

# Evaluation report

## CTC 'Shop by Bike' trial

### September 2012 to November 2012

#### Introduction

The Shop by Bike trial was carried out as part of CTC's involvement in the EU funded CycleLogistics project. A second trial will be carried out in 2013, the venue for which is as yet undecided, but we will use the feedback from this first trial to help make that decision.

There are several aims of these trials;

- More than 80% of shopping trips are for everyday consumables. A small shift in these trips from car to bike would have a considerable impact on our towns and cities.
- We wanted to help bring about a change in shopping routines and the way people transported other personal goods. This will hopefully help them make the change from motorised transport to human powered transport for at least some of their journeys.
- We also hoped that participants would recommend and encourage shopping by bike to their friends, family and colleagues, using their own experience to help 'sell' it and to generate a knock-on effect.
- Finally, we asked participants to provide us with information about the facilities provided by the various supermarkets and shops they visited; we will use this to lobby for better facilities for all cyclists so that more people will be encouraged to choose the bike for some of their shopping trips.

In the first trial, CTC used both its website and weekly email newsletter to advertise for volunteers. Participation was incentivised by offering a £20 voucher to spend at Wiggle, an on-line bicycle store, and the criterion for involvement was that they shouldn't currently use the bike as their main mode of transport for their shopping (however, this wasn't strictly adhered to, and for purposes of comparison has actually proved quite useful). Within 72 hours of advertising the campaign 100 people had stepped forward to take part, the limiting factor was the number of incentives we could offer, though several people did choose to take part without incentive as they were so keen to add their findings to the project. We asked the volunteers to use the bike for shopping at least once a week for a minimum of 4 weeks and to report back via a questionnaire which included a range of questions, some requesting quantitative data and some questions asking for personal opinion.

## Executive Summary

Of the 106 people originally signed up to do the trial, 77 people managed to complete it and returned their questionnaires, a return rate of over 72%. The main reasons for non-completion of the task were illness and bad weather during October.

The table below provides a total distance travelled by the participants throughout the trial period, and the amount of carbon dioxide emissions and fuel this saved during the period<sup>1</sup>. The savings quoted are the equivalent of roughly 4 cars<sup>2</sup> being removed from our roads for the period of the trial. Whilst this doesn't sound huge, this is the product of just 77 people's efforts, and a small percentage shift in overall modal share from cars to bikes would have a substantial effect on the roads.

Pre-trial transport choice	Number	Percent	Total number of trips made	Distance travelled (km)	CO <sup>2</sup> emissions saved (kg)	Fuel saved (kg)
Car	50	64.9%	465	3,392	763	228
Bike	19	24.7%	276	2,219	499	149
Public transport or walking	8	10.4%	76	362	81	24
<b>Total</b>	<b>77</b>	<b>100%</b>	<b>817</b>	<b>5,973</b>	<b>1,344</b>	<b>402</b>

**Table 1: Summary of activity**

Unsurprisingly, participants that already used their bike a lot were prepared to travel a little further; they averaged just over 8 kilometres per trip and they also made more frequent trips on average, shopping approximately 3 times per week. Car users averaged just over 7 kilometres per trip and also shopped by bike less frequently, making slightly over 2 trips per week.

Most of the participants reported that they had enjoyed the experience of shopping by bike and just 1 person said that they were unlikely to continue. Perhaps most encouraging is that all 50 car users involved in the trial said they would carry on using the bike for at least some of their shopping trips in the future. Furthermore, only 4 people said they hadn't recommended shopping by bike to friends and family. However, there were numerous conditions attached to some of the positive responses. The likely impact of this will be considered in depth later in the report.

<sup>1</sup> for the purpose of this report figures of 225g of carbon dioxide and 67g of fuel per kilometre are used to calculate the savings

<sup>2</sup> Based on an average car travelling about 19,000 km/year

## Supermarket and Store Performance

Participants in the trial shopped at a wide variety of different stores and supermarkets, from large national organisations such as Tesco, Sainsbury and Asda, to smaller high street independent retailers and local markets. The provision of cycle parking facilities encountered at these stores was as varied as the stores actually visited. The table below offers a summary of the responses received.

Satisfaction with facilities offered	Pre-trial transport choice		
	Car	Bike	Public transport or walking
Very satisfied	5	4	0
Fairly satisfied	19	6	2
Partly satisfied	19	6	4
Not at all satisfied	6	2	2
Mix of responses	1	1	0
<b>Total</b>	<b>50</b>	<b>19</b>	<b>8</b>

**Table 2; Satisfaction with cycle parking facilities offered by supermarkets**

There were a few reasons underpinning total satisfaction with the facilities being offered; the provision of plentiful covered parking for bikes, the parking area being monitored by the store’s CCTV system or being positioned reasonably close to the store’s entrance, and a relaxed attitude shown by staff when the weather was bad.

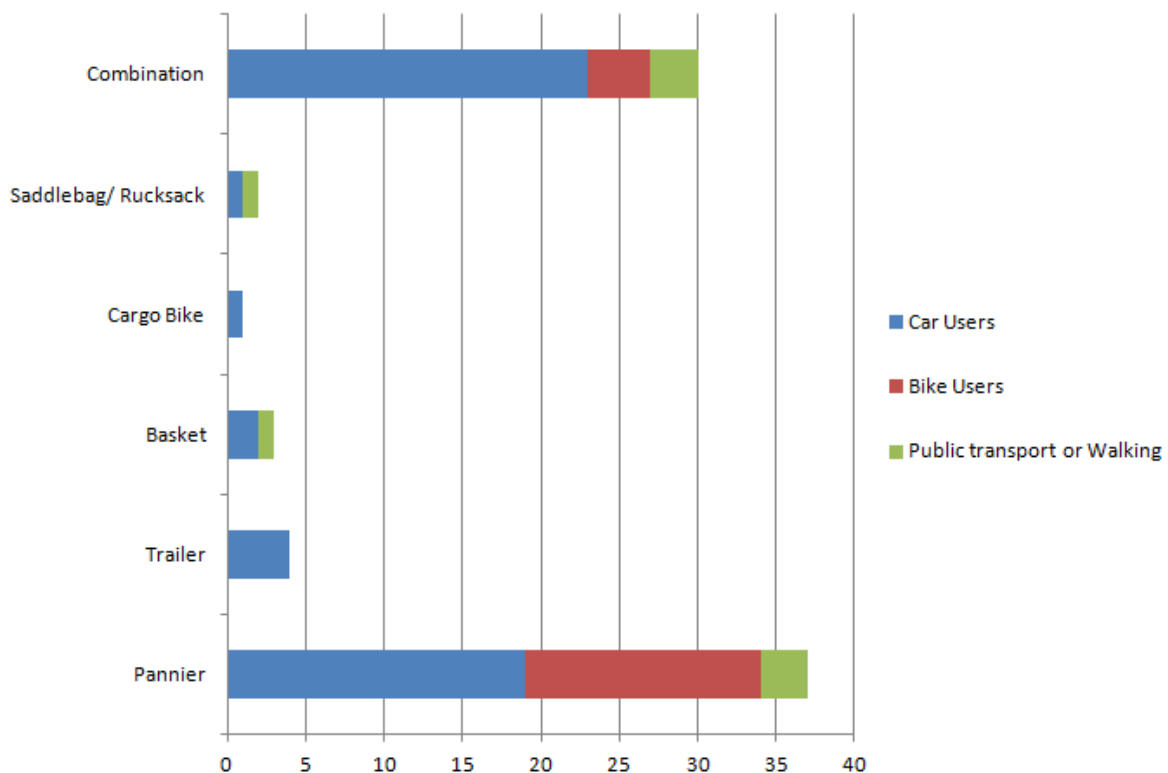
*‘...none of the supermarkets minded when I put my bike inside the entrance when it was raining’*

Those that reported complete dissatisfaction cited pretty much the opposite. A lack of dedicated bike parking or bike parking that was clearly added as an afterthought, squashed between signs, near bins or parked cars all of which made it difficult to exit once fully laden. One respondent reported that they had shopped in pairs as they were worried about easily removable parts on the bike not being there when they returned. Despite this negative experience only 1 of these participants said they definitely wouldn’t be using the bike for shopping in the future and only 1 hadn’t recommended it to friends or family.

There was a range of responses in between, both positive and negative. A recurring complaint was the lack of security offered for bikes, and it is interesting to note that this still doesn't dissuade people from shopping by bike. This provides questionable motivation for supermarkets to improve their facilities. In terms of providing facilities for cyclists there were no reliably good or bad performing national supermarket chains. CTC will use this report to highlight these inconsistencies to the stores involved and will work with them to try and improve this situation for all cyclists.

### Equipment

Figure 1 below shows the type of equipment used by participants in the trial. By far and away the most popular piece of equipment was the pannier, followed by a combination of equipment (the vast majority of which incorporated panniers in some way, such as panniers and trailer, panniers and a rucksack etc.).



**Figure 1; Type of equipment used**

*'It was too lengthy to pack everything away...made the whole trip longer...'*

Over 80% of people reported that they were at least fairly satisfied with the equipment's ability to make shopping by bike easier. Only 1 person was completely dissatisfied with the equipment they used (a combination of saddlebag and a shoulder bag), reporting that packing everything away was

laborious and that overall it had added time to their shopping trip. They also quoted that they found it harder to just nip in another shop on the way home due to being fully loaded.

Although an overwhelming majority of people felt the equipment they used made it easier, there were a significant number, 23 participants, who felt the equipment used was not sufficient to transport everything. There was no real correlation between the type of equipment used and the ability to transport everything. One desirable by-product of this limited space, reported by some of the participants at least, was that less household food waste was being created.

There were some great examples of people using their bikes for transporting things other than themselves and their shopping during the trial, and most people said that they had done this. Moreover, all bar 3 people said that they were now motivated to use their bike for transporting other personal goods.

Below is a selection of some of the many things that people managed to transport on their bikes:

- 🚲 Recycling
- 🚲 Logs
- 🚲 Sports equipment
- 🚲 Gardening tools
- 🚲 Computer equipment
- 🚲 Accordion
- 🚲 Guitar
- 🚲 Car batteries
- 🚲 Carpentry tools
- 🚲 Laundry
- 🚲 Study materials
- 🚲 22 inch television



Bikes; not just for shopping

### Estimated Future Impact of the Trial

Participants in the trial were asked whether or not they were likely to continue shopping by bike, and a resounding 99% of them said yes they would carry on shopping by bike. We also asked for what percentage of shopping trips were they likely to use the bike for in the future; over 50 people said they would be doing at least half their shopping by bike.

This information was then used in conjunction with the number of times they told us they had shopped by bike during the trial, and how far they had travelled on average per trip. We have used this data, along with a couple of assumptions, to try and estimate the number of kilometres per week they would travel whilst shopping by bike in the future.

An explanation of how this was calculated is below, and an example table follows. The choices made refer to information on the participant questionnaire.

- John Smith told us he had participated for 4 weeks and he had made 6 trips in total giving us an average of 1.5 trips per week.
- On average each trip was 1 mile or 1.61km (*choices offered were 0-2 miles, 3-5 miles, 6-10 miles or more than 10 miles*); the midpoint of these was then chosen for the calculation, in John’s case, 1 mile.
- John ticked ‘Yes’ he would continue shopping by bike (*choices offered were ‘Yes’, ‘Probably’, ‘Probably Not’, and ‘No’*), these choices were assigned a value of 100%, 75%, 25%, and 0% respectively.
- Finally, when asked for what percentage of trips he would use his bike he ticked the ‘50% to 75%’ box (*choices offered were ‘0%-25%’, ‘26%-50%’, ‘51%-75%’, and ‘76%-100%’*); again, the midpoint of these was then chosen for the calculation, in John’s case 62.5%.
- The ‘Likelihood of Continuation’ figure was then multiplied by the ‘Percentage of Trips’, and the result multiplied by ‘trips per week’ x ‘trip length’
  - For John this calculation would be:  $(100\% \times 62.5\%) \times (1.5 \times 1.61) = 1.5\text{km/week}$

Name	Total km travelled	Avg. trips per week	Avg. trip length (km)	Likelihood of continuing	For what percentage of trips?	Likelihood x percentage	Est. future km/week
John Smith	9.7	1.5	1.61	100%	62.5%	62.5%	1.5
Jane Smith	57.9	1.8	6.44	75%	37.5%	28.1%	3.3

**Table 3; example estimate**

Using the above rationale it was possible to estimate the potential impact the Shop by Bike trial might have in the future, highlighted in the table below. This doesn’t take into account the multiplier effect of the participants telling others about their experience as this was too difficult to quantify. Hopefully this will lead to greater uptake over and above those that took part in the trial.

	Distance Travelled (km)	CO <sup>2</sup> Saved (kg)	Fuel Saved (kg)
Per week	775	174	52
Per annum	40,309	9,070	2,714

**Table 4; Projected future impact of the Shop by Bike trial**

Clearly it would be useful for CTC to follow this up with a telephone interview to participants in 6 months time to see if those involved have actually carried on shopping by bikes, and this would give greater confidence in these figures. This will be reported following our next Shop by Bike trial.

### Comments and Feedback from Participants

We invited participants to provide further feedback on several of the questions and responses were broad ranging.

Constructive comments on local issues and requests for us to provide support in lobbying local supermarkets were common, as were remarks that the project was a great idea and it should be promoted further:

*'I would be very keen to see this encouraged much more widely for market towns, and towns with pedestrianised areas...'*

*'shopping by bike needs to be part of the culture, changing how everyone uses bikes...'*

*'...let's get more people out of their cars because cycling is better!'*

*'... would be interested in any support or materials for lobbying supermarkets...'*

*'Better security for bike parking would be useful'*

Even more frequent were comments that people had found it quite easy, had really enjoyed it and that it was actually much quicker and more satisfying than their previous shopping trips:

*'I had to be a little more aware of how much heavy stuff I bought, but I came home with a real sense of achievement'*

*'In general shopping by bike is a relatively easy thing to accomplish'*

*'...invigorating both mentally and physically...'*

*'Much quicker, easier and eco-friendly than the car...'*

*'Walking to the shops is not bad, but I must confess that it's easier by bike and it saves time and I even discovered a cycle route to the nearest food market.'*

*'Much better; less stressful, no parking problems...enjoyed the excuse to be out on my bike'*

However, most useful for the CycleLogistics project were the comments offering suggestions to increase uptake in shopping by bike:

*'I think that one of the main barriers to shopping by bike is safe and easy access to shops. If we can continue to improve the cycling infrastructure I'm sure that more people would shop by bike'*

*'The roads need making safer to encourage less experienced cyclists. There is poor access to some out of town stores from cycle routes.'*

*'Any new retail developments should be encouraged to offer sensible secure bike parking.'*

*'Supermarkets could realistically offer a reward scheme for cycle users...'*

*'...supermarkets could be encouraged to support cycling with extra loyalty points for not bringing a car to the car park...'*

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