



TravelSmart in Worle

Final Report on the Individualised Travel Marketing Project in Worle (September – October 2008)

**Report for South West of England Regional
Development Agency, West of England Partnership
and North Somerset Council**

October 2009

EXECUTIVE SUMMARY

The TravelSmart® Individualised Travel Marketing (ITM) project conducted in 2008 across a target population of 2,078¹ households in Worle was successful in increasing the use of sustainable and active travel modes, leading to significant reductions in car use.

The ITM project achieved substantial increases in walking, cycling and use of public transport, leading to relative reductions in car-as-driver trips of 12% and in car distances travelled for day-to-day trips of 15% (a net saving of 3.2 million car km per year among the target population). This level of behaviour change is in line with other UK TravelSmart projects.

The shift from car travel to walking, cycling and public transport also resulted in an 11% increase in average daily exposure to physically active forms of travel.

Changes in travel behaviour were measured by detailed surveys conducted before and after the ITM project across the entire target population, with a separate control group.

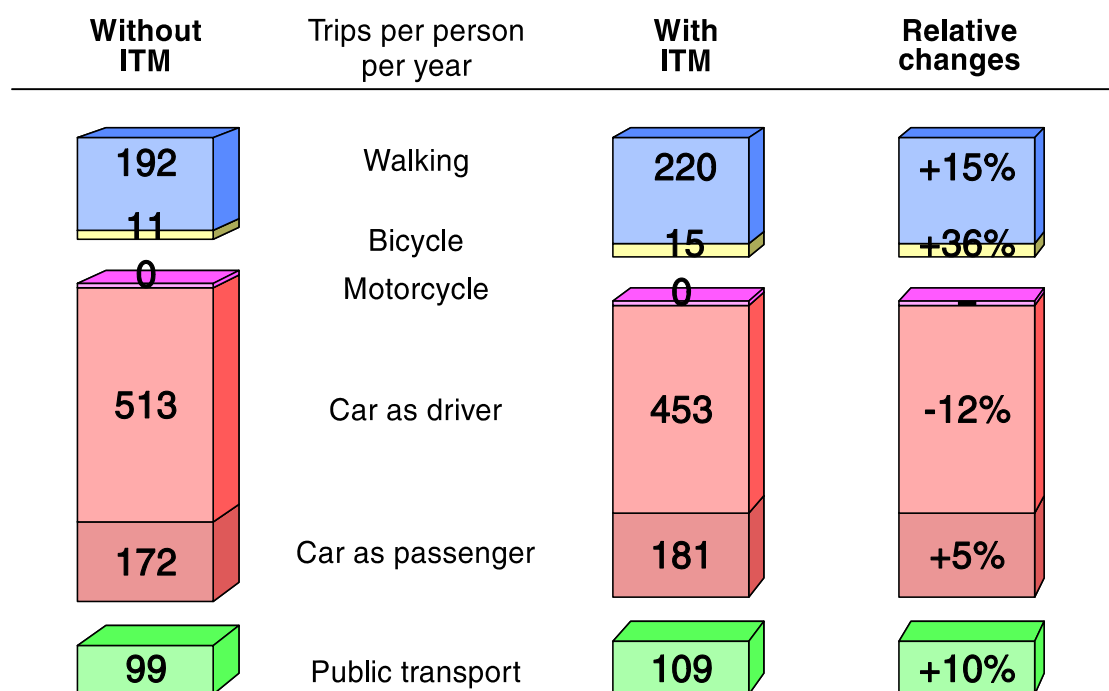
The Worle TravelSmart project was managed by a working group consisting of Sustrans, Socialdata and North Somerset Council. The ITM project and evaluation activities were designed and implemented by Sustrans and Socialdata, with funding from the South West of England Regional Development Agency. In addition, in-kind contributions were provided by North Somerset Council towards the development and supply of marketing materials and in terms of staff time to support the project. Public transport test-tickets were offered in-kind by First. The total cost of the project, including evaluation, was £117,200.

The changes in travel behaviour, measured in trips per person per year, are summarised in the figure overleaf. This modal shift was achieved without any

¹ The original target population was 1,850. This was exceeded because there were more available telephone households in the area than anticipated and, as this number was not significantly higher than the planned target population, it was decided to include the additional households in the project. It was also agreed that Socialdata and Sustrans would include some 'contribution in kind' to the project and these additional households form part of that contribution.

constraint on daily mobility among the target population, and with no significant increase in daily travel time. The surveys also showed that modal shift occurred throughout the day, suggesting that TravelSmart contributes to reducing traffic and increasing active travel during both peak and off-peak periods.

Changes in trips by main mode (trips per person per year)



The first phase of the ITM project involved making contact with the target population of 2,078 households in Worle. Ninety-four percent of these households responded to telephone contact and were segmented into groups according to their current travel patterns and willingness to participate in the TravelSmart project. Of these contacted households, 63% were interested in receiving personalised information and advice on sustainable and active travel modes.

In total, TravelSmart information packs containing more than 8,500 items of information, rewards and incentives were delivered to a total of 872 households in the target area. The most popular individual item was the

Worle on foot, by bike, by bus local travel map, followed by bus stop specific timetables and the *Weston and North Somerset Bus Times* booklet.

Households were also able to request TravelSmart further services in the form of home advice sessions and incentives to encourage greater use of sustainable and active travel modes (including five free ‘First’ day test-tickets to try out local bus services). A total of eight home visits were conducted by trained advisors on cycling or public transport (the latter by staff from North Somerset Council).

TRAVELSMART IN WORLE
Final Report on the Individualised Travel Marketing Project in 2008

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1 INTRODUCTION

1.1 This report

This report reviews the implementation and outcomes of the TravelSmart Individualised Travel Marketing (ITM) project conducted in Worle in autumn 2008. The project aimed to reduce levels of car use and encourage more environmentally-friendly forms of travel by promoting walking, cycling and use of public transport.

The report is intended primarily for the South West of England Regional Development Agency, West of England Partnership and North Somerset Council. However rights to the use of this report and data contained herein will be shared by the client group, Sustrans and Socialdata for the purposes of further developing TravelSmart in the UK.

1.2 Report structure

Although the report should be taken as a whole, each main section is designed to provide readers with a stand-alone account of the project background, methodology or outcomes, as follows:

- Section 2 provides a general background on TravelSmart, sets out the key elements of the ITM methodology and reviews the local context for the Worle TravelSmart project including its specific objectives, timetable and project management;
- Section 3 covers the work done by all project partners to prepare for the Individualised Travel Marketing project;
- Section 4 reviews the implementation of the project itself and provides a detailed account of the community responses recorded at each stage;
- Section 5 reviews the methodology of the evaluation surveys and reports the behavioural changes and other outcomes achieved by the TravelSmart project;
- Section 6 compares the results of this project with those of other TravelSmart projects which have taken place in the UK; and
- Section 7 presents key conclusions based on the project outcomes.

2 PROJECT DESCRIPTION

2.1 Background

The Worle TravelSmart project was the first of two ITM projects funded by the South West of England Regional Development Agency and managed by Sustrans and Socialdata. (The second project was completed in Brislington & Knowle in Bristol during spring 2009.) TravelSmart in Worle was developed in close cooperation with North Somerset Council to ensure it complemented other initiatives in the area.

Sustrans and partners Socialdata were commissioned to conduct a TravelSmart ITM project targeting 2,078² residential households in Worle.

The project also involved working with other local partners, including public transport operator First, as well as other departments within North Somerset Council.

In order to measure the outcomes of the TravelSmart project, part of the funding was used by Socialdata and Sustrans to conduct a programme of evaluation.

2.2 Aims and objectives

The aim of the Worle TravelSmart project was:

- To reduce levels of car use among the target population by promoting walking, cycling and use of public transport.

The specific objectives were:

- To develop a package of information, incentives and other services to promote walking, cycling and public transport;

² The original target population was 1,850. This was exceeded because there were more available telephone households in the area than anticipated and, as this number was not significantly higher than the planned target population, it was decided to include the additional households in the project. It was also agreed that Socialdata and Sustrans would include some 'contribution in kind' to the project and these additional households form part of that contribution.

- To offer this package of information, incentives and other services to a target population of 1,850 households in Worle and to fulfil all requests using the TravelSmart ITM technique (see below); and
- To evaluate the effects of this intervention against a range of performance indicators relating mainly to personal travel behaviour.

2.3 The TravelSmart Individualised Travel Marketing process

The TravelSmart ITM process has been developed and proven over many years as a highly successful tool for changing travel behaviour. Pioneered by Socialdata during the late 1980s, the technique has since been applied in more than 250 projects targeting a total of more than three million people world-wide. In the UK, the TravelSmart programme run by Sustrans and Socialdata is currently targeting a total of more than 100,000 households in seven locations (including three large-scale projects) with the offer of personalised travel information and support.

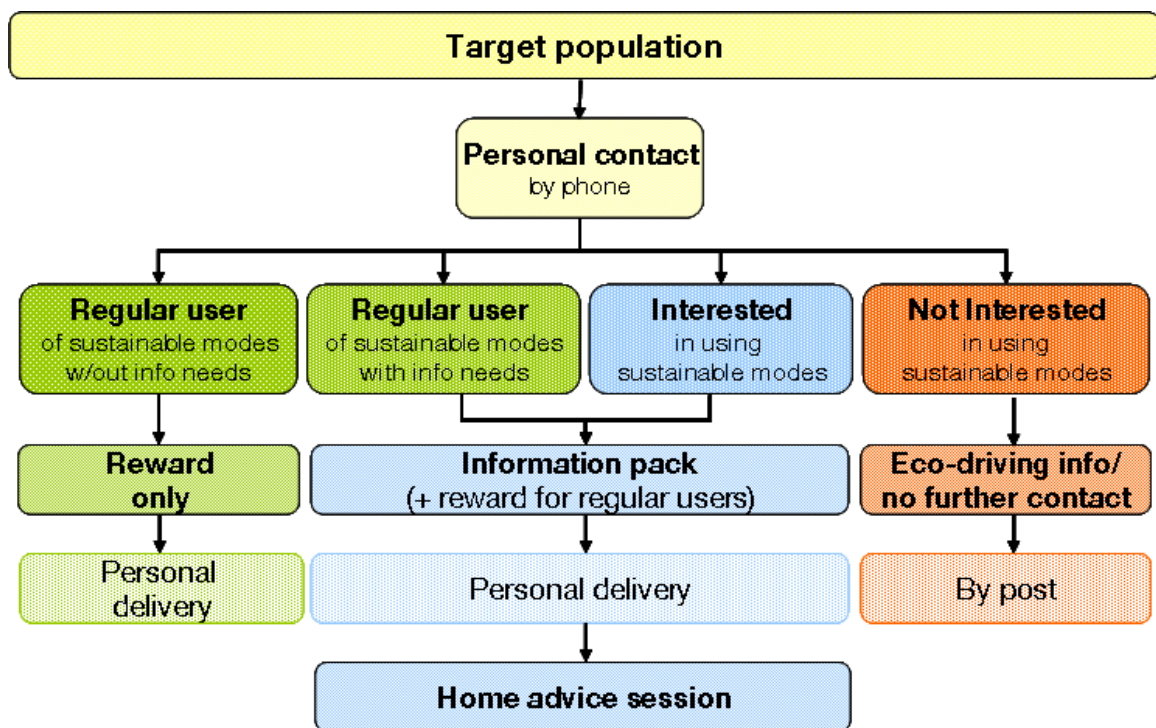
The ITM process was developed as a result of detailed research by Socialdata showing that poor information and lack of motivation were important barriers preventing greater use of walking, cycling and public transport as alternatives to car travel. It is now widely recognised that while good infrastructure is needed to provide better alternatives to the car, the full potential for modal shift towards more sustainable travel cannot be realised unless people are well-informed about the options and motivated to use them.

The TravelSmart ITM process, as illustrated in Figure 2.1, involves three key stages each based on personal contact with the households in the target area. The process involves dialogue which motivates people to consider and review their own travel behaviour in the context of their lifestyles. People who are interested in changing are supported and encouraged, but the choice is always left to the individual. This process enables people to make voluntary individual changes which add up to make a significant difference to community-wide travel patterns.

The same Individualised Marketing technique has been successfully applied by Socialdata in Australia to promote domestic water efficiency. Other

TravelSmart programmes have included the use of health-related marketing materials and promoted other forms of physical activity alongside sustainable travel.

Figure 2.1 Individualised Travel Marketing process



2.4 Target area and population

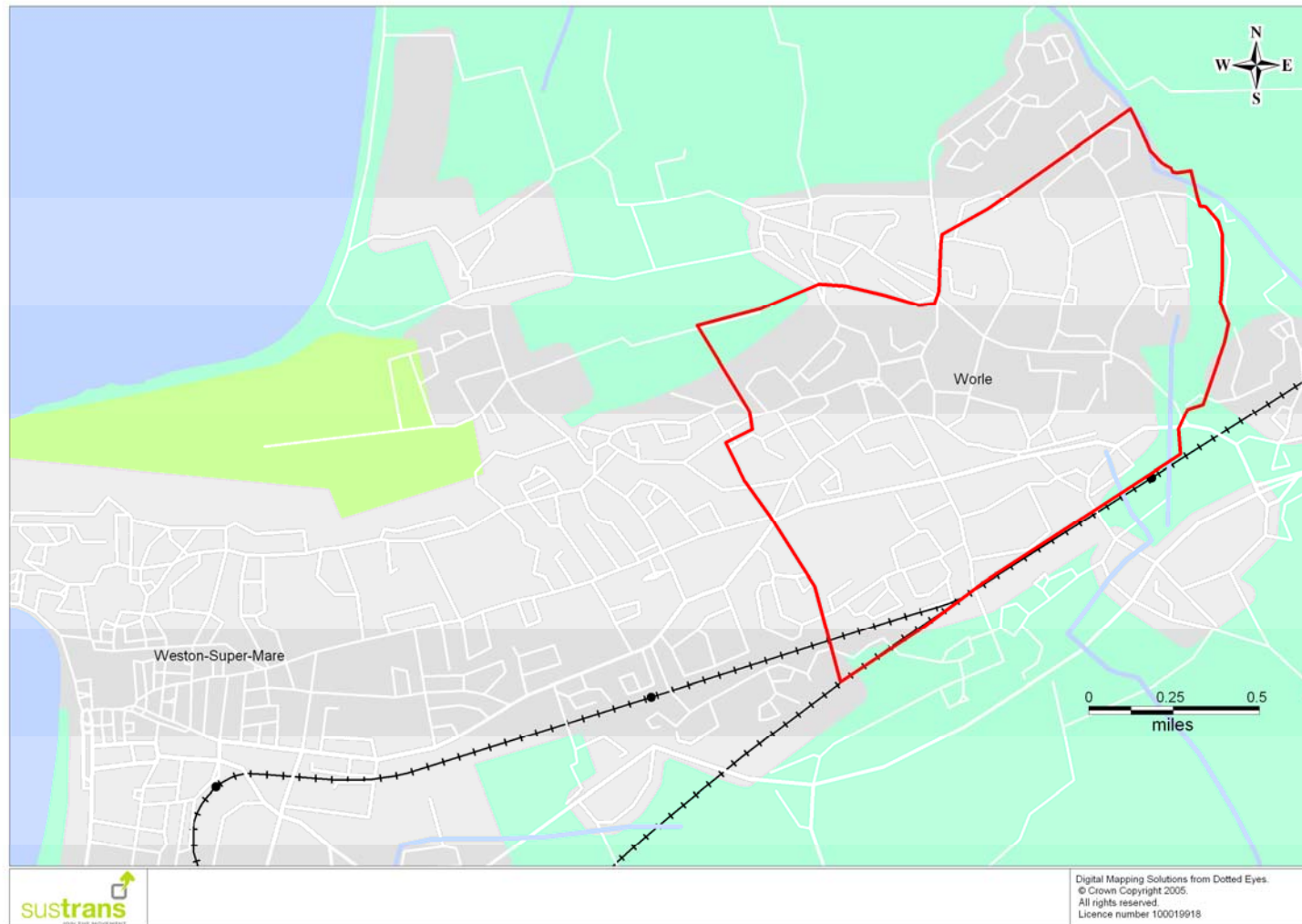
The target area for this TravelSmart project covered most of Worle, to the east of Weston-super-Mare town centre. The boundaries of the target area are shown in Figure 2.2.

This area was selected for a number of reasons:

- Good existing bus links linking the town centre and residential areas;
- An established network of walking and cycling routes;
- Proximity to the town centre and therefore access to its bus and rail stations; and
- Local facilities and amenities reducing the need to travel into the town.

The target population was drawn from residential households in this area with publicly available telephone details (to enable more efficient contact throughout the ITM process) drawn at random using a commercially available address database. This process provided the total target population of 2,078 households.

Figure 2.2 Map of the target area



2.5 Project management

The project working group consisted of Sustrans, Socialdata and North Somerset Council (NSC). Following a project inception meeting, the majority of contact between partners was conducted over the phone or by email, but also included progress meetings between Sustrans and Socialdata. A further meeting was held between all parties following submission of the ITM field report in February 2009, providing an opportunity to discuss the results of the project as well as next steps.

Sustrans, with support from Socialdata, was responsible for day-to-day project management and reporting, as well as development of the marketing package. Sustrans also managed the local ITM fieldwork, including delivery of information packs and coordination of home visits. Implementation of the travel surveys, preparation of data bases, ITM telephone contact and mailing operations were handled by Socialdata.

NSC supplied local travel information materials on public transport, walking and cycling as well as local school travel maps. Local bus operators 'First' supplied a number of bus service timetables. The project also received support from a number of other local partners including: First Great Western and the Mendip Hills Area of Outstanding Natural Beauty (AONB) Service.

2.6 Costs and funding

The total budget for delivery of the Worle TravelSmart ITM project was £108,700 (including £29,000 for evaluation). In addition, in-kind contributions were provided by NSC towards the development and supply of marketing materials and in terms of staff time to support the project. Public transport test-tickets were offered in-kind by First. Sustrans and Socialdata also agreed to provide in-kind contributions of £10,000 to the West of England TravelSmart programme as a whole (i.e. across the Worle and Brislington & Knowle projects). At the time of writing a total of £8,773.50 had been provided

2.7 Timetable

The project was conducted according to the following timetable:

April 2008	Project inception
April – May 2008	Travel behaviour survey (before)
April – September 2008	Preparation of ITM project
September – October 2008	Implementation of ITM project
April – May 2009	Travel behaviour survey (after)
October 2009	Final reporting

3 PREPARATIONS FOR THE TRAVELSMART PROJECT

3.1 Introduction

The TravelSmart project offered households a wide range of high-quality information, advice and support on local options for using sustainable travel modes (walking, cycling and public transport).

With support from NSC and other local partners, Sustrans coordinated the assembly of a marketing package consisting of printed information materials, incentives and rewards, and personal advice sessions (home visits).

3.2 Information materials

A range of information materials was assembled on local options for walking, cycling and public transport. The principal sources of these materials were NSC, Sustrans and the local public transport operators.

A checklist of available materials was developed and reviewed according to the following broad criteria:

- Relevance to local travel needs of households in the target area;
- Consistency with the overall aims of the TravelSmart project; and
- Availability in the quantities required and within project timescale.

A complete list of all information materials offered during the TravelSmart project is given in Table 3.1.

All of the materials selected for use in the ITM project were listed on the TravelSmart order form (see Annex A). The form included the offer of a small incentive (see following section) to encourage households to respond quickly.

Table 3.1 Information materials assembled for the ITM project

Category / item	Publisher/provider
Local Travel Map Worle on Foot, by Bike, by Bus	Sustrans
Public Transport Bus stop timetables North Somerset travel map Weston-super-Mare and North Somerset bus times Pocket bus timetables: X1, 350 ACL 06 ACL 05 ACL 85 Local train timetables Regional & national train timetables PLUSBUS Freedom travelpass Diamond Travelcard The easy way to explore the region by train Railcards: Senior Citizens Families Young Persons Disabled Persons Simpler rail fares Personal journey plan	NSC NSC First First ACL ACL NSC First Great Western First Great Western National Rail First Great Western North Somerset Council First Great Western National Rail National Rail National Rail National Rail National Rail Traveline / Sustrans
Walking Family Explorer The Mendip Hills – West Mendip Way Heritage – Somerset and county Tyntesfield travel map 2008 Woodspring, Sand Bay and Kewstoke walk	NSC Mendip Hills AONB Service Sustrans NSC NSC

Walk In to Work Out	Sustrans
Walk More – Feel the Difference	Sustrans
Get walking, keep walking	Sustrans
Cycling	
Maps for cyclists	
North Somerset	NSC
Bristol	BCC
Bath and North East Somerset	NSC
South Gloucestershire	South Gloucestershire Council
The Strawberry Line	Sustrans
Cycling by train	First Great Western
Why Cycle?	Sustrans
Get cycling	Sustrans
Cycling with children	Sustrans
Take a Stand (Life Cycle UK)	NSC
Pledge Card	
TravelSmart Pledge Card	Sustrans
Other Information	
Weston Community Transport	Sustrans
2CarShare.com	NSC
Travel better, live better	NSC
Safe Routes to Schools	Sustrans
School travel maps	
Priory Community School	NSC
Milton Park Primary School	NSC
Worle Community School	NSC
Kewstoke Primary School	NSC
Go4Life Directory	NSC
Incentives	
Key ring (with five years membership of a lost key recovery service)	Sustrans

3.2.1 Local travel map

In partnership with NSC, Sustrans produced a local travel map showing integrated information on cycling, walking and public transport in and around the target area (see Figure 3.1).

Figure 3.1 Local travel map (cover and map extract)



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3.2.2 Personal journey plan

The offer of a personal journey plan, downloaded from the Traveline journey planner, was included on the order form.

The back page of the order form was designed to capture the same information about the user's requirements as the Traveline internet journey planner.

3.2.3 Pledge Card

When a household pledged to use environmentally-friendly travel options more often, they qualified for a TravelSmart Pledge Card. The Pledge Card enabled households to take advantage of discounts at cycle shops in Weston-super-Mare. These discounts were arranged by Sustrans with local retailers and included savings on servicing, accessories and new bikes.

The Pledge Card also included a 20% discount on all orders placed by phone with the Sustrans shop.

3.3 Incentives and gifts

Sustrans sourced a range of incentives and gifts to support the ITM project:

- TravelSmart-branded calico shopping bags and folders in which to package materials and facilitate deliveries;
- TravelSmart-branded key rings to encourage a quick response to the order form; and
- TravelSmart-branded pens, notepads and fluorescent armbands, and an unbranded puncture repair kit, to reward regular walkers, cyclists and public transport users to 'confirm' their sustainable travel behaviour.

Incentives offered as part of the further services are discussed separately in the following section.

3.4 Further Services

A package of 'further services' was developed and offered on the TravelSmart order form as a means of providing further support and encouragement to households with a particular interest in making greater use

of sustainable travel modes. These services were provided in the form of a home advice session and were geared towards people currently making little or no use of the travel modes concerned. Households could receive a home visit with a local advisor on cycling, walking and/or public transport.

The TravelSmart order form³ carried the following text to allow households to sign up for these further services:

- *TravelSmart Plus: Your household may be eligible for a personal advice session with one of our local experts on public transport, cycling and/or walking in your area. Select one (or more) of the options below and we'll be in touch to arrange a home visit to suit your needs. You'll be surprised at the opportunities available.*

Choose public transport – get the most out of public transport with the help of one of our specialist advisors, including tips on all the best ticket deals and a chance to try out local services.

Choose cycling – get going on two wheels with the help of one of our cycling consultants, including advice on the best local routes, a bike 'health check' and the limited offer of a free cycle trip computer.

Choose walking - put your best foot forward with the help of one of our walking experts, including advice on the best local routes, health information and the limited offer of a free pedometer.

For *Choose public transport*, local bus operator First agreed to offer five free 'First' day test tickets to try out local First services.

For *Choose cycling*, a local Sustrans cycling advisor was able to provide households with personal advice, a bike health check and the offer (and set-up) of a free cycle trip computer.

For *Choose walking*, households could receive personal advice and route planning from a local Sustrans walking advisor, as well as the offer (and set-up) of a free Step-O-Meter to help measure their progress.

³ Only households that were not regular bus users were sent this version of the order form.

3.5 Local field office

Sustrans managed the packing and delivery of personalised information packs from a temporary field office located at Priory Community School. A team of seven staff carried out the fieldwork operations over an eight-week period. This included the walking and cycling home visit advisors using the field office as a base.

3.6 Call centre

Socialdata managed the telephone contact process, together with the mailing of all announcement letters, order forms and gift lists, from its office in Bristol. A team of dedicated staff carried out telephone contact and motivation over an eight-week period. Other specialist staff were called upon to book home visit sessions and carry out a thorough process of quality control.

4 IMPLEMENTATION OF THE TRAVELSMART PROJECT

4.1 Introduction

This section describes the implementation of the Worle TravelSmart project in its three main phases: Contact and Segmentation; Service (Confirmation, Motivation and Information); and Convincing.

4.2 Contact and Segmentation Phase

The aim of the Contact and Segmentation Phase was to make direct contact with as many private residential households as possible in the target population, and to segment them into groups for the later phases of the ITM process.

All households were sent an official announcement letter⁴ explaining the purpose of the project. Based on their current use of sustainable travel modes and level of interest in receiving information on walking, cycling and/or public transport, a total of 1,957 households (94% of the initial 2,078 households) were successfully contacted and segmented into Interested, Regular User and Not Interested ('I', 'R' and 'N') Groups (see Table 4.1).

⁴ Signed by Cllr Elphan Ap Rees, Deputy Leader, Executive Member for Strategic Planning, Highways and Economic Development, North Somerset Council.

Table 4.1 Contact and Segmentation Phase

	Households
Total households	2,078
Contacted / segmented households (total)	1,957
Contacted / segmented households (%)	94%

Comprising:

Group 'I' households interested in receiving information (not including regular public transport users, but including regular walkers and cyclists)	941	48%
Group 'R with' households with at least one member regularly using environmentally-friendly modes (including public transport) and with an information wish	298	15%
Group 'R without' households with at least one member regularly using environmentally-friendly modes, (public transport, walking or cycling), but who did not require further information	133	7%
Group 'N' households who did not wish to participate, had no interest, or were unable to use environmentally-friendly modes	585	30%

4.3 Service Phase: Confirmation, Motivation and Information

The aim of this phase was to offer information and support to households contacted during the ITM process according to their specific needs.

A comprehensive list of information on walking, cycling and public transport (referred to as the order form) was sent to households identified as Group 'I' or Group 'R with'. An offer of a small incentive (a key ring) was included on the order form to encourage households to return their requests promptly.

In the Confirmation Phase, all households in Group 'R' (with or without information needs) and those in Group 'I' that regularly walked or cycled

were offered a TravelSmart-branded gift as a way of confirming their behaviour. This offer was made on a separate mail-back order form.

The outcomes of this Confirmation Phase are detailed in Tables 4.2 and 4.3. These show that a total of 455 rewards were delivered, 231 to households in Group 'I'⁵, 191 to Group 'R with' and 33 to Group 'R without'. Of the total rewards delivered, 125 were puncture repair kits, 268 were pens and notepads and 62 fluorescent armbands.

Table 4.2 Confirmation Phase (Groups 'I' and 'R with')

	I	R with	Total
Total households	941	298	1,239
Households with wish for reward	231	191	422
Puncture repair kit	77	40	117
Recycled pen and note pad	118	130	248
Fluorescent arm band	36	21	57
Households with no wish for reward	586	78	664
Total response	817	269	1,086
Response rate	87%	90%	88%

⁵ Group 'I' includes households with regular use of walking and/or cycling which are therefore eligible for a reward.

Table 4.3 Confirmation Phase (Group ‘R without’)

	R without
Total households	133
Households with wish for reward	33
Puncture repair kit	8
Recycled pen and note pad	20
Fluorescent arm band	5
Households with no wish for reward	1
Total response	34
Response rate	26%

During the Motivation and Information Phase, households successfully segmented into Groups ‘I’ and ‘R with’ received order forms by post. Motivation phone calls were made to households not returning their forms within a specific time period. As shown in Table 4.4, a total of 1,239 households were included in the Motivation and Information Phase. Of these 88% (1,086 households) responded by completing the order form and a total of 839 requested information.

Table 4.4 Motivation and Information Phase

	I	R with	Total
Total households	941	298	1,239
Households with information wish	629	210	839
Households with no wish for information	188	59	247
Total respondents	817	269	1,086
Response rate	87%	90%	88%

Table 4.5 reviews the quantities of information materials and incentives delivered during the TravelSmart ITM project. All items were included in personalised packs on the basis of requests made via the order form. These packs, together with the rewards for regular users, were delivered almost entirely by bike and on foot, with a small proportion by post.

The *Worle on foot, by bike, by bus* local travel map was the most popular item of information requested, followed by *Bus stop specific timetables* and the *Weston and North Somerset bus times* booklet. The most popular item of cycling information was the *North Somerset Cycle Map* and the most popular item of walking information was the *Heritage – Somerset and County* leaflet.

In addition to the main Service phase, a pack of information materials on responsible driving was sent to 226 households in Group ‘N’. This pack consisted of the *Worle on foot, by bike, by bus* local travel map; *2Carshare.com* leaflet; *Travel better, Live better*; *TransportEnergy* top tips card; *Speed: Know your limits* leaflet; and a *Transport Direct* card. The remaining households in Group ‘N’ were not sent this information because their responses to the Contact phase suggested this service would be inappropriate (eg. households with strong data confidentiality concerns; very aged and/or infirm occupants; or long-term absence).

Table 4.5 Information materials and incentives delivered

	I	R with	Total
Total items	5,997	2,092	8,089
Items per participating household⁶	6.4	7.0	6.5
Items per pack⁷	9.5	10.0	9.6
General materials: new local travel map			
Worle on foot, by bike, by bus	421	125	546
Public Transport			
Bus stop specific timetables	360	126	486
North Somerset travel map	298	103	401
Weston-super-Mare and North Somerset bus times	342	136	478
Pocket bus timetables:			
X1,35: Weston-super-Mare – Congresbury – Cleeve – Backwell - Bristol	247	104	351
ACL 06: Weston-super-Mare – Oldmixon – Worle	201	77	278
ACL 05: Weston-super-Mare – Sainsburys Uphill – Hospital	206	82	288
ACL 85: Weston town centre – Earlham Grove – Corondale Road – St Georges	129	39	168
Local train timetables	239	102	341
Regional and national train timetables	199	76	275
PLUSBUS	92	43	135
Freedom travelpass	128	46	174
Diamond travelcard	61	14	75
The easy way to explore the region by train	112	42	154
Railcards:			
Senior Citizens	121	46	167
Young persons	27	14	41
Families	27	11	38
Disabled persons	16	12	28
Simpler rail fares	89	39	128

⁶ Based on all households in Groups 'I' and 'R with' included in the motivation and information phase.

⁷ Based on all households in Groups 'I' and 'R with' receiving a pack.

Cycling			
North Somerset	200	66	266
Bristol	76	16	92
Bath and North East Somerset	59	13	72
South Gloucestershire	46	9	55
The Strawberry Line	177	59	236
Cycling by train	41	12	53
Why Cycle?	27	7	34
Get cycling	44	19	63
Cycling with children	38	6	44
Take a Stand (life cycle UK)	7	1	8
Walking			
Family explorer	267	79	346
The Mendip Hills-West Mendip Way	248	77	325
Heritage - Somerset and county	273	87	360
Tyntesfield travel map 2008	123	37	160
Woodspring, Sand Bay and Kewstoke walk	253	81	334
Walk in to Work Out	37	6	43
Walk more - feel the difference	87	39	126
Get walking, keep walking	93	31	124
Related Information			
Weston Community transport	79	27	106
2Carshare.com	27	5	32
Travel better, live better	59	19	78
Safe routes to schools	28	3	31
School travel maps:			
Priory Community School	7	0	7
Worle Community School	13	2	15
Milton Park primary School	2	0	2
Kewstoke primary School	2	0	2
Go4Life directory	149	52	201
Pledge Card			
Offers savings on accessories and new bikes at local cycle and outdoor shops	132	52	184

Incentives			
Free key ring	88	50	138

4.4 Convincing Phase

4.4.1 Overview

The Convincing Phase aims to further encourage people to make environmentally-friendly travel choices more frequently by offering additional personal advice and support. This support was included on the order form under the heading of *TravelSmart Plus*.

A total of 105 households expressed an interest in *TravelSmart Plus* (see Table 4.6). These households were telephoned to explain the offer of a home visit conducted by an advisor on walking, cycling and/or public transport⁸. As a result, nine households booked a total of nine home visits. Of these, eight were successfully conducted.

⁸ Households already using public transport regularly were not offered public transport further services.

Table 4.6 Further service requests and home visits

	I	R with	Total
Total Households	941	298	1,239
Households interested in further services	87	18	105
Number of potential home visits by type:			
<i>Public Transport</i>	80	-	80
<i>Cycling</i>	64	18	82
<i>Walking</i>	38	16	54
Households booking one or more home visits	6	3	9
Number of booked home visits:			
<i>Public Transport</i>	3	-	3
<i>Cycling</i>	3	3	6
<i>Walking</i>	-	-	-
Number of conducted home visits:			
<i>Public Transport</i>	2	-	2
<i>Cycling</i>	3	3	6
<i>Walking</i>	-	-	-

4.4.2 Public transport further services

Households who wanted to use public transport more often and who were not already using the bus regularly were offered a home visit conducted by a North Somerset Council member of staff (home visit advisor), together with five free First day tickets to try out local First services.

Households that expressed an interest were contacted by phone to schedule an appointment for a home visit. In total, three households booked an appointment, of which two took place (the other was cancelled at the door as the householder was unwell).

Following the home visits a record form was completed by the advisor. One home visit was rated as very successful and the other was very unsuccessful as the household felt it was cheaper to drive the car and would only use buses if they were cheaper. Both households had a test ticket.

4.4.3 Cycling further services

Households interested in further support on cycling were offered a home visit including personal advice, a bike health check and the offer of a free cycle trip computer.

Following phone contact, six cycling home visits were booked, and all were subsequently completed.

Advisors found that the most frequently stated reasons for wanting to cycle more were family/social. Other reasons included exercise, convenience, environment and economy. Barriers to cycling included not owning a bike, fitness and lack of parental interest in cycling.

Among the home visits conducted, four included a cycle health check to identify any maintenance issues in need of attention, and four households also took advantage of the free cycle trip computer. Visits typically lasted 40 to 60 minutes. The majority of visits were rated as either successful or very successful.

4.4.4 *Walking further services*

Households interested in further support on walking were offered a home visit including personal advice and route planning, as well as the offer (and set-up) of a free pedometer to help measure their progress.

No households took up the offer of a walking home visit. This may have been because once they received their information pack they felt that they had all the information required, or because households did not want advisors in their house. One household did not wish to receive a visit because of a family bereavement.

4.5 Summary

In summary, during the TravelSmart project in Worle, deliveries containing 8,544 items of travel information, incentives and rewards were made to a total of 872 households. Each delivery was packed in a project-branded folder and calico bag before being hand-delivered on foot or by bicycle. A total of eight home visits were conducted.

4.6 Implementation issues

The following issues arose either prior to or during implementation of the TravelSmart project, and therefore had an impact on the timetable, budget and/or the quality of the service provided to households.

- Recruitment of fieldwork staff

The short period for conducting the fieldwork (due to a relatively small target population) meant that it was unusually challenging to recruit staff who were willing to work on this short-term basis. The presence of a full-time field office manager did, however, make it easier to address staff resources and provide suitable cover for different roles when required.

- Availability and supply of information materials

It was not possible to obtain all materials for the start of the project due to problems with supply. Therefore a small number of information packs were delivered later than scheduled.

5 EVALUATION

5.1 Introduction

The Worle TravelSmart project was evaluated against a range of performance indicators focusing mainly on changes in personal travel behaviour.

In common with most other TravelSmart programmes, the key component of the monitoring and evaluation framework was a set of detailed travel behaviour surveys, conducted by Socialdata before and after the ITM project.

As well as results from these surveys, a number of additional outputs have been provided to North Somerset Council as further feedback. These include:

- A detailed Field Report summarising implementation of the ITM project and responses from the target population (reproduced as Section 4 of this report).
- Quote of the Day Booklet, containing comments collected from households during the ITM project.
- Quality Control, whereby a sample of households receiving information from the ITM project were telephoned to check safe receipt of their information pack, whether all items had been included and whether they were satisfied with the contents.

The remainder of section 5 focuses on the objectives, methodology and analysis of the travel behaviour surveys.

5.2 Travel behaviour surveys

5.2.1 Objectives

The key objective of these surveys was to provide a robust measure of the changes in travel behaviour associated with the TravelSmart project in Worle. In particular, the surveys were designed to evaluate the effects of the ITM project on mode choice, car use and average daily participation in walking and cycling as modes of travel.

5.2.2 Method and implementation

The New KONTIV[®] survey method has been developed over many years by Socialdata and applied successfully in travel behaviour research and the evaluation of ITM programmes in more than 15 countries world-wide, including most previous TravelSmart projects in the UK.

For each household, the survey consists of a household questionnaire and a set of individual travel diaries for each of its members for a nominated day of the week. The survey sample includes households completing travel diaries for all seven days of the week. To ensure a high response rate a pre-paid return envelope is provided with the survey and in cases where surveys are not returned Socialdata provides further motivation by post and telephone.

The survey aims to collect information on all trips⁹ to all out-of-home destinations on a nominated travel day for each household. The customer focus of the questionnaire design and individualised approach in the introductory mailing and subsequent motivation ensures high response rates and reliable results.

Surveys were conducted before and after the ITM project to evaluate changes in key mobility indicators over the project period. The key elements of the survey design were as follows:

- Separate samples were drawn from the ITM target population and from Milton and East Weston-super-Mare (as a control group). This allowed the analysis to take into account any external influences on travel behaviour across the town (e.g. changes in the weather including seasonal effects: major events affecting the highway network).
- All samples were drawn at random from residential households with available telephone records, in order to reflect the ITM target population itself. To further ensure that results were representative of the whole target population, the target group samples for the after survey included a proportional share of households which chose not to participate in the ITM project.

⁹ The subsequent analysis of day-to-day mobility excludes trips of more than 100km (a very small percentage of personal trips) to avoid skewing any distance-related indicators.

- Minimum sample sizes for both target and control groups (i.e. the number of complete survey responses) were designed to provide statistically significant results¹⁰. For both the before and after surveys, these were set at 300 persons net for the target group and 300 persons net for the control group.

The before survey was implemented by Socialdata with support from Sustrans during March to May 2008, and the after survey during April to May 2009. The procedure for each of the surveys was as follows:

- i) Mailing of an official announcement letter¹¹ to all households in the gross sample;
- ii) Mailing of survey forms and official covering letter to all households in the gross sample;
- iii) Mailing of an official reminder letter to all households from whom a response had not been received after one week;
- iv) Mailing of a second reminder letter (on Socialdata headed paper and signed by the Socialdata project manager) to non-responding households a further week later; and
- v) Reminder telephone calls to non-responding households each week to offer support in completing the forms and to motivate them to return them.

The actual sample sizes and response rates achieved are summarised in Tables 5.1a and 5.1b.

¹⁰ The statistical tests used in analysing the survey data are explained in Annex B.

¹¹ Bearing the North Somerset Council logo and signed by Karuna Tharmananthar, Assistant Director of Development and Environment.

Table 5.1a Survey sample sizes (persons) and response rates (%)

Baseline Travel Survey 2008 in Worle

Period of implementation: April 28th to June 1st 2008

	TOTAL	TARGET GROUP	CONTROL GROUP
Mail-out Gross	1,400	700	700
Sample loss ¹⁾	157	77	80
Adjusted gross	1,243	623	620
Response	881	436	445
Response rate in %	71%	70%	72%
(Contract persons)	600	300	300

Table 5.1b Survey sample sizes (persons) and response rates (%)

After Travel Survey 2008 in Worle

Period of implementation: April 28th to June 1st 2008

	TOTAL	TARGET GROUP	CONTROL GROUP
Mail-out Gross	1,145	700	445
Sample loss ¹⁾	72	63	9
Adjusted gross	1,073	637	436
Response	791	427	364
Response rate in %	74%	67%	83%
(Contract persons)	600	300	300

¹⁾ Sample loss: Moved away; deceased etc.

With 881 respondents in the before survey and 791 respondents in the after survey, a much larger sample was provided by Socialdata than in the initial design (600 people net each for the before and after) for no additional cost.

5.2.3 Analysis

The analysis of the before and after surveys was designed to show changes in key mobility indicators associated with the TravelSmart intervention. This involved a comparison of behavioural data from the target and control group samples in the before and after surveys. A summary of this methodology, including the statistical procedures used to account for changes in the data due to sampling factors or external influences, is shown in Annex B.

The basic measure used for this analysis was the average number of trips per person per year. This gives the best overall picture of personal travel behaviour, as opposed, for example, to average distances per person per year, the results for which would be skewed by the very small number of long trips.

The main indicators selected for the evaluation were as follows:

- Trips per person per year by main mode¹²;
- Personal daily mobility (including trip rates, distances travelled and trip purposes);
- Time spent travelling per person per day by main mode, and total daily exposure to walking and cycling; and
- Car use measured by actual usage, number of trips, travel time, distance travelled and average occupancy per private car per day.

A series of other indicators are also used to show changes in mode choice by trip purpose, time of day, gender and age group.

For the purposes of this evaluation, a trip is defined as a one-way course of travel having a single main activity as its purpose. The number of trips per person per year was calculated on the standard formula that on average, a person will spend 341 days of the year at home. This takes into account the days that a person travels away, for example on holiday or business.

¹² The main mode of a trip is defined as the mode used for the greatest length of the trip.

The charts below use ‘Without ITM’ and ‘With ITM’ to represent the changes in the ITM target group ‘before’ and ‘after’ the implementation of the TravelSmart programme, taking into account the effects of external influences measured across the rest of the town (control group).

It is important to note that the following results show the changes in travel behaviour that were achieved across the whole target population including those in the ‘N’ (‘Not Interested’) group and non-respondent households.

5.2.4 Changes in travel behaviour

Figure 5.1 shows the percentage of trips by main mode (i.e. ‘mode share’) with and without TravelSmart, as measured by a comparison of the after survey (‘With TravelSmart’) with the before survey (‘Without TravelSmart’). This comparison takes into account changes measured in the control group that did not receive TravelSmart. The share of car-as-driver trips was reduced from 52% to 46%, with corresponding increases in walking, cycling and public transport.

Figure 5.1 Changes in percentage of trips by main mode

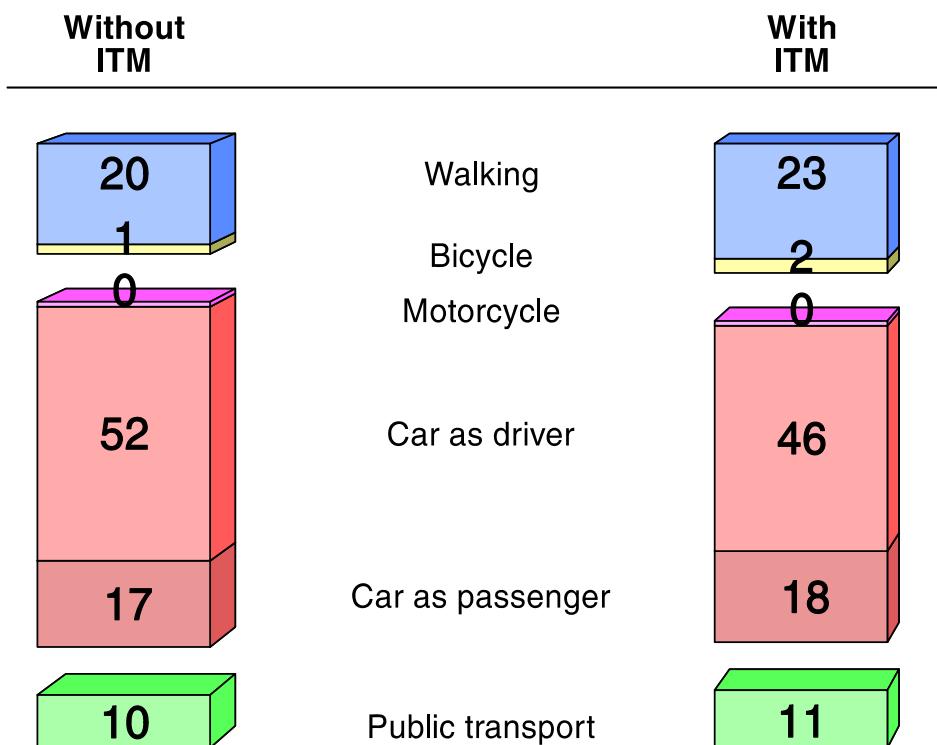
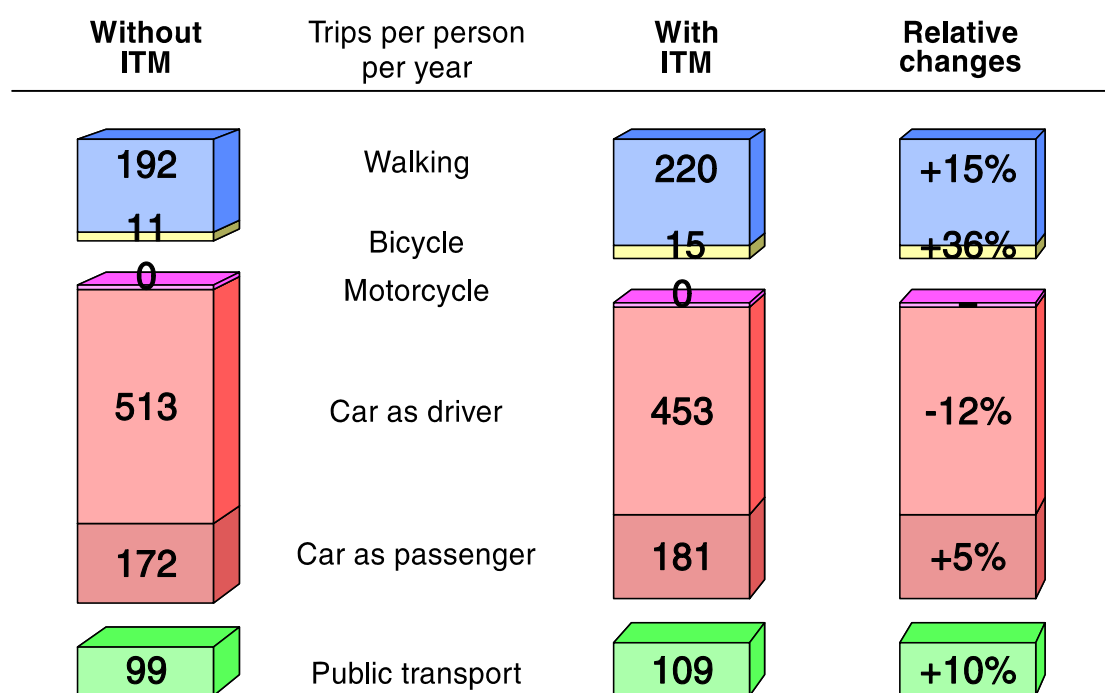


Figure 5.2 expresses the changes in mode choice in terms of trips per person per year and shows the relative changes associated with the TravelSmart intervention. It shows that the 12% relative reduction in car-as-driver trips was achieved by switching 42 trips per person per year to other modes (i.e. an average across the target population of less than one return journey¹³ per person per week).

Among the sustainable travel modes, walking saw the biggest gains in absolute terms with an additional 28 trips per person per year being made on foot, a relative increase of 15%. However public transport also gained an additional 10 trips per person per year (a relative increase of 10%), while cycling saw a 36% relative growth from a low baseline level.

Figure 5.2 Changes in trips by main mode (trips per person/year)



¹³ Each return journey being made up of two one-way trips.

As shown in Figure 5.3, there was almost no change in personal daily mobility between the two surveys. This strongly suggests that while TravelSmart influenced how people travel, it did not impact on the number of activities they undertake on a daily basis, their daily travel demand (measured by number of trips and distances travelled), or (despite the shift from car travel to more sustainable modes) time spent travelling.

Figure 5.3 Changes in personal mobility (per person/day)

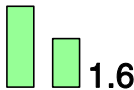
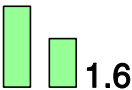


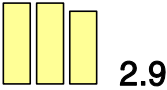
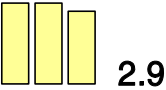


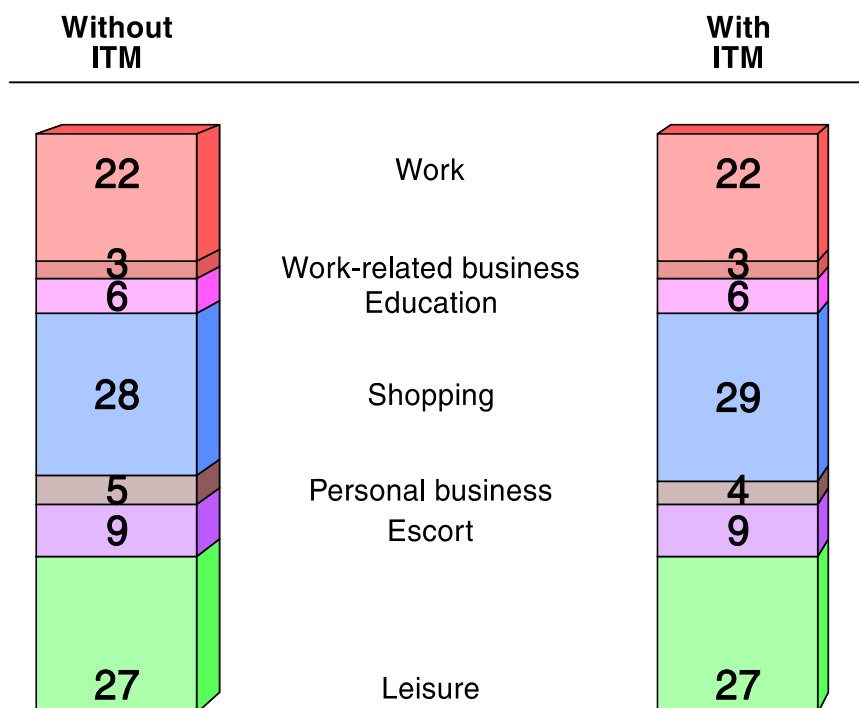
Without ITM	Per person/day	With ITM
	ACTIVITIES	
	TRAVEL TIME (min)	
	TRIPS	
	DISTANCE (km)	

Figure 5.4 provides an analysis of trips by purpose, without and with ITM. This shows that on the whole there was little change in the type of trips being undertaken by residents in the Worle target population between the two surveys. The proportion of commuting trips remained the same at just over one fifth of all trips, with shopping and leisure remaining the largest trip generators accounting together for more than half of all trips.

Figure 5.4 Changes in trip purpose (%)



The changes in car use for day-to-day trips shown in Figure 5.5 reflect the reduction in car-as-driver trips. There were reductions in the share of cars used each day (from 77% to 70%), average trips per car per day (from 2.7 to 2.3), average duration of use per car per day (from 48 to 46 minutes), and average distance travelled per car per day (from 24.6 to 20.9 km). A slight increase in average car occupancy was measured, from 1.3 to 1.4 people per trip.

Figure 5.5 Changes in car usage (per car/day)

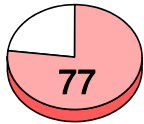
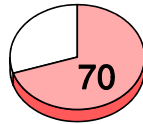
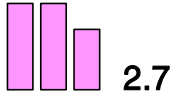






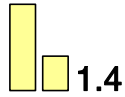
Without ITM	Per (private) car/day	With ITM
	USAGE (%)	
	TRIPS	
	DURATION (min)	
	DISTANCE (km)	
	OCCUPANCY (per trip)	

Figure 5.6 shows the changes in car distances travelled in more detail. While the number of cars owned by households in the target population remained unchanged at 2,500, the distance travelled per car per day for day-to-day trips¹⁴ reduced from 24.6 to 20.9 km, resulting in a net saving of 3.2 million car km per year, a relative reduction of 15%.

Figure 5.6 Changes in car distances travelled

Without ITM		With ITM
2,500	(Private) Cars in total	2,500
24.6	Kilometres per car per day (everyday mobility)	20.9
21.0 m	Total kilometres per year (341 days)	17.8 m
	Reduction (kilometres per year)	3.2 m
	Relative reduction	-15%

Using Defra’s standard CO₂ emissions factor¹⁵, this equates to annual emissions reductions of approximately 660,000 kg (or 660 tonnes) CO₂ compared to pre-project levels.

¹⁴ As stated earlier, this analysis excludes the small proportion of trips over 100km.

¹⁵ Based on a fleet average emissions factor of 207.5g CO₂ per vehicle km, from Defra’s (2007) *Guidelines to GHG Conversion Factors for Company Reporting*.

As shown in Figure 5.7, there was a notable increase in the average amount of time per person spent using active travel modes during the period between the two surveys (from 99 to 110 hours per person per year). This 11% relative increase could make a significant contribution to increasing overall levels of physical activity amongst the target population; especially for those individuals starting from a very low baseline level of activity.

Figure 5.7 Changes in total active travel time (per person/year in hours)

	Without ITM	With ITM	Change (hours)	Relative change
Hours per person per year	99	110	+11	+11%

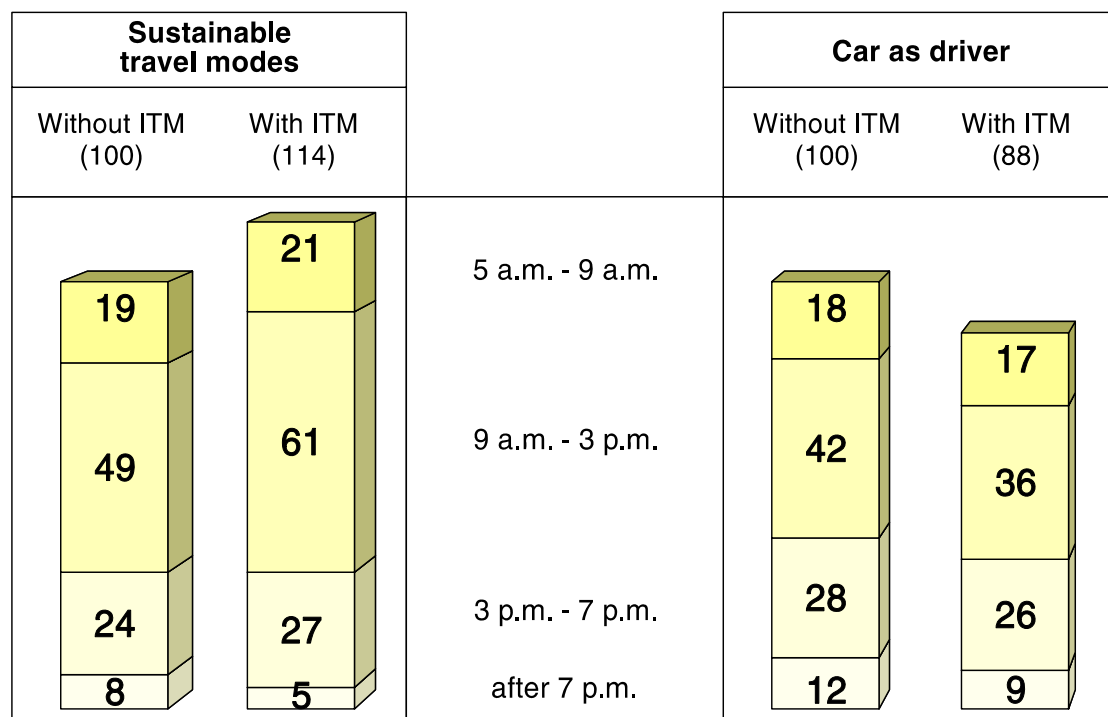
Walking, cycling and access / egress to public transport or car (parked)

The next three charts show how the increases in use of sustainable travel modes and the reductions in car-as-driver trips associated with TravelSmart were distributed by time of day, age and gender, and by trip purpose. For the purposes of this analysis, trips by sustainable travel modes (walking, cycling and public transport) are aggregated and compared with car-as-driver trips. There was an overall 14% relative increase in use of sustainable travel modes for all trip purposes (increasing from a baseline index of 100 to 114). The relative reduction in car-as-driver trips of 12% is shown by the change from a baseline index of 100 to an index of 88.

Figure 5.9 shows that the use of sustainable travel modes increased mostly in the daytime, with the greatest relative increase occurring between 9am and 3pm. There was a reduction in trips made by sustainable modes after 7pm.

The greatest relative reductions in car-as-driver trips also occurred between 9am and 3pm. Overall this analysis demonstrates that TravelSmart contributes to reducing car traffic and increasing active travel, to a greater extent at off-peak periods of the day.

Figure 5.9 Changes in mode choice by time of day (%)



The distribution of travel behaviour change by age and gender is shown in Figure 5.10. Increases in walking, cycling and use of public transport were measured across the age and gender groups, with the most significant (absolute and relative) growth occurring in people aged over 60. The greatest reductions in car-as-driver trips were also seen among people aged over 60, although there were reductions amongst men and women in the 20-59 age group.

Figure 5.10 Changes in mode choice by age and gender (%)

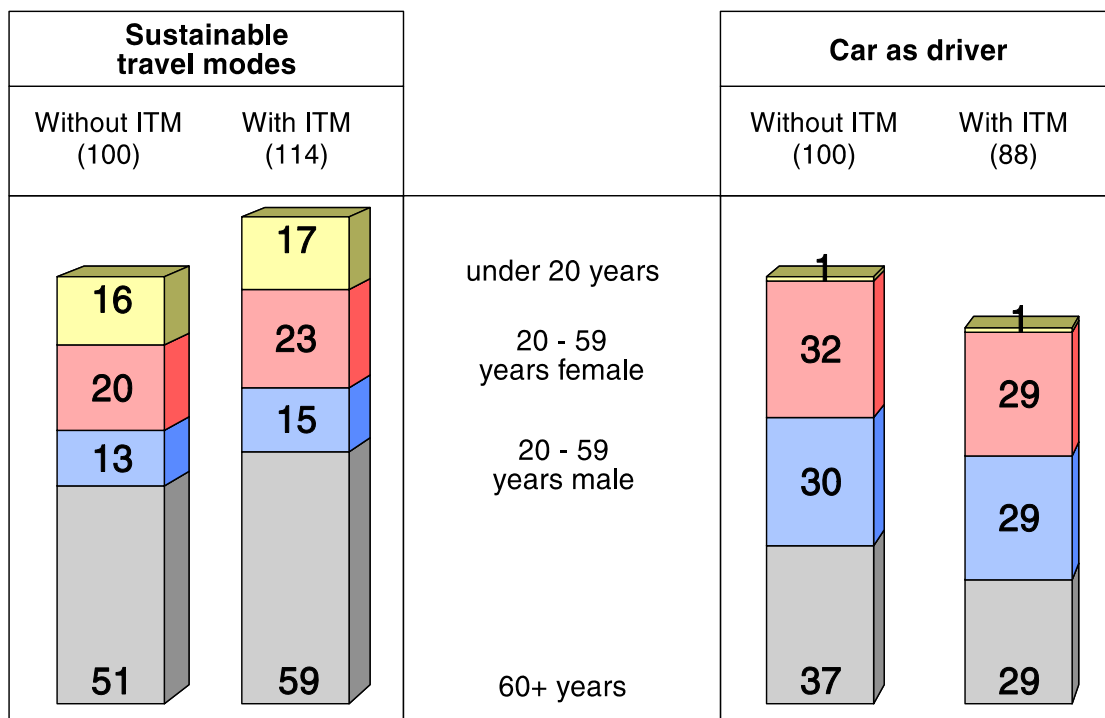
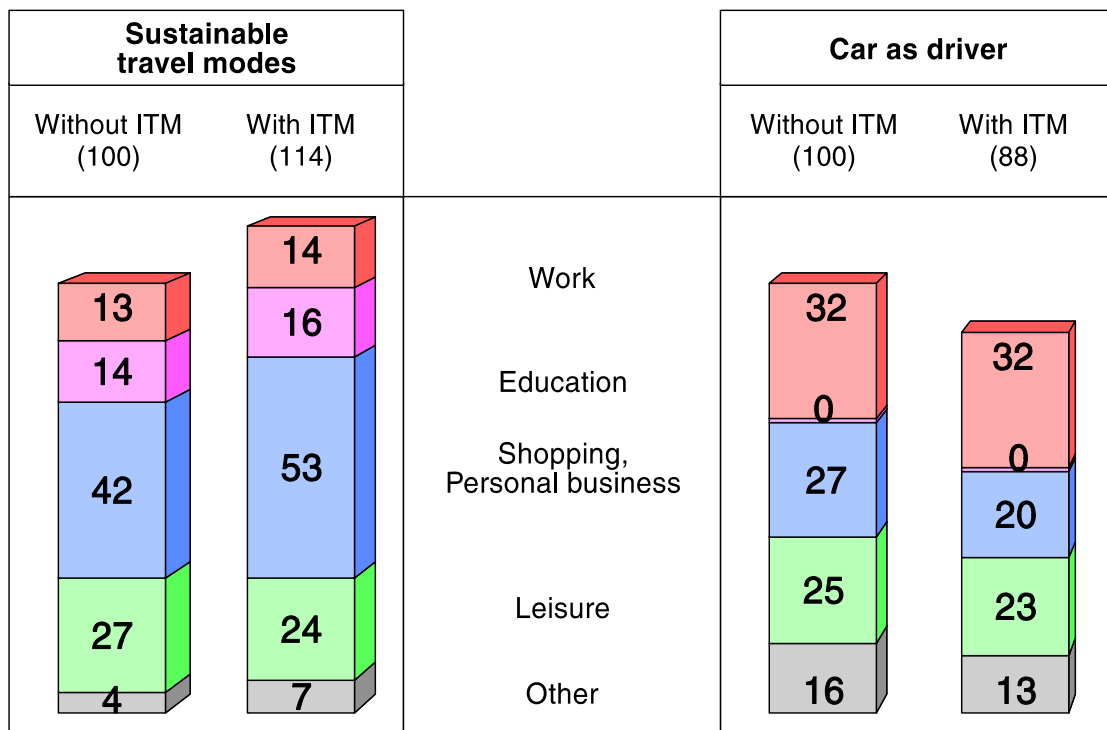


Figure 5.11 shows changes in mode choice for different types of trips. Increases in use of sustainable travel modes were apparent for all trip purposes except leisure. The greatest relative increase was for shopping and personal business. The greatest relative reduction in car-as-driver trips was also for this trip category. Work trips, by contrast, showed no reduction (probably illustrating the relative inflexibility of this journey type).

Figure 5.11 Changes in mode choice by trip purpose (%)



5.3 Customer satisfaction survey

In larger TravelSmart projects it is standard practice to carry out a customer satisfaction survey with those households receiving a home visit. In this small project, however, none of the eight households which received a home visit returned the customer satisfaction questionnaire. Unfortunately this means that we cannot report any outcomes in this regard.

6 CONCLUSIONS

6.1 Introduction

The aim of the TravelSmart project in Worle was to promote greater use of sustainable and active travel modes (walking, cycling and public transport) as alternatives to car travel among a target population of 2,078 households

In order to achieve this aim, the following components were put in place:

- The design of a coherent and attractive marketing offer consisting of local sustainable transport information;
- The identification of key individuals and project partners to ensure relevance, supply and shelf-life of marketing materials;
- The recruitment of local staff and resources to implement the fieldwork, providing an effective knowledge base and adding value as a community initiative; and
- The application of the proven TravelSmart ITM technique, with supporting project management systems, adapted where appropriate to local conditions.

The success of the project in achieving its aim is measured ultimately by the responses of the target population, in particular the willingness of households to participate in the TravelSmart project; the volume of information and other services requested; and, critically, the changes in travel behaviour.

The following sub-sections review the key outcomes of the Worle TravelSmart project under these broad headings.

6.2 Key outcomes

6.2.1 Travel behaviour change

The travel behaviour surveys conducted before and after the TravelSmart project show significant increases in levels of walking, cycling and use of public transport as modes of day-to-day travel, leading to notable reductions

in car use. The key indicators, measured across the whole target population (i.e. not only those who actively participated in TravelSmart), are:

- Growth in trips by sustainable and active travel modes, with relative increases in walking (15%), cycling (36%) and public transport (10%);
- An increase of 11% in daily exposure to active forms of travel (i.e. time spent per person per day participating in walking and cycling as modes of transport);
- A relative reduction in car-as-driver trips of 12%, generating a 15% reduction in car distances travelled, a net saving of 3.2 million car km per year, and an estimated annual CO₂ saving of approximately 660 tonnes.

The evaluation suggests that greatest modal shift occurred from car-as-driver trips (which declined by 60 trips per person per year) to walking (which gained 28 trips). However public transport also gained 10 trips per person per year (a relative increase of 10%), while cycling saw a 36% relative growth, albeit from a low baseline level.

These changes are broadly in line with those measured in other recent TravelSmart projects (as shown in Table 6.1 below).

Table 6.1 Summary of recent TravelSmart project outcomes

Location	Date	Target population (households)	Relative change in car-as-driver trips	Relative change in trips by sustainable modes
Doncaster	2004-06	2,275	-13%	+29%
Gloucester	2005-06	4,050	-13%	+17%
Preston & South Ribble	2007	25,231	-10%	+11%
Lancaster Town & Morecambe	2007	25,001	-14%	+19%
East Inverness	2007	1,500	-13%	+19%
Peterborough	2004-08	30,006	-11%	+16%
Worcester	2004-08	23,504	-10%	+12%
Worle	2008	2,078	-12%	+14%

Further analysis of the travel survey data for TravelSmart in Worle shows that:

- The behaviour changes were achieved without any constraint on daily mobility (i.e. activities, number of trips, distances travelled) among the target population;
- Although there was markedly increased use of sustainable travel modes, there was virtually no change in daily time spent travelling among the target population;
- The greatest increases in use of sustainable modes occurred in the daytime between 9am and 3pm and the greatest reductions in car-as-driver trips were observed during the same time period, although smaller changes were observed at peak travel times;
- Shopping and leisure remained the largest trip generators after TravelSmart, accounting together for more than half of all trips; and
- Growth in the use of sustainable and active travel modes was seen across all age and gender groups, with the most significant growth occurring in people aged over 60.

6.2.2 Participation in the Individualised Travel Marketing project

The ITM process resulted in high participation rates among the target population of 2,078 households. This demonstrates a positive community response to the personalised TravelSmart approach, and suggests a previously unmet demand for information on local transport options.

- Ninety-four percent of households in the target population responded to the initial contact phase;
- Of these, 63% were interested in receiving information through the TravelSmart project and a further seven percent were already regular users of sustainable travel modes who did not request additional information;
- Eighty-eight percent of those initially interested in receiving information then responded to the offer of information and advice by completing a TravelSmart order form, either in their own time at home or over the phone; and
- A total of 872 personalised TravelSmart packages were hand-delivered to participating households (including 33 containing only rewards for regular users): approaching half of the initial target population.

6.2.3 Demand for information and advice

The profile of requests received during the TravelSmart project indicates a high demand for information and advice on local transport.

- More than 8,500 items of information, incentives and rewards were requested during the TravelSmart project, an average of 6.5 per participating household.
- Of the information materials on offer, the *Worle on foot, by bike, by bus* local travel map was the most popular item, followed by bus stop specific timetables and the *Weston and North Somerset Bus Times* booklet.
- A total of 105 households requested further personal advice on walking, cycling and/or public transport. Nine of these went on to book one or more advice sessions, and of the sessions booked, eight were

successfully completed. These advice sessions were conducted at people's homes and included the offer of an incentive.

***ANNEX A:
TRAVELSMART ORDER FORM***



Worle

Please fill in and return this form to order your **free** personal information pack

Help us to **help you!**

Help us to ensure prompt delivery of your materials - please fill in your contact details below

Name: _____
 Address: _____
 Tel. No. Day: _____ Evening: _____



Your order form for a personal journey plan

Please tell us about the journey you wish to make by public transport.

In order for us to provide you with the most useful information, please complete ALL sections of this form.

Journey plans are available for travel in and around the Weston and Worle area.

From: (please give exact location)

House number/name: _____

Street: _____

Town/City: _____

Postcode: _____

To: (please give exact location)

House number/name: _____

Street: _____

Town/City: _____

Postcode: _____

Outward journey:

I need to depart / arrive (delete as appropriate)

on (day of the week) _____ at (time) _____ am / pm

Return journey:

I need to depart / arrive (delete as appropriate)

on (day of the week) _____ at (time) _____ am / pm

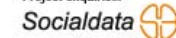
Means of travel:

I am prepared to travel part/all of the way by: Bus Coach Rail Any mode

Sustrans registered charity No. 326550



Project enquiries:



PO Box 536, Bristol BS99 3UX
Freephone 0800 58 78 029

Thank you for taking part in *TravelSmart!*

Public Transport

- **Bus stop timetables:** A timetable showing the frequency and destination of all main services using the bus stop(s) nearest to your home.
- **North Somerset travel map:** A guide to bus routes and destinations throughout the area with frequency information.
- **Weston-super-Mare and North Somerset bus times:** First timetables for all the main services in the area, with local network maps for Portishead, Clevedon, Nailsea and Weston-super-Mare.
- **Pocket bus timetables:** Timetables showing the times and routes for bus services of your choice in Worle and the surrounding area:
 - X1, 350:** Weston-super-Mare - Congresbury - Clawe - Backwell - Bristol
 - ACL 06:** Weston-super-Mare - Oldmixon - Worle
 - ACL 05:** Weston-super-Mare - Sainsburys - Uphill - Hospital
 - ACL 85:** Weston town centre - Earthon Grove - Coronado Road - St Georges
- **Local train timetables:** A convenient pack of pocket timetables for local trains to Bristol Temple Meads, Filton Abbey Wood, Bristol Parkway and Exeter.
- **Regional & national train timetables:** Trains to London, South Wales, Bath, Cheltenham, Somerset, Birmingham and Portsmouth.
- **PLUSBUS:** Information on ticket options for combining bus and train travel.
- **Freedom travelpass:** Details about how to get unlimited travel on most buses and all train services within North Somerset, Bristol, Bath and North East Somerset and South Gloucestershire.
- **Diamond Travelcard:** Information about concessionary travel for the over 60s and those with eligible disabilities (includes application form).
- **The easy way to explore the region by train:** Information about ticket options available allowing you to explore the South West and West Country by train.
- **Railcards:** Details on discounted travel:

Senior Citizens <input type="checkbox"/>	Young Persons <input type="checkbox"/>
Families <input type="checkbox"/>	Disabled Persons <input type="checkbox"/>
- **Simpler rail fares:** Details of changes to rail tickets and fares.

New local travel map



- **Worle on Foot, by Bike and by Bus:** A brand-new TravelSmart map for your local area showing walking and cycling routes, information about bus and train services and local facilities.

Cycling

- **Maps for cyclists:** A series of local cycle maps showing traffic-free and on-road cycle paths, plus cycle shops, cycle parking and other useful information.
 - North Somerset:** Including Clevedon, Nailsea, Portishead and Weston-super-Mare.
 - Bristol:** Covering Avonmouth, South Bristol, Bristol city centre and Kingswood.
 - Bath and North East Somerset:** Bath and the city centre, Keynsham, Midsomer Norton and Radstock.
 - South Gloucestershire:** Including Patchway, Bradley Stoke, Thornbury, Alveston, Winterbourne, Yate, Chipping Sodbury and Frampton Cotterell.
- **The Strawberry Line:** Leaflet and map for the 8 mile traffic-free route from Yatton to Cheddar, via Congresbury and Winscombe, with information about attractions along the route.
- **Cycling by train:** National Rail leaflet about taking bikes on trains in the UK.
- **Why Cycle?** Find out for yourself what's making more and more people take to two wheels.
- **Got cycling:** An indispensable guide to buying, riding and maintaining your bike.
- **Cycling with children:** Information about bike seats, tag-along bike trailers and many other ways to get them started young.
- **Take a Stand (Life Cycle UK):** Information about how to get free cycle stands for your organisation.

Walking

- **Family Explorer:** Map showing walking and cycling routes in North Somerset with information about local activities and accessibility.
- **The Mendip Hills - West Mendip Way:** What to look out for and places to eat along this route.
- **Heritage - Somerset and county:** Local heritage trails including Worle, Sand Point, Weston Woods and Kewstoke.
- **Tyntesfield travel map 2008:** How to get to the National Trust Tyntesfield estate using the bus, train, on foot and by bike.
- **Woodspring, Sand Bay and Kewstoke walk:** Route map, places and features of interest and how to get there on public transport.
- **Walk in to Work Out:** A special leaflet on walking (and cycling) to work - how to get started and reap the benefits to your health and wealth!
- **Walk More - Feel the Difference:** Leaflet packed with useful tips on walking - the easy way to improve your health.
- **Get walking, keep walking:** Health facts, tips and a walking plan to get you started.

Related Information

- **Weston Community Transport:** Door to door service with fully accessible vehicles for those who are unable to use conventional public transport.
- **2CarShare.com:** North Somerset's Car Share scheme, the benefits and how to get involved.
- **Travel better, live better:** A comprehensive booklet with information about walking, cycling, using public transport and car sharing, useful contacts and local sustainable travel events.
- **Safe Routes to Schools:** Help for parents wanting to provide their children with a safe and healthy journey to school.
- **School travel maps:** Maps showing walking, cycling and public transport routes to local schools, including a 10 minute walking and 10 minute cycling zone.
 - Priority Community School
 - Milton Park Primary School
 - Worle Community School
 - Kewstoke Primary School
- **Go4Life Directory:** A guide to various local activities and classes for adults, including exercise classes, dance, golf, swimming and tennis.

TravelSmart Pledge Card

By ticking 'Yes' to the question at the top of this form, you qualify for a unique discount scheme.

The TravelSmart Pledge Card offers savings on accessories and new bikes at local cycle and outdoor shops.

TravelSmart PLUS

Your household may be eligible for a personal advice session with one of our local experts on public transport, cycling and/or walking in your area. Select one (or more) of the options below and we'll be in touch to arrange a home visit to suit your needs. You'll be surprised at the opportunities available.

- Choose public transport - get the most out of public transport with the help of one of our specialist advisers, including tips on all the best ticket deals and a chance to try out local services.
- Choose cycling - get going on two wheels with the help of one of our cycling consultants, including advice on the best local routes, a bike 'health check' and the limited offer of a free cycle trip computer.
- Choose walking - put your best foot forward with the help of one of our walking experts, including advice on the best local routes, health information and the limited offer of a free pedometer.

Free gift!

On quick return of this order form, you can receive this **FREE keyring with 5 years membership of a lost key recovery service (value up to £25).** Limited numbers available.



Please tick the box to accept this offer.

See back page for your personal journey plan order form



***ANNEX B:
CONCEPT OF EVALUATION***

ANNEX B: CONCEPT OF EVALUATION

1 Travel behaviour surveys

To demonstrate the effects of the TravelSmart ITM project in Worle, behavioural travel surveys were conducted to measure changes in travel behaviour. The surveys used the New KONTIV[®]-design, a self-administered mail-back survey technique with follow-up by post and telephone.

The survey concept was planned as ‘before’ and ‘after’ surveys, each approaching the ITM target group in Worle and a control group in a part of the town not approached by the ITM project. The surveys used a cross-sectional design based on independent randomly drawn samples of households in the target area and in the control area.

Table A1 shows the dates, response rates and net sample sizes for each of the surveys.

Table A1: Survey Data

	Survey date	Response rate	Net sample
			Persons
Target Group			
Before survey	April - May 2008	70 %	436
After survey	March - April 2009	67 %	427
Control Group			
Before survey	April - May 2008	72 %	445
After survey	March - April 2009	83 %	364

The survey samples ensure an acceptable level of statistical significance in the key outcomes presented (see Section 3 of this Annex). However the evaluation also includes a weighting procedure to ensure the response behaviour of the target group sample is representative of that found in the

ITM target population as a whole. To provide the correct basis for comparison, the distribution of the ITM groups ('I', 'R' and 'N' and non-respondents) in the survey sample is adjusted to match that found during the contact phase of the ITM campaign.

2 Control group effects

Changes in mode choice are the central indicators of the success of an ITM campaign. To separate the effect of ITM from other influences, a survey design with a control group was used. Both the target and control group were surveyed before and after the marketing intervention.

Table A2 shows the before and after results for the Target Group. Before the ITM project, 19 % of all trips were made (exclusively) on foot, 1 % by bicycle, less than 0.5 % by motorcycle, 53 % by car-as-driver, 18 % by car-as-passenger and 9 % by public transport. After the campaign the share of walking had risen to 23 %, of cycling to 2 % whereas the share of car-as-driver trips decreased to 46 %. Car-as-passenger trips remained stable and public transport increased from 9 to 11 %.

Table A2: Mode Choice (%) – Target Group

	TARGET GROUP	
	Before %	After %
Walking	19	23
Cycling	1	2
Motorcycle	0*)	0*)
Car-as-driver	53	46
Car-as-passenger	18	18
Public transport	9	11
TOTAL	100	100

*) less than 0.5 %

Mode choice can also be shown in trips per person per year. An average person in the target group undertook 986 trips per year at time of the before survey (on 341 days at place of residence). One hundred and eighty-nine of these trips were made on foot, 11 by bicycle, etc. (see Table A3).

Table A3: Mode Choice (trips per person per year) – Target Group

	TARGET GROUP	
	Before	After
	Trips per person per year	
Walking	189	220
Cycling	11	15
Motorcycle	0	0
Car-as-driver	516	453
Car-as-passenger	180	181
Public transport	90	109
TOTAL	986	978

However the changes between before and after are not necessarily the effects of the ITM project. To determine other influencing factors (seasonal and external influences), a control group which was not exposed to the ITM project was used.

Before the ITM project in the control group (Table A4) 18 % of all trips were made (exclusively) on foot, 50 % by car-as-driver and 20 % by car-as-passenger. Public transport accounted for 6 % and cycling for 5 %. After the ITM project, there was a decrease in car use (driver: 50 to 49 %; passenger: 20 to 19 %) and slight increases in walking and public transport (see Table A4).

Table A4: Mode Choice (trips per person per year) – Control Group

	CONTROL GROUP	
	Before %	After %
Walking	18	19
Cycling	5	5
Motorcycle	1	1
Car-as-driver	50	49
Car-as-passenger	20	19
Public transport	6	7
TOTAL	100	100

These changes in the control group have to be taken in account when the reference for the situation ‘with ITM’ is established. The observed changes for the control group between before and after would also be expected in the target group. Comparing before and after on the basis of trips per person per year for the control group, a ‘transfer factor’ is derived (Table A5), and with this transfer factor the before figures for the target group are adapted (Table A6). On this basis, the ‘before’ situation in the target group *corrected by control group effects* forms the baseline against which change is measured.

Table A5: Mode Choice (trips per person per year) – Control Group

	CONTROL GROUP		Transfer Factor
	Before	After	
Walking	172	175	1.018
Cycling	43	43	1.000
Motorcycle	7	6	0.860
Car-as-driver	469	467	0.994
Car-as-passenger	190	182	0.958
Public transport	63	70	1.100
TOTAL	944	943	

Table A6: Mode Choice (trips per person per year) – Target Group

	TARGET GROUP		
	Before	Transfer factor	Without ITM
Walking	189	1.018	192
Cycling	11	1.000	11
Motorcycle	0	0.860	0
Car-as-driver	516	0.994	513
Car-as-passenger	180	0.958	172
Public transport	90	1.100	99
TOTAL	1,010		987

This shows that following the after survey there would have been 192 walking trips per person per year ‘without ITM’, 11 bicycle trips, 513 trips by car-as-

driver and 172 trips as passenger, and 99 public transport trips. The changes associated with ITM can be measured in this basis.

Table A7 shows the findings of the after survey ('with ITM') for the target group. In the target group 23 % of all trips were now made (exclusively) on foot, 2 % by bicycle, 0 % with a motorcycle, 46 % by car-as-driver, 18 % by car-as-passenger and 11 % by public transport.

Compared to 'without ITM', the share of walking trips had risen from 20 to 23 %, bicycle trips from 1 to 2 %, car-as-passenger from 17 to 18 % and public transport from 10 to 11 %. The share of car-as-driver trips decreased from 52 to 46 %.

Table A7: Mode Choice – Target group

	Without ITM	With ITM
	%	%
Walking	20	23
Cycling	1	2
Motorcycle	0*)	0*)
Car-as-driver	52	46
Car-as-passenger	17	18
Public transport	10	11
TOTAL	100	100

*) less than 0.5 %

Again, mode choice can also be shown in trips per person per year. At that time of the after survey an average person undertook 987 trips per year 'without ITM' and 978 trips 'with ITM'.

Walking was the means of transport for 192 trips 'without ITM' compared to 220 trips 'with ITM'. Cycling increased from 11 to 15 trips per person per year, public transport from 99 to 109 trips. Car-as-driver trips decreased

from 513 to 453 trips, while car-as-passenger trips rose slightly from 172 to 181 per person per year (see Table A8).

Table A8: Mode Choice (trips per person per year) – Target Group

Trips per person per year	Without ITM	With ITM
Walking	192	220
Cycling	11	15
Motorcycle	0	0
Car-as-driver	513	453
Car-as-passenger	172	181
Public transport	99	109
TOTAL	987	978

This can also be expressed as relative change, as shown in Table A9.

Table A9: Mode Choice – Relative Change

Change in trips per person per year		Relative change %
+28	Walking	+15
+4	Cycling	+36
±0	Motorcycle	n. a.
-60	Car-as-driver	-12
+9	Car-as-passenger	+5
+10	Public transport	+10

Walking trips per person per year increased by 28 (relatively by +15 %). This is the greatest increase in number of trips. Bicycle increased by 4 trips per person per year (+36 %) and public transport by +10 (+10 %).

There was a decrease of 60 car-as-driver trips per person per year (-12 %).

This evidence indicates that the ITM project reduced car use by 12 % and increased the share of sustainable travel modes: walking (+15 %); cycling (+36 %); and public transport (+10 %).

3 Independent audit of Socialdata evaluation concept

The evaluation concept was developed and used for the first large-scale application of TravelSmart in Perth (Australia). In this case, an independent audit was undertaken (commissioned by the Western Australian Ministry of Transport) by Prof. K. Goulias, then Professor at the Pennsylvania State University and Director of the Centre for Excellence in Intelligent Transportation Systems; now Professor at the University of California in Santa Barbara. He states in his audit report that all documents were accessible, enabling an unlimited verification of the correctness of the method and the results, and concludes that the procedure used by Socialdata “...exceeds [the standard] in other survey applications in Europe and the US” and “...in all components the Socialdata planned assessment follows high standards of practice. The procedures ... are excellent” (in Goulias, K. G., *Audit of South Perth Individualised Marketing Evaluation Survey*, report for Western Australia Transport, 2001).

4 Statistical Significance of the Changes in Mode Choice

Concerning the statistical significance of the changes in mode choice, expert opinions differ whether this test should be based on persons or trips. For that reason the following test was implemented for both persons and trips. The statistical significance of change in mode choice is located between the results of these two tests. Bases for the test are persons in independent samples before and after.

Car-as-driver mode share

Persons

The following test can be performed. The zero-hypothesis and the alternative-hypothesis are:

$$H_0: P_1 \leq P_2$$

$$H_1: P_1 > P_2$$

P_1 = share of car-as-driver 'without ITM'

P_2 = share of car-as-driver 'with ITM'

The zero-hypothesis postulates that the share of car-as-driver trips with ITM is not lower than without ITM. If this zero-hypothesis can be rejected, there is an impact of ITM on the reduction of the car-share.

The calculation is done as t-test for independent samples. The share of car-as-driver without (52 %) and with ITM (46 %) and the number of observed persons are the inputs (before: $n_1 = 436$; after: $n_2 = 427$).

For the test value the following formula exists:

$$\begin{aligned} T &= \frac{P_1 - P_2}{\sqrt{\frac{P_1(1-P_1)}{n_1} + \frac{P_2(1-P_2)}{n_2}}} = \\ &= \frac{0.057}{\sqrt{0.0012}} = 1.6746 \end{aligned}$$

Test-decision:

$$\varphi(y, y) = \begin{cases} 1 & \text{if } T < z_a \\ 0 & \text{other} \end{cases}$$

$$z_{0.05} = 1.645 \text{ (critical value for a level of significance of 95 \%)}.$$

It follows that based on this test the zero-hypothesis (no decrease of the share of car-as-driver with ITM) can be rejected with a probability of over 95 %.

Trips

For testing on the basis of trips, the same test can be performed.

The zero-hypothesis and the alternative-hypothesis are:

$$H_0: P_1 \leq P_2$$

$$H_1: P_1 > P_2$$

P_1 = share of car-as-driver 'without ITM'

P_2 = share of car-as-driver 'with ITM'

The zero-hypothesis postulates that the share of car-as-driver trips with ITM is not lower than without ITM. If this zero-hypothesis can be rejected, there is an impact of ITM on the reduction of the car-share.

The calculation is done as t-test for independent samples. The share of car-as-driver 'without ITM' (52 %) and 'with ITM' (46 %) and the number of observed trips are the inputs (before: $n_1 = 1,261$; after: $n_2 = 1,227$).

For the test value the following formula exists:

$$T = \frac{P_1 - P_2}{\sqrt{\frac{P_1(1-P_1)}{n_1} + \frac{P_2(1-P_2)}{n_2}}} =$$

$$= \frac{0.057}{\sqrt{0.0004}} = 2.8433$$

Test-decision:

$$\varphi(y, y) = \begin{cases} 1 & \text{if } T < z_\alpha \\ 0 & \text{other} \end{cases} \quad \text{B11}$$

$z_{0.01} = 2.326$ (critical value for a level of significance of 99 %).

It follows that the zero-hypothesis (no decrease of the share of car-as-driver with ITM) can be rejected with a probability of more than 99 %. The reduction of car usage achieved by the ITM project in the target area is therefore highly statistically significant.

The significance tests performed produced a significance level of more than 95 % based on persons and more than 99 % based on trips.

Table A8: Overview of significance tests for car reduction

	Persons	Trips
Level of significance	> 95 %	> 99 %

These values enable us to say with great confidence that the observed changes in mode choice did not occur by chance.

Sustainable travel mode share

The statistical significance of the changes in mode choice was also tested for the achieved increase of the share of sustainable travel modes (STM = walking, bicycle, public transport).

Persons

The following test can be performed. The zero-hypothesis and the alternative-hypothesis are:

$$H_0: P_1 \geq P_2$$

$$H_1: P_1 > P_2$$

P_1 = share of STM 'without ITM'

P_2 = share of STM 'with ITM'

The zero-hypothesis postulates that the STM share without ITM is larger than or equal to the STM share with ITM. If this zero-hypothesis can be rejected, there is an impact of ITM on the increase in STM share.

The calculation is done as a t-test for independent samples. The share of STM without (31 %) and with ITM (36 %) and the number of observed persons are the inputs (before: $n_1 = 436$; after: $n_2 = 427$).

For the test value the following formula exists:

$$T = \frac{P_1 - P_2}{\sqrt{\frac{P_1(1-P_1)}{n_1} + \frac{P_2(1-P_2)}{n_2}}} =$$

$$= \frac{-0.05}{\sqrt{0.0010}} = -1.5618$$

Test-decision:

$$\varphi(y, y) = \begin{cases} 1 & \text{if } T > z_a \\ 0 & \text{other} \end{cases}$$

$z_{0.1} = -1.645$ (critical value for a level of significance of 95 %).

It follows that based on this test the zero-hypothesis (no increase of the share of STM with ITM) can be rejected with a probability of over 95 %. The increase of STM usage achieved by the STM campaign is statistically significant.

Trips

For testing on the basis of trips, the same test can be performed. The zero-hypothesis and the alternative-hypothesis are:

$$H_0: P_1 \geq P_2$$

$$H_1: P_1 > P_2$$

P_1 = share of STM 'without' ITM

P_2 = share of STM 'with' ITM

The zero-hypothesis postulates that the STM share without ITM is larger than or equal to the STM share with ITM. If this zero-hypothesis can be rejected, there is an impact of ITM on the increase in STM share.

The calculation is done as t-test for independent samples. The share of STM without (31 %) and with ITM (36 %) and the number of observed trips are the inputs (before: $n_1 = 1,261$; after: $n_2 = 1,227$).

For the test value the following formula exists:

$$T = \frac{P_1 - P_2}{\sqrt{\frac{P_1(1-P_1)}{n_1} + \frac{P_2(1-P_2)}{n_2}}} =$$

$$= \frac{-0.05}{\sqrt{0.0004}} = -2.6517$$

Test-decision:

$$\varphi(y, y) = \begin{cases} 1 & \text{if } T > z_\alpha \\ 0 & \text{other} \end{cases}$$

$z_{0.01} = -2.326$ (critical value for a level of significance of 99 %).

It follows that the zero-hypothesis (no increase of the share of STM with ITM) can be rejected with a probability of at least 99 %. The increase of STM usage in the ITM target area is highly statistically significant.

The significance tests performed produced a significance level of over 95 % based on persons and over 99 % based on trips.

Table 8: Overview of significance tests for STM increase

	Persons	Trips
Level of significance	> 95 %	> 99 %

These values enable us to say with great confidence that the observed changes in mode choice did not occur by chance.

In case of any queries regarding this report, please contact:

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