offences and penalties.

Police forces are responsible for the enforcement of road traffic law.

Source: Audit Scotland

take direct action to improve safety on these roads. The Department must rely on local authorities to take steps to reduce accidents on local roads but it is providing additional funding to enable this to happen.

6.7 In 2005, about 40 per cent of all road casualties occurred on roads with a speed limit of more than 40mph, although these roads accounted for just over half the people killed and seriously injured and 72 per cent of deaths. The rate of decline in the number of people killed and seriously injured on these roads is lower than on roads in built-up areas. By 2005 the number of people killed and seriously injured on roads with speed limits of more than 40mph had fallen by 36 per cent compared to the average between 1994 and 1998, whereas on roads in built-up areas the rate of decline was 45 per cent.

Trunk roads

6.8 The Department works with the trunk road maintenance operating companies (see Part 3) to monitor trunk road safety and to identify sites that would benefit from accident prevention measures. Accident reduction measures can include new signing and road markings, anti-skid treatments, speed limit reductions and larger scale measures such as climbing lanes and increased overtaking opportunities. Since 1989, more than 550 accident reduction schemes have been introduced on Scottish trunk roads at a cost of £16.9 million. They are estimated to have prevented 600 accidents to date.

Local roads

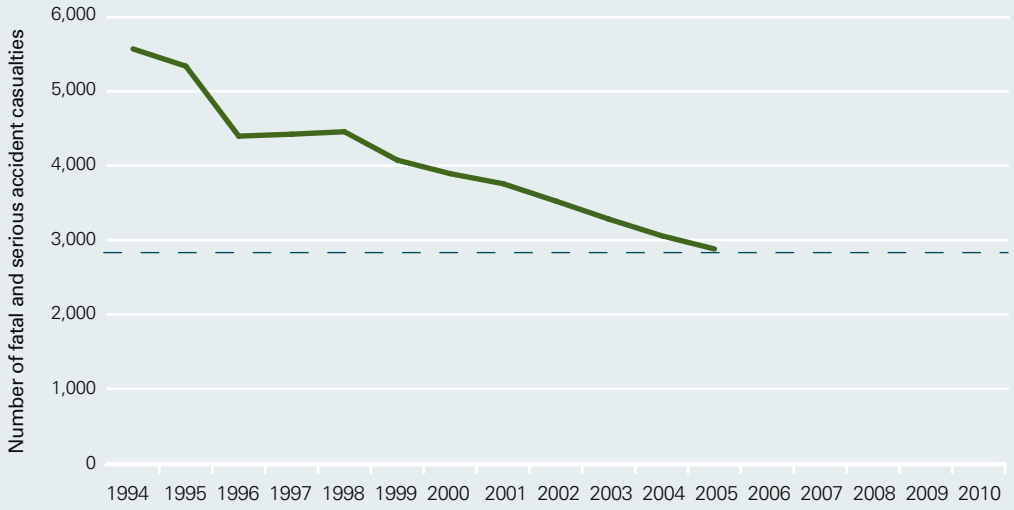
6.9 Child pedestrians are a particularly vulnerable group, making up 37 per cent of pedestrian non-fatal injuries in 2005 and over six per cent of all the people injured on Scottish roads. Following a pilot project in 1998 which indicated that the introduction of (non-mandatory) 20mph speed zones was successful in both reducing vehicle speeds and accidents,[33] the Department is providing around £50 million to local authorities between 2003 and 2008 to introduce 20mph schemes around schools and related safety projects. By the end of 2005, 20mph speed zones were in place at 1,463 schools (about 54 per cent of schools in Scotland).

6.10 One of the related safety projects is Home Zones, a pilot project involving four local authorities which aims to create residential areas where pedestrians, cyclists and drivers share the road space. Streets in Home Zones are designed to be safer, to look better and to have attractive places for children to play and people to meet. The first Home Zones were established following guidance issued by the Department in 2002. Consultation with residents has, however, been time consuming and progress has been slower than originally hoped. The Edinburgh pilot scheme was suspended by the local authority in 2005 due to excessive cost and lack of community support. Progress on the Aberdeen pilot also stopped in 2005 following the publication of proposals to demolish some of the properties within the area designated for the Home Zone.

33 Scottish Executive Central Research Unit '20mph Speed Reduction Initiative' 2001

Exhibit 27

Total fatal and serious accident casualties against target

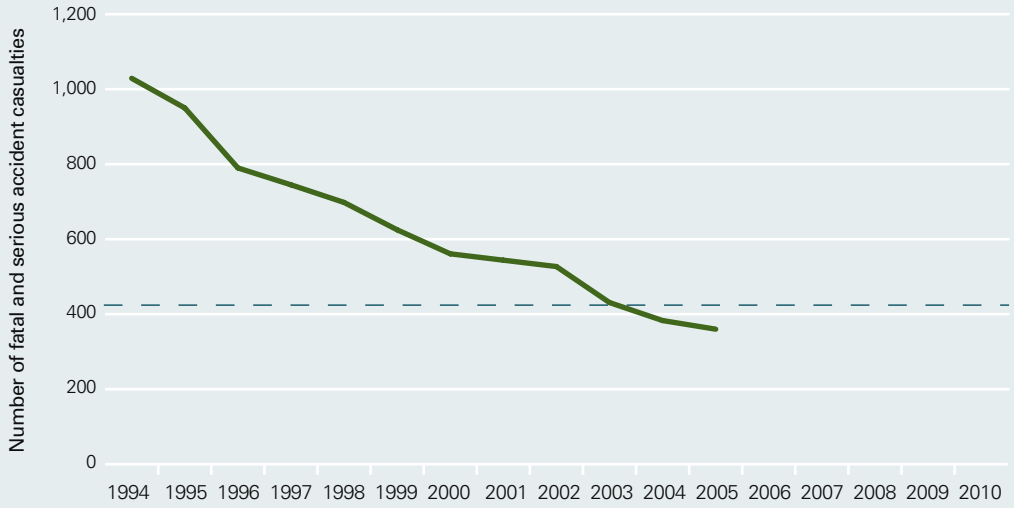


The target is to reduce the total number of fatal and serious accident casualties to 2,903 per annum by 2010 (a 40% reduction on the average between 1994 and 1998).

Source: Scottish Executive Statistical Bulletin: Key 2005 Road Accident Statistics: June 2006

Exhibit 28

Child fatal and serious accident casualties against target



The target is to reduce child fatal and serious accident casualties to 421 per annum by 2010 (50% of the average between 1994 and 1998).

Source: Scottish Executive Statistical Bulletin: Key 2005 Road Accident Statistics: June 2006

Significant effort is directed towards improving road safety awareness

6.11 Designing safe roads is important but road safety also depends on the behaviour of drivers, cyclists and pedestrians. The Department provides annual funding of about £1.5 million to Road Safety Scotland (formerly the Scottish Road Safety Campaign) to develop and coordinate Scotland-wide road safety education and publicity campaigns. Road Safety Scotland (RSS) works closely with local authorities, police road safety units and other partners to ensure a joined-up approach to road safety in Scotland.

6.12 Road Safety Scotland's publicity campaigns and other initiatives are targeted at the main causes of accidents and at groups at particular risk of accidents. In 2005/06 its activities included:

- Further screening of the fourth Foolspeed advert.

Excessive speed is considered to be a factor in about a third of fatal road traffic accidents.[34] The Foolspeed campaign sought to tackle inappropriate speeding in urban areas, with the fourth and final television advert in the series looking at the positive aspects of adopting a calmer driver style. An evaluation of the campaign was carried out in the early part of 2006 and is expected to be published shortly.

- Coordinating campaigns to reduce drink and drug driving.

Alcohol-related road accidents are estimated to account for about one in every six road accident fatalities. Drink-driving advertising campaigns in 2005/06 concentrated on the 'morning after' effect and the lifestyle consequences of being caught drinking and driving. Towards the end of the financial year, a new drink-drive TV advert was made, focusing on the real threat of being caught and convicted of drink-driving.

Many people who take drugs and drive believe that drugs do not impair their driving ability and that there is little chance of them being caught. A radio advert highlighting the dangers of drug-driving was aired in January 2005 and supported by posters specifically targeted at cannabis users. RSS's Driver Behaviour Strategy Working Group is considering how next to tackle drug-driving.

- Coordinating campaigns to reduce accidents involving young drivers.

Around 2,000 young people (aged 17-19 years) pass their driving test in Scotland every month. As many as one in five can be expected to be involved in a crash in their first year of driving. Two main initiatives were launched in 2005/06. 'Crash Magnets' involved the production of an educational DVD for S3-S6 secondary school children addressing excessive speed, drink/drug driving, seatbelt wearing and road user distraction such as the use of mobile phones. The 'Before and After' advertising campaign focused on the physical consequences of being involved in a car crash based on survey findings that disability is a major concern to young males.

- Promoting road safety among motorcyclists.

Unlike other modes of transport, the number of accidents involving motorcyclists on Scotland's roads is increasing. Around 450 motorcyclists were killed and seriously injured in 2002, representing an increase of nine per cent per year since 1996.[35] RSS routinely funds the road safety exhibition at the annual Scottish Motorcycle Show. It also continues to produce 'Bikesafe' promotional leaflets as part of the multi-agency Bikesafe Scotland's campaign to reduce motorcycle accidents through better training and education of motorcyclists.

- Administering the Children's Traffic Club in Scotland (CTCS).

The CTCS was established in November 1995 for all three to five-year-old children. Once registered, the child is provided with six books over an 18-month period designed to assist parents/carers to teach road safety to the child. Since 1995, some 333,000 children have been registered with the CTCS representing 56.4 per cent of all eligible children. In 2005, there were 27,197 new members, representing an uptake rate of 52 per cent. A report on research into increasing membership of the CTCS in areas of high social deprivation was published in July 2006.

- Contributing to a campaign to increase the wearing of seatbelts by children.

Research in 2002[36] found that only 87 per cent of children were wearing seatbelts and fewer than 82 per cent of five to 13-year-olds were compliant with the law. During 2005/06, RSS was a key partner in the 'Good Egg' child in-car safety campaign which aims to provide parents and children with information necessary to ensure children and young people are carried safely in vehicles.

34 *Tomorrow's roads: safer for everyone*, a joint strategy produced in 2000 by the Department of the Environment, Transport and the Regions, the Scottish Executive and the National Assembly for Wales.
35 *Motorcycle accidents and casualties in Scotland 1992-2002*, Scottish Executive Research Findings No.194/2004, October 2004.
36 *Seat Belt Wearing in Scotland: A Second Study of Compliance*, Scottish Executive Research Findings No.157/2002, January 2003.

Appendix 1. 2003 Partnership Agreement transport commitments

The 2003 Labour-Liberal Democrat Partnership Agreement included the following transport commitments and supporting activities:

High-level commitments

To ensure that the transport system meets the needs of business, transport users and the environment by:

- delivering rail links to Edinburgh and Glasgow airports
- re-opening the Airdrie to Bathgate railway
- re-opening the Kincardine-Alloa-Stirling rail link
- constructing the Larkhall to Milngavie line
- redeveloping Waverley station in Edinburgh in co-operation with the Strategic Rail Authority
- investing in a tram network in Edinburgh
- extending air routes through the Air Route Development Fund
- improving Scotland's ferry links to mainland Europe
- completing the central Scotland motorway network
- completing the Aberdeen Western Peripheral Road
- extending concessionary fares schemes on public transport, including a national off-peak bus scheme for older people and people with disabilities
- assessing improved public transport concessions for people with disabilities
- progressively introducing a scheme of national bus, rail and ferry concessionary travel for young people, initially for all in full-time education or training
- supporting construction of the Borders Rail Line
- continuing to support feasibility studies into the Glasgow Crossrail project, and other public transport initiatives in Glasgow, and the Aberdeen cross-rail link.

To improve access for rural communities by:

- reviewing existing bridge tolls in Scotland and entering into negotiations with a view to ending the discredited toll regime for the Skye Bridge
- expanding the Rural Transport Initiative and developing its qualifying criteria innovatively to meet further identified needs
- working to reduce the cost of lifeline air links within, to, and from the Highlands and Islands by suitable use of Public Service Obligations to improve services, increase frequency and reduce the cost to individuals, businesses and public agencies. We will fully evaluate the current HITRANS proposals for a Highlands and Islands air network
- ensuring sufficient resources are available for the non-trunk road network, particularly recognising the needs of pressurised rural roads affected by timber production and other primary industries.

To protect the environment and improve safety by:

- taking more action to get freight off our roads, by using Freight Facilities Grants to encourage freight carrying by rail and water
- introducing Green Transport Plans
- introducing 20mph speed zones around schools and safer routes to school for walking and cycling
- providing a national framework for safe walking to school and walking buses
- supporting the development of Homezones to improve safety for pedestrians and cyclists in residential areas.

To ensure that our transport system is well planned and delivered by:

- before 2007, beginning work on the next ten-year Transport Plan and, as part of that process, conducting a strategic projects review for all transport modes, against clear criteria on safety, environmental impact and meeting the economic needs of Scotland
- bringing forward proposals for a Strategic Transport Authority as an agency within the Executive directly accountable to Ministers, focusing on: delivery improvements in transport infrastructure; coordination of national concessionary fare schemes; better investment balance between transport modes and monitoring of the delivery of national targets and standards to secure sustainable transport; taking responsibility for the delivery of quality bus contracts; securing improved working with local authorities as partners in delivery; the development of effective regional delivery partnerships; overseas routes promotion; and oversight of currently tolled bridges. The Ministerial role would be to set policy direction and budget allocation.

Supporting activity

Improving infrastructure

- Negotiate UK Government support to develop Scottish bids to be the UK's international container hub port.
- Continue to support local authority provision of park and ride facilities linked to fast means of transport in and out of town and city centres.
- Learn from experience overseas with a view to setting a minimum standard for the planting of trees to act as carbon sinks beside new road developments.

Improving integration of different transport modes

- Continue to ensure that bus timetable information is easily available and that bus services offer convenient links between communities and other types of public transport.
- Continue to support easy to use through-ticketing schemes, including time-limited tickets.
- Continue to invest in high quality travel information.
- Ensure that the needs of cyclists are properly taken into account in future rail and ferry franchises.

Promoting public transport

- Agree a new ScotRail franchise and improve on the current level of service.
- Continue to support and invest in lifeline ferry links.
- Ensure that, under the new contract for CalMac ferries, encouragement is given for innovation on existing ferry routes and new or shorter crossings to islands.
- Monitor whether the Quality Partnership powers included in the Transport Act 2001 are adequate to protect and enhance evening, weekend and rural bus services.
- Pilot new kick-start plans to create better value bus services, provided over an 18-month period to promote particular under-used routes through enhanced frequency and marketing.
- Promote quality contracts for bus services.
- Support demand-responsive transport (DRT) initiatives, particularly in rural areas.

Protecting the environment and improve safety

- Support initiatives to improve safety at railway stations and the satisfaction experienced by passengers.
- Continue to invest in road improvements to reduce casualties.
- Ensure that car fumes are reduced by supporting the use of emission-reducing equipment.
- Reduce light pollution and save energy by specifying appropriate lighting standards.

Appendix 2. Review of transport appraisal methods

We reviewed how a sample of 22 road and rail projects were appraised. The sample comprised most of the major transport projects identified by the Scottish Executive as priorities in its transport White Paper *Scotland's transport future* (published in June 2004) plus a sample of other projects.

The Scottish Executive identified the 13 road projects in the sample from three main sources:

- Projects which were carried over from the previous administration but had been subject to the Strategic Roads Review (SRR) carried out in 1998/99 to assess their continued viability.

- Projects which were identified through the multi-modal Central Scotland Transport Corridor Study (CSTCS) carried out between 2000 and 2002 to examine options aimed at relieving congestion on the A8, A80 and M74 corridors.

- Smaller projects which were identified through Route Action Plan (RAP) reviews aimed at identifying options for improving safety and operational effectiveness on single carriageway trunk roads.

Seven of the nine rail projects in the sample were identified by local authorities, one (the Larkhall – Milngavie Rail Link) was identified by Strathclyde Passenger Transport. The remaining rail project was identified through the Central Scotland Transport Corridor Study.

The approach to the evaluation of these projects was influenced by their size and when they were first proposed:

- Five projects pre-dated the introduction of STAG. The Larkhall – Milngavie Rail Link received financial support from the Scottish Executive's now closed Transport Challenge Fund and was subject to an appraisal methodology specifically developed for awarding grant support from the Fund. The other four projects were identified through the Strategic Roads Review and were subject to the Scottish Executive's New Appraisal Methodology (NAM). The NAM approach scored proposed road schemes against a series of sub-criteria within the five main criteria of integration, economy, safety, environment and accessibility, using a textual scale ranging from strongly negative to strongly positive. Road proposals were not assessed against other modal options but a 'do minimum' option was considered.

- Sixteen projects were subject to some form of STAG appraisal. STAG is applicable to all projects after July 2001, except those projects which were at an advanced stage of planning at that time. Its main features include:

  - A two-stage approach to evaluating transport options with stage one involving a high-level sift of options and with more detailed analysis of feasible options carried out at stage two.

  - Unlike NAM, it can be used to evaluate different transport modes eg, to compare the merits of different road and rail options to solve particular transport problems.

  - It assesses options against scheme-specific objectives and the extent to which they contribute to the Scottish Executive's five high-level transport objectives of economic development, protecting the environment, social inclusion, integration and safety.

The extent to which STAG was applied to these projects differed as can be seen from the following tables (see overleaf).

- The remaining project was not subject to a STAG appraisal because the project was an offshoot from the M8 upgrade examined as past of the CSTCS. The Department considered that it was inappropriate to subject a relatively small project to a separate STAG analysis.

Project	Appraisal approach
Projects which pre-dated STAG	
M74 Completion	These four schemes were identified through the SRR and appraised using the NAM methodology.
Kincardine Bridge – second crossing	
A96 Fochabers/Mosstodloch Bypass	
A68 Dalkeith Bypass	
Larkhall-Milngavie rail link	This project was proposed by Strathclyde Passenger Transport and funded from the Transport Challenge Fund. It was appraised using methodology developed for assessing proposals against Fund objectives.
Projects which were subject to STAG appraisal	
M8 Baillieston-Newhouse	These three projects were reviewed as part of the SRR and referred to further investigation as part of the CSTCS. Full two-stage STAG appraisals were carried out on various road options.
M80 Stepps-Haggs	
A80 Auchenkilns	
Airdrie-Bathgate Rail Link	This project was identified as part of the A8 corridor plan which was examined as part of the CSTCS. The whole corridor plan was subject to a full two-stage STAG appraisal. A second full STAG appraisal was carried out to examine the rail link.
A68 Pathhead to Tynehead Junction	These five smaller projects costing less than £5 million each were identified through RAP reviews. Each was appraised using Small Scheme Appraisal Summary Tables involving a simplified appraisal carried out in line with STAG principles.
A9 Kincraig to Dalraddy	
A76 Glenairlie	
A9 Crubenmore Dual Carriageway Extension	
A77 Ardwell to Slockenray	
Edinburgh Airport Rail Link	Both these projects were proposed by the relevant local authority. Earlier appraisals eliminated options such as park and ride facilities and increased bus services leaving only heavy rail options to be evaluated through the STAG process.
Glasgow Airport Rail Link	
Waverley Infrastructure Works	Proposed by the City of Edinburgh Council. Options appraised using STAG 1 with detailed design of the preferred option appraised using STAG 2 methodology.
Aberdeen Western Peripheral Route	Proposed by the North East of Scotland Transport Partnership. The need for the AWPR was identified through a STAG appraisal of the local regional transport strategy. Options for the specific route of the by-pass were then taken forward by the Scottish Executive using trunk road design guidance.
Stirling-Alloa-Kincardine Rail Link	Proposed by Clackmannanshire Council. Various options were considered as part of a bid for funding from the Public Transport Fund prior to the introduction of STAG. Railway route options were subsequently assessed using STAG.
Edinburgh Trams Phase 1	Proposed by the City of Edinburgh Council. The need for a tram system was identified through a STAG appraisal of the local transport strategy. Route options were subsequently appraised individually using STAG 2. The preferred option is, however, an amalgamation of two lines which has not been subject to full STAG appraisal.
Borders Rail Line	Proposed by Scottish Borders Council. Various options were considered as part of a bid for funding from the Public Transport Fund prior to the introduction of STAG. The preferred railway option was then assessed using STAG. As part of the Scottish Parliament's consideration of the Waverley Railway (Scotland) Bill, other non-rail options were subsequently re-assessed using STAG in 2005.
Projects which were not subject to STAG appraisal	
M74 Raith Interchange	Identified as part of an offshoot from the M8 upgrade through the CSTCS. The junction was considered too small for a formal STAG appraisal.

Appendix 3. Major projects – cost and timescale estimates

Project	Cost estimates (£ million)		Construction estimates				Reasons for estimate increase
			Start		Complete		
	Initial	Latest	Initial	Latest	Initial	Latest	
RAIL [1]							
Borders Rail Line Aims to increase economic opportunities and improve quality of life for communities in Midlothian and the Borders. (June 2006 – Bill passed by Scottish Parliament.)	130 (2003)	155	2005	Early 2007	2008	End 2011	Projected price inflation. There is no real terms cost increase.
Edinburgh Trams Phase 1 Aims to help create the transport infrastructure necessary to promote a growing local economy and create a healthy, safe and sustainable environment. (March 2006 – Edinburgh Tram Bills (Lines 1 and 2) passed by Scottish Parliament.)	473 (2003)	450-500	Mid-2006	Autumn 2006	Mid-2009	Early 2011	Scottish Executive contribution inflated from £375m in 2003 prices to expected out turn prices. No real terms cost increase.
Edinburgh Airport Rail Link Aims to cope with projected increase in passenger numbers at Edinburgh Airport, which is currently only accessible by road. (March 2006 – Bill introduced to Scottish Parliament.)	497	550-600	2007	Early 2007	2011	End 2011	Projected price inflation. No real terms cost increase.
Glasgow Airport Rail Link Aims to cope with projected increase in passenger numbers at Glasgow Airport, which is currently only accessible by road – principally the M8. (March 2006 – Bill introduced to Scottish Parliament.)	160	170-210	2007	2007	End 2009	End 2010	Projected price inflation. No real terms cost increase.
Airdrie - Bathgate Railway Aims to reduce congestion on the M8/A8 and to improve transport links between West Lothian and North Lanarkshire with Glasgow and Edinburgh. (May 2006 – Bill introduced to Scottish Parliament.)	341	300-375	2007	Early 2007	2010	2010	Initial estimate falls within latest range. Range reflects range of likely future cost inflation.

Stirling - Alloa - Kincardine rail link Aims to improve public transport access to and from Alloa, and improve freight links to the Kincardine Bridge to remove freight (coal) trains from the Forth Rail Bridge. (Construction started October 2005.)	37 (2003)	65-70	Spring 2004	Started Oct 2005	Winter 2005-06	Summer 2007	Increase in land/property compensation following detailed investigation by District Valuer. Changes in railway standards. Delays and changes in project scope caused by Railtrack going into administration.
Waverley Station (Phase 1) Aims to reduce (road) congestion by increasing track capacity, creating opportunities to expand and improve services. (Construction started December 2005.)	150	150	N/A	Started Dec 2005	Autumn 2006 - end 2007	Dec 2007	No cost increase expected despite price inflation.

1 Rail projects – where possible, 'initial' estimates are taken from the 'explanatory notes' for each scheme's Bill when it was presented to the Scottish Parliament. (Dates in brackets are when estimates were made). 'Latest' estimates are taken from the Transport Minister's announcement to Parliament on 16 March 2006.

Project	Cost estimates (£ million)		Construction estimates				Reasons for estimate increase
			Start		Complete		
	Initial	Latest	Initial	Latest	Initial	Latest	
ROAD [2]							
M74 completion Aims to tackle congestion, improve accessibility and encourage economic regeneration. (July 2006 – appeal in Court of Session withdrawn.)	250 (2000)	375-500	2005	Spring/ summer 2007	By 2008	End 2010	£250m cost estimate was prepared by councils. Increase in land/property value and compensation for affected businesses. Compensation cannot be accurately estimated until detailed work by District Valuer. Projected price inflation – up to 2008 at 2.5% pa. Difficult ground conditions and more extensive levels of contamination.
Aberdeen Western Peripheral Road Aims to tackle congestion and improve accessibility as part of a Modern Transport System for the area. (May 2006 – proposed route announced)	120 (2002)	295-395	Late 2007	Summer 2009	End 2010	End 2011	£120m cost estimate was prepared by councils. Increase in length from 31km to 46km following Ministerial Decision in Dec 2005. Construction inflation (5-6% pa): £16m @ 3yrs Projected cost based on future inflation 2.5% pa and 2010 completion: £25m. Environmental Mitigation: £6m. Increased earthwork costs following detailed GI Investigation: £10m. Increase in land/property value – £20m added as a result of Milltimber Brae alignment requiring relocation of International school of Aberdeen. More detailed design: £7m. Updated base data: £38m.
A8 Baillieston-Newhouse Aims to alleviate congestion, improve safety and improve connectivity to key economic development sites. (March 2006 – draft road orders published)	105 (2002)	150-180	N/A	2008	By 2010	2010/11	Includes for projected inflation to outturn at 2.5% pa. Additional junctions.

Kincardine Bridge – 2nd crossing Aims to alleviate congestion on the Kincardine bridge. (Construction started June 2006)	71 (2002)	120	N/A	Started June 2006	2008	Nov 2008	Initial estimate did not include VAT. Construction inflation. Additional environmental protection measures. Additional ground conditions/mine workings.
A80 Stepps-Haggs – phase 1-3 Aims to alleviate congestion. (July 2006 – ministerial approval given.)	120 (2002)	130-150	N/A	Spring 2008	By 2010	Autumn 2010	£120m cost estimate at mid-2004. Risk analysis undertaken to provide upper and lower bound estimates. Design refinement. Projected cost based on future inflation 2.5% pa and 2009/10 completion implementation.
A68 Dalkeith Bypass Aims to reduce congestion, noise and air pollution associated with the heavily used current route through Dalkeith town centre. (Design preparation stage, tenders due in June 2006.)	30-40 (2005)	30-40	N/A	Summer 2006	N/A	Summer 2008	Scheme brought forward as a result of M74 delay. Previous estimates over 10 years out of date.
M74 Raith Interchange Aims to decrease queues of traffic on the A725 Bellshill and Bothwell approaches, and on the M74 ramps that connect to the junction. (July 2006 – at proposal stage.)	N/A	45	N/A	2008/09	N/A	Not yet finalised	Associated improvements with the M8.
M8 Associated Network Improvements Aims to adapt Baillieston to Maryville and joining motorways to new traffic movements. (July 2006 – at proposal stage.)	N/A	50	N/A	2008/09	N/A	Not yet finalised	Associated improvements to M8.

2 Road projects – 'Initial' estimates are taken (where possible) from Ministerial announcements that the schemes would go ahead; otherwise they are taken from the Central Scotland Transport Corridor Studies (2003). (Dates in brackets are when estimates were made). 'Latest' estimates, from Transport Scotland (August 2006), are for estimated costs at out turn, ie when the project is completed.

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