

Measure title: **Individual Travel Advice**

City: **Norwich**

Project: **CIVITAS  
Smile**

Measure number: **11.5**

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## **A Introduction**

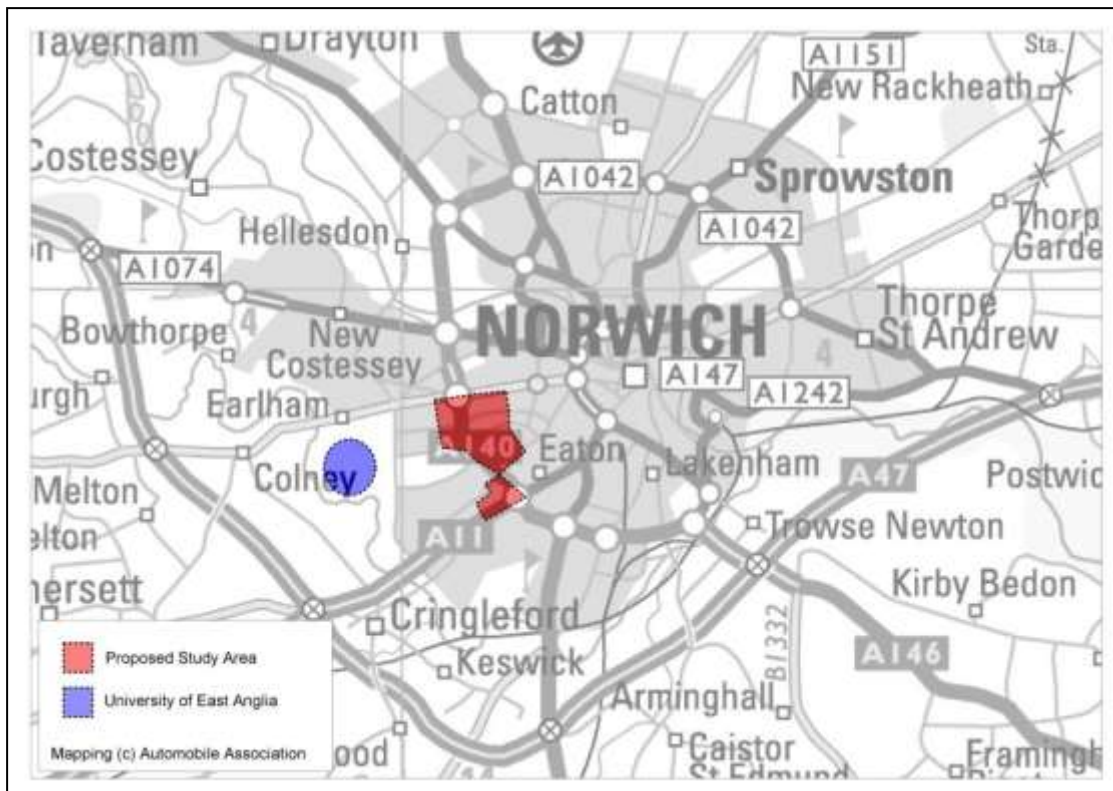
The University of East Anglia (UEA) is situated approximately 3 miles from the centre of Norwich in an edge-of-city, semi rural location. Alongside its teaching & research facilities the campus provides a “home” for around 3,500 of its 16,000 students and employment for around 3,000 staff (including volunteer staff).

In addition to the main campus, the University has a recently built School of Nursing & Midwifery (NAM) located approximately 1 mile from the site opposite the Norfolk & Norwich University Hospital (NNUH). The University’s sister institutes, John Innes Centre (JIC) & the Institute of Food Research (IFR) are around the same distance to the west of the campus. The area is known as the Norwich Research Park (NRP) and the open fields surrounding the NRP are designated for development into a “science” park at some point in the future.

The University adopted its Travel Plan in December 2002. The aim of the Plan is to; “Ease the car parking problems at the University and reduce the University’s environmental impact through a reduction in non-essential car use, achieved by creating opportunities for staff, students and visitors to travel by alternative means of transport to the private car or to travel in ways which reduce the number of one-person, one-car commuter journeys”. Delivery of the Plan has centred on the need to provide new infrastructure to support walking and cycling, provision of a lift sharing scheme including a database of potential sharers along with benefits such as reserved parking and improvements to local bus services including reducing the cost of travel. Whilst there has been a marketing strategy in place, this has sought to raise awareness across the community rather than focusing on individuals. The results of the Personalised Travel Planning (PTP) projects first in Australia and more recently in a small number of UK cities led the University to believe this type of targeted marketing could help it to achieve its overall aims.

Due to the success of the Personalised Travel Planning services provided for staff and students at the UEA, the programme has been extended to evaluate the potential in local residential areas. The study area is located to the east of the UEA and west of the Norwich ring road. It is within 2km of Norwich City Centre and the UEA. The study area consists of 2,195 households. A control area of 493 households has also been identified adjacent to the study area in order to make comparisons between ‘before’ and ‘after’ the Personalised Travel Planning is undertaken. Within the area there are a several local amenities including four schools and four shopping areas.

Figure 1: Study area



The wider context of travel planning and advice is as follows.

### Policy and Aspirations of Norfolk County Council & Norwich City Council

Norwich City Council and Norfolk County Council share responsibility for transport planning in Norwich and are active in encouraging and raising awareness of more sustainable modes of travel. Their Environmental Policy agreed by the Cabinet in December 2001 states that Norfolk County Council will “encourage a shift towards more sustainable transport including appropriate public transport and cycling and walking”. To help achieve this goal **Local Transport Plan 2** prepared by both the County and City Council for 2006-2011 includes the following objectives:

- Improve opportunities for travel by sustainable modes particularly public transport, walking and cycling;
- Ensure delays to buses are kept to a minimum;
- Deliver a more efficient transport network and encourage people to use more sustainable modes of transport such as the bus;
- Provide information and marketing as well as support for workplace and school travel plans;
- Encourage Norfolk’s residents/visitors to use more sustainable modes of transport like walking, cycling and public transport wherever possible; and
- Raise awareness of the contribution transport can make to climate change so that people are better able to understand the impacts their transport decisions make.

It should be noted that although encouraging residents to travel by sustainable modes is an objective it is not known at this stage how or if this is being delivered currently, in particularly directly to households in the Norwich area.

### **The Norwich Area Transport Strategy (NATS) 2006**

The Norwich Area Transport Strategy looks forward to 2025 and will form the framework for making future decisions about all aspects of transport in the Norwich area. The County Council adopted the original NATS strategy in 1997 and has since been reviewed with a revised version adopted by the County Council in 2004. NATS aims to:

- Provide easy access for people to and within the city, meeting individual needs and maintaining the economic health of Norwich;
- Make sure that journeys are sustainable; and
- Minimise any adverse impact on people's health and enjoyment of the city or upon the historic or natural environment.

NATS will achieve this by:

- Encouraging people to get into the city without using cars by improving facilities for walking, cycling and public transport like Park & Ride;
- Encouraging alternative forms of transport when looking at new schemes. The order of priority is walking, cycling, public transport, taxis, essential motor vehicles, non-essential motor vehicles;
- Tackling accidents and the environmental impacts of traffic; and
- Supporting the economic growth of the Norwich area.

## **A1 Objectives**

The measure objectives are:

- Provide individuals with one-to-one travel advice;
- Provide practical support;
- Provide motivational support; and
- Market all forms of sustainable travel to achieve a reduction in private car use, particularly sole occupancy journeys, reduce congestion and associated pollution.

The upscale to the residential Personalised Travel Planning project included the following objectives:

- Using the lessons learnt from the UEA Personalised Travel Planning project, apply Personalised Travel Planning to a residential situation.
- Engage with the local community to assess travel behaviour and perceptions of sustainable transport.
- Provide detailed advice and information at an individual level to those willing to consider their sustainable options.
- Raise awareness of the sustainable options and facilities available in the area.
- Influence travel behaviour and reduce single occupied car travel in an identified area.

- Extend the sustainable culture and journey planning initiatives at the UEA to residents in the surrounding areas.
- Improve existing links as well as create new ones between the UEA and the residential areas in the surrounding area.
- As a demonstrational project, assess the effectiveness of Personalised Travel Planning and whether it has the potential to be applied elsewhere.

## A2 Description

The measure has been implemented through the appointment of a Personal Travel Advisor (PTA) whose role is:

- To work one-to-one with staff and students to motivate individuals to think about their travel options and to discuss their choices in order to change their travel behaviour.
- Provide staff and students with information on the alternatives available to them and to support those undertaking behaviour changes to ensure sustainability.
- To target groups, in particular those who live closest to the University, those who perceive change as difficult due to family caring responsibilities or who feel most vulnerable to crime (generally women and young students away from home for the first time) and those who could use public transport, cycle or walk, through mailings, one-to-one advice session and events.
- Provide drop in sessions around campus and as part of University organised events i.e. accommodation fair, Freshers' Week and devise and deliver marketing campaigns/promotions to ensure as many people as possible are engaged in initiatives.
- To provide practical support to help individuals move to a more sustainable means of travel including the provision of free bus passes, loan bikes etc.

## B Measure Implementation

### B1 Innovative aspects

The innovative aspects of the measure are:

- The University has not previously targeted individuals or specific groups. Therefore using University databases to target individuals or groups with tailored travel information is a new approach. The "Drop in" sessions which aim to provide groups within a School, Division or Building with opportunities to be given advice and help with individual travel needs is a new and innovative approach to marketing Travel Plan initiatives and achieving modal shift.
- The "try-before-you-buy" cycle scheme. Ten cycles are available free-of-charge to staff and students who do not own a cycle to trial cycling. The scheme is aimed primarily at those who drive to campus. The Ten bikes are continuously booked out, and a

waiting list is in place. The Scheme has a high "conversion" rate with the majority of those who have borrowed cycles going on to purchase a cycle. See Appendix 1.

- The "Buy Back Cycle Scheme". Students and staff who are here for less than 9 months of the year, and International students benefit most from this scheme although the quality and affordability of the cycles make this a good option for anyone looking for a used cycle. The scheme allows an individual to purchase a cycle and the University guarantees to buy it back at a fixed price at the end of the term alternatively of course the cycle can just be kept. The scheme is also reducing the number of abandoned bikes that need to be recycled.

For the residential Personalised Travel Planning project the innovative aspects are:

- This is the first residential Personalised Travel Planning project to be undertaken in Norwich. Most previous Personalised Travel Planning projects have been undertaken in Australia. The few projects undertaken in the UK have included Nottingham, Gloucester, Sheffield, Bristol and Peterborough.
- Combining the residential project with the UEA project is a unique approach allowing for resources to be shared such as marketing materials, (branded 'Travelbug') cycling/walking maps, public transport information and best practice to be exchanged.
- A different survey technique was opted for collecting 'before' and 'after' data for the residential project. Whereas other Personalised Travel Planning projects used postal surveys, telephone calls or home visits to ascertain before and after travel behaviour, the project in Norwich was unique in the sense that the survey was hand delivered in a special 'travel pack' with other information and resources including a letter explaining the scheme, a 'travel bug', a lollipop, pen and stickers. Households were then asked to leave their packs on the doorstep to be collected. This technique allowed households to complete their surveys easily in their own time and the surveys could subsequently be collected from their house without their being disturbed via a visit or telephone call. An incentive of free entry into a prize draw for £1,000 was offered to encourage residents to respond and all households that responded received a free pedometer.
- As with the UEA project, households in the study area were invited to attend drop-in sessions, enabling them to speak with advisors on a one-to-one basis to access information tailored to their needs.
- All residents in the study area were given information on fuel efficient driving techniques whether they requested personalised information or not. This gave car drivers the opportunity to think about the way they drive even if they weren't willing to change their travel mode to a more sustainable one.
- The project had an interesting and innovative marketing scheme. Again, the residential project had the advantage of being able to adapt and utilise part of the UEA's existing marketing brand as well as use the same printing and design company, with which the UEA has an established relationship. The UEA's Travel Plan brand

is 'Get the Travelbug' the residential project used this same travel bug to create the brand; 'Have you heard the TravelBuzz?'. All the literature in the travel pack was branded with this theme and logo. The same branding is also used for the website and dedicated e-mail address [travelbuzz@uea.ac.uk](mailto:travelbuzz@uea.ac.uk).

## B2 Situation before CIVITAS

The UEA Travel Plan has sought through a range of hard and soft measures to achieve modal shift and reduce in particular single occupancy car journeys. The Travel Plan has enabled UEA to provide an environment which supports and promotes sustainable travel and this has been reflected in its success with modal shift. Surveys undertaken by the University show:

- Some 38% of the staff & student population commuted regularly by car; in 2005 this number had fallen to just 22%.
- The number of people who travel alone has reduced with a 26% reduction in staff and a 12% reduction in student single occupancy journeys.
- Despite considerable growth in the built environment that has allowed for an increase in staff & student numbers there are 500 less drivers today than in 1998. Furthermore the intervention of the Travel Plan has ensured the growth in car journeys is materially less than the growth in the University. Without Travel Plan intervention over 6000 people would regularly drive to campus; the number in 2005 was just over 4000.

Despite the success of the Plan there is evidence that the University faces a "plateau" in further modal shift. Those most likely to change have already done so and the battle is now for "hearts and minds" with those who could change but don't/won't and those who have yet to form a travel behaviour pattern targeted.

Additionally, decreased parking availability due to the construction of new buildings and continuing growth in student & staff numbers means the University faces a parking shortfall in December 2009 if further modal shift is not achieved.

This measure is therefore an important tool in the overall traffic management strategy of the University.

The goals of Norwich City Council and Norfolk County Council referred to in section A may have meant that prior to the residential Personalised Travel Planning project the same households may have received some type of 'exposure' to travel planning information through the following schemes and initiatives:

- Workplace Travel Plans
- School Travel Plans

There are also these additional CIVITAS projects taking place in Norwich which residents may or may not have heard about:

- Low Emission Zones;
- Alternative fuel vehicle fleets;

- Time controlled access restrictions;
- Influencing the choice of vehicle towards smaller and more efficient vehicles;
- Rail Station interchange;
- City Centre Car Sharing Club;
- Travel Planning; and
- Car Pooling.

Norwich is therefore a city proactive in raising awareness of the impacts of traffic on the environment.

Whilst these above schemes have been introduced and may have raised awareness of sustainable transport, it is unlikely that they will have provided individuals with tailored information to meet their own specific travel needs.

The study area for the residential Personalised Travel Planning consists of a range of housing types including detached, semi-detached, terraced, bungalows and flats. Census data (2001) was analysed to review the demographics of the area. There are a high number of students (17%) living in the area (which is understandable given the proximity to the UEA). The rest of the population is comparable to the national average – 35% working full time, 10% working part time, 12% retired and 3% unemployed. Almost a third of households in the area do not have access to a car or van. Table 1 and Table 2 illustrate the employment and car ownership levels for the study area, Norwich, Norfolk, East of England and England.

There is already a high level of pedestrian and cycle activity in the area. Facilities for pedestrians and cyclists are plentiful and of a high quality with cycle lanes, pelican and toucan crossings, home zones and traffic calming measures. The Avenues provides a direct cycle route between the UEA and Norwich City Centre. Christchurch Avenue also provides a pleasant traffic calmed route between Earlham Road and Newmarket Road.

The area has a good standard of public transport infrastructure with an adequate number of bus stops each offering texting facilities (passengers can text a number and are then sent details of the next bus services from that bus stop). Services run every 10 minutes from the study area to the UEA, Horsford, Riverside, Norwich Railway Station and Norwich City Centre.

The National Travel Survey further reflects the wide use of more sustainable travel modes for all purpose trips. Walking accounts for 50% of all trips made, cycling 5%, 11% car/van passenger and 26% car/van driver (in comparison to 43% for England). This is illustrated in Table 3.

	Norwich 010	Norwich 009	Norwich 012	Norwich 011	Average for Study Area	Norwich	Norfolk	East England	of England
<b>Employees Part-time</b>	9%	10%	12%	11%	10%	12%	13%	12%	12%
<b>Employees Full-time</b>	19%	47%	33%	41%	35%	39%	38%	43%	41%
<b>Self-employed</b>	4%	8%	7%	7%	7%	6%	9%	9%	8%
<b>Unemployed</b>	2%	3%	2%	5%	3%	4%	3%	3%	3%
<b>Full-time student</b>	9%	7%	2%	6%	6%	4%	2%	2%	3%
<b>Retired</b>	12%	6%	19%	12%	12%	12%	17%	14%	14%
<b>Student</b>	35%	16%	5%	10%	17%	8%	3%	4%	5%
<b>Looking after home / family</b>	5%	4%	5%	4%	5%	6%	7%	7%	7%
<b>Permanently sick / disabled</b>	4%	2%	3%	5%	3%	6%	5%	4%	5%
<b>Other</b>	2%	2%	2%	3%	2%	3%	3%	3%	3%
<b>Unemployed people aged 16 - 24</b>	1%	1%	1%	1%	1%	1%	1%	1%	1%
<b>Unemployed people aged 50 and over</b>	0%	0%	1%	1%	1%	1%	1%	1%	1%
<b>Unemployed people aged 16-74: Who have never worked</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Unemployed people aged 16-74: Who are long-term unemployed</b>	1%	1%	1%	1%	1%	1%	1%	1%	1%

**Table 1: Employment Characteristics (Source Census 2001)**



	Norwich 010	Norwich 009	Norwich 012	Norwich 011	Average for Study Area	Norwich	Norfolk	East of England	England
Households with no cars or vans	35%	28%	18%	40%	30%	36%	21%	20%	27%
Households with one car or van	48%	52%	51%	44%	49%	48%	47%	44%	44%
Households with two cars or vans	14%	18%	26%	13%	18%	14%	25%	28%	24%
Households with three cars or vans	2%	3%	4%	2%	3%	2%	5%	6%	5%
Households with four or more cars or vans	1%	1%	1%	1%	1%	1%	2%	2%	1%

**Table 2: Car Ownership Levels (Source Census 2001)**

	Norwich 010	Norwich 009	Norwich 012	Norwich 011	Average for Study Area	Norwich	Norfolk	East of England	England
Train/Underground	0%	1%	0%	0%	0%	0%	0%	3%	3%
Bus/Minibus/Coach	13%	4%	9%	3%	6%	7%	5%	4%	8%
Motorcycle/Scooter/Moped	0%	0%	0%	0%	0%	0%	0%	0%	0%
Car/Van Driver	29%	23%	26%	20%	26%	27%	46%	48%	43%
Car/Van Passenger	17%	9%	11%	7%	11%	13%	17%	17%	17%
Bicycle	6%	5%	5%	3%	5%	4%	3%	2%	2%
Walk	34%	57%	50%	65%	50%	46%	27%	24%	26%
Taxi/Other	1%	1%	1%	1%	1%	1%	1%	1%	1%

**Table 3: Modal Share for all purpose trips (Source National Travel Survey 2006 incorporated with the census travel to work information 2001)**

### **B3 Actual implementation of the measure**

The measure was implemented in the following stages:

**Stage 1: Appoint Travel Planner (May 2006 to August 2006)** – create job description, advertise position in local and national paper, shortlist, interview and appoint Travel Planner

**Stage 2: Develop Program for Initial Awareness Raising and Marketing of Project (August 2006 – November 2006)** – raise awareness of existence of PTA and role within the campus community, decide target groups, selection of promotional/advertising literature.

**Stage 3: Identify Target Groups (September 2006 – November 2006)** – target individuals/groups identified through the use of car parks permit database, develop drop in session programme, travel diaries

**Stage 4: Work with individuals/groups to develop travel plans (November 2006 – March 2008)** – drop-in sessions, marketing of individual travel plan service through literature, postcards, emails, raising awareness through press/intranet, working with individuals to find alternative means to travel into campus without using a motor car.

**Stage 5: Upscale of measure to provide residential personalised travel planning (March 2008 – September 2008)**

**Stage 6: Identify Survey Area (including study area and control area) (June 2008 - July 2008)** – determine number of households, undertake site visit/assessment, gather information.

**Stage 7: Produce and Distribute Publicity Materials (July 2008 – September 2008)** – including leaflets, letters, website, specific e-mail address, press releases, marketing materials.

**Stage 8: Baseline Surveys (July 2008)** – deliver and collect the travel packs.

**Stage 9: Personalised Travel Planning (July 2008 - August 2008)** - provide to those households who requested Personalised Travel Planning, tailored information through drop-in sessions and delivering information to households. Provide information on driving efficiently to the households that didn't travel by a sustainable mode and didn't require any further information on sustainable modes.

**Stage 10: Second Stage Surveys (September 2008 – October 2008)** – deliver, collect and analyse 'after' data.

**Stage 11: Reporting (August 2008 – October 2008)** – analyse, review and report the findings of the project.

### **B4 Deviations from the original plan**

The deviations from the original plan comprised:

- **Deviation 1** – Due to internal problems at the university there was a delay in appointment of Travel Advisor that has led to the measure being delivered over a much shorter period of time than anticipated.

- **Deviation 2 Travel Diaries** – *The take-up of students and staff wishing to keep a travel diary has been minimal; 500 diaries were collected but only a handful returned.*
- **Deviation 3 Target Groups** – *It was anticipated that specific target groups would be contacted i.e. those identified through the University's Parking Permit system. The focus would be on those who lived in a postcode area close enough to campus to travel by other means. Whilst less defined, greater success appears to come from holding drop in sessions and face-to-face contact along with leaflets/and emails rather than targeting postcode areas.*

The deviations from the upscaling residential Personalised Travel Planning project comprised:

- **Deviation 4 Returned Travel Packs** - *The number of completed packs left on the door steps to be collected was lower than anticipated. As a result of this the surveyors revisited targeted areas (areas with a particularly low response rate) and knocked on doors to see if there were any additional completed packs to be picked up.*
- **Deviation 5 Information on Driving Fuel Efficiently** - *The driving fuel efficiently information was intended to be delivered to those households not travelling by sustainable modes or requesting further information to do so. However, in reality the logistics to do this proved complicated so it was decided to distribute this information to all households regardless of their current travel patterns and whether they requested further information or not.*
- **Deviation 6 Drop-in Sessions** - *Due to the low number of households initially interested in attending a drop-in session reminder notes were distributed to all households in the study area to attract more interest.*
- **Deviation 7 Prize Draw Winner** – *In the cover letters to the residents it was detailed that the winner of the free prize draw would be announced on Friday 10<sup>th</sup> October. Due to a slight delay in data inputting, the winner was not announced until two weeks later.*
- **Deviation 8 Project checklist** – *It was the intention to produce a household checklist which detailed when households were issued information/surveys, which households responded and how they received their personalised travel planning information. Due to some missing information this was not possible, although it is not considered that this hindered the overall study.*

## B5 Inter-relationships with other measures

The measure is related to other measures as follows:

- **Measure 8.5 On street ticket vending machines**
  - One of the ticket vending machines has been installed on campus.
- **Measure 9.2 Provision of a City Centre Car Club**
  - Initially Car Club launched on Campus however failed to be a success and vehicle re-located to city centre
- **Measure 12.9 Provision of Real Time Travel Information**
  - Plans underway to install available system at bus stops on campus.

## C Evaluation – methodology and results

### C1 Measurement methodology

#### C1.1 Impacts & Indicators

##### Indicators for the University Individual Travel Advice element

No.	Indicator name	Description	Data Units
13	Awareness Level	Number of people in contact with the service	Quantitative & Qualitative
14	Acceptance Level	Number of Travel Plans agreed or take up of initiatives	Quantitative & Qualitative
16	PT Services Relative Cost	University Annual Bus Pass vs. average income	Quantitative
18	Accuracy of PT Timekeeping	Derived from published timekeeping data, Survey	Quantitative & Qualitative
19	Quality of PT Service	Survey	Qualitative
27	Modal split	Survey	% Quantitative

Detailed description of the indicator methodologies:

- **Indicator 13** (awareness level) a “clipboard” survey of the University community was used to determine the awareness of the measure across campus and establish modal share. The survey sought to determine where the awareness is due to the measure rather than the Travel Plan Strategy. Additionally where a postcode group were targeted these individuals were contacted by telephone or email.
- **Indicator 14** (acceptance level) Data on the acceptance of the measure was collected through follow-up interviews with those contacted as part of one-to-one advice sessions along with a general “clipboard” survey of the University community. The aim again was to determine if change in travel behaviour had been achieved by the measure, the Travel Plan strategy or

other factors (i.e. moving home, cost of fuel etc.). Where individuals entered into a personal travel plan the interview also recorded if the change in behaviour had been sustained. Surveys sought, where a change in mode took place, if this was due to the Travel Plan, the measure or the current economic conditions.

- **Indicator 16** (PT service relative Cost) This was a desktop exercise to relate average income to average cost of PT journeys including the use of the UEA Annual Bus Pass.
- **Indicator 18** (accuracy of PT timekeeping) Use of data collected as part of bus service monitoring by First Bus Company & Norfolk County Council.
- **Indicator 19** (quality of service) Results derived from survey
- **Indicator 27** (Modal Split) % analysis of modal share

### Indicators for the upscaling residential Personalised Travel Planning

No	Indicator Name	Description	Data Units
13	Awareness level	Degree to which the awareness of the policies/measures has changed	Index, qualitative, collected, survey
14	Acceptance level	Attitude survey of current acceptance with the measure	Index, qualitative, collected, survey
15	Perception of Public Transport accessibility	Attitude survey of perception of physical accessibility of Public Transport network (distance to nearest Public Transport stops)	Index, qualitative, collected, survey
16	Public transport services relative cost	Cost of public transport related to average personal income (i.e. cost of a weekly, monthly or annual pass in proportion of the average weekly, monthly or annual income, respectively)	Index, quantitative, measurement
17	Perception of Public Transport security	Perception of security when using public transport options	Index, qualitative, collected, survey
18	Accuracy of Public Transport timekeeping	Percentage of services arriving/departing on time compared to timetables (each city should fix the interval of time considered as a delay compared with timetable)	Percentage, quantitative, collected, measurement
19	Quality of Public Transport service	Perception of quality of Public Transport services	Index, qualitative, collected, survey
27	Average modal split-vehicles	Percentage of vkm for each mode	Percentage, quantitative, derived

Detailed description of the indicator methodologies:

- **Indicator 13** (awareness level) This was derived through analysing the survey responses of residents' awareness levels before and after the Personalised Travel Planning intervention. The 'before' and 'after' survey responses of the control group receiving no travel planning intervention were also assessed to ascertain whether any change was due to the Personalised Travel Planning intervention alone or other factors, for example increased fuel prices or a new public transport service.

- **Indicator 14** (acceptance level) In the ‘after’ survey respondents were asked how useful the Personalised Travel Planning had been and their acceptance of this service in the future was also ascertained.
- **Indicator 15** (perception of Public Transport accessibility) Data collected from the resident travel survey was used to ascertain resident’s perception of physical accessibility to public transport services i.e. convenient location of bus stop.
- **Indicator 16** (Public Transport services relative cost) Rather than actual relative cost, data collected from the resident travel survey were used to ascertain resident’s perception of the cost of using public transport.
- **Indicator 17** (perception of Public Transport security) This used the data collected from the resident travel survey to ascertain resident’s perception of security when using public transport options.
- **Indicator 18** (accuracy of Public Transport timekeeping) The Personalised Travel Planning initiative will have no influence on the timekeeping of Public Transport, instead the perception of this was measured through the residents’ questionnaires. If deemed necessary, quantitative data could be collected from the local bus operators.
- **Indicator 19** (quality of Public Transport service) The perception of the quality of public transport services i.e. comfort, cleanliness was collected through the resident travel survey.
- **Indicator 27** (modal split) Modal split in terms of distance travelled by each mode was collected from the resident travel survey. This was collected for a typical weekday, Saturday and Sunday and factored accordingly.

## C1.2 Establishing a Baseline

The University’s individual travel advice element utilised baseline data from the University’s Commuter Survey 2005. The survey collected quantitative & qualitative data relating to all modes of transport, the University Traffic management Policies including the Car Parking Policy and its marketing/promotion strategy. The survey sought not only to count “how many” but also to look at motivation in order that the Travel Plan could be developed and tailored to meet the needs of the University community.

Indicators 13 & 14	The baseline is zero as this is a new concept.
Indicators 16	The baseline is zero as no previous comparison has been made.
Indicator 18	The baseline data was that held by First Bus Company and Norfolk County Council.
Indicator 19	The baseline data used was the UEA Commuter Survey 2005, Section
Indicator 27	The baseline data used was from the UEA Commuter Survey 2005.

The residential Personalised Travel Planning project baseline was established from the resident travel survey undertaken in July 2008. The survey collected a mixture of quantitative and qualitative data regarding local transport facilities, modes of travel used, reasons for using particular modes and data about the household and the respondent. Baseline data was collected from the study area and the control area in order to compare with

the data after the Personalised Travel Planning intervention (study area) and without the intervention (control area).

In addition traffic surveys were undertaken at two locations within the study area. The traffic surveys include recording the number of pedestrians, cyclists, vehicles and public transport (including estimated occupancy levels). This data was also used in conjunction with the household residential surveys.

### **C1.3 Building the business-as-usual scenario**

The University has had its Travel Plan in place since 2002 and has also recently joined a project sponsored by Carbon Connections to promote lift-sharing. Therefore the University would have continued to seek to achieve its aim of reducing private car journeys and in particular single occupancy journeys and raising awareness of the need to travel sustainably had the measure not been introduced.

A comparison of the baseline modal share data from the 1998 Travel Survey (pre Travel Plan) and that of the 2005 UEA Commuter Survey (post Travel Plan) showed a reduction of 16%. Following the implementation of the Travel Plan there was an immediate reduction in the number of individuals who regularly drove to campus of at least 10% due to the introduction of a more restrictive parking policy. Therefore the rate of modal shift achieved through soft measures is estimated at 1% per year although this may be misleading as there is anecdotal evidence that since 2006 the rate of shift has slowed. As the Travel Plan has continued to develop and deliver a range of new initiatives to support and promote sustainable travel it is reasonable to predict that this level of shift should have been maintained. Therefore in quantitative terms the measure will need to demonstrate modal shift beyond this figure if it is deemed to have achieved its aims.

A key aim of the University's Travel Plan is to raise awareness of the many good reasons to choose a sustainable means of transport where possible. Reasons include community and environmental concerns in the form of reducing congestion and pollution to the personal benefits including reducing personal carbon footprints, saving money and increasing health & well being.

In addition to the work undertaken by the University in the form of its Travel Plan, the cost of living and fuel prices have risen significantly in the UK. This may have an effect on the travel behaviour of staff and students as many seek to reduce spending by finding less expensive alternatives. Furthermore the University from September 2008 will lose approximately 250 parking spaces to enable construction of its Biomass Wing; student parking will be relocated to a remote, albeit free, overflow car park. The effects of this will not be known until November 2008.

The introduction of a control area for the PTP project establishes what would have happened regardless of the intervention. Therefore it is possible for the Personalised Travel Planning project to take into consideration any other factors such as increased living costs, increased fuel or changes in public transport which will have an impact on resident's travel decisions. The control area was surveyed at the same time as the study area in July 2008 (before

the intervention) and September 2008 (after the intervention) in the form of a self-completion questionnaire hand delivered in the travel pack.

Any changes within the control area will be considered with the results for the study area. Therefore it is fair to assume that any additional change within the study area is likely to be as a result of the Personalised Travel Planning intervention.

## C2 Measure results

### C2.1 Society

#### University Results

Three surveys were undertaken to determine awareness and acceptance of the measure. These included:

- **Survey 1:** Clipboard survey of people who had not been in direct contact with the Service. Number of respondents 323, 142 staff, 190 students and 163 unidentified.
- **Survey 2:** Clipboard survey of people who had been in contact with the Service. Contact would include any form of advertising, attendance at an event or drop in session. Number of respondents 495, 96 staff, 126 students and 105 unidentified.
- **Survey 3:** Telephone/email survey of those who had been identified through the University's databases and targeted by the Personal Travel Advisor. The majority would have received personalised Travel Plans based on their postcode. The survey sought to understand travel behaviour rather than acceptance of the measure. Number of respondents 337, 227 staff and 110 students.

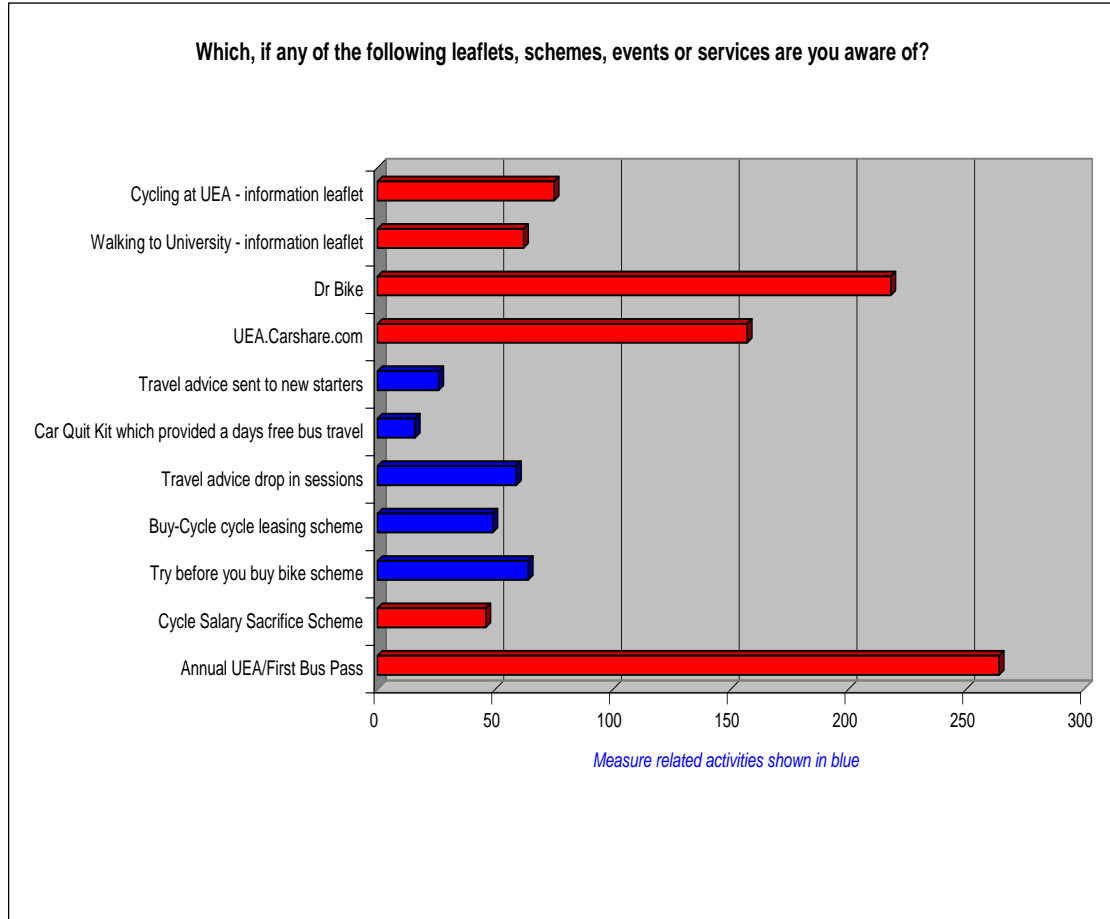
Despite advance publicity the number of respondents was very low with just 1155 individuals taking part, approximately 7% of the University's population. It is estimated that of this figure, only 33% were students. The low number of students surveyed is in part due to the time of year (the survey coincided with exam period) and may also be due to the surveyors failing to record accurately the respondents status. As student travel habits have traditionally differed from staff e.g. students tend to walk & bus more, cycle & drive less than staff, this may impact on the accuracy of the results.

Surveys 1 & 2 were undertaken in busy areas of campus i.e. close to shops, catering facilities etc. Individuals were stopped at random and asked if they had heard of the Personal Travel Advice Service, a positive or negative response then determined which of the survey sheets were completed. Unfortunately surveyors failed to establish with Survey 1 if a respondent was a member of staff or a student however given this survey was undertaken alongside Survey 2 it can be assumed that the staff/student split would be identical.

Figure 2 demonstrates the results from **Survey 1**, which shows the majority of those who took part in the clipboard surveys indicated they had not consciously been aware of the service however when asked about particular leaflets, information, events etc. over half had received information regarding the service or initiatives delivered as part of the measure. This



demonstrates an unconscious awareness of the measure. It should also be noted that the longevity of an item impacted on awareness, Dr Bike, UEA Car Share & the Annual Bus Pass all scored highly and all have been established for a number of years.



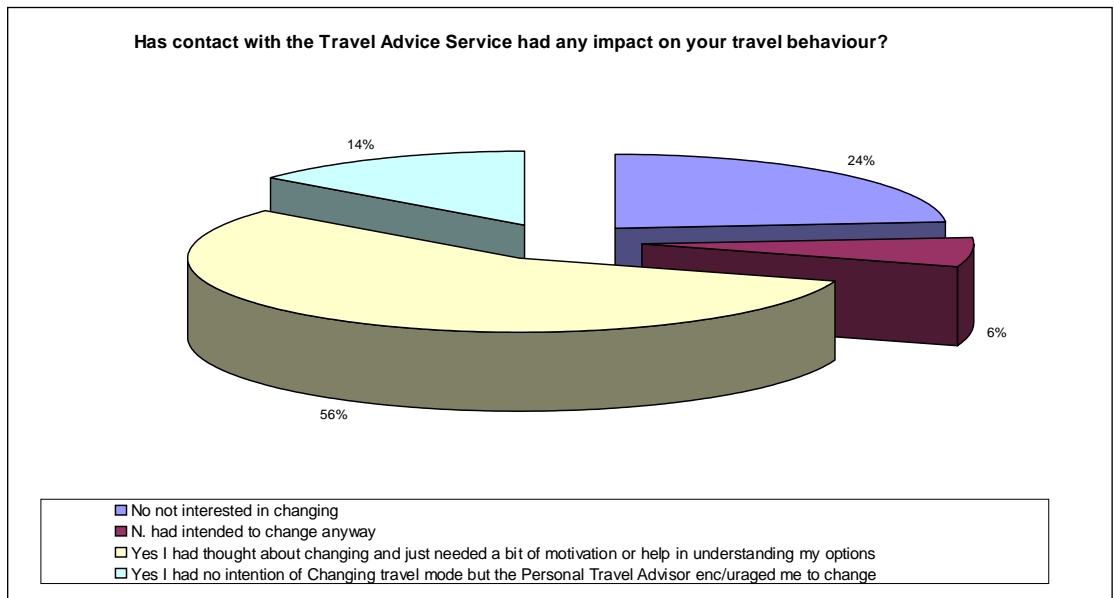
**Figure 2**

Of those surveyed 146 responded yes to the question “if you had known this service was available would you have used it?” 177 said no. Similar results were recorded in respect of knowledge of the Travel Plan with 144 people aware of the Plan. Overall this indicates a good awareness of the aims and objectives of both the measure and the Travel Plan.

Surveys 2 and 3, (which concentrated on those who had had contact with the Individual Travel Advice Service) sought to understand what, if any, change the measure had achieved and how individuals perceived the value of the Individual Travel Advice Service.

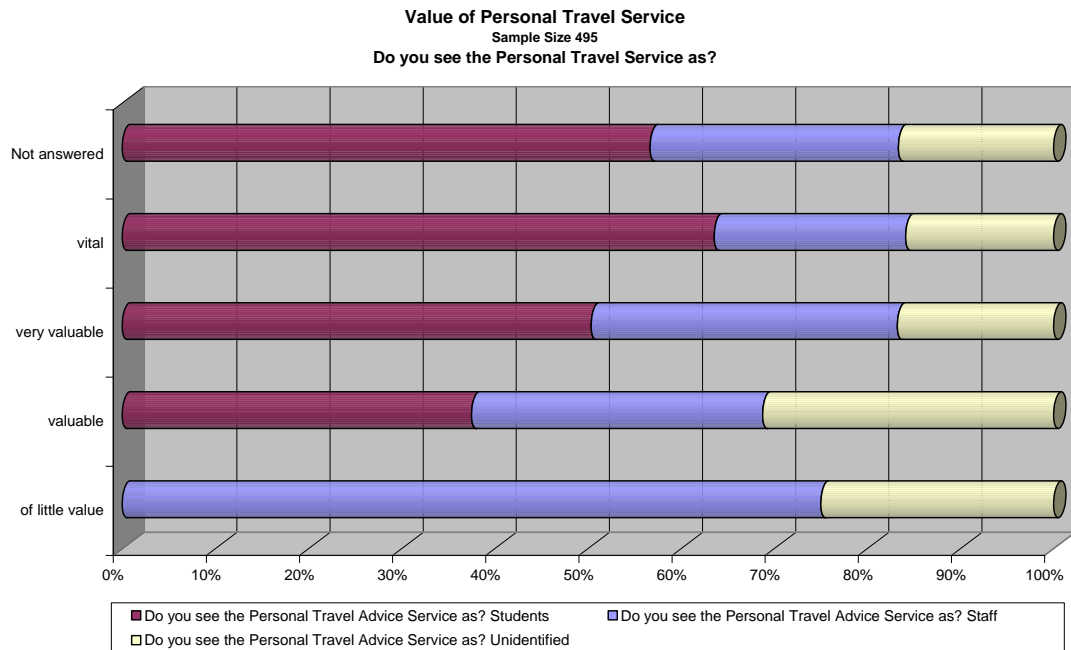
**Survey 2** revealed the majority of respondents had been made aware of the service through emails, advertising materials or as part of an event such as Green Travel Week. Only 26 had attended a drop in session and 39 had personally contacted the Travel Advisor to discuss travel choices.

Of the people who had received unsolicited information regarding alternatives to the car, approximately 1/3 had found it useful. Figure 3 shows the link between contact with the personal travel service and changes to travel behaviour identified in survey 2 but this does not include the 101 respondents from survey 3 who also felt the service had helped to change their travel behaviour. 70% of respondents to this question had changed travel behaviour; more importantly perhaps 14% had made changes although they had originally not been interested in making any change to their travel behaviour.



**Figure 3**

Those taking part in survey 3 were asked to assess the value of such a service, only 20 people (4%) felt the service was of no or little value. Figure 4 reveals the perceived value of the scheme by group surveyed.



**Figure 4**

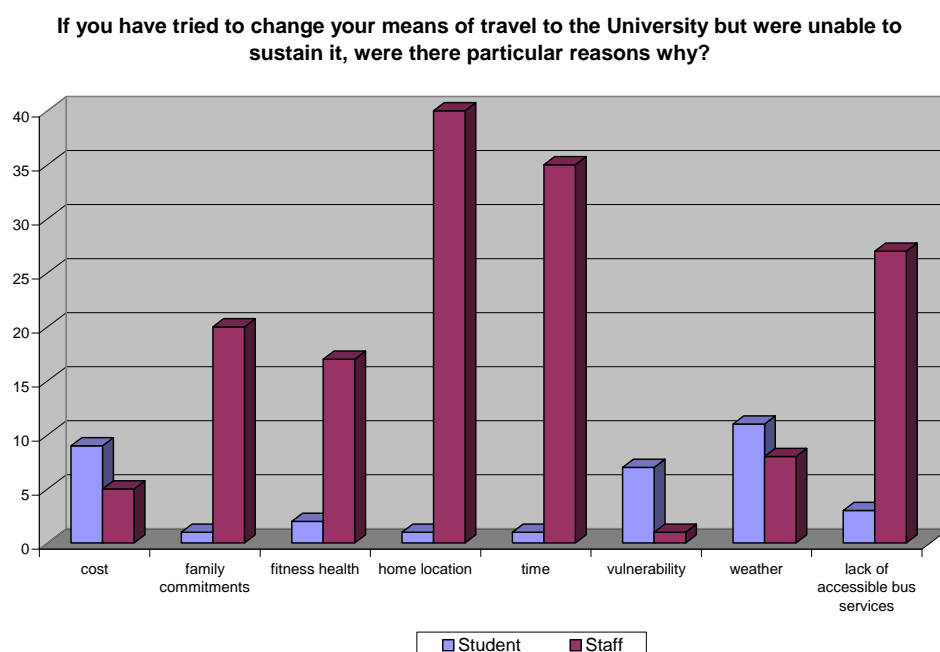
**Survey 3** sought to establish the views of individuals targeted using information held on the University’s Parking Permit and Human Resource databases. Postcode data was available for all with the exception of those contacted via the HR database enabling tailored information to be provided. This method also enabled the follow up survey to be conducted by telephone or email.

It should be noted that the majority of respondents, 77% were staff members and therefore results may reflect the position of staff rather than that of students.

The key results of the survey were:

- 50% of respondents had tried a different mode of transport during the course of the measure; in 2005 the number of staff and students who had changed behaviour following the introduction of the Travel Plan was 30% and 38% respectively.
- 44 of the 71 respondents who had been a sole occupancy car user prior to intervention admitted to making fewer car and in particular sole occupancy journeys.
- All modes had seen a reduction in usage which suggests the information supplied made people aware of their options and provided opportunities to try other modes
- When asked what mode had been tried and if the new mode had been sustained the results revealed that the majority continued to use a different mode at least occasionally and 20 people had switched to a more sustainable mode on an everyday basis.
- 37 and 31 respondents respectively admitted they had tried alternative modes of transport just once or for less than a week.

Those who had been unable to sustain use of an alternative mode were asked why this had been the case with the following results:



**Figure 5**

The results shown in figure 5 are consistent with results from previous travel surveys at the University particularly in respect of staff. Traditionally, staff live a greater distance from the campus often making it difficult to walk, cycle or use a bus and family commitments along with set hours of working make for greater constraints in terms of time. Students however are more sensitive to cost, weather conditions and may feel more vulnerable. It should be noted that just 35 students sought to answer this question as opposed to the 153 staff members.

Whilst the Travel Advice Service was seen as a tool in reducing the impact on the environment of University generated journeys, making people aware of modal choice and the need to change goes beyond this. 122 respondents had changed their travel behaviour in general with 74 individuals indicating much less use of the car for journeys outside of the “commute”.

#### **Indicator 16 - PT Services Relative Cost**

The average salary at the University is £27,438.45: therefore the relative cost of public transport assuming the use of an UEA/First Bus Annual season ticket at a cost of £148.00 is 0.5% of salary.

#### **Residential Area Results**

The residents in the study area were asked the same questions both ‘before’ and ‘after’ the Personalised Travel Planning (PTP) intervention. The surveys took the same form as the control survey with additional questions relating to the Personalised Travel Planning and the ‘Request for Information Sheet’ included in the ‘before’ survey for respondents to indicate what information they required and in which format. For the ‘before’ survey 358 households

responded from a total of 2,195 households relating to a response rate of 16%. Of these;

- 181 respondents (51%) currently travelled by sustainable modes and didn't need anymore information;
- 59 respondents (16%) currently travelled by sustainable modes and wanted more information;
- 22 respondents (%) didn't use sustainable modes and wanted more information;
- 25 respondents (9%) didn't use sustainable modes and don't want any more information; and
- 71 respondents didn't answer the question.

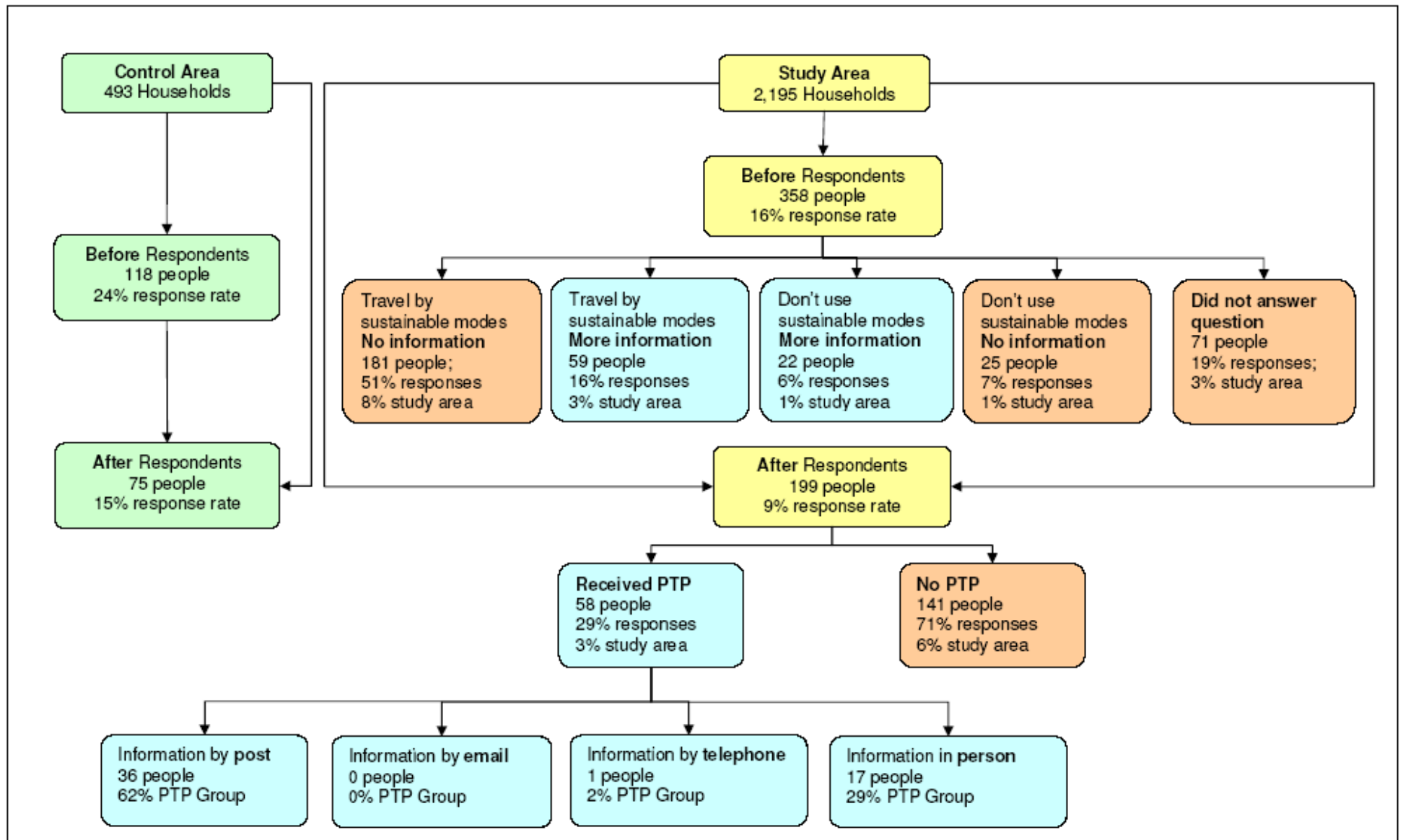
In total therefore 23% (81) of respondents to the question and 4% of the whole study area requested PTP information.

Information was available by post, e-mail, telephone or a home visit and could include any of the following.

- Bus stop map;
- Bus timetables;
- Bus Station Details;
- Text information;
- Train Times;
- Cycling Map;
- Cycling information;
- Cycle safety;
- Bicycle User Group;
- Use of loan cycle;
- Walking routes;
- Walking Information;
- Car Sharing;
- City Car Club;
- Eco-driving;
- Car maintenance; and
- Personalised journey planning for specific journeys.

Figure 6 summarises the number of respondents, sample size and the information requested. It should be noted that in reality a much smaller proportion of people received information in person, although because information was hand delivered this may have been interpreted as being 'in person'. Therefore the proportion of people receiving information by post may be much higher.

For the purposes of the data analysis the responses have been grouped into four categories: i) control area ii) study area (including all respondents) iii) PTP group (to assess the impact of the PTP intervention only) and iv) Non PTP group (people in the study area, who had not requested PTP information, but could have been exposed to some of the intervention).



**Figure 6: Summary of respondent numbers and response rates**

## Respondent Profile

The split between male and female respondents was similar across all groups in both the before and after surveys with approximately a third of responses from males and two-thirds from female respondents. The age breakdown was also very similar across the groups in the before and after surveys. The key exception was within the PTP group whereby the age of respondents in the after survey was noticeable higher than the before surveys. This suggests that people aged over 45 were more likely to take part in the PTP study than the under 45 age groups. This was also reflected in respondent's employment status, whereby the PTP group were more likely to be retired compared to the study group generally. It should also be noted that there was a slightly higher proportion of retired people who responded in the control area compared to the study area.

Approximately a fifth of all respondents did not have access to a car, which is lower than the average for the area compared to the Census Data. A third of respondents did not have access to a bicycle, which was similar across all groups in both the before and after surveys.

## Indicator 13 - Awareness of Policies & Measures

For the awareness of policies and measures the results were analysed for the following three respondent groups:

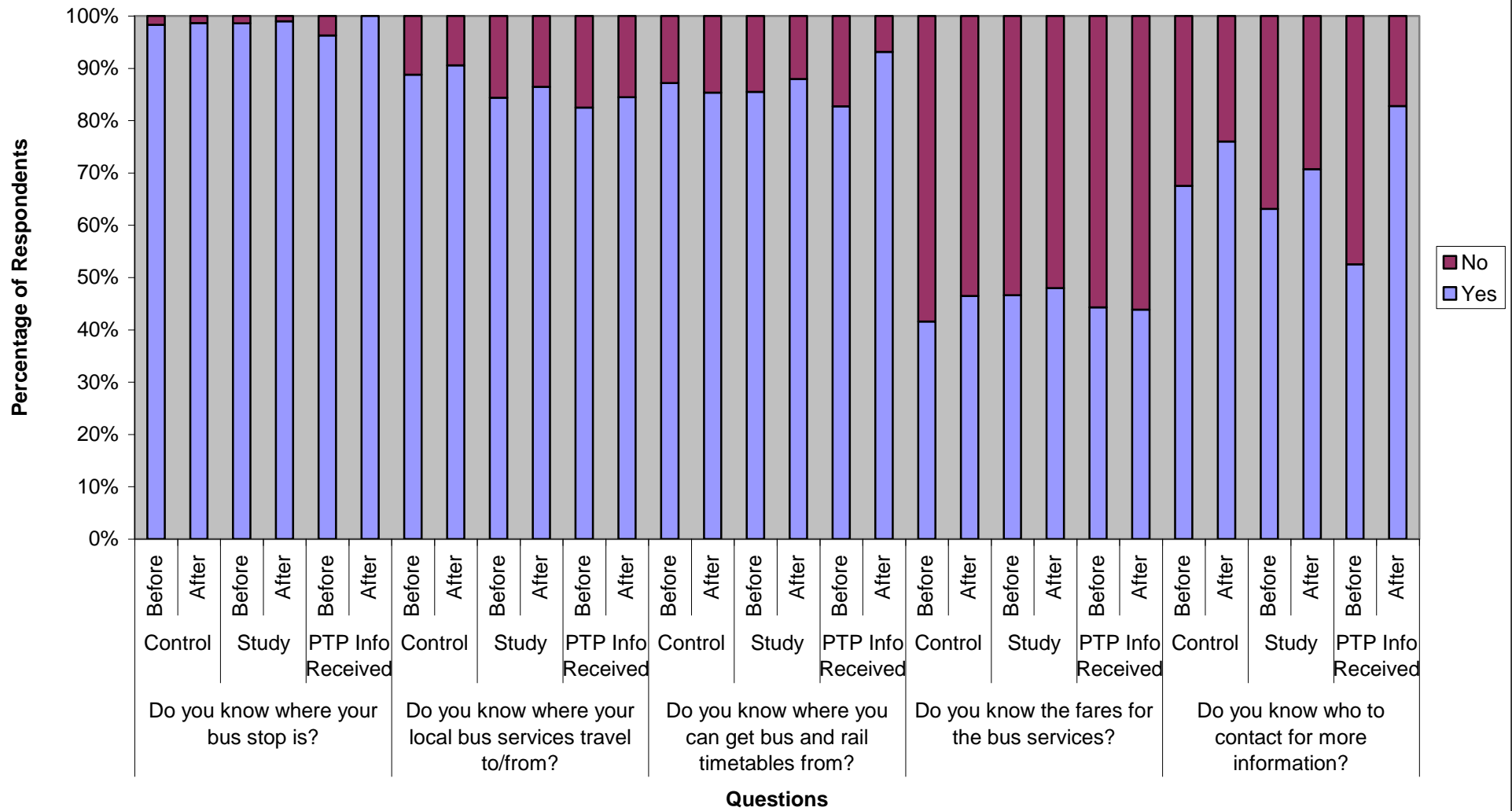
- 'Control' = Control respondents (before survey n = 118; after survey n = 75);
- 'Study' = Whole study area regardless of whether PTP information was requested or not (before survey n = 358; after survey n = 199); and
- 'PTP Info Received' = Respondents that had requested and / or received PTP information (before survey n = 81; after survey n = 58).

## Public Transport

Figure 7 illustrates the awareness of public transport facilities and services 'before' and 'after' the intervention for each the control area, the study area and for those respondents who had received the PTP information. Overall it can be seen that whilst the level of awareness for bus stops, bus routes and timetable information is very high, there is a much lower awareness generally with regards to who to contact for more information on public transport and fare levels. Although the level of awareness of bus stops was already high before the intervention, for those respondents receiving the personalised travel planning information the level of awareness increased in the 'after' survey ensuring that 100% of respondents now know where their bus stop is located. The intervention has therefore been successful in raising awareness of bus stop locations.

Interestingly, the intervention has appeared to have little or no impact on the awareness of local bus services and fares. However, the personalised travel planning has been successful in increasing awareness of where to get bus and rail timetable information from. Of those respondents receiving the personalised travel planning information there was a substantial increase of 10% from 83% aware of where to get bus/train timetables 'before' to 93% aware 'after'. Even more successful was the impact the intervention had on raising awareness of who to contact for more information. It can be seen that there was a 30% increase in awareness of who to contact for more information from the respondents who had received the PTP information.

### Awareness of Public Transport - Before and After the Intervention



Figure



## Walking & Cycling

Figure 8 illustrates the level of awareness of walking and cycling initiatives 'before' and 'after' the intervention.

It can be seen that compared to the general awareness of public transport, awareness of cycle and walking measures is lower. However, it can also be seen that the level of awareness for all the walking and cycling initiatives have increased more in the study area compared to the control area. To summarise, from 'before' to 'after':

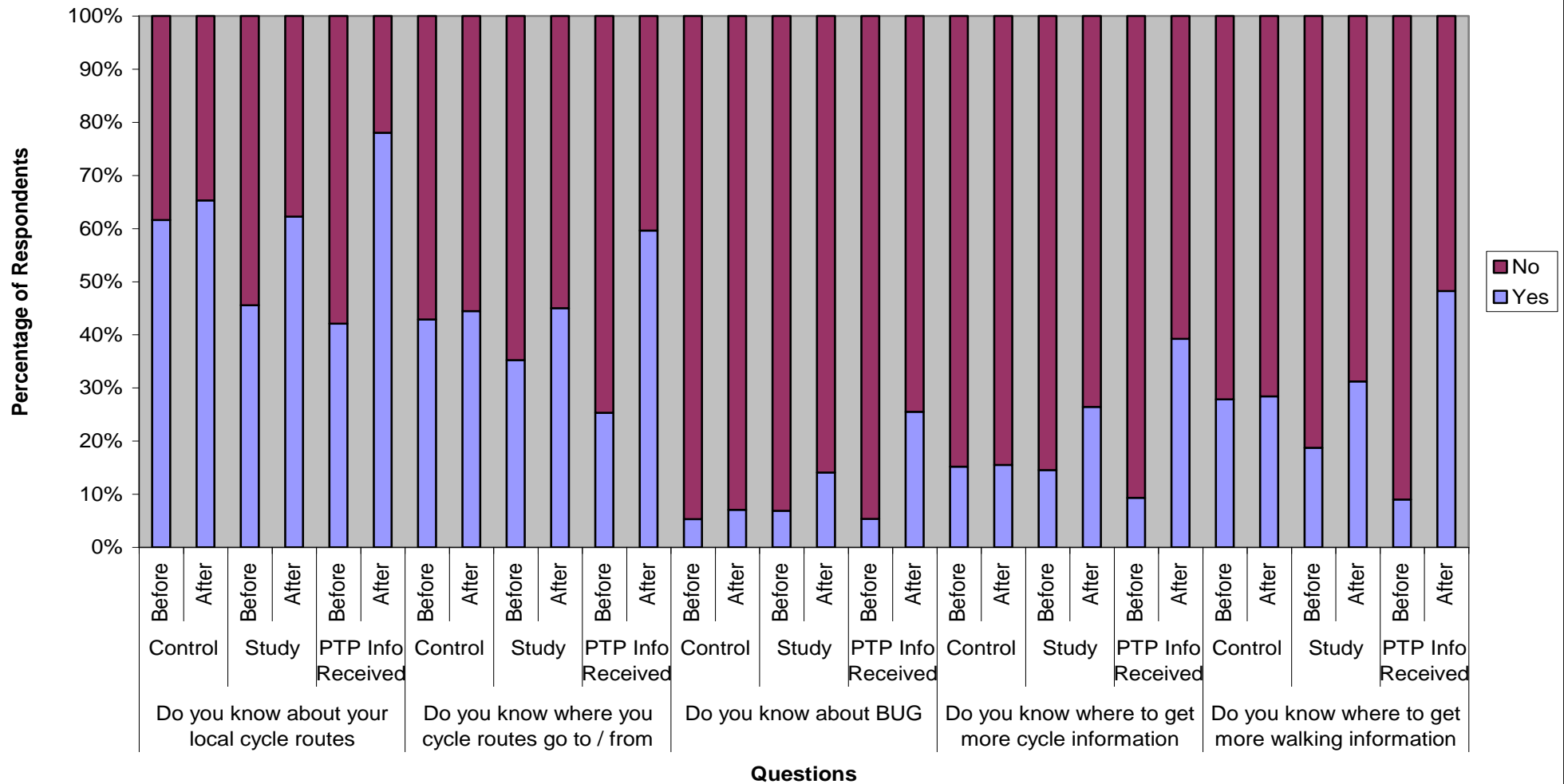
- The proportion of respondents aware of cycle routes has increased by 17% in the study area and 4% in the control area;
- The proportion of respondents aware of where the cycle routes go to/from has increased by 10% in the study area and 2% in the control area;
- The proportion of respondents aware of the BUG (Bicycle User Group) has increased by 7% in the study area and 2% in the control area;
- The proportion of respondents aware of where to get cycling information from has increased by 15% in the study area and 0% in the control area; and
- The proportion of respondents aware of where to get walking information from has increased by 12% in the study area and 1% in the control area.

Of those respondents receiving the personalised travel planning information the results from 'before' and 'after' were even more noticeable:

- The proportion of respondents aware of cycle routes increased by 36%;
- The proportion of respondents aware of where the cycle routes go to/from increased by 34%;
- The proportion of respondents aware of the BUG (Bicycle User Group) increased by 20%;
- The proportion of respondents aware of where to get cycle information from increased by 30%; and
- The proportion of respondents aware of where to get walking information from increased by 39%.

It can therefore be concluded that the PTP intervention has been very successful in increasing awareness of all walking and cycling initiatives and measures. It also appears that the PTP intervention has been more successful at raising the awareness of walking and cycling initiatives than of public transport.

### Awareness of Walking & Cycling - Before and After the Intervention



Figure

### **Car Sharing & Car Clubs**

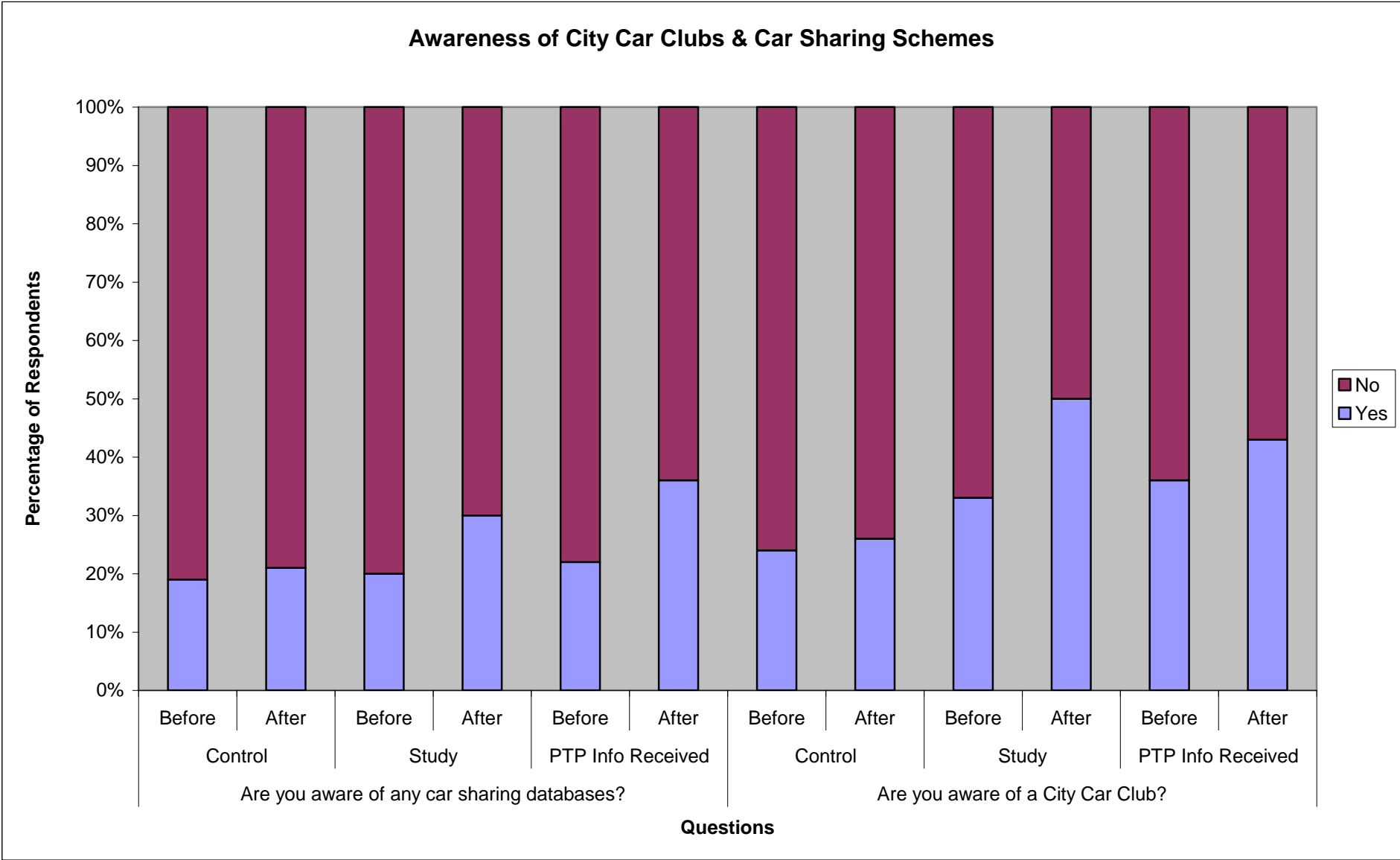
Figure 9 illustrates the awareness of City Car Clubs and Car Sharing databases 'before' and 'after' the intervention. As with the cycling and walking measures the awareness of City Car Clubs and Car Sharing databases is generally low. The intervention of the personalised travel planning has however increased awareness levels of Car Sharing databases and City Car Clubs whilst the control area has maintained more or less at the same level with only a 2-3% change. For the study area from 'before' and 'after' the intervention:

- The proportion of respondents aware of any Car Sharing databases has increased by 10% and of those receiving the personalised travel planning information by 13%; and
- The proportion of respondents aware of a City Car Club has increased by 17% and of those receiving the personalised travel planning information by 8% .

It is not known why the level of increase is less from those receiving the information than from those within the whole study area and this result seems to be an anomaly. It could be argued that asking the same question twice could result in respondents 'feeling' more aware of the City Car Club just because they have come across the term previously.

To summarise, the impact of the intervention on raising awareness has;

- A positive impact on raising awareness of bus stops, timetable information and of who to contact for more public transport information;
- Little or no impact on raising awareness of fares or bus routes;
- a substantial impact on raising awareness of all cycle/walking measures and initiatives; and
- A positive impact on raising awareness of Car Sharing databases and City Car Clubs.



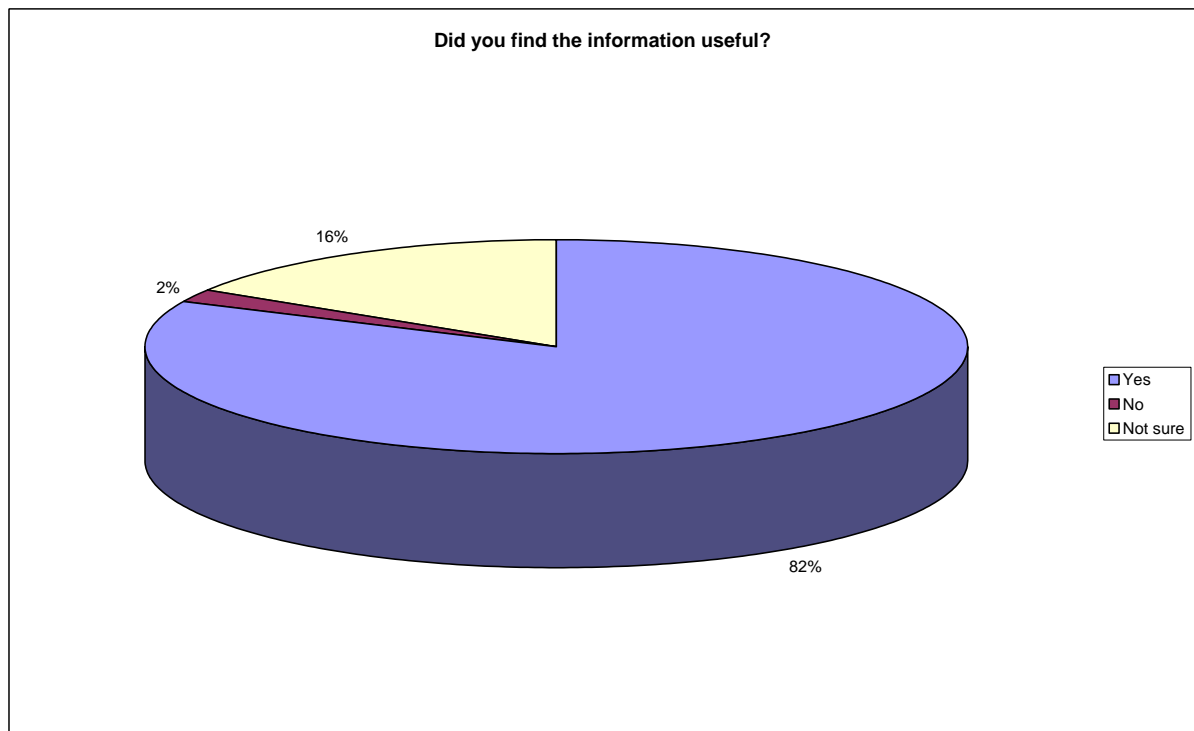
**Figure**

### Indicator 14 - Acceptance of Intervention

To measure the level of acceptance of the personalised travel planning information respondents were asked the following after they had received the information:

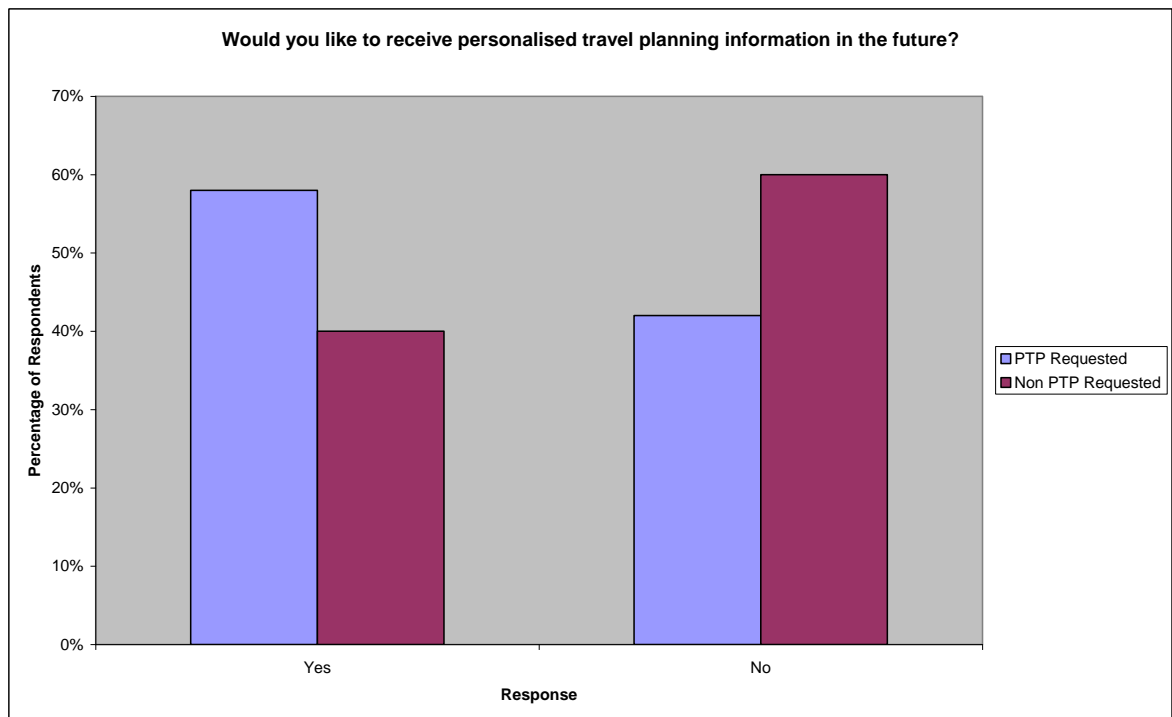
- Did you find the information useful?
- Would you like to be included in future opportunities to receive personalised travel planning?

Figure 10 below identifies how useful the respondents found the personalised travel planning information. Of those who received the information 82% said that they found it useful, 16% said they weren't sure if they found it useful and only 2% said that the information wasn't useful. This identifies that providing residents with information is a worthwhile exercise and that the majority of respondents found it useful.



**Figure 10**

All study area respondents were asked if they would like to receive personalised travel planning information in the future and the results are shown in Figure 11. Encouragingly, it can be seen that of those respondents who requested the information 58% would like to receive it again in the future. Also of those respondents who didn't request information this time round 40% said they would be interested in receiving the information in the future. This identifies how receptive residents would be to intervention if it was to be provided again in the future.



**Figure 11**

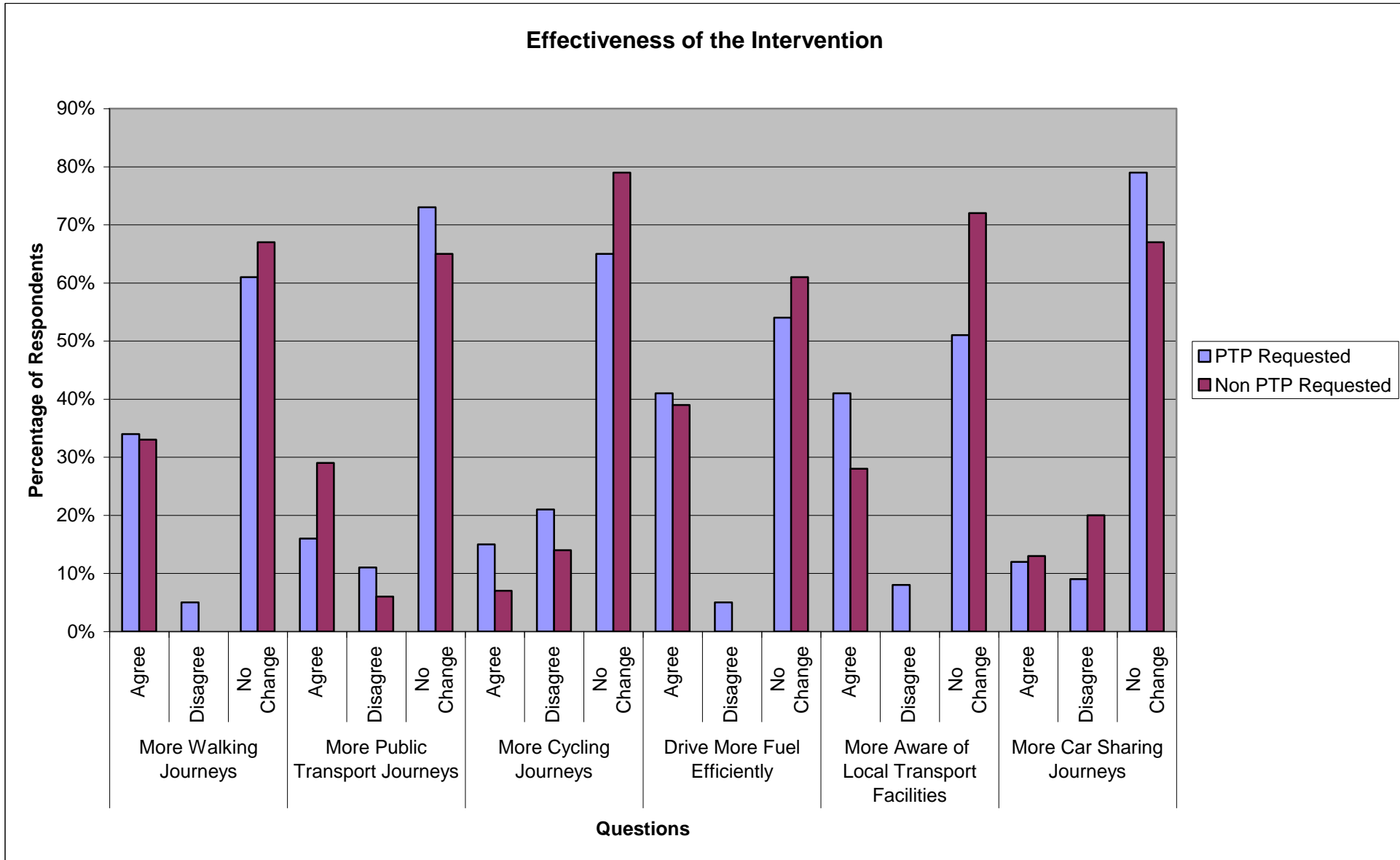
To measure the effectiveness of PTP respondents were asked to rate the following:

- I make more walking journeys;
- I make more journeys using public transport;
- I make more cycling journeys;
- If I make a journey by car, I am more aware of driving fuel efficiently;
- I am more aware of local transport facilities; and
- I have made more car sharing journeys.

Figure 12 compares the responses of those who had received PTP with the non-PTP group to assess if the intervention was effective in changing travel patterns and habits to more sustainable modes. The main areas where people had changed were walking (over 30% of respondents stated that they walked more often) and people driving more efficiently (over 40% of respondents agreed).

It should be noted that all respondents in the study area were provided with information on driving more efficiently and this explains why the whole study area agreed that they were driving more fuel efficiently.

Relating back to the findings of Indicator 13, the responses support the fact that awareness of local transport facilities has been raised, particularly amongst the people who received PTP information.



Figure

### **Indicators 15, 16, 17, 18 & 19 - Perception of Public Transport accessibility, cost, security, timekeeping and quality**

To measure the perception of public transport in terms of accessibility, cost, security, reliability and quality of public transport before and after the intervention respondents in both the control and study area were asked to rate their level of agreement with the following statements:

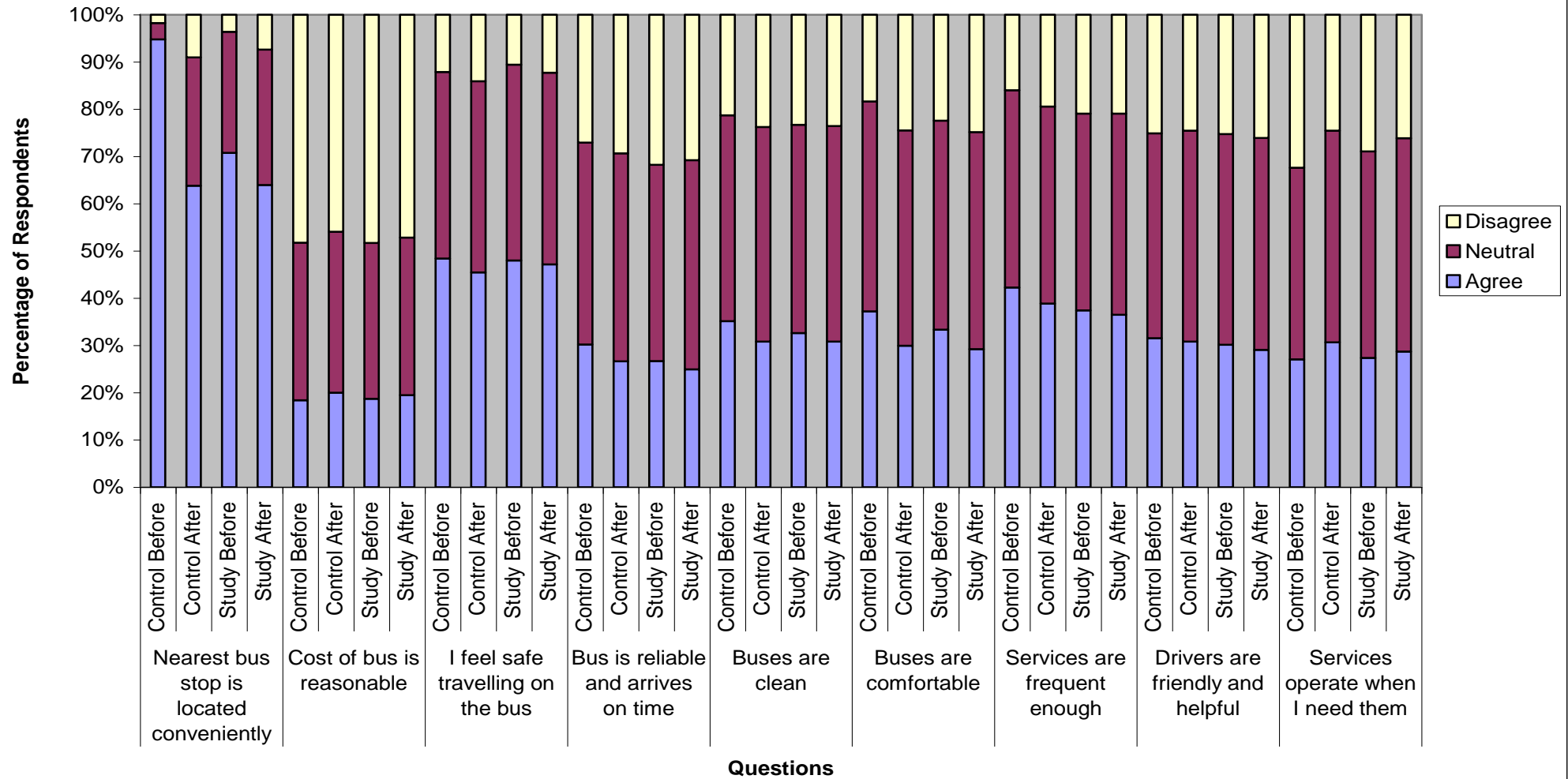
- My nearest bus stop is located conveniently to where I live
- The cost of my bus service is reasonable
- I feel safe travelling on my local bus
- My local bus is reliable and arrives on time
- The buses are clean
- The buses are comfortable
- The services are frequent enough for my requirements
- Drivers/staff are friendly and helpful
- Services operate when I need them

Figure 13 shows the responses to these questions 'before' and 'after' the intervention for both the study and control area. It can be seen that the study area 'before' and 'after' follows the same pattern as the control 'before' and 'after' and therefore there is no change in perception as a result of the personalised travel planning. It is considered that PTP has had no direct influence on modal shift or perception and therefore that any changes in perception were not likely to be a consequence of the intervention.

Interestingly, the perception of the location of bus stops and the cost of the bus seems to relate with the level of awareness illustrated in Figure 11. Where perception is positive, the awareness level is high i.e. in the case of the location of bus stops. Likewise where perception is negative, awareness level is low i.e. the cost of the bus. It could therefore be concluded that perception to a certain extent is determined by the level of awareness.



### Perceptions of Public Transport - Before and After the Intervention



Figure

## Transport

### University Results

#### Indicator 18 - Accuracy of Public Transport timekeeping

Table 3 below shows the timekeeping of First Bus services. On time is not more than 1 minute early and not more than 5 minutes late. The data are for journeys tracked on the ACIS BusNet system which is fitted to buses and jointly funded by First Bus Company and Norfolk County Council. The data refers only to journeys tracked and not all scheduled journeys. Journeys may not be tracked for a number of reasons which includes faulty equipment and driver not keying the correct journey details into their ticket machine.

Base line	Target	Apr	May	Jun	Jul	Aug	Sept	Oct
Apr-Nov 07								
82%	87%	87	86	87	87	85	83	85
Apr-Nov 07								
71%	75%	79	78	77	79	79	75	77

**Table 3**

#### Indicator 19 - Quality of PT Service

No data was collected; unfortunately questions relating to this area were not included in the “after” surveys.

#### Indicator 27 - Modal Share and Changes in Travel Behaviour

During the measure the University sought to focus on providing infrastructure and other physical measures which support sustainable travel rather than marketing and promotion activities. This type of activity alone has not previously created modal shift and therefore this action could be viewed as creating a “control area”.

Whilst it is difficult to accurately compare the data collected in this survey with that from 2005 there is evidence that an overall reduction in regular car usage of 1% has been achieved for the period of the measure. In the 2005 the views of 1163 (48%) of staff and 2721 (28%) of students were captured in the commuter survey. The surveys undertaken as part of this evaluation saw a total of 1155 people surveyed as follows:

Survey No.	Staff	Students	Unidentified
1	142	190	163
2	96	126	105
3	110	227	N/A

Figure 14 shows modal share comparison for both staff and students and indicates an overall reduction in car use of 1%. Importantly there has been a decrease in the number of sole occupancy car journeys and a corresponding increase in car sharing and cycling. Whilst levels of driving are reduced, staff members continue the trend towards use of this mode that reflects the wider spread of home locations throughout Norfolk. Travel by bus has remained unchanged at 20% over twice the local and national levels (Table 4). In 2005 walking was the most popular mode of travel to and from the UEA, in 2008 it

shares its position with cycling. The measure has introduced two specific cycling schemes and the University has further improved facilities for cyclists; this may be responsible for the increase. Disappointingly the levels of walking have fallen by 11% since 2005 and have for the first time fallen below levels recorded for England, the East of England and Norfolk. Group by group comparisons (Figures 15 & 16) show that the decrease is attributed to students; staff have increased walking levels. The headline statistic taken from the survey is that 50% of the university population commute by means which do not create CO2 emissions or add to the level of congestion on local roads and promote improved levels of fitness and health.

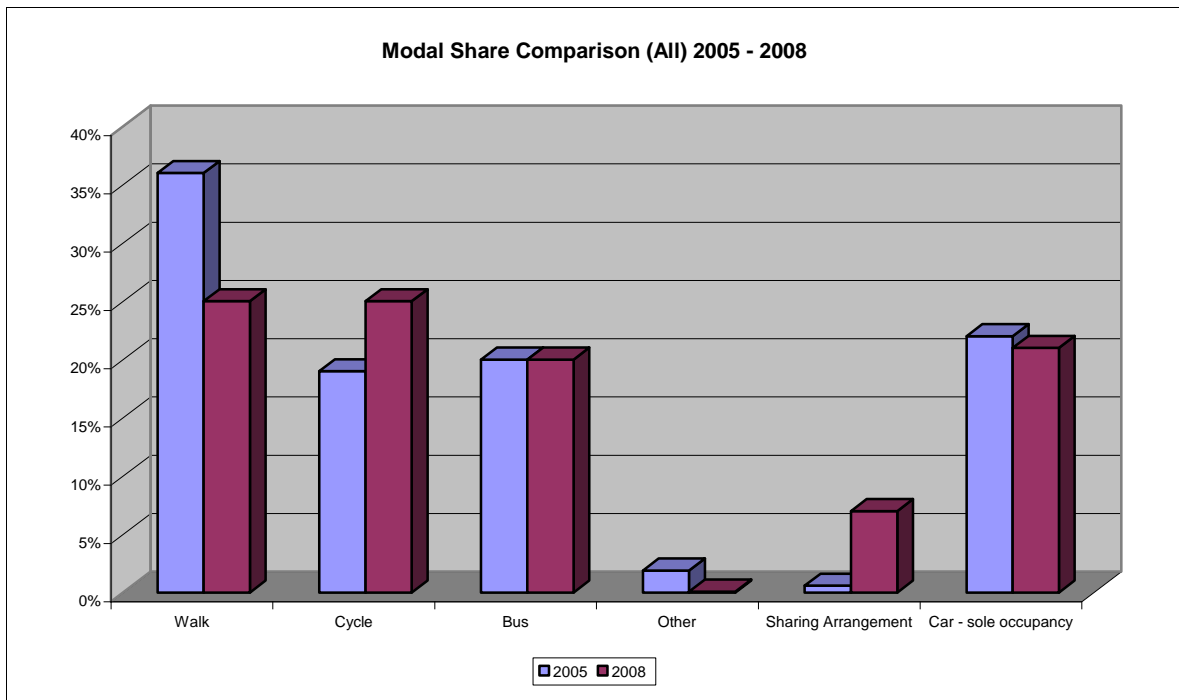
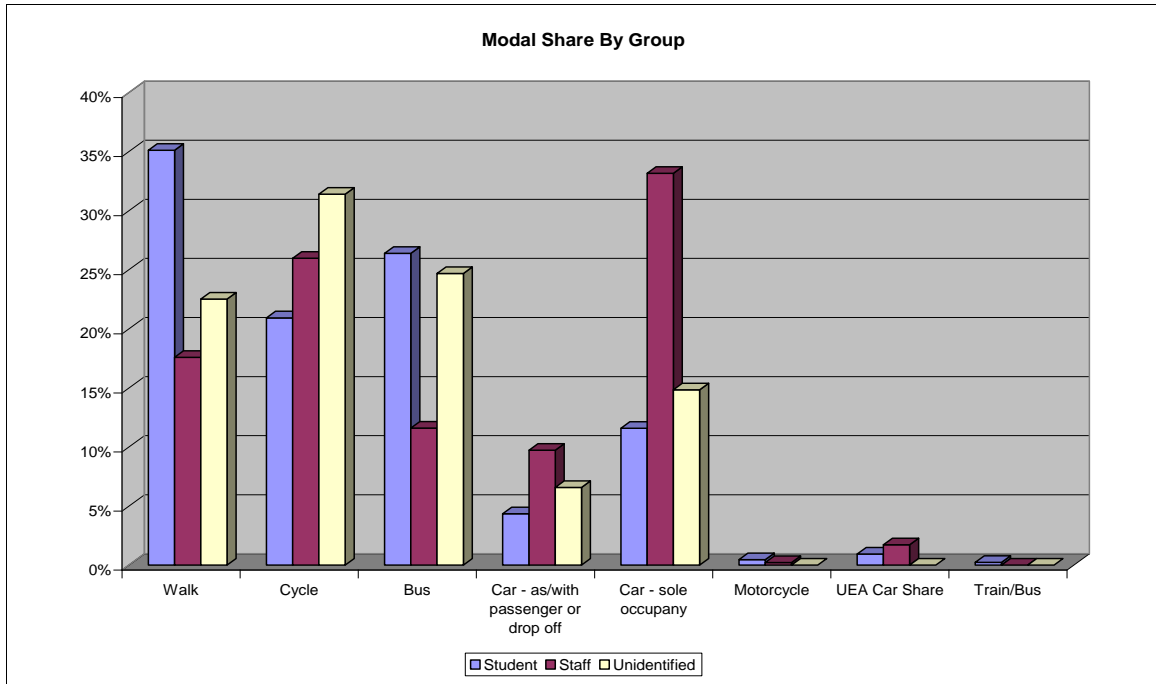


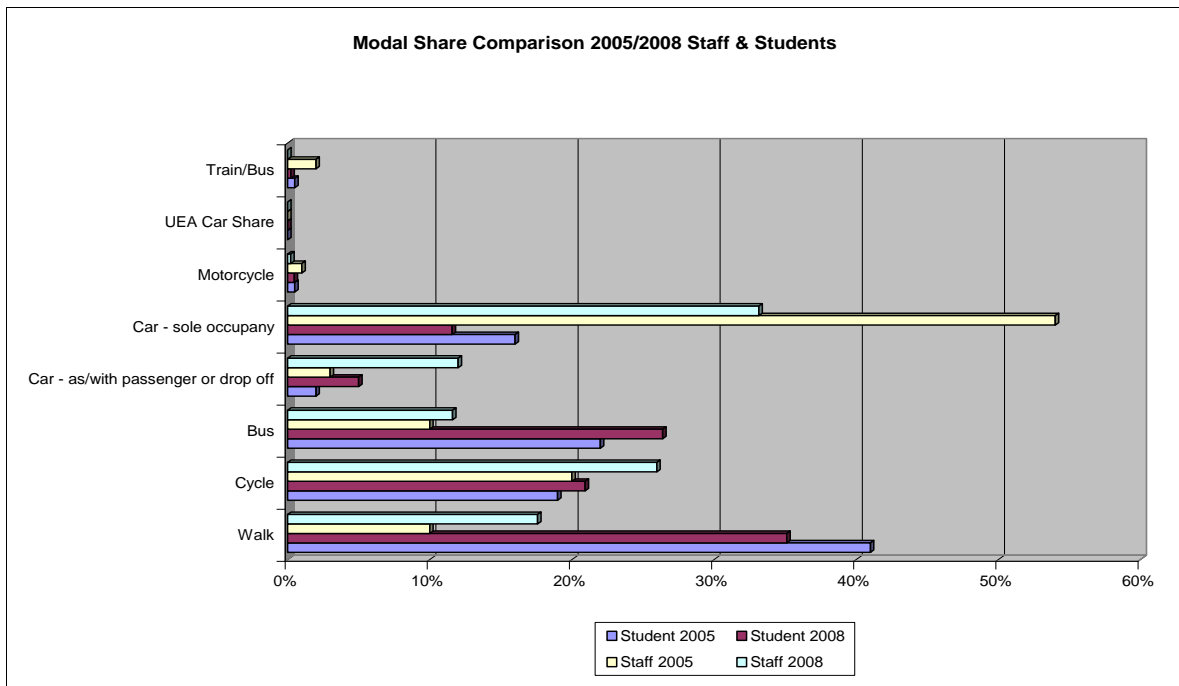
Figure 14

	Norwich	Norfolk	East of England	England	Average for Study Area - upscale of 11.5	UEA
Train/Underground	0%	0%	3%	3%	0%	0%
Bus/Minibus/Coach	7%	5%	4%	8%	6%	20%
Motorcycle/Scooter/Moped	0%	0%	0%	0%	0%	0%
Car/Van Driver	27%	46%	48%	43%	26%	21%
Car/Van Passenger	13%	17%	17%	17%	11%	8%
Bicycle	4%	3%	2%	2%	5%	25%
Walk	46%	27%	24%	26%	50%	25%
Taxi/Other	1%	1%	1%	1%	1%	0%

Table 4



**Figure 15**



**Figure 16**

In addition to the results from the survey listed under the above indicators there has been growth in the number of lift share registrations.

In 2006 marketing of the University's lift sharing scheme could best be described as low key with general distribution of information through reception areas on the web site. In 2007 three events were held to promote lift sharing:

- **June:** National Liftshare Day saw 2000 Happy National Liftshare Day birthday cards sent to staff and students to promote scheme.

- **September/October:** large increase in new registrations in part due to the start of term and parking difficulties but numbers were boosted by a one day promotion held in the car park highlighting the scheme to car drivers in late September after term had started.
- **December:** students returning home for Christmas targeted via postcards encouraging them to register and share their journeys home.

In 2007 new database registrations totalled 165 with the greatest increase (81) recorded in December following the “postcard” campaign. In 2008 the growth in registrations on the University’s database has continued and there are currently 340 people registered. Of those registered, only 13 have joined the University’s Smartshare scheme which provides members with a reserved parking space, less expensive parking, and a guaranteed-get-you-home scheme. There have been no special events during 2008 however every new parking permit issued has been accompanied by a personal travel plan including information on lift-sharing.

Between January and October 2008, new registrations have totalled 75. The pattern of growth in new registrations however is much different from that recorded in 2007; there has been steady growth rather than the “spikes” evident after a particular marketing campaign. This suggests awareness is being raised but if the “drip feed” of information is combined with special events which create renewed interest registration levels can be further enhanced.

## **Residential Area Results**

### **Indicator 18 - Accuracy of PT Timekeeping**

Table 3 above shows the timekeeping of First Bus services. On time is not more than 1 minute early and not more than 5 minutes late. The data is for journeys tracked on the ACIS BusNet system which is fitted to buses and jointly funded by First Bus Company and Norfolk County Council. The data refers only to journeys tracked and not all scheduled journeys. Journeys can not be tracked for a number of reasons, which include faulty equipment and driver not keying the correct journey details into their ticket machine.

### **Indicator 27 – Modal Split**

For the modal split the results were analysed for the following four respondent groups:

- ‘Control’ = Control respondents (before survey n = 118; after survey n = 75);
- ‘Study’ = Whole study area regardless of whether PTP information was requested or not (before survey n = 358; after survey n = 199);
- ‘PTP Group’ = Respondents that had requested and / or received PTP information (before survey n = 81; after survey n = 58); and
- ‘Non PTP Group’ = Respondents who did not request and / or receive PTP information (before survey n = 277; after survey 141).

To measure the percentage of vehicle kilometres for each mode of transport respondents in the study area and control area were asked to indicate how many miles they had travelled by each mode on a specific Thursday, Saturday and Sunday during the survey period. Subsequently the mileage

has been converted to kilometres and a thorough analysis of the results has been undertaken.

The change in modal split before and after is summarised in Table 5 (modal split – kilometres) and Table 6 (modal split – trips). There are variances in modal split identified in the before and after surveys. However, no firm conclusions relating to the impact of the personalised travel planning intervention can be drawn on the basis of these modal split changes. It is also considered that the kilometre modal split is unfairly represented due to a small number of rail trips accounting for a large proportion of kilometres in the before scenario. As this was not recorded again in the after scenario it had a significant influence on the modal split – for example a reduction of 16% in train kilometres in the ‘after’ personalised travel planning group.

Kilometre Trips	Control Group	Study Group	PTP Group	Non PTP Group
Car Driver	-9%	1%	1%	1%
Car Passenger	2%	5%	6%	5%
Bus	-1%	0%	7%	-3%
Train	-2%	-4%	-16%	0%
Motorcycle	0%	-1%	-3%	0%
Taxi	0%	1%	0%	1%
Other	1%	0%	0%	-1%
Cycling	7%	-2%	1%	-3%
Walking	2%	0%	3%	0%

**Table 5 ‘Before’ and ‘After’ Percentage change in mode share (kilometres)**

Mode Trips	Control Group	Study Group	PTP Group	Non PTP Group
Car Driver	8%	-1%	5%	-4%
Car Passenger	-1%	2%	-2%	3%
Bus	0%	-3%	4%	-5%
Train	-1%	0%	-1%	1%
Motorcycle	0%	0%	0%	0%
Taxi	0%	0%	0%	0%
Other	0%	0%	-1%	0%
Cycling	1%	-2%	-3%	-1%
Walking	-7%	4%	-2%	6%

**Table 6 ‘Before’ and ‘After’ Percentage change in mode share (trips)**

Due to the fact that a small proportion of rail trips accounted for a large proportion of kilometres travelled in the study area, it is possible that the modal split could be perceived as unrepresentative of the area generally. Therefore analysis was also undertaken for each mode, this is summarised in Table 7 (kilometres per person), and Table 8 (trips per person). As the data were collected for a weekday and over a weekend, data was also analysed against day of the week and weighted to provide a typical seven day week.

It can be seen from the average number of kilometres driven per person that across all groups kilometres travelled as a car driver reduced in the after surveys. Whilst the personalised travel planning group decreased mostly over the weekend, the control area reduced on weekdays. It is therefore difficult to account any change in driver kilometres to the personalised travel planning intervention and any changes might be as a result of the differences between respondents in the before and after surveys.

Car passenger kilometres per person increased by a large proportion in the study and personalised travel planning groups, whilst dropping in the control area. The same pattern was also seen for bus kilometres per person. When bus miles were weighted to a seven day week, bus kilometres reduced by 39% for the control group and rose by 40% in the PTP group. Cycling kilometres per person increased dramatically in the control area, whilst kilometres cycled decreased across all other groups. Walking kilometres per person decreased in the control area, and was at least maintained in the personalised travel planning group, although fell slightly across the study area as a whole.

By analysing the kilometre modal split and kilometres travelled per person by mode it has not been possible to firmly conclude that the personalised travel planning intervention has had an influence on modal choice. An increase in bus travel and car passenger journeys was recorded in the personalised travel planning group although it is thought that this could be attributed to the differences in people responding to the before and after survey.

In addition to the kilometres travelled the number of trips undertaken during the same period was also recorded by respondents and then analysed. When trips were weighted to a seven day week it can be seen that the number of car driver trips per person increased by 33% in the control group and fell by 21% in the study area. Bus trips also increased within the personalised travel planning group compared to the control area particularly at weekends. However there was an increase in the number of cycling trips made by the control group and a large decrease in the study area. Walking trips decreased across all groups.

It is considered that people are more likely to accurately record the number of trips made by mode compared to recording the kilometres travelled by mode. In addition as noted earlier, the proportion of over 45's and retired people who took part in the personalised travel planning element of the study was higher than the before proportion of over 45 year olds. Therefore the modal split patterns of these groups of people is more likely to include more bus travel and car sharing. Weekend travel too was also a key variance in the modal patterns before and after and this could also have been a result of the nature of the respondents.

**Table 7 Summary of Kilometres travelled**

Car driver – KM	Weighted – 7 day week			Weekday only			Weekend only		
	km/person	km change	% change	km/person	km change	% change	km/person	km change	% change
Control Before	125.47			18.59			32.53		
Control After	71.43	-54.04	-43%	9.22	-9.37	-50%	52.35	-7.18	-22%
Study Before	95.48			12.92			30.89		
Study After	88.72	-6.76	-7%	13.99	1.07	8%	18.76	-12.13	-39%
PTP Group Before	114.58			16.28			33.17		
PTP Group After	84.56	-30.02	-26%	13.11	-3.17	-19%	19.01	-14.16	-43%
Non-PTP Group Before	89.57			11.89			30.12		
Non-PTP Group After	90.39	0.82	1%	14.32	2.43	20%	18.80	-11.32	-38%
Car passenger – KM	Weighted – 7 day week			Weekday only			Weekend only		
	km/person	km change	% change	km/person	km change	% change	km/person	km change	% change
Control Before	28.19			4.42			6.10		
Control After	21.53	-6.66	-24%	1.77	-2.65	-60%	12.68	6.59	108%
Study Before	17.29			2.12			6.69		
Study After	23.97	6.68	39%	2.49	0.37	17%	11.52	4.83	72%
PTP Group Before	16.97			2.37			5.10		
PTP Group After	21.45	4.48	26%	1.97	-0.40	-17%	11.60	6.50	128%
Non-PTP Group Before	17.32			2.04			7.13		
Non-PTP Group After	25.13	7.87	45%	2.72	0.69	34%	11.51	4.38	61%
Bus – KM	Weighted – 7 day week			Weekday only			Weekend only		
	km/person	km change	% change	km/person	km change	% change	km/person	km change	% change
Control Before	14.15			2.63			1.02		
Control After	8.59	-5.56	-39%	1.47	-1.16	-44%	1.24	0.22	22%
Study Before	13.53			2.41			1.50		
Study After	12.23	-1.30	-10%	1.86	-0.54	-22%	2.91	1.41	94%
PTP Group Before	16.43			2.83			2.27		
PTP Group After	23.07	6.64	40%	4.38	1.55	55%	1.15	-1.12	-49%
Non-PTP Group Before	12.63			2.27			1.27		
Non-PTP Group After	7.82	-4.81	-38%	0.83	-1.44	-63%	3.66	2.38	188%



Cycling - KM	Weighted – 7 day week			Weekday only			Weekend only		
	km/person	km change	% change	km/person	km change	% change	km/person	km change	% change
Control Before	9.06			1.45			1.81		
Control After	15.22	6.17	68%	1.89	0.44	30%	5.78	3.97	219%
Study Before	11.85			1.84			2.67		
Study After	7.63	-4.22	-36%	1.20	-0.63	-34%	1.61	-1.06	-40%
PTP Group Before	8.52			1.26			2.22		
PTP Group After	8.30	-0.23	-3%	1.50	0.24	19%	0.80	-1.41	-64%
Non-PTP Group Before	12.78			2.00			2.79		
Non-PTP Group After	7.34	-5.44	-43%	1.09	-0.91	-45%	1.88	-0.91	-33%
Walking – KM	Weighted – 7 day week			Weekday only			Weekend only		
	km/person	km change	% change	km/person	km change	% change	km/person	km change	% change
Control Before	13.37			1.99			3.44		
Control After	11.08	-2.29	-17%	1.56	-0.43	-22%	3.30	-0.14	-4%
Study Before	13.93			2.11			3.40		
Study After	13.36	-0.57	-4%	2.03	-0.07	-3%	3.19	-0.21	-6%
PTP Group Before	14.28			2.24			3.06		
PTP Group After	14.31	0.04	0%	2.24	0.00	0%	3.11	0.05	2%
Non-PTP Group Before	13.78			2.06			3.49		
Non-PTP Group After	13.01	-0.77	-6%	1.96	-0.10	-5%	3.20	-0.29	-8%

**Table 8 Summary of Trips Per Person**

Car driver – Trips	Weighted – 7 day week			Weekday only			Weekend only		
	Trip/person	trip change	% change	trip /person	trip change	% change	trip /person	trip change	% change
Control Before	6.29			0.96			1.50		
Control After	8.39	2.10	33%	1.37	0.42	43%	1.52	0.02	1%
Study Before	7.95			1.30			1.44		
Study After	6.26	-1.69	-21%	1.01	-0.29	-22%	1.21	-0.23	-16%
PTP Group Before	7.57			1.19			1.64		
PTP Group After	7.31	-0.26	-3%	1.16	-0.03	-3%	1.53	-0.11	-7%
Non-PTP Group Before	8.03			1.33			1.38		
Non-PTP Group After	5.69	-2.34	-29%	0.92	-0.41	-31%	1.09	-0.29	-21%
Car passenger – Trips	Weighted – 7 day week			Weekday only			Weekend only		
	Trip /person	trip change	% change	trip /person	trip change	% change	trip /person	trip change	% change
Control Before	1.42			0.16			0.62		
Control After	1.41	-0.01	-1%	0.19	0.03	16%	0.48	-0.14	-22%
Study Before	1.46			0.19			0.51		
Study After	1.48	0.02	1%	0.18	-0.01	-5%	0.57	0.06	13%
PTP Group Before	1.88			0.28			0.46		
PTP Group After	1.22	-0.65	-35%	0.14	-0.15	-51%	0.53	0.08	17%
Non-PTP Group Before	1.33			0.16			0.52		
Non-PTP Group After	1.59	0.25	19%	0.20	0.04	24%	0.59	0.06	12%
Bus – Trips	Weighted – 7 day week			Weekday only			Weekend only		
	Trip /person	trip change	% change	trip /person	trip change	% change	trip /person	trip change	% change
Control Before	2.19			0.38			0.29		
Control After	2.35	0.15	7%	0.41	0.03	8%	0.28	-0.01	-3%
Study Before	3.37			0.63			0.23		
Study After	2.27	-1.10	-33%	0.40	-0.23	-37%	0.29	0.06	27%
PTP Group Before	3.04			0.57			0.20		
PTP Group After	3.33	0.29	10%	0.60	0.04	6%	0.31	0.11	57%
Non-PTP Group Before	3.45			0.64			0.23		
Non-PTP Group After	1.85	-1.60	-46%	0.31	-0.33	-51%	0.28	0.04	19%

Cycling - Trips	Weighted – 7 day week			Weekday only			Weekend only		
	Trip /person	trip change	% change	trip /person	trip change	% change	trip /person	trip change	% change
Control Before	2.31			0.37			0.44		
Control After	2.80	0.49	21%	0.45	0.08	22%	0.53	0.09	21%
Study Before	2.87			0.47			0.49		
Study After	2.04	-0.83	-29%	0.33	-0.14	-30%	0.38	-0.11	-23%
PTP Group Before	2.79			0.44			0.57		
PTP Group After	1.69	-1.10	-39%	0.29	-0.15	-34%	0.22	-0.34	-61%
Non-PTP Group Before	2.88			0.48			0.47		
Non-PTP Group After	2.16	-0.71	-25%	0.35	-0.13	-27%	0.41	-0.05	-11%
Walking – Trips	Weighted – 7 day week			Weekday only			Weekend only		
	Trip /person	trip change	% change	trip /person	trip change	% change	trip /person	trip change	% change
Control Before	5.20			0.78			1.31		
Control After	4.25	-0.95	-18%	0.59	-0.19	-25%	1.32	0.01	1%
Study Before	6.09			0.96			1.28		
Study After	5.64	-0.45	-7%	0.88	-0.08	-8%	1.22	-0.06	-5%
PTP Group Before	7.46			1.21			1.41		
PTP Group After	5.88	-1.58	-21%	0.95	-0.26	-22%	1.14	-0.27	-19%
Non-PTP Group Before	5.67			0.88			1.24		
Non-PTP Group After	5.58	-0.09	-2%	0.86	-0.02	-2%	1.26	0.01	1%

## Traffic Surveys

In addition to the household surveys, traffic surveys were also undertaken at two locations in the study area to monitor travel by all modes of transport over one weekday to coincide with the 'before' survey and one weekday to coincide with the 'after' survey. The results are shown in Table 9. It can be seen that there is a reduction in the modal split for car journeys at both locations in the after surveys. There is also an observed increase in the proportion of cyclists at both locations. It should be noted that the before surveys were undertaken in July and although it was within the school term period, UEA students were unlikely to be travelling to the University at this time. The after surveys were undertaken on October 1<sup>st</sup> 2008 and it was term time at both the schools and university. It is possible that the increase is as a result of students returning to university.

Location	Jessopp Road / College Road		Christchurch Road / The Avenues	
	Before	After	Before	After
Mode Trips				
Pedestrians	28%	29%	19%	19%
Cyclists	9%	13%	18%	24%
Car	62%	54%	61%	55%
HGV	0%	1%	0%	0%
Motorcycle	0%	2%	1%	1%
Bus / mini-bus	0%	2%	2%	1%
Other	0%	0%	1%	0%

**Table 9 Summary of modal split observed during traffic surveys**

## Additional Interesting Results

Other interesting findings from the survey include the following for all respondents:

- The main reasons for travelling by car was for convenience (around 36% of respondents) followed by lack of alternative (around 16% of respondents) and car essential for job (around 15% of respondents).
- The main reasons for not travelling by car was for health and fitness reasons (around 26% of respondents) followed by the most practical method (around 20% of respondents) and 'enjoy the alternatives' (around 16% of respondents);
- Two-thirds of respondents park their car in a private drive or garage, a third of respondents park on-street;
- When respondents were asked what would encourage them to travel by more sustainable modes financial/cost savings and health/fitness were the most popular responses;
- A third of respondents did not feel safe cycling whilst around 90% of respondents do feel safe when walking;
- The main purpose for both cycling and walking was for travel to shops/retail followed closely by leisure/fun purposes;
- Around a third of respondents used a bicycle in the last week, around a third last used a bicycle over a year ago and around 15% of respondents have never used a bicycle.
- Around 45% of respondents used public transport in the last week, around 15% over a year ago and only around 5% of respondents have never used public transport.

### C3 Achievement of Quantifiable Targets

No.	Target	Rating
1	Increase awareness of alternative sustainable modes	**
2	Increase awareness of the UEA Travel Plan & Personal Travel Planning Service	**
3	Increase use of non-sustainable modes (Modal share)	**
4	Raising awareness of sustainable modes of transport in the residential study area	***
5	Influence travel behaviour in the residential study area	0
6	Encourage more fuel efficient driving in the study area	**
NA = Not Assessed      0 = Not achieved    * = Substantially achieved (at least 50%) ** = Achieved in full      *** = Exceeded		

### C4 Up-scaling of results

The Further Education (FE) & Higher Education (HE) sector experience is unique insofar as estates are workplaces, residential areas, education facilities, leisure facilities and very often visitor centres, all of which are publicly funded. This makes it difficult for private sector workplace solutions, or residential, Business Park or school based travel plans to be effective.

The University of East Anglia is a member of the Environmental Association of University's and Colleges (EAUC) and it is to this forum in particular that the success of this measure is important. The EAUC has shown real interest in the outcomes of the measure and is keen to use lessons learned as a best case study from which others in the FE and HE sector can benefit.

The education sector is not the only beneficiary; the results of the measure are also of value to employers seeking to deliver workplace travel plans. The successful measure demonstrates the need for to give information to people rather than waiting for them to seek information on travel choices.

As part of the up-scaling the University carried out Personalised Travel Planning in a residential area to the west of Norwich City Centre and to the east of the UEA. The proposed study area is approximately equidistant from Norwich City Centre and the UEA as shown in Figure 1.

The success of soft measures such as this are difficult to evaluate and modal shift figures alone do not clearly demonstrate the success or otherwise of the measure.

The qualitative data is of greater value. Soft measures deliver change over a much longer period of time and converting raised awareness into behavioural change may take time to achieve particularly where there are practical barriers to change which need to be overcome (i.e. improved bus services). Therefore if modal shift is to be the key indicator of success there is a need to measure over a longer period of time.

Within the University factors associated with the PTA's approach such as personality, local transport knowledge and experience will also influence outcomes but it would be inappropriate and unfair to seek an assessment of this through surveys. This may be of less importance to the residential area participants.

## C.5 Appraisal of evaluation approach

The evaluation in respect of the University project proved more difficult than anticipated. The first attempt to gather evaluation data using an on-line survey failed to deliver a sample size from which any conclusions could be drawn. It was decided that the “personal touch” in the form of clipboard surveys would deliver improved evaluation data from which assessment and conclusion could be drawn. Producing hard copies of surveys, recruiting staff etc. resulted in the survey being undertaken during exam period, which meant fewer students were on campus. Despite advance publicity the number of respondents was very low with just 1155 individuals taking part, approximately 7% of the University’s population. It is estimated that of this figure, only 33% were students. The low number of students surveyed is in part due to the time of year (the survey coincided with exam period). Students were recruited to undertake the surveys and received training however it was clear the majority had failed to record accurately the respondent’s status, therefore it was not possible to determine if the data related to staff or students. This was important as student travel habits have traditionally differed from staff e.g. students tend to walk & bus more, cycle & drive less than staff, this may impact on the accuracy of the results.

Surveys 1 & 2 were undertaken in busy areas of campus i.e. close to shops, catering facilities etc. Individuals were stopped at random and asked if they had heard of the Personal Travel Advice Service, a positive or negative response then determined which of the survey sheets were completed. Unfortunately surveyors failed to establish with Survey 1 if a respondent was a member of staff or a student however given this survey was undertaken alongside Survey 2 it can be assumed that the staff/student split would be identical.

Finally, in respect of the University Survey some questions were omitted from the survey form thus it was impossible to measure specific areas including perception of public transport, indicator 19. Furthermore with hindsight there may have been a misunderstanding of what was to be measured with much effort concentrated on aspects of the measure and not enough data on travel and transport behaviour. Survey questions did not mirror many of those from the 2005 University Commuter Survey evaluating the survey was problematic.

The lessons learnt from the University project were used to determine the methodology of the residential project and here the results were more conclusive and concise. Surveys were hand delivered and households given a short period of time to respond with the incentive of winning a cash prize. Response rates etc. are given at Table 10 p23. Overall the data collected covered all areas of travel as well as seeking to assess the acceptance and perhaps success of this type of intervention.

Residential projects of this nature have tended to be delivered over 6 months or more; due to the late delivery of the up-scaling the time period over which households could have participated was approximately 6 weeks and this included the summer school vacation. Additionally, the Golden Triangle is popular rental area for students. These students would not have been resident at the start (“before”) of the survey but had returned for the new academic year and therefore could have taken part in the “after” results. It would be interesting to re-visit the area to see if there have been any further changes beyond those identified in the results.

## C6 Summary of evaluation results

### The key results from the UEA intervention are as follows:

- **Key Result 1** – a 1% modal shift away from the car and in particular sole occupancy journeys, has been achieved.
- **Key Result 2** – 50% of the Universities community travel by foot or cycle.
- **Key Result 3** – there had been a significant increase in the number of shared journeys from just under 1% in 2005 to 7% in 2008; there have been 240 new registrations on the University's lift share data base during the measure.
- **Key Result 4** - Where there had been contact with the Personal Travel Service 70% (Survey 2) and 50% (Survey 3) had tried an alternative mode.
- **Key Result 5** - 14% of those who received unsolicited information had made changes to travel behaviour even though they had originally been interested to do so.
- **Key Result 6** – the 2 specific cycling schemes had been very successful; 39 of the 48 who participated in the “try-before-you-buy” scheme went on to buy a bike and now cycle 2- 3 times each week.
- **Key result 7** – 122 people had changed their travel behaviour outside of the “commute” demonstrating greater awareness of the reasons for effecting change has a wider impact.
- **Key Result 8** – only 4% of those surveyed rated the value of the service as of little or no value.
- **Key Result 9** – The use of public transport had not altered.

### The key results from the residential personalised travel planning intervention are as follows:

- **Key Result 1:** Increased awareness of bus stops (from 96% to 100%), timetable information (from 83% to 93%) and where to get public transport information (from 53% to 83%);
- **Key Result 2:** Increased awareness of cycle routes (from 42% to 78%), BUG (from 5% to 25%), cycling information (from 9% to 39%) and walking information (from 9% to 48%);
- **Key Result 3:** Increased awareness of City Car Clubs (from 36% to 43%) and Car Sharing Databases (from 22% to 36%);
- **Key Result 4:** The majority of respondents who received the information – 82% found it useful;
- **Key Result 5:** Over half (58%) of the respondents who had received the personalised travel planning information would like to receive the information again if it was offered in the future;
- **Key Result 6:** More respondents who had received the PTP information agreed that they drove more fuel efficiently, were more aware of local transport facilities and walked more than those that hadn't received the PTP information;
- **Key Result 7:** Perceptions of Public Transport did not alter;
- **Key Result 8:** For the majority of respondents travel habits and patterns remained unchanged;
- **Key Result 9:** Perception relates with the level of awareness i.e. where perception is negative, awareness level is low and where perception is positive, awareness level is high;
- **Key Result 10:** Kilometres travelled did not appear to be influenced by PTP in the study area, although there was a large increase in bus travel recorded by people who had received PTP in the after surveys.

## D Lessons learned

### D1 Barriers and Drivers

#### D1.1 Barriers

- **Barrier 1** – Lack of accurate data from the University’s parking Permit System which made it difficult to identify and target groups or individuals. The inaccuracies meant individuals had often left the University and therefore time was all too often wasted trying to contact them to offer the service. Furthermore possessing a parking permit does not equate to use; at least 10% of those identified through the Permit Database travelled to the campus by means other than the car and therefore were uninterested in the service.
- **Barrier 2** – Travel diaries were identified as a means of helping individuals to understand their travel behaviour and identify opportunities to initiate change. From the measure perspective they were also seen as an important evaluation tool. Despite support from the Student Union only one of 500 diaries was returned. This left a gap in knowledge and understanding.
- **Barrier 3** – The City Car Club vehicle provided as part of the integration with measure 9.2 failed to achieve success and was withdrawn. The reason for this appeared to be the cost of membership and the many private car hire arrangements in place within the university.
- **Barrier 4** – The low response rate from both the before and after surveys in the personalised travel planning project mean that the findings are not as representative for the area as they could have been. There was a 16% response rate for the before survey and a 9% response rate for the after survey. Also only 81 respondents (4% of the whole study area) requested further information. These are only small proportions of the total population.
- **Barrier 5** – Residents were asked to complete the after survey within nine weeks of receiving the personalised travel planning information. The length of time between receiving the information and monitoring the effects will influence the results. Residents’ perceptions and responses could alter whilst the information about sustainable travel is still fresh or it could be argued that nine weeks is not enough time to change ‘hearts and minds’ or time for the residents to try other modes of transport and that a change of habit would take a much longer term approach.
- **Barrier 6** – The project was undertaken between July and September when the main school holidays take place. The timing of the study could have influenced the results in the following ways:
  - Residents could have been on holiday when correspondence was sent;
  - Walking and cycling are modes of travel more suitable for the summer months; and
  - Typical journey patterns may differ during holidays as residents may have more or less time.



- **Barrier 7** – Seasonal weather variations will influence travel patterns - undertaking the study again in the winter months may have presented entirely different results. Similarly, the weather between July and September did become cooler, wetter and darker and may have altered residents' travel patterns from the way they travelled in July.
- **Barrier 8** – Students from the UEA were recruited to deliver information/questionnaires and input the data. The benefits of employing students were that they were cost effective, readily available, flexible and enthusiastic about sustainable transport issues and therefore the project. A meeting was arranged to brief the students and a clear checklist was created for them to fill out what each household had received. Unfortunately this checklist wasn't utilised and the request for information sheets were disposed of. This made it impossible to ascertain which households requested information in what form and for which mode of travel for those respondents who had completed the before survey but not the after one. This highlights a disadvantage of employing students in the fact that they were inexperienced, had a lower skill level and were occasionally unreliable.
- **Barrier 9** – Questions asked to ascertain the acceptance and effectiveness of the personalised travel information were only asked to those residents within the study area and not in the control group. This wasn't a problem as any change between the control and study area, relating to awareness and mode of travel could be sought from other areas of the questionnaire. However in terms of driving more fuel efficiently only data from the study area was collected. Therefore it was not possible to conclude whether changes in efficient driving were as a result of the personalised travel information or external influences such as increased fuel prices and increased media coverage regarding driving more fuel efficiently.
- **Barrier 10** – The chosen study area may not have been the most appropriate area for the project to take place. The study area consisted of students from the UEA who will have already been exposed to the UEA Travel Plan and the facilities and measures in place to encourage more sustainable travel. The impact of the personalised travel planning information will have therefore had little influence on these residents as they were already aware of alternatives and may have already 'shifted' to more sustainable modes of transport. Likewise, the study area already had a high proportion of walkers and cyclists and the area may have already reached its 'saturation' point with regard to delivering further modal shift from single occupancy cars to walking and cycling.

## D1.2 Drivers

- **Driver 1** – The measure was taken forward as part of the University's wider sustainability agenda which includes development and delivery of a Travel Plan. The Plan has already delivered a number of hard measures and emphasis has shifted to the soft measures and in particular the "battle for hearts & minds".
- **Driver 2** – The Travel Plan has achieved much success but there is evidence the rate of modal shift is slowing. This measure aims to provide a "boost" to the travel plan through a new and innovative way of encouraging change.

- **Driver 3** – The UEA have always been innovative, forward thinking and successful in terms of encouraging more sustainable types of travel. The personalised travel planning project was therefore able to build on this existing culture as well as utilise the schemes available at the UEA such as the BUG group, Liftshare contacts and marketing materials to help drive the personalised travel planning project forward.
- **Driver 4** – The personalised travel planning project has been driven by the following policies and aspirations of Norfolk County Council:
- **Environmental Policy** - ‘to encourage a shift towards more sustainable transport’
- **Second Local Transport Plan (2006 – 2011)** - including the objectives of encouraging Norfolk’s residents/visitors to use more sustainable modes of transport and raising awareness of the contribution transport can make to climate change so that people are better able to understand the impacts their decisions make.

There are also schemes and initiatives taking place throughout Norfolk including the Norwich Area Transport Strategy (NATS) 2006 and other CIVITAS projects that strive to encourage people to use more sustainable types of transport.

## D2 Participation of stakeholders

- **Stakeholder 1** – UEA bicycle User Group gave their full support to the measure and have been proactive in assisting with cycling activities.
- **Stakeholder 2** – First Eastern buses have been supportive of the measure and provided 1000 free one day travel cards as part of a wider publicity campaign to increase bus patronage and took part in the residential drop in session.
- **Stakeholder 3** - Liftshare.com providers of the University’s journey share database, have fully supported the measure and provided statistical information to enable analysis.
- **Stakeholder 4** – UEA Student Union have been supportive of the measure demonstrated by the provision of space for “drop in” sessions.
- **Stakeholder 5** – CRed, the Carbon Reduction Programme gave its full support to the project demonstrated through its help with data analysis.
- **Stakeholder 6** – Norfolk County Council Passenger Transport Unit who demonstrated their support at the residential travel advice roadshow.
- **Stakeholder 7** - Norwich City Council who have demonstrated their support by providing information including Norwich Cycling Maps for both the UEA and up-scaling of the project.
- **Stakeholder 8** – City Car Club participated in the travel advice roadshows as part of the up scaling of the project.
- **Stakeholder 9** – Norwich High School for Girls
- **Stakeholder 10** – UEA students delivered all correspondence and information to the residents, inputted data and undertook the traffic counts.
- **Stakeholder 11** – Halcrow Group Ltd worked in partnership with the UEA in delivering the residential personalised travel planning project.

## D3 Recommendations

- **Recommendation 1** – Implementation would be possible in any other public or private sector organisation with the resources necessary to provide what is a labour intensive means of eliciting change
- **Recommendation 2** – The two cycle schemes provided as part of the measure contributed to its overall success and could be implemented without the need to offer a Personalised Travel Service
- **Recommendation 3** – Understanding the audience is important and choosing who to target and how, will be very dependent on the organisation. Whilst the focus of the measure was initially to target drivers with information the general awareness raising that has been a by product has helped to deliver the overall aim. Those who drive, whether targeted or not have become more aware of the issues surrounding sustainable travel.
- **Recommendation 4** – A formal Travel Plan and/or parking policy is not necessary but is seen as helpful.
- **Recommendation 5** – Partnership working with providers of transport services including bus and train operators is necessary to deliver a successful outcome.
- **Recommendation 6** – This is not an “anti car” campaign; offering help with lift sharing and use of car clubs is recommended to avoid being seen as “unrealistic”.
- **Recommendation 7** – Survey 3 revealed those who tried a sustainable mode of transport did so for less than a week; this may not be enough time to realistically assess if the mode could be viable. Initiatives may need to focus on offering longer term “introductory offers” and securing commitment to trying a different mode for an agreed time period e.g. a free 10 day bus pass provided where a parking permit is surrendered for the same period.
- **Recommendation 8** – Factors which could have an impact on the survey results in the residential personalised travel planning project include seasonal weather changes and the amount of time between receiving information and monitoring. It is recommended therefore that future projects should ‘drip feed’ information continually throughout the year and monitoring should take place 12 months after the before survey, at the same time of year.
- **Recommendation 9** – A different survey technique is suggested for obtaining ‘before’ and ‘after’ data. The method of delivering and collecting packs gave a higher response compared to typical postal surveys but it was still low compared with the responses achieved from other personalised travel planning projects where a house visit or telephone call technique was adopted.
- **Recommendation 10** – For future projects it is recommended that completed request for information sheets are kept to allow full correlations to be drawn between the types of information requested, how and by whom.
- **Recommendation 11** – In-depth statistical analysis such as the use of SPSS (Statistical Package for Social Sciences) wasn’t included as part of this project. It would be useful in the future and for other projects to analyse the results more thoroughly to identify the level of significance

change between the before and after survey. However for this to be viable a higher sample size might be required.

#### **D4 Future activities relating to the measure**

The University intends to continue with the concept of “Direct Marketing” beyond January 2009 although the focus will move to areas which have been particularly successful i.e. the two cycle schemes, the “drop in” sessions and the provision of information to all new employees. The Personal Travel Advisor post will be retained. The University has already made a significant change to the issue of parking permits with every successful applicant receiving a personal travel plan with their permit. The University will monitor and assess the outcome of this action in 2009.

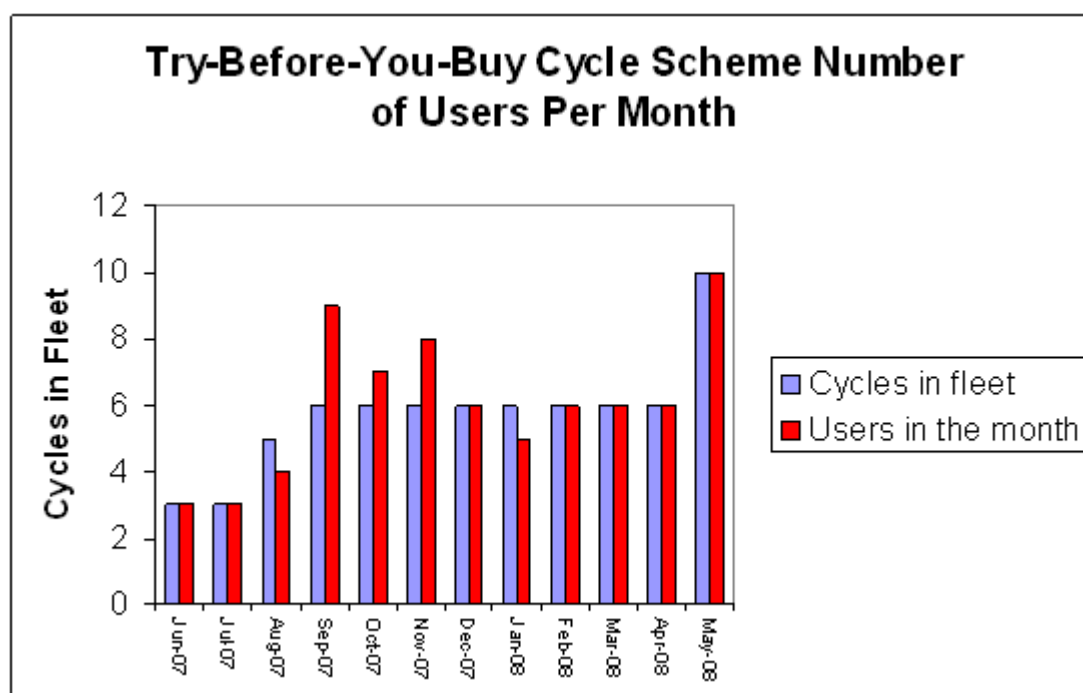
Additionally the expertise gained as a result of the up-scaling of the measure to include residential homes is seen to be of value to Norwich City Council (and possibly other Councils) who had expressed an interest in this type of project. The results of the evaluation will be shared locally and available to other Councils who request it.

## Appendix 1: Initiatives Introduced Try Before You Buy Cycle Scheme

The “try-before-you-buy-cycle” scheme was introduced in June 2007. Staff and students were given the opportunity to borrow a lightweight, good quality cycle and accessories to try cycling to campus for one month. Initially three bicycles were purchased – one folding, one ladies and one gents cycle. Another folding and ladies cycle were added to the fleet 6 weeks later, followed by a further ladies bike in September 2007. Three ladies and one gents were added May 2008. This giving a current total of 10 cycles available for loan.

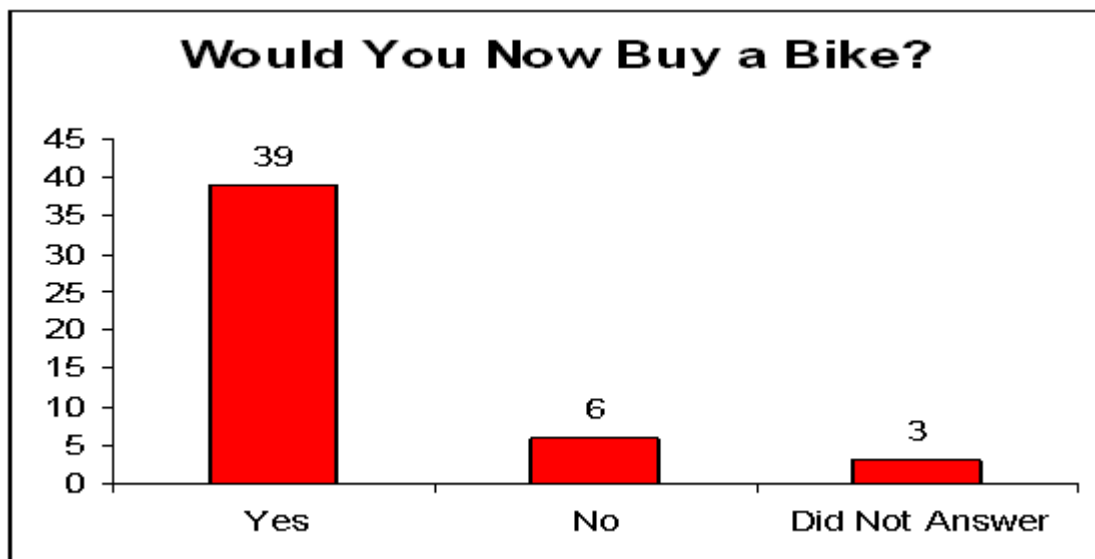
<b>Bikes in Fleet as at May 2008:</b>	<b>Type:</b>
2	Folding cycles (unisex).
2	Gents cycles
6	Ladies cycles

Demand for the cycles has been continuous, with the exception of a period shortly after Christmas 2008 when all the cycles were loaned out, but for a longer loan period than 1 month. The total number of users recorded between June 2007 and May 2008 is 61.



Note: Sept, Oct, Nov more users than cycles as folding cycle was loaned out for short term loans.

\*10 bikes issued at time of report so not completed survey



The types of cycles purchased were not as initially planned. It was anticipated that there would be a demand for gentleman’s cycles, however the scheme has appeared to be more popular with females, which is reflected in the cycle fleet.

The model of cycle that appears most popular is a traditional ladies 3 speed cycle with twist gears. This can be explained by the type of participant in the scheme, many of whom are returning to cycling after a gap of many years and feel more confident on a cycle with minimal gears, in an upright position.

The folding cycles have proved popular because of their “quirkiness” rather than their ability to be taken on public transport, however these have also been loaned out short-term to staff who have been away on placement or travelling on public transport to a meeting.

When questioned on how often the participants cycled, 2-3 days a week was the most common answer, with people indicating that this was more often than they expected to. Weather conditions and time being the main reason cited as to why they did not cycle on some days.

