

*/Measure title:* **Road Safety Campaign in Brighton & Hove**

*City:* **Brighton & Hove** *Project:* **Archimedes** *Measure number:* **44**

## **Executive Summary**

Measure description and implementation process:

This measure involved the development and launch of a coordinated and branded road safety publicity campaign to increase road safety awareness and influence the behaviour in groups of people who are statistically most at risk of being injured in collisions. This was followed by the implementation of innovative road safety engineering measures, at 4 high risk sites in the CIVITAS area in order to improve safety.

Initial research was undertaken to identify those people most at risk of collisions, the sites where they are most at risk, and how and why these collisions occur. Using this research, designs for road safety solutions were drawn up and implemented. Solutions included changes in lining and signing, as well as poster and leaflet campaigns.

### **Evaluation approach and key results:**

The evaluation for this measure focused on specific target groups and compared social indicators of awareness and acceptance of the publicity campaign, alongside traffic and accident data at the sites of implementation. As the hard changes to infrastructure/street furniture etc. were relatively small scale, the changes in traffic and accident data were unnoticeable, therefore impact of the measure has focused on social awareness and acceptance.

Key Results:

- Accidents decreased significantly from 60 to 15.
- However people's perception of safety decreased from 75% to 63%.
- 29% reduction in peak hour traffic flows.

Lessons Learned:

- Obtain robust data collections at the start of the project.
- Consult and inform local community about your proposed solutions.
- Once measures have been implemented, continuing monitoring road safety behaviour to identified any changes or patterns.
- Make sure you get good 'before' and 'after' surveys, so you can evaluate the success of the measure.
- Communicate with your target audience. Involve them in the design of campaign activities, imagery, for example. – Don't assume you know what your target audience will respond to.

## **A Introduction**

---

### **A1 Objectives and Target Groups**

#### **A1.1 Objectives**

The measure objectives are:

##### (A) High level / longer term:

The objective of the CIVITAS Road Safety project was to:

- Assist in improving road safety and reducing casualties at high risk sites through physical road safety measures; and
- Increase road safety awareness in groups of people who are statistically most at risk of being injured in collisions through a publicity campaign.

##### (B) Strategic level:

To reduce the amount of casualties as a result of roadside collisions by:

- Increasing road safety awareness and influencing the behaviour in groups of people who are statistically most at risk of being injured in collisions through a publicity campaign.
- Implementing road safety engineering measures, at 2-4 high risk site in the CIVITAS area to improve road safety.

##### (C) Measure level:

- To launch a coordinated and branded road safety publicity campaign to increase road safety awareness and influence the behaviour in groups of people who are statistically most at risk of being injured in collisions.
- To implement innovative road safety engineering measures, at 2-4 high risk site in the CIVITAS area in order to improve safety.

#### **A1.2 Target groups**

The following target groups were identified as most 'at risk'.

- Pedestrians, 10-24 yrs
- Cyclists 20-34 yrs
- Motorcyclists (all ages)
- Moped riders 16 & 17 yrs

**Contributory factors:**

- Failed to look properly (Driver/rider – 34% of collisions)
- Failed to look properly (pedestrian - 22.64% of collisions)

**Campaign Focus Area:**

Further research was carried out to determine where (within the CIVITAS corridor) the 'at risk' groups are most frequently injured. Sections/junctions of the London Road and Lewes Road have been identified as high risk, in terms of road safety. Road Safety Campaign was an 18-month campaign. It ran along side the engineering works. Particular areas of focus for the campaign were:

- London Road (from the Cheapside junction to the Rose Hill Terrace junction)
- Lewes Road (at the Coombe Road junction)
- Lewes Road (at the Franklin Road junction)

**A2 Description**

This measure involved:

- The development and launch of a coordinated and branded road safety publicity campaign to increase road safety awareness and influence the behaviour in groups of people who are statistically most at risk of being injured in collisions; and
- The implementation of innovative road safety engineering measures, at 4 high risk sites in the CIVITAS area in order to improve safety.

**Brighton & Hove CIVITAS Corridor**





Measure title:

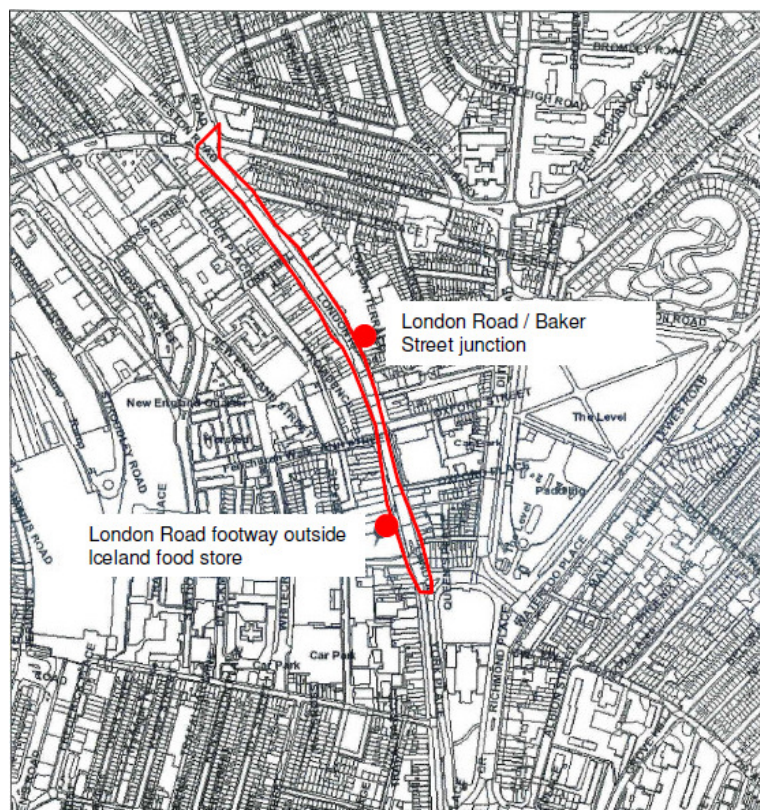
Road Safety Campaign in Brighton & Hove

City: Brighton

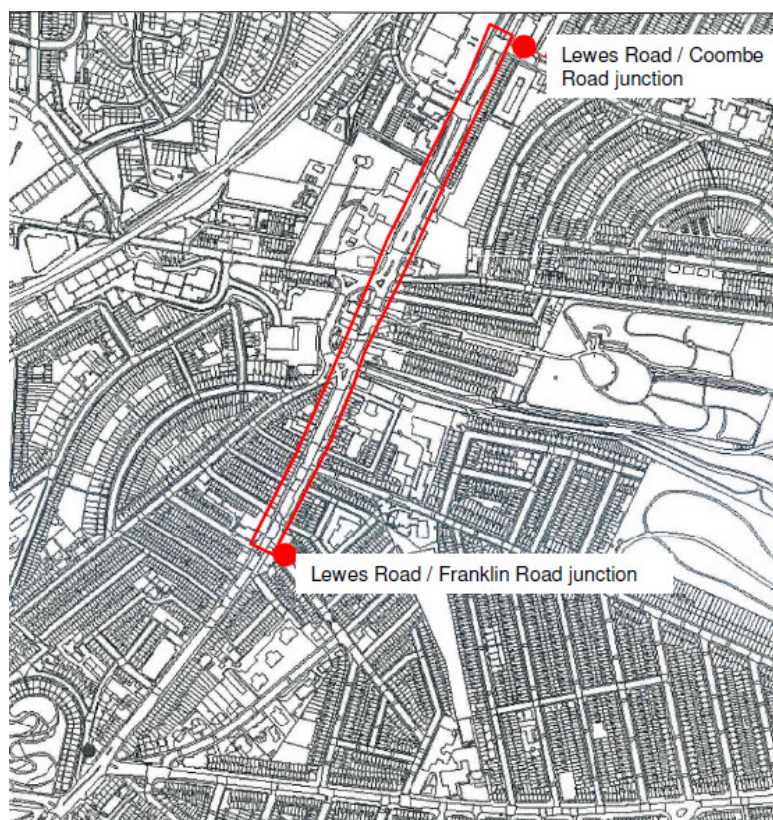
Project: Road Safety Campaign

Measure number: 44

### Sites for implementation:



London Road: Baker Street junction site and Iceland store footway site



Lewes Road: Coombe Road junction site and Franklin Road junction site

*Measure title:*

**Road Safety Campaign in Brighton & Hove**

*City:* **Brighton**

*Project:* **Road Safety Campaign**

*Measure number:* **44**

**A3** Person in charge for evaluation of this measure

Name of person

Debbie Reed /Sarah Jay ( LEC)

Name of organisation

Brighton & Hove City Council

Direct telephone

01273 290367/ 01273291028

E-mail

[debbie.reed@brighton-hove.gov.uk](mailto:debbie.reed@brighton-hove.gov.uk)

[sarah.jay@brighton-hove.gov.uk](mailto:sarah.jay@brighton-hove.gov.uk)

---

## B Measure implementation

---

### B1 Innovative Aspects:

The innovative aspects of the measure are:

#### **Innovative aspect 1:**

New Conceptual Approach: MOSAIC (<http://www.experian.co.uk/business-strategies/mosaic-public-sector.html>), the socio-demographic database from Experian Public Sector, was used to analyse the socio-economic composition of the most 'at risk' road user group by postcode, giving us a better understanding of the campaign 'target audience' (and therefore the campaign approach); and locations within the CIVITAS site where campaign publicity would be better placed to reach our target audience, for example.

#### **Innovative aspect 2:**

Targeting specific user groups: Using MOSAIC data helped us target appropriate groups with tailored campaigns.

### B2 Planning of Research and Technology Development Tasks

N/A

### B3 Situation before CIVITAS

Making Brighton & Hove a safer place to live is a key priority for the City Council. In terms of transport, this is achieved (as set out in the Local Transport Plan) through a targeted approach to investment in road safety, which focuses on locations with the highest level of casualties.

Currently, road safety improvements are made through education, engineering measures; and/or the use of a School Crossing Patrol and/or through projects within the school. Since 2000, Brighton & Hove have started to deliver real success in reductions of road casualty numbers.

Brighton & Hove wish to build on their work of improving road safety in the city and in particular by working to improve safety at locations with the highest level of casualties. CIVITAS funding enabled the city council to do.

There are a number of factors specific to Brighton & Hove that influence analysis of road casualties and collisions and the planning and implementation of remedial measures.

For example:

- The city has an exceptionally high ratio of small and single-person households and a very high percentage of households that live in shared buildings. The density of population means that many roads are densely parked.



- The success experienced in Brighton & Hove in encouraging people to travel by sustainable modes has led to significantly altered travel patterns in the past decade. For example, an increase in bus and train passenger numbers has led to an increase in pedestrian journeys at either end of those trips. Consequently, many areas now experience unprecedented concentrations of people and buses, and altered interactions between people and vehicles.
- Brighton & Hove is a popular destination for many people who live outside the city and so are not familiar with the local road layouts, which differ significantly from the two neighbouring counties and from most areas in the South East Region.

Through the CIVITAS Road Safety Project, the qualitative and quantitative data obtained (pre implementation) enhanced the existing programme and provided an in-depth understanding / reasoning of the target audience, road casualties / collisions and the planning and implementation of remedial measures. (See B1 'Innovative Aspects' for more information about how the assistance from CIVITAS enhanced the existing road safety programme).

London Road and Lewes Road corridors were identified as locations (within the CIVITAS corridor) vulnerable groups are at most risk of being injured in collisions. Both roads are two key areas in the city with a high volume of shoppers and road users.

Data research identified five 'at risk' sites along the London Road and Lewes Road where road safety engineering improvements would benefit. Project engineers drew up preliminary proposals for each site based on the research undertaken. The proposals focused on de-cluttering the area to improve visibility at junctions for all road users. The five 'at risk' sites were also the location for the road safety publicity campaign.

#### **B4 Actual implementation of the measure**

The measure was implemented in the following stages:

##### **Stage 1 Research and Methodology: (Jan 2009 – May 2009)**

Research was initially undertaken in partnership with the Sussex Safer Road Partnership (SSRP) Data Analysis Team to:

- Identify groups of people (within the CIVITAS corridor) who are statistically most 'at risk' of being injured in collisions
- Identify where (within the CIVITAS corridor) the 'at risk' groups of people are at most risk of being injured in collisions; and
- Identify why and how (causation factors) the identified 'at risk' groups of are being injured in collisions.

The data research identified a number of groups that represented the majority of Killed or Seriously Injured (KSI) casualties in the CIVITAS area (and therefore termed most 'at risk'). These were:

- Pedestrians aged between 10 and 24 years
- Powered two wheelers (motorcyclists / moped riders)
- Cyclists aged between 20 and 34 years

'Failed to look properly' was the highest-ranking contributory factor and the reason why / how the identified 'at risk' groups of are being injured in collisions.

The London Road and Lewes Road corridors were identified as locations where (within the CIVITAS corridor) the 'at risk' groups are at most risk of being injured in collisions. Both the London and Lewes Road are two key areas in the city with a high volume of shoppers and road users.

Data research identified 'at risk' sites along the London Road and Lewes Road where road safety improvements would be beneficial.

These were:

1. London Road
2. London Road / Baker Street junction
3. Lewes Road / Franklin Road junction
4. Lewes Road / Coombe Terrace / Coombe Road junction

Traffic data (traffic flows, modal split and average vehicle speeds) were collected and video monitoring undertaken to further inform traffic and road user behaviour at these sites.

## Stage 2 Design / Implementation

Design Period: M9 – M10 (May 2009 – June 2009)

Implementation Period: M26-28 (October 2010 – December 2010):

This information and the initial research undertaken was used by project engineers to draw up preliminary proposals for each site. The proposals (outlined below) focused on de-cluttering the area to improve visibility at junctions for all road users. Plans and 'before and after' pictures are provided in the appendices which are referenced below where appropriate.

### 1. London Road / Baker Street junction

<b>Situation</b>	<ul style="list-style-type: none"> <li>• The location of street furniture was reducing visibility for drivers pulling out of Baker Street into the London Road.</li> </ul>
------------------	--



<b>Action</b>	<p><b>North-side of junction:</b></p> <ul style="list-style-type: none"> <li>• Relocation of no-entry sign to the far south-west corner of the footway.</li> <li>• Removal of some of the tactile paving and replacement with regular paving slabs.</li> <li>• Removal of 'A' Boards.</li> </ul> <p><b>South-side of junction:</b></p> <ul style="list-style-type: none"> <li>• Removal of guard railing.</li> <li>• Removal of 'A' Boards.</li> <li>• Removal of some of the tactile paving and replacement with regular paving slabs.</li> </ul>
<b>Benefit</b>	<ul style="list-style-type: none"> <li>• Increased visibility for road users pulling out of the Baker Street junction onto the London Road</li> <li>• The removal or repositioning of street furniture de-clutters the footway and improves pedestrian crossings/visibility lines.</li> </ul>

## 2. London Road

<b>Situation</b>	<ul style="list-style-type: none"> <li>• The RTI sign was previously positioned north of the bus shelter.</li> <li>• The opaque advertising panel (on the northern end of the shelter) prevented people reading the RTI sign when sitting inside of the shelter.</li> <li>• As a consequence people tended to lean out of the bus shelter to view the RTI sign; resulting in bus/pedestrian conflict.</li> </ul>
<b>Action</b>	<ul style="list-style-type: none"> <li>• Repositioning of the RTI sign south of the bus shelter.</li> </ul>
<b>Benefit</b>	<ul style="list-style-type: none"> <li>• RTI sign is now visible from the bus shelter meaning that it can be viewed safely from within the bus shelter.</li> </ul>

## 3. Lewes Road / Franklin Road

<b>Situation</b>	<ul style="list-style-type: none"> <li>• Conflict between vehicles and cyclists at the junction.</li> <li>• Drivers' visibility was reduced when the loading bays were in use.</li> </ul>
<b>Action</b>	<ul style="list-style-type: none"> <li>• Reduction in the length of the 'loading only' bay, in the Lewes Road, from 4 to 2 bays.</li> <li>• Provision of a third loading bay at the entrance of Franklin Road.</li> </ul>

	<ul style="list-style-type: none"> <li>Improvements to the cycle lane to make it more prominent / conspicuous; and addition of a new cycle logo marking to the resurfaced cycle lane.</li> </ul>
<b>Benefit</b>	<ul style="list-style-type: none"> <li>Increased visibility from the nearside running line from 7m to 15.7m.</li> <li>Drivers wishing to exit Franklin Road onto the Lewes Road now have increased visibility of approaching cyclists (travelling southbound on the Lewes Road) thereby reducing potential conflict.</li> </ul>

#### 4. Lewes Road / Coombe Road Junction

<b>Situation</b>	<ul style="list-style-type: none"> <li>Conflict between vehicles and cyclists at the junction.</li> </ul>
<b>Proposal</b>	<ul style="list-style-type: none"> <li>Reinstatement of advanced stop line to include a more prominent/ conspicuous surfacing treatment.</li> <li>Improvement of the cycle lane in order to make it more prominent / conspicuous; and addition of a new cycle logo marking to the resurfaced cycle lane.</li> </ul>
<b>Benefit</b>	<ul style="list-style-type: none"> <li>The cycle lane and advanced stop line is now more prominent /visible to motorists.</li> </ul>

Proposals were distributed internally to Ward Councillors, Cabinet Members and council transport officers for comments/approval. Members of the public and statutory consultees were consulted through the statutory traffic regulation order (TRO) process. Cabinet Members' approval was subsequently given to implement the four small-scale measures in the London Road and Lewes Road.

The road safety improvement works began in October 2010 and were completed in March 2011.

#### Road Safety Campaign Measures: Campaign Posters

The road safety publicity campaign featuring city residents was launched in London Road and Lewes Road on Monday 8th November 2010.

Six road safety publicity "I use the road" campaign posters (see Figures 1 and 2) were designed featuring Brighton & Hove residents as they walked, cycled, rode or drove in the city. Using local people in real life situations these posters, give a realistic representation of transport use in the city. Posters were displayed at bus shelter advertising sites near the 'at risk' sites in London Road and Lewes Road.

Residents appear in the campaign posters going about their daily journeys. By raising awareness of different road users our aim was to change the attitudes and

behaviours that cause collisions and encourage good road safety habits, so everyone is safe.

The campaign is aimed at helping to prevent collisions on two of the city's busiest roads with the message for all road users to 'look out for others' and to 'share the road, share the responsibility, and make it safe'.

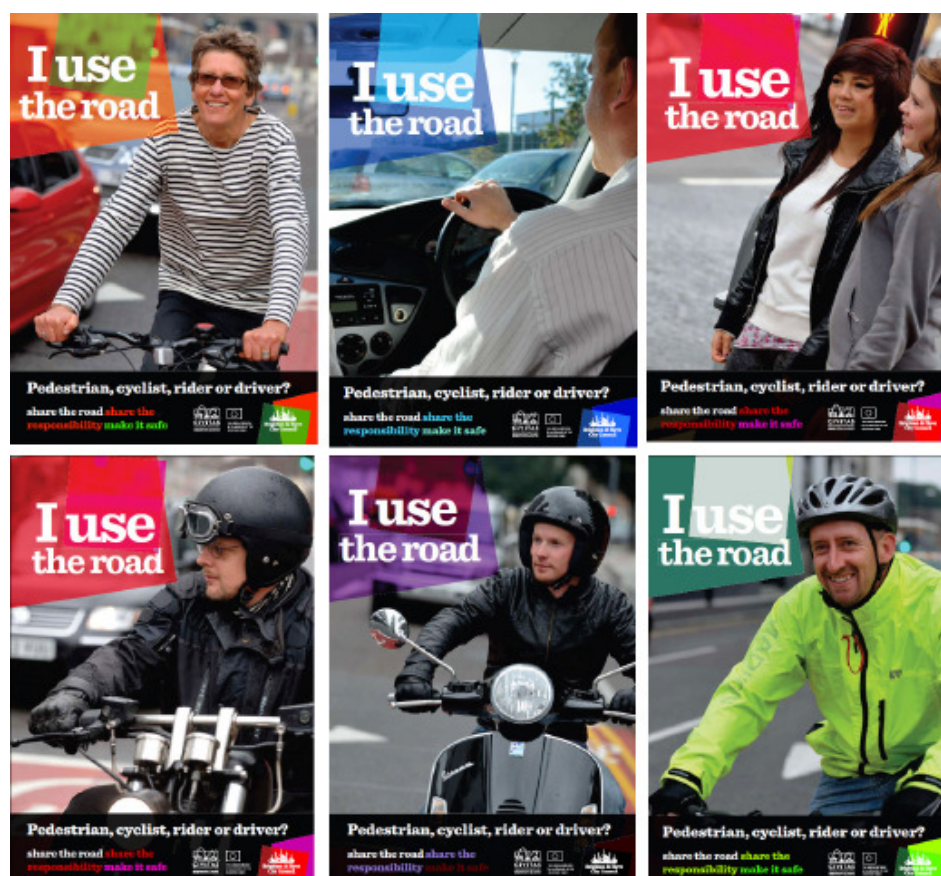


Figure 1: Road safety campaign posters

Measure title:

Road Safety Campaign in Brighton & Hove

City: Brighton

Project: Road Safety Campaign

Measure number: 44



**Figure 2: Road Safety Campaign Posters at bus stop locations**

London Road Bus Stop Posters	
Went up (date)	Came down (date)
08.11.10	05.12.10
06.12.10	02.01.11
31.01.11	13.02.11

Lewes Road Bus Stop Posters	
Went up (date)	Came down (date)
03.01.11	30.01.11
31.01.11	27.02.11
28.02.11	27.03.11

N.B: No banners were displayed in London Road.

#### Road Safety Campaign Measures: Radio Feeds

Two radio adverts were aired across the region during November to remind people to look out for others when crossing or driving on the road.

Casualty data was used in the radio advert. By raising awareness of the number of people injured in 2009 in the two shopping areas, the aim was to change the attitudes and behaviours that cause collisions and encourage good road safety habits. The script for the road safety radio advert was as follows:

**SFX:** *Starts with traffic noise which gradually fades out into the background.*

**Voice 1:** "89 people were injured as a result of collisions in the Lewes Rd and London Rd shopping areas in 2009

**Voice 1:** "Whether you're a pedestrian, cyclist, rider or driver - Look out for others! - Share the road share the responsibility, make it safe!"

Visit, [brighton-hove.gov.uk](http://brighton-hove.gov.uk) for more information

The first 20 second advert was played 25 times a week for two weeks on Heart FM and reached 220,000 listeners a week.

The second radio advert was aired on a local radio station in the city during November to remind people to look out for others when crossing or driving on the road. The 20 second advert was played 25 times a week for two weeks and reached 70,000 listeners a week.

The London Road and Lewes Road corridors are two key entry/exit points in and out of the city. The radio feed was aired on both regional and local radio to reach both local people and those who commute into the city from the surrounding region.

Dates of Transmission:

Radio Station	Ad transmission start date	Ad transmission end date
Juice FM	15.11.10	28.11.10
Heart Radio	09.11.10	19.11.10

#### Road Safety Campaign Measures: Lamppost Banners

The poster campaign artwork was printed onto lamppost banners (see Figure 3). These were hung on lampposts leading up to and at the Lewes Road / Coombe Road junction. The purpose was to raise awareness of the different road users using this junction and to reinforce the campaign message - "Whether you're a pedestrian, cyclist, rider or driver - Look out for others! - Share the road share the responsibility, make it safe!"



Measure title:

Road Safety Campaign in Brighton & Hove

City: Brighton

Project: Road Safety Campaign

Measure number: 44



Figure 3: Road safety campaign lamppost banners

Lewes Road Lamppost Banners	
Went up (date)	Came down (date)
14.02.11	20.02.11
21.02.11	27.02.11
14.03.11	20.03.11
21.03.11	27.03.11

#### Road Safety Campaign Measures: Cycle Code Leaflet

The cycling code leaflet was designed to support the road safety campaign by offering general practical advice for cycling in the city. Copies of the leaflet have been distributed to:

- The Road Traffic Police to give to cyclists in the city.
- BHCC members of staff who cycle.
- School children who are learning to cycle.

- Copies of the leaflet are available to pick up from the town hall.

A copy is shown in Figure 4. The leaflet was distributed in February 2011

Outside of leaflet



Inside of leaflet

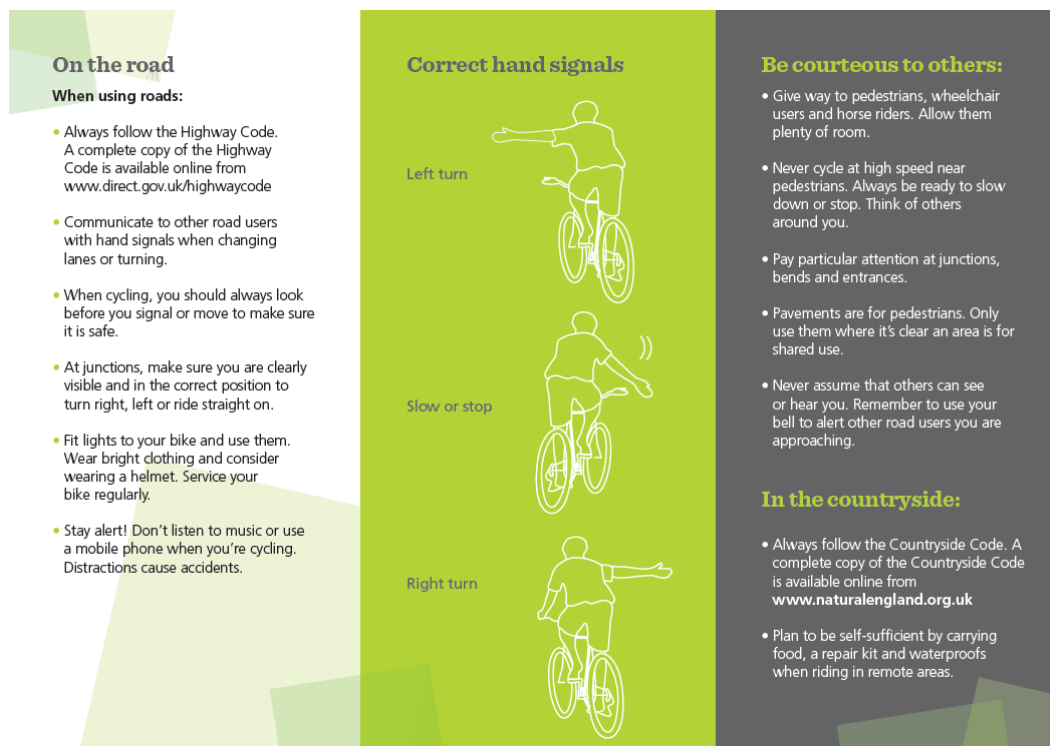


Figure 4: Cycling code leaflet

### **Stage 3: Evaluation**

M37- M48 (September 2011 – August 2012): The Evaluation Stage was within this period.

During this stage, post implementation surveys were commissioned, undertaken, and analysed. These included on-street questionnaires to monitor awareness and acceptance, traffic collision data, and traffic volume and speed data.

Comparing the findings from the various data collections resulted in an evaluation of the measure impact (see section C2).

#### **B5 Inter-relationships with other measures**

The measure is related to other measures as follows:

- **Measure 54** – At the site level, users of the Car Club (no longer applicable)
- **Measure 32** - those involved in the Travel plans could also be targeted in the road safety campaign.

Within WP5, the other Archimedes cities implemented measures to improve road safety. In particular Usti and Labem (in measure 49) developed a web portal providing the public with important information on road safety and security as well as an educational campaign and the two cities could exchange experience on this.

---

## **C Planning of Impact evaluation**

---

### **C1 Measurement Methodology**

#### **C1.1 Impacts and Indicators**

##### **C1.1.0 Scope of Impact**

This measure targeted vulnerable groups identified from detailed research via a campaign to influence behaviour and reduce casualties.

The indicators monitored not only the awareness of any campaign, which is essential to the target group 'seeing/hearing' the message – but also the reflected impact in the accident data.

#### **Society**

Society indicators focused around public awareness and acceptance of the intervention and campaign, as well as spatial accessibility. These factors were key, as a large part of the road safety initiative is encouraging users to have an awareness of those people around them and what is happening on the route. Acceptance of the scheme was more problematic to assess over a short period of time; behavioural change may come about unwittingly on the part of the user.

#### **Transport**

The Transport indicators focused around traffic levels and road safety. Safety was monitored through behavioural surveys and accident data, to assess the impact the interventions had upon how people use the routes and whether safety has been improved. Traffic levels were monitored to assess the increases or decreases in the usage of the route in response to the interventions.

Measure title: **Road Safety Campaign in Brighton & Hove**

City: **Brighton**

Project: **Road Safety Campaign**

Measure number: **44**

### C1.1.1 Selection of indicators

NO.	EVALUATION CATEGORY	EVALUATION SUB-CATEGORY	IMPACT	INDICATOR	DESCRIPTION	DATA /UNITS
	<b>SOCIETY</b>					
13		<b>Acceptance</b>	Awareness	Awareness level	Awareness of the policies/measures	Index (%), qualitative, collected, survey
	<b>TRANSPORT</b>					
20		<b>Safety</b>	Transport Safety	Injuries and deaths caused by transport accidents	Number of accidents, fatalities and casualties caused by transport accidents	No, Quantitative, measurement
			Road Safety	Behavioural Surveys	Percentage of road users (to be identified) using safe road safety behaviour	%, quantitative, derived
21		<b>Transport System</b>	Traffic Levels	Traffic flow by vehicle type - peak	Average vehicles per hour by vehicle type - peak	Veh per hour, quantitative, measured
22				Traffic flow by vehicle type - off peak	Average vehicles per hour by vehicle type – off peak	Veh per hour, quantitative, measured
23			Congestion Levels	Average vehicle speed - peak	Average vehicle speed over total network	Km/hr, quantitative, derived
24				Average vehicle speed - off peak	Average vehicle speed over total network	Km/hr, quantitative, derived
26			Modal split	Average modal split-passengers	Percentage of passenger-km for each mode	%, quantitative, derived
27				Average modal split-vehicles	Percentage of vehicle-km for each mode	%, quantitative, derived

*Speeds over the total network could not be determined. Likewise the passenger/km and vehicle/km could not be determined (see numbers 23, 24, 26, 27). Speed and volume counts were carried out at the identified 'at risk' sites. We also recorded the number of people travelling in vehicles at the identified 'at risk' sites (see D1: Deviations from the original plan)*



Measure title: **Road Safety Campaign in Brighton & Hove**

City: **Brighton**

Project: **Road Safety Campaign**

Measure number: **44**

**C1.1.2 Methods for evaluation of indicators**

No.	INDICATOR	TARGET VALUE	Source of data and methods	Frequency of Data Collection
13	Awareness level	General Public	Type of Survey: On-street questionnaire	M12: Before Data Collection  M30: After Data Collection.
			<p>Purpose: To obtain the views of residents, businesses and key and interested parties before and after implementation of physical measures.</p> <p>Method: On-street questionnaire before and after Implementation</p> <p>Sample Size: 50 (residential / business opinion within the designated survey area).</p>	
20	Injuries and deaths caused by transport accidents		Method: Sussex Police (Stats 19).The software AccMap will be used. BHCC Road Safety Data Co-ordinator is to undertake analysis of data.	Yearly
	Behavioural Surveys		<p>Source: Consultants</p> <p>Type of Survey: Observation Monitoring Surveys.</p> <p>Purpose: To observe the crossing behaviour of pedestrians before/after implementation of the physical measure. Types and patterns of behaviour can be monitored and analysed.</p>	Yearly

Measure title: **Road Safety Campaign in Brighton & Hove**

City: **Brighton**

Project: **Road Safety Campaign**

Measure number: **44**

No.	INDICATOR	TARGET VALUE	Source of data and methods	Frequency of Data Collection
			Method: Field workers manually record pedestrian behaviour on street.  Sample Size: 250 people at each site.  Geographical Area: London Road (between Baker Street and Rose Hill Terrace).  Response Rate: N/A for this type of survey.	
21/22	Traffic Flow – peal/off peak		Source: East Sussex County Council	Pre/post implementation
23/24	Average vehicle speed – peak / off peak	Traffic monitoring	Source: East Sussex County Council	Pre/post implementation
26/27	Average modal split-passengers	Traffic monitoring	Source: East Sussex County Council	Pre/post implementation

## C1.2 Establishing a Baseline

The baseline is strongly based around the current situation in road safety upon London Road and Lewes Road, prior to the intervention of this measure. Traffic flows and behaviour were also monitored.

The following data was obtained at the beginning of the project to establish a baseline:

### **Sussex Police, Stats19** (done on 29.10.09)

- Number of collisions and casualties involving cycles, powered two wheelers and pedestrians at the Lewes Road / **Coombe Road** junction from:
  - 01 January 2005 – 31 December 2008; and
  - 01 January 2009 – 30 September 2009
- Number of collisions and casualties involving cycles, powered two wheelers and pedestrians at the Lewes Road / **Franklin Road** junction from:
  - 01 January 2005 – 31 December 2008; and
  - 01 January 2009 – 30 September 2009
- Number of collisions and casualties involving cycles, powered two wheelers and pedestrians in **London Road shopping area** from:
  - 01 January 2005 – 31 December 2008; and
  - 01 January 2009 – 30 September 2009
- Speed counts in **London Road shopping area** from
  - 20.02.10 – 27.02.11
- Speed and volume of traffic at the Lewes Road / Franklin Road junctions from:
  - 20.02.10 – 26.02.10

*Measure title:*

**Road Safety Campaign in Brighton & Hove**

*City:* **Brighton**

*Project:* **Road Safety Campaign**

*Measure number:* **44**

○ 22.02.10 – 01.03.11

- The number of collisions and injuries and deaths caused by transport collisions

**ESCC: (monitoring period 20.02.10 – 27.02.10)**

12 hour manual classified turning counts at the following junctions:

- London Road / Baker Street
- London Road / Rose Hill Terrace
- Lewes Road / Coombe Road
- Lewes Road / Franklin Road

12 hour survey to record vehicle occupancy at the following locations:

- Leaving Baker Street
- Leaving Rose Hill Terrace
- Leaving Franklin Road
- Lewes Road north of Coombe Road in the inside lane.

7 day automatic speed/volume survey in:

- London Road
- Lewes Road

**Vincent Knight:** (Monitoring undertaken on 08.06.10, 11.06.10 and 20.06.10)

3 day CCTV monitoring in London Road (between Baker Street and Rose Hill Terrace)

- Road user behaviour monitored and analysed

Measure title: Road Safety Campaign in Brighton & Hove

City: Brighton

Project: Road Safety Campaign

Measure number: 44

### SSRP & BHCC: (Data Gathered May 2009)

- Injuries and deaths caused by transport collisions

### BHCC: (Surveys carried out during March 2011)

- Awareness, acceptance and perception of accessibility on-street questionnaires (BEFORE Implementation).

### C1.3 Methods for Business as Usual scenario

#### Traffic flows

For traffic flows an average has been taken of differences in traffic flows in surrounding streets. This average has been applied to the before figures to identify a business as usual figure.

#### Accident Data

Workings:

	Accidents city wide	Casualties city wide
Pre: 36 months (9 months)	1388 (347)	1503 (376)
During: 5 months (9 months)	177 (319)	193 (347)
After: 9 months (9 months)	379 (379)	406 (406)

#### Accidents:

Percentage decrease between 'before' and 'during' is:

$$347 - 319 = 28 / 347 \times 100 = 8\% \text{ (this will be our BaU)}$$



Measure title:

Road Safety Campaign in Brighton & Hove

City: Brighton

Project: Road Safety Campaign

Measure number: 44

Percentage increase between 'during' and 'after' is:

$$379 - 319 = 60 / 319 \times 100 = 18.8\%$$

Percentage increase between during and after is:

$$379 - 347 = 32 / 379 \times 100 = 8.4\%$$

#### Casualties:

Percentage decrease between 'before' and 'during' is:

$$376 - 347 = 29 / 376 \times 100 = 7.7\% (8\%) \text{ (this will be our BaU)}$$

Percentage increase between 'during' and 'after' is:

$$406 - 347 = 59 / 347 \times 100 = 17\%$$

Percentage increase between during and after is:

$$379 - 347 = 32 / 379 \times 100 = 8.4\%$$

$$406 - 376 = 30 / 406 = 7.4\%$$

C1.4 Cost Benefit

N/A

## **C2 Measure results**

### **Why and how we did the road safety London Road on-street questionnaire**

An on-street questionnaire was carried out in London Road shopping area (Cheapside to Preston Circus) in March 2010.

The purpose was to obtain views (from the groups listed below) about their perception, acceptance and awareness level of road safety in the area.

Groups interviewed:

- Pedestrians
- Cyclists
- Motorcyclists / Moped riders
- Car Drivers
- Traders

During the month of March, fieldworkers stood at various locations in the London Road shopping area to reach the groups being targeted.

- Fieldworkers stood at the entrance to the London Road car park to reach car drivers who use the area.
- Fieldworkers stood on the pavement outside popular shops in the London Road to reach pedestrians using the area.
- Fieldworkers stood by the popular cycle stands at the Ann Street and Baker Street junction to reach cyclists who use the area.
- Fieldworkers asked shop keepers in London Road to also answer the questionnaire.

Targeting moped riders and motorcyclists was little more difficult because riders do not park in a particular designated area. - London Road does not have designated bays for example, as car drivers and cyclists do.

We knew from our initial research, moped riders aged 16 and 17 were identified as a vulnerable group; and that a high number of students locally use this mode of transport to get to and from the college in the survey area.

We therefore decided to approach the college to ask if we could put the questionnaire on the college's intranet site. The college agreed and encouraged students (through online publicity) to answer the questionnaire.

Measure title: Road Safety Campaign in Brighton & Hove

City: Brighton

Project: Road Safety Campaign

Measure number: 44

Twenty-five pedestrians, car drivers, cyclists, traders answered the questionnaire. Fifteen moped / motorcycle riders answered the questionnaire. We plan to get a further ten responses by other means, so each user group has equal number of responses.

### On-street findings:

#### Before:

	Number	How safe do you feel (driving, cycling or walking)				
		Very safe	safe	neither	unsafe	Very unsafe
Drivers	7	3	4	0	0	0
Cyclists	9	1	6	1	1	0
Pedestrians	24	6	10	5	3	0
<b>Total</b>	<b>40</b>	<b>10</b>	<b>20</b>	<b>6</b>	<b>4</b>	<b>0</b>

#### After:

2012	Number	How safe do you feel (driving, cycling or walking)				
		Very safe	safe	neither	unsafe	Very unsafe
Drivers	7	0	5	2	0	0
Cyclists	7	0	3	3	1	0
Pedestrians	24	0	16	3	4	1
<b>Total</b>	<b>38</b>	<b>0</b>	<b>24</b>	<b>8</b>	<b>5</b>	<b>1</b>

#### Before:

		What do you think the main road safety issues are?
--	--	--

Measure title: Road Safety Campaign in Brighton & Hove

City: Brighton

Project: Road Safety Campaign

Measure number: 44

		Visibility of other road	Visibility (physical environment, sun	Looking but failing to see	Speed of traffic	Volume of traffic/ congestion
Drivers	7	0	2	2	2	1
Cyclists	9	1	0	2	1	4
Pedestrians	24	2	2	10	1	5
<b>Total</b>	<b>40</b>	<b>3</b>	<b>4</b>	<b>14</b>	<b>4</b>	<b>10</b>

After:

2012		No answer	What do you think the main road safety issues are?				
			Visibility of other road	Visibility (physical environment, sun	Looking but failing to see	Speed of traffic	Volume of traffic/ congestion
Drivers	7	1	4	1	1	1	1
Cyclists	7	1	0	0	3	1	3
Pedestrians	24	5	2	1	4	3	9
<b>Total</b>	<b>38</b>	<b>7</b>	<b>6</b>	<b>2</b>	<b>8</b>	<b>5</b>	<b>13</b>

1 driver made 3 choices

1 cyclists made 2 choices

3 pedestrians made 2 choices

3 pedestrians thought alternative reasons were the cause.

\*1 x pedestrian: Thought phasing of lights too long

\*1 x pedestrian: Thought pedestrians do not wait for green man. Red man

Measure title: Road Safety Campaign in Brighton & Hove

City: Brighton

Project: Road Safety Campaign

Measure number: 44

takes too long.

\*1 x pedestrian: thought drivers do not look

## Findings from Traders

Traders have been asked slightly different questions about safety dependent on the mode of transport used:

### Before:

Traders	Number	How safe do you feel				
		Very safe	safe	neither	unsafe	Very unsafe
Driving	2	0	2	0	0	0
Walking	4	0	1	0	1	0
Cycling	1	0	1	0	0	0
Riding (200cc moped)	1	0	1	0	0	0
		0	5	0	1	0

### After: 2012

Traders	Number	How safe do you feel				
		Very safe	safe	neither	unsafe	Very unsafe
Driving	0	0	0	0	0	0
Walking	6	2	2	2	0	1
Cycling	1	0	0	0	1	0
Riding (200cc moped)	0	0	0	0	0	0
		2	2	2	1	1



Measure title:

Road Safety Campaign in Brighton & Hove

City: Brighton

Project: Road Safety Campaign

Measure number: 44

Notes: 1 trader made 2 choices

**Before:**

Traders	Number	What do you think the main road safety issues are?				
		Visibility of other road users	Visibility (physical environment, sun glare, rain, snow)	Looking but failing to see	Speed of traffic	Volume of traffic/ congestion
Driving	2	1	0	0	0	2
Walking	3	1	1	3	3	2
Cycling	1	0	1	0	1	0
Riding	1	1	0	0	0	1

**After: 2012**

Traders	Number	What do you think the main road safety issues are?				
		Visibility of other road users	Visibility (physical environment, sun glare, rain, snow)	Looking but failing to see	Speed of traffic	Volume of traffic/ congestion
Driving	0	0	0	0	0	0

Measure title: **Road Safety Campaign in Brighton & Hove**

City: **Brighton**

Project: **Road Safety Campaign**

Measure number: **44**

Walking	6	1	1	3	0	2
Cycling	1	0	0	1	0	1
Riding	0	0	0	0	0	0

Notes: 1 x trader thought noise was a road safety issue

Notes: 1 trader made 2 choices

Notes: 1 trader made 2 choices

### London Road/Baker Street Junction

#### Before:

	Number	Do you think visibility at London Road/ Baker Street junction is an issue?				
		Major issue	Big issue	Small issue	Minor issue	Not an issue
Drivers	7	0	2	1	3	0
Cyclists	9	0	4	1	0	2
Pedestrians	24	0	9	1	0	9
<b>Total</b>	<b>40</b>	<b>0</b>	<b>15</b>	<b>3</b>	<b>3</b>	<b>11</b>

#### After: 2012

	Number	No answer	Do you think visibility at London Road/ Baker Street junction is an issue?				
			Major issue	Big issue	Small issue	Minor issue	Not an issue
Drivers	7	4	0	2	0	0	1
Cyclists	7	1	1	1	2	1	1

Measure title: Road Safety Campaign in Brighton & Hove

City: Brighton

Project: Road Safety Campaign

Measure number: 44

Pedestrians	24	0	2	6	5	4	7
<b>Total</b>	<b>38</b>	<b>5</b>	<b>3</b>	<b>9</b>	<b>7</b>	<b>5</b>	<b>9</b>

As previously, traders were asked slightly different questions, dependent on the mode of transport used:

**Before:**

Traders	Number	Do you think visibility at London Road/ Baker Street junction is an issue?				
		Major issue	Big issue	Small issue	Minor issue	Not an issue
Driving	2	0	2	0	0	0
Walking	4	0	2	1	1	0
Cycling	1	0	0	1	0	0
Riding	0	0	0	0	0	0

**After:**

Traders	Number	No answer	Do you think visibility at London Road/ Baker Street junction is an issue?				
			Major issue	Big issue	Small issue	Minor issue	Not an issue
Driving	0	0	0	0	0	0	0
Walking	7	3	0	1	1	0	2
Cycling	1	1	0	0	0	0	0
Riding	0	0	0	0	0	0	0

\*Please note, one trader noted 2 common modes of transport used in London Road

**C2.1 Society**

C2.1.1 Acceptance

Measure title: **Road Safety Campaign in Brighton & Hove**

City: **Brighton**

Project: **Road Safety Campaign**

Measure number: **44**

Indicator	Before (date)	B-a-U (date)	After (date)	Difference: After-Before	Difference: After-BaU
13 Awareness level	75% felt very safe or safe	75% felt very safe or safe	63% felt very safe or safe	12% decrease	12% decrease

## **C2.2 Transport**

### **C2.2.1 Safety**

Indicator	Before (date)	B-a-U (date)	After (date)	Difference: After-Before	Difference: After-BaU
20 Road Safety Accidents	60	65	15	-45	-50
20 Road Safety Casualties	45	48	17	-28	-31

### **Tuesday 8<sup>th</sup> June Results: London Road U-Turns**

The following diagram, figure 2.1, illustrates the location at which each U-turn takes place.

Figure 2.1: London Road U-Turns Tuesday 8th June

Measure title:

**Road Safety Campaign in Brighton & Hove**

City: **Brighton**

Project: **Road Safety Campaign**

Measure number: **44**



The main areas where U-turns take place are around the junction with Rose Hill Terrace, and towards the end of the survey area above Baker Street. A large amount of the latter use, or have come from, the parking bays on either side of the road.

In total 73 movements were recorded, approximately 50 of which were U-turns and the remainder were 3 point (or more) turns.

The peak hours for U-turns were between 09:00 to 10:00 and 17:00 to 18:00, with 9 occurring in each hour.

The majority of these movements, approximately two thirds were conducted by vehicles initially travelling north, before turning back south.

The following diagram, figure 2.2, illustrates the classification of the vehicles recorded, with cars being in the majority with 45 observed.

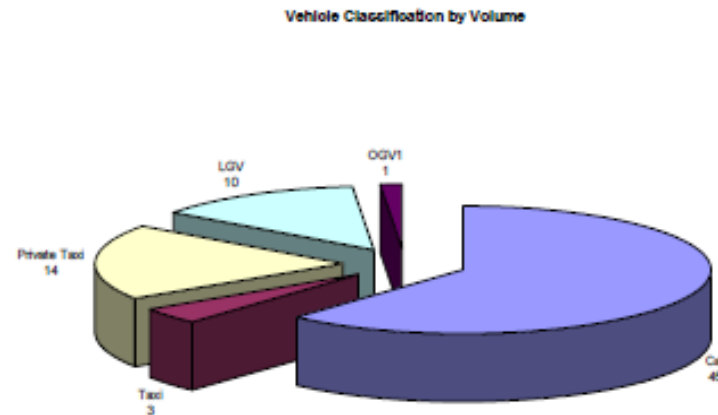
Measure title: Road Safety Campaign in Brighton & Hove

City: Brighton

Project: Road Safety Campaign

Measure number: 44

Figure 2.2: Vehicle Classification Tuesday 8<sup>th</sup> June



## Pedestrian Conflict

The diagram, figure 2.5, below illustrates conflicts between pedestrians and vehicles between the periods of 12:00 to 13:00 and 15:00 to 16:00.

Pedestrian Conflict Tuesday 8th June



Measure title: **Road Safety Campaign in Brighton & Hove**

City: **Brighton**

Project: **Road Safety Campaign**

Measure number: **44**



The major positions of the conflict occurred around the junction with Rose Hill Terrace and in the middle of the southern section of London Road.

The table below, table 2.1, illustrates each conflict by classification.

Pedestrian Conflict by Classification Tuesday 8th June

Measure title: **Road Safety Campaign in Brighton & Hove**

City: **Brighton**

Project: **Road Safety Campaign**

Measure number: **44**

Classification	Description	Number	% of All Conflicts
0	Pedestrian crosses between stationary vehicles in one carriageway then crosses other half of road when there is a gap in traffic	5	5%
1	Encounter e.g. pedestrian waits in carriageway.	83	81%
2	Controlled Action – Deviation from route or controlled braking.	13	13%
3	Near Miss - When there is very quick deceleration, lane changing or stopping, or a very close action of increased pedestrian speed or direction	1	1%

The majority of conflict was defined by pedestrians waiting in the carriageway to cross, 81% of the total. A large proportion of this number found themselves crossing through queuing traffic.

49 conflicts were recorded in the hour between 12:00 and 13:00, compared with 53 between 15:00 and 13:00.

## Results Summary

### London Road U-Turns

- Each day of the survey produced around 60 - 70 U-turn movements, with the majority being U-turns as opposed to 3 point turns.
- Just over half of the U-turns on each day were completed by vehicles travelling northbound from London Road (S).
- Vehicles that travel northbound from London Road (S) tended to U-turn at the first opportunity in the parking bays either side of the stretch of road just north of Baker Street.
- On each day the majority classification recorded was the car, followed by taxis and light goods vehicles.

## Pedestrian Crossings

- Between a third and a half of all crossings on London Road used the official pedestrian crossing just to the south of York Hill.
- Throughout each day of the survey the evening period of 16:00 to 19:00 proved to be the most popular, followed by the inter period of 12:00 to 14:00.
- The most popular unofficial crossing sections were those furthest from the central official crossing, particularly the section of road incorporating Rose Hill Terrace.

## Pedestrian Conflict:

- A large amount of pedestrian conflict on London Road was caused by pedestrians crossing through sections of queuing vehicles, specifically those queuing in the northbound direction. A major location of this being near the junction with Rose Hill Terrace.
- On the majority of occasions, around 70-80% of each occasion on each day, the pedestrians are able to cross by undertaking precautionary action, for example waiting in the road before they cross.
- The remainder of the conflict occurrences resulted in a controlled action by the vehicle driver, for example slowing in speed so that the pedestrian can cross.

## Collisions

### Lewes Road /Coombe Road Junction.

1<sup>st</sup> set of data: 08<sup>th</sup> November 2007 – 07<sup>th</sup> November 2010 (36 months)

- 16 Casualties in 36 months: 0 Fatal, 2 Serious, 14 Slight.

Measure title:

Road Safety Campaign in Brighton & Hove

City: Brighton

Project: Road Safety Campaign

Measure number: 44

- 43.8% of casualties are cycles
- 25% of casualties are pedestrians

Casualties:	Fatal	Serious	Slight	Total
Cycles	0	1	6	7
M/cycle <50	0	0	0	0
M/cycle >50<=125	0	0	2	2
M/cycle >125<=500	0	0	0	0
M/cycle >500	0	0	1	1
Taxi	0	0	1	1
Car	0	0	0	0
Minibus	0	0	0	0
Bus/Coach	0	0	1	1
HGV <= 3.5	0	0	0	0
HGV >3.5<7.5	0	0	0	0
HGV >=7.5	0	0	0	0
Pedestrians	0	1	3	4
<b>Total</b>	<b>0</b>	<b>2</b>	<b>14</b>	<b>16</b>

2<sup>nd</sup> set of data: 08<sup>th</sup> November 2010 – 31 December 2011 (14 months)

- 2 Casualties in 14 months: 0 Fatal, 1 Serious, 1 Slight
- 1 x cycle casualty
- 1 x bus/coach casualty

Casualties:	Fatal	Serious	Slight	Total
Cycles	0	1	0	1
M/cycle <50	0	0	0	0
M/cycle >50<=125	0	0	0	0

Measure title:

Road Safety Campaign in Brighton & Hove

City: Brighton

Project: Road Safety Campaign

Measure number: 44

M/cycle >125<=500	0	0	0	0
M/cycle >500	0	0	0	0
Taxi	0	0	0	0
Car	0	0	0	0
Minibus	0	0	0	0
Bus/Coach	0	0	1	1
HGV <= 3.5	0	0	0	0
HGV >3.5<7.5	0	0	0	0
HGV >=7.5	0	0	0	0
Pedestrians	0	0	0	0
<b>Total</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>

### Franklin Road Junction

1<sup>st</sup> set of data: 08<sup>th</sup> November 2007 – 07<sup>th</sup> November 2010 (36 months)

- 13 Casualties in 36 months: 0 Fatal, 3 Serious, 10 Slight
- 69% of casualties are cycles
- 23% of casualties are pedestrians

<b>Casualties:</b>	<b>Fatal</b>	<b>Serious</b>	<b>Slight</b>	<b>Total</b>
Cycles	0	1	8	9
M/cycle <50	0	0	0	0
M/cycle >50<=125	0	0	0	0
M/cycle >125<=500	0	0	0	0
M/cycle >500	0	0	1	1
Taxi	0	0	0	0
Car	0	0	0	0
Minibus	0	0	0	0

Measure title:

Road Safety Campaign in Brighton & Hove

City: Brighton

Project: Road Safety Campaign

Measure number: 44

Bus/Coach	0	0	0	0
HGV <= 3.5	0	0	0	0
HGV >3.5<7.5	0	0	0	0
HGV >=7.5	0	0	0	0
Pedestrians	0	2	1	3
<b>Total</b>	<b>0</b>	<b>3</b>	<b>10</b>	<b>13</b>

2<sup>nd</sup> set of data: 08<sup>th</sup> November 2010 – 31 December 2011 (14 months)

- 3 Casualties in 14 months: 0 Fatal, 0 Serious, 3 Slight.
- 66.6% of casualties are cycles
- 33.3% of casualties are motorcycles (<50cc engine)

<b>Casualties:</b>	<b>Fatal</b>	<b>Serious</b>	<b>Slight</b>	<b>Total</b>
Cycles	0	0	2	2
M/cycle <50	0	0	1	1
M/cycle >50<=125	0	0	0	0
M/cycle >125<=500	0	0	0	0
M/cycle >500	0	0	0	0
Taxi	0	0	0	0
Car	0	0	0	0
Minibus	0	0	0	0
Bus/Coach	0	0	0	0
HGV <= 3.5	0	0	0	0
HGV >3.5<7.5	0	0	0	0
HGV >=7.5	0	0	0	0
Pedestrians	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>



London Road

1<sup>st</sup> set of data: 08<sup>th</sup> November 2007 – 07<sup>th</sup> November 2010 (36 months)

- 45 Casualties in 36 months: 0 Fatal, 4 Serious, 41 Slight
- 44.4% of casualties are pedestrians
- 24.4% of casualties are cycles

<b>Casualties:</b>	<b>Fatal</b>	<b>Serious</b>	<b>Slight</b>	<b>Total</b>
Cycles	0	1	10	11
M/cycle <50	0	0	0	0
M/cycle >50<=125	0	0	2	2
M/cycle >125<=500	0	0	0	0
M/cycle >500	0	0	2	2
Taxi	0	0	0	0
Car	0	0	0	0
Minibus	0	0	1	1
Bus/Coach	0	0	9	9
HGV <= 3.5	0	0	0	0
HGV >3.5<7.5	0	0	0	0
HGV >=7.5	0	0	0	0
Pedestrians	0	3	17	20
<b>Total</b>	<b>0</b>	<b>4</b>	<b>41</b>	<b>45</b>

2<sup>nd</sup> set of data: 08<sup>th</sup> November 2010 – 31 December 2011 (14 months)

- 18 Casualties in 14 months: 0 Fatal, 4 Serious, 14 Slight
- 44.4% of casualties are pedestrians
- 33.3% of casualties are cycles

Measure title:

Road Safety Campaign in Brighton & Hove

City: Brighton

Project: Road Safety Campaign

Measure number: 44

<b>Casualties:</b>	<b>Fatal</b>	<b>Serious</b>	<b>Slight</b>	<b>Total</b>
Cycles	0	0	6	6
M/cycle <50	0	0	0	0
M/cycle >50<=125	0	0	1	1
M/cycle >125<=500	0	0	0	0
M/cycle >500	0	1	0	1
Taxi	0	0	0	0
Car	0	0	0	0
Minibus	0	0	0	0
Bus/Coach	0	0	2	2
HGV <= 3.5	0	0	0	0
HGV >3.5<7.5	0	0	0	0
HGV >=7.5	0	0	0	0
Pedestrians	0	3	5	8
<b>Total</b>	<b>0</b>	<b>4</b>	<b>14</b>	<b>18</b>

## All Sites

Before Implementation

BEFORE	No. of Months	Total Accidents	Accidents p.a.	Total Casualties	Casualties p.a.
Site Name					
City-wide	36	1388	462.6	1503	501
Lewes Road jw Coombe Road	36	14	4.67	16	5.33
Lewes Road jw Franklin Road	36	12	4	13	4.33
London Road	36	34	11.33	45	15

Measure title:

**Road Safety Campaign in Brighton & Hove**

City: **Brighton**

Project: **Road Safety Campaign**

Measure number: **44**

During Implementation

DURING	No. of Months	Total Accidents	Accidents p.a.	Total Casualties	Casualties p.a.
Site Name					
City-wide	5	177	<b>425</b>	193	<b>463</b>
Lewes Road jw Coombe Road	5	1	<b>2.4</b>	1	<b>2.4</b>
Lewes Road jw Franklin Road	5	0	<b>0</b>	0	<b>0</b>
London Road	5	5	<b>12</b>	5	<b>12</b>

After Implementation

AFTER	No. of Months	Total Accidents	Accidents p.a.	Total Casualties	Casualties p.a.
Site Name					
City-wide	9	379	<b>505</b>	406	<b>541</b>
Lewes Road jw Coombe Road	9	1	<b>1.33</b>	1	<b>1.33</b>
Lewes Road jw Franklin Road	9	3	<b>4</b>	3	<b>4</b>
London Road	9	12	<b>16</b>	13	<b>17.33</b>

- From the data above, we can see that accidents on the Lewes Road junction with Coombe Road have reduced by 3.34 per annum.
- The number of accidents per annum on the Lewes Road / Franklin Road junction remain static.

Measure title: **Road Safety Campaign in Brighton & Hove**

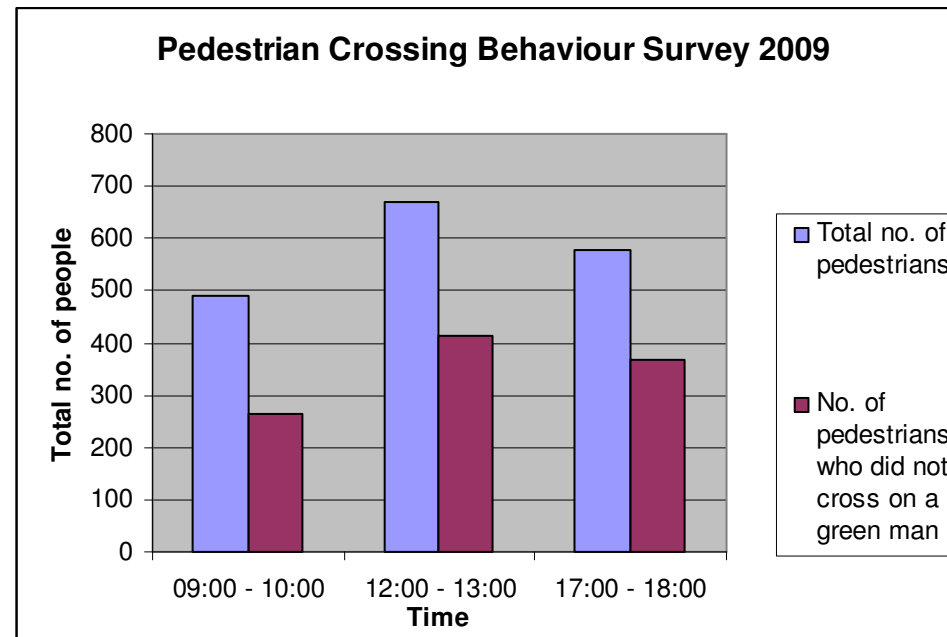
City: **Brighton**

Project: **Road Safety Campaign**

Measure number: **44**

## Crossing Behaviour Surveys, London Road

Before:



After:

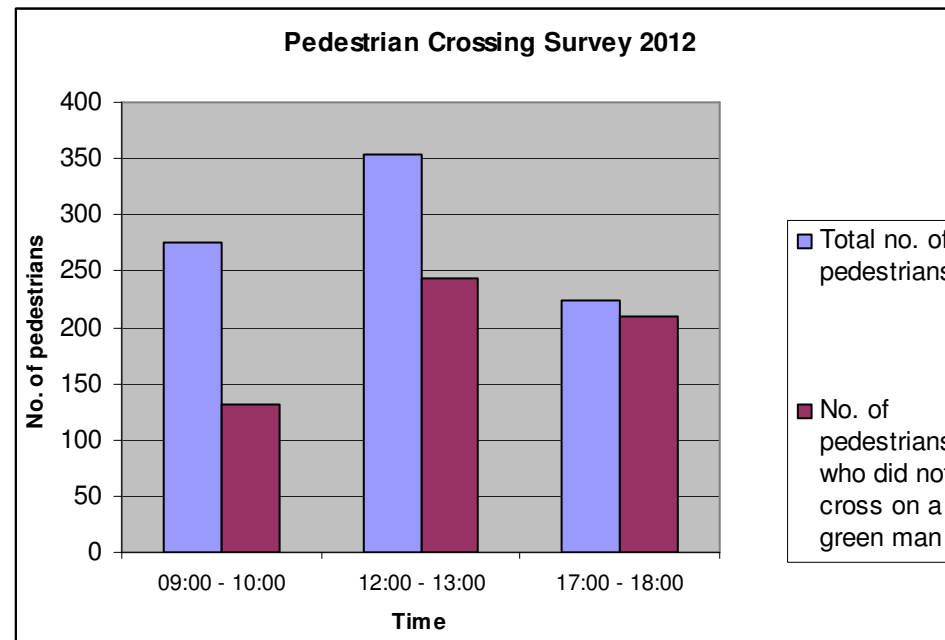
Measure title:

**Road Safety Campaign in Brighton & Hove**

City: **Brighton**

Project: **Road Safety Campaign**

Measure number: **44**



## **C2.2.2 Transport System**

### ***A270 Lewes Road***

The volume and speed of traffic were recorded and the results are displayed as summaries.

The average 85<sup>th</sup> percentile speed over twenty four hours was recorded as:

A4644 - Northbound 27.5 miles per hour

A4645 - Southbound 30.3 miles per hour

*The 85<sup>th</sup> percentile speed is the speed at, or below, which 85 percent of the traffic is travelling, or viewed another way, the speed that only 15 percent of drivers exceed.*

The average speed over twenty four hours was recorded as:

A4644 - Northbound 20.8 miles per hour

A4645 - Southbound 24.4 miles per hour

*The average speed is the speed at, or below, which 50 percent of the traffic is travelling, or viewed another way, the speed that only 50 percent of drivers exceed.*

### **A23 London Road**

The volume and speed of traffic were recorded and the results are displayed as summaries.

The average 85<sup>th</sup> percentile speed over twenty four hours was recorded as:

A4646 - Northbound 28.4 miles per hour

A4647 - Southbound 30.5 miles per hour

*The 85<sup>th</sup> percentile speed is the speed at, or below, which 85 percent of the traffic is travelling, or viewed another way, the speed that only 15 percent of drivers exceed.*

The average speed over twenty four hours was recorded as:

A4646 - Northbound 20.9 miles per hour

A4647 - Southbound 23.7 miles per hour

*The average speed is the speed at, or below, which 50 percent of the traffic is travelling, or viewed another way, the speed that only 50 percent of drivers exceed.*

Measure title:

**Road Safety Campaign in Brighton & Hove**

City: **Brighton**

Project: **Road Safety Campaign**

Measure number: **44**

Indicator	Before (date)	B-a-U (date)	After (date)	Difference: After-Before	Difference: After-BaU
21 Traffic flow - peak	9AM: 100 1PM: 103	9AM: 97 1PM: 100	9AM: 71 1PM: 78	-29 -25	-26 -22
22 Traffic flow – off peak	4AM: 21 3PM: 98	4AM: 20 3PM: 95	4AM: 23 3PM: 75	2 -23	3 -20
23 Vehicle speed - peak	9AM: 34.1 1PM: 30.1	9AM: 33 1PM: 29	9AM: 27 1PM: 25.9	-7.1 -4.2	-6 -3.1
24 Vehicle speed – off peak	4AM: 34 3PM: 23.1	4AM: 33 3PM: 22	4AM: 36.5 3PM: 25.8	2.5 2.7	3.5 3.8
26 Modal split - passengers	P/C: 1 x 2 people 2 x 1 person  M/C: 1 x 1 person  Car: 141 x 1 person	P/C: 1 x 2 people 2 x 1 person  M/C: 1 x 1 person  Car: 141 x 1 person	P/C: 45 x 1 people 1 x 2 people  M/C: 5 x 1 person 1 x 2 people  Car:		



Measure title:

**Road Safety Campaign in Brighton & Hove**

City: **Brighton**

Project: **Road Safety Campaign**

Measure number: **44**

	87 x 2 people 11 x 3 people 1 x 4 people 1 x 5 people  LGV: 20 x 1 person 8 x 2 person  RUP: 1 x 2 people  RP: 2 x 1 person 1 x 2 people 1 x 3 people  M/B: 1 x 8 people	87 x 2 people 11 x 3 people 1 x 4 people 1 x 5 people  LGV: 20 x 1 person 8 x 2 person  RUP: 1 x 2 people  RP: 2 x 1 person 1 x 2 people 1 x 3 people  M/B: 1 x 8 people	112 x 1 person 55 x 2 people 6 x 3 people 1 x 4 people  LGV: 32 x 1 person 61 x 2 people 1 x 3 people  RUP: 4 x 1 person  RP: 1 x 1 person 1 x 2 people  M/B: 1 x 1 person		
27 Modal split - vehicles	P/C: 22 M/C: 2 Car: 241 LGV: 28	P/C: 22 M/C: 2 Car: 241 LGV: 28	P/C 342 M/C 13 CAR 487 LGV 54 RUP 6 RP 10		

Measure title: **Road Safety Campaign in Brighton & Hove**

City: **Brighton**

Project: **Road Safety Campaign**

Measure number: **44**

	RUP: 1 RP: 4 M/B: 47	RUP: 1 RP: 4 M/B: 47	ART 0 BUS 236 M/B 19 TOT 1167 HGV 10 OGV 16		
--	----------------------------	----------------------------	--	--	--

### C3 Achievement of quantifiable targets and objectives

No.	Target	Rating
1	Assist in improving road safety and reducing casualties at high risk sites through physical road safety measures	**
2	Increase road safety awareness in groups of people who are statistically most at risk of being injured in collisions through a publicity campaign	**
3	Implementing road safety engineering measures, at 2-4 high risk site in the CIVITAS area to improve road safety	**
NA = Not Assessed    O = Not Achieved    * = Substantially achieved (at least 50%) ** = Achieved in full       *** = Exceeded		

### C4 Methods for Up Scaling

If the measure had proved to be successful in raising the awareness of road safety issues, as well as reducing road traffic accidents then there would be scope to up scale it to other parts of Brighton & Hove highlighted as at risk.

Similar demographic modelling of those most at risk in these locations would have to be conducted, as well as assessing the appropriate publicity based upon the findings of this evaluation.

How different target groups respond to different interventions and different publicity campaigns would inform how to conduct future measures based upon baseline research.

An appraisal of the costs involved relative to the safety benefits would also have to be considered before implementing similar interventions elsewhere in the city.

## **C5 Appraisal of evaluation approach**

The evaluation approach was robust. A wide range of primary data was carried out / commissioned, to able us to assess road safety awareness and behaviour in the two sited areas in the city.

## **C6 Summary of evaluation results**

- From the data above, we can see that accidents on the Lewes Road junction with Coombe Road have reduced by 3.34 per annum.
- The number of road accidents (per annum) on the Lewes Road / Franklin Road junction remain static.

## **C7 Future activities relating to the measure**

Work to improve road safety in the city continues through the Brighton & Hove City Council Road Safety Team. Engineering measures or promotional / campaign measures are embedded into our Local Transport Plan (LTP3). The LTP3 includes a long-term Strategy for delivering transport improvements that looks ahead to 2026, and a 3-year Delivery Plan.

“This will include targeting engineering solutions, by maintaining a priority list of locations where collision data justifies more detailed investigation, in order to identify any patterns or trends. The aim is to identify opportunities to deliver engineering schemes that reduce collisions and casualties and promote use of more sustainable transport. Engineering solutions would be supported by the

*Measure title:* **Road Safety Campaign in Brighton & Hove**

*City:* **Brighton**

*Project:* **Road Safety Campaign**

*Measure number:* **44**

appropriate education, training and publicity. An annual review of data will be conducted to ensure the list is up to date and the effect of engineering solutions implemented will be evaluated". (p84 Brighton & Hove City Council, LTP3).

---

## D Process Evaluation Findings

---

### D0 Focused measure

X	0	No focussed measure
	1	Most important reason
	2	Second most important reason
	3	Third most important reason

### D1 Deviations from the original plan

- Deviation 1

#### Re: C1.1.2 (Methods for evaluation of indicators)

Speeds over the total network could not be determined. Likewise the passenger/km and vehicle/km could not be determined (see numbers 23, 24, 26, 27). Speed and volume counts were carried out at the identified 'at risk' sites. We also recorded the number of people travelling in vehicles at the identified 'at risk' sites

Data Obtained:

#### ESCC:

12 hour manual classified turning counts at the following junctions:

- London Road / Baker Street
- London Road / Rose Hill Terrace

*Measure title:*

**Road Safety Campaign in Brighton & Hove**

*City:* **Brighton**

*Project:* **Road Safety Campaign**

*Measure number:* **44**

- Lewes Road / Coombe Road
- Lewes Road / Franklin Road

12 hour survey to record vehicle occupancy at the following locations:

- Leaving Baker Street
- Leaving Rose Hill Terrace
- Leaving Franklin Road
- Lewes Road north of Coombe Road in the inside lane.

7 day automatic speed/volume survey in:

- London Road
- Lewes Road

#### **Vincent Knight:**

- 3 day CCTV monitoring in London Road (between Baker Street and Rose Hill Terrace)
- Road user behaviour monitored and analysed

#### **SSRP & BHCC:**

- Injuries and deaths caused by transport collisions

#### **BHCC:**

- Awareness, acceptance and perception of accessibility on-street questionnaires (BEFORE Implementation).
- Awareness, acceptance and perception of accessibility on-street questionnaires (AFTER Implementation)

## Deviation 2:

We proposed to pilot a central reservation along part of London Road to prevent the dangerous U turns as part of the package of measures to improve road safety in London Road shopping area. For full details, please see the table below.

The proposal was opposed Barrier based on political and/or strategic motives, lack of sustainable development agenda or vision, impacts of a local election.

We did however, conduct a period of 24/7 video monitoring to gather evidence of driver/pedestrian behaviour. We then revisited this area a year later. However, the possibility of introducing the traffic islands weren't feasible / justifiable (under the CIVITAS Road Safety project heading), since the objective of the project is improving road safety and reducing casualties at high risk sites through physical road safety engineering measures.

The reason the traffic islands are not justifiable is because we don't actually have a 'current' collision problem (caused by 'U' turns) in London Road, surprisingly, with no recorded collisions since October 2009. - It is good news the collision figures for this type of manoeuvre are so low and it's even better news there are no U-turns listed in the collisions within the polygon between 1<sup>st</sup> October 2009 and 31<sup>st</sup> March 2011.

### London Road, Baker Street/York Hill junction and York Hill junction to Rose Hill Terrace (2 Drawings)

<b>Situation</b>	<ul style="list-style-type: none"><li>Cars performing 'U' turn manoeuvres / motorcyclists filtering inappropriately which leads to vehicular / pedestrian conflict.</li></ul>
<b>Proposal</b>	<ul style="list-style-type: none"><li>Stage 1 - Conduct a period of 24/7 video monitoring to gather evidence of driver/pedestrian behaviour. Subject to gathering the evidence to move directly to Stage 2.</li><li>Stage 2 - Construct 2 long continuous refuges to prevent the 'U' turn manoeuvre (1.3m wide) and prevent filtering.</li></ul>



Measure title: Road Safety Campaign in Brighton & Hove

City: Brighton

Project: Road Safety Campaign

Measure number: 44

	<p><b>London Road between York Hill junction to Rose Hill Terrace:</b></p> <p>Slightly reduce the length of the 'loading only' bay (south of Rose Hill Terrace) to prevent Cars performing 'U' turn manoeuvres at the northern end of the refuge.</p> <p><b>Please note:</b></p> <p>The proposed refuges (in the London Road) would be <b>temporary</b> installations and would come under the banner of a research and development project to address the issues identified by the video monitoring. They would be constructed and trialled for a set period of 6 months. Video monitoring / further traffic and collision data monitoring would be carried out during the trial period. The video footage and 'before'/'during' traffic/collision data would then be analysed, to establish whether the islands would benefit from being a long-term physical measure. A video survey /high mast filming specialist would be contracted to monitor/analyse vehicle movements/behaviour for a set period of time.</p>
<b>Benefit</b>	Reduce vehicular/pedestrian conflict in London Road.

- Deviation 3:

Uncertainty whether there is funding (from the LTP side) to continue the campaign after March 2011. If the campaign does come to an end, it would have run for 5 months rather than 18 months.

## D2 Barriers and drivers

### D2.1 Barriers:

NR	Barrier Field	Barrier
<b>Preparation Phase</b>		
1	Political / Strategic	The political leadership was not keen for the original plans to go ahead due to their perceived impact on vehicle journey times. An alternative measure had to be found.
<b>Implementation Phase</b>		
1	Political / Strategic	The lack of political support for the original plans meant that the measure was not large enough in scale to have the intended impact.

### D2.2 Drivers

Below are the three most important drivers encountered during the reporting period:

NR	Barrier Field	Barrier
<b>Preparation Phase</b>		
1	Political / Strategic	The measure concerned is part of Brighton & Hove's Sustainable Urban Mobility Plan and thus a stated priority of the city.
3	Cultural	Brighton & Hove suffers from high road safety accident figures compared to other British cities and there is therefore a local desire to improve road safety conditions.

Measure title: **Road Safety Campaign in Brighton & Hove**

City: **Brighton**

Project: **Road Safety Campaign**

Measure number: **44**

Implementation Phase		
7	Planning	The measure plans received positive safety audit results.
Operational Phase		
7	Planning	The measure plans received positive safety audit results.

### D2.3 Activities

NR	Barrier Field	Barrier
Preparation Phase		
7	Planning	A wide range of primary data was carried out / commissioned, to able us to assess road safety awareness and behaviour in the two sited areas in the city. Further detailed research was carried out on the specific sites identified in the preliminary research phase.
10	Technological	Engineering solutions and awareness raising campaign activities were developed and consulted upon.
Implementation / Operational Phase		
10	Technological	The engineering solutions identified in the preparation phase were implemented.
5	Involvement /	The awareness raising campaign activities

Measure title: Road Safety Campaign in Brighton & Hove

City: Brighton

Project: Road Safety Campaign

Measure number: 44

	<b>Communication</b>	identified/developed during the preparation phase were launched in and around the two identified sites, London Road and Lewes Road.
--	----------------------	---

## D3 Participation

### D.3.1 Measure Partners

<b>Measure partner 1</b>	
<b>Name:</b> Sustainable Transport, BHCC	
<b>Type of Organisation:</b>	<b>Level of Activity:</b>
1. City	<input checked="" type="checkbox"/> 1. Leading Role
<input checked="" type="checkbox"/> 2. Public Transport Company	2. Principle participant
3. Knowledge Institution (e.g. university)	3. Occasional participate
4. Non Governmental Organisation	
5. Private Company	
6. Other, please describe	

<b>Measure partner 2</b>	
<b>Name:</b> BHCC Communications/Marketing Team	
<b>Type of Organisation:</b>	<b>Level of Activity:</b>
<input checked="" type="checkbox"/> 1. City	1. Leading Role
2. Public Transport Company	<input checked="" type="checkbox"/> 2. Principle participant
3. Knowledge Institution (e.g. university)	3. Occasional participate
4. Non Governmental Organisation	
5. Private Company	
6. Other, please describe	

Measure title:

Road Safety Campaign in Brighton & Hove

City: Brighton

Project: Road Safety Campaign

Measure number: 44

Measure partner 3	
<b>Name:</b> Sussex Safer Roads Partnership, Data research Team	
Type of Organisation:	Level of Activity:
1. City	1. Leading Role
2. Public Transport Company	2. Principle participant
3. Knowledge Institution (e.g. university)	X 3. Occasional participate
4. Non Governmental Organisation	
X 5. Private Company	
6. Other, please describe	

#### D.3.2 Stakeholders

- Residents and Traders in and around the two identified sites where consulted during the design and development (preparation) stage of the project.

## D4 Recommendations

#### D.4.1 Recommendations: Measure Replication

This measure may be transferred to cities interested in increasing road safety awareness and influencing the behaviour in groups of people who are statistically most at risk of being injured in collisions through a publicity campaign; and implementing road safety engineering measures, at high risk sites to improve road safety.

Through carrying out this measure, Brighton & Hove City Council achieved the following:

- Accidents decreased significantly from 60 to 15.

*Measure title:*

**Road Safety Campaign in Brighton & Hove**

*City:* **Brighton**

*Project:* **Road Safety Campaign**

*Measure number:* **44**

- However people's perception of safety decreased from 75% to 63%.
- 29% reduction in peak hour traffic flows.

To implement a similar measure, it is recommended to consider the following:

- The financial costs are mainly the initial outlay in terms of the initial design, material and implementation costs.
- The road safety engineering measures we implemented were small in scale and low cost, but effective.
- Cities should consider the road culture of their city before embarking on a road safety campaign.

#### D.4.2 Recommendations: process (related to barrier, driver, and action fields)

---

- a) Obtain robust data collections at the start of the project.
- b) Consult and inform local community about your proposed solutions.
- c) Once measures have been implemented, continuing monitoring road safety behaviour to identified any changes or patterns.
- d) Make sure you get good 'before' and 'after' surveys, so you can evaluate the success of the measure.
- e) Communicate with your target audience. Involve them in the design of campaign activities, imagery, for example. – Don't assume you know what your target audience will respond to.