The Scottish Government

Monitoring and Evaluation of the Smarter Choices, Smarter Places Programme

Going Smarter

Final Report

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Contents

Executive Summary

The Smarter Choices Smarter Places (SCSP) programme was established by the Scottish Government and CoSLA in 2008. Its aim was to combine measures to encourage travel behaviour change, with infrastructure and service improvement investment, fostering more sustainable travel habits. Achieving such behavioural change was intended to save people money, help to make them healthier, reduce transport emissions and develop more cohesive communities.

Seven pilot areas received funding under the programme, and implemented local programmes between 2009 and 2012. These were Barrhead, Dumfries, Dundee, Glasgow East End, Kirkintilloch/Lenzie, Kirkwall and Larbert/Stenhousemuir.

Monitoring and evaluation of the programme was undertaken by a research team, working in cooperation with the Scottish Government and the local delivery teams. Monitoring and evaluation activities included dedicated surveys and focus groups, together with local data collection and user surveys. These evaluation activities are reported in detailed survey and analysis reports for each pilot area. This report provides an overview that draws from the findings in all pilot areas.

The results of the evaluation showed that public attitudes changed in the pilot areas over the course of the programme. Changing attitudes can be a prelude to, or a response to, behaviour change and the results showed:

- Improved perceptions of local neighbourhoods and communities.

- Generally more positive attitudes towards walking and cycling and the associated infrastructure.

- Improved perceptions of bus travel, with the exception of bus fares where perceptions declined markedly.

- Changes in attitudes towards car use were more complex. Although it was clear in most areas that people had an increasingly positive attitude towards car use, there were also indications in some areas that people increasingly recognised that reducing car use would be a good thing to do from a community or personal perspective.

Awareness of the branded campaigns in most of the pilot areas in the 2012 household survey was good, with more than 50% of respondents in Barrhead, Dumfries, Kirkwall and Larbert/ Stenhousemuir having heard of the local SCSP brands. The majority of respondents in all areas also had an accurate picture of what their locally branded campaign was about. When provided with visual prompts of the campaign logos, awareness was even greater, with 85% of people in Dumfries recognising the logo.

Observed travel behaviour changes between 2009 and 2012 were as follows:

- A higher proportion of trips was made on foot in all areas, with statistically significant increases in five out of the seven pilot areas, and with all changes greater than those recorded in comparable areas in Scotland. The greatest increases were recorded in Larbert/Stenhousemuir, where mode share for walking increased by 21.4 percentage points,

and Barrhead, where the equivalent increase was 14.8 percentage points, against a background trend in comparable areas of 1.6 percentage points.

- Cycling mode share increased in five out of the seven pilot areas. The increase in Dumfries was statistically significant but only in Dumfries and Dundee was the increase greater than that recorded in similar areas of Scotland.

- The proportion of trips made by bus decreased in five of the seven areas, but a statistically significant increase was observed in Kirkintilloch/Lenzie. Bus use declined more among people in households without a car, and saving money by switching to active travel modes appears to have been a factor affecting this change.

- The proportion of trips made as a car driver decreased in all seven pilot areas by more than the changes observed in other similar parts of the country. The reductions ranged from 19.4 percentage points in Larbert-Stenhousemuir to 1.6 percentage points in Glasgow East End. These decreases were statistically significant in Barrhead, Dumfries, Kirkintilloch/Lenzie and Larbert/Stenhousemuir. In all seven SCSP areas, the observed decrease in the proportion of trips made as a car driver was greater than the background trend from comparable areas.

- The mode share of car passenger trips increased in five of the seven pilot areas, particularly for leisure trips and for visiting friends and relatives. The increases were statistically significant in Dundee, Glasgow East End and Kirkwall, as was the decrease observed in Larbert/Stenhousemuir.

These changes in travel behaviour had impacts which can be related to the SCSP programme goals, although it is not possible to say to what extent these impacts derived directly from the SCSP investment, and to what extent they were due to other factors. The estimated impacts were:

- An average annual financial saving on direct transport expenditure of £62 per resident, equivalent to about £9 million per year across the seven pilot areas.

- Health gains from increased physical activity estimated using standard health impact valuation techniques by discounting future health benefits to the present day are worth £6,150 per 100 population plus £2,024 per 100 population for healthcare savings, equivalent to £10.6 million across the SCSP areas; but established active travel valuation techniques estimate health savings much more highly at £46 million.

- Carbon reductions total 16,400 tonnes of carbon dioxide per year, which is valued at £0.9 million per year using current carbon values, equivalent to £6 per capita.

The experience of SCSP programme and project delivery provided a rich source of information and learning points that should be valuable to other authorities implementing similar initiatives in the future. These showed how the programme was planned, organised, funded and delivered, integrating established roles in infrastructure and service provision with new roles in promotion, partnership working, organisation, management, and feedback.

It is recommended that the Scottish Government and Transport Scotland, in partnership with Local Authorities, and CoSLA should facilitate and enable wider application of the types of investment piloted through the SCSP programme. Specifically:

- Local Authorities could take the lead in *partnership working* by developing *service level agreements* with their NHS partners and other public agencies so that complementary roles and responsibilities are clear, and joint working within the community plan is translated into practical funded programmes. Closer *working with local bus operators* could facilitate joint investment for mutual benefit in bus services. To set an ambitious vision for place making that communities can get behind, detailed *plans for path infrastructure and urban realm* investment should be defined.

- Improved *communication and branding* led by Local Authorities could include a communication strategy to enable information and feedback for all people in the community, including partnerships with local media, links to other associated campaigns, and the use of joint branding to present sustainable transport delivery as a coherent integrated approach.

- *Monitoring and evaluation* should continue to be seen as integral to SCSP delivery, as this is a fast developing field with scope for further improvement. Routine monitoring of local initiatives by Local Authorities would enable more detailed insight into who is responding to specific measures including local panel surveys, counts and user surveys to understand changes over time.

- The SCSP programme demonstrates the role and benefits of the Scottish Government support for Local Authorities. Successful features of this support include: a national programme to facilitate locally managed promotional activity; further action to support local delivery of safer walking and cycling routes to shops and services; more detailed guidance on appraisal of smarter choices initiatives; and a specific fund to support innovation.

Three years has been a very short period in which to plan and deliver such diverse and complex programmes. Continued action on this developing agenda will enable a smarter Scotland consistent with sustainable development aims.

1.0   Introduction

1.1   There is an economic, environmental and social dividend if the transport system is operated and used more resource-efficiently. The term "smarter choices" is increasingly used to describe the development and promotion of sustainable transport, both in terms of the decisions by users about their travel choices, and by transport system providers about their service offer. Public authorities are also able to facilitate "smarter places" which are conducive to smarter travel choices.

1.2   This report describes the monitoring and evaluation of the Scottish Smarter Choices Smarter Places (SCSP) programme. It has been prepared by Derek Halden Consultancy (DHC), Aberdeen University and Integrated Transport Planning Ltd (ITP) and draws on information gathered by the research team through quantitative and qualitative research over a four year period.

The Smarter Choices Smarter Places programme

1.3   The SCSP programme was established by the Scottish Government and CoSLA in 2008. Its aim was to combine measures to encourage behaviour change with infrastructure and service improvement initiatives in order to achieve more sustainable travel habits. This includes more walking, cycling and use of shared transport such as car-sharing and public transport. Achieving such behavioural change was intended to save people money, help to make them healthier, reduce transport emissions and develop more cohesive communities.

1.4   The policy background to the Smarter Choices Smarter Places (SCSP) programme derives from the Scottish Government's overall purpose, as defined through five national strategic objectives: to make Scotland wealthier and fairer; smarter; healthier; safer and stronger; and, greener. The programme directly targeted these objectives, since adoption of more sustainable travel habits can have economic, environmental, health and social benefits.

1.5   Local Authorities were invited by the Scottish Government, working in partnership with CoSLA, to bid for funding support from the SCSP programme for pilot projects in their local areas. Seven Local Authorities were awarded funding from the SCSP programme and the pilot projects commenced work in late 2008. The pilot programme was jointly funded through Health, Environment and Transport programmes and at least £15 million was spent plus many other unquantifiable partner resources.

1.6   The SCSP monitoring and evaluation team followed an Evaluation Plan developed with the Scottish Government in 2008. This included data collection and analysis by the evaluation team across the seven pilot areas, combined with local monitoring by the Local Authority delivery teams. Monitoring and evaluation activities started in the spring of 2009 and continued through to mid 2012.

Contents of this report

1.7   This report describes:

- The delivery programme and its costs in Chapter 2.

- The approach to the monitoring and evaluation in Chapter 3.

- Observed changes in attitudes in Chapter 4.

- Observed travel behaviour changes and the factors affecting these in Chapter 5.

- Appraisal of impacts from behavioural change in Chapters 6.

- The mechanisms for delivering the programme and benefits of the approach in Chapter 7.

- Conclusions and Recommendations in Chapter 8.

1.8   The bulk of the evidence on which this report is based is presented in companion reports describing the results of surveys and data analysis. These reports comprise Monitoring and Evaluation Reports for each of the pilot areas and reports describing the analysis of national data and focus group research.

1.9   The evaluation programme sought to establish the impacts of the investment, and offer feedback to the Local Authorities in interim reports throughout the programme to assist with the effectiveness of delivery. Interim reports published for 2009, 2010 and 2011 explain how learning points were identified and applied to the SCSP programme delivery.

Acknowledgements

1.10   This project was commissioned by the Scottish Government, and there were many staff at the Scottish Government, including within Transport Scotland, who enthusiastically contributed to the study including Donna Easterlow, Philip Glennie, Tracy McKen, Ian Maxwell, Michael Young and many others.

1.11   Thanks are also due to the members of the local SCSP delivery teams within Local Authorities and their partners for sharing information and experiences with the monitoring and evaluation team.

1.12   The research would not have been possible without thousands of residents participating in surveys and attending focus groups and interviews. Many of these people asked to see what difference their contributions had made, so by publishing this report the Scottish Government and the research team acknowledge the importance of these contributions and how they have been used to support Smarter Choices and Smarter Places.

2.0   Programme Delivery and Costs

> **Seven pilot areas received funding under the SCSP programme and implemented local programmes between 2009 and 2012. These were Barrhead, Dumfries, Dundee, Glasgow East End, Kirkintilloch/Lenzie, Kirkwall and Larbert/Stenhousemuir.**
>
> **There were three main areas for spending: provision of new infrastructure and services; promotion through campaigning, information and publicity initiatives; and organising and managing delivery including travel plans for organisations, and direct engagement with households through personal travel planning.**
>
> **The total identified spending of £14.7 million was used to influence wider programmes in health, regeneration, roads, transport, and land use planning.**
>
> **Provision of new infrastructure and services accounted for two thirds of the funding, and promotion, organisation and management activities accounted for the remaining third.**

2.1   This chapter describes the identifiable inputs to and outputs from the SCSP programme. When launching the programme, the Scottish Government highlighted that a particularly innovative aspect was to derive new ways of linking transport infrastructure and service provision with marketing and promotion. The design of the SCSP programme in each area set out to co-ordinate 'promotion' and 'provision' within a Scottish context, exploring how to organise and manage progress towards a more sustainable approach to transport delivery[1].

Setting up the programme

2.2   In 2008 Local Authorities across Scotland were invited to submit their proposals for inclusion in the pilot programme, and seven areas were selected: Barrhead, Dumfries, Dundee, Glasgow East End, Kirkintilloch/Lenzie, Kirkwall and Larbert/Stenhousemuir. Each local programme evolved from that point as the Local Authorities developed their plans by working jointly with stakeholders in their areas, including members of the local community. There were many other Local Authorities that submitted unsuccessful bids for SCSP pilot funding, and some of the initiatives developed through these proposals have been implemented (even in the absence of dedicated funding support from the Scottish Government). Some of these schemes were showcased at a project

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[1]*http://www.transportscotland.gov.uk/roads/sustainable-transport/funding-for-projects/smarter-choices-smarter-places/monitoring*

dissemination workshop in June 2012[2]. A systematic review of the unsuccessful bids was, however, not part of this evaluation.

2.3   All of the Local Authorities participating in SCSP delivered complex programmes including new infrastructure and services and measures to promote behaviour change. A full description of the planned deliverables was given in the baseline report[3]. Each authority developed its plans in line with local experiences, and this is discussed in detail in the pilot area reports, together with the resulting outcomes and impacts.

2.4   Despite the complexity of the programme all projects followed a common typology to organise, manage, promote and provide sustainable transport solutions. This chapter describes these types of initiatives, and summarises the approaches to delivery for each type of project.

Types of initiative

2.5   For the purposes of this evaluation, the funding inputs were analysed in detail under three main categories:

- <u>Provision</u> of new infrastructure, services and facilities which accounted for the largest proportion of the funding. This was designed to enable local populations to make choices consistent with national and local transport policy aims, by improving infrastructure, services and facilities.

- <u>Promoting</u> the availability of transport and access options, including the new infrastructure, services and facilities funded through SCSP, to foster travel behaviour consistent with public policy aims. These have been the lowest cost elements of the SCSP programme.

- <u>Organising and managing</u> practical delivery to link transport with wider policy goals such as economic growth, social inclusion, improved health, and environmental aims. The costs of SCSP partnership working and other management processes can be difficult to separate from other activities already taking place within authorities and not specifically related to smarter travel, e.g. community planning and health improvement.

2.6   All of the pilot areas included projects to provide, promote and organise change. These initiatives were considered within eleven main delivery themes.

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[2] *The presentations made by each of the authorities at a CoSLA workshop on smarter choices in June 2012 are available on request from Transport Scotland.*

[3] *Derek Halden Consultancy, Aberdeen University and Integrated Transport Planning Ltd. Monitoring and Evaluation of the Smarter Choices Smarter Places Programme - Baseline Report v1-1, February 2010.*

Provision

- Transport services – This includes new bus services, ticketing improvements, and other transport services.

- Infrastructure provision – This includes new cycleways, footpaths, pedestrian crossings, bus lanes, pedestrianisation, cycle facilities, and other associated changes to the built environment.

Promotion

- Travel information – Publishing public transport information, developing real time information systems, printing route information maps, and developing other printed and web based journey information.

- Campaigns – A wide range of general marketing activities covering media campaigns, branding, promotional leaflets, campaigns and other social marketing.

- Active travel promotion – Covering a wide range of different general promotional activities covering health walks, healthy lifestyles, calorie maps, and other health promoting materials and activities.

- Cycle promotion – Sometimes these projects were closely related to active travel promotion but this category deals with initiatives that focus less on active travel and more on cycle marketing. These include managing and promoting bike sharing and rental, bike loan schemes, cycle publicity, and cycle maintenance schemes.

- Car and lift sharing promotion – Including trip sharing, car clubs, and lift sharing.

- Training and events – Including activities to improve skills of people to travel independently, cycle training, and events to engage residents and businesses and raise awareness of sustainable transport.

Organising and management

- Travel planning (TP) – Travel plans organise the planning, delivery and promotion of new infrastructure, facilities, services, information, and other promotion and provision. There were many types of travel plans in the SCSP areas targeting destinations (trip attractors) like schools, businesses, and leisure attractions. Residential travel plans were sometimes also included under travel planning, but for the purpose of this research all travel planning for residential locations, where the trips are generated (as opposed to attracted) were included within the general field of personal travel planning.

- Personal travel planning (PTP) – is a specific case within travel planning where individuals are engaged directly where they live, at events, in the street or other direct marketing contacts, and not through organisations. The generic components

of PTP are surveying or discussing with individuals their travel choices, identifying personal targets or plans for change, and providing information, incentives and motivation to encourage them to change behaviour.

- Other management and joint working – Ensuring the effective delivery of a diverse package of measures across a range of delivery partners requires substantial background management and communication. Although in most cases the management and organisational functions can be related to the delivery of specific programmes like PTP, there were also some instances where overarching management tasks, often to cover multiple initiatives, were delivered as a separate goal[4].

2.7   The approach to evaluating outputs, processes, outcomes and impacts is discussed in Chapter 3, but at this point it is worth noting that outcomes and impacts were analysed by pilot area, rather than by individual initiatives or themes. Where clear links between funding inputs and associated impacts could be identified these are discussed in later chapters. The analysis of the processes for change and mechanisms for delivery in Chapter 7 also reveal learning points about individual types of initiative. All of the pilots included packages of measures, so the evaluation considers the balance of investment within the package, rather than outcomes or impacts for any individual measure.

Financial and other inputs to SCSP delivery

2.8   In this analysis of financial inputs, all identifiable spending is included regardless of the source. Funds came from the Local Authorities, Regional Transport Partnerships, the Scottish Government, the NHS, European programmes, local businesses including bus companies, and other community contributions.

2.9   It was difficult to isolate the timing and level of additional spending from parallel spending programmes, such as health promotion and regeneration. These other programmes appear to have at least partly funded some of the delivery, and it was not always clear what added value or discrete elements the SCSP investment secured. The evidence of inputs to SCSP delivery therefore lacks clarity, and the scale of delivery cannot be determined from available financial data. Local Authorities were asked to report all of the funding they were aware of, so that the research could allocate costs to delivery on a consistent basis across the seven areas. This was only partially achieved, and in nearly every area the authorities refer to a large amount of additional quantified and un-quantified Local Authority staff time supporting the programme. Table 2.1 shows the quantifiable resources deployed in each area.

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[4] E.g. buying Local Authority staff time in Orkney to ensure that sustainable transport solutions were considered in planning applications for housing

2.10   The data in the table needs to be treated with caution since:

- Each authority allocated these costs in different ways, and although authorities made efforts to clarify and update costs during the preparation of this report it was not possible to disaggregate the final spending figures to allow precise like-for-like comparisons between the spending profile and the delivery of initiatives. The costs in Table 2.1 allocate management, design and implementation costs as closely as possible to the relevant categories, and were agreed with each Local Authority.

- SCSP was one funding input into larger transport programmes. The changes in the other transport investment during the period of the SCSP pilots may have been affected by the SCSP programme. Indeed it would be hoped that SCSP will have improved the efficiency of delivery in wider programmes and this may have led to budget changes. This research has not included a comprehensive review of funding programmes so changes in wider transport funding have been ignored.

- Although funding was used as a prompt to facilitate joint working between different Local Authority departments, the process analysis in all pilot areas revealed that funding was not usually needed. SCSP programmes were as much about changing ways of working as about how much was spent. Many important changes were initiated through SCSP, but funded by others, such as the public transport, infrastructure, and staff time investment funded by businesses, schools and other public agencies. The Forth Valley Royal Hospital investment in bus services and woodland cycle paths derived from a planning consent.

- Some authorities used SCSP funding to invest in projects that were being led by other agencies. These shared projects required all partners to contribute to be able to proceed, so the SCSP inputs were important. However the total cost of delivering these partnership projects is unknown. Establishing clearly the part of any shared programme that can be attributed to transport was not possible, so for the purposes of this evaluation only the costs allocated from SCSP resources were included.

- Delivery costs are context-specific as the voluntary support of partners available in one place might not be available in other places.

- In general, the costs estimated in the 2008 proposal documents proved to be generous. Both construction work and campaigning activities were often below budget. As experience of delivering this type of programme grows, it should be possible to estimate costs more accurately and to improve the efficiency of delivery, further reducing the costs of SCSP programmes.

2.11   Provided these important caveats are noted, Table 2.1 provides a useful indication of the balance of investment in each Local Authority area.

Table 2.1 – Summary of costs by theme

	Barrhead	Dumfries	Dundee	Glasgow East End	Kirkintilloch/ Lenzie	Kirkwall	Larbert/ Stenhousemuir	Total
Provision (£000)	**810**	**5,040**	**348**	**2,000**	**440**	**888**	**402**	**9,929**
Transport services	110	2,072	0	0	0	158	0	2,340
Infrastructure	700	2,968	348	2000	440	730	402	7,589
Promotion, Organisation and Management (£000)	**548**	**730**	**1,103**	**500**	**270**	**391**	**1,279**	**4,820**
Information provision	57	199	68	50	5	37	80	4,820
Campaigns			135	97	30	80	600	
Active travel promotion			204	50	40	20	27	
Cycle promotion	7		141	2			17	
Car and lift sharing promotion			0	55				
Training and events			49			52		
Travel planning	360	25	70		195		47	
Personalised travel planning		377	425			187	321	
Other management	124	129	10	246		15	187	
Total spend (£000)	**1,358**	**5,770**	**1,451**	**2,500**	**710**	**1,279**	**1,681**	**14,749**
Population of each area	**17,518**	**38,964**	**30,568**	**30,085**	**32,302**	**7,997**	**20,201**	**177,634**
Total spend per resident (£)	**78**	**148**	**47**	**83**	**22**	**160**	**83**	**83**
Spend per resident per year (£)	**26**	**49**	**16**	**28**	**7**	**53**	**28**	**28**
Total spend on provision per resident (£)	**46**	**129**	**11**	**66**	**14**	**111**	**20**	**56**
Total spend on promotion per resident (£)	**31**	**19**	**36**	**17**	**8**	**49**	**63**	**27**

2.12   The total identified spend of £14.7 million is slightly less than the £15 million programme announced in 2008[5] for several reasons. Some Local Authorities were unable to identify all of the elements of in-house spending and some of the planned investment did not go ahead or had not yet been completed at the time this report was prepared. Where a Local Authority was able to estimate the number of days spent on an activity, this was factored by an average resource rate of £200 per day. This average daily rate reflects the range of tasks that were delivered, but some Local Authorities may have used more senior staff with higher resource costs.

2.13   The promotion, organisation and management categories were combined in the financial analysis. It was not possible to separate the costs of the organisational elements of travel planning and PTP delivery from the costs of the promotions themselves. Similarly events, active travel promotion and cycle training were sometimes promoted as discrete activities and sometimes bundled within more integrated campaigns.

2.14   The preparatory spending started in early 2009 and the outturn costs shown in Table 2.1 are based on expenditure up until the end of March 2012. The total spent was about £83 per resident (or £28 per resident per year), of which about two thirds was spent on the provision of new infrastructure and services and about one third on promotion and organisation. Management costs are included within each initiative except when management activities relate to general cross sector liaison activities such as community planning. These wider management tasks have been shown as 'other management' as they relate to general promotion of SCSP to partners.

2.15   Each pilot was different and targeted local needs, therefore spending cannot be compared between pilots. Nevertheless, spending levels can help to show the scale of activity undertaken in each pilot area. Figure 2.1 shows that spending on promotion per resident varied across the pilots from less than £3 per resident per year in Kirkintilloch/Lenzie to £21 per person per year in Larbert/Stenhousemuir. Expenditure on provision ranged from less than £4 per resident per year in Dundee to £43 per resident per year in Dumfries.

2.16   Dumfries and Glasgow East End spent £6 per head per year on promotion, accounting for 13% and 20% respectively of SCSP costs. In contrast Dundee and Larbert/Stenhousemuir spent up to three quarters of their total SCSP funding on promotional activities equating to £12 and £21 per head per year respectively. Dundee delivered one of the lowest cost programmes per head, so despite the high proportion of the spending being on provision the expenditure on promotion of £12 per resident per year was only just over the average for the pilot areas.

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[5] *The £15 million was a figure which included contributions from Local Authorities. Since 2008 the programme has changed with additional contributions from others. The figures presented represent the best available picture of what was actually spent on SCSP delivery in the pilot areas.*

Figure 2.1 – Total expenditure per resident in each pilot area (2009-2012)

2.17   Most of the Local Authorities were building on long term spending programmes for the provision of similar infrastructure and services for new paths, public realm investment, and investment in bus services and facilities. The SCSP programme offered continuing support for these changes complementing the larger mainstream investment programmes. In contrast to the provision, most Authorities had undertaken very limited promotional activity in the past, so the total SCSP funding of £1.6 million per year for promotion represented a large increase compared with the background level from mainstream programmes.

2.18   The apparently high level of spending per person in Dumfries and Kirkwall partly reflects the higher budgets for transport provision in these areas, and the relatively expensive provision of bus services and path infrastructure dominated the investment in these areas. Both areas are regional centres, so it is perhaps misleading to allocate the spending only to people who live within the pilot areas. The bus service improvements in both areas have been designed to secure more sustainable transport network coverage across wider areas, interchanging within the regional centres.

Outputs

2.19   The key elements of delivery in each area are summarised in Table 2.2. Full details are provided in the evaluation report for each area.

Table 2.2 – Key deliverables by pilot area

Pilot	Promotion, Organising and Management	Infrastructure and Service Provision
Barrhead (Branded as "GO Barrhead")	• School travel plan groups supported in all schools with rewards programme • Cycle training in three schools • Personal travel planning • Business travel planning • Information and publicity materials • Organised walks • Events	• New pedestrian crossings and footpath improvements • Landscaping, paving and other improvements to the public realm • New off-road paths • Cycle parking installed at schools • New bus shelters installed
Dumfries (Branded as "GO Smart", "GO Bike", "GO Walk")	• Personal travel planning • Publicity and support materials for business travel planning • Business travel plans • Information and publicity • Cycle club established	• Eight new buses • Bike-2-Go rental scheme • Four transport interchanges sites • Footway upgrades in area centre • Radial walking/cycling routes • Two 20mph zones
Dundee (Branded as "Dundee Travel Active")	• Personal active travel planning • Active travel promotion schemes • Cycle training delivered • School road safety programme • Air quality improvement programme	• Improved signs and streetscape • Bike loan scheme • Cycle storage facilities installed
Glasgow East End (Branded as "On the Move")	• Travel behaviour change campaign • Community outreach programme • Bike loan scheme implemented	• Cycle routes constructed • New signs installed for pedestrians and cyclists
Kirkintilloch/ Lenzie (Branded as "Healthy Habits")	• Healthy habits information centre • Information and publicity materials • Active travel promotion with GPs • School travel campaign • Workplace travel campaign	• Close missing links in core path network • Cycle racks and storage installed • New signs installed
Kirkwall (Branded as "Kick Start Kirkwall")	• Personal travel planning • School travel programme • Cycle training • Car Wise Kirkwall campaign • Information and publicity	• Footpath enhancements • New path to health completed • 20mph zone • Airport bus service and associated bus service improvements
Larbert/ Stenhousemuir (Branded as "Take the Right Road")	• Personal travel planning • Information and publicity • Health walk with football club • Cycle training • Schools projects • Hospital travel plan	• Improvements to core path network • Cycle parking installed at schools

Delivery timescales

2.20   All authorities had started planning delivery by May/June 2009 when the baseline evaluation surveys took place and had completed most elements of programme delivery by May 2012 when the final household surveys took place. The more expensive promotional activities like PTP were delivered mainly in 2010 and 2011. The construction of paths and other infrastructure was spread across the three year period, with some infrastructure being completed in 2012 close to the end of the pilot programme.

2.21   Promotion activities which took place in advance of infrastructure provision were able to highlight the investment plans, but the gaps in provision may have continued to constrain behaviour change throughout the pilot period. For example in Glasgow East End, the On the Move campaign was launched in advance of the completion of the cycle paths, so the behaviour change effects of infrastructure completed in 2012 may not yet have been visible at the time the final surveys were done.

2.22   Fuller details of the timing of each activity and the funding for each project are shown in the individual monitoring and evaluation reports for each of the SCSP pilot areas.

3.0   Evaluation Methodology

Evaluation of the Smarter Choices Smarter Places programme was undertaken in line with a plan, developed by the research team in cooperation with the Scottish Government and the SCSP Local Authorities. This covered:

- **Evaluation of the changes in travel behaviour and attitudes in the SCSP pilot areas over the course of the SCSP programme;**

- **Evaluation of the impacts of the observed behavioural and attitudinal changes in key policy areas, such as carbon reduction and health improvement; and**

- **Process evaluation – to find out how well the process of delivering the SCSP interventions worked, including monitoring of the outputs delivered and capture of the qualitative experiences of the delivery teams and local people**

A "mixed method" approach was used to evaluate attitudes and behaviour change outcomes. This included large scale quantitative surveys; local data collection; and qualitative research with residents and stakeholders; as well as a review and analysis of published national data to set observed changes in context.

Impact assessment drew on the behaviour change outcomes and broadly followed the principles of Scottish Transport Appraisal Guidance (STAG). Process evaluation relied largely on the Local Authority delivery teams' records and on capture of their qualitative experiences through one-to-one contacts with the research team, periodic meetings and stakeholder workshops.

Overview

3.1   The evaluation plan was developed and agreed with the Scottish Government and Local Authorities in late 2008 and early 2009. This plan was followed, with some adjustments during the course of the project as agreed with the client to adapt to changing circumstances. The evaluation focussed on three main areas:

- Evaluation of the changes in travel behaviour and attitudes (outcomes) in the SCSP pilot areas over the course of the SCSP programme;

- Evaluation of the impacts of the observed behavioural and attitudinal changes in key policy areas, such as carbon reduction and health improvement; and

- Process evaluation – to find out how well the process of delivering the SCSP interventions worked, including monitoring of the outputs delivered and capture of the qualitative experiences of the delivery teams and local people.

3.2   This chapter starts by explaining the overall approach to the research and then explains the survey and analysis methods from paragraph 3.16 onwards.

Evaluation of attitude and behaviour change outcomes

Evaluation activities

3.3   A "mixed method" approach was used to evaluate attitudes and behaviour change outcomes. This included quantitative surveys; data collection; and qualitative research with residents and stakeholders; as well as a review and analysis of published national data. The aim was to draw on these various sources of information to draw conclusions consistent with all sources of evidence.

3.4   Table 3.1 summarises the timing of each evaluation activity. Some of these involved surveys before, after and during the SCSP programme delivery while others involved continuous monitoring of data sources.

Table 3.1 – Activities to evaluate changes in travel behaviour and attitudes

Evaluation activity	Baseline (before) – Spring 2009	Interim Yr 1 – Spring 2010	Interim Yr 2 – Spring 2011	Final (after) – Spring 2012	Comment
Household survey including travel diary	✔			✔	Large scale household survey including one-day travel diary and attitudinal and behavioural questions.
Local Authority monitoring and user surveys	✔	✔	✔	✔	Vehicle, cycle and pedestrian monitoring counts, together with local user surveys and data analyses.
Qualitative research – focus groups and in-depth interviews	✔			✔	Focus groups and in-depth interviews in the baseline to understand the potential for change, and final focus groups to gather feedback on what measures were effective.
Telephone surveys	✔	✔	✔		Smaller-scale telephone surveys to provide interim monitoring of behavioural and attitudinal change, for feedback to the delivery teams.
Monitoring of national data on travel behaviour	✔			✔	Monitoring of National Travel Survey, Scottish Household Survey, Scottish Health Survey and VoSA data to identify national trends and characteristics to put outcomes in context.

Isolating the behavioural effects of the SCSP programme

3.5   As is usually the case with public policy measures, the SCSP programme could not be implemented as a controlled experiment, as there are very many influences on travel

behaviour. When evaluating the effects of the programme, the challenge was to measure the impact of changes in travel behaviour without being able to observe what would have happened without the programme (the "counterfactual"). To address this challenge, the research approach was designed to allow the external background influences on travel behaviour to be identified separately from the influence of the SCSP interventions *as far as is possible* through the use of data from comparator areas of Scotland and national data.

3.6   To assess background trends data were collected through household and telephone surveys in three local areas which had not received SCSP programme funding. These three local areas (Arbroath, Bearsden and Dalkeith) were used to create a pool of data from which seven individual "synthesised" control data sets were created to match the demographic characteristics of the seven SCSP pilot areas. This approach was developed as an experimental approach at the Scottish Government's request, based on advice commissioned by the Scottish Government independently of the Monitoring and Evaluation project.

3.7   However, after review and discussion between the research team and the client group, it was agreed that this approach to deriving background trends was unable to represent real world changes. The process of synthesising the data from three comparator areas to create seven control samples averaged out locally important changes and characteristics, which meant that the seven synthesised samples were not good comparators for any of the seven SCSP areas.

3.8   For the final analyses, the research reverted to the approach originally proposed in 2008, using national data from the Scottish Household Survey (SHS) to represent background trends in behaviour change between 2008 and 2011 (the nearest comparable three year period to the 2009-12 SCSP implementation timeframe). The Scottish Government was able to provide special datasets which summarised across Scotland data from places that could be seen as broadly similar to the seven SCSP pilot areas:

- Localities with populations of over 125,000 – comparator for Dundee and Glasgow East End areas

- Localities with populations between 10,000 and 50,000 – comparator for Barrhead, Dumfries, Kirkintilloch/Lenzie and Larbert/Stenhousemuir.

- Remote small towns with populations between 3,000 and 10,000 – comparator for Kirkwall

3.9   National average behaviour change trends were also established from the SHS and used as a further source of comparison with the changes observed in the SCSP pilot areas.

3.10   This approach allowed the *associations* between the SCSP investment and behavioural outcomes to be identified, although it should be noted that it was not possible (as is often

the case with evaluations in the "real world") to make firm *causal* connections between the SCSP funding and observed behaviour changes. In particular, the research programme did not allow, in general, outcomes to be related to an individual SCSP measure. This would have required significant additional in-depth research on individual interventions at the local level in each of the seven areas, coupled with use of an area-wide panel survey approach – neither of which fitted within the funding constraints for evaluation of the SCSP programme.

Evaluation of potential impacts resulting from behavioural and attitudinal change

3.11   The observed behaviour and attitude changes were used to conduct an analysis of the potential impacts of the SCSP programme across a number of policy areas. This impact evaluation was undertaken broadly following the principles of Scottish Transport Appraisal Guidance (STAG[6]) to assist with transferability of research findings back into future application of SCSP type investment proposals.

3.12   Summary tables were completed for each SCSP pilot area using the same headings as a STAG summary table. The five STAG categories and individual policy aims used in the summary table are shown in Table 3.2, which describes the policy aim, the desirable direction of impact, and how benefits could potentially be achieved by the SCSP measures. The completed summary tables for each of the seven SCSP areas are included in the individual SCSP pilot area evaluation reports. Some of the main impacts are presented in Chapter 6 of this report.

Table 3.2 – Potential impacts of the SCSP Programme

Policy aim	Direction of impact relative to policy aims	How benefits are potentially achieved through SCSP measures
Economy		
Reducing the cost of travel	Positive benefits from user savings	• Benefits are achieved when travellers spend less money on fares, tolls, parking and vehicle operating costs.
Travel time savings	Positive benefits from travel time savings	• Benefits from travellers experiencing time savings such as from reduced road congestion but dis-benefits if longer trips are induced or people switch to slower modes like walking.
Net benefits to transport operators	Positive benefits from increased revenues and lower investment and operating costs	• Changes in revenues and investment costs estimated from changes in passenger numbers. • Investment and operating costs where changes are made in service patterns.

Policy aim	Direction of impact relative to policy aims	How benefits are potentially achieved through SCSP measures
Wider economic benefits and location impacts	Positive benefits from more footfall in area centres	• Travel changes that made the local economy larger and more competitive. • Footfall in area centres, and turnover in shops.
Accessibility		
Access to opportunities	Positive benefits from more opportunity and choice particularly by walking	• Benefits from induced travel offering more attractive travel opportunities indicated by increases in trip making and satisfaction with access to services.
Social inclusion and community development	Positive benefits from more people able to participate	• Based on increased self-reported positive perception of areas as places to live and voluntary contributions in new community initiatives.
Environment		
Emissions	Positive benefits from carbon reductions	• Reduction in car mileage leads to direct reductions in greenhouse gas emissions. Additional impacts may come from congestion reduction.
Air quality impacts	Positive benefits from better air quality	• Local perceptions of the environment.
Cultural heritage and streetscape	Positive benefits from improved perceptions	• Survey results about local culture, public space and infrastructure improvements.
Integration		
General health	Positive benefits perceived wellbeing	• Self-reported perceptions of general health, which may or may not be related.
Physical activity levels	Positive benefits from more activity	• Active travel and physical activity levels.
Regeneration and land use planning	Positive benefits from transport delivering wider policies	• Contribution made to regeneration and land use planning goals
Political value of changes	Benefits from political support for SCSP	• Identify political consequences of investment
Safety		
Personal security	Positive benefits from improved security	• Based on increase in self-reported perceptions of personal security and safety when travelling during the evening.
Road safety	Positive benefits from lower casualties	• Installation of pedestrian crossings, reduced traffic speeds and perceptions of road safety.

Process evaluation

3.13   Monitoring of the outputs (e.g. number of people given personal travel planning advice etc) delivered in each of the seven areas relied largely on the Local Authority delivery teams keeping records and sharing them with the evaluation research team at intervals throughout the programme.

3.14   Capture of the qualitative experiences of the delivery teams was undertaken through liaison with the Local Authorities. This included one-to-one contacts with delivery team members in each Local Authority and periodic progress meetings involving all the SCSP Local Authorities and the Scottish Government representatives. Stakeholder workshops were held in each area in 2011 and a final learning event was held in 2012.

3.15   Additional qualitative feedback from local people on the SCSP programme was obtained through a series of focus groups undertaken at the end of the programme (June 2012) in each area.

Household surveys

Timing and content

3.16   Household surveys were the primary method for collecting data on travel behaviour and attitudes across the pilot areas. These were undertaken in April/May/June 2009 (baseline) and April/May 2012 (final). The surveys covered:

- A one-day travel diary for the previous day.

- Questions asking people to report on their frequency of use of each travel mode in the previous twelve months and whether this had changed over that period.

- Questions relating to perceptions of travel issues and the local environment.

- Other questions about respondent attitudes and behaviour including personal health and physical activity.

- Questions relating to awareness and response to SCSP and related investment (2012 only).

- Questions on household characteristics and respondent demographics.

Survey methodology

3.17   The selection of respondents for the two household surveys was undertaken using random probability sampling within the target areas defined by each Local Authority. This was done using postcode address files to select households, with the person of interest within the household being selected as the adult (aged 16 or over) who had the next birthday on the day the survey was administered.

3.18   In 2009, the surveys were administered using a questionnaire which was left at each household, allowing for self-completion by the respondent with additional assistance and support being provided by surveyors when they collected completed forms. This approach proved to be more costly and complex to undertake than had been expected, and there was limited scope for the surveyors collecting the responses to check all of the responses, particularly the travel diaries. In order to achieve a high quality sample for the 2012

surveys, a face-to-face computer assisted personal interview (CAPI) approach was adopted instead, allowing surveyors greater control over the survey responses and delivering a better response to the travel diary element than in 2009.

3.19   It was recognised that any change of survey methodology could potentially affect comparability between the 2009 and 2012 surveys. In changing the approach the benefits of higher quality responses were considered by the research team and the Scottish Government to exceed any disbenefits from lack of comparability. Similar changes have or are being made in most of the major national surveys which have traditionally relied on hard copy survey completion and which are all transferring to CAPI approaches to benefit from quality and efficiency savings. The questionnaire for 2012 was also slightly longer in order to cover recent experiences of transport change in the area including awareness of brands.

Achieved sample

3.20   The achieved survey samples in 2009 and 2012 are shown in Table 3.3. It should be noted that (particularly in 2009) some completed questionnaires did not include fully valid responses to all questions, so the table shows numbers of fully and partly completed travel diaries.

Table 3.3 Household survey sample sizes

Area	2009				2012			
	Completed household surveys and travel diary responses							
	All household surveys received	*Fully completed travel diaries*	*Partially completed travel diaries*	*No trips reported*	*All household surveys received*	*Fully completed travel diaries*	*Partially completed travel diaries*	*No trips reported*
Barrhead	1,353	664	286	403	1,040	721	30	289
Dumfries	1,600	727	398	475	1,227	790	61	376
Dundee	1,355	654	224	477	1,056	718	29	309
Glasgow East End	1,365	634	234	497	1,044	619	54	371
Kirkintilloch / Lenzie	1,352	475	338	539	1,044	730	70	244
Kirkwall	1,009	447	276	286	772	567	39	166
Larbert / Stenhousemuir	1,362	409	484	469	1,045	604	62	379
Totals for SCSP areas	**9,396**	**4,010**	**2,240**	**3,146**	**7,228**	**4,749**	**345**	**2,134**

3.21   The achieved survey sample characteristics are described in detail in the reports for each pilot area. There were some differences between the 2009 and 2012 survey samples. One

possible explanation for this is that the non-response biases using the modified 2012 survey methodology were different to those in the 2009 survey. In particular, across all areas there was a higher proportion of respondents from households without a car in the 2012 survey sample than in the corresponding 2009 survey sample. The research team was mindful of this in the analysis, and where possible undertook separate behavioural change analyses for people from car-owning and non-car-owning households. However, this potential source of bias should be borne in mind when reviewing the analyses on the overall aggregated samples presented in later chapters.

3.22   In addition to the surveys in the pilot areas, the comparator sample discussed in Paragraph 3.6 was used to look at the impacts on programme awareness and health impacts where there was not suitable national data which could be used as a comparator. In 2009 3,111 households completed a survey in these comparator areas, which after data cleaning generated 1,248 fully completed travel diaries; and in 2012 2,316 households were surveyed generating 1,547 travel diaries.

Weighting within the survey analysis

3.23   Before undertaking the analysis of the household survey, the 2009 and 2012 survey data samples were weighted. The primary reason for weighting data for use in the analyses was to correct for "non-response bias" in the achieved sample as far as possible. This occurs because some subsets of the population may be more willing or able to respond to surveys than others. Weighting helps to ensure the data analysis more closely reflects what the results would have been if people from all sub-sets of the population had been equally willing to respond to the surveys.

3.24   A number of possible weighting approaches were considered and tested, before agreement was reached with the Scottish Government on the most appropriate approach. The final decision was to weight according to age and gender, with the weights derived by comparing the age and gender of the achieved samples with population figures for the SCSP areas taken from the 2010 mid-year population projection statistics prepared by the Scottish Government (2010 was chosen as the middle year of the SCSP programme). Weighting by age/gender combination is a commonly used approach in many national surveys.

3.25   Weighting by car ownership was considered in detail, alongside weighting by age and gender. However, the most recent population data on car ownership available at the level of the SCSP areas was the 2001 Census data, which was felt unlikely to be representative of car ownership patterns over a decade later. Unfortunately, the 2011 Census data was not available at the disaggregated spatial level needed at the time of analysis and reporting. Also with the introduction of more shared transport in the SCSP pilots, a possible outcome was that people would choose to share rather than own cars. Weighting by car ownership would have impaired the ability of the analysis to look at car ownership

effects. It was therefore agreed with the Scottish Government that additional weighting by car ownership would not be appropriate. Car-owning and non car-owning households are analysed separately and together to identify important relationships in the data.

Statistical testing

3.26 Statistical tests were undertaken on the changes in behaviour and attitudes between 2009 and 2012, for the overall survey samples and different socio-economic sub-groups. These tested for statistically significant differences in the survey sample and sub-sample data between survey years i.e. how confident one could be that any difference had not occurred by chance. The use of the word 'significant' in this report refers to statistical significance at the 95% confidence interval or greater – i.e. where we could be at least 95% confident that any difference in the data had not occurred by chance.

Telephone surveys

3.27 Telephone surveys were undertaken in 2009, 2010 and 2011 to monitor evolving attitudes and perception of respondents about how they had changed behaviour. The analysis of these surveys was used in the interim reporting to provide feedback to the Scottish Government and Local Authority delivery teams. The results of these interim surveys were reported in the interim reports and are only used indirectly in this Final Evaluation Report through references to the earlier reports.

3.28 The achieved telephone survey sample sizes were 400 respondents in each area and were drawn from telephone numbers in the pilot areas coupled with random digit dialing to include ex-directory numbers. Weighting of data in the analyses and use of statistical testing was in line with that described above for the main household surveys.

Local Authority data

3.29 Local Authority monitoring activities were seen from the outset as an integral part of the evaluation plan. In particular:

- Local counts of vehicle, cycle and pedestrian flows provided valuable corroborative evidence of the area-wide behavioural changes reported in the travel diary. They also provided the local authorities with valuable feedback on use of specific new infrastructure (e.g. new cycle paths or footpaths) and/or localised initiatives. The design and implementation of these surveys was agreed with the Local Authorities in the Evaluation Plan, but the scope was restricted by the perceived needs and priorities of the Local Authorities for data collection. Each pilot area adopted different approaches consistent with the local plans for smart evidence led delivery.

- Local user surveys were undertaken to provide feedback on user responses to initiatives and were most widespread in relation to the personal travel planning (PTP) initiatives, where there were interactions between the project delivery teams

and the residents of each area. Other user feedback was obtained for cycle promotion schemes and training projects in some areas and from users of cycle networks. The results of these activities are summarised in the monitoring and evaluation report for each pilot area. User feedback supplied directly to project promoters or delivery teams often delivers positive perspectives, as users do not want to offend providers. Response bias is also common if people think that the way they respond will influence future delivery. When drawing on this data the likely bias has been acknowledged.

Focus groups and in-depth interviews

3.30   In early 2009 two focus groups and 10 in-depth interviews were undertaken in each pilot area. The purpose of this baseline qualitative research was to understand existing attitudes and behaviour in each area, assist in the design of the quantitative research, and understand the mechanisms by which SCSP interventions might make an impact. The focus groups identified the main factors affecting travel choices and the individual interviews enabled in-depth questioning to identify how individual views related to day-to-day experiences in each area. The research identified opportunities in each area which could be built upon and barriers which would need to be overcome before behaviour change could be achieved. The opportunities and barriers covered:

- Living in the area and the local economy and society.

- Views of the transport system, travel patterns and perceptions of each mode.

- Lifestyles, environment and prospects for people and places.

- Perceptions of the planned SCSP measures.

3.31   The identified mechanisms for change were used to inform the design of the quantitative research and reported to the local authorities to help them plan their programmes[7].

3.32   In June 2012 two further focus groups were undertaken in each of the SCSP areas (and also in three "comparator" areas: Arbroath, Bearsden and Dalkeith). The groups were used to understand the mechanisms for attitude and behaviour change between 2009 and 2012. Topics covered included: general changes in the area; awareness of the local SCSP programme; transport changes; and, specific responses to SCSP initiatives. The research is reported in detail in the report on the 2012 SCSP focus groups, and summarised within the pilot area reports.

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[7] *See http://www.transportscotland.gov.uk/roads/sustainable-transport/funding-for-projects/smarter-choices-smarter-places/monitoring*

Stakeholder consultation

3.33   When the main stage of SCSP delivery was drawing to a close in the summer of 2011, workshops and follow up interviews were held with the main stakeholders who had been involved with project delivery. The Local Authorities nominated partners in the NHS, regeneration staff, voluntary group representatives, education authority staff, regional transport partnerships, and other stakeholders, to ensure that all of the main organisations involved with SCSP delivery could share views about their experiences and learning points. Not all partners were able to attend workshops, but follow up interviews were held to obtain a range of perspectives about the experiences and processes of delivery. These interviews were summarised in reports and circulated to each Local Authority, and these were reported in detail in the 2011 interim evaluation report. During this period the Local Authorities also undertook further investment in tasks seeking to lock-in the benefits of the SCSP pilots by planning legacy activities to secure the sustainability of initiatives that appeared to be working.

3.34   A further opportunity for clarification of what had been learned was undertaken through a shared learning event on 23 May 2012 when each of the authorities described how they viewed their achievements and what they had learned. The presentations made at this shared event complemented and updated the workshop findings from 2011.

National data review

3.35   National data was reviewed to show trends in Scotland during the period of the SCSP programme. This was used to place the observed travel behaviour and attitudinal changes in the SCSP pilot areas in context.

3.36   The national data review is the subject of a separate supporting report "Analysis of National Data Sources and Trends". This report profiles national characteristics about behaviour and attitudes, including data drawn from:

- Scottish Household Survey

- National Travel Survey

- Scottish Health Survey

- VoSA data on car odometer changes in Scotland by postcode area.

3.37   The data are presented where possible for at least the period from 2005, to identify trends prior to the start of SCSP implementation in 2009.

4.0   Attitudes and Awareness

Quantitative evidence on the extent to which attitudes and awareness changed over the course of the SCSP programme came from the household surveys undertaken in each pilot area. This was complemented by qualitative evidence from the focus group research.

Public attitudes changed over the course of the programme with:

- Improved perceptions of local neighbourhoods and communities.

- Generally more positive attitudes towards walking and cycling and the associated infrastructure.

- Improved perceptions of bus travel, with the exception of bus fares where perceptions declined markedly.

- Changes in attitudes towards car use showed that in most areas people had an increasingly positive attitude towards car use but in some areas people increasingly recognised that reducing car use would be a good thing to do from a community or personal perspective.

Awareness of the branded campaigns in most of the pilot areas in the 2012 household survey was good, with more than 50% of respondents in Barrhead, Dumfries, Kirkwall and Larbert/ Stenhousemuir having heard of the local SCSP brands. The majority of respondents in all areas also had an accurate picture of what their locally branded campaign was about. When provided with visual prompts of the campaign logos, awareness was even greater, with 85% of people in Dumfries recognising the logo.

4.1   Changing attitudes can be a prelude to, or a response to, behaviour change, but are also important in their own right. Well executed promotional measures to change attitudes may have many positive consequences, such as people and organisations working together on business travel plans moving on to develop other community projects. This Chapter reports on changes in attitudes and awareness between 2009 and 2012.

Baseline attitudes and perceptions of SCSP

4.2   The baseline surveys in 2009 showed that there was a good fit between national aims for SCSP, the planned local interventions, and people's aspirations in most of the areas. Residents envisaged that the new infrastructure construction and promotion activities were consistent with the sort of changes that would encourage travel which was healthier and saved people money particularly in Barrhead, Dumfries, Dundee, and Larbert/Stenhousemuir. In Kirkintilloch/Lenzie the regeneration of the centre of Kirkintilloch was the top priority rather than environmental or health based promotion, and in Kirkwall residents had different infrastructure improvement priorities, and sought a

more community based delivery approach. In Glasgow the research identified that residents saw the planned investment as relevant for the 2014 Commonwealth Games, but were unable to identify ways that it would affect residents between 2009 and 2012.

4.3   The 2009 focus groups also revealed support for some types of SCSP initiative with participants revealing that they could see how:

- audits of walking and cycling networks would lead to better maintenance and completion of gaps such as at busy road crossings;

- targeted public transport information would prompt them to use public transport for some journeys;

- better bus facilities such as shelters would help to overcome one of the greatest perceived barriers to bus use – the unattractive waiting environment; and

- community involvement in delivery would help to ensure that priority investment received local buy-in.

4.4   Residents had difficulty envisaging how some types of intervention could succeed. The people participating in these groups may not be representative of the population but minority views can still act as obstacles to delivery and need to be overcome including:

- Perceptions that personal travel planning was unnecessary and patronising. Some people felt that too much money had already been spent by government on behaviour change campaigns, and perceived that they already had sufficient knowledge to make good decisions.

- Traffic calming was also perceived to be a controversial programme, except at schools and in cul-de-sacs, with the problems created by road humps and cushions being a particular problem for buses.

- General marketing of healthy active travel was viewed as likely to be ineffective as people thought that there was already too much of this type of publicity by government and it could be perceived as patronising.

4.5   Initial perceptions are important, as if people do not think something will work, then even if it does, they may attribute the benefits to different factors about which they had higher expectations. Most participants in the baseline focus groups and in-depth interviews had no personal knowledge of programmes like PTP on which to base their views. The pilots offered an opportunity to tailor local programmes to make them acceptable and effective amongst the local community.
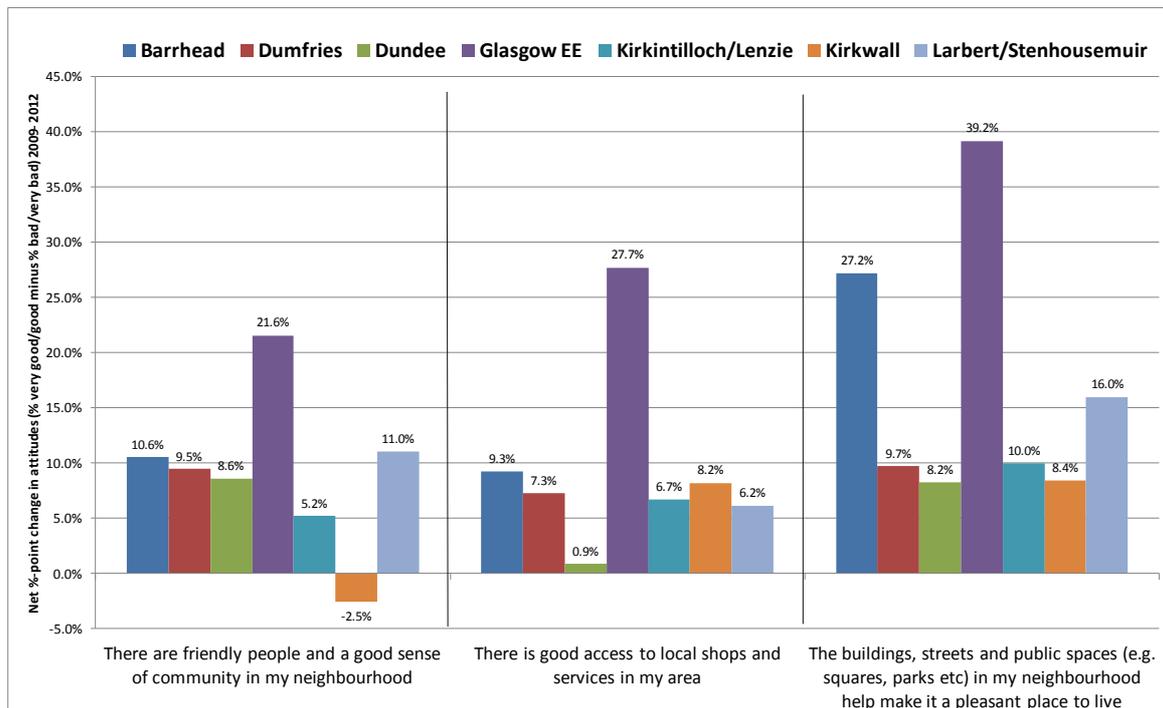
4.6   All of the pilot areas continued to develop the packages of SCSP initiatives, modifying them and adding new or different initiatives to meet local needs. The development of each programme is reported in detail in the final reports for each pilot area.

4.7   Other observations made at the outset that were relevant for building local support for delivery were that:

- Walking, and also (in the main) cycling, were considered to make a positive contribution to health, community cohesion and quality of life.

- Safety and personal security were seen as important barriers to walking, cycling and to some extent bus use so investment to tackle real or perceived barriers was regarded positively.

- Car use is suppressed by congestion and parking restraint, so people could only see any benefit from reduced personal car use if the benefits were 'locked-in' to stop the roads filling up with other traffic.

- Public transport improvements were seen as more important for giving people without cars better travel opportunities than as alternatives to car use.

- People felt strongly that there was already too much advice about what to do and not enough practical help highlighting things that they might not know.

4.8   Overall people were keen to participate in programmes that built stronger, healthier and cleaner communities.

Attitudes to community and neighbourhood

4.9   On the household survey, respondents were asked to state their agreement/disagreement with various attitude statements on a five-point scale. Figure 4.1 shows the changes in three attitudes related to neighbourhood characteristics.

4.10   To calculate the change we have used the 'net' score in each year on each attitude (i.e. the proportion saying they strongly agree/agree minus those who say they strongly disagree/disagree) and looked at the difference in this net score between 2009 and 2012. Attitudes appear to have improved on most measures in most areas. On all three measures, the greatest improvement was in Glasgow East End. Barrhead also performed relatively well, particularly on the perceptions of the built environment. There was some deterioration in community 'friendliness' in Kirkwall and Dundee does not appear to have improved its perceptions of access to local shops and services.

Figure 4.1 – Change in attitudes to neighbourhood characteristics in SCSP pilot areas (percentage point change 2009-2012)

Household Survey samples (2009 & 2012, weighted) range between 772 & 1600. Scores show the difference in the % of people agreeing minus those disagreeing to give an overall indication of the direction and magnitude of change in each attitude between the sample years.

4.11   The SCSP survey asked an identical question to the SHS survey 'How would you rate your neighbourhood as a place to live?' These data have been plotted on the same scale for each SCSP pilot area and the relevant SHS data in Figure 4.2. In all pilot areas, the increase in the proportion of people rating their neighbourhood as 'very' or 'fairly' good increased more than the SHS data for equivalent localities.

4.12   However, in keeping with the results in Figure 4.1, Glasgow East End saw the greatest improvement overall as there was also a marked reduction in the proportion of people rating their neighbourhood as poor. In Kirkwall there was virtually no change either way and this was the same in the equivalent sized towns in the SHS data.

Figure 4.2 Comparison of SCSP and SHS trends in neighbourhood rating (percentage point changes 2008/9 – 2011/12)

Household Survey samples (2009 & 2012, weighted) range between 772 & 1600. Differences between 2009 and 2012 proportions in SCSP sample on the neighbourhood rating question are significant at p<0.05*. SHS (1) = localities with between 10 – 50k population; SHS (2) = localities over 125k population; SHS (3) = datazone classification – remote small towns.

Attitudes to walking

4.13   Attitudes to attributes of different modes of transport were included in the household survey. We go through each of these sets of attitudes in turn.

4.14   The importance placed on the promotion of walking, cycling and healthy habits in the pilots warrants a comparative overview of the changes to the perceptions of these modes. Figure 4.3 details attitudes to walking.

Figure 4.3: Changes in attitudes to walking in each SCSP pilot area (percentage point change 2009 - 2012)

Household Survey samples (weighted) showing here the difference between 2009 and 2012 for each area. Scores show the difference in the % of people agreeing minus those disagreeing to give an overall indication of the direction and magnitude of change in each attitude between the sample years.

4.15 In two of the pilot areas – Barrhead and Glasgow East End - where net average daily walking trips increased according to the travel behaviour analysis (see Chapter 5), there is evidence of strong improvements in perceptions about the safety and quality of the pedestrian environment and security when walking around in the evening. Both areas received considerable investment in the path network including safety at road crossings and focus group participants highlighted these features as having contributed to safety. In Glasgow East End there was also a strong improvement in perceptions of crime during the daytime although this is not the case for Barrhead. Focus group participants noted that in Glasgow East End the local roads were much quieter as a result of recent investment in
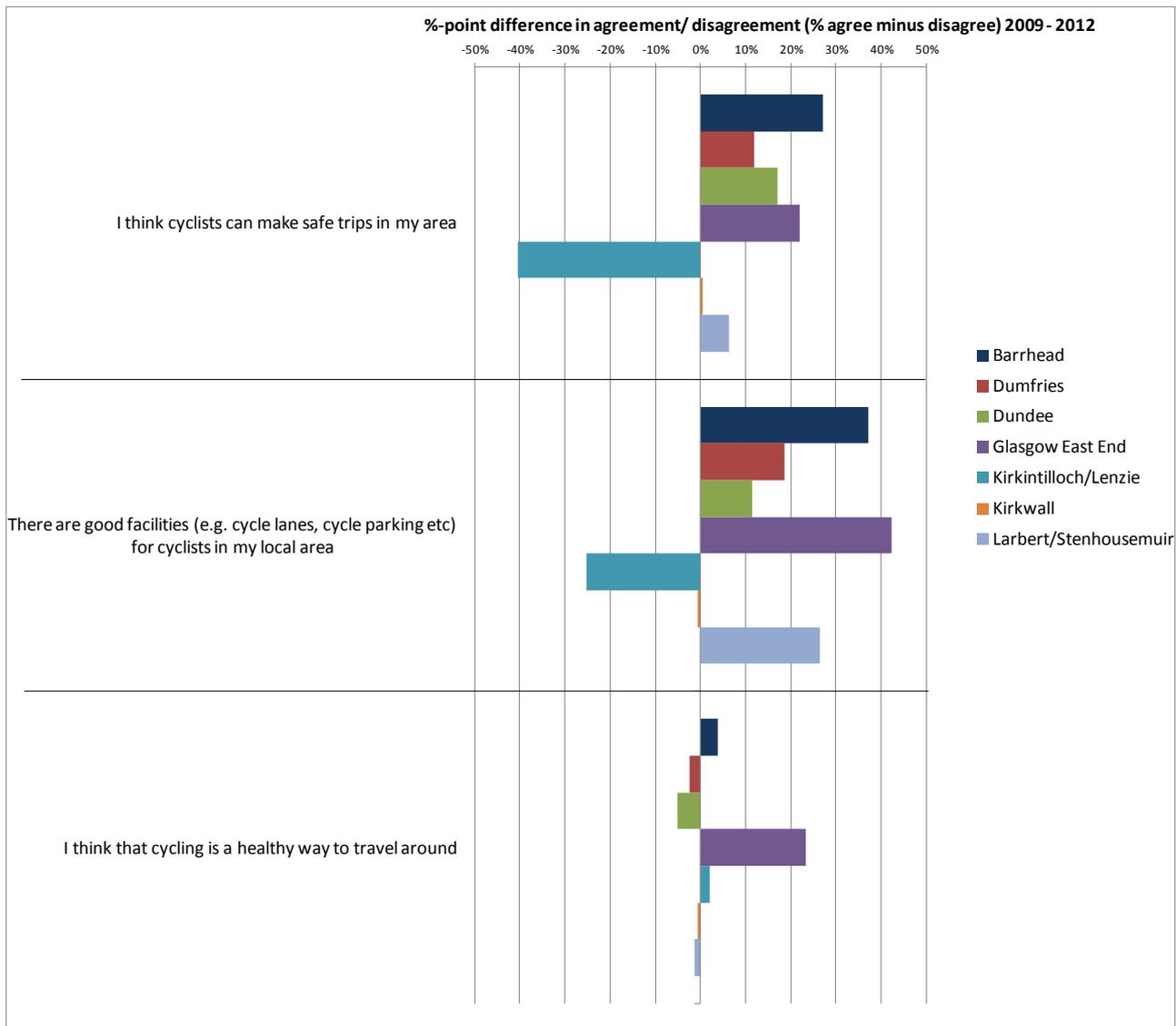
the M47 Northern Extension and Clyde Gateway roads, and it seems that these changes, together with investment in new paths have made walking and cycling safer, with better lighting and crossing facilities.

4.16   Despite the fact that walking mode share also increased in Kirkintilloch/Lenzie (Chapter 5) and investment was made in the path network, perceptions of the walking environment did not improve. Some focus group participants noted that they had been prompted to walk more and had therefore noticed more problems. This perhaps illustrates how behaviour change can influence attitudes, with awareness and perceptions changing as expectations about the walking network grow faster than improvements to the network are delivered.

4.17   Kirkintilloch/Lenzie and Dundee were the only two areas where there was an increase in the proportion of people believing they should walk more to keep fit, and this coincides with their campaigns which were targeted at healthy and active travel.

Attitudes to cycling

4.18   Figure 4.4 shows that attitudes to cycling improved in all areas apart from Kirkintilloch/Lenzie. As with walking it may be that expectations of the cycling networks were growing faster in the area than path improvements were made. Attitude change creates essential public support for Local Authorities to change spending priorities. The Council in Kirkintilloch/Lenzie has recently revised their forward programme to increase investment in the path networks, so it may be that elected representatives are recognising local attitude changes in the population. East Dunbartonshire has a longer track record of smarter choices delivery than some of the pilot areas, so this may be one reason why it shows different changes in attitudes from the other pilot areas.

4.19   As shown in Chapter 5, cycling trip mode share increased in five of the SCSP areas (not Kirkwall or Glasgow East End), although of those only the increase in Dumfries was statistically significant. Attitudes to cycling safety and facilities improved in Dumfries although not as much as in Barrhead and Glasgow East End. Indeed, despite the lack of increase in cycling mode share recorded, there was a particularly marked improvement in attitudes in Glasgow East End, including the perception that cycling is a healthy way to travel around and this bodes well for the new infrastructure that was completed late in the SCSP programme in this area. Glasgow East End also delivered much of its investment in cycle promotion through an existing social enterprise (The Bike Shed) and the success of working closely with a local cycle shop/business perhaps shows the value of changing local attitudes by working with local community partners with shared agendas.

Figure 4.4: Changes in attitudes to cycling in each SCSP pilot area (percentage point change 2009 - 2012)

Household Survey samples (weighted) showing here the difference between 2009 and 2012 for each area. Scores show the difference in the % of people agreeing minus those disagreeing to give an overall indication of the direction and magnitude of change in each attitudes between the sample years.

Attitudes to bus travel

4.20   Attitudes to bus travel are shown in Figure 4.5. Generally there has been an improvement in attitudes to the bus, but the relationship between attitudes and the behaviour changes reported in Chapter 5 are complex. Improvement or deterioration in attitudes has not always translated into increases or reductions in mode share. The most notable changes in attitude include:

- The perceived ease in getting information about bus services improved the most in Glasgow East End, Barrhead, Kirkintilloch/Lenzie and Dumfries. A substantial investment was made in a real time bus information system in Dumfries and focus group participants noted this as a positive feature that would encourage them to use buses. Most areas distributed bus timetables as part of PTP, events and through information centres, but Glasgow East End was unusual by not including this type of personal support. The high satisfaction with public transport information may relate to wider City Council investment in marketing Glasgow's bus network through the Streamline project and other mainstream initiatives, emphasising that SCSP is a small piece in a big picture. Along with availability of information, perceptions of bus service reliability improved noticeably in Glasgow East End.

- The degree to which buses enable access to important facilities improved the most in Kirkintilloch/Lenzie, and perceptions of frequency improvements and evening services were also the highest here. Bus mode share improved the most in this pilot area.

- Perceptions of reliability deteriorated in Kirkwall. The large increase in patronage recorded on key time critical services such as to Kirkwall airport may indicate that more people are now concerned about bus reliability.

- 'Liking' travelling by bus fell uniquely in Dumfries which may reflect some of the local negative perceptions towards the restructuring of the bus network undertaken through SCSP. Sometimes securing financially sustainable approaches to transport provision can be unpopular, and the Council view one of the benefits of SCSP as having achieved a publicly acceptable restructuring, but this is still not popular.

- Attitudes towards bus fares stand out as particularly negative among all the bus related attitudes. The most negative perceptions are apparent in Glasgow East End and Kirkintilloch/ Lenzie. Interestingly, there was very little difference in the amount that attitudes towards bus fares changed between those holding a concessionary travel pass (around 30% of the whole sample) and those without as both groups were less inclined to agree that 'bus fares were about right'. This demonstrates how people often answer attitudinal surveys based on their overall perception of the situation rather than specifically relating to their own experience.

Figure 4.5: Changes in attitudes to bus travel in each SCSP pilot area (percentage point change 2009 - 2012)
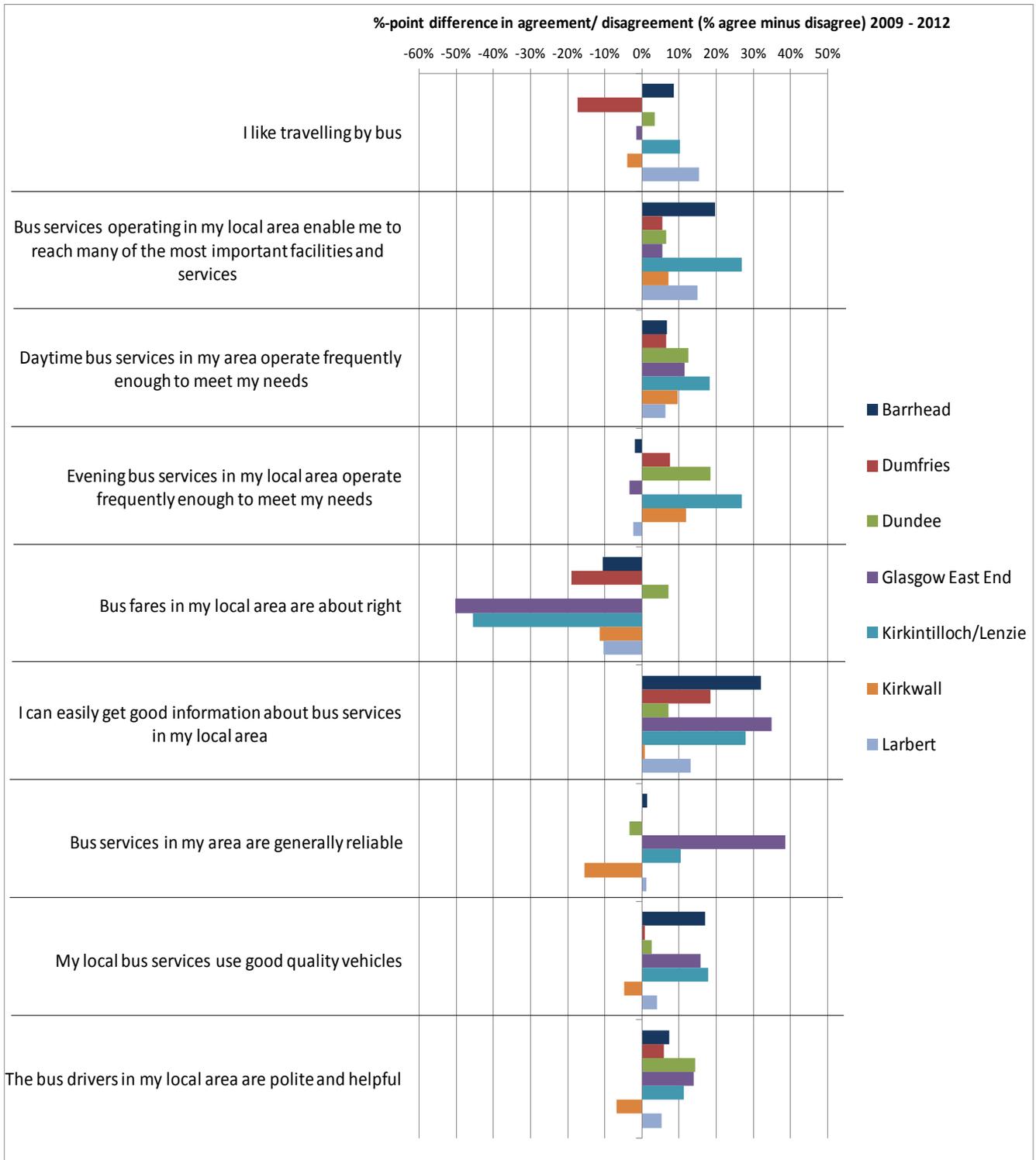

Household Survey samples (weighted) showing here the difference between 2009 and 2012 for each area. Scores show the difference in the % of people agreeing minus those disagreeing to give an overall indication of the direction and magnitude of change in each attitudes between the sample years.

Attitudes to car use

4.21   Figure 4.6 shows the changes in attitudes to car travel by all respondents (drivers and non-drivers) in each of the pilot areas. The most notable trends in these attitudes are:

- There was a slight increase in the proportion of people agreeing that they like car travel everywhere apart from Kirkwall, and a reduction everywhere in the idea that it is stressful. The behaviour change reported in Chapter 5 suggests that car driving fell in all pilot areas. If people are enjoying their car travel more by mixing it with travel by other modes then this could be helping to reduce car dependence.

- In everywhere apart from Kirkwall there was a slight increase in the proportion of people who agree that they would like to travel by car more often. Reducing car use to save money was mentioned in all focus groups, so the weak economy seems to be suppressing car use.

- There was an increase in the proportion of people who agree that people should be allowed to use their cars as much as they like everywhere apart from Kirkintilloch/Lenzie and Dundee. Glasgow East End witnessed the greatest increase in this attitude. Glasgow East End also demonstrated the lowest reduction in car driving of all the pilot areas which is consistent with the wishes of the population to drive more and the increasing road supply to support this with the recent completion of the M74 motorway extension and the Clyde Gateway roads substantially reducing car travel times.

4.22   Figure 4.7 shows the changes in attitudes to car travel among *car drivers only* in each of the pilot areas. The most notable trends in these attitudes are:

- In Kirkintilloch/Lenzie there was a relatively large increase in the proportion of people who say they are actively trying to use their car less and a corresponding reduction in those who say they are not interested in reducing their car use. There was also the greatest reduction here in those saying they just tend to use their car without thinking about it. Various data sources collated to measure car use in Kirkintilloch/Lenzie lead us to a confident conclusion that car use has indeed fallen here more than most of the other pilot areas and that feelings of car dependence are declining.

- Car drivers in Glasgow East End appear more attached to their cars than in 2009. Here respondents are less inclined to suggest they are actively reducing their car use or want to reduce it. This once again reflects the behavioural analysis whereby car driving reduced the least in this pilot area consistent with major road investment making car travel more competitive. However there was a large increase in the proportion agreeing that it would be easy for them to reduce their

car use so although car use is increasing perceptions of being dependent on cars seems to be reducing.

- Car drivers in Glasgow East End and Barrhead are also less likely to agree that reducing their car use would make them feel good whereas agreement with this has increased in most other pilot areas.

- There has been a marked reduction in all pilot areas apart from Barrhead in the proportion of people who perceive there to be no practical alternatives to most of the car journeys they make. The SCSP campaigns have sought to work with local people to look at the practical options to their travel choices. It may be that although people do not yet wish to change behaviour this has raised awareness that alternatives are available. This may be related to the personal support offered via projects such as PTP. The Barrhead focus groups raised concern about trends in land use changes, such as for education, employment and retail provision, which meant that people needed cars to be able to access services.

- There has been a greater increase in the willingness to pay more car taxes to pay for public transport improvements by car drivers in Dundee than anywhere else.

Figure 4.6: Changes in attitudes to car travel (all respondents) in each SCSP pilot area (percentage point change 2009 - 2012)

Household Survey samples (weighted) showing here the difference between 2009 and 2012 for each area. Scores show the difference in the % of people agreeing minus those disagreeing to give an overall indication of the direction and magnitude of change in each attitudes between the sample years.

Figure 4.7: Changes in attitudes to car travel (car drivers only) in each SCSP pilot area (percentage point change 2009 - 2012)

Household Survey samples (weighted) showing here the difference between 2009 and 2012 for each area. Scores show the difference in the % of people agreeing minus those disagreeing to give an overall indication of the direction and magnitude of change in each attitudes between the sample years.

Awareness of the SCSP programmes

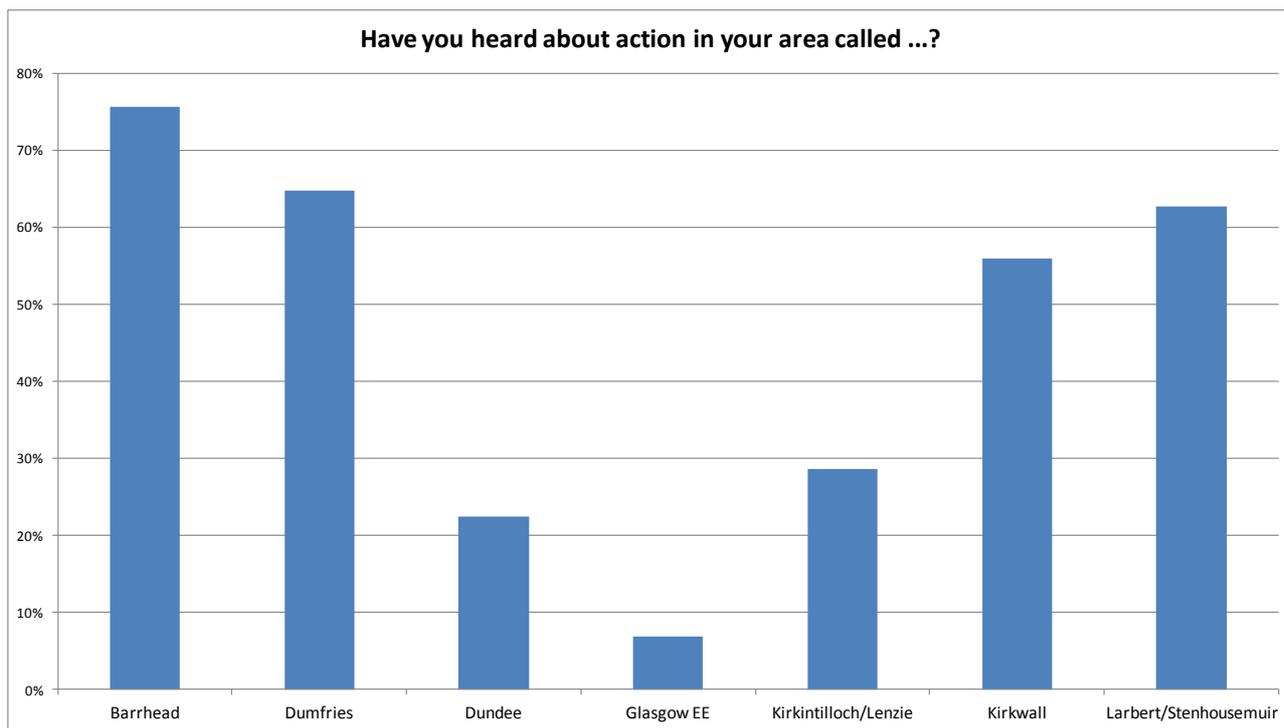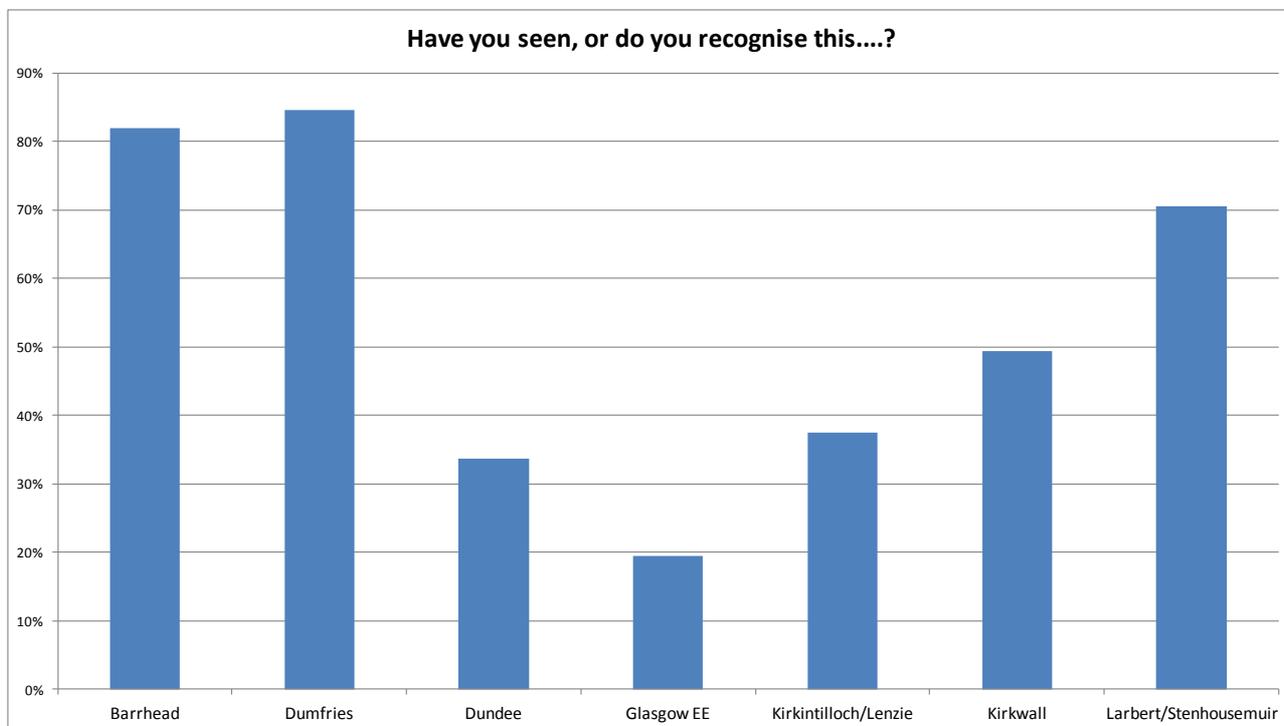4.23 The 2012 post-intervention survey attempted to gauge recognition and interpretation of the various SCSP campaigns and brands in each of the areas. In order to measure the extent to which people recognised the branding that had been used during the SCSP programme, respondents were asked if they had heard of the campaign in their area and were then shown the campaign logo and asked whether they recognised it.

4.24 Figures 4.8 and 4.9 reveal the level of campaign recognition in each area. Campaign recognition ranges from 76% of respondents saying they had heard of the campaign in Barrhead to only 7% in Glasgow East End. Recognition generally increased once the picture / logo was shown to the respondents with the exception of Kirkwall. The relatively low recognition of the logo in Kirkwall may indicate that they had heard about the campaign through local media like local papers or radio which did not use the logo, rather than directly from the campaign activities, or that the logo used was less memorable. Elsewhere recognition of the logo ranged from 85% in Dumfries to 19% in Glasgow East End.

4.25 It may be that it was harder to get the message across in areas which are already crowded with social messages. Kirkintilloch/Lenzie and Dundee, both with relatively low levels of brand recognition, adopted brands which emphasised that active travel was healthy ("Healthy Habits" and "Dundee Travel Active"). In the baseline focus groups people identified that they thought that there was too much promotional activity particularly around healthy behaviour. This was re-affirmed in several of the 2012 focus groups (although interestingly not specifically Dundee and Kirkintilloch/Lenzie) with health examples being used to illustrate that people were not listening: "*can they not get the message that not everyone is obese and those that are obese probably don't want to change*".

4.26 Glasgow East End also had lower recognition of the brand and this seemed to be related to the fact that the promotion was not connected in the minds of local people with anything that was being provided. Focus group participants in Glasgow East End noted that if the "On the Move" campaign had been associated with the M74 completion or East End Regeneration Route then people might have listened, as illustrated by the quote: "*a brand cannot be an empty promise*". It therefore seems plausible to suggest that the brands that achieved the highest recognition seemed to do so because they were describing what residents saw as a new type of delivery programme.

Figure 4.8: Brand recognition in each SCSP pilot area in 2012

Household Survey samples (2012, weighted) range between 77 772 (Kikwall) and 1045 (Larbert/Stenhousemuir).

Figure 4.9: Logo recognition in each SCSP pilot area in 2012

Household Survey samples (2012, weighted) range between 77 772 (Kikwall) and 1045 (Larbert/Stenhousemuir).

4.27   In some areas, promotion ran ahead of provision, or was inconsistent with provision. The focus group participants considered that in Glasgow East End which is undergoing major economic restructuring, the brand was only meaningful to residents if it promoted a practical training or skills development programme to help people get "On the Move" and these had only been a small part of the campaign. Similarly, in Kirkwall, the interim review in 2010 revealed local concerns that the 'Kick Start Kirkwall' brand did not capture the identity of sustainable travel in Kirkwall. By 2012, the focus group participants had accepted 'Kick Start Kirkwall' as a brand describing the path round the Peedie Sea giving the new infrastructure an identity.

4.28   Respondents were also asked what they thought the campaign was about and were given a number of options or an 'other' option (Figure 4.10). The majority of respondents in all seven SCSP areas believed the campaigns to be about '*encouraging people to be more active*' with the second most popular answer being '*getting people to use cars less*'. Dumfries and Larbert/Stenhousemuir had notable proportions also believing it was about encouraging bus use. The greatest proportion saying they did not know was in Glasgow East End.

4.29   This reflects the opportunities available in each area, not just the promotional messages. For example, the focus groups revealed that in Dundee sharing lifts in cars was viewed as one of the main benefits of Dundee Travel Active despite the connection between active travel and sharing lifts not being obvious. If Tactran and the Council have been particularly successful at promoting the sharing of lifts thus helping Dundee Travel Active, then this demonstrates how complementary marketing programmes can support each other for mutual benefit. It might be for this reason that the use of the GO branding by the NHS, bus companies and other partners in their own publicity in Barrhead and Dumfries contributed to the very high recognition.

Figure 4.10: Perceived interpretation of the campaigns in each SCSP pilot area in 2012 (% of people agreeing this is a purpose of the campaign)

Household Survey samples (2012, weighted) range between 772 (Kirkwall) and 1056 (Dundee).

Perceived success of the SCSP programmes

4.30   Respondents were also asked a variety of questions about their awareness of changes to various transport infrastructure and services in their area. Figure 4.11 shows that, for all but one improvement (cycling routes in Kirkintilloch/Lenzie) more people agree that the services have improved than disagree. In particular, improvements in walking and pedestrian crossings and cycle routes tended to receive the highest levels of acknowledgement. Especially strong improvements were recorded in the following areas:

- Public transport information in Larbert/Stenhousemuir where there had been investments in both bus and rail services by the operators but these were associated with the pilot through marketing, for example by wrapping buses in Take the Right Route branding. These improvements may help to explain the slight increase in bus modal share here reported in Chapter 5. However, the least improvement in public transport information was perceived in Kirkintilloch/Lenzie where increases in bus modal share were greatest.

- Information about walking options was perceived to be a feature of the programmes in Barrhead, and Larbert/Stenhousemuir. The Council in these pilots used physical signs and maps distributed to households covering not just the new routes but the developing network of paths which had received investment prior to the SCSP programme.

- Walking and pedestrian crossings in Barrhead and Larbert/Stenhousemuir were highly rated which can be related to the investment made and observed increases in walking in these locations. Where infrastructure appears to have made a greater impact on walking behaviour in Kirkintilloch/Lenzie, Larbert/Stenhousemuir and Barrhead it has been by tackling recognised gaps in the path network and providing a comprehensive network of well signposted new routes.

- Information about cycling options in Dumfries and Larbert/Stenhousemuir was highly rated, consistent with the investment programme in these areas where maps of the network were promoted as part of the marketing activities. It is also consistent with the fact that Dumfries was the only pilot area where a statistically significant increase in cycling was measured from the travel diary.

- Cycle routes in Dumfries, Glasgow East End and Larbert/Stenhousemuir where the networks had been improved both on and off road.

- Built environment changes in Barrhead, Glasgow East End and Larbert/Stenhousemuir which is consistent with the recent changes, although only in Barrhead were the streetscape changes funded by SCSP, with the changes being due to land use developments in Larbert/Stenhousemuir and Glasgow East End.

- Sharing lifts in cars in Dundee and Larbert/Stenhousemuir were perceived to have been recent improvements. Larbert/Stenhousemuir funded the promotion of Tripshare Falkirk through SCSP but in Dundee the opportunities were promoted through a broader Tactran programme. With more than 3% of the population having signed up to a Liftshare scheme in Dundee this shows the benefits that Tactran report they have been delivering to promote sharing with local employers and at events.

4.31 There was only one incidence where people believed a service had deteriorated; for cycling in Kirkintilloch/Lenzie. Development in the area has resulted in increased road traffic and the Council's largest investment, to mitigate the increased congestion, has been constructing the new Kirkintilloch Link Road. People may perceive that these changes have disadvantaged cyclists who rely on increasingly busy roads.

Figure 4.11: Perceived improvements to infrastructure and services in each SCSP pilot area (% of people agreeing in 2012)

Household Survey samples (2012, weighted) range between 772 (Kirkwall) and 1056 (Dundee). Scores show the difference in the % of people agreeing minus those disagreeing to give an overall indication of the direction and magnitude of opinion.

5.0   Travel Behaviour Change

Between 2009 and 2012 the research evidence showed that travel behaviour changed significantly in at least some ways in all seven pilot areas.

A higher proportion of trips were made on foot, with statistically significant increases in five out of the seven pilot areas. The greatest increases were recorded in Larbert/Stenhousemuir, where mode share for walking increased by 21.4 percentage points, and Barrhead, where the increase was 14.8 percentage points, against a background trend in comparable areas of Scotland of an increase of 1.6 percentage points.

Cycling mode share increased in five out of the seven pilot areas. The increase in Dumfries was statistically significant but only in Dumfries and Dundee was the increase greater than that recorded in similar areas of Scotland.

The proportion of trips made by bus decreased in five of the seven areas, but a statistically significant increase was observed in Kirkintilloch/Lenzie. Bus use declined more among people in households without a car than in car-owning households.

The proportion of trips made as a car driver decreased in all seven pilot areas by more than the changes observed in other similar parts of the country. The reductions ranged from 19.4 percentage points in Larbert/Stenhousemuir to 1.6 percentage points in Glasgow East End. These decreases were statistically significant in Barrhead, Dumfries, Kirkintilloch/Lenzie and Larbert/Stenhousemuir.

The mode share of car passenger trips increased in five of the seven pilot areas. The increases were statistically significant in Dundee, Glasgow East End and Kirkwall, as was the decrease observed in Larbert/Stenhousemuir.

5.1   This chapter describes what was learned about travel behaviour change. It starts with evidence from a variety of sources to assess how behaviour changed and then discusses the mechanisms for change.

Observed behaviour change methods

5.2   Behaviour change outcomes across the pilot areas were measured by comparing data from a number of sources. Similar findings from different data allow more robust conclusions to be drawn about changes in travel associated with the SCSP programme. Four types of data were used:

- Changes in *mode share* (relating to proportion of all trips by main mode) of each mode in the 2009 and 2012 from the travel diary on the household surveys.

- Changes in *self reported frequency of use* (number of days per week or year) of each mode in the 2009 and 2012 household surveys.

- Changes in *observed travel patterns* from local count data.

- Changes in travel behaviour reported through local user surveys undertaken by the Local Authority teams in the SCSP pilot areas.

5.3   Some points to note on these evidence sources are as follows:

- A comparison of trip mode share was used, rather than directly comparing numbers of daily trips by mode, since review of the survey data outputs showed that the numbers of trips reported (across all modes) in the travel diary was consistently greater in 2012 than it was in 2009. The change in methodology from self reported information to computer assisted interviews (CAPI) may have elicited more comprehensive trip recording. While this was beneficial in terms of quality, it made meaningful comparison of raw trip numbers difficult.

- Average distance travelled by mode per person reported in the travel diaries showed no statistically significant changes between 2009 and 2012 for any mode. As a result of concerns about the greater recording of trips in 2012 noted above, we have not included distance reported in the travel diaries among the indicators examined here. Where we required changes in distance travelled to calculate impacts we used reported changes in trip numbers and an average figure for trip length taken from similar localities for relevant years in the Scottish Household Survey.

- There are differences between the 2009 and 2012 samples in the proportion of respondents living in households with and without cars (as discussed in Chapter 3). In order to account for this, we looked at changes in behaviour for people from households with and without at least one car, where appropriate, in order to allow for this difference. Where we make comparisons between car-owning and non car-owning households in this way it refers to the number of cars owned in total by persons living in the same household as the respondent. It is therefore one possible indication of car access but may not be the whole picture. It is acknowledged that those living in a household with a car may not have personal access to it themselves; and those living in households without a car may nevertheless have access to a car through friends, neighbours, the workplace or car clubs.

- Analysis of trip mode share from the travel diary results concentrated on the main mode for each trip, which is the mode used for the longest (by distance) stage of a journey. This approach was adopted rather than analysis at the individual trip stage level because the 2009 baseline data set missed many of the minor trip stages (e.g. walking to the bus stop for a "bus trip"). This was one of the reasons for the change of approach from self-completion to CAPI for the 2012 survey.

- Count data has a number of sources of uncertainty. Some of the count data was marked as questionable by the Local Authorities due to potential errors in recording trips at certain times or places. The location of the counting sites on new paths was not always complemented with background counts elsewhere in the pilot areas from which cycle trips may have been abstracted. The network of counters did not capture a complete picture of walking and cycling levels across the entire pilot area and in most pilot areas the picture was very patchy as many planned counts were not completed successfully. Unlike the household survey data, we were not able to compare this data to background trends elsewhere in Scotland, other than occasionally being able to compare what happened in the target areas to wider changes in the area or the trend prior to the intervention.

Changes in walking

5.4   Table 5.1 shows the observed change in walking trip mode share between 2009 and 2012 in each of the SCSP pilot areas, as reported in the household survey travel diaries. It also shows where the corroborative evidence sources point to changes in the same direction. Changes in mode share recorded in the Scottish Household Survey[8] (SHS) in similar areas across Scotland are also shown for comparison.

5.5   The mode share of walking trips increased in all areas, with increases varying from 0.3 percentage points in Kirkwall to 21.4 percentage points in Larbert/Stenhousemuir. The increases in walking trip mode share were statistically significant in five of the seven SCSP areas. In all cases, the observed increases in walking trips were greater than those recorded in the SHS in comparable areas.

5.6   Table 5.1 reveals that in the majority of cases the direction of change recorded through the corroborative data sources was consistent with those observed through the travel diaries:

- Barrhead shows a consistent and positive picture in terms of desired behaviour change towards walking across all sources of data.

- We can also conclude with some confidence that people in the target areas of Kirkintilloch/Lenzie and Larbert/Stenhousemuir increased the proportion of trips they make on foot.

- In Dumfries, the travel diary results suggest that there was a significant increase in the proportion of trips being made on foot, although this was not supported by town centre pedestrian counts.

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[8] *Changes relate to 2008-11, the nearest comparable 3-year period available from SHS data.*

- In Dundee, the observed change in walking trip mode share between 2009 and 2012 was not statistically significant, but notably was different to the trend in comparable city areas across Scotland where walking decreased. The changes in travel behaviour reported by Dundee's own local PTP evaluation survey and pedestrian counts lend some support for the observed increase being representative of a real change within the population rather than occurring by chance within the survey sample.

- The travel diary results in Glasgow East End showed a statistically significant increase in the proportion of trips made on foot. Again, this is set against a background of declining walking mode share in comparable city areas across Scotland. A note of caution, though, comes from the self-reported frequency results within the Glasgow East End household survey, where the proportion of people reporting walking on more than two days per week declined.

- Other than data on the journey to school, the data in Kirkwall leads to a conclusion that overall walking activity has probably not increased in the target area. It should be noted, however, that the average number of walking trips per capita in Kirkwall was the highest of all the SCSP pilot areas in the baseline, and remains relatively high in the post-intervention survey. It is also noteworthy that the observed small increase in proportion of trips made on foot bucks the trend of a decrease recorded through the SHS in other remote small towns of a similar size.

Table 5.1: Observed changes in levels of walking

	Change in trip mode share (main mode) across SCSP target areas			Change in trip mode share in comparable areas	Corroborative support for change reported in travel diaries		
	From SCSP evaluation travel diaries			From analysis of national SHS data 2008-11	Self-reported frequency	Count data	Local user surveys
	2009	**2012**	**%-point change**	**%-point change**			
Barrhead	21.5%	36.3%	+14.8%	+1.6%	✓	✓	n/a
Dumfries	22.0%	29.6%	+7.6%	+1.6%	✓	X	n/a
Dundee	45.9%	48.2%	+2.4%	-2.8%	✓	n/a	✓
Glasgow East End	41.0%	46.1%	+5.1%	-2.8%	X	✓	n/a
Kirkintilloch / Lenzie	18.9%	23.9%	+5.1%	+1.6%	✓	✓	n/a
Kirkwall	34.1%	34.4%	+0.3%	-1.9%	X	-	n/a
Larbert / Stenhousemuir	15.8%	37.2%	+21.4%	+1.6%	✓	-	n/a
Scotland (national)				-0.1%			
Notes	Blue shading shows observed change is statistically significant All figures are rounded to the nearest 0.1 percentage points.						
	✓ means corroborative data shows trend in same direction as observed change; X means data shows opposing trend						
	- means corroborative data is inconclusive; n/a means data not available or not collected						

5.7 Figure 5.1 presents the observed change in trip mode share for people in households with and without at least one car. This shows that in Dumfries, Kirkintilloch/Lenzie, and Kirkwall there was a greater shift towards walking among people from car-owning households, while in Barrhead, Dundee, Glasgow East End and Larbert/Stenhousemuir there was a greater shift towards walking among non-car-owning households. This latter group of pilot areas includes a large proportion of people with low disposable incomes who may have been prompted to walk as a necessity to save money. In Dumfries, Kirkintilloch/Lenzie and Kirkwall there are larger populations of more affluent car-owning households where the motivation to walk is likely to have been more by choice.

Figure 5.1: Observed changes in walking trip mode share for people from households with and without access to a car (percentage point change 2009 -2012)

2009 & 2012 travel diary samples (weighted) used as the base to calculate changes.

5.8 Overall, it can be reasonably concluded that between 2009 and 2012 there was a shift towards greater walking in all the SCSP pilot areas, with the exception of Kirkwall (where walking mode share was already unusually high) and Dundee. In all cases, the observed increase in walking mode share was greater than that seen between 2008 and 2011 in comparable areas and against the national Scottish trend of a small decrease in walking mode share. This can be seen as a very positive result for the SCSP programme.
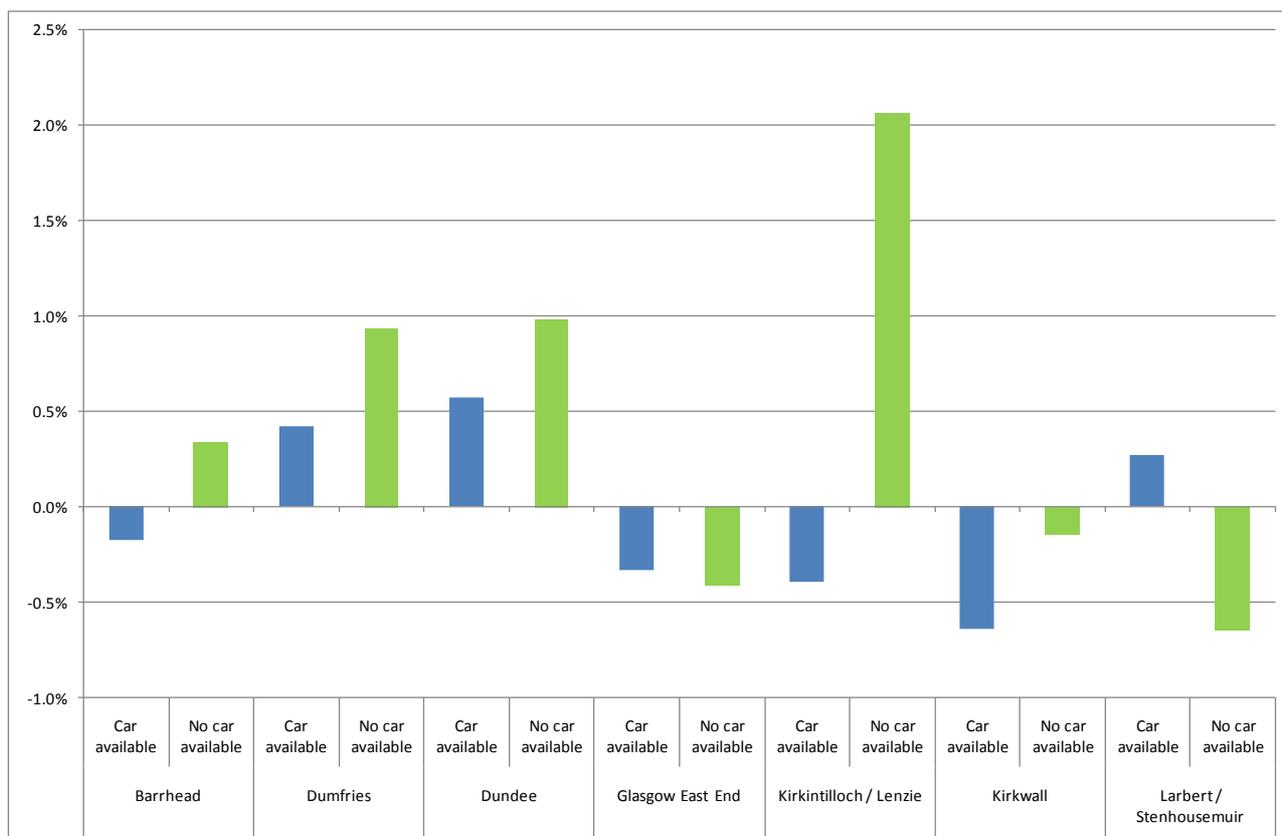
Changes in cycling

5.9   Table 5.2 compares the mode share of cycling trips between 2009 and 2012 in each of the seven SCSP target areas from the travel diary data. In five of the SCSP areas, cycling trip mode share increased, although of those only the increase in Dumfries was statistically significant. In Glasgow East End and Kirkwall small decreases in cycling trip mode share were observed, although neither was statistically significant. Dumfries and Dundee were the only two areas to show increases in cycling mode share in excess of those recorded in similar areas of Scotland in the SHS.

5.10   It should be noted, however, that the number of cycling trips reported by survey respondents in the travel diaries was very low (in some cases in single figures) in both survey years. This is largely because the mode share for cycling is also low and this is reflected in the lack of statistical significance of the changes in cycling in most cases.

5.11   In terms of corroborative data sources, the SCSP household survey question on frequency of use of different modes showed trends in the same direction as that observed in the travel diaries for five of the seven SCSP target areas (the exceptions being Barrhead and Dumfries). However, count data from local monitoring activities did lend support to the observed increase in the proportion of trips made by bicycle in Barrhead. The PTP evaluation survey undertaken by the local PTP team in Dundee (which suggested that 7% of PTP participants had increased their cycling activity) also reinforces the observed increase in cycling mode share recorded in that target area. In other areas, an opposing or inconclusive trend was observed.

5.12   Figure 5.2 presents the observed change in trip mode share for people in households with and without at least one car. This suggests that in Barrhead, Dumfries, Dundee, Kirkintilloch/Lenzie and Kirkwall there was a greater shift towards cycling (or a smaller shift away from cycling) among people from non car-owning households. In Glasgow East End and Larbert/Stenhousemuir the opposite was true. Community perceptions are likely to be important determinants of cycling behaviour, so it may be that in Barrhead, Dumfries, Dundee, Kirkintilloch/Lenzie and Kirkwall the positive perceptions are within the wealthier car-owning communities, whereas in the other communities the more positive perceptions may be within the non car-owning communities.

5.13   In Barrhead and Kirkintilloch/Lenzie a large increase in the number of cyclists was observed through the count data, but not in Dundee, and no suitable counts were available for Kirkwall.

Table 5.2: Observed changes in levels of cycling

	Change in trip mode share (main mode) across SCSP target areas			Change in trip mode share in comparable areas	Corroborative support for change reported in travel diaries		
	From SCSP evaluation travel diaries			From analysis of national SHS data 2008-11	Self-reported frequency	Count data	Local user surveys
	2009	2012	%-point change	%-point change			
Barrhead	0.6%	0.9%	+0.3%	+0.5%	X	✓	n/a
Dumfries	0.6%	1.3%	+0.7%	+0.5%	X	X	n/a
Dundee	0.5%	1.3%	+0.8%	+0.2%	✓	X	✓
Glasgow East End	0.7%	0.4%	-0.4%	+0.2%	✓	X	n/a
Kirkintilloch / Lenzie	0.7%	1.0%	+0.3%	+0.5%	✓	n/a	n/a
Kirkwall	1.8%	1.2%	-0.5%	+1.7%	✓	-	n/a
Larbert / Stenhousemuir	0.6%	0.9%	+0.4%	+0.5%	✓	-	n/a
Scotland (national)				+0.3%			
Notes	*Blue shading shows observed change is statistically significant. All figures are rounded to the nearest 0.1 percentage points.*						
	✓ *means corroborative data shows trend in same direction as observed change; X means data shows opposing trend*						
	- *means corroborative data is inconclusive; n/a means data not available or not collected*						

Figure 5.2: Observed changes in cycling trip mode share for people from households with and without access to a car (percentage point change 2009 – 2012)

2009 & 2012 travel diary samples (weighted) used as the base to calculate changes.

Local bus travel

5.14   Table 5.3 compares the bus trip mode share changes in each of the seven areas, as reported in the travel diary element of the household survey. The mode share of bus trips decreased in five of the seven areas with small decreases of less than one percentage point in Kirkwall, Barrhead and Dumfries and larger decreases in the SCSP pilot areas of the Dundee and Glasgow East End. In contrast, increases of 0.8 percentage points and 7.4 percentage points were observed in Larbert/Stenhousemuir and Kirkintilloch/Lenzie respectively. The increase in bus mode share observed in Kirkintilloch/Lenzie was statistically significant, as were the decreases recorded in Dundee and Glasgow.

5.15   The corroborative evidence from the household survey question on frequency of use of different modes and from bus patronage data (where available) showed trends in the same direction as that observed in the travel diaries in all cases except in Barrhead.

5.16   Figure 5.3 shows the changes in proportions of trips made by bus by people in households with and without access to a car. This shows that across all areas bus use declined more among people in households without a car than among those living in car-owning households. Focus group participants, particularly in Glasgow East End and Dundee where

the declines in bus use were greatest, noted that they had reduced bus travel wherever possible to save money, whereas car-owning households tend to be using bus by choice so may have not felt the need to reduce their use of the bus. In Kirkintilloch/Lenzie and Barrhead there was an increase in bus trip mode share among people from households with a car.

5.17   In all SCSP areas except Larbert/Stenhousemuir and Kirkintilloch/Lenzie, bus trip mode share declined to a greater extent than the average of comparable areas across Scotland and compared with the national average. Given the economic circumstances and the emphasis in many of the SCSP pilot areas on encouraging active travel, it is plausible that bus trips were transferred to walking, particularly in view of the increases in walking mode share reported above.

5.18   Taking account of all the evidence, it can be concluded that bus travel increased in Kirkintilloch/Lenzie and decreased in Dundee and Glasgow East End. The picture is inconclusive with respect to the other SCSP areas where changes in bus trip mode share were small and not statistically significant.

Table 5.3: Observed changes in bus travel

	Change in trip mode share (main mode) across SCSP target areas			Change in trip mode share in comparable areas	Corroborative support for change reported in travel diaries		
	From SCSP evaluation travel diaries			From analysis of national SHS data 2008-11	Self-reported frequency	Count data	Local user surveys
	2009	**2012**	**%-point change**	**%-point change**			
Barrhead	14.7%	14.1%	-0.6%	+0.1%	X	n/a	n/a
Dumfries	8.4%	7.6%	-0.9%	+0.1%	✓	✓	-
Dundee	18.5%	14.3%	-4.3%	-0.4%	✓	n/a	n/a
Glasgow East End	26.6%	20.2%	-6.5%	-0.4%	✓	✓	n/a
Kirkintilloch / Lenzie	17.4%	24.8%	+7.4%	+0.1%	✓	n/a	n/a
Kirkwall	1.4%	1.3%	-0.1%	+1.8%	✓	n/a	n/a
Larbert / Stenhousemuir	6.4%	7.3%	+0.8%	+0.1%	✓	n/a	n/a
Scotland (national)				0.0%			
Notes	*Blue shading shows observed change is statistically significant.*				*All figures are rounded to the nearest 0.1 percentage points.*		
	✓ *means corroborative data shows trend in same direction as observed change; X means data shows opposing trend*						
	- *means corroborative data is inconclusive; n/a means data not available or not collected*						

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Figure 5.3: Observed changes in bus trip mode share for people from households with and without access to a car (percentage point change 2009 – 2012)

2009 & 2012 travel diary samples (weighted) used as the base to calculate changes.

Travel by car as a driver

5.19   Table 5.4 shows the change in the mode share of car driver journeys in each of the seven areas, as reported in the travel diaries. The mode share of car driver trips decreased in all of the seven areas between 2009 and 2012, with reductions ranging from 1.6 percentage points in Glasgow East End to 19.4 percentage points in Larbert-Stenhousemuir. These decreases were statistically significant in Barrhead, Dumfries, Kirkintilloch/Lenzie and Larbert/Stenhousemuir.

5.20   In all seven SCSP areas, the observed decrease in the proportion of trips made as a car driver was greater than the corresponding change recorded through the Scottish Household Survey in comparable areas, and greater than the Scottish national trend. The corroborative evidence from all the available sources also showed changes in the same direction as those observed in the travel diary data.

5.21   Taking account of all the evidence, it can be concluded that there were reductions in car driver trips among the target populations in Barrhead, Dumfries, Kirkintilloch/Lenzie and Larbert/Stenhousemuir and most probably reductions (albeit smaller ones) in car driver

trips in Dundee, Glasgow East End and Kirkwall. This can be seen as a very positive result for the SCSP programme.

Table 5.4: Observed changes in travel by car as a driver

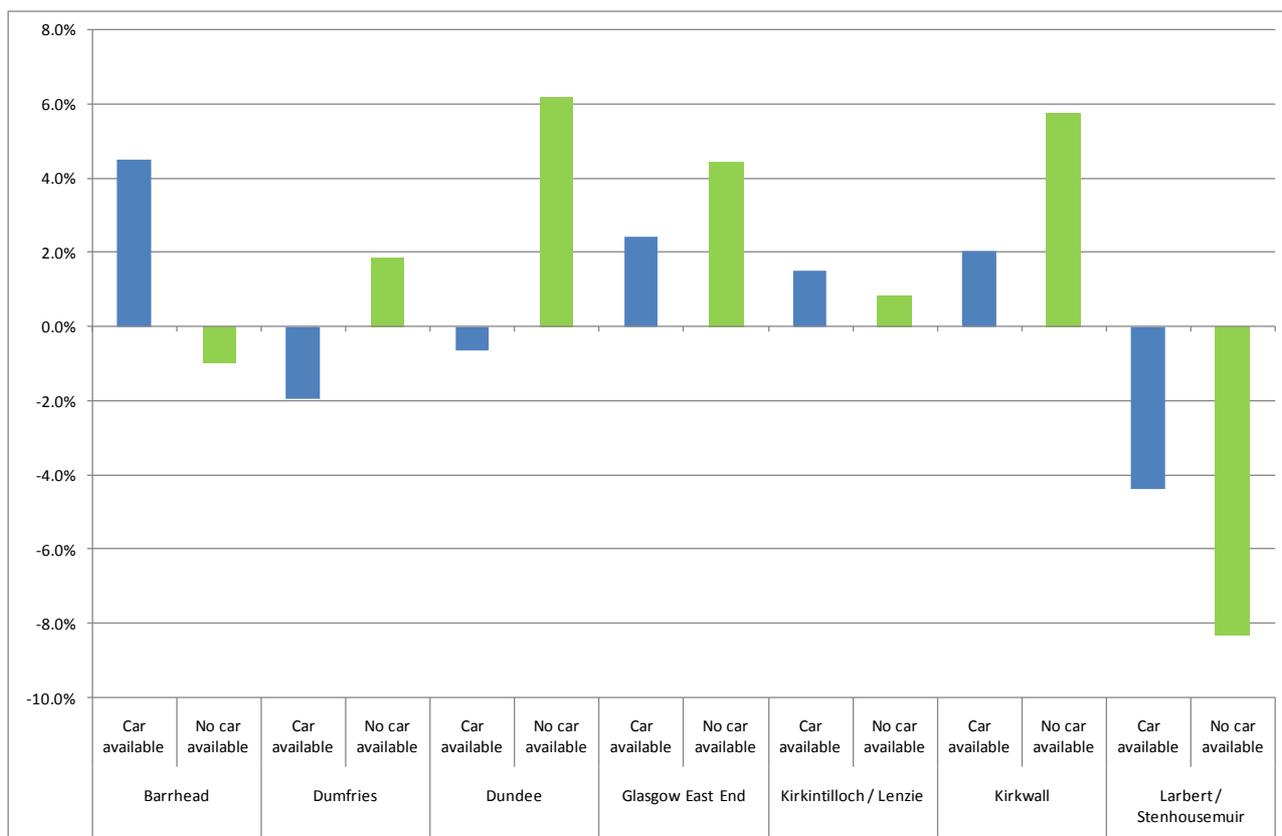|	Change in trip mode share (main mode) across SCSP target areas			Change in trip mode share in comparable areas	Corroborative support for change reported in travel diaries		
	From SCSP evaluation travel diaries			From analysis of national SHS data 2008-11	Self-reported frequency	Count data	Local user surveys
	2009	2012	%-point change	%-point change			
Barrhead	47.9%	29.0%	-18.9%	-1.5%	✓	n/a	n/a
Dumfries	53.6%	46.2%	-7.4%	-1.5%	✓	n/a	n/a
Dundee	24.9%	23.0%	-1.9%	+2.7%	✓	✓	✓
Glasgow East End	19.8%	18.2%	-1.6%	+2.7%	✓	✓	n/a
Kirkintilloch / Lenzie	49.4%	38.0%	-11.4%	-1.5%	✓	n/a	n/a
Kirkwall	51.2%	48.1%	-3.1%	-2.7%	✓	n/a	n/a
Larbert / Stenhousemuir	60.5%	41.1%	-19.4%	-1.5%	✓	n/a	n/a
Scotland (national)				+0.1%			
Notes	Blue shading shows observed change is statistically significant.				All figures are rounded to the nearest 0.1 percentage points.		
	✓	means corroborative data shows trend in same direction as observed change; X means data shows opposing trend					
	-	means corroborative data is inconclusive; n/a means data not available or not collected					

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Travel by car as a passenger

5.22   Table 5.5 shows the change in the mode share of car passenger in each of the seven areas, as reported in the travel diaries. The mode share of car passenger trips increased over the study period in five of the seven areas. Increases varied from 1.2 percentage points in Kirkintilloch/Lenzie to 3.5 percentage points in Glasgow East End. In Dumfries and Larbert/Stenhousemuir, the areas with the greatest proportion of trips made by car as driver in 2009, the mode share of car passenger trips fell by 1.3 percentage points and 5.0 percentage points respectively. The increases in car passenger trip mode share were statistically significant in Dundee, Glasgow East End and Kirkwall, as was the decrease observed in Larbert/Stenhousemuir. As with car driver trip mode share, the corroborative evidence from all the available sources consistently showed changes in the same direction as those observed from the travel diary data.

5.23   The increases in car passenger trip mode share in the five areas where this was observed were all in excess of (and in some cases, the opposite direction to) changes recorded through the Scottish Household Survey in comparable areas. The small decrease in car passenger mode share observed in Dumfries was similar to that recorded in comparable areas of Scotland, while the larger decrease seen in Larbert/Stenhousemuir was greater than that seen in comparable areas. The national trend from the SHS data analysis was for a slight decrease in car passenger mode share.

5.24   Figure 5.4 shows the changes in proportions of trips made as a car passenger by people in households with and without access to a car. This shows that in Dumfries, Dundee, Glasgow East End and Kirkwall, car passenger trip mode share increased more among people without access to a household car than among those with household car access. In Barrhead and Kirkintilloch/Lenzie the opposite was true, while in Larbert/Stenhousemuir the reduction in car passenger mode share was smaller among people from households with a car than among those without.

5.25   Taking all the evidence into account, it can be concluded that car passenger trips increased among the SCSP target populations of Dundee, Glasgow East End and Kirkwall, and decreased in Larbert/Stenhousemuir. There were probably also small increases in Barrhead and Kirkintilloch/Lenzie and a small decrease in Dumfries – although this is less certain.

Table 5.5: Observed changes in car passenger travel

	Change in trip mode share (main mode) across SCSP target areas			Change in trip mode share in comparable areas	Corroborative support for change reported in travel diaries		
	From SCSP evaluation travel diaries			From analysis of national SHS data 2008-11	Self-reported frequency	Count data	Local user surveys
	2009	**2012**	**%-point change**	**%-point change**			
Barrhead	9.6%	11.2%	+1.6%	-1.6%	✓	n/a	n/a
Dumfries	13.6%	12.2%	-1.3%	-1.6%	✓	n/a	n/a
Dundee	7.7%	10.4%	+2.7%	+1.2%	✓	✓	-
Glasgow East End	5.9%	9.5%	+3.5%	+1.2%	✓	✓	n/a
Kirkintilloch / Lenzie	8.4%	9.7%	+1.3%	-1.6%	✓	n/a	n/a
Kirkwall	9.4%	12.3%	+3.0%	-0.7%	✓	n/a	n/a
Larbert / Stenhousemuir	13.5%	8.5%	-5.0%	-1.6%	✓	n/a	n/a
Scotland (national)				-0.7%			
Notes	*Blue shading shows observed change is statistically significant. All figures are rounded to the nearest 0.1 percentage points.*						
✓	*means corroborative data shows trend in same direction as observed change; X means data shows opposing trend*						
-	*means corroborative data is inconclusive; n/a means data not available or not collected*						

Figure 5.4: Observed changes in car passenger trip mode share for people from households with and without access to a car (percentage point change 2009 – 2012)

2009 & 2012 travel diary samples (weighted) used as the base to calculate changes.

Train

5.26   Rail travel was not a principal focus of the SCSP pilots as it does not form a key part of the local travel mix in the selected areas, and there are no rail services in Kirkwall. However, travel by train was included in the household survey. The travel diary results suggested that no significant changes to train travel habits took place in five of the seven SCSP areas, remaining at a small proportion (typically between 0% and 3%) of the trips made. In Glasgow East End and Kirkintilloch/Lenzie, a statistically significant drop in rail mode share was reported (in both cases of the order of 1 percentage point) between 2009 and 2012. Some focus group participants particularly highlighted rail as a mode they had used less to save money.

Taxi

5.27   Travel by taxi was also not a particular focus of the SCSP pilots. Travel diary results showed no significant change in reported taxi use in Dundee, Glasgow East End or Kirkwall between 2009 and 2012. However statistically significant increases in taxi mode share were recorded in Barrhead, Larbert/Stenhousemuir, and Dumfries (up 2.9, 2.3 and 0.8

percentage points respectively). A significant decrease of 1.3 percentage points was recorded in Kirkintilloch/Lenzie. It is of note that changes in taxi use were in the opposite direction to bus use changes in all areas.

Changes in mode use by journey purpose

5.28   Table 5.6 compares the percentage point changes (between 2009 and 2012) in the proportions of trips made by each mode for five main journey purposes. The table can be used to make comparisons between journey purposes or between modes. Green indicates an increase of +1 percentage point or more in mode share, and red a decrease. White indicates no change or a very small change (<+/-1 percentage point).

5.29   Walking mode share increased between 2009 and 2012 for most journey purposes in all pilot areas. The smallest level of switching to walking was in relation to leisure and shopping journeys, although there were some exceptions to this – notably the increase in walking mode share for shopping in Larbert/Stenhousemuir and for shopping and leisure in Barrhead. Walking to work increased in six out of the seven pilot areas.

5.30   There were relatively few notable changes in cycle mode share for most journey purposes and pilot areas. Exceptions included the small increases in cycling to work in Barrhead, Dumfries and Dundee and the use of the bike for visiting friends and relatives in Dumfries, Dundee and Larbert/Stenhousemuir.

5.31   There was a mixed picture for bus use with very little increase in the use of the bus for the journey to work, except in Larbert/Stenhousemuir and to a smaller extent in Dumfries. Bus use on the journey to work fell in Kirkintilloch/Lenzie, Dundee and Barrhead.

5.32   Car driving mode share reduced for almost all journey purposes in all pilot areas. Most notably, car mode share fell in all areas for visiting friends and relatives and to access education (with the exception of Kirkwall), and for shopping with the exception of Glasgow East End. Increases in car driving were recorded for work journeys in Dundee and Kirkintilloch/Lenzie.

5.33   Car passenger mode share increased for most journey purposes in all pilot areas. In particular, car passenger trips made for leisure and for visiting friends and relatives generally experienced an increased mode share.

5.34   In summary, the SCSP programme can be associated with an increase in active modes (especially walking) for the journey to work, to education, visiting friends and family and to a lesser extent shopping trips. Car reductions were especially strong for education and visiting friends and family.

Table 5.6: Changes in mode share for each journey purpose in each pilot area (percentage point change 2009 – 2012)
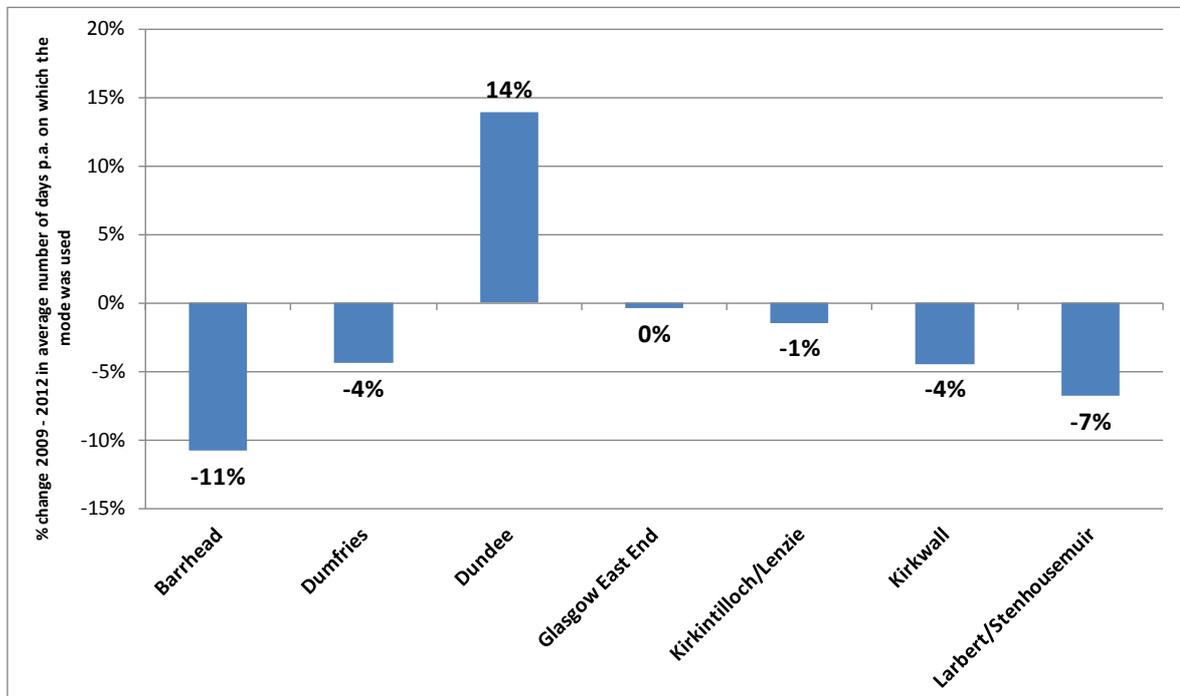
		Walk	Bicycle	Bus	Car Driver	Car Passenger
To work	Barrhead	+11.3	+3.3	-2.2	-18.1	+6.8
	Dumfries	+2.5	+2.7	+1.1	-2.9	-3.8
	Dundee	-7.6	+1.2	-1.3	+5.2	+0.5
	Glasgow EE	+9.4	-0.7	+0.8	-11.7	+2.5
	Kirkintilloch/Lenzie	+0.4	+0.5	-7.3	+5.6	+4.2
	Kirkwall	+4.0	-0.9	-0.5	-1.9	+0.3
	Larbert/Stenhousemuir	+11.8	0.0	+3.1	-13.0	-2.0
Education	Barrhead	+15.0	0.0	+4.8	-18.8	-5.5
	Dumfries	+29.4	0.0	-5.5	-14.6	-9.3
	Dundee	+15.9	+1.0	-14.9	-6.6	+4.6
	Glasgow EE	+14.2	0.0	-6.5	-5.1	+6.5
	Kirkintilloch/Lenzie	+0.5	0.0	+8.5	-14.1	+5.1
	Kirkwall	-10.7	0.0	+1.5	+9.8	-2.1
	Larbert/Stenhousemuir	+26.6	0.0	+2.7	-28.8	+2.9
Shopping	Barrhead	+11.4	+0.7	+1.5	-15.7	+1.4
	Dumfries	+1.9	-0.2	+4.1	-1.9	-4.9
	Dundee	+4.0	-0.2	-3.5	-8.5	+6.1
	Glasgow EE	-1.3	-0.2	-2.0	+2.3	+2.4
	Kirkintilloch/Lenzie	-8.9	+0.7	+16.4	-5.3	-1.5
	Kirkwall	-1.2	+1.1	-2.2	-0.8	+1.6
	Larbert/Stenhousemuir	+27.1	-0.2	-3.2	-14.0	-9.7
Leisure	Barrhead	+20.8	-1.1	-1.1	-31.2	+3.3
	Dumfries	-2.2	+1.1	-4.7	-0.6	+4.8
	Dundee	+5.1	0.0	+0.6	-9.4	+2.4
	Glasgow EE	-1.6	-0.7	-4.2	+5.6	+2.4
	Kirkintilloch/Lenzie	-9.6	-0.5	+28.4	-25.0	+6.8
	Kirkwall	+0.3	-1.6	+1.7	+3.5	-0.9
	Larbert/Stenhousemuir	-3.5	+1.0	+2.4	-4.2	-0.2
Visiting Friends and Relatives	Barrhead	+14.0	-4.0	+10.1	-16.1	-5.1
	Dumfries	+14.0	+2.4	-0.5	-18.6	+3.3
	Dundee	-2.5	+2.9	-1.7	-5.7	+3.8
	Glasgow EE	+20.6	0.0	-12.6	-0.9	+1.2
	Kirkintilloch/Lenzie	+21.9	+0.9	-8.8	-12.2	+2.2
	Kirkwall	+0.8	-0.8	+2.2	-6.9	+3.3
	Larbert/Stenhousemuir	+35.4	+1.7	+1.2	-35.7	-3.4

2009 & 2012 travel diary samples (weighted) used as the base to calculate changes. All figures are rounded to the nearest 0.1 percentage points.

Changes in frequency of use of travel mode

5.35   There were two ways of measuring travel behaviour on the household survey. All the analysis so far in this chapter has used data from the travel diary relating to the mode share of journeys undertaken on the survey day. In addition, respondents were also asked to say how frequently they had used each mode in the previous twelve months using a scale with categories as follows: 'never'; less often than once a month'; less than once a week, but at least once a month'; 'about once a week'; 2-4 times per week'; '5 or more days a week'. Once we have this data, we can then assume an average number of days per year based on these categories, and this gives an overall score on which to compare people's travel patterns. This offers useful additional data to the travel diary as it captures travel patterns across a whole year.

5.36   Figure 5.5 begins by examining the percentage change in the average number of days travelled as a car driver by those who live in households with a car. We can see that, travel as a car driver reduced in all pilot areas apart from Dundee (where it increased) and Glasgow where it stayed the same. The reductions in the five pilot areas ranged from -1% to -11%. The greatest reductions were in Barrhead and Larbert/Stenhousemuir which corroborates the mode share analysis in Table 5.4.

Figure 5.5: Change in average number of days travelled as a car driver in the previous 12 months (People from households with a car only) (% change 2009 – 2012)
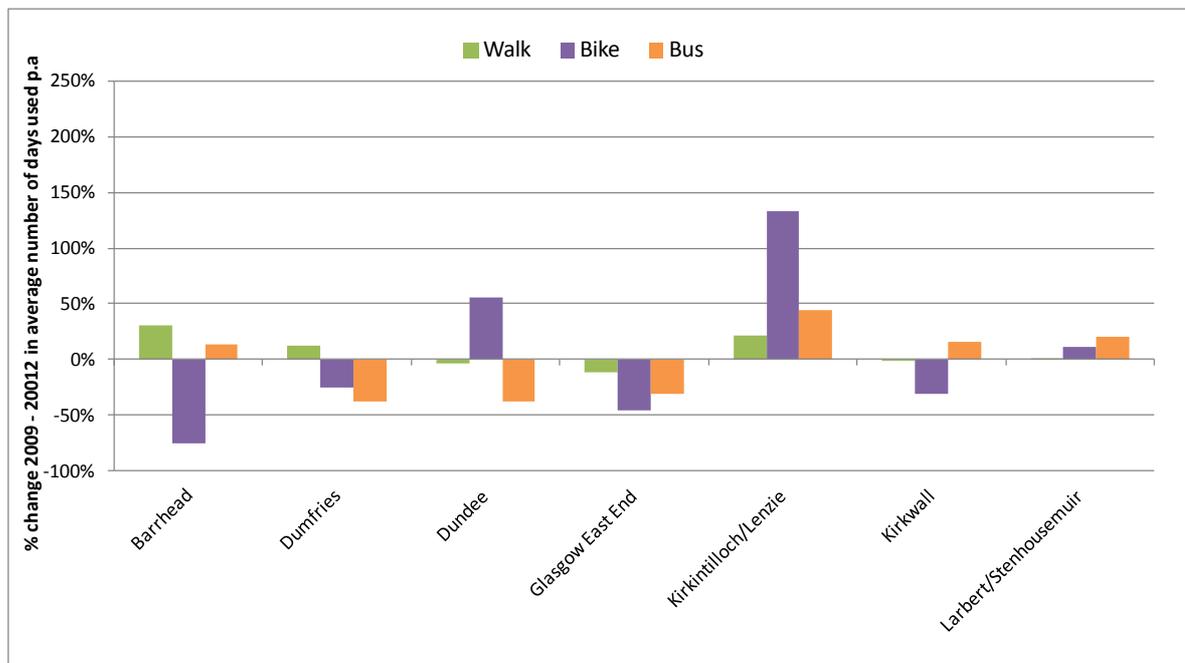

2009 & 2012 household travel survey (weighted) samples (self-reported frequency) used as the base to calculate changes.

5.37   Figures 5.6 and 5.7 present a summary of the frequency of use of non-car modes split out again by those living in households with a car and those without. The first thing to note is

the overall pattern of change. Those living in households with a car have generally changed their average use of non-car modes, in both upward and downward directions, more than those without a car. This suggests that those with access to a car at least some of the time experience more variability in their travel patterns overall. This challenges the view often expressed that car use is habitual. We would need panel data to fully test this proposition, but these data give some indication that car drivers benefit from smarter choice interventions.

5.38   Those living in households with a car also increased their use of walking more 'often' (i.e. in more of the pilot areas) than those not living with a car. Again, this suggests that car-owning households are willing to respond to smarter choices initiatives. Patterns of change in cycle and bus use are more difficult to generalise with largely equal changes in the use of these modes up and down for both car-owning and non car-owning groups.

Figure 5.6: Change in average number of days travelled in non-car modes in the previous 12 months (People from households with a car only) (% change 2009 – 2012)

2009 & 2012 household travel survey (weighted) samples (self-reported frequency) used as the base to calculate changes.

Figure 5.7: Change in average number of days travelled in non-car modes in the previous 12 months (People from households without a car only) (% change 2009 – 2012)

2009 & 2012 household travel survey (weighted) samples (self-reported frequency) used as the base to calculate changes.
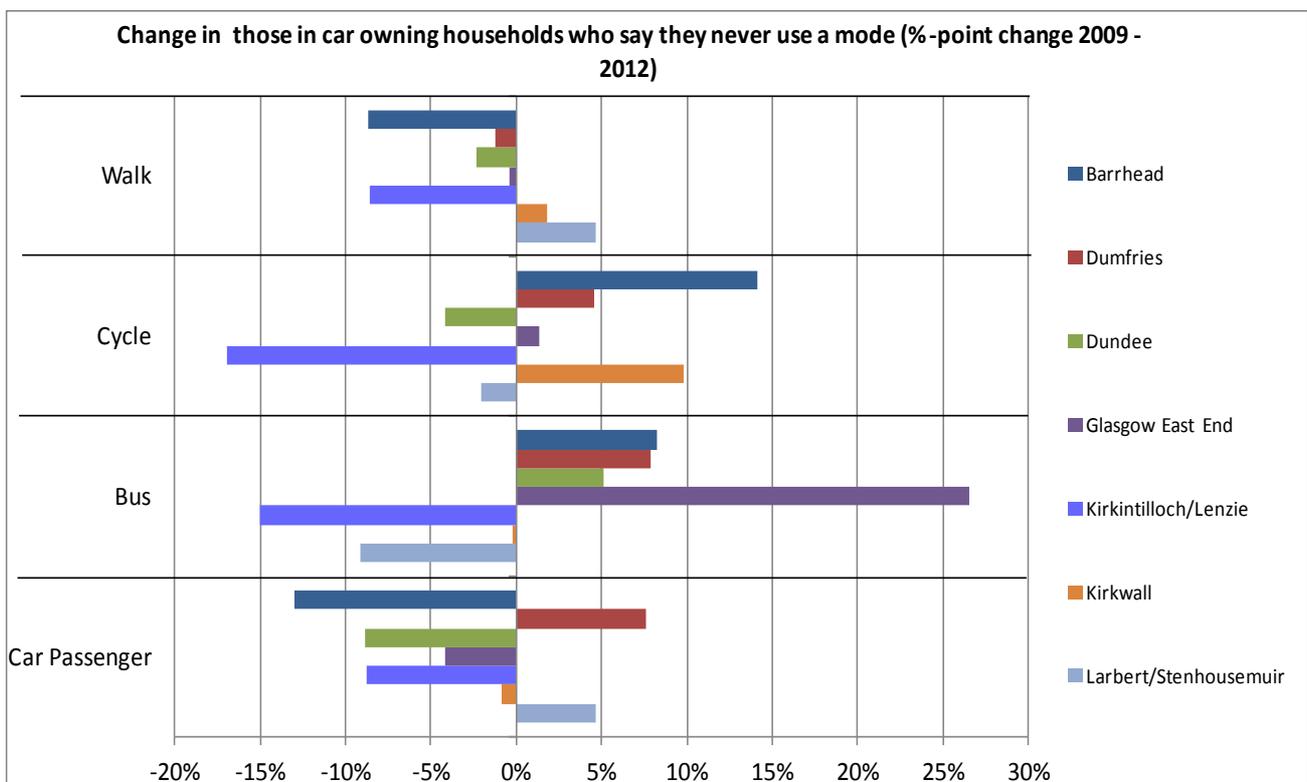
People taking up new modes of travel

5.39   It can also be important to encourage people to experiment with new modes. This can be particularly important in the context of active travel where, for example, increasing physical activity from 'nothing to something' can be as important as increasing the proportion of people reaching the full physical activity recommendation of exercising at least five days a week.

5.40   Figure 5.8 contrasts the changes over the study period in the proportions of people in each pilot area who said they 'never' used a particular mode. In order to take account of the greater proportion of non car-owners in the 2012 samples, this analysis was carried out *for those living in households with a car only* in order to see whether any changes in mode share were reported by those where access to a car may have been more readily available.

5.41   With respect to walking, five out of the seven pilot areas reported a reduction in the proportion of people who say they never walk among those living in car-owning households. The greatest reductions were seen in Barrhead and Kirkintilloch/Lenzie. This analysis does not show a dramatically different pattern to that seen in the mode share analysis above (i.e. Barrhead and Kirkintilloch/Lenzie also saw an overall increase in walking mode share). It confirms that the increase in mode share was not only as a result

of increases in walking by people who were doing it already, but that the SCSP programme is also associated in some places with getting people to walk who were not used to doing this before.

5.42 The greatest reduction in those who say they 'never' cycle was reported in Kirkintilloch/Lenzie with some notable reduction also in Dundee. There were increases in the reported proportions of people who say they never cycle in Barrhead, Dumfries and Kirkwall suggesting that there is a growing proportion of the population in these areas who see themselves as non-cyclists.

5.43 A greater proportion of those in car-owning households seemed to be using the bus at least some of the time in Kirkintilloch/Lenzie and Larbert/Stenhousemuir, but a lot fewer in Glasgow East End.

5.44 The proportion of those in car-owning households who say they never travel as a car passenger has generally reduced in all pilot areas. However, there has been an increase in never travelling as a car passenger in the Dumfries and Larbert/Stenhousemuir areas. This corroborates the analysis of the travel diary where average car passenger mode share across all respondents also reduced in these two areas.

Figure 5.8: Changes in proportion saying they 'never' use a mode (percentage point change 2009 – 2012)

2009 & 2012 household travel survey (weighted) samples (self-reported frequency) used as the base to calculate changes.

Changes in mode use relating to socio-demographic characteristics

5.45   The percentage changes in the average number of days per year that each mode was reported to have been used by various socio-demographic groups are examined to give a broad indication of who is changing behaviour. Table 5.7 shows that there were very few sub-groups across all of the pilot areas where car driving increased.

5.46   Kirkintilloch/Lenzie had the greatest contrast between groups who reduced and those who increased their driving. In particular males and those in work increased their driving, as did the youngest age group in this pilot area. This may be an indication that people were driving further to work in 2012 than 2009.

5.47   In Glasgow East End, those in the youngest age group also increased their car driving. In three locations those with a disability or illness were one of the only groups to report more driving.

Table 5.7: Changes in average number of days travelled as a Car Driver (percentage change 2009-2012)

	Barrhead	Dumfries	Dundee	GEE	K/L	Kirkwall	L/S
Male	-27%	-14%	-14%	-12%	+10%	-17%	-28%
Female	-38%	-21%	-7%	-17%	-13%	-9%	-36%
With Children	-31%	-21%	-14%	-8%	-14%	-15%	-28%
Without Children	-32%	-15%	-7%	-17%	+3%	-13%	-33%
In work	-17%	-5%	+1%	-12%	+5%	-13%	-11%
Not working	-39%	-30%	-26%	-23%	-9%	-6%	-52%
With disability/illness	-55%	-42%	+2%	+22%	-16%	+4%	-54%
Without disability/illness	-30%	-11%	-12%	-12%	+1%	-14%	-30%
16-34 years	-26%	-12%	-1%	+19%	+22%	-27%	-24%
35-64 years	-33%	-17%	-11%	-32%	-1%	-11%	-32%
65+ years	-43%	-27%	-31%	-52%	-31%	-6%	-51%

2009 & 2012 household travel survey (weighted) samples (self-reported frequency) used as the base to calculate changes.

Table 5.8: Changes in average number of days travelled by Bus (percentage change 2009-2012)

	Barrhead	Dumfries	Dundee	GEE	K/L	Kirkwall	L/S
Male	-4%	-35%	+5%	-12%	+27%	+11%	+17%
Female	10%	-19%	-13%	-14%	+32%	-6%	+41%
With Children	+29%	-22%	+12%	-25%	+79%	+32%	+58%
Without Children	-3%	-27%	-10%	-9%	+21%	-6%	+23%
In work	+22%	-23%	-14%	-6%	+27%	+8%	+30%
Not working	-7%	-32%	-1%	-16%	+30%	-5%	+23%
With disability/illness	-30%	-15%	+8%	-10%	-20%	-8%	0%
Without disability/illness	17%	-29%	-9%	-13%	+40%	0%	+36%
16-34 years	+34%	-9%	-17%	-22%	+29%	+45%	+41%
35-64 years	+4%	-29%	+7%	-9%	+39%	-5%	+33%
65+ years	-26%	-34%	-4%	-7%	+13%	-17%	+11%

2009 & 2012 household travel survey (weighted) samples (self-reported frequency) used as the base to calculate changes.

5.48 The pattern of change in bus travel (Table 5.8) varied more across the population groups. In Dumfries and Glasgow East End *all* sub-groups reported a reduction in bus travel. In contrast, *all* groups in Larbert/Stenhousemuir reported an *increase*. In Kirkintilloch/Lenzie where increases in bus use were highest overall, all groups increased their bus use apart from those with a disability or illness. Looking across the pilot areas, more people out of work reduced their use of the bus than those in work.

5.49   The numbers using cycles were too low to allow detailed socio-demographic analysis. Nevertheless, walking changes (see Table 5.9) showed how active travel trends affect the population. Walking increased for all but those with a disability or illness, and sometimes elderly people (Barrhead, Dumfries and Larbert/Stenhousemuir). In Dundee only those in work reported a reduction in walking. This aligns with the travel diary analysis above which showed that Dundee was the only SCSP area to record a reduction in the mode share of walking to work. This is consistent with focus group participants who perceived that residents of Dundee had increased their use of active modes when they were able, but accessing work increasingly involved car use.

5.50   From this analysis, walking reduced across all groups in Kirkwall and all except those with children in Glasgow East End. Whilst these self-perceptions are less robust indicators of overall change than the travel diary analysis, the table provides a useful comparison the relative changes for each group.

Table 5.9: Changes in average number of days travelled by Walking (percentage change 2009-2012)

	Barrhead	Dumfries	Dundee	GEE	K/L	Kirkwall	L/S
Male	+30%	+6%	+3%	-16%	+4%	-4%	+4%
Female	+43%	+4%	+3%	-4%	+15%	-5%	+6%
With Children	+49%	+16%	+3%	1%	+3%	-4%	+19%
Without Children	+32%	+2%	+3%	-13%	+11%	-4%	0%
In work	+31%	+12%	-10%	-6%	+15%	-1%	+7%
Not working	+38%	+1%	+12%	-11%	+5%	-8%	+5%
With disability/illness	-6%	-12%	+8%	-24%	-8%	-12%	-14%
Without disability/illness	+47%	+11%	+1%	-3%	+12%	0%	+8%
16-34 years	+50%	+14%	+2%	-1%	+5%	-7%	+9%
35-64 years	+32%	+7%	+2%	-16%	+14%	0%	+6%
65+ years	+26%	-9%	+2%	-13%	+4%	-13%	-7%

2009 & 2012 household travel survey (weighted) samples (self-reported frequency) used as the base to calculate changes.
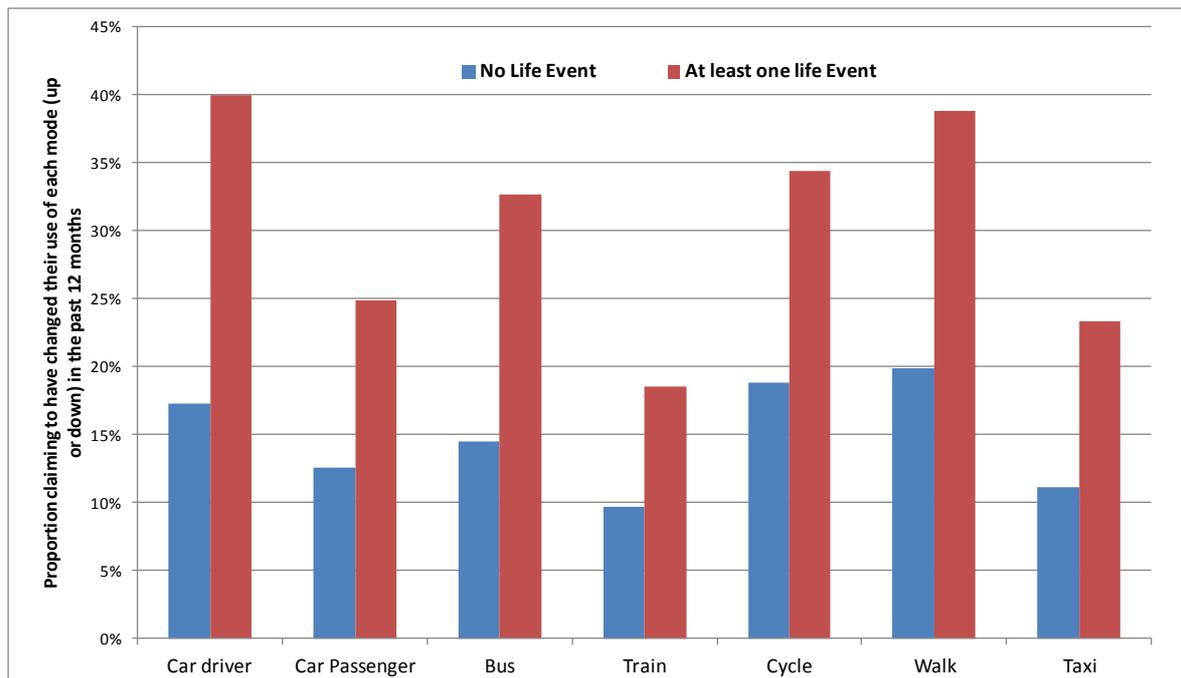
Changes in mode use relating to 'moments of change' or life events

5.51   Change in travel behaviour may occur when people undergo an event in their life such as changing job or moving house. Experience in the previous 12 months of these life events, or 'moments of change' were recorded in 2012 (though not in 2009). Respondents were also asked to to indicate whether their use of each mode had increased, reduced or stayed the same in the past 12 months[9]. By looking at these indicators together, it is possible to get a sense of change in travel behaviour, the extent to which this may be related to other changes in peoples' lives and the degree to which different modes are subject to the greatest amount of change[10].

5.52   Figure 5.9 takes the data set for all seven pilot areas combined and shows that greater change in mode use (up and down combined) appears to be associated with life events for all transport modes. The most change is associated with car driving and walking with 40% of those saying they had experienced at least one life event saying they had changed their level of car use in the twelve months prior to the survey, compared to 17% who had not.

5.53   This pattern is fairly consistent across all seven pilot areas although there are some exceptions. For instance, in Barrhead, those indicating changes in cycling (mainly upwards) were associated with those who had experienced stability (i.e. no life events). This could be an indication of local circumstances which mean that the uptake of cycling is most likely to happen once someone has lived or worked there for at least 12 months and is familiar with the area. The same was true for train travel in Barrhead and in Glasgow East End.

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[9] *Note these data do not include people who indicated that they 'never' used the mode in the past twelve months. However, this is expected to have little impact on this analysis as this would mean they stopped using the mode before the life event took place.*

[10] *Ideally one would look at whether or not a person's mode split and average number of journeys etc had changed after a life event compared to before. However, this would only be possible if we asked the same people to fill out a survey both before and after such an event. Therefore, in this analysis, we had to rely on the person's self-reported indication of changes in mode use over the corresponding period.*
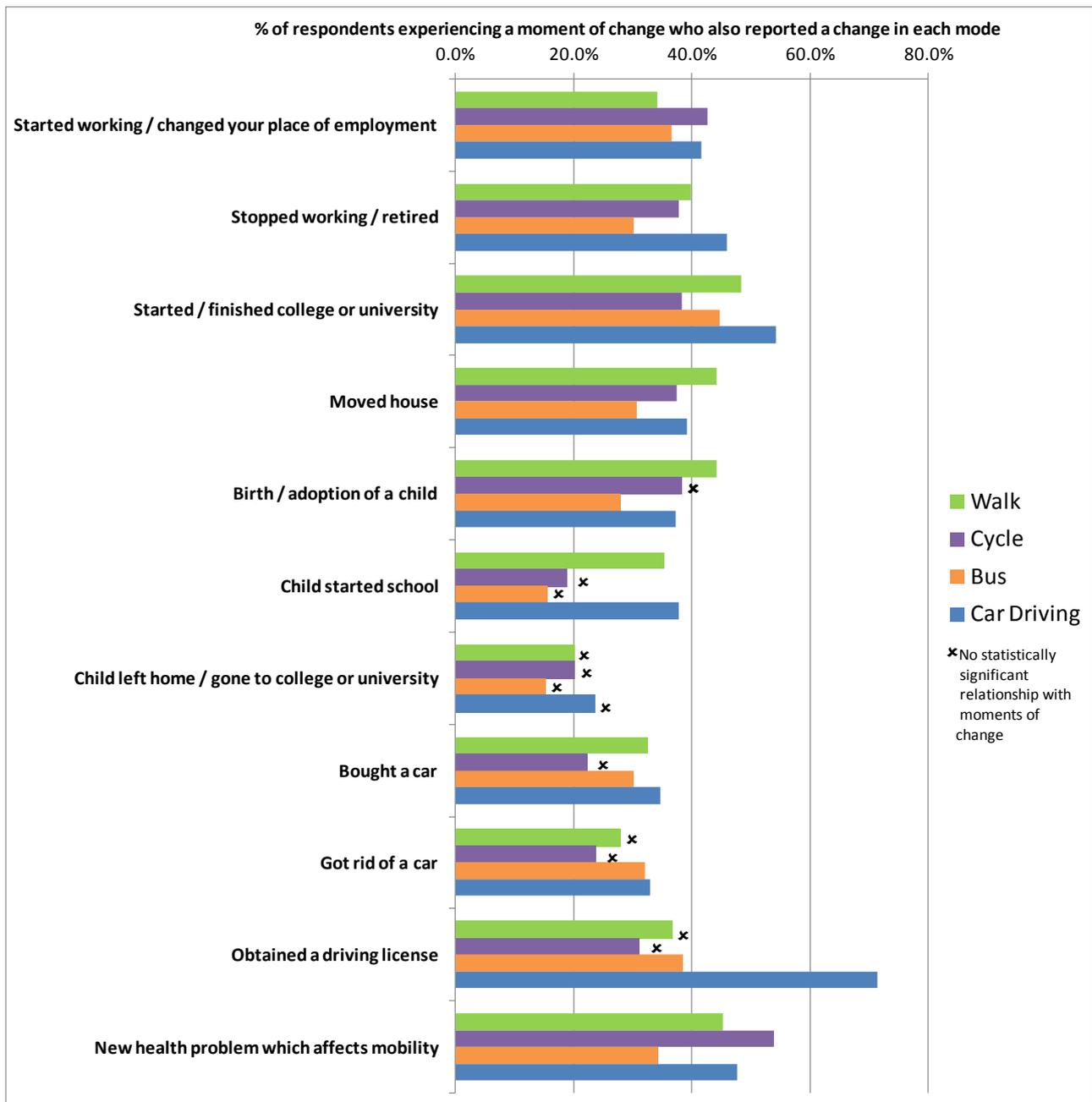
Figure 5.9: The proportion of people claiming to change use of each mode according to the experience of life events in the previous 12 months (2012)

2009 & 2012 household travel survey (weighted) samples (self-reported change in mode use) used as the base to calculate changes. Differences between life event/ no life event are all significant at p<0.05 for all modes.

5.54   From this data we can also begin to understand which life-events appear to lead to the most change in mode use. Figure 5.10 displays the proportion of people who indicated they had changed their use of a mode (up or down) if they had also experienced a life event.

Figure 5.10: The proportion of people claiming to change use of each mode if they had also experienced each life event in the previous 12 months (2012)

2009 & 2012 household travel survey (weighted) samples (self-reported change in mode use) used as the base to calculate changes.: work/ changing place of employment(N=238); stopped working/ retired (N=303); started/ finished college or university (N=158); moved house (N=559); birth/ adoption of a child (N=166); child started school (N=53); child left home/ gone to college or university (N=26); bought a car (N=257); got rid of a car (N=209); obtained a driving licence (N=38); new health problem (N=337). Differences between life event/ no life event are all significant at p<0.05 for all modes unless ✗.

5.55   The small sample sizes in some of the sub categories mean that results must be treated with caution but the analysis suggests that:

- Obtaining a driving licence had the biggest impact on car driving (tending to increase). However, the acquisition of a driving licence did not have a significant effect on active travel, although it is associated with a reduction in bus travel. Also, buying or getting rid of a car seemed to have less of an association with changes to car driving than might be expected and some of the lowest associations with changes in use of other modes.

- Starting or finishing University/College appeared from this analysis to lead to relatively large changes in travel behaviour. For instance, it was associated with large shifts in car travel although further analysis shows that this can be in either direction (up or down). Walking was the mode most affected and further analysis showed that this led most frequently to an increase in journeys on foot. Bus travel was also impacted the most by this life event (associated with both increases and decreases).

- The birth / adoption of a child was associated with an increase in walking, changes both up and down with respect to car driving, but not significantly associated with any changes in bus use or cycling.

- Cycle use was most impacted by new health problems (leading mainly to a reduction) followed by starting work / changing employment (leading mainly to an increase).

- A child leaving home to go to college seemed to have the least impact on changes in mode use, although the sample sizes for this life event were very small (only 17 incidences across the whole sample).

Summary of observed travel behaviour changes across pilot areas

5.56   Table 5.10 presents a summary of the changes in trip mode share between 2009 and 2012, as measured through the travel diaries, for each of the SCSP pilot areas. This draws on the figures presented in the preceding sections of this chapter. Statistically significant changes in mode share are shaded in blue, with the colour hue dependent on the strength of support from the corroborative evidence sources for the direction of change observed (the darker the hue, the stronger the corroborative evidence is available that points in the same direction).

Table 5.10: Summary of changes in mode share across the SCSP pilot areas

Change in trip mode shares	Walking	Cycling	Bus	Car driver	Car passenger	Train	Taxi
	percentage point change						
Barrhead	+14.8%	+0.3%	-0.6%	-18.9%	+1.6%	+0.2%	+2.8%
Dumfries	+7.6%	+0.7%	-0.9%	-7.4%	-1.3%	+0.2%	+0.8%
Dundee	+2.4%	+0.8%	-4.3%	-1.9%	+2.7%	+0.3%	-0.1%
Glasgow East End	+5.1%	-0.4%	-6.5%	-1.6%	+3.5%	-1.1%	+0.5%
Kirkintilloch / Lenzie	+5.1%	+0.3%	+7.4%	-11.4%	+1.3%	-1.0%	-1.4%
Kirkwall	+0.3%	-0.5%	-0.1%	-3.1%	+3.0%	0.0%	-0.1%
Larbert / Stenhousemuir	+21.4%	+0.4%	+0.8%	-19.4%	-5.0%	-0.1%	+2.3%
Notes	*Blue shading shows observed change is statistically significant.*						
	The darker the hue, the more supporting evidence there is for the direction of change						

5.57   In summary it can be concluded that the SCSP programme was associated with increases in the levels of active travel and reductions in car driving over and above those seen in comparable locations in Scotland over a similar time-period. Although these changes in behaviour were not always entirely consistent across the pilot areas (or even within the pilot areas according to different types of data used to understand the changes), we can nevertheless reasonably summarise the changes for each mode as follows:

- Walking - The mode share of walking trips increased in all areas, with statistically significant increases in five out of the seven pilot areas and with all observed changes greater than those recorded in comparable areas in the Scottish Household Survey. The greatest increases were recorded in Larbert/Stenhousemuir (+21.4 percentage points from 15.8% to 37.2%) and Barrhead (+14.8 percentage points from 21.5% to 36.3%). The increases in walking took place across most journey purpose in all of the pilot areas, with particular increases associated with the journey to work and the smallest in relation to leisure and shopping journeys. Except in Glasgow East End and Kirkwall, walking increased for all groups other than those with a disability or illness and occasionally the oldest age groups. When people undergo a life event, walking was one of the modes which tended to undergo the most change up or down. In particular, starting college/university and the birth or adoption of a child was associated with increases in walking.

- Cycling - Cycling mode share increased in five out of the seven pilot areas. Only the increase in Dumfries (+0.7 percentage points from 0.6% to 1.3%) was statistically significant, and Dumfries and Dundee were the only two areas to show increases in cycling mode share greater than that recorded in similar areas of Scotland. Increases in the mode share of cycling came mainly from non car-owning

households in Barrhead, Dumfries, Dundee, Kirkintilloch/Lenzie and Kirkwall, but it was those living in car-owning households in Glasgow East End and Larbert/Stenhousemuir who were most attracted to this mode. In Glasgow East End, it was also the oldest age groups who reported an increase. There were small increases in cycling to work in Barrhead, Dumfries and Dundee and in the use of the bike for visiting friends and relatives in Dumfries, Dundee and Larbert/Stenhousemuir.

- Bus use - The mode share of bus trips decreased in five of the seven areas. A statistically significant increase in bus mode share was observed in Kirkintilloch/Lenzie (+7.4 percentage points from 17.4% to 24.8%) and significant reductions were recorded in Dundee and Glasgow (-4.3 (from 18.5% to 14.3%) and -6.5 percentage points (from 26.6% to 20.2%) respectively). Despite overall increases in Kirkintilloch/Lenzie, bus use for the journey to work fell. There was, however, an increase in the use of the bus for the journey to work in Larbert/Stenhousemuir and to a small extent in Dumfries. Looking across the pilot areas, more people out of work reduced their use of the bus than those in work. Similarly, across all the pilot areas, bus use declined more among people in households without a car than among those living in car-owning households. Indeed, a greater proportion of those in car-owning households used the bus at least some of the time in Kirkintilloch/Lenzie and Larbert/Stenhousemuir but a lot fewer in Glasgow East End.

- Car driving - The mode share of car driver trips decreased in all of the seven areas between 2009 and 2012, with reductions ranging from 1.6 percentage points (from 19.8% to 18.2%) in Glasgow East End to 19.4 percentage points (from 60.5% to 41.4%) in Larbert-Stenhousemuir. These decreases were statistically significant in Barrhead, Dumfries, Kirkintilloch/Lenzie and Larbert/Stenhousemuir. In all seven SCSP areas, the observed decrease in the proportion of trips made as a car driver was greater than the corresponding change recorded through the Scottish Household Survey in comparable areas. Reductions in car driving were recorded for the journey to work in all areas except Dundee and Kirkintilloch/Lenzie. Most notably, car mode share fell in all areas for visiting friends and relatives and to access education (with the exception of Kirkwall), and for shopping with the exception of Glasgow East End. The youngest age group (17 – 34 years) was associated with increases in driving in both Glasgow East End and Kirkintilloch/Lenzie. In three locations, people with a disability or illness were one of the only groups to report more driving. As would be expected, increases in car driving were seen strongly after the acquisition of a driving licence. Changes in car driving were also strongly linked with other life-change moments, particularly starting or finishing University and the birth / adoption of a child, which were both associated with increases and decreases in car driving. However, buying or getting

rid of a car seemed to have less of an association with changes to car driving than might be expected.

- Car passenger - The mode share of car passenger trips increased in five of the seven areas. The increases in car passenger mode share were statistically significant in Dundee (+2.7 percentage points from 7.7% to 10.4%), Glasgow East End (+3.5 percentage points from 5.9% to 9.5%) and Kirkwall (+3.0 percentage points from 9.4% to 12.3%), as was the decrease observed in Larbert/Stenhousemuir (-5.0 percentage points from 13.5% to 8.5%). Car passenger mode share increased for most journey purposes in all pilot areas. In particular, car passenger trips made for leisure and for visiting friends and relatives generally experienced an increased mode share.

6.0   Impacts

Although it is not possible to say to what extent behavioural changes derived directly from the SCSP investment and to what extent they were due to other factors, the impacts of those changes were estimated for the seven pilot areas.

There was an average annual financial saving on direct transport expenditure of £62 per resident, equivalent to about £9 million per year across the seven pilot areas.

Health benefits estimated using standard health impact valuation techniques, by discounting future health benefits to the present day, are worth at least £10 million, but established active travel valuation techniques estimate health savings much more highly at £46 million.

Carbon reductions totalling 16,400 tonnes of carbon dioxide per year were identified, which is valued at £0.9 million per year using current carbon values, or around £6 per capita.

Using a lower bound discounting rate of 3.5% and an upper bound rate of 50% the discounted benefits of the SCSP programme are between £40 million and £106 million representing a rate of return on the investment of between 2.7 and 7.

SCSP strengthened the community capacity in all seven pilot areas and increased participation, enhancing the capabilities of residents.

Saving people money

6.1   Using the estimated behaviour changes recorded in the pilot areas, the resulting impact on how much people spend directly on transport was assessed. Changes in spending on car travel, public transport fares and taxi fares were estimated using the methods and parameters in Scottish Transport Appraisal Guidance (STAG)[11]. Changes in travel behaviour from Chapter 5 were used for the calculations, though it cannot be assumed that all of the changes were attributable to the SCSP investment. However, this appraisal gives a broad overview of the scale of impacts on individual spending.

Method for estimating impacts

6.2   Changes in user charges were assessed using differences in fares and vehicle operating costs between 2009 and 2012. Any additional charges paid by people from increased bus and rail use were a cost to travellers. For users who switched mode from car to public transport, the additional fare paid was a financial dis-benefit to the traveller, but they also made a financial gain in terms of savings in vehicle operating costs. Although the travel behaviour analysis has not identified which people switched mode, the overall changes in

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[11] *Transport Scotland. Scottish Transport Appraisal Guidance. http://www.transportscotland.gov.uk/stag/home*

transport spending within the population were used to calculate the change in consumer surplus.

6.3   There are some important caveats to make about any analysis of transport spending. If transport is predominantly a derived demand, helping people to get to work, shops and other needs, then savings in travel costs are predominantly a benefit. Someone who chooses to walk rather than drive to work has saved money. However travel can also be predominantly an end in itself. Behaviour change supported by the SCSP programme included leisure trips such as walking or cycling in local parks where the destination is of only secondary importance. People may have been prompted, for example by a bus timetable they received through an SCSP initiative, to make an additional leisure bus journey and incur an additional cost. This would be a positive outcome, since they are increasing their leisure activity, but a negative impact for an assessment of saving money.

6.4   In some situations the opportunity to travel less by bus is beneficial for residents, if they can save money by walking or cycling, and also improve their health. In other situations increased bus patronage is beneficial, particularly where there is mode shift from car travel. The local authorities actively sought through the SCSP programme to promote behaviour change that balances the competing aims of more bus travel for beneficial trips and less bus travel for journeys that could be made by walking or cycling. The restructuring of bus services in Dumfries explicitly planned the improved service with these goals in mind, with multi-modal interchanges with information to help people choose the best overall mode. In Chapter 5 it was seen that in some areas (Larbert/Stenhousemuir and Kirkintilloch/Lenzie) this resulted in a net increase in bus travel, and in others a net reduction. These average aggregate net increases and net reductions for each pilot area were used in this assessment of how much money residents saved.

6.5   Looking at what people spend on transport in isolation from travel time impacts can be misleading when considering overall benefits. The STAG transport economic efficiency appraisal reports include travel time savings and cost savings together under the economy criterion. Travel time savings often provide the largest element of this economic efficiency calculation from new or faster transport services, such as road and rail network improvements and reduced congestion. In the SCSP pilots, the travel time savings were much less important, with few infrastructure or service changes being designed to reduce journey times.

6.6   Congestion reduction effects were considered to be low. Congestion affected only short periods of the day in very localised areas[12] in Dumfries, Kirkwall, Larbert/Stenhousemuir and Kirkintilloch/Lenzie. Barrhead is more affected by congestion for many car trips and

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[12] http://www.transportscotland.gov.uk/analysis/LATIS/data/Model-data/Congestion-mapping

the focus groups showed that local people think that SCSP has helped to create congestion as part of the area centre traffic management and pedestrian priority investment. If this is the case, then it may be that increased congestion is being used to deter car use by increasing travel time in order to deliver other benefits like saving people money, and improving their health. It is these latter benefits that were the focus of the SCSP projects, rather than delivering time savings, so it is these policy goals that this impact assessment addresses.

6.7   Nevertheless congestion has been relieved in Glasgow East End by the substantial recent investment in the East End Regeneration Route and the M74 Northern Extension. The household survey and focus group evidence demonstrates that local perceptions of walking and cycling have improved due to the quieter local roads. This will have indirectly affected the impacts observed. In Dundee there may also have been de-congestion benefits from less car travel that could affect the impacts, but the changes were small so these have been ignored.

6.8   The savings were applied by combining some external sources of data on the costs of travel with data on travel behaviour changes reported in Tables 5.10. The results are reported in Table 6.1. The external sources of data used were as follows:

- Car fuel consumption and non-fuel operating costs were calculated using the formulae in Clauses 9.5.18 and 9.5.20 of STAG. An average operating cost per car mile of 19 pence per mile was estimated for the pilot areas. Congestion can impact on vehicle operating costs, since fuel consumption varies according to the speed of the vehicle, but in the absence of a detailed speed flow relationship for each area, this was not considered.

- Public transport fares for the period 2009 to 2012 were estimated to be an average of £1.10 for a single journey, based on a review of bus fares in all the pilot areas. This takes account of the fact that a proportion (~30%) of the household survey respondents were concessionary travellers, so would travel free.

- Taxi fares were estimated to be £3.57 which has been estimated as the average taxi fare for a single journey based on national averages from the Scottish Household Survey.

6.9   No account was taken of parking costs as these could not be readily calculated from the evidence available. Also, no savings were calculated for car passengers since it was assumed that car trips as a passenger were being made with drivers who were travelling for another purpose, or that the drivers providing the lifts would have recorded their journeys as for escort purposes. Where a car driver made an extra trip (e.g. to the shops

to fit in with taking a passenger) then this would be assessed in the analysis as an additional car driver trip[13].

6.10 The estimation of the financial savings made by people in each area was made by taking the change in average trips per person per day as a driver and by bus as derived from the behavioural changes recorded in the travel diary and reported in Table 5.10. However savings were only calculated where the trip mode share changes between 2009 and 2012 were statistically significant. This may mean that overall benefits have been underestimated as there were observed but not significant reductions in car use in Dundee, Glasgow East End, and Kirkwall.

6.11 The cost parameters described above were then applied to these changes to calculate the per capita change in transport spending for residents in each of the pilot areas as follows:

- The changes in car driver and bus trips were factored up to an annual number of trips by assuming that the changes recorded in the survey month were representative of any month of the year. The per capita daily financial savings were therefore factored by 365 to estimate annual savings.

- To calculate distance, the average car trip and bus trip distances were taken from the Scottish Household Survey Data[14] using comparable locations to the pilot areas, in the same way as was described in Chapter 5 for the behaviour changes.

- These savings were then factored up by the adult population of each pilot area. The household survey was only for adults 16+, so the changes made amongst children were not included. This then gave the total change in the distance travelled for residents of each area per year by each mode.

- Changing from one mode to another, such as car to walking, is very often associated with a destination choice change. Mode shift from walking to driving is associated with making longer trips and mode shift from driving to walking is associated with shorter trips. The use of an average car trip distance in the analysis is consistent with the use of the population level data as the mode shift is spread across all trip lengths[15]. Panel data is needed to measure these effects accurately, but the focus group participants observed that they had made local walking trips to replace car trips to more distant shopping locations, and replaced longer leisure trips with local

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[13] The travel diary analysis is based on the main mode so if people were passengers for only a minor part of the trip then they would be omitted from this analysis.

[14] SHS distance figures for car: Dundee and Glasgow 10.0 kilometres, Barrhead, Dumfries, Kirkintilloch/Lenzie, Larbert/Stenhousemuir 11.1 kilometres, Kirkwall 13.4 kilometres.
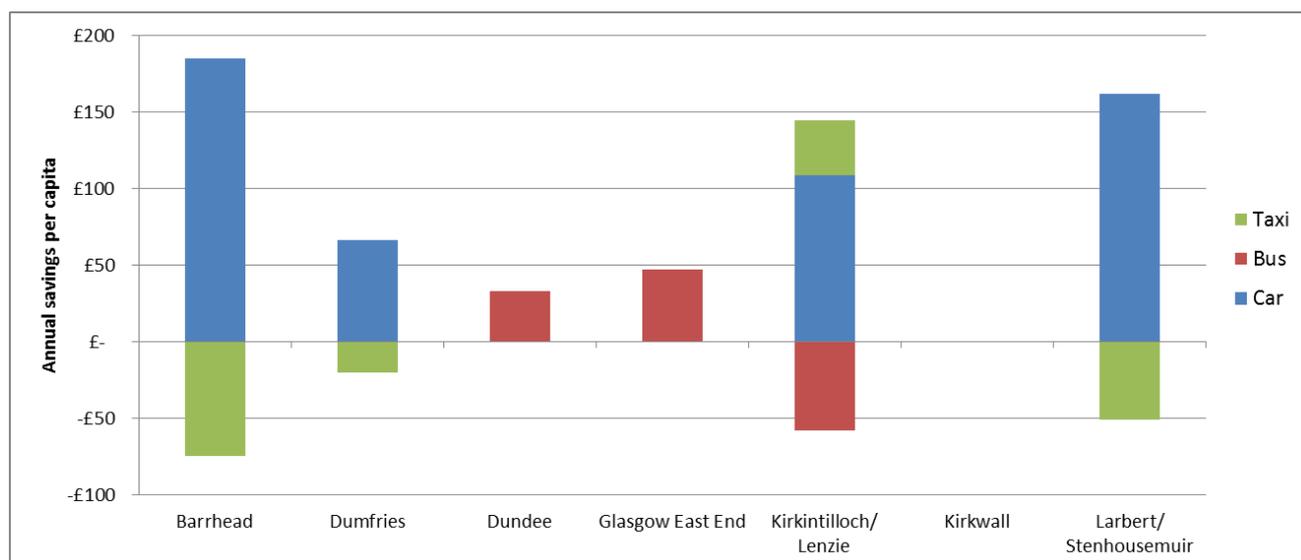
[15] There is a wide ranging literature on travel time budgets showing that particularly for shopping and leisure trips when people travel faster they largely use the same time budget to travel to more distant locations (e.g. Mohktarian 2003. A Review and Analysis of the Empirical Literature on Travel Time and Money Budgets).

leisure activities like a walk in the park. Achieving such destination choice changes to achieve shorter trips was an explicit part of the campaigns in several pilot areas encouraging people to use local services and facilities. Generic assumptions about trip distance changes from average car to average walk trip distances may underestimate the savings if the people changing mode were previously making longer than average car journeys (e.g. changing from a 40km drive in the country to a walk in the park). However if the majority of the people shifting mode come from the shorter car trips (e.g. people changing from driving to walking 2 km to the supermarket) then the use of average car trip lengths could mean that the benefits have been overestimated.

Estimated financial savings

6.12 Figure 6.1 shows the annual savings per person using the method described above. The pilot areas show savings per person per annum as follows: Barrhead £109, Dumfries £46, Dundee £33, Glasgow East End £47, Kirkintilloch/Lenzie £86, Kirkwall £0 and Larbert/Stenhousemuir £110.

6.13 It should be noted that the savings on bus travel in Dundee and Glasgow could reflect the location of the pilot areas in cities where residents are able to walk for many trips. The focus group evidence suggested that many people in Dundee and Glasgow had decided to use buses less in order to save money. They attributed this to financial necessity in difficult economic times which had pushed them towards the change in behaviour. Although people do not attribute the cost savings to SCSP it may be that the campaigns encouraged, or pulled, people to save money by walking more. It is not possible to determine the extent to which the push or pull measures delivered the change but, as the SCSP pilot areas differ from the background trend, it is likely that SCSP has been a key factor supporting the changes. If the annual saving per capita is factored by the population of the pilot area then there would have been £0.9 million less income to the bus operators in Dundee and £1.121 million less in Glasgow, which should be visible through bus patronage data, although this was not available to the research team.

6.14 Overall, an aim of SCSP was to save people money, and it seems that we can associate the programme impacts with this goal.

Figure 6.1 – Annual saving per capita (£)

6.15   Looking at the programme as a whole, as shown in Table 6.1, the average annual financial saving per resident was £62, with £69 of this from reduced car operating costs, £4 from reduced spending on buses and an increase in spending on taxi fares of £11.

Table 6.1 – Annual saving on transport by SCSP pilot area residents

Pilot Area	Car	Bus	Taxi	Total
	£k			
Barrhead	2,629		-1,071	1,558
Dumfries	2,136		-663	1,472
Dundee	0	883	0	883
Glasgow East End	0	1,211	0	1,211
Kirkintilloch/ Lenzie	2,878	-1,553	9,57	2,282
Kirkwall	0	0	0	0
Larbert/ Stenhousemuir	2,604	0	-827	1,778
Total	10,247	541	-1,604	9,184
	£			
Total per adult (16+)	69	4	-11	62

6.16   If we attribute all of these savings to the SCSP programme, then the savings to residents of just over £9 million per year is nearly twice the cost of delivering the SCSP programme of less than £5 million per year.

6.17   The SCSP pilot areas were not selected by the Scottish Government necessarily to be representative of Scotland as a whole, but do include rural small areas, medium sized areas and cities across the country. If £62 per person in Scotland could be saved through an SCSP type programme then this would save the 4.5 million adults in Scotland about

£279 million per year. Although this is only about 4% of the total household spending on transport this is still a very substantial sum.[16]

Helping to make people healthier

6.18 There is considerable interest in the potential for health gains from active travel if it increases levels of physical activity in an increasingly sedentary population. The Scottish Physical Activity Strategy recommends that adults should be accumulating 30 minutes or more of moderate activity 5 times per week[17]. There is a long term target in Scotland for 50% of all adults over 16 to meet this level by 2022. However, the most recent results from the Scottish Health Survey show that between 2008 and 2011 there was no significant change in the proportion meeting the recommendations[18].

6.19 For public health gains to be realised, it is not sufficient for there just to be an increase in active travel; it must also be accompanied by an increase in physical activity by people who do not currently meet guidelines. An increase in active travel alone could substitute for other types of physical activity or it could be accounted for by increasing activity by those already meeting the guidelines. This section analyses the physical activity data collected for the evaluation of the SCSP programme, and provides estimates for the value of associated health gains. It also translates estimates of walking activity from the household survey travel diary into economic benefits.

Health and physical activity outcomes

6.20 Respondents to the household survey were asked to record how many days per week (outside of work) they typically undertake at least 30 minutes of moderate exercise including walking and cycling. The wording from the Scottish Health Survey was used to explain that this activity did not need to be undertaken all in one go, but could be across more than one session in a day. Those who reported 5 or more days were classified as meeting recommended physical activity levels.

6.21 Figure 6.2 shows the proportion in each SCSP area meeting the recommendations before and after the programme and contrasts this to the Scottish national average and target for 2022. Taking all areas together, the proportion meeting the recommendation in 2009 was 30.8% and afterwards was 35.0%. This represents an increase of just over 4 percentage points compared to a static average figure in Scotland over a similar time period (2008 – 2011). Performance in the individual SCSP target areas was variable with the greatest percentage point increase achieved in Kirkintilloch/Lenzie (+10percentage points) and the
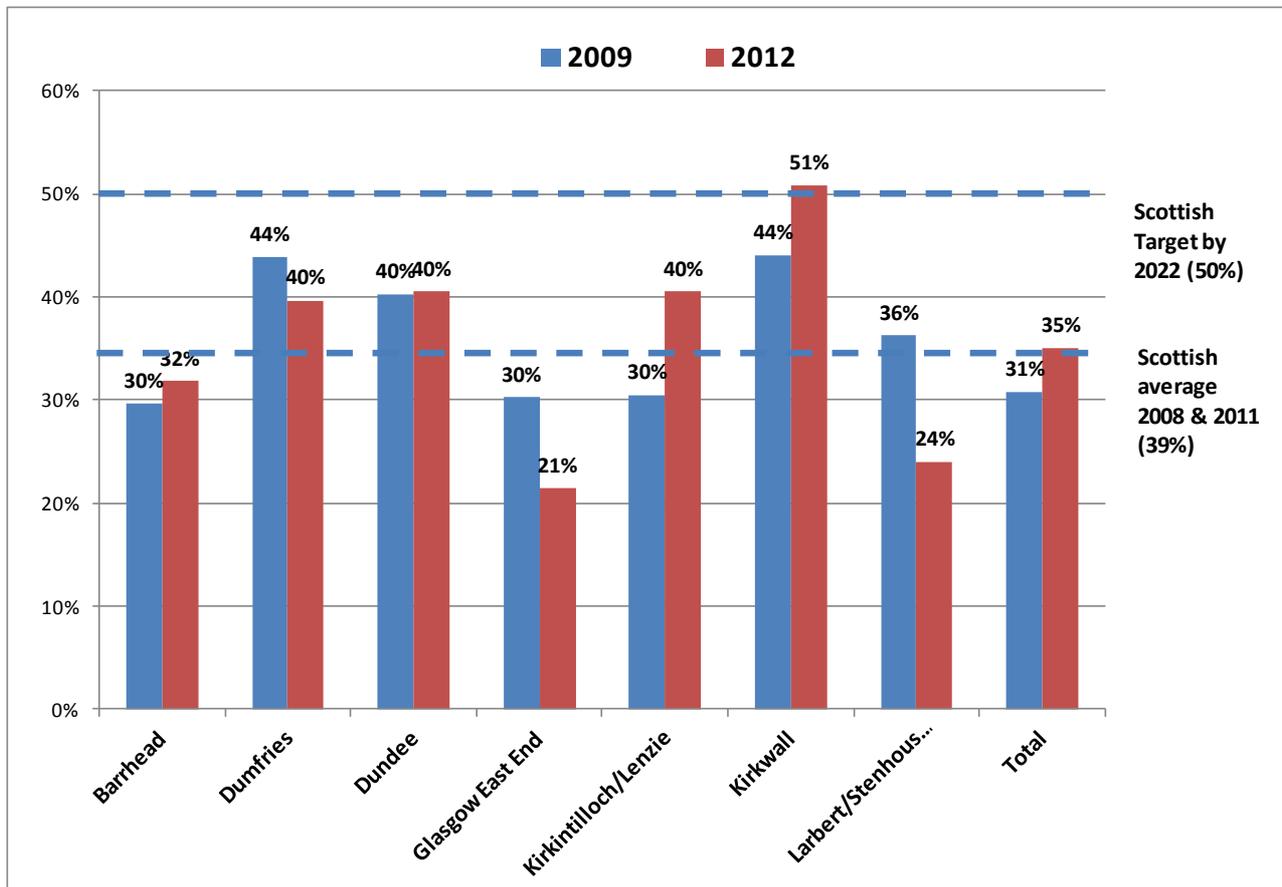
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[16] *In June 2012 GROS estimated that there were 2.37 million households in Scotland and Scottish Transport Statistics estimates household transport spending at £61.10 per week making about £7.5bn per year*

[17] *http://www.scotland.gov.uk/Topics/Health/health/Introduction*

[18] *Derek Halden Consultancy, Aberdeen University and Integrated Transport Planning Ltd. Monitoring and Evaluation of the Smarter Choices Smarter Places Programme - Analysis of National Data Sources and Trends v3. February 2013.*

greatest reduction in Larbert/Stenhousemuir (-12 percentage points). Overall, three out of the seven areas increased the proportion reaching the recommendations, three reduced it and one stayed the same.

Figure 6.2: Proportions reaching recommended physical activity levels in each area in 2009 and 2012
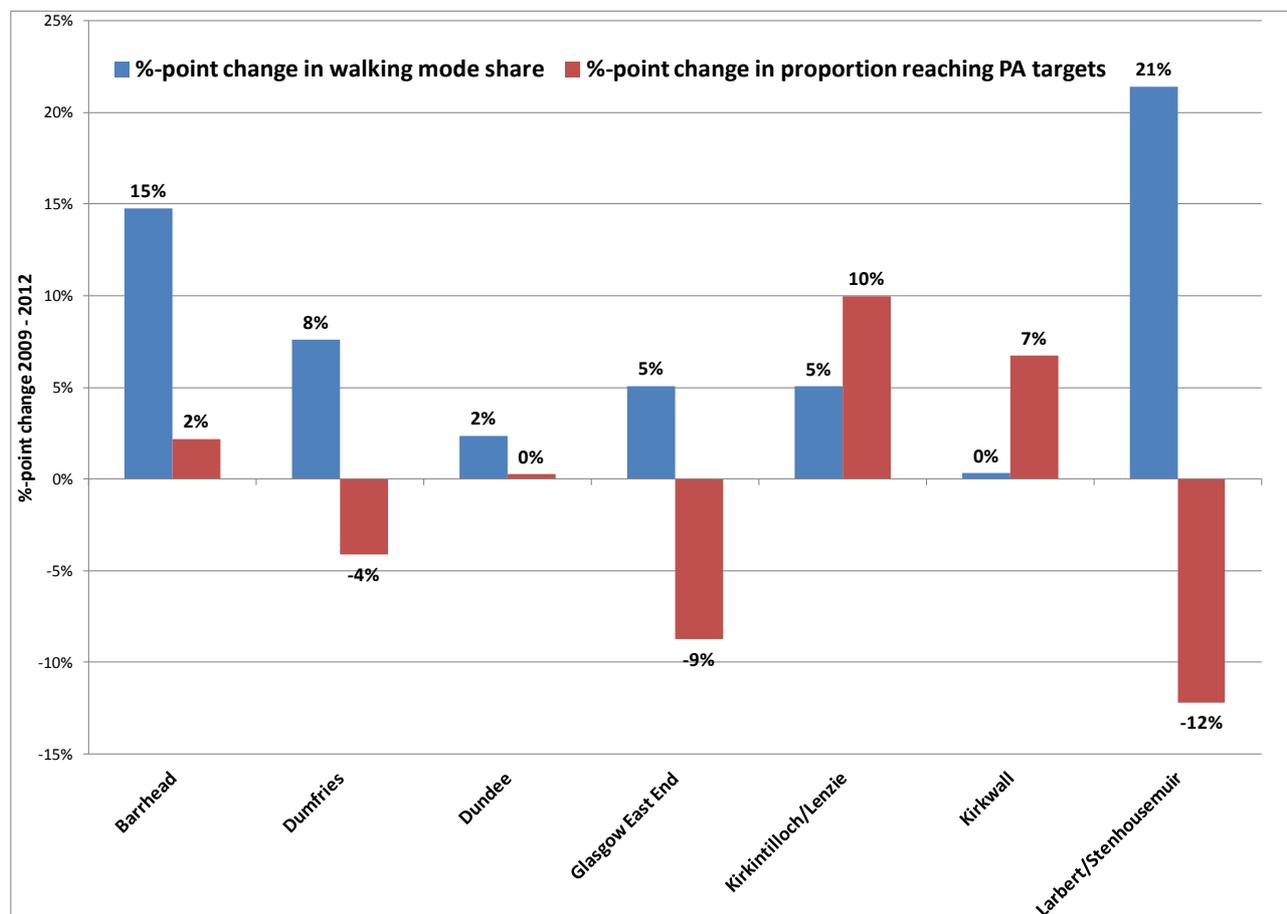

2012 household travel survey (weighted) samples. Samples for individual areas range between 772 (Kirkwall 2012) and 1365 (Glasgow EE 2012). Differences between 2009 and 2012 proportions are significant at p<0.05 for all areas, bearing in mind that this graph shows the proportion reaching the target as the total of those saying they exercise '5-6 days per week' + 'everyday' and disguises some changes within these categories.

6.22   Figure 6.3 compares the percentage changes in mode share by walking with the percentage change in proportions of the sample reaching the recommended level of physical activity. Whilst this is merely a visual representation of two separate indicators and no statistical relationship between changes in walking and physical activity can be carried out in this cross-sectional survey, this nevertheless shows that there is not a consistent relationship between changes in physical activity and levels of walking. For instance, increases in physical activity have been recorded in Kirkwall but no increases in walking can be reasonably concluded to have taken place, and the opposite is true for Larbert/Stenhousemuir. It may be that publicity about active travel prompts people to be more active in other ways but understanding such relationships is complex. Also, the

physical activity measure only records activities undertaken five times a week for more than 30 minutes. Given that the average walking trip distance is 0.7 miles as recorded in the SHS data, much of the walking activity will not be picked up in the physical activity measure, so it is not surprising to see greater increases in walking than activity levels.

Figure 6.3: Proportion reaching recommended physical activity (PA) targets and changes to walking mode share (percentage point changes 2009 - 2012)

2009 & 2012 household travel survey (weighted) samples. Samples for individual areas range between 772 (Kirkwall 2012) and 1365 (Glasgow EE 2012).

6.23   We first calculate the economic benefits from the changes in overall physical activity in the pilot areas. We then do the same for walking only.

Calculating the impact of the SCSP programme on physical activity levels

6.24   In this analysis, the outcome of interest is physical activity undertaken outside work or education settings. This definition was adopted because the amount of physical activity at work would be determined by job type rather than individual behaviour and this is unlikely to be affected by the introduction of the SCSP programme. Three measures of exercise were analysed; (i) whether respondents did any exercise at all ('decision to do any exercise') (ii) the number of times they exercised in a week ('weekly exercise') and (iii) whether they met the government recommendations on exercise frequency ('meeting

recommendations'). The results were consistent, so only the results relating to the third measure are reported here; whether individuals met the recommended guidelines of 30 minutes of moderate intensity exercise five days a week.

6.25   In order to evaluate changes in physical activity that may be associated with the SCSP programme it is necessary to identify what changes happened in the pilot areas over and above what would have happened anyway 'in the background'. There is no suitable national data to use as a comparator, so to represent this background trend, we used data from the three additional, non-SCSP comparator areas (Arbroath, Bearsden and Dalkeith). We assessed the difference between these comparator areas and the pilot areas at baseline and the difference between them after the programme was introduced. By using the same sources of data, and examining differences between the SCSP pilot areas and comparator areas before and after the introduction of the programme, we could isolate the changes that took place in the SCSP areas net of the background trend.

6.26   Ideal control areas would be the same in all characteristics as the SCSP target areas and subject to the same changes over time but this is not possible in a real world experiment. In order to at least partially account for any differences, we used a statistical method that enabled some matching between the SCSP and non-SCSP areas on key variables relevant to physical activity and health impacts, such as underlying levels of health and disability. This analysis used a regression model to allow a range of variables to be controlled for, and provides one way of overcoming the differences in the composition of samples between surveys. Respondents were identified according to whether they lived in a SCSP pilot area or comparator area allowing the analysis to control for differences in the sample in the model, so un-weighted data was used for this analysis.

6.27   This analysis showed that any reductions in exercise in the SCSP areas between 2009 and 2012 were less than the reduction in the non-SCSP areas. Hence the pilot areas may be associated with higher levels of physical activity than would otherwise have occurred. Individuals were more likely to exercise (although not necessarily reach the recommended levels) if they had access to a car, were in work, were male, were in better health, were younger and were better educated. Similarly, the analysis showed that the reduction in the number of individuals who undertook enough exercise to meet the recommended level of five 30 minutes session per week was less in areas with SCSP funded programmes than in the control showing once again that the programme may be associated with a better outcome – i.e. a smaller reduction in the number of people achieving this goal.

6.28   This analysis also gave us an indication of the scale of the effect. The SCSP programme was associated with an increase of 5% in an individual's probability of meeting the government guidelines. However, access to a car reduced the probability of meeting the guidelines by 3% and being aged 35-44 compared to 16-24 reduced the probability by 8%. So the impact of individual characteristics was often larger than the impact of the programme itself.

6.29   Overall the results showed an association between the SCSP pilot areas and individuals meeting the recommended guidelines of activity levels. However, as noted in Chapter 3, this association cannot be interpreted as a *causal* relationship and there are a number of caveats. In order to be confident in these results, the background trends without the SCSP in the comparator areas, and the SCSP areas, would have needed to have been the same. We saw in Figure 6.3 that there is some inconsistency in the relationship between the increases in average walking trips and increases in physical activity, so it is uncertain how much of the increases in physical activity we can attribute to the active travel promotions in the SCSP pilot areas. There are many other influences over levels of physical activity in the SCSP areas which we were not able to observe and could not include in our analysis. We cannot differentiate between the parallel impact of these influences and the impacts of the SCSP programme.

Economic value of health gains from changes in physical activity

6.30   Bearing in mind the above caveats and uncertainties it was still useful to estimate an economic value for the change in health gains predicted from the change in activity levels. To do this we estimated an average value per 100 population from all the target areas using data on changes in the number of individuals meeting the government targets for exercise. The value of the physical activity gains was estimated using four steps:

- Calculate the change in the number of individuals meeting the government recommended level of exercise.

- Calculate the quality adjusted life years (QALYs[19]) associated with the change.

- Attach a monetary value to those QALYs.

- Estimate the saving in health care costs as a consequence of meeting the recommended level of exercise.

6.31   In step (i) we used our finding that the probability of meeting the national guideline is 5% higher than it would have been without the intervention. Therefore the increase in numbers meeting the guideline was 1.5 per 100 of the population.

6.32   In step (ii) we needed to identify the QALY value to attach to the increased number of people meeting the guidelines. This is difficult because the health gain from meeting the guideline would vary according to how much exercise was undertaken previously – i.e. where each individual *started* from before the intervention. However it is not possible to

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[19] *A quality-adjusted life year (QALY) is a measure used in health economics to assess the cost effectiveness of an intervention based on the number of years of life that would be added by the intervention. It is defined as a measure of the state of health (mental and physical) of a person or group in which the benefits, in terms of length of life, are adjusted to reflect the quality of life. Each year in perfect health is assigned a 1 down to a value of 0.0 for death to reflect the health-related quality of the additional years gained.*

calculate this as we did not survey the same individuals in 2012 as in 2009. We therefore drew upon a recent UK evaluation of an exercise referral scheme which reported results in terms of numbers of people becoming active as a result of an intervention. Using this source, the QALY gain per person becoming active was 0.205 and this was then multiplied by the estimated change in physical activity (1.5) to give the size of this QALY associated with this change (Table 6.2). This is the first line in Table 6.2 and represents the central estimate.

6.33   In order to compare this with other ways of estimating the impacts, we used a separate approach with different figures on the value to be attached to a QALY. The low estimate is based on the idea that the difference between the post-intervention level of physical activity and their pre-intervention level was only 30 minutes a week, and corresponds to all of the increase in meeting the guidelines coming from those who were initially just below the guideline level of physical activity. The high estimate represents all of the change coming from people who were previously completely inactive. Hence, these estimates span the range of possibilities.

6.34   In step (iii) QALYs are valued by reference to the NICE threshold of £20,000 - £30,000 and we used these to attach a monetary value to the QALYs.

Table 6.2: Benefits measured in health gains over a lifetime from meeting physical activity guidelines

	1	2	3	4	
	Increase in number of active persons	QALY gain per person	QALY gain per 100 population (column 2 x column 1)	Monetary value (£) of QALY gain per 100 population based on NICE thresholds (column 4 x column 3)	
				£20,000	£30,000
Central estimate	1.5 per 100	0.205	0.3075	6,150	9,225
Variant 1: 30 mins increase per week	1.5 per 100	0.078	0.117	2,340	3,510
Variant 2: 150 mins increase per week	1.5 per 100	0.391	0.587	11,730	17,595

6.35   In addition to the value of the health gain, higher levels of physical activity would be expected to reduce health care costs. In step (iv) we estimate this saving. Once again using the values found in the literature, the estimated reductions in lifetime costs of cases of stroke, CHD and diabetes avoided as a result of increased physical activity average £5,262 per 100 population (derived from Trueman and Anokye (2012)[20]). This is equivalent to a

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[20] *Trueman P and Anokye PN (2012) Applying economic evaluation to public health interventions: the case of interventions to promote physical activity Journal of Public Health doi:10.1093/pubmed/fds050. The calculation was*

saving of £1,349 per person becoming physically active. In Trueman and Anokye this is based on 3,900 persons becoming physically active in the cohort of 100,000. The estimated increase in numbers of people becoming physically active as a result of SCSP is 1.5 per 100, giving an estimated health care saving of £2,024 per 100 population. Using the adult population for the seven pilot areas, the gross value of this saving in health care costs would be £3.5 million. These would be in addition to the benefits from health gains presented in Table 6.2 (i.e. the conservative baseline estimate of £6,150 per 100 population) and combining these figures gives a gross value of £10.6 million.

Health economic value of increases in walking

6.36   HEAT (Health Economic Assessment Tool) was developed by the World Health Organisation as an online resource to help in conducting economic assessments of health benefits of walking (or cycling) by estimating the value of reduced mortality that results from specified amounts of walking (or cycling), based on best available evidence. HEAT represents a first step towards an agreed harmonised methodology based on the best available information and evidence. Therefore, the accuracy of results of the HEAT calculations should be understood as estimates of the order of magnitude, much like many other economic assessments of health effects.

6.37   The effect of changes in walking was analysed using HEAT to assess the impact of the SCSP interventions. For this it requires figures for the number of average daily trips per capita and the average distance walked per trip. The number of average daily trips is calculated from the weighted travel diary analysis[21]. Average distances per trip have been taken from the Scottish Household Survey relating the pilot areas to comparable locations in the national data. We used the average trip distance recorded in the locations in 2008 and 2011, effectively assuming that the average distances walked per trip have not changed over time.

6.38   In the estimation of HEAT, several assumptions had to be made regarding the model parameters:

- It was assumed in the HEAT model that the time needed to reach full level of walking is one year.

- The health benefits were calculated based on a reduced probability of death for people who walk. The mortality rate used in HEAT should reflect the rate of the population being studied so the UK 2009 mortality rate was used.

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based on savings of £5,262,142 for a cohort of 100,000 people arising from 51 avoided cases of CHD, 16 avoided cases of stroke and 86 avoided cases of diabetes with associated lifetime costs of £17,728, £1,965 and £50,309 respectively.
[21] *The HEAT analysis is weighted to establish population level effects in contrast to the physical activity analysis which is unweighted since the regression model used build in controlling effects for age, gender and many other things.*

- The value of a statistical life used in the model is derived from "willingness to pay" to avoid death in relation to the years a person can expect to live according to the statistical life expectancy. The "willingness to pay" represents how much a representative sample of the population (who in this instance are potential victims) would be willing to pay (in monetary terms) to avoid a specific risk such as the risk of a road crash. The default value of €1.574 million, which is a standard value used across Europe, was used.

- The average benefits were calculated for a time period of 10 years and, since benefits occurring in the future are generally considered less valuable than benefits occurring in the present, a discount rate of 5% was applied to future benefits[22].

- When assessing the impact of an intervention it is prudent to assume that not all the walking, or increase in walking, observed is newly induced walking that is directly attributable to the intervention itself. As is recommended in the HEAT guidelines, when the proportion of the new walking attributable to the intervention is unknown, 50% is considered to be an acceptable assumption.

- Adult population figures were taken from the 2010 mid-year population estimates published by the Scottish Government although it should be noted that the majority of the literature underpinning the HEAT tool draws upon studies on older populations.

- HEAT is intended to be applied for walking of at least moderate pace (i.e. about 3 miles/hour or 4.8 km/hour) as walking at this speed requires an energy expenditure that is considered to be necessary for health benefits. Walking pace was not available from the travel diary data.

6.39 In Table 6.3 the current value of the total benefits accumulated over 10 years, at individual pilot area level is shown, as calculated by HEAT.

Table 6.3: Current value of the total benefits accumulated from changes in walking activity over 10 years (per 100 population)

SCSP pilot area	(£)
Barrhead	25,697
Dumfries	11,498
Dundee	46,148
Glasgow East End	42,398
Kirkintilloch/Lenzie	15,600
Kirkwall	12,375
Larbert/Stenhousemuir	29,300

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[22] *Discounting is applied to make benefits occurring in the future comparable to benefits occurring today. The 5% rate is recommended in the HEAT tool.*

6.40   Dundee and Glasgow had the highest benefit per 100 population from increases in walking as a result of the intervention. The lowest benefits from increased walking were experienced in Kirkwall and Kirkintilloch/Lenzie. The level of these benefits were directly proportional to the change in number of walking trips per person recorded in the travel diaries, and the different distance figures for the different types of location recorded in the SHS data. It should be noted that these estimates do not take account of differences in the health of the sample populations.

6.41   All of these values are greater than the central estimates of benefits calculated from the changes in the physical activity in the previous section (Table 6.2). If these benefits were grossed up across the population of the seven pilots, this would be in the order of £46 million in health benefits.

6.42   When comparing both estimates it is important to recognise that we are measuring different things. The HEAT analysis only measures benefits from walking for a 10 year period but includes a wider range of physical activity measures. The assessments in Table 6.2 cover a longer period, but only consider activity in relation to the target threshold of 30 minutes activity 5 times a week. Given that the average walking trip distance is 0.7 miles, much of the walking activity will not be picked up in the physical activity measure of more than 30 minutes activity. The benefits in the HEAT model, by using the willingness to pay value of a statistical life, are the much broader approach to the valuation of benefits. In addition, by focusing on walking alone, the HEAT tool does not allow any consideration that the increase in walking may substitute for other physical activities and so does not account for any reductions in other physical activity such as cycling, heavy housework or DIY, swimming, use of a gym, aerobics/keep fit/gymnastics and active sports.

Reducing carbon emissions

6.43   The scale of the impacts on carbon (CO_2) emissions arising from the reduction in car driving trips was assessed using the method set out in Scottish Transport Appraisal Guidance (STAG)[23]. Using this approach the CO_2 changes were factored by a value of CO_2 based on non-traded carbon values.

6.44   These calculations were carried out for cars and taxis, as there was insufficient information available about the changes to bus operations. The changes in bus routes and vehicles in Dumfries were to have been covered in the Council's carbon footprinting assessment project, but this did not proceed. In Kirkwall the changes to the airport bus services were assumed to be relatively small. In other areas there were no instances identified where SCSP had resulted in significant changes to the emissions from bus services.

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[23] *Transport Scotland. Scottish Transport Appraisal Guidance. http://www.transportscotland.gov.uk/stag/home*

Carbon savings from car driving

6.45   Carbon (CO_2) savings were derived from the change in car and taxi mileage in each of the SCSP pilot areas between 2009 and 2012 based on the travel diary results reported in Table 5.10. Car passenger trips were also treated in the same way as for the financial savings, capturing the changes through reported car driver behaviour.

6.46   Carbon emissions factors were obtained as recommended in STAG from current published literature[24]. Emissions factors are themselves dependent on the size of the vehicle as shown in Table 6.4.

Table 6.4 – g CO_2 per km by size of car

Car size	g CO_2 per km
Small Car	165.7
Medium Car	200.2
Large Car	268.0

6.47   The proportion of small, medium and large cars in each of the pilot areas in 2012 was also available from the household survey and shown in Table 6.5. Kirkwall had the highest proportion of large cars and Kirkintilloch/Lenzie had the lowest proportion of small cars. In Barrhead and Dundee there were substantially more small cars than in the other pilot areas. In the absence of better data, taxi emissions were assumed to be larger than the average, and because they are predominantly driven around town, were assumed to have the emissions profile of a large car.

Table 6.5 – Proportion of car types by SCSP pilot area (2012)

Pilot Area	Small Car	Medium Car	Large Car
Barrhead	33.1%	57.7%	9.1%
Dumfries	24.2%	66.3%	9.4%
Dundee	32.7%	59.6%	7.7%
Glasgow East End	21.8%	68.8%	9.4%
Kirkintilloch Lenzie	19.0%	73.5%	7.5%
Kirkwall	23.1%	65.2%	11.7%
Larbert/Stenhousemuir	24.7%	65.4%	10.0%

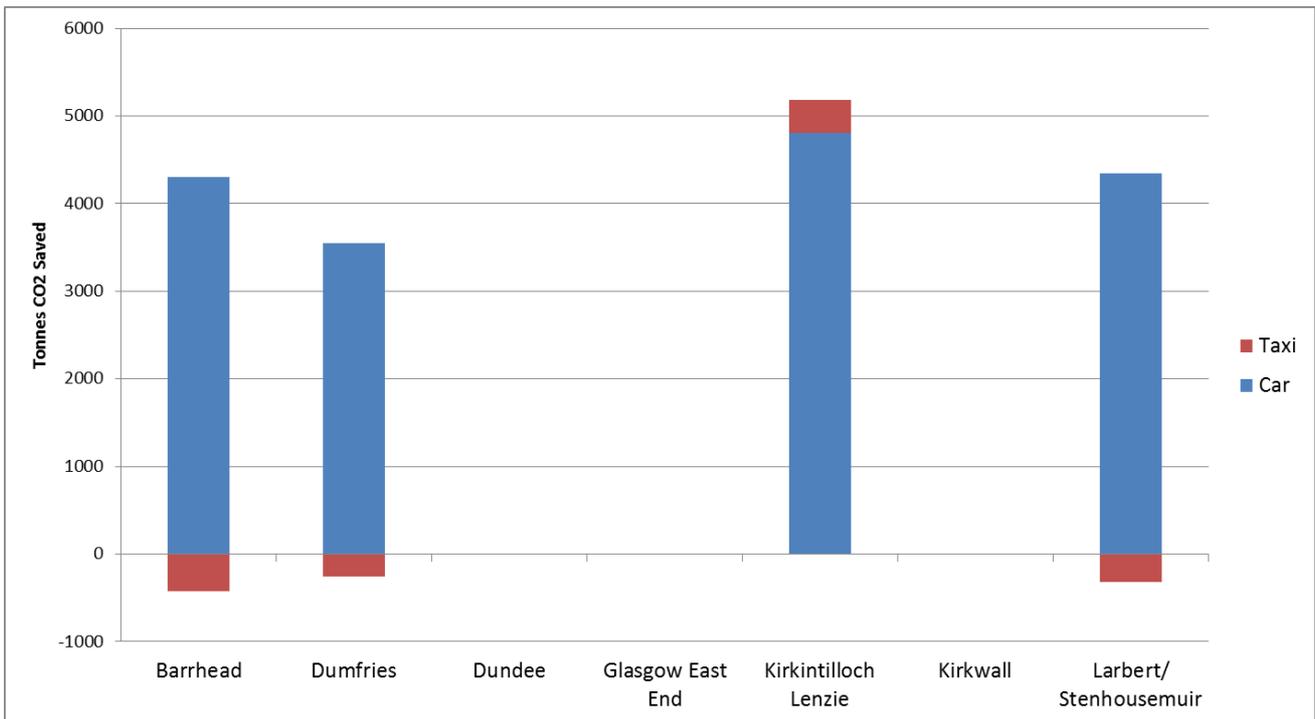*2012 household travel survey (weighted) sample.*

6.48   STAG appraisal guidance recommends values for each tonne of CO_2 of £14.14 (traded) and £55.20 (non-traded) respectively[25]. Car emissions are a non-traded sector so £55.20 per tonne was used.

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[24] *CO_2 emission factors for each of these are taken from - 2011 Guidelines to Defra / DECC's GHG Conversion Factors for Company Reporting: Methodology Paper for Emission Factors. August 2011*
[25] *DfT 2012. Transport Appraisal Guidance 3.3.5 - The Greenhouse Gases Sub-Objective*

6.49   Figure 6.4 shows the CO_2 emissions savings by pilot area. Savings were calculated based on the changes in trips travelled as a car driver multiplied by average trip lengths for cars or taxis from comparable locations in the SHS (as in cost saving analysis). As for the financial analysis above, savings were only calculated where the mode share changes were statistically significant which covered four out of the seven pilot areas. Similarly the other assumptions about applicability across the population and trip length changes were as for the financial savings as discussed in Paragraph 6.11. These daily savings in distance per capita were then used to estimate annual savings of CO_2 by factoring the daily figure by the adult population in each area and 365 days.

Figure 6.4 – Annual reduction in emissions of CO_2 by SCSP pilot area (Tonnes)

6.50   Table 6.6 shows the value of this carbon saving based on the CO_2 value of £55.20 per tonne. The carbon emissions saving across the whole of the seven areas is valued at £0.9 million per year or £6 per capita.

Table 6.6 – Tonnes of CO$_2$ savings and value of saving per annum

Pilot Area	Pilot area CO$_2$ saving (tonnes)	Value £k
Barrhead	3,880	214
Dumfries	3,292	182
Dundee	0	0
Glasgow East End	0	0
Kirkintilloch/ Lenzie	5181	286
Kirkwall	0	0
Larbert/ Stenhousemuir	4,021	222
Total	**16,374**	**904**
Total saving per capita	**0.176**	**10**

Summary of quantifiable impacts

6.51   Only a few of the SCSP programme impacts are quantifiable. Table 6.7 summarises the estimated impacts of these quantifiable benefits.

6.52   The health benefits were discounted to the present day using the established methods for this. However the decay rates for the financial and environmental benefits depend on how long the behaviour changes are sustained and this is not known. In practice the investment to maintain these levels of behaviour should be much lower than the initial investment within SCSP but as a conservative estimate it is assumed that the benefits decay rapidly by 50% per year which reduces the benefits to near zero within less than five years. A high decay rate such as this could be possible for the promotion activities. However the provision would be estimated to decay at the standard government investment discounting rate of 3.5% per year. Table 6.7 shows the rate of return over 10 years. Some elements of provision will continue for more than 10 years but maintenance costs will also be important after 10 years and these have been omitted.

Table 6.7 – Rate of Return on SCSP investment discounted over 10 years

	Annual saving (£million)	Lower bound discounted present value benefit (£million)	Upper bound discounted present value benefit (£million)
Saving people money	9	18	79
Improving the environment	0.9	2	7
Improving their health		20	20
Total		**40**	**106**
Rate of Return		**2.7**	**7**

Building stronger communities

6.53   It is not possible to quantify the impacts on strengthening communities but throughout the focus groups and workshops, participants commented that SCSP was seen as a ground breaking programme, changing the ways that people, Local Authorities, public agencies and businesses interacted with each other. Over the last decade, Community Planning[26] and other new legislative and administrative changes such as single outcome agreements for Local Authorities, have sought to improve the way that all of these groups interact. So if SCSP was successful in improving transport delivery for communities, then it clearly contributes towards one of the Government's central policy aims.

6.54   Travel behaviour change succeeds when local people recognise the benefits they can achieve and receive the support and confirmation needed to take the required steps. The 2009 baseline focus groups showed that promotion of behaviour change could be perceived as threatening if local people did not first recognise the benefits of reduced car travel, healthier lifestyles, and supporting local shops and public transport. Transport Authorities start from their established position as providers of infrastructure and services and the baseline focus group discussions showed that some people were sceptical about whether the authorities have a potential role as champions of more efficient and sustainable travel. Between 2009 and 2012 the pilots succeeded in overcoming this by listening to people at events and through PTP, delivering training initiatives, and promoting messages through organisations already trusted with championing personal and community needs.

6.55   The 2012 household surveys showed that respondents were more satisfied with their communities as places to live than in 2009 and that perceptions of community and neighbourhood had improved by more than the background trend in Scotland. By looking at the delivery processes the reasons for these changes in perceptions can be assessed using three characteristics of communities[27]:

- Evidence of community groups and social enterprises being established and a better trained and supported population.

- Evidence of participation such as volunteering, or increased participation in work and leisure activities.

- Demonstrating equality of opportunity considering gaps between most and least deprived neighbourhoods in each area.

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[26] *The Local Government in Scotland Act 2003 - Guidance for Community Planning.*
http://www.scotland.gov.uk/Publications/2004/04/19168/35271
[27] *Improving Local Outcome Indicators Project. http://www.improvementservice.org.uk/local-outcome-indicators/*

Enabled groups and individuals

6.56   The Local Authorities in the SCSP pilot areas noted that working on SCSP provided a practical project delivery opportunity, where transport could lead on delivery programmes planned through the community planning partnerships. In five of the pilot areas the focus group discussion participants stated that they perceived Local Authorities more positively in 2012 than they had done in 2009. This emerged from discussion of recent changes with participants noting that people perceived that Local Authorities were trying harder. In contrast, the focus groups in all three areas where the comparator sample was obtained (Arbroath, Bearsden and Dalkeith) did not perceive an improvement by the Local Authorities, with very similar perceptions of Local Authorities as in the baseline focus groups. The absence of positive comments about the Local Authority getting better in some areas does not imply that this is representative of public attitudes. However, the focus group results from the pilot areas suggest that the more innovative delivery approaches in SCSP areas helped to create more positive perceptions of the Local Authorities.

6.57   Glasgow East End illustrates the ways that the Local Authorities needed to change the way they work to accommodate new types of transport delivery, supporting the strategy for regeneration of the area. Until SCSP, the roads department was involved in infrastructure projects like new roads and bus priority projects such as Streamline. In order to focus on travel demand management in addition to transport supply the Local Authority established new joint working processes and organisational structures which helped to pave the way for the travel planning for the Commonwealth Games. The event travel plan for the Games is now being developed as one of the largest examples of smarter choices delivery in Scotland, but in 2008 when SCSP was planned, the pilot was seen mainly in terms of providing some infrastructure for the Games and delivering some cycle promotion. The new organisational structures have a Steering Group and separate delivery teams, designed to cope with the challenges of working with partners including volunteers, local businesses, community groups, the Police and other community planning partners.

6.58   Similarly in Dundee, the Local Authority officers identified SCSP as a landmark project where the Local Authority could establish its role in demand management. Joint projects with the NHS, volunteers, and the local business community are now adopted as core activities by elected members within budget decisions by the Local Authority, enhancing the capability of local delivery partners to ensure that social needs are met and community capacity is nurtured. An example of a joint project was a rent-free shop unit made available from a local shopping centre as part of the corporate social responsibility support to provide a local information centre for Dundee Travel Active.

6.59   For all of the SCSP pilot areas, the organisational model for future delivery continues to evolve. The pilots showed how the national funding could be used to help Local Authorities set up support and promotional services for travel behaviour change programmes.   However, for mainstream delivery the boundaries and partnerships between these services and other overlapping local promotional activities would need to be much clearer for health, regeneration, education and environmental improvement. Two options have emerged. In Dumfries and Dundee discussions continue about whether to formalise the new community planning functions within a new social enterprise which would be able to draw funding from transport, health, education, regeneration and other sources to deliver joint programmes. Alternatively, or additionally, the functions could be managed within narrower remits. The Active Passports in Barrhead have continued to be delivered through the Healthy Weight Communities promoted by the NHS and community planning partners.

6.60   Delivery partners in Dumfries suggested that the involvement of Stagecoach throughout the wider marketing and promotion of the SCSP programme helped to widen the appeal of the SCSP programme. This promotion demonstrated how private companies and public agencies were working together, and it is notable that the visual recognition of the *GO Smart* brand was highest in Dumfries, and the general brand recognition was highest in Barrhead where the 'shop local' campaign involved local retailers. Focus group participants noted that they had seen the brand at bus stops, amongst other locations. Likewise the Stagecoach branding was shown in places that the bus company would not otherwise be associated with, such as cycle hire stands, so the evidence suggests that the integrated approach to procurement worked for both the Local Authority and its partners.

6.61   Delivery teams in all of the areas felt that more involvement by local businesses, like local grocers, butchers, and newsagents benefiting from local walk-in trade, and transport businesses such as cycle shops who can engage with the programme, would have been helpful. Most of the areas increased their level of engagement with local businesses as the programme proceeded. The larger SCSP programme budget in Dumfries probably made it easier to motivate the bus operator to respond with partnership investment at an earlier stage than in some of the other areas, since there was a greater potential (indirect) reward for the company against which to balance the commercial risks of involvement. Stagecoach was able to add value to the Local Authority investment with its own marketing and promotion.

6.62   All delivery teams were agreed that if public investment is being used to deliver improved profits for local businesses such as cycle shops and bus companies, then partnership arrangements are needed to share the benefits between the Local Authority and the businesses. Such arrangements could also help to lever in greater investment into smarter choices programmes from such private companies. There would be no major cost in partnering with bus companies and other service providers to jointly promote change, but

trust needs to be built over time. This was seen as starting to happen with the *Take the Right Route* branding being shown on the buses in Larbert/Stenhousemuir, and the partnership working on the *GO Barrhead* Campaign with McGills in Barrhead.

6.63 More time is needed to see how each of the pilot authorities sustain delivery of these new broad programmes. In the meantime the evidence that SCSP enabled communities to deliver is summarised in Table 6.8.

Table 6.8 – Enabling approaches for groups and individuals in the SCSP pilot areas

Pilot Area	Successful processes	Further work needed
Barrhead	• Organisation of community planning with staff from several sectors uniting under the *GO Barrhead* brand. • Pride in the *GO Barrhead* brand as a demonstration of a new found community confidence.	• Local employers do not all plan safe and efficient access for their staff and visitors • Partnerships with bus companies not yet formalised. • Improve partnership resilience to staff churn by delivering a wider range of projects through the partnerships involving more staff in practical delivery • Future joint funding arrangements for active travel promotion need service level agreements with NHS primary care teams.
Dumfries	• *GO Smart* Travel Club established as a partnership project with commercial and wider public agency interests	
Dundee	• Dundee Travel Active established as an ongoing programme for managing delivery on active travel with partners from across society. • Community time-banking project set up to help ensure incentives for volunteers	
Glasgow East End	• New management arrangements for delivering community plans such as Glasgow East End regeneration including Commonwealth Games. • The community outreach work has supported health and community development through training and participation in active travel events	
Kirkintilloch/ Lenzie	• Social enterprises working with schools including East Dunbartonshire Cycle Cooperative and Sustrans.	
Kirkwall	• Schools involved in planning safe routes for walkers and cyclists	
Larbert/ Stenhousemuir	• Walk the talk events now operating more independently and managed by the community. • Children's Bike Club delivering training.	

Increased participation and enhanced personal capabilities

6.64 All of the pilot areas relied on volunteers to some extent. In most areas health walks continue to be sustained on a regular basis by volunteers who now lead the walks. In Dundee the volunteer walks have grown from a single health walk to a programme of walks with different frequencies and lengths for people with different abilities, and the on-going training of volunteers continues to be funded by the NHS.

6.65 In Glasgow East End, community groups have been contracted to provide services, such as the cycle training by The Bike Station. In deprived areas a higher proportion of paid staff

time is needed which has been managed by investing support through local social enterprises, who also provide pathways to employment from volunteering through to permanent jobs. Cycling Scotland has a training programme for volunteers and trainers, and liaison with all of the SCSP Local Authorities was important to ensure that these activities were coordinated and targeted. The cycle training programme demonstrated how community capacity can be nurtured, not just by training local volunteers to offer training, but in training people to train more volunteers thereby creating a strong community able to sustain its cycle training without external help.

6.66   As volunteer activity rose in the pilot areas there was a need to reward personal commitment with practical action in order to maintain enthusiasm and commitment. The volunteer rangers for the path network in Dundee started with a high level of enthusiasm but this enthusiasm gave way to despondency amongst some rangers when the Local Authority was perceived to be responding to path audit findings too slowly. If volunteers do not feel valued they lose interest and stop volunteering. Despite the loss of some of the volunteers who were impatient for change, the Local Authority was able to support others and establish a budget for a path maintenance programme. The pressure to maintain the path maintenance budget is therefore now built into the audits by the volunteer rangers since as members of the community they can lobby for investment, and also report problems through formal management procedures. Community capacity and community pressure for investment are therefore now better integrated.

6.67   Several pilot areas experimented with the use of Twitter and Facebook to communicate with local communities. The numbers joining these sites were limited (e.g. 85 followers of Melo Velo Facebook Club in Barrhead). Focus group participants in Barrhead, Kirkwall, and Dundee viewed these approaches as positive evidence that Local Authorities were trying harder, but the participants also noted that Local Authorities should not expect that residents would join their social networks directly. People do not view their relationship with the Local Authority as a direct social network, but would like people in the community who follow the Local Authority (e.g. such as the Scouts, Churches, Community Councils and others) to 'favourite' posts that might be of interest to their members so that the messages are disseminated effectively. It was noted that school teachers were barred from having students in their social networks, but e-mail and SMS text networks were widely used to disseminate messages. Overall, better communication was seen as essential for smarter choices to succeed, and stakeholders in all pilot areas report that this was achieved.

6.68   Travel plans and PTP were used to engage with communities to recruit individuals and groups in order to plan, organise, fund and deliver improvements. Champions emerged from within existing volunteer networks, businesses, and schools. There were different levels of involvement by the community. Over 20 volunteers were recruited to help with health walks, making a regular commitment to provide this active travel support service.

At least 30 volunteers helped with path inspections and maintenance, plus the involvement of schools in identifying gaps in safe routes to school. Some people simply signed up as members of travel clubs to help participate in the programmes, with over 10,000 people signing up for these programmes[28]. Some participants grew their involvement and became fund raisers and community champions, such as for the charity fundraising walks in Larbert/Stenhousemuir. These community champions should help to secure future impacts from the SCSP programme through networking which continues to build community capacity delivering training, support and information dissemination across the communities.

6.69   This recruitment of residents as local champions and as participants paves the way for future delivery, but is fragile and needs to be nurtured, with incentives and support for an ongoing programme of activities. Early successes with schools and some community groups could be built upon and extended to include more local businesses as some Local Authorities were doing towards the end of the pilot period.

6.70   The travel advisors recruited locally in each area were important for successful community engagement. Rather than the marketing within SCSP being seen as preaching, as some residents and elected representatives feared at the outset, the travel advisors, champions, and travel club members who have been recruited proved to be a valuable resource in the community, helping to build local capacity and making future delivery much easier. Stakeholders such as NHS staff in the areas noted that the enthusiasm of the advisors helped to ensure that the promotional activities were generally received as promoting positive messages.

6.71   Table 6.9 summarises the experience from the SCSP programme on enhancing local community participation.

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[28] *People registering were as follows: 2900 in Barrhead, 2399 in Dumfries, 1645 in Dundee, 1017 in Kirkwall and 4707 signing up in Larbert Stenhousemuir with 1548 of these becoming more active members and 15 of these becoming community champions.*

Table 6.9 –Enhanced participation and personal capabilities

Pilot Area	Successful Processes	Further Work Needed
Barrhead	• Training of volunteer health walk leaders. • Volunteer cycle trainers • Cycle maintenance skills training	• New enterprises needed, or development of existing enterprises, as a channel for community participation in transport. • Funding streams needed to invest in volunteer led projects. • Overcome barriers to volunteer participation such as financial cost of accreditation and training.
Dumfries	• Coaching for the youth cycle development project	
Dundee	• Training of volunteer health walk leaders • Volunteer cycle trainers • Volunteer network rangers	
Glasgow East End	• Funding supporting growth of social enterprises • Rehabilitation of people facing drug addiction	
Kirkintilloch/ Lenzie	• Training of volunteer health walk leaders • Volunteer cycle trainers	
Kirkwall	• Training of young people as active travel advisors • Training of volunteers to provide passenger assistance	
Larbert/ Stenhousemuir	• Training of volunteer health walk leaders • Cycle training for autistic children	

Equality of opportunity

6.72 Each of the pilot areas opened up new opportunities for all people in the community. Improved access to local services was noted to be particularly beneficial by focus group participants as helping those likely to be excluded from opportunities. The "Shop local" campaign in Barrhead and the community guides in Barrhead and Kirkintilloch/Lenzie were positive steps to help boost the local shops and services. This encouraged spending by people who had a choice of where to shop, which then supported local businesses on which lower mobility groups were dependent.

6.73 The socio demographic analysis findings in Chapter 5 show that the benefits of the programme were evenly distributed across the old and young, those in and out of work and at different life-stages. This shows that there is potential for SCSP investment to be designed and targeted to ensure that all needs are met. For example, in Dundee particular steps were taken to ensure that older and disabled people could benefit from being more active. The health walks programme, in particular, targeted these groups and this helped to cement relationships with the NHS who were able to refer people to these walks as part of health-care packages. Dundee was the only pilot area to see increases in walking among those with a disability or illness.

6.74 Table 6.10 shows how SCSP delivery supported a more equal society.

Table 6.10 – Securing equality of opportunity

Pilot Area	Successful Processes	Further Work Needed
Barrhead	• Promotion of improved safety and security when accessing local services.	• Close gaps in walking and cycling networks, particularly pedestrian crossings. • Bus quality partnerships to address inequalities in costs of bus travel.
Dumfries	• Improved walking routes, and pedestrian crossings have improved safety and security when accessing local services. • Improved bus network coverage has enabled more bus trips to access the area centre, railway station, the hospital and other local services near these locations.	
Dundee	• Older, disabled people and people with health problems have particularly benefitted from assistance with access to the countryside through health walks	
Glasgow East End	• Drop kerbs and road crossing points have improved access for all.	
Kirkintilloch/ Lenzie	• The new core path network has improved access to the countryside	
Kirkwall	• Older, disabled people and people with health problems have particularly benefitted from the new bus services, and may benefit in the future from the travel training.	
Larbert/ Stenhousemuir	• The new path network has improved access to the hospital and the countryside	

7.0   Delivering Smarter Choices Smarter Places

The SCSP programme has shown how to plan, organise, fund, and deliver, practical programmes to integrate established Local Authority roles in transport infrastructure and service provision, with new approaches to promote travel attitude and behaviour change.

Capturing the financial savings from SCSP delivery is needed to make future delivery more self-financing. As local participants and businesses experience practical benefits, their willingness to invest increases.

Partnership agreements between Local Authorities and local partners including the NHS and bus operators were needed to ensure that each partner focused their involvement on activities which delivered added value.

Complex programmes made up of many low cost discrete measures were given an identity through branding of local activities.

The inclusion of infrastructure within the SCSP programmes ensured that Local Authorities were able to close gaps in networks to enable more opportunities to be promoted.

Relevant, timely, helpful information about walking, cycling and public transport travel opportunities was identified as particularly useful by residents. Competitions and organised walks to try new leisure routes were reported by residents to be practical prompts to walk more. Participating in community events was sometimes a cost effective approach to community engagement.

Cycle campaigners and enterprises were key contributors to the local community capacity, and were able to support both shared and private cycle use.

Funding for car and lift sharing schemes was best provided by those with a direct financial stake in the benefits, such as local employers.

The delivery of practical benefits like new safe routes or better information was successfully organised through travel plans, but SCSP did not refresh interest in the travel planning process itself. PTP helped to make SCSP delivery more dynamic and responsive; recruiting local people as champions or Travel Club members; and helping to personalise provision and promotion.

SCSP has provided a practical focus for community planning, enabled volunteering opportunities with training in key skills, and improved the capacity of the Local Authorities to deliver future joint working programmes across multiple sectors. Embedding and sustaining these benefits will require a much stronger local evidence base than was achieved in the pilot areas so that Local Authorities measure, and are then are able to celebrate, progress and achievements within their communities.

7.1   In this Chapter we look at what was learned about the process of delivering SCSP measures through the pilots. This draws heavily on feedback and views from the Local Authority delivery teams. It also draws on qualitative feedback from local people from the focus group discussions and on views reported in the household surveys. The Chapter starts by considering the roles of the main stakeholders in planning, organising, funding and delivering change. It then reviews the delivery approaches under the SCSP delivery themes to highlight learning points.

7.2   Figure 7.1 illustrates how the programme was planned, organised, funded and delivered, integrating established roles in infrastructure and service provision with new roles in promotion, partnership working, organisation and management.

Figure 7.1 – Planning, organising, funding and delivering Smarter Choices Smarter Places

7.3   The planning sometimes originated within community planning partnerships, sometimes within schools or other community organisations, and sometimes through the Local Authorities looking to deliver a local goal in a new way. The plans then identified the

infrastructure, services, training and other requirements to deliver the required goals and secured the required funding to allow specific initiatives to proceed.

7.4   Delivery mechanisms for a pilot can be different from more mainstream activity, but each Local Authority started with a different track record of smarter choices delivery which allowed the pilots to demonstrate delivery processes within a range of mainstream settings.

The role of funding within delivery processes

7.5   Chapter 6 shows that the financial savings in transport spending achieved by residents are well in excess of the programme costs, and improved efficiency in Local Authority transport investment should lead to substantial additional savings into the future. However the large size of these savings when compared with the investment costs does not mean that SCSP is self-funding, since a key purpose of the investment is to motivate people and organisations to do things that they would not otherwise have done.

7.6   Without the funding, the Local Authorities would have been unable to secure commitment from partners to engage in joint working. One health professional noted that there has been a lot of talk and agenda setting in community planning, but SCSP has provided an opportunity to turn this into something practical. All of the Pilot Authorities are now working more closely with partners in other sectors. Specific examples can be drawn from each of the pilot area reports, but good examples include the integration of *GO Barrhead* with the "Shop Local" campaign, including the extension of this to Clarkston, and the information centre with active travel support jointly delivered with the NHS and local shopping centre in Dundee.

7.7   Orkney Council used the SCSP funding to create new procedures in the Local Authority to ensure that public transport, walking and cycling were considered in future investment decisions. Future investment in these modes would therefore be built into the wider development, roadworks and planning processes, reducing the need for separate funding.

7.8   Although funding was used as the incentive for joint working, other incentives were also successful. The investment in the cycleways and bus services in Larbert/Stenhousemuir, including the management of staff and visitor travel through a travel plan, used a planning condition to secure the hospital investment.

7.9   Although it is not possible to attribute the impacts of any programme to the level of spending, as discussed in Chapter 2, it was clear that the indirect effects of SCSP on wider investment programmes was important. For example some residents of Larbert/Stenhousemuir cited the new path network built as part of the travel plan for the new hospital as influencing their behaviour, rather than any of the infrastructure changes directly funded by SCSP.

7.10   The ability to fund and deliver SCSP depended on the Local Authorities organising delivery. Success in delivery requires that the Authorities are able to manage and resource funding from a range of sources to deliver SCSP type activities. SCSP helped to save people money so it might be possible to create mechanisms to capture these savings to make future SCSP programmes self-financing. Some of the pilot authorities considered resourcing options for the future, such as whether a social enterprise would be better able to manage income to fund programme delivery. The viability of these approaches depends on phasing SCSP funding so that those benefitting from the investment have the opportunity to contribute, as their willingness to pay increases.

7.11   The remainder of this Chapter looks at the Local Authority experiences of planning, funding and delivering initiatives under each of the eleven delivery themes.

Public transport services

7.12   The Local Authorities did not all include public transport (PT) improvements. Kirkwall invested in bus services, Barrhead in bus facilities, and Dumfries invested in both services and facilities. Other pilot areas used their marketing activities to help local people identify suitable local public transport services, and in Larbert/Stenhousemuir part of the campaigning budget was used to work with local bus companies on a marketing programme.

7.13   Dumfries and Kirkwall were more reliant on publicly funded bus services, so investing in a bus network where the Local Authority was already a major financial stakeholder allowed direct financial benefits for the Local Authorities themselves. In the other pilot areas more of the services were commercial so increases in patronage would deliver financial benefits primarily for the operators. The mix of commercial and supported services in Dumfries required a funding partnership with the bus operator, Stagecoach, to deliver the service improvements.

7.14   Throughout the pilots, bus companies continued to be reluctant to share data with the Local Authorities on passenger numbers. Some bus companies noted that the Competition Commission might regard the sharing of data as undermining competition[29]. Most SCSP delivery teams noted that Local Authority investment in joint working solutions with bus operators was probably being suppressed as a result of this lack of data[30]. For example, if

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[29]http://www.competition-commission.org.uk/assets/competitioncommission/docs/pdf/inquiry/ref2010/localbus/pdf/local_uses_provisional_findings_report.pdf
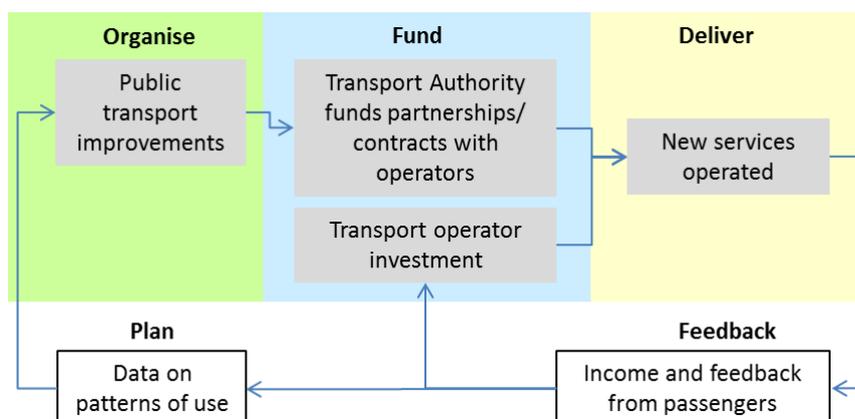
[30]*Many studies for the Commission for Integrated Transport, Department for Transport and others, show that the collective actions of government through transport departments, competition authorities and traffic commissioners has focused on competition in the bus industry at the expense of promoting the benefits of partnership. A useful independent review of the issues relating to bus competition is http://www.competition-commission.org.uk/assets/competitioncommission/docs/pdf/inquiry/ref2010/localbus/pdf/tas_report*

investment such as PTP, new bus shelters and reallocation of road space in Barrhead resulted in more bus passengers, then it is important to be able to demonstrate these impacts in order to make a case for further public transport investment. In the absence of such evidence, partnership investment with bus companies becomes more difficult to support.

7.15 The role of Regional Transport Partnerships was particularly important for public transport provision, since most of the Regional Partnerships were developing initiatives with bus companies. Dumfries and Galloway Council and SWestrans were in a stronger position to manage relationships with bus companies since the public transport functions of SWestrans and local transport functions of the authority could be synchronised more easily with both authorities covering the same geographical area. This meant that roads investment in bus lanes and other infrastructure could be coordinated more easily with financial support for bus services. In other areas, the complementary roles of Regional Transport Partnerships and Local Authorities were more complex to manage. The Barrhead team explained that SPT (Strathclyde Partnership for Transport) was involved in the SCSP pilot, but it had not proved to be possible to co-ordinate SPT bus investment with the SCSP pilot. SPT has the lead role in liaising with the bus industry on funding and partnership issues, so although the involvement of East Renfrewshire Local Authority was welcomed in funding bus shelters and information, the pilot was not seen as an integral part of SPT programmes to tackle barriers to bus use.

7.16 Figure 7.2 summarises the delivery processes evident from the pilot areas showing how the improvements were funded, what they delivered, and how this feeds back to ensure that the approach is sustainable. Local Authority funding covers all of the investment channelled through the budgets of the Authorities from many sources, including national funding such as SCSP, Cycling, Walking, Safer Streets funding, and general revenue grants.

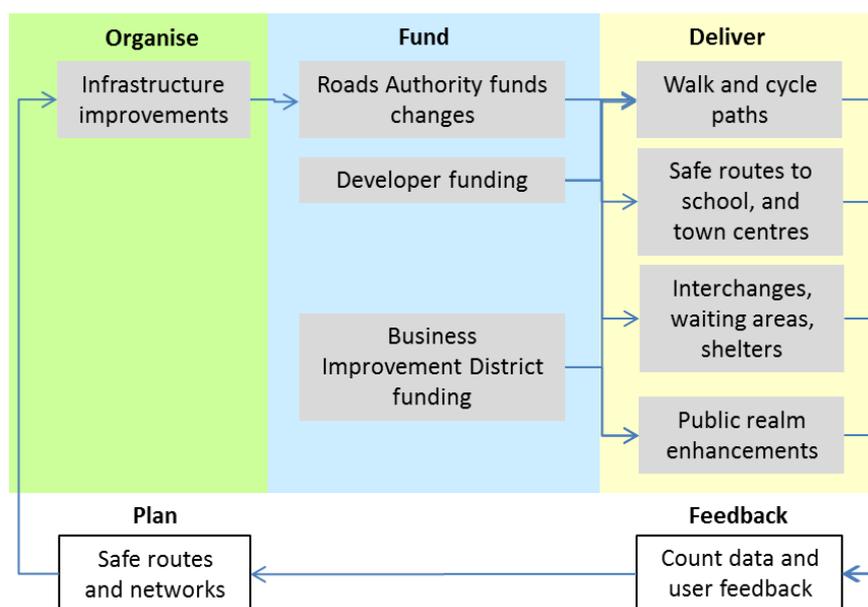**Figure 7.2 – Delivering improved public transport services**

Infrastructure provision

7.17 The opportunity for national funding for local infrastructure schemes was a key motivator for many authorities to apply for SCSP funding. For some Local Authorities, promotional elements were included to meet the criteria for SCSP infrastructure funding, rather than from any locally driven motivation to experiment with travel behaviour change promotion.

7.18 In all of the pilots at least some of the national investment will have resulted in net additional spending, particularly in the pilots with the high infrastructure spending components such as Dumfries, Kirkwall and Glasgow East End. However, the SCSP investment may have partially backfilled reductions in Local Authority budgets for new walking and cycle paths. Local autonomy on funding reduces when national ring-fenced funding is provided, and when funding pressures are high, Local Authorities will spend to the minimum level that is politically acceptable in any budget area.

7.19 Particularly innovative elements derived from the way that infrastructure was packaged with promotional activities included:

- Before designing streetscape and public realm enhancements in Dundee, the walkability of the area was assessed by looking at wider factors such as the experience of walkers as they progressed through the area.

- Glasgow East End started with the greatest focus on infrastructure, and the promotion worked particularly well when a local social enterprise set up to promote sustainable transport was contracted to audit the walk and cycle path network. Using the infrastructure funding the Local Authority was able to implement many of the recommendations for path improvements linking the infrastructure improvements with their promotion by the social enterprise.

- In Dumfries, the new Park and Choose sites took a more integrated approach to walk, cycle, bus and road networks than had previously been achieved. There was no track record of such sites and it was not clear what standard form of information sign to use. Parts of Europe use standard interchange signs to describe multi-modal Park and Choose interchanges, but there is no standard approach in Scotland. Park and Choose signs were approved to distinguish this innovative feature.

- In several of the areas, the placing of highly visible signs on new infrastructure was seen as a good way to explain to people how the marketing approaches related to the delivery of physical changes. For example, wrapping the cycle lockers in Larbert/Stenhousemuir with the *Take the Right Route* branding was one example of this which was mentioned in the focus groups as a mechanism that had contributed to cycling to the station, and awareness of this brand was relatively high compared with most pilot areas.

7.20   The relationship between infrastructure investment and promotion is sensitive, and a balance was needed in all of the SCSP areas to ensure that Local Authorities were able to present themselves as 'doers' as well as 'listeners' and 'informers'. The inclusion of infrastructure within the SCSP programmes resulted in better public engagement and involvement in the promotional activities.

7.21   Given the limited number of car reduction measures in the original plans, the fact that these were scaled back is interesting. It seems that the positive messages to promote sustainable transport were best kept separate from encouraging people to use their cars less through parking restrictions, traffic calming and pedestrianisation. Traffic calming proposals had been identified as controversial in the baseline report, and this proved to be the case. Both Barrhead and Kirkwall revised their schemes with less traffic calming than had originally been planned. In Barrhead this was achieved early in the planning stages after the baseline review was completed and in Kirkwall the changes were made in response to public concern about the scheme. The pedestrianisation in Kirkintilloch did not proceed, and the parking demand management in Dumfries was delayed.

7.22   The decline of 'streets' as they have become dominated as places for the movement of cars and parking is a widely recognised problem. SCSP sought to create places for people and activities to nurture stronger communities. However the place making agenda was not viewed as central to SCSP delivery in all pilot areas. Public realm investment and parking management were significant elements within the Barrhead and Dumfries programmes but received less attention in most other pilots. The baseline report in 2009 identified that local people would be more supportive of a programme for 'smarter places' than 'smarter choices', and the 2012 surveys show the popularity of *GO Barrhead* and *GO Smart* programmes where there was relatively more investment in place making. It may be that a stronger place making element in future delivery would help to gain wider support for SCSP delivery.

7.23   Figure 7.3 summarises the delivery processes evident from the pilot areas showing how the improvements were funded, what they delivered, and how this feeds back to ensure that the approach is sustainable.

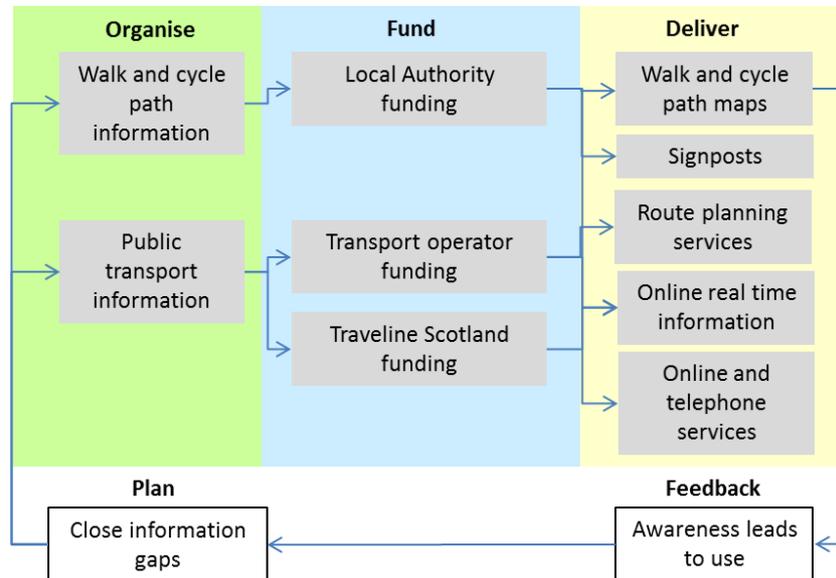**Figure 7.3 - Delivering improved infrastructure[31]**

Information

7.24 All of the stakeholders in the pilot areas noted that practical information was viewed positively by the local population. In particular walking and cycle route maps were used as low cost practical guides to the routes, local attractions and services that residents might consider accessing by active travel options.

7.25 Managing the development of public transport information services was not viewed by most pilot authorities as something they would lead. Regional Transport Partnerships were considered to be better placed to partner with transport operators, as SWestrans demonstrated for Dumfries. The Local Authorities require public transport information in printed and electronic formats and all of the pilots used readily available timetables, online and mobile services. The Local Authorities promoted this information adding value to national services like Traveline Scotland by working through their local networks and partners. For example, several Local Authorities agreed with local GP practices that relevant public transport information should be available in receptions. These were not large or costly tasks to implement, but the pilots demonstrated that it takes time to build trust with partners to manage the change.

7.26 The low cost approach to real time information in Dumfries showed how bus locations can be streamed to any internet connected device. Heavily used bus stops had information displayed at the stop which helped to ensure people were aware of the availability of real

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[31] *Note that the BID funding related to the follow up investment in East Renfrewshire and was not in the pilot area itself. It has been included in the diagram as it demonstrates a key transferable source of funding.*

time information, and at other locations travellers were directed to use the internet by accessing the service from their phones or other devices.

7.27   Figure 7.4 summarises the delivery processes evident from the pilot areas.

Figure 7.4 - Delivering improved information

Campaigns

7.28   A wide range of general marketing activities were undertaken covering media campaigns, branding, promotional leaflets, and campaigns. Brands provided the identity for the campaigns in various ways as follows:

- A high profile - Brand building was assisted by the use of large banners, such as those used in Larbert/Stenhousemuir and Barrhead. These banners are relatively cheap and particularly if local organisations in the area are prepared to put them up e.g. on school railings, which also helps to build a sense of local ownership. Background marketing using these posters and banners is considered to have paved the way for more targeted marketing approaches.

- Getting the message across - Positive engagement with the local press was particularly important for getting messages across, with focus group participants often describing their awareness of the brands, and the opinions they had formed, based on what they had read in the local papers. The local press tended to report published papers that go to Local Authorities, and successfully navigating debates about smarter choices in Local Authorities for the schemes in Barrhead and Dumfries was important for how positive and negative features were reported in the local papers.

- The message is in the brand - In Dundee, the Anthony Active stress ball figure could be brought to life as a person in a costume at events. Marketing materials were

best used to give an identity to targeted delivery programmes such as PTP. Similarly the Healthy Habits brand was used to help get the message across about the benefits of active healthy travel.

- Uniting together for shared benefits - The brands used in some areas created a structure within which different organisations could unite. For example NHS employees in Barrhead would have not been able to send out letters on behalf of East Renfrewshire Local Authority for an active travel event, but joint teams were able to share resources in the most efficient ways under the GO Barrhead campaign.

- Promotion of services providing help - Some brands were viewed as providing practical help with specific needs and capabilities. There was a good fit between training programmes and brands like *Take the Right Road* and *On the Move*, with focus group participants welcoming these campaign messages as giving identity to otherwise low profile training programmes through schools and community organisations. *Kick Start Kirkwall* was seen as a good way to give a higher profile to the provision of a comprehensive path network.
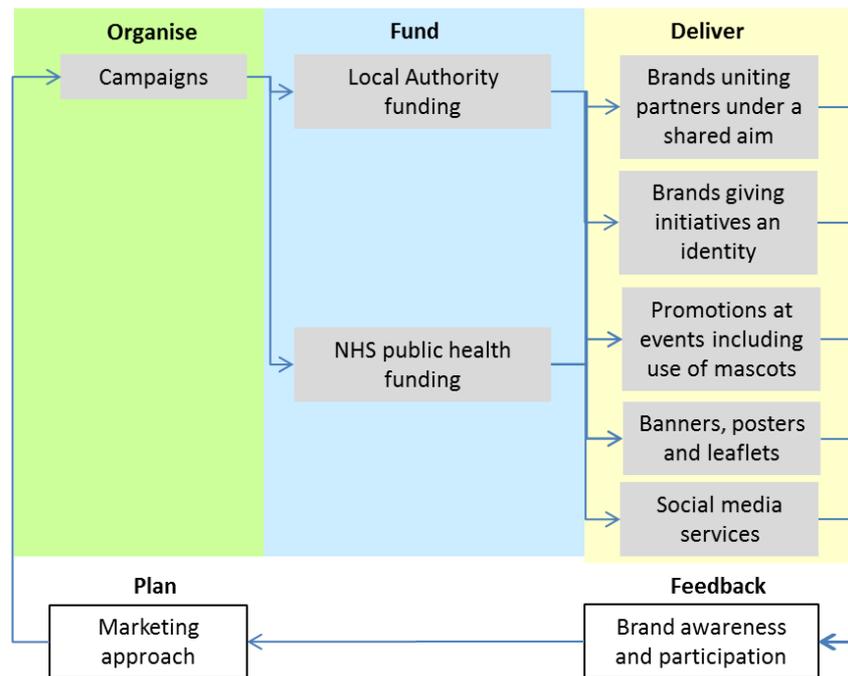
7.29   Defining social values for shared marketing, such as the need for more active travel, was one of the most important elements of the campaign programme. In some areas the identities of the separate partners were retained in the marketing to emphasise the joint commitment to delivery of a whole programme (e.g. *GO Smart* Dumfries on posters, leaflets and publicity was associated with brands of partners like the NHS, EU, the Crichton, and Stagecoach). This approach had the dual advantage of building the corporate brands of public authorities like the Local Authority and SWestrans through a joint lifestyle and travel marketing programme.

7.30   Some of the brands identified specific delivery themes - for example, with 'Travel Active' in Dundee, and 'Healthy Habits' in Kirkintilloch/Lenzie. Active travel became the main delivery theme of the programmes in both these areas and analysis of the attitudinal data in Chapter 4 identified an increase in the proportion of people in these areas feeling they should walk more to keep fit.

7.31   Responses to campaigns can be unpredictable as many commercial companies demonstrate when they quickly withdraw campaigns that do not work. The process of being responsive is part of smart working. Overall the SCSP projects showed different ways to create campaigns and add value through relevant local brands. Appropriate use of these brands is important to ensure that they complement the programme delivery so that the campaigns support: the creation of corporate identities for partnership delivery; delivery themes such as for better health; event brands such as active travel days; and, consumer brands that niche groups can unite behind (e.g. Dr Bike).

7.32   Figure 7.5 summarises the delivery processes evident from the pilot areas.
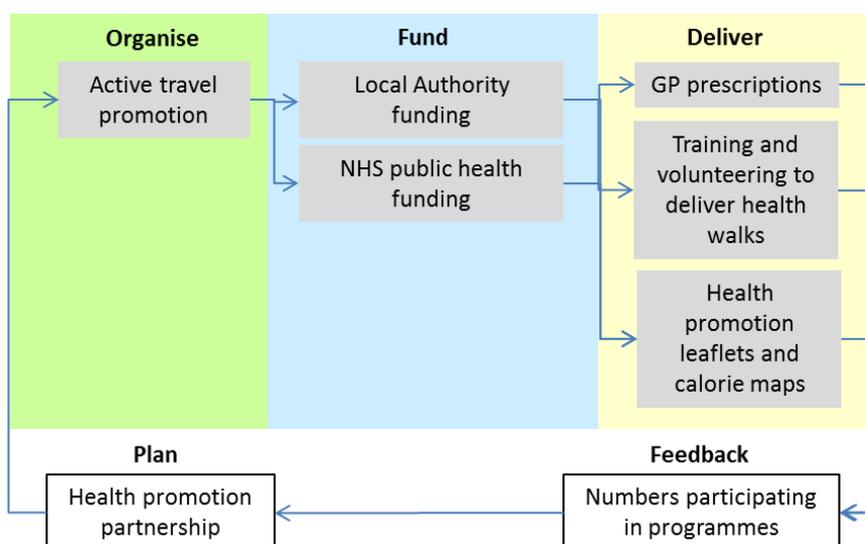
Figure 7.5 – Campaigning mechanisms

Organise	Fund	Deliver
Campaigns	Local Authority funding	Brands uniting partners under a shared aim
		Brands giving initiatives an identity
	NHS public health funding	Promotions at events including use of mascots
		Banners, posters and leaflets
		Social media services

Plan	Feedback
Marketing approach	Brand awareness and participation

Active travel promotion

7.33   In each of the areas where active travel promotion was a major part of the programme, there were strong partnerships with NHS health promotion teams to manage the shared objectives on this agenda. NHS and Council roles developed from parallel separate programmes in primary health care and infrastructure to include joint delivery of programmes to foster active lifestyles through health walks, local events and PTP.

7.34   In all of the pilot areas, health promotion was a central aim under which to promote sustainable travel, but the discrete roles of Local Authority and NHS staff were not set out in any formal partnership document like a service level agreement. The contribution of NHS staff to SCSP delivery was more informal than a contract to provide services, and the level of NHS resourcing could not easily be quantified in any pilot area.

7.35   SCSP funding was sometimes a useful supplement, rather than core funding for active travel promotion. With multiple potential sources of funding, the unique contribution of SCSP was to link the transport departments in the Local Authority with wider health promotion. In some situations these links were only indirectly related to transport, such as the investment in the *Common Wheel* project in Glasgow, where people facing mental illness were involved in bicycle refurbishment, or the time-banking initiative in Dundee which supported the NHS and social care partners with the promotion of volunteering. By contributing to these activities the Local Authorities helped to foster co-operation with partners, which can be expected to have wider benefits for future transport and health improvement.

7.36   The SCSP teams all reported that involvement in social inclusion projects was a strong motivator, and helped to build broader support from partner agencies. For example the GPs in Dundee were initially reluctant to prescribe active travel, but as joint working developed with the NHS, referral by medical practices proved to be an effective and focused approach for ensuring that active travel packages could be offered to people whom the NHS had identified as having the greatest health needs.

7.37   The experience of the pilots suggested that future delivery of active travel promotion needs to be tightly focused on elements where transport provides clear added value. It may be that the transport authority role can be restricted to short programmes to set up and refresh measures to facilitate healthy travel, after which Local Authorities can rely on the NHS to fund future active travel promotion as part of more general health promotion.

7.38   Figure 7.6 summarises the delivery processes evident from the pilot areas.

Figure 7.6 – Delivery mechanisms for active travel promotion

Cycle promotion

7.39   Three areas invested heavily in cycle promotion: Dumfries, Dundee and Glasgow East End. In all three, bikes for use in cycle training were purchased, and in Dumfries and Dundee distinctive approaches were taken to cycle loan and rental. This included not just promoting shared bikes but providing new cycle supply to support cycle rental and cycle sharing. Both Dundee and Dumfries viewed the provision of shared bikes entirely from the perspective of improving access to bikes, although as with cars there are potential environmental benefits in terms of resource use, if people use shared rather than private bikes.

7.40   Table 7.1 compares and contrasts the features of the two different ways of promoting cycle rental in Dundee and Dumfries.

Table 7.1 – Factors influencing contrasting approaches to bike rental

Factor	Dundee	Dumfries
Approach	Cycles on short term trials at events and for long term loans to households, with the loan condition being that lenders get to keep bikes that are well used.	A public bike scheme to complement the well established private cycle ownership and use in the area. For a small joining fee of £10, Bike2Go members can pick up and drop off cycles at various locations in the area with journeys of under 30 minutes being free.
Cost	A relatively inexpensive approach to trigger cycle ownership and use, particularly if the bulk of the cost of bike purchase is recovered through lease purchase charges. The SCSP funding paid the full cost of the bike purchase and user charges could be avoided in the future with a sponsor able to supply a limited number of bikes per year.	The costs of managing a public bike scheme are high (even if the initial infrastructure costs are excluded), and long term viability depends on a sponsor prepared to invest heavily (as in Paris, London and elsewhere). Provided the scheme is perceived positively within the area the prospects of a sponsor should be good. The level of usage may ultimately be less important for viability than the level of sponsorship, but it is only possible to get sponsorship for something that is popular.
Positive local perceptions of cycling and people who cycle	There were already positive attitudes to cycling shown in the household surveys in 2009[32], and perceptions have become more positive. However, Dundee has seen less improvement in perceptions of cycling than most of the other pilot areas.	There are positive local perceptions of cycling, and expectations that Dumfries should be at the leading edge of cycle development demonstrated in the focus groups. However residents considered that the scheme was a good thing for tourists and currently the sign up and payment approaches are more tailored to residents. The high visibility of the locations chosen for the bike rental points makes a statement about Dumfries being proud of its cycle heritage and this is positive but more usage from tourists is needed to maintain these positive perceptions.

7.41 Public bikes as a supplement to private bike supply have been established in cities over the last 20 years and in every case require external funding to supplement user charges to ensure viability. Previous experience of shared bikes in Scotland has been managed through cycle shops or social enterprises such as the Bike Station[33]. In Glasgow a social enterprise called the Bike Shed (which is now part of the Bike Station) was able to become involved in supplying bikes to schools and supporting bike recycling as a result of making a successful proposal to Glasgow City Local Authority. The approach in Glasgow
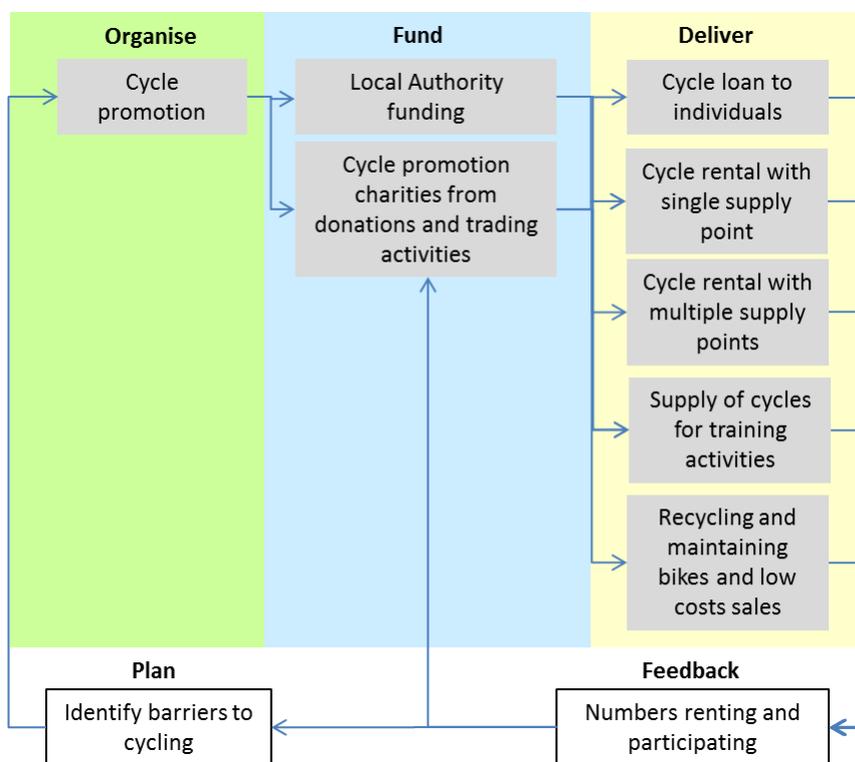
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[32]*Positive community perceptions of cycling are when it is observed that that cycling is a normal choice by local people and where cycling receives practical support from local businesses and community leaders.*

[33] *In Edinburgh, Glasgow and Perth this organisation provides fleets of bikes to assist with training.*

demonstrates the benefits of making funding accessible to businesses and social enterprises as delivery is sustained more easily beyond the funded period.

7.42   The smartcards used for Bike2Go in Dumfries were different from the national smartcards being promoted by Transport Scotland for the YoungScot programme and the national concessionary travel scheme. They were also not integrated with other smartcards in general use like the EMV[34] payment cards being used by some transport providers. Looking forward it will be important to ensure that payment approaches are simpler, and focus group participants suggested that this would encourage wider use of such schemes by enabling access by more people.

7.43   Figure 7.7 summarises the delivery processes evident from the pilot areas.

Figure 7.7 – Delivery mechanisms for cycle promotion

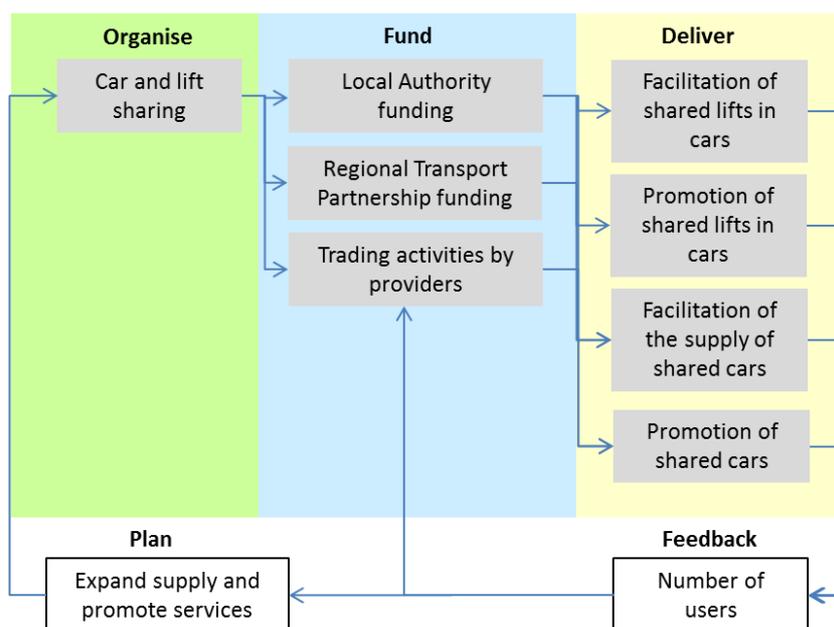### Car and lift sharing

7.44   Although nearly all SCSP programmes included sharing lifts in cars in their planned initiatives, most relied on existing schemes which had largely been set up by the Regional Transport Partnerships. There is no indication that the mechanisms to promote the sharing of lifts in cars through the SCSP programmes had as large an impact as promotions by Regional Transport Partnerships (RTP). The Tactran area with the highest level of sharing, promoted lift sharing through travel plans for businesses and other organisations.

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[34] *Electronic Mastercard Visa offering touch and go payments for services*

7.45   The evidence from the national data is that where sharing is promoted through third parties such as businesses or community groups then there is more lift sharing activity. For something as personal as sharing lifts in cars people are best approached by someone with whom they have a social or business relationship.

7.46   The role of Local Authorities in promoting the sharing of cars through car clubs depends on supporting the growing number of providers of car club services. Access to a shared car in a car club can help people to save money on car ownership, encouraging public transport for most travel, yet making a car available when one is needed. Close to the main conurbations, residents of the pilot areas had access to car club cars through online clubs like Hertz Connect, and Whip Car. Residents of Barrhead, Glasgow East End and Kirkintilloch/Lenzie all had reasonably good access to shared cars within a short distance, although these were not actively promoted through the SCSP pilots. However there were no shared cars in Dumfries, so to enable people to save money on car ownership the Local Authority planned a car club through SCSP for launch in the autumn of 2012.

7.47   Companies offering car sharing and lift sharing services are growing nationally, and the benefits of partnerships with Local Authorities are also very clear. Local Authorities do not necessarily need to provide financial assistance, as the value is at least partly derived through the benefits of sharing, but the Authorities have a key role to play facilitating and promoting these services, including allocating dedicated parking spaces for shared cars. Car club promotion has yet to be fully tested in the pilot areas, since car clubs were much less developed in 2010, when most of the PTP was undertaken, than they are in 2012. The focus group evidence in both 2009 and 2012 showed that residents support the growth of car clubs, particularly with many people finding they are unable to afford their own car. The car club promotion in Dumfries plans to use the travel club members recruited through PTP in 2010 and 2011.

7.48   Figure 7.8 summarises the delivery processes evident from the pilot areas.

Figure 7.8 – Delivery mechanisms for car and lift sharing

Training and events

7.49 By participating in exhibitions and community events, including those already organised by other groups in the pilot areas, the delivery teams were able to engage with the community at low cost. Barrhead, Dumfries and Larbert/Stehousemuir used events as a supplement to door to door communications such as through PTP programmes. Conversations to define personalised challenges could either be held at the event, or people could sign up for PTP participation for follow up at a convenient later time.

7.50 Some training needs in transport are determined nationally, particularly car driver and motorcycle training[35]. Cycling Scotland has made progress in recent years with their Bikeability Scheme, and the national cycle action plan includes a programme to increase and fund more training[36]. Nearly all of the SCSP projects included cycle training in schools since this was a natural development of the work of school travel plan officers.

7.51 Since cycle training saw a changing policy agenda during the SCSP programme, the role of the Local Authorities in recruiting and managing local volunteers in the pilots evolved during the programme. The role of the Local Authorities was clear in providing local support for nationally funded programmes. For example, the Bishopbriggs Cycle Co-operative was able to develop a strong schools programme with national funding from

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[35] *This investment is made by transport users in response to regulations by government which are revised regularly with the latest amendment being The Motor Vehicles (Driving Licences) (Amendment) Regulations 2010. In contrast there is no legislation requiring training for safe walking, cycling bus or rail travel.*

[36] *The Cycling Action Plan for Scotland 2010 commits £300k for cycle training.*
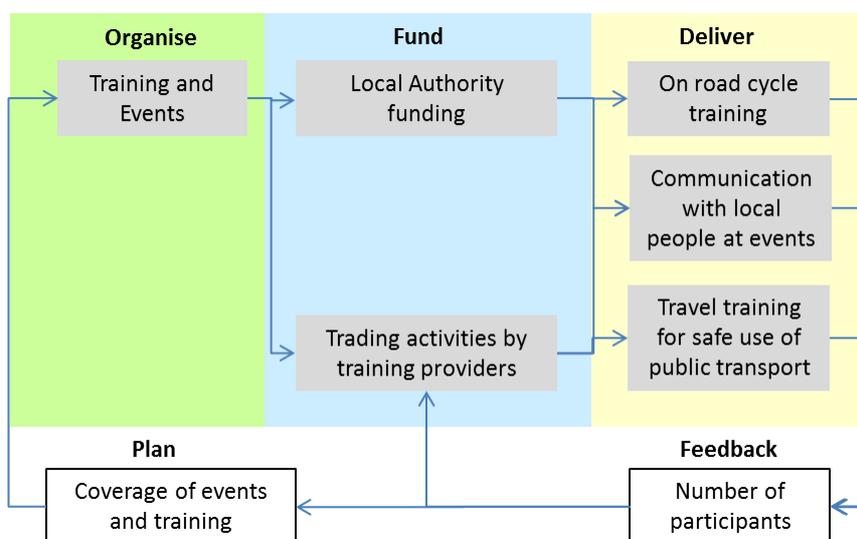*http://www.scotland.gov.uk/Publications/2010/06/25103912/0*

Cycling Scotland, and building from the national funding was then able to support cycling in Kirkintilloch/Lenzie, with funding from SCSP.

7.52   The travel training in Kirkwall showed that viable future delivery depends on linking training to some regulatory or organisational aim. People will participate in training when required to do so but may not otherwise be sufficiently motivated to improve their knowledge and skills. The Local Authorities are best placed to facilitate training programmes but require partners to motivate people to participate.

7.53   Figure 7.9 summarises the delivery processes evident from the pilot areas.

Figure 7.9 – Delivery mechanisms for training and events

Travel planning

7.54   In the baseline evaluation report[37], the surprising lack of travel plans within businesses and organisations in the pilot areas was highlighted. The promotion of travel planning by Local Authorities and Regional Transport Partnerships has received substantial resources over more than a decade, and travel plan promotion has been included in the Scottish Government transport policy documents for the same period[38]. The SCSP pilots all sought to draw from the broad evidence base that shows how small sums of investment in travel plans can deliver large benefits[39]. Most pilots sought to re-energise the travel plan

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[37]http://www.transportscotland.gov.uk/roads/sustainable-transport/funding-for-projects/smarter-choices-smarter-places/monitoring

[38] E.g. Scottish Office 1998 - Travel Choices for Scotland and Scottish Executive 2006 – Scotland's National Transport Strategy.

[39]Rye T. 2002 Travel Plans: Do They Work? Transport Policy 9:4, pp 287-298.Also "DHC 2000. Evaluation of the Cycle Challenge Initiative. Final Report for Scottish Executive" reported that travel plans for many major employers had been triggered through very low cost programmes by working through campaign groups such as the Lothian Cycle campaign in Edinburgh and the Highland Cycle Campaign in Inverness.

programme and in Kirkintilloch/Lenzie 'Travel Plan Central' was one of the main delivery themes.

7.55   However all of the SCSP delivery teams found that there was a poor early response from local businesses. The reasons for this are not clear, but the authorities' delivery teams commented that more time could have been spent engaging with businesses to identify what factors affected their participation, including how to promote benefits for trade and productivity. As projects gained momentum, with the broad community engagement becoming more visible, businesses increasingly took more interest.

7.56   The business engagement in several of the pilots proved to be increasingly successful by 2012. The *Working with the Willing* programme in Barrhead perhaps illustrates this best since businesses had seen some of the good things happening in the area under the SCSP programme and wanted to be part of it.

7.57   Local Authorities are often amongst the largest local employers, and businesses expect the Local Authorities to practice what they preach. Most of the pilot Local Authorities recognised that they aim to be community leaders acting as a catalyst for wider promotion of travel plans. However, few Local Authorities succeeded with travel plan delivery. In Barrhead the Local Authority made some steps towards travel plan promotion but take up from staff making travel behaviour changes was reported by the Local Authority to be low. Several Local Authorities reported that they were considering approaches to manage staff car parking, but without actually implementing practical incentives like this to support and manage behaviour change the impacts of travel plan promotion has been limited.

7.58   As the SCSP programme proceeded Local Authorities became better placed to engage with businesses. Business travel plan networks and forums[40] that existed prior to the start of SCSP were used to support delivery e.g. at Dumfries and Galloway Royal Infirmary. The investment in public transport, infrastructure and promotion demonstrated practical progress to help local employers, and engagement with business increased in most pilot areas towards the end of the SCSP programme.

7.59   The new Forth Valley Royal Hospital in Larbert was the largest development in the area and a travel plan had been required as part of the planning application. *Take the Right Route* branding was included in the signs on the new paths jointly funded by the hospital and Local Authority and these were some of the paths that the local community most appreciated when the new infrastructure was discussed in the focus groups. The hospital became engaged in helping to promote the SCSP campaign by delivering PTP clinics, and
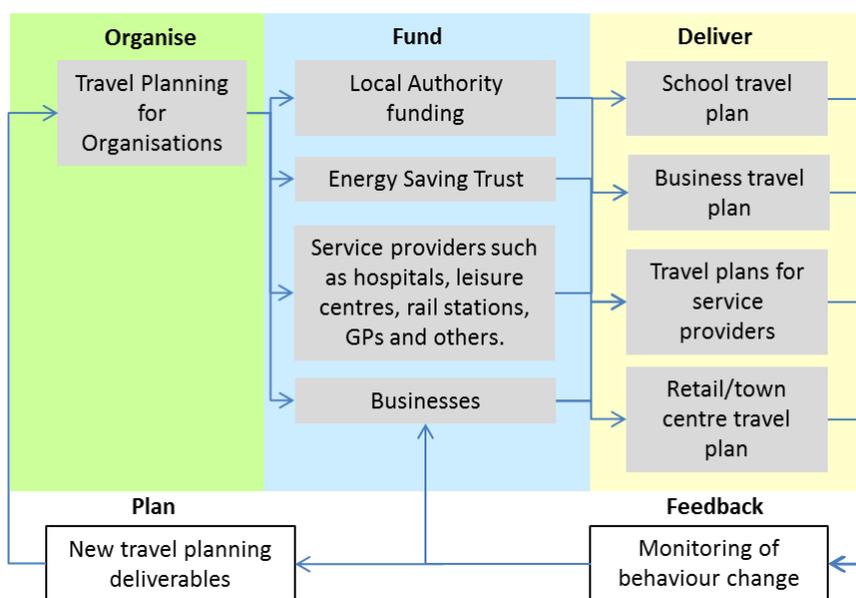
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[40] *In order to share experiences and jointly organise solutions, good travel planning practice usually involves regular communications between local stakeholders with a common interest in ensuring that safe attractive sustainable travel opportunities are available. Local Authorities need to play a key role in these networks or forums.*

funding bus services and footpaths. The terms of this engagement were partly defined by the contractual terms of the planning agreement demonstrating the use of statutory processes to support smarter approaches, in addition to infrastructure improvements which are often required in planning agreements.

7.60   SCSP gave a stronger local impetus to school travel planning. School travel plan officers in the Local Authorities were able to work with SCSP delivery teams to offer services that gave new energy to school travel planning. Glasgow City Council launched a competition for funding to help promote school travel planning and this attracted interest from schools that were able to celebrate the successful award of funding as part of travel plan promotion. The use of funding competitions has been highlighted in most good practice guidance on school and business travel planning[41] but there continues to be scope for much greater use of this approach. The Local Authority sought submissions from schools for how they would use funding to support active travel to school, and was able to fund several investments. A relatively small investment appeared to ignite a high level of activity in school travel planning.

7.61   Overall the lesson from the SCSP programme appears to be that travel plans succeed when they deliver practical benefits to participants like safe routes to schools, workplaces and other local destinations. However there is little interest in travel planning processes in themselves. The SCSP pilots worked with schools, leisure centres, businesses, hospitals, local traders, rail operators and others to develop safe routes, information and other targeted initiatives. The pilot authorities reported successful engagement with these groups, working with them to deliver many information, infrastructure, and service changes. The pilots therefore suggest that travel planning was most effective when it concentrated on the practical changes. Given that travel planning 'processes' have been a hard sell for more than a decade, the experiences from the pilots raise questions about how travel planning should be promoted to partners in the future.

7.62   Figure 7.10 shows the mechanisms used in travel plan delivery.

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[41] E.g. Energy Efficiency Best Practice Programme, 2002 "A travel plan resource pack for employers' EEBPP, London. The Stationery Office.

Figure 7.10 – Travel plan delivery mechanisms

Personal travel planning (PTP)

7.63   Personal travel plans have been implemented within school and business travel plans since the 1980s, but it is only since about 2003 that there has been direct targeting of households in the UK[42]. Direct engagement with citizens through PTP now tends to be treated separately from indirect engagement through organisations operating travel plans sometimes with PTP techniques embedded within them. In the pilots, PTP was administered with households in residential areas, at events and at bespoke facilities like the shop in Kirkintilloch high street[43].

7.64   East Dunbartonshire Local Authority had previously piloted household PTP through the Stepchange programme[44] and chose to target personal support under the SCSP programme through events and an information and advice centre in Kirkintilloch. The Glasgow East End programme did not include any PTP, but for all the other pilots the bulk of the delivery was through door to door programmes in residential areas. The areas that used the door to door approach found that the PTP became an anchor activity, since it helped to manage and target action across the SCSP programme. If cycle maps or some

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[42]*Although it became popular in Australia in the 1990s to provide personal travel planning services as membership services for organisations or as information for travellers accessing unfamiliar destinations, the personal travel planning pilots in the UK were developed from about 2003 – see review of these in http://www.healthandtransportgroup.co.uk/research/makingptpworkresearch.pdf.*

[43]*Department for Transport, 2008. Making Personal Travel Planning Work – Practitioner's Guide. Integrated Transport Planning Ltd et al.*

[44]*The Stepchange project began in 2003 and aimed to develop and deliver good practice for achieving travel behaviour change for Scotland. It was designed to introduce new transport interventions and to roll out such approaches to Local Authorities and other interested parties across Scotland.*

other support were particularly appreciated on the doorstep, then this feedback helped to prioritise how much investment was made on associated promotional activities. The PTP delivery therefore helped to make the delivery *smart* in the sense that it became more dynamic and responsive to opportunities.

7.65   Comparing the areas with and without PTP, the most obvious difference is that the areas that delivered PTP programmes have networks of Travel Club members or champions potentially able to assist with smarter choices implementation in their street or area, although further work with these people is needed to convert this willingness into practical delivery. In Glasgow where there was no PTP the Local Authority was reliant on working through third party social enterprises like the Glasgow Bike Station and Freewheeel North. In Kirkintilloch/Lenzie the dialogue with the community was managed not just at the information centre in the town centre but also through events.

7.66   The perceptions in East Dunbartonshire Council at the start of the programme that PTP had proved to be poor value in the past needs to be examined carefully. If the value of PTP has been in creating a dialogue to help Local Authorities add value to other activities, then perhaps these benefits can be captured more efficiently than attempting to visit every house. The focus groups showed that PTP was welcomed only as a mechanism to survey people about what they needed, but few examples could be identified by focus group participants in any pilot area of prompts that had changed behaviour. The user PTP feedback showed that many of the prompts were in fact followed up, but even this feedback showed a weakening relationship over time, with few concrete examples of Champions or Travel Club members bringing their own energy to future personal delivery. If PTP is dependent on regular publicly funded interventions, then there appears to be scope for better value approaches. The work in Dundee has progressively migrated to engagement through schools, community groups and other organisations and the NHS team there felt that PTP might be better value as a backup to close identified gaps in the travel plan programme, reaching people that would not be reached through established and trusted social and business networks.

7.67   The experiences of the PTP delivery teams have therefore started to demonstrate how better value PTP might be delivered. It is relatively straightforward for a PTP manager to ensure that details of contacts within each household are recorded and followed up appropriately, but the first contact does not need to be on the doorstep. This could be by post or through other low cost engagement approaches. By starting from low cost contact approaches, such as events in the area, and through school, business and social networks, it should be possible to offer low cost PTP to everyone who wants it. Potentially PTP could work systematically through the electoral register, in association with address point data, to ensure that everyone had been contacted. Political and commercial campaigns already work systematically through all households in this way, so it may be that behaviour change campaigns can adopt a similar approach. Such approaches were not tested in the

pilots and may have very different levels of impact. However this systematic approach to contacting all households is already being undertaken in Dundee by the NHS for their social prescribing pilot, learning the lessons from the PTP approach, in which they participated.
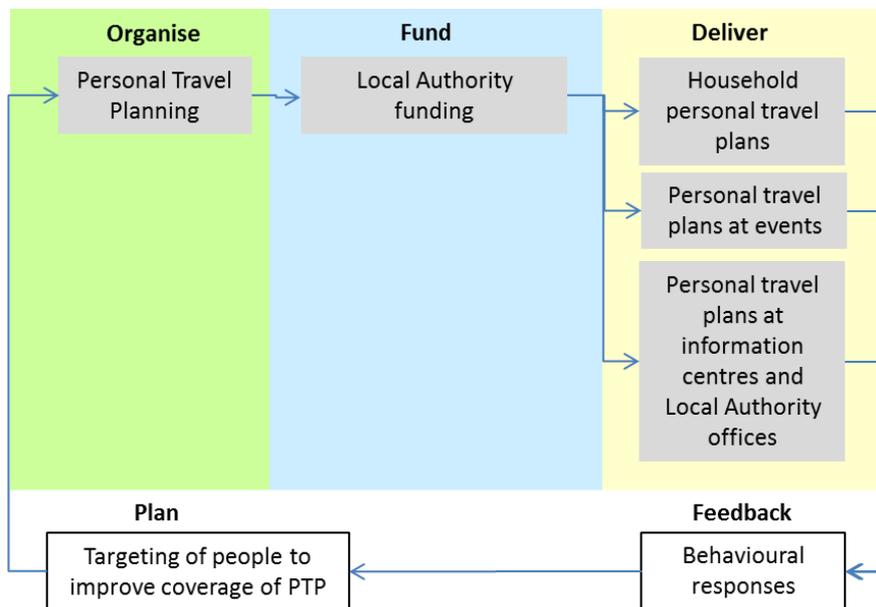
7.68 The PTP programmes recruited a total of over 10,000 people as either community champions or participants, creating a strong pool of active citizens taking part in behaviour change programmes in the seven areas. However these participants need to be supported with fresh tasks and incentives to secure the sustainability of their participation. The travel advisor teams in each area highlighted that unless champions are given a clear job of work to do with appropriate rewards and incentives, and members are offered new and relevant challenges to fit in with changing lifestyles, then the benefits could decay when other life changes occur.

7.69 Skills in marketing and building local social networks, learned by the travel advisors and travel club participants, are easily transferred to employment markets. Some of the travel advisors were able to use their experience in this intermediate labour market to move on to more permanent employment. Further work is needed to understand the benefits of the skills and capabilities of advisors and participants developed through the programmes.

7.70 People who sign up for the travel clubs were supported with personal travel plans and active challenges, but for these to be sustained they need to remain fresh and dynamic with new challenges, opportunities and rewards for members. Particularly when promoting PTP on the doorstep or at events, the ability to offer some useful equipment such as pedometers, maps, and timetables was important. This helped to avoid any perception that the travel advisors were preaching, and to reinforce their role as providing practical support and assistance. Local politicians in both Barrhead and Dumfries had concerns that it was not the role of the Local Authority to tell people what to do, so it was particularly important to emphasise that travel advisors were not there to tell or sell any particular viewpoint, but to listen and advise about opportunities that were available.

7.71 PTP seemed to work well as a recruitment programme for follow up activities. For example, in Larbert/Stenhousemuir the PTP was used to recruit members of the travel club[45] who were willing to receive future communication and support on travel issues from the Local Authority. In Dundee the participants were subsequently targeted through an air quality campaign, and in Barrhead the PTP programme helped to recruit people for health walks.

7.72 A broadly based agenda was helpful. In Larbert/Stenhousemuir the travel advisors were briefed on a wide range of Local Authority services and were able to develop the dialogue in line with the issues that were seen as important by the residents, not simply sustainable

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[45] *The database of interested people wishing to participate in the programme and receive updates.*

travel. This was considered by the Local Authority to help with engagement, and with nearly 5,000 people participating in the area the approach does appear to have been successful in generating interest.

7.73   Figure 7.11 summarises the delivery processes evident from the pilot areas.

Figure 7.11 – Personal travel plan delivery mechanisms

Management and organisation

7.74   With such complex programmes, overall management and organisation was challenging. In general three programme and project management roles emerged:

- A steering role to provide oversight to the direction of the project and to engage with elected representatives;

- A project management role to engage with partners and community representatives such as community planning partners; and,

- Team leaders to facilitate the delivery of individual tasks such as managing a publicity campaign or the construction of a cycleway.

7.75   Sometimes the delivery teams were led by partners (e.g. the public health team from the NHS in Dundee led one of their projects) and sometimes by consultants, but in most cases Local Authority staff from roads, transport, regeneration, environmental and community services led each initiative.

7.76   In Dumfries the relatively high profile given to public transport and travel planning (both functions that sat with SWestrans rather than the Local Authority) resulted in formal reporting for approval to the SWestrans Board in addition to meetings of Local Authority Committees. In other areas the engagement with the Regional Transport Partnerships was

through liaison rather than formal approval. The three pilot areas within the Strathclyde Partnership for Transport (SPT) area focused on active travel, so the travel planning functions of SPT were the main points of contact, but public transport information was also developed jointly with SPT. In Dundee the travel planning and promoting sharing of lifts in cars was led by TACTRAN, and in Larbert/Stenhousemuir the main involvement of SEStran was in promoting the sharing of lifts in cars. The strategic partnerships with health, education, social work, and regeneration were managed through the Local Authorities in all areas other than Dumfries where SWestrans led on these functions.

7.77   All areas were able to make improvements to the initiatives within their SCSP programmes throughout the delivery period, and some were able to grow the size of the programme and extend its duration by drawing in resources from other partners. NHS funding in Barrhead and Dundee has been committed to allow ongoing delivery of active travel promotion under the joint local branding developed during the SCSP programme.

7.78   In Kirkwall specific funding was allocated under the SCSP programme to support Local Authority staff time organising better joint working on land use planning applications and for roadworks. The fact that walking routes were built into new housing developments, when in the past this might have been forgotten, demonstrates that bridging departmental boundaries in the Local Authority is important. East Dunbartonshire Council also demonstrated joint working with the Local Authority's property and planning teams developing a practical project with non-standard parking requirements in Kirkintilloch.

7.79   Other Local Authorities commented that they were not always as joined up as they would like to be, but did not necessarily view the addition of joint working as a separate project. In Dundee the Local Authority used Dundee Travel Active as a breakthrough project to nurture joint working and the benefits of this should emerge in the years ahead. In general the experience of the SCSP pilots confirmed that joint working is complex and requires concerted efforts (e.g. co-ordinating transport and health programmes to promote active travel). Provided there is a clear focus on practical deliverables, participants view the benefits as worth the effort, but stakeholders note that greater clarity about roles and responsibilities would help to avoid duplication of effort.

7.80   Although there were formal SCSP deliverables for ensuring essential management data were available[46], this was not always the case. In all areas other than Barrhead, Dumfries and Glasgow, the walking and cycling count data available were less than planned. Most programmes chose to proceed without a detailed understanding of where the greatest impacts were being achieved. This meant that the programmes were not able to respond as dynamically as they could have done to changes in the areas. Quickly building on
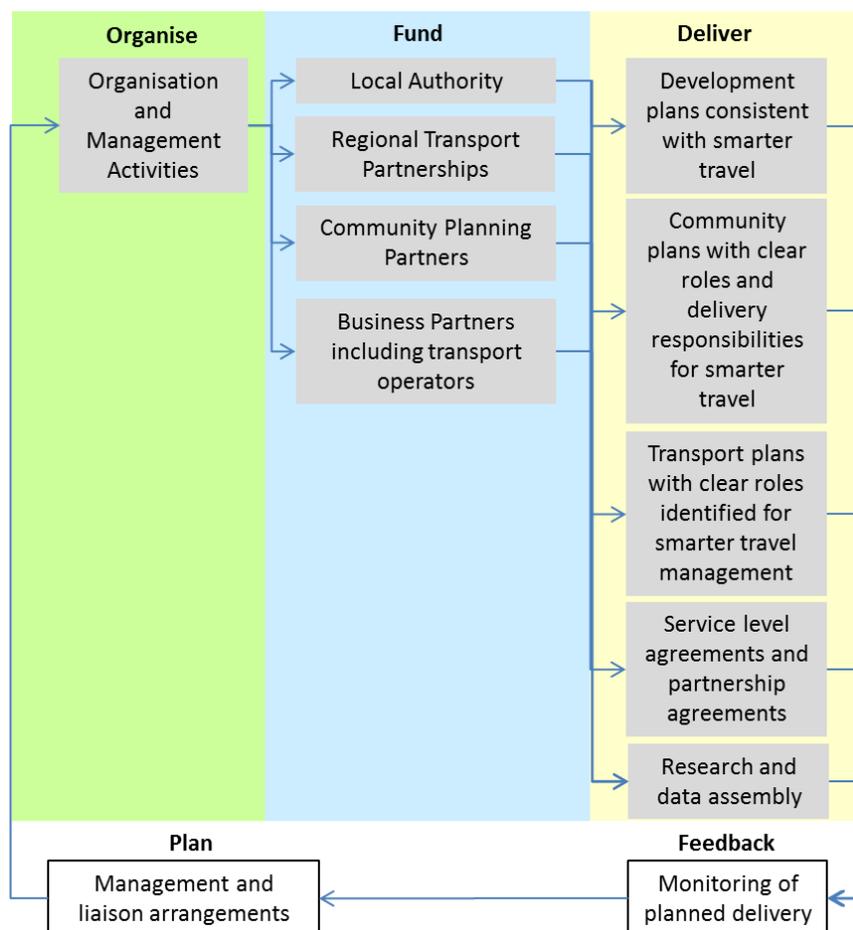
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[46] *A manager needs to know how many people are involved, costs of key heads of expenditure, timescales, customer/ participant satisfaction, and other related factors.*

success helps to lock in programmes that are working and to drop initiatives that are not proceeding as planned.

7.81   Also there are real accountability difficulties that need to be overcome within promotional activities. Residents reflected concerns in the population that they could not be sure that public funds were being used wisely in promotion. This has been compounded throughout the SCSP programme with monitoring data from each pilot authority measuring success in terms of outputs, such as the number of leaflets issued, with very limited feedback on impacts for particular people. Looking forward, perhaps more of the promotion should be performance related with financial rewards for those delivering programmes being linked to social goals and behavioural outcomes.

7.82   All of the pilot authorities have decided to continue with at least some aspects of SCSP delivery beyond the end of the funded period. The programme has demonstrated how to overcome the prevailing aversion to risk that can stifle innovation, and continuing delivery shows that Local Authority pilot teams have valued the new approaches and see potential in sustained delivery. Evidence of the growing backing for SCSP includes: the business community participating and increasingly resourcing *GO Barrhead* initiatives in 2012, the Wellgate shopping centre providing a rent free shop for Dundee Travel Active, and Local Authorities protecting SCSP activities at a time when other programmes are being cut.

7.83   The confidence to continue investing requires robust local outcome monitoring including feedback from local people and responding dynamically to this feedback. It is a well established principle that if you do not measure what you value you will end up valuing what you measure[47], so it is a sobering reflection that car traffic continues to be measured in all of the pilot areas, but there still appears to be no similar commitment to measure walking or cycling levels in several areas, or to partner with bus companies to secure bus travel data on a regular basis. Bus companies regard patronage data as essential for commercial planning of services and this readily available data is equally important for local authorities who have statutory obligations to ensure that social needs are being met. If there are barriers, such as the alleged conflict between competition law and the freedom of information requirements, then these need to be overcome since smarter working requires stakeholders to work constructively together.

7.84   Figure 7.12 shows the mechanisms used to organise and manage delivery to define the frameworks and assemble the evidence to plan the contracts and partnerships for delivery.

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[47]*E.g. Audit Commission 2000. The Principles of Performance Measurement*

Figure 7.12 – Mechanisms for organising and managing delivery

Organise	Fund	Deliver
Organisation and Management Activities	Local Authority	Development plans consistent with smarter travel
	Regional Transport Partnerships	Community plans with clear roles and delivery responsibilities for smarter travel
	Community Planning Partners	Transport plans with clear roles identified for smarter travel management
	Business Partners including transport operators	Service level agreements and partnership agreements
		Research and data assembly

Plan	Feedback
Management and liaison arrangements	Monitoring of planned delivery

How residents perceived the behaviour change processes

7.85 The observations about how and why programme delivery worked can usefully be complemented by analysis of the ways that local people said they had changed behaviour. Three overarching themes emerge from this analysis:

- *Promotion and provision must be consistent* - Without sustainable travel opportunities there is nothing to promote, and if the experience from behaviour does not confirm the attractiveness of the opportunity then the cycle of behaviour change is not validated. In the SCSP areas Dundee was able to spend much less on provision since there were already more sustainable travel opportunities, whilst in Dumfries the bulk of the budget was spent on provision to ensure that there was suitable infrastructure and services to be promoted.

- *Start from what people already know they want* - An aim of including provision and promotion in the same programme was to ensure that identified gaps in infrastructure were closed. Where these gaps were closed, the focus group

evidence suggests that residents appreciated this and SCSP had a greater influence over travel choices.
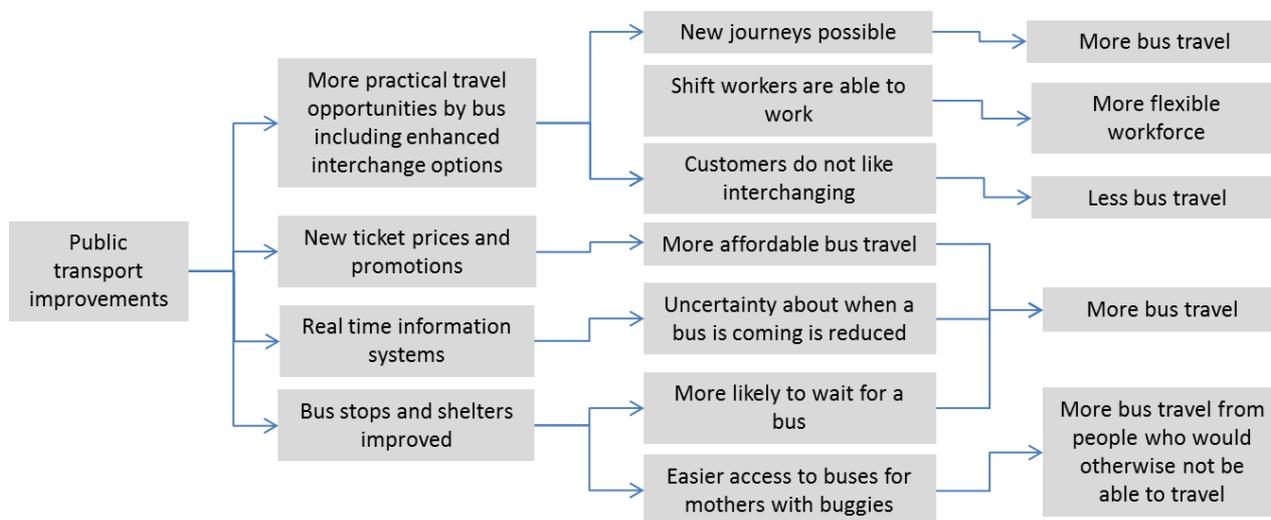
- *Residents want tangible delivery not planning processes* - Travel plans and PTP are largely ways of organising smarter delivery and residents understand these mainly in terms of the practical delivery such as new pedestrian crossing or the information about the health walk. Residents also construed PTP as the Local Authorities surveying them to ask their view.

7.86   In addition to these main themes focus group participants identified that the ways that they had personally changed behaviour or knew of people who had made changes. The focus groups are reported in detail separately but the main conclusions are summarised below by SCSP delivery theme.

Transport Services

7.87   Figure 7.13 shows the mechanisms identified in the focus groups by which public transport investment had supported behaviour change. These were largely about making bus travel more available for more trips, reflecting the perceptions discussed in Chapter 4 that improved frequencies and more evening services were associated with changing perceptions of the bus by mode switchers.

Figure 7.13 – Public transport investment and mechanisms for behaviour change

Infrastructure

7.88   The pilots with the largest spend per capita spend such as Kirkwall did not necessarily achieve the greatest increases in walking (£111 spend in Kirkwall compared to £14 in Kirkintilloch/Lenzie). This emphasises that good infrastructure is necessary, but not always sufficient, to deliver change. Infrastructure seems to have delivered two main enabling functions for more walking and cycling:
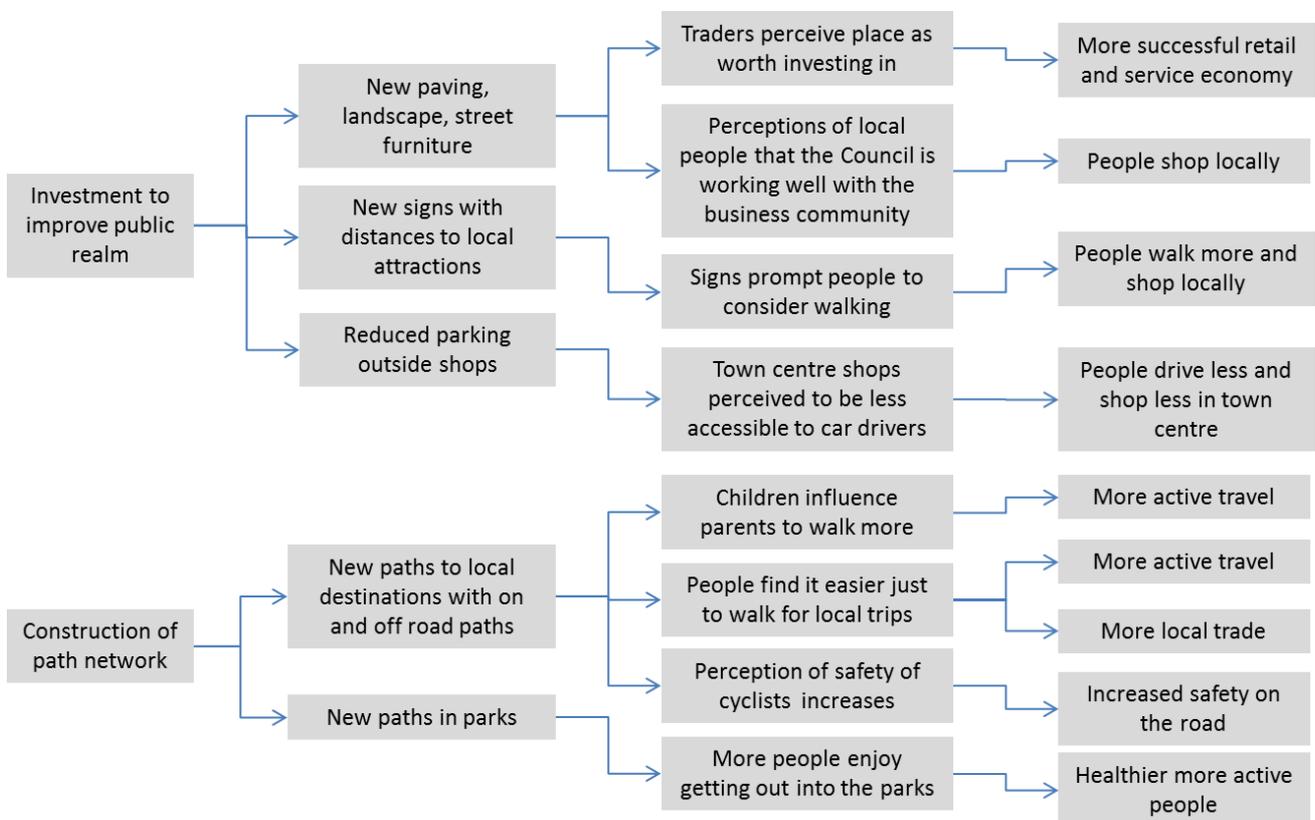
- Closing gaps in networks such as the lack of safe crossing points for busy roads.

- Providing new opportunities for walking and cycling such as new well signposted leisure paths.

7.89 The optimal balance between infrastructure investment and promotion varies from area to area and the impacts of provision may relate most strongly to the clear targeting of identified gaps in networks. The behavioural analysis shows that in areas with relatively high levels of walking before the programmes started, such as in Kirkwall and Dundee, there was limited change as a result of the new infrastructure. Infrastructure appears to have made a greater impact on walking behaviour in Kirkintilloch/Lenzie, Larbert/Stenhousemuir and Barrhead by tackling recognised gaps in the path network.

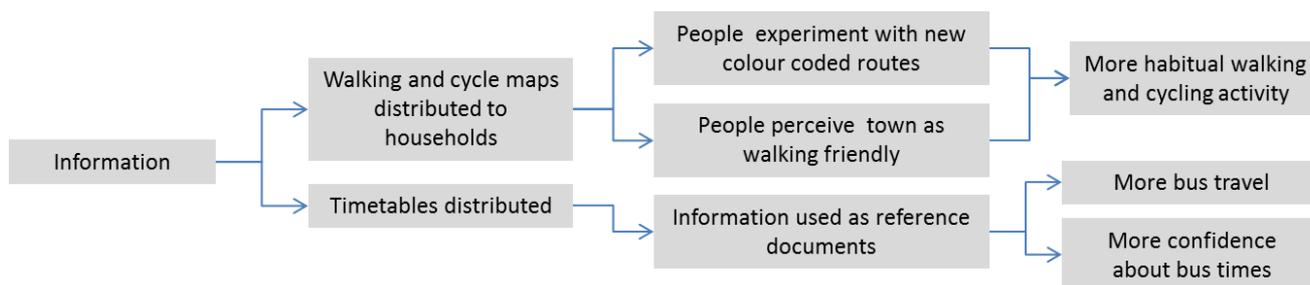7.90 Figure 7.14 shows the mechanisms for behaviour change identified in the focus groups.

Figure 7.14 – Infrastructure investment and mechanisms for behaviour change

Information

7.91 All of the pilot areas included printed and electronic information about public transport, walking and cycling opportunities. These were generally low cost and were perceived positively by focus group participants. People noted that they had used the information provided when going for walks and using buses. Figure 7.15 shows the mechanisms identified in the focus groups by which travel information had supported behaviour change.
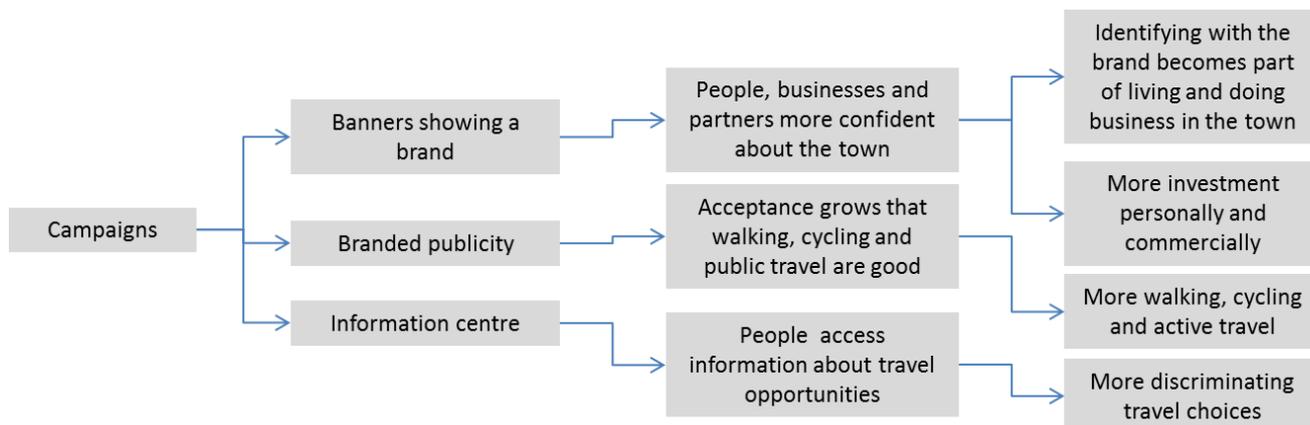
Figure 7.15 – Investment in transport information and mechanisms for behaviour change

Campaigns

7.92   Brand awareness was discussed in Chapter 4 and focus group participants related the brands to their own willingness to get behind behaviour change programmes. Figure 7.16 shows the mechanisms identified in the focus groups by which investment in campaigns had supported behaviour change.

Figure 7.16 – Campaigns and mechanisms for behaviour change
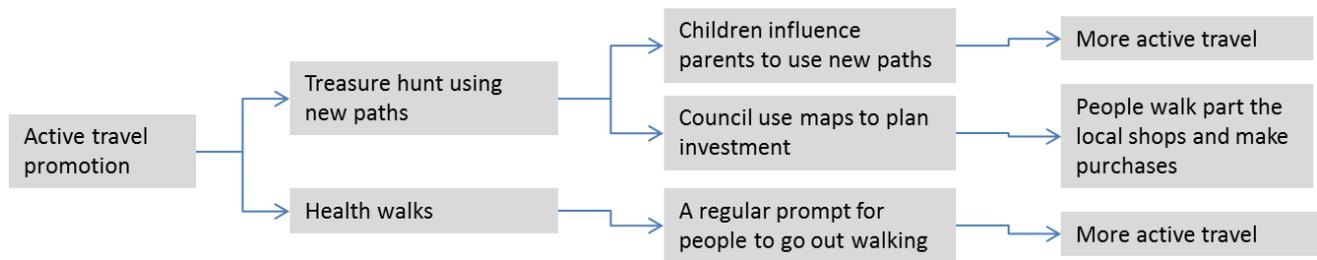

Active Travel

7.93   Figure 7.17 shows the mechanisms identified in the focus groups by which investment in active travel promotion had supported behaviour change.

7.94   Support from within social and family groups was important for prompting these activities and people often referred to issues such as going with friends on the health walks, and families trying treasure hunts. Public health prompts with GPs encouraging their patients to join walking groups also was noted as having made a difference.
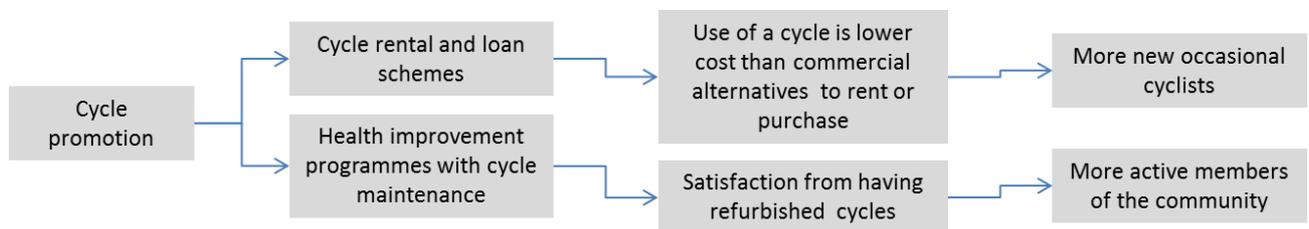
Figure 7.17 – Active travel and mechanisms for behaviour change

Cycle Promotion

7.95   Figure 7.18 shows the mechanisms identified in the focus groups by which cycle promotion had supported behaviour change.

Figure 7.18 – Cycle promotion and mechanisms for behaviour change
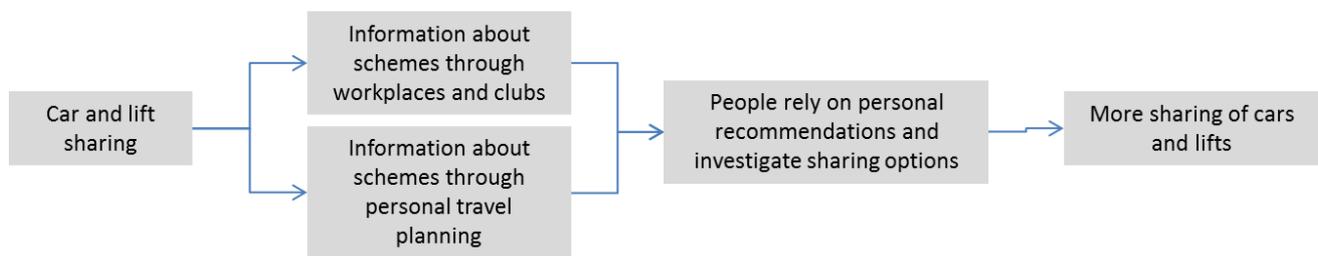

Car and lift sharing

7.96   The role of SCSP in supporting more sharing of lifts in cars was highlighted in several focus groups. The data on sharing lifts in cars depends largely on which Regional Transport Partnership area the pilot is located[48]. The Tactran areas all have more sharing than the Sestran areas which in turn are higher than SWestrans, SPT, and Hitrans respectively. The 0.6% of the population of Dumfries who have signed up for DGTripshare largely did so during the period of SCSP but this compares with 3.3% of the population of Dundee who signed up during the same period and sharing lifts in cars was not a focus of SCSP there. People generally identified promotion through the workplace as the prompt to sign up for a lift sharing scheme.

7.97   Figure 7.19 shows the mechanisms identified in the focus groups by which car and lift sharing promotion had supported behaviour change. Information and sharing projects (shared bikes, cars, lifts) delivered both improvements in the opportunity to make more sustainable trips and promotion of these trips.

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[48] *Data on sharing was supplied by the company Liftshare who provide services to several of the Regional Transport Partnerships and this is reported in the SCSP review of national data report.*

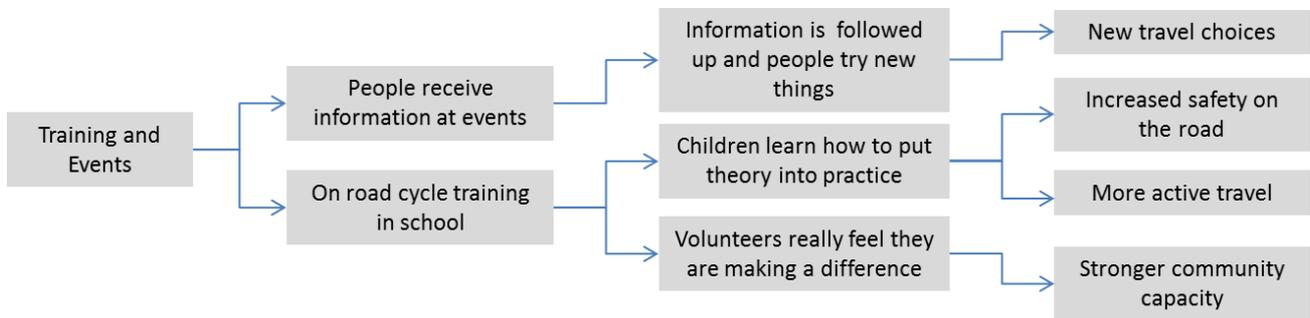**Figure 7.19 – Car and lift sharing promotion and mechanisms for behaviour change**

Events and training

7.98   Events included a wide range of approaches covering: community fun days, workshops for businesses, exhibitions, and displays. These proved to be important ways of making contact with people in each area, sometimes with several hundred people visiting stands at a single event, such as the fun days in Dundee.

7.99   Travel training for people who do not have the confidence to make independent journeys is sometimes seen as a key programme within road safety or community planning but across Scotland few authorities have such programmes[49]. The Kirkwall project showed that investing in trainers with the skills to support local people is only part of the process of culture change. People within Kirkwall needed incentives to seek training as the confidence to seek training comes through peers and other social support systems with which the SCSP programme needed to engage. This means that the people who might benefit most from training will commonly avoid seeking training, so the mechanism identified for training to succeed was first to raise awareness of the benefits of training amongst potential beneficiaries.

7.100   Overall, the SCSP pilots show that training and events have been a useful part of the background activities in each area, but the focus group evidence has been unable to link any of the training programmes directly with behaviour change. Campaigns were perceived in all pilots most negatively when residents thought that the Local Authority was telling them what to do, and were perceived most positively as practical help to enable new approaches. The strong focus on training has probably contributed indirectly to help with brand building for campaigns. The *On the Move* campaign in Glasgow was poorly recognised but was understood by some as a training programme. Residents perceived that the cycle training programme by the Bike Shed was improving skills and capabilities, tackling core concerns in the areas about lack of skills and the need for better safety.

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[49]*MACS 2006. Actions required to improve the Mobility of Disabled People. Final Report – showed that although there are travel buddy schemes, and 'mobility officers' attached to Local Authorities and community groups little is known about the way these are managed, funded, and the skills and training required to discharge these functions.*

7.101   Figure 7.20 shows the mechanisms identified in the focus groups by which training and events had supported behaviour change.

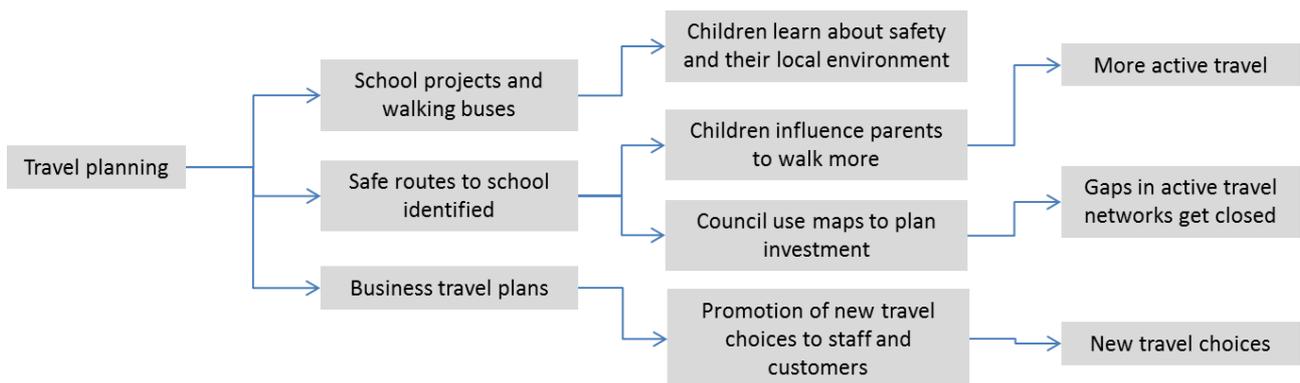**Figure 7.20 – Training and events and mechanisms for behaviour change**

Travel Planning

7.102   Informed people appear to be more willing to listen and act on promotional messages. This was seen with the late stage interventions in several pilot areas where businesses which had previously received early stage information about travel planning opportunities, were more willing to change behaviour once the programme delivery had been sustained for some time (e.g. *Working with the Willing* in Barrhead). Figure 7.21 shows the mechanisms identified in the focus groups by which travel planning had supported behaviour change.

7.103   One parent highlighted how more pupils now walked to school as a result of safer routes to school planning.

"at school the children did a super little map of safe walking routes".

Figure 7.21 – Travel planning and mechanisms for behaviour change

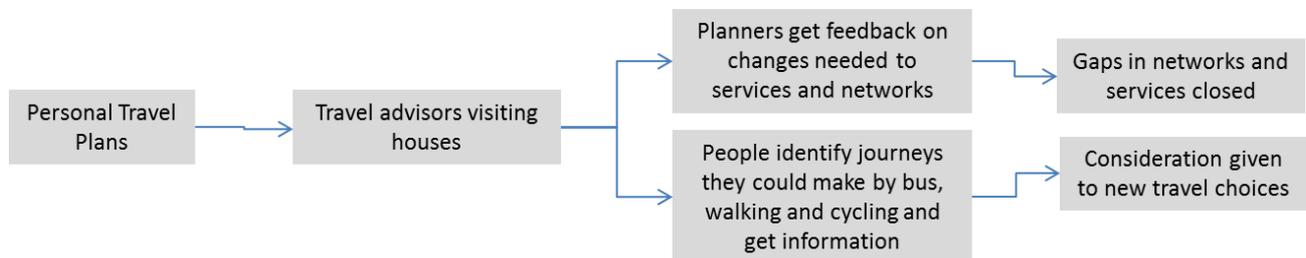**Personal Travel Planning**

7.104   As noted in Chapter 4 people are more likely to attribute behaviour changes to factors which they know like infrastructure investment. Therefore even when PTP has prompted behaviour change people will tend to say that it was the health walk or the new cycleway that prompted the change even though the factor that had motivated the change was the

information about these opportunities through PTP. Interpreting the mechanism by which PTP influences people is more complex than for some interventions due to this response bias.

7.105   Not all people like travel advisors coming to their doorstep. In Dumfries, the travel advisors reported that some residents were prepared to participate at events in the area and discuss personal travel planning challenges, but pointed out that they did not want to encourage doorstep selling.

7.106   Figure 7.22 shows the mechanisms identified in the focus groups by which personal travel planning had supported behaviour change.

Figure 7.22 – Personal travel planning and mechanisms for behaviour change

Key learning points

7.107   Delivering SCSP has shown how to plan, organise, fund and deliver, practical programmes to integrate established roles in transport infrastructure and service provision with new approaches which promote travel attitude and behaviour change, working in partnership to manage these complex cross sector programmes. Key learning points are as follows:

- Funding - SCSP delivery costs are lower than the financial savings made by citizens from programme implementation, and capturing the savings made by all delivery partners and users will help to make future delivery more self-financing.

- Public transport – Clear written agreements with service providers are needed to make SCSP investment effective and to ensure changes in service usage are measured and managed in partnership.

- Infrastructure - The inclusion of infrastructure within the SCSP programmes ensured that Local Authorities were able to present themselves as 'doers' as well as 'listeners' and 'informers', helping the promotional activities to be accepted by local people and politicians. Closing gaps in walking and cycling networks was essential to enable suitable opportunities to be promoted.

- Information – Low cost practical guides to ensure the availability of relevant, timely helpful information about walking, cycling and public transport travel opportunities was identified as particularly useful by residents. "Quality Information Partnerships"

are increasingly common for buses, and similar partnerships are needed to ensure that service providers, shops and transport operators keep information up to date and available.

- Campaigns – Complex programmes made up of many low cost discrete measures were given an identity through branding of local activities. These local campaigns helped to build ownership of the programmes in local communities, improve joint working with partners, give coherence to activities, and explain key messages.

- Active travel promotion – The roles of Local Authority, NHS and other staff in active travel promotion need to be clearly defined in service level agreements to ensure complementary delivery with maximum effectiveness. Competitions and organised walks to try new leisure routes were reported by residents to be practical prompts to walk more.

- Cycle promotion – Some element of shared/public bike provision was needed to ensure that cycles were available to all people, including for cycle training. Cycle campaigners and enterprises were key contributors to the local community capacity, and were able to support both shared and private cycle use.

- Car and lift sharing – Local communities managed sharing through local organisations and employers but data on sharing activity was limited. Funding for sharing schemes was best provided by those with a direct financial stake in the benefits, such as local employers.

- Training and events – Training was best linked to life stages such as cycling training at school, or in support of activities to facilitate participation in social activities. Participating in community events was often a cost effective approach for community engagement.

- Travel Planning – The delivery of practical benefits like new safe routes or better information was successfully organised through travel plans, but SCSP did not refresh interest in the travel planning process itself. People particularly appreciated local businesses and schools promoting attractive local walking opportunities suggesting that future promotion should more on delivering safer routes than on planning processes.

- Personal travel planning – PTP helped to make SCSP delivery more dynamic and responsive, recruiting local people as champions or Travel Club members, and helping to personalise provision and promotion. There appears to be scope for better value delivery approaches, working through trusted public service providers, community organisations and business networks, and restricting higher cost household engagement to people who would not be reached through these networks.

- Management and organisation – SCSP has provided a practical focus for community planning, enabled volunteering opportunities with training in key skills, and improved the capacity of the Local Authorities to deliver future joint working cross-sector programmes. Embedding and sustaining these benefits will require a much stronger local evidence base than was achieved in the pilot areas so that Local Authorities measure and celebrate progress and achievements within their communities.

8.0 Conclusions and Recommendations

8.1 The evidence base described in this report enables a number of key conclusions to be drawn and recommendations to be made for the future. Overall, the SCSP programme has successfully demonstrated that there are ways to change travel attitudes and behaviour that save people money, improve their health, reduce transport emissions, and build stronger communities.

Inputs and outputs

8.2 £14.7 million was invested in promotion and provision of new infrastructure and services in the seven pilot areas. This investment helped lever funding from other public agencies, developers and transport operators. The size of the partner contributions cannot be determined but are likely to be substantially greater than the SCSP funding.

8.3 The outcomes and impacts are not necessarily related to how much was spent. This is not surprising as SCSP was only a very small proportion of transport spending in the pilot areas, and each pilot area started with a different track record and starting position. There were some very good value interventions such as securing sustainable transport through planning agreements, complemented by other investment in services and infrastructure which tended to cost less than the Local Authorities had estimated. There is therefore potential for even better value in the future by learning lessons from the pilot programme.

Changes in attitudes

8.4 Changing attitudes can be a prelude to, or consequence of, behaviour change and well executed promotional measures have many positive consequences for better joint delivery amongst residents, businesses and public agencies. Our conclusions on attitudinal change in the SCSP pilot areas over the programme duration are:

- Attitudes towards the local community and neighbourhood generally became more positive in the SCSP pilot areas, particularly in relation to perceptions of the built environment. General ratings of the neighbourhood as a place to live improved more than in comparable locations as measured in national data.

- Attitudes towards walking and cycling and the associated infrastructure generally became more positive in the SCSP pilot areas particularly in relation to investment in new cycle and pedestrian infrastructure.

- Attitudes to bus travel generally improved in the SCSP pilot areas, with the exception of perceptions of bus fares which generally declined markedly.

- Changes in attitudes towards car use were complex. Although it was clear in most areas that people had an increasingly positive attitude towards car use, there were

also indications in some areas that people increasingly recognised that reducing car use would be a good thing to do from a community or personal perspective.

Changes in travel behaviour

8.5   The pilot areas saw increases in the levels of active travel, and reductions in car driving over and above those seen in comparable locations in Scotland over the same period. In particular:

- Walking - The mode share for walking trips increased in all areas, with statistically significant increases in five out of the seven pilot areas and with all changes greater than those recorded in the Scottish Household Survey in comparable locations. The greatest increases were recorded in Larbert/Stenhousemuir, where mode share for walking increased by 21.4 percentage points, and Barrhead where the equivalent increase was 14.8 percentage points, against a background trend in comparable areas of 1.6 percentage points. There were larger increases associated with the journey to work and smaller increases for leisure and shopping journeys. Except in Glasgow East End and Kirkwall, walking increased in all socio-demographic groups except for people with a disability or illness, and in some places amongst the oldest age groups. Starting college/university and the birth or adoption of a child were associated with larger increases in walking.

- Cycling - Cycling mode share increased in five out of the seven pilot areas. However, only the increase in Dumfries was statistically significant and Dumfries and Dundee were the only two areas to show increases in cycling mode share greater than that recorded in similar areas of Scotland. Increases in cycling came mainly from non car-owning households in Barrhead, Dumfries, Dundee, Kirkintilloch/Lenzie and Kirkwall, but it was those living in car-owning households in Glasgow East End and Larbert/Stenhousemuir who were most attracted to this mode.

- Bus use - The mode share for bus trips decreased in five of the seven areas, including greater decreases than comparable areas of Scotland. A statistically significant increase in bus mode share was observed in Kirkintilloch/Lenzie and significant reductions were recorded in Dundee and Glasgow. Despite an overall increase in Kirkintilloch/Lenzie, bus use for the journey to work fell. There was, however, an increase in the use of the bus for the journey to work in Larbert/Stenhousemuir and to a small extent in Dumfries. Looking across the pilot areas, more people out of work reduced their use of the bus than those in work. Similarly, bus use declined more among people in households without a car than among those living in car-owning households.

- Car driving - The mode share for car driver trips decreased in all of the seven areas between 2009 and 2012, with reductions ranging from 1.6 percentage points in

Glasgow East End to 19.4 percentage points in Larbert-Stenhousemuir. These decreases were statistically significant in Barrhead, Dumfries, Kirkintilloch/Lenzie and Larbert/Stenhousemuir. In all seven SCSP areas, the observed decrease in the proportion of trips made as a car driver was greater than the corresponding change recorded through the Scottish Household Survey in comparable areas. Reductions in car driving were recorded for the journey to work in all areas except Dundee and Kirkintilloch/Lenzie. Car mode share fell in all areas for visiting friends and relatives, for accessing education (except in Kirkwall), and for shopping (except Glasgow East End). The youngest age group was associated with increases in driving in both Glasgow East End and Kirkintilloch/Lenzie. Changes in car driving were also strongly linked with other life-change moments, particularly starting or finishing University and the birth/ adoption of a child.

- Car passenger - The mode share for car passenger trips increased in five of the seven areas. The increases were statistically significant in Dundee, Glasgow East End and Kirkwall, as was the decrease observed in Larbert/Stenhousemuir.

Impacts from behavioural change

8.6   The changes in travel behaviour have had positive impacts in relation to the SCSP programme goals. It is not possible to establish how much of the observed change has derived directly from the SCSP investment and how much was due to other factors and initiatives in the local areas. Nevertheless, we have been able to estimate the financial savings, health benefits and carbon emission reductions from the travel behaviour changes as follows:

- The annual financial saving on direct transport costs per resident per year was £62 on average, with £69 coming from reduced car operating costs, £4 from reduced spending on buses and an increase in spending on taxi fares of £11. This means that over £9million per year was saved by local households through their travel behaviour change.

- The behavioural changes in the SCSP areas have health impacts that will accrue over a number of years into the future. The SCSP pilot areas were associated with higher levels of physical activity than would otherwise have occurred, and an increase of 5% in an individual's probability of meeting Government guidelines on physical activity. Health gains from increased physical activity estimated using standard health impact valuation techniques by discounting future health benefits to the present day are worth £6,150 per 100 population plus £2,024 per 100 population for healthcare savings, equivalent to £10.6 million across the SCSP areas. However the average walking trip distance is 0.7 miles so physical activity changes will only partly be accounted for by changes in numbers of people meeting physical activity

guidelines. Using the World Health Organisation Health Economic Assessment Tool the benefits from more active travel would be of the order of £46 million.

- As a result of reduced emissions from cars and taxis it is estimated that 16,400 tonnes of carbon dioxide were saved per year in the pilot areas. This is valued at £0.9 million using current carbon values from Scottish Transport Appraisal Guidance.

Programme delivery

8.7 The experience of SCSP programme and project delivery across the seven pilot areas has depended on three main things: the availability of an attractive sustainable travel opportunity, sufficient promotion to encourage people to try the travel opportunity, and positive feedback from experience of the travel option helping to translate experimental behaviour to habitual behaviour. The main learning points on delivery to emerge from the programme are as follows:

Provision

8.8 Provision of infrastructure often delivered some new asset such as a new path which residents generally appreciated but where behaviour change impacts were unclear. *Behaviour change was achieved when the new infrastructure and services closed the gaps* that acted as real or perceived barriers, and were actively promoted through the smarter choices measures. The changes in attitudes can be a good indicator of changes to travel patterns that may occur in the future.

8.9 Sometimes delivering more sustainable solutions will be unpopular such as the restructuring of the bus networks. There are very large cost savings possible in transport delivery by linking promotion with provision to make unpopular changes achievable, as demonstrated by the bus network changes in Dumfries.

Promotion

8.10 Indirect communications with residents were often seen to be as important as direct messages. People use local clubs, businesses, and local papers to help them to filter messages that they think might be relevant. This is particularly important for programmes where people need to do new things like share a lift in a car.

8.11 Correctly *identifying the social needs of a community and linking promotional messages to these is essential*. Linking the "Shop local" campaign in Barrhead with more short walking trips, and offering cycle training to support improved safety in Glasgow East End, are just two of the ways that campaigns were linked with the core values of the pilot areas.

8.12 Health promotion messages have been developed by the NHS for some time and the investment through SCSP provided clear added value to this when tightly focused on transport initiatives to support active travel.

8.13   Working with the local media was important in all pilot areas. In some pilot areas the Local Authorities published maps and information through sponsored supplements, and this was both effective at disseminating the information and building relationships with the media who are key players in communication for any local area.

8.14   Brands proved to be useful for giving a new identity to new programmes. Rather than smarter choices appearing to be a complex unconnected set of initiatives, programmes like the Dundee Travel Active programme or the GO Barrhead programme are now seen alongside the roads programme or bus investment as mainstream investment choices.

8.15   Brand recognition in most of the pilot areas in the 2012 household survey was good, with more than 50% of respondents in Barrhead, Dumfries, Kirkwall and Larbert/ Stenhousemuir having heard of the local SCSP brands. The majority of respondents in all areas also had a correct picture of what their locally branded campaign was about.

Organising and management

8.16   Success with *SCSP delivery and community planning are closely related*. When partners work together to deliver more sustainable communities, residents receive common messages from multiple sources and often from people or agencies they trust. Partnership working among different organisations is therefore a key aspect of successful delivery.

8.17   Achieving behaviour change is a gradual process, with people who try new travel options needing to convert early experimental behaviour into habitual behaviour. Time is needed for programmes to bed in, and to build ownership of the initiatives amongst stakeholders in each local area. The SCSP programme delivered early indications of the potential outcomes and impacts, but many of the benefits will not yet have been realised.

8.18   Travel plans and personal travel planning provided a primary mechanism by which providers and users of transport communicated in the SCSP pilot areas. *Two way communications are an essential requirement of smart working* to ensure an appropriate balance between investment in supply and demand for travel. There is substantial scope for improvements in the efficiency and effectiveness of these plans, with more focused delivery of practical benefits for people, rather than on the process of travel planning itself. Involvement from local people and businesses in the delivery of programmes like those delivered in the SCSP pilot areas is essential for their sustainability. If there is strong community support then it is more likely that controversial programme elements such as traffic calming become more politically and financially achievable.

Monitoring and feedback

8.19   Some authorities made provision for local data collection and local user surveys from the outset, viewing user feedback as an essential part of project management to monitor and adjust delivery. However, in other areas the lack of local data collection and local user surveys limited the ability to respond dynamically to changes in the local area. In order for

smarter choices to be smart, they need to be responsive to local opportunities as they arise.

8.20 All of the pilot authorities are continuing with some or all parts of the SCSP programme so the programme has helped to support innovation. Sustainable approaches to transport depend on supporting innovation and SCSP has proved to be highly successful in achieving this. Local Authorities want to see similar mechanisms into the future where they can secure resources for innovative transport delivery.

Recommendations

8.21 The evidence from the monitoring and evaluation shows that, with the right combination of investment in "smarter choices" and "smarter places" to suit local conditions, changes in travel behaviour and attitudes can be achieved with relatively low levels of investment delivering community and personal benefits. There are opportunities for wider delivery of SCSP across Scotland and a need to tackle barriers to delivery. It is recommended that the Scottish Government and Transport Scotland, in partnership with Local Authorities, and CoSLA should facilitate and enable wider application of the types of investment piloted through the SCSP programme.

8.22 Based on the delivery experiences in the SCSP pilot areas and the evidence from the qualitative and quantitative data, the following features of programmes supported by central and local government should include the following.

<u>Local Authorities</u>

Partnership working

8.23 Partnership working is needed between Local Authorities, the NHS, transport providers and business organisations to secure practical and focused delivery. Experience with delivering active travel programmes in the SCSP pilot areas showed that there was initially a lack of clarity about the complementary roles of transport, health, education and social work sectors in active travel promotion. In order to facilitate this partnership working:

- Local Authorities could take the lead in developing *service level agreements* with their NHS partners so that complementary roles and responsibilities are clear and recognised within service delivery. Similar service level agreements may also be needed with other public agencies to ensure that joint working within the community plan is translated into practical funded programmes.

- Detailed plans for each town and settlement across Scotland could be described in local transport strategies and plans to help set *an ambitious vision that communities can get behind*. Investment in local infrastructure was seen to be facilitated by working with local people and businesses to create attractive paths and an improved urban realm. Some of the pilot authorities did not have mainstream

'place making' investment programmes for an improved urban realm prior to the pilots, and such investment would merit higher priority.

- Local Authorities could ensure that sustainability aims are delivered within bus service provision through *closer working arrangements with their local bus operators*. The SCSP programme was generally not particularly successful in attracting more people to use the bus, and some people were attracted from bus use to walking. In several locations, lack of access to bus patronage data hampered the ability of the Local Authorities to target the needs of their citizens. Where partnership agreements were in place with bus operators, this facilitated joint consideration of how to target investment for mutual benefit in sustainable bus services.

Communication and branding

8.24 This evaluation found clear links between promotional activities and infrastructure and service availability. Closing gaps in networks was sufficient to enable promotion of entire networks and services, with local people particularly appreciating improved routes to local shops and facilities. The following ingredients of successful communication and branding were evident from the evaluation:

- A comprehensive *communication strategy* that enables information and feedback for all people in the community, including partnerships with local media and links to other associated campaigns (e.g. on health and regeneration).

- Enabling and engaging local people at *every stage* of programme delivery.

- *Branding* of the local programme, facilitating joint working between partners, so that sustainable transport delivery is presented to people as a coherent integrated approach.

Monitoring and evaluation

8.25 Monitoring and evaluation should continue to be seen as integral to SCSP delivery, as this is a fast developing field with scope for further improvement. Evidence-led delivery also involves responding dynamically to changes in communities including monitoring of travel behaviour by all modes through traffic counts and user surveys. *Routine monitoring* of local initiatives and tracking attitudes and behaviour, particularly through *local panel surveys*, would enable more detailed insight than was possible in this evaluation into who is responding to specific measures, the nature of these changes (e.g. mode shifting, destination shifting or both) and how behaviour changes over time. *Counts and users surveys* would allow Local Authorities to demonstrate to their local communities that they value walking and cycling activity, and to understand changes over time.

The Scottish Government / Transport Scotland

8.26   The SCSP programme demonstrates the role and benefits of the Scottish Government in supporting Local Authorities. It is beyond the scope of this evaluation to identify the precise ways in which future funding programmes could be designed to support transport innovation or capture the financial savings but we can conclude from the evidence that:

- Further action is needed to support local delivery of *safer walking and cycling routes* to shops and services across local communities. Even in the SCSP pilot areas where steps were taken to attain this goal, gaps and perceived barriers in the networks remained and more could be done. These barriers could be tackled more systematically across Scotland in order to reduce the deterrents to active travel. For example, Local Authorities could be encouraged to publish maps of safer walking and cycling routes covering all significant communities in their areas. This could even be mandated if the Scottish Government chose to adopt a similar approach to that being pursued by the Welsh Government through their Active Travel Bill.

- Several pilot authorities noted that the involvement of the Scottish Government in SCSP was necessary in order to build the cross sector delivery, particularly with nationally administered services such as health. National Government could do more to facilitate and reinforce local delivery, and a national programme could facilitate and reinforce local promotion of sustainable travel to individuals. The Scottish Government is already committed to investment in promotion as part of its action plan to meet Climate Change targets. The experiences from the SCSP pilots demonstrate how to plan and manage successful local campaigns. Citizens enabled with nationally promoted tools, technologies and publicity would be better able to engage with local initiatives through schools, workplaces, transport providers and other service providers. For example, a national GO Smart programme could be linked with the promotion of the proposed national Saltire Card.

- *Scottish Transport Appraisal Guidance* could offer more detail on how to appraise smarter choices initiatives. If investment is to grow in this field it must be underpinned by stronger appraisal to ensure that investment is prioritised at the greatest needs. For example, this evaluation was able to demonstrate the wider benefits of the investment in smarter choices, such as local regeneration and developing stronger communities and these could be better captured in practical appraisals.

- Specific funding is needed to support innovation in these emerging approaches. Every SCSP area demonstrated that there is substantial scope to improve SCSP delivery. Opportunities for innovation need to be extend across Scotland to allow Local Authorities and community groups to bid for "transport change" investment.

8.27   Three years has been a very short period in which to plan and deliver such diverse and complex programmes. Continued action on this developing agenda will enable a smarter Scotland consistent with sustainable development aims.

9.0 Associated Reports

9.1 References are provided in footnotes throughout the report. The supporting reports with the evidence on which this report has been based are as follows:

- Derek Halden Consultancy, Aberdeen University and Integrated Transport Planning Ltd. *Going Smarter in Barrhead*: Monitoring and Evaluation of the Smarter Choices, Smarter Places Programme. Report to The Scottish Government, February 2013.

- Derek Halden Consultancy, Aberdeen University and Integrated Transport Planning Ltd. *Going Smarter in Dumfries*: Monitoring and Evaluation of the Smarter Choices, Smarter Places Programme. Report to The Scottish Government, February 2013.

- Derek Halden Consultancy, Aberdeen University and Integrated Transport Planning Ltd. *Going Smarter in Dundee*: Monitoring and Evaluation of the Smarter Choices, Smarter Places Programme. Report to The Scottish Government, February 2013.

- Derek Halden Consultancy, Aberdeen University and Integrated Transport Planning Ltd. *Going Smarter in Glasgow East End*: Monitoring and Evaluation of the Smarter Choices, Smarter Places Programme. Report to The Scottish Government, February 2013.

- Derek Halden Consultancy, Aberdeen University and Integrated Transport Planning Ltd. *Going Smarter in Kirkintilloch/Lenzie*: Monitoring and Evaluation of the Smarter Choices, Smarter Places Programme. Report to The Scottish Government, February 2013.

- Derek Halden Consultancy, Aberdeen University and Integrated Transport Planning Ltd. *Going Smarter in Kirkwall*: Monitoring and Evaluation of the Smarter Choices, Smarter Places Programme. Report to The Scottish Government, February 2013.

- Derek Halden Consultancy, Aberdeen University and Integrated Transport Planning Ltd. *Going Smarter in Larbert/Stenhousemuir*: Monitoring and Evaluation of the Smarter Choices, Smarter Places Programme. Report to The Scottish Government, February 2013.

- Derek Halden Consultancy, Aberdeen University and Integrated Transport Planning Ltd. Monitoring and Evaluation of the Smarter Choices, Smarter Places Programme - *Analysis of National Data Sources and Trends*. Report to The Scottish Government, February 2013.

- Derek Halden Consultancy, Aberdeen University and Integrated Transport Planning Ltd. Monitoring and Evaluation of the Smarter Choices Smarter Places Programme - *Report of Focus Group Research*. Report to The Scottish Government, February 2013.