ATKINS

East Staffordshire Growth Options Study

Transport Strategy Report (Volume 3)

May 2009

Plan Design Enable

(This page is intentionally left blank)

East Staffordshire Growth Options Study
Transport Strategy Report (Volume 3)

Eco Towns and Sustainable Urban Extensions - Impact of Smarter Choices

May 2009

Notice

Document History

JOB NUMBER: 5023650			DOCUMENT REF: Transport Strategy Report - Volume 3.doc			
V3	Final Draft for Client	VP	PB	CS	AT	1/5/2009
V2	Draft for Internal Discussion	YP	PB	CS		29 April 09
V1	Draft for Internal Discussion	YP	PB	CS		29 April 09
Revision	Purpose Description	Originated	Checked	Reviewed	Authorised	Date

(This page is intentionally left blank)

Contents

Section Page

1. Introduction 7

Purpose of Report 7
Research 7
What is a Sustainable Urban Extension (SUE)? 7
Structure of Report 8

2. Sustainable Urban Extensions and Eco Towns 9

Introduction 9
UK 9
Non UK 12

3. Smarter Choice Measures 15

Introduction 15
Examples of Smarter Choice Measures and Initiatives 15

4. Summary 21

Introduction 21
Estimated Impact of Smarter Choices Measures 23

List of Tables

Table 3.1 - Travelsmart Projects and % Reduction in Car Trips 16
Table 3.2 - Effect of Individualised Marketing on Personal Travel Behaviour 17
Table 3.3 - Outcomes of Recent TravelSmart ITM Projects 19
Table 4.1 – Common Features of Eco-Town and SUEs relating to Modal Shift 21

(This page is intentionally left blank)

1. Introduction

Purpose of Report

1.1 This report is intended to consider the impact of smarter choice measures on Eco-Towns and Sustainable Urban Extensions (SUE) to consider how these measures could be applied to the new housing areas in the Burton area.

Research

1.2 A bibliographical search was undertaken using relevant published documentary and internet-based sources. It is not intended to be a comprehensive evaluation of all the available literature relating to Eco-Towns, SUEs or Smarter Choices, but rather set the main issues relating to good practice and model shift.

1.3 The following reports, guidance, research and web-sites have been used as the basis for the report:

- Smarter Choices – Changing the Way We Travel (Cairns et al., 2004);
- Peterborough Travel Behaviour Research (Socialdata, 2005);
- Taunton Transport Strategy Review (Atkins, 2007);
- West Midlands Transport Innovation Fund Bid (Atkins 2007);
- Travel Behaviour Research Baseline Survey 2004 – Sustainable Travel Demonstration Towns (Sustrans and Socialdata 2004);
- Best Practice in Urban Extensions and New Settlements, A report on emerging good practice (TPCA March 07)
- www.planningportal.gov.uk/england/professionals
- www.princes-foundation.org
- http://showcase.hcaacademy.co.uk

What is a Sustainable Urban Extension (SUE)?

1.4 Housing growth is frequently portrayed as a negative phenomenon due to the impact on existing infrastructure and services. It is true that, if planned in an unsustainable way, it can have negative impacts on local infrastructure such as roads, schools and hospitals. However, it is also true that if planned in a holistic, sustainable way, alongside the necessary local infrastructure that may be required, housing growth can have many positive effects, including the regeneration of deprived areas, increasing the share of public transport use, and boosting the local economy.

1.5 The Planning Portal[1] glossary defines an urban extension as development that: *"Involves the planned expansion of a city or town and can contribute to creating more sustainable patterns of development when located in the right place, with well-planned infrastructure including access to a range of facilities, and when developed at appropriate densities."*.

1.6 It has also been assumed that a SUE should comprise the elements of a sustainable community as defined by the publication, *Sustainable Communities – Building for the Future* (ODPM 2003), both in terms of its own area coverage and also its contribution to the existing urban areas.

[1] www.planning portal.gov.uk

1.7 The document defines sustainable communities as: "… places where people want to live and work, now and in the future. They meet the diverse needs of existing and future residents, are sensitive to their environment, and contribute to a high quality of life. They are safe and inclusive, well planned, built and run, and offer equality of opportunity and good services for all." (ODPM, 2003).

1.8 Sustainable Communities – Building for the Future (ODPM, 2003) identifies the following components of a sustainable community:

1.9 "Sustainable communities embody the principles of sustainable development. They do this by:

- balancing and integrating the social, economic and environmental components of their community
- meeting the needs of existing and future generations
- respecting the needs of other communities in the wider region or internationally to make their own communities sustainable

Structure of Report

1.10 Following on from this Introduction the remaining report is structured as follows:

- **Section 2 – Examples of Good Practise –** sets out a summary of the results of our desk top research to establish examples of good practise in eco-towns, sustainable urban extensions and smarter choice initiatives.
- **Section 3 – Smarter Choice Measures** –sets out in more detail the various types of smarter choice initiatives and their potential impact on modal shift, particularly transfer from the private car.

2. Sustainable Urban Extensions and Eco Towns

Introduction

2.1 The Town and Country Planning Association (TCPA) have published some very useful and informative best practice and emerging good practice guidance on SUEs and new settlements[2]. This report includes case study examples that can be used as best practice to inform any further developments of this type. The examples contain some useful information relating to transport issues and modal shift.

2.2 The following section of this report therefore includes some of the case studies from this report, together with other case studies identified through our own desk top internet search from both within and outside the UK highlighting specific issues and opportunities relating to transport and particularly the potential of achieving modal shift with sustainable urban extensions and eco-towns.

UK

Sustainable Urban Extension: Poundbury - Dorset

2.3 Poundbury is an urban extension to the Dorset county town of Dorchester, West Dorset. It was designed by the Prince of Wales who outlined his pioneering ideas in his 1989 book, 'A Vision of Britain'. The first house went on sale in Poundbury in 1993 and it is now one third built.

2.4 As of January 2009, Poundbury is home to more than 1,500 people in different types of housing, including social housing, as well as providing employment for 1,000 people[3]. It is planned to grow to 2,200 homes by 2025 and is expected to increase the population of Dorchester by about one - quarter (approximately 5,000 people) over the development period.

2.5 It is a high - density urban quarter of Dorchester which gives priority to people, rather than cars, and where commercial buildings are mixed with residential areas, shops and leisure facilities to create a walkable community and is an example of a sustainable community designed to put the needs of people before cars.

2.6 It is made up of Town Houses, Cottages, Shops and Light Industry. Its innovative design allows the combination of Traditional Architecture and Modern Town Planning and boasts a thriving community in which people can work and live in close proximity with traffic calming measures.

2.7 Poundbury is emerging as a thriving community with an excellent school nearby, a pub, shops, a garden centre, cafes and restaurants, a hairdresser and a chocolate factory.

2.8 Poundbury follows many of The Prince's ideas about sustainable communities. These include building around the needs of the pedestrian rather than the car. With businesses and shops integrated throughout Poundbury, it is easy for people to live, work and shop locally.

2.9 "At Poundbury the entire Masterplan was based upon placing the pedestrian, and not the car, at the centre of the design." The Prince of Wales.

2.10 At Poundbury, priority is given to people, rather than cars to help create a sense of community and a feeling of safety. Poundbury is intentionally unfriendly to cars; the roads are irregular and

[2] TCPA (March, 2007) Best Practice in Urban Extensions and new Settlements: A Report on Emerging Good Practice

[3] Poundury, Dorset, Media Guide, January 2009

winding, controlling the speed of vehicles in a natural way. Commercial buildings have been built among residential areas – homes, shops and community and leisure facilities – to encourage people to walk rather than take their car.

2.11 According to a survey in September 2003, 86% of Poundbury residents were pleased to have moved there and a similar number believe that Poundbury has broken the mould of characterless modern development[4].

2.12 The success of Poundbury has now been recognised far beyond Dorset and many of the principles have been incorporated into the Government's Planning Guidance Note (PPG3). Poundbury was also highlighted as an exemplar in "Living Working Countryside. The Taylor Review of Rural Economy and Affordable Housing**"** a report by Matthew Taylor MP, published in July 2008 and commissioned by Prime Minister Gordon Brown.

Sustainable Urban Extension: Upton - Northampton

2.13 In 2001, Northampton Borough Council, English Partnerships as landowner and The Prince's Foundation embarked on a project to create an urban extension that would promote best practice in sustainable urban growth. The area identified for the extension was a site allocated in the Local Plan at Upton on the south-west edge of the town.

2.14 When it is complete the development will comprise a minimum of 1,020 homes, together with a mix of uses which includes a primary school, local shops and live-work units. Other commercial office use, retail and community uses will form a local centre along Weedon Road (A45) on the northern edge of Upton.

2.15 Key features relating to transport, include:

- Improved public transport to the site and surroundings.
- A high street and main square serving as a focal point for the community.
- Local shopping facilities.
- Improved pedestrian and cycle links on and around the site.
- The local centre to be located along the Weedon Road (the main road to the north of the site).

Urban Extension: Newcastle Great Park

2.16 Newcastle Great Park (NGP) http://showcase.hcaacademy.co.uk/index.html is a 485 hectare (1,200 acre) mixed-use urban extension located three miles North West of Newcastle city centre. Land for the development, at the time designated as green belt, was identified in the 1998 Newcastle City Council Unitary Development Plan (UDP). Two primary justifications were put forward for allocating land in the green belt for development: first the need to boost the economic performance of the North East region as a whole, and secondly the need to react to the significant out-migration of residents from the city core, in search of suitable family homes.

2.17 The location straddles the A1 trunk road, with development completing the Kingston Park area of Newcastle to the east of the A1, and retail, business and residential uses to the west of the A1. Transport interchange with the A1 is provided from the business park, and dedicated bus services link the site to the nearest Metro station.

2.18 There are a number of core principles underlying the development of the site, including:

[4] Poundury, Dorset, Media Guide, January 2009

- To secure appropriate transportation infrastructure and services so as to maximise journeys other than by private car and to minimise the impact on surrounding communities created by additional traffic.

2.19 A green transport plan was prepared for the whole of NGP to assist in delivering a sustainable and integrated transport system for the development. The plan targets the residential, educational and commercial elements of the scheme.

2.20 A list of pledges binding on the developers and the local planning authority has also been agreed. Some of the more innovative pledges include:

- funding to the sum of £20,000 per annum for ten years for a green transport co-ordinator;
- a contribution of £300,000 to the City Council to create a real-time information system at bus stops and on board vehicles;
- free travel to employees at the business park;
- no property to be more than 400 metres from a bus stop;
- a sum of £840,000 provided to ensure that transport operators buy in to running services from the start of development;
- all vehicles to have distinctive NGP branding and be fully wheelchair accessible;
- funding of £180,000 provided for the installation and maintenance of automated bus gates;
- provision of a secure 1,000-space park-and-ride car park, enabling higher-frequency public transport to be provided;
- £1.2 million to be spent on providing and improving off-site cycle facilities;
- any new occupier of NGP to be entitled to a discount of up to 50 per cent on the cost of a new cycle through a nominated supplier; and
- safe routes to schools linking all the residential areas.

2.21 All the above pledges were written into a section 106 agreement and agreed by the developers of NGP. The overarching objective of the green transport plan is to bring about a modal shift among the occupiers of the development. **The plan sets a target of reducing the current average of 90% of employees driving to work to a maximum of 60% by the time the development is completed.**

2.22 Furthermore, it is intended to **reduce the proportion of children being driven to primary school to just 10%, and in the longer term to increase the proportion of NGP residents who travel to work by public transport, walking, cycling, or car sharing to more than 50%.**

Seldown Park: Eco-Village - Poole

2.23 Seldown Park in Dorset was developed by Western Challenge, in partnership with the Borough of Poole, won Best New Social Housing Scheme of the Year at the 2006 Excellence in Housing Awards, and is recognised as an important step in the UK's development of more environmentally friendly housing. The scheme is the first on the South coast to achieve an EcoHomes 'Excellent' rating, and was commended by the Royal Town Planning Institute Planning Achievement Awards – particularly for the way in which the Association engaged the local community by inviting local residents to monthly meetings at the concept stage, to participate in development of the design.

2.24 The £10 million showpiece development consists of 86 new homes - 10 reserved for key workers – and includes a mix of flats and houses, with 37 homes to rent, 45 homes for shared-ownership, and four at market price.

2.25 Poole Borough Council - original owners of the site - wanted to send a strong message to commercial developers that environmental measures were a necessary and achievable part of

any redevelopment. This, however, was the first experience of the EcoHomes rating system, in particular, for most of the partners involved, and all went through a shared learning process. A key learning point was involvement of an EcoHomes Assessor from an early stage, though it was also recognised that there is no substitute for good in-house understanding of the system. The Sustainability Works web tool was also considered particularly helpful in providing “what-if” modelling for the site and identifying which EcoHomes credits to aim for.

2.26 The resulting homes at Seldown incorporate a range of environmentally friendly features in relation to transport these include:

- the Eco Village is a Home Zone, which puts residents first and considers the car a guest;
- location close to the town-centre allows direct walking routes to shops, buses and trains, and the village has been designed to be pedestrian friendly and keep vehicle speeds below 10mph: hard paving without gutters or defined road boundaries is shared by both people and cars, and provides informal recreational space, with no individual parking spaces marked, and street furniture carefully placed to slow vehicles;
- a car club, provided by Western Challenge, encourages lower car ownership, with two environmentally-friendly electric vehicles, dedicated parking spaces, and a charging point;
- lockable storage for 172 bicycles;
- 0.7 parking spaces per home provide just 60 car spaces for the village, with: residents needing to buy permits for these; owners of environmentally friendly vehicles paying half the normal rate; and the revenue ring-fenced to support sustainable transport measures. Controlled parking zones around the village discourage residents from trying to evade the restrictions;
- broadband internet access to all homes allows residents to work from home, reducing travel and car dependency. A proportion of properties can also have a bedroom configured to provide a workspace, depending on individual occupant preference;
- new residents will be issued with a travel pack including public transport maps/timetables, cycle routes, etc; and the residents' association will be encouraged to help develop a walking bus and 'cycle train' (a group of children cycling with adult escorts) for the ‘school run’.

Non UK

Eco-towns: Hammarby Sjöstad (Stockholm, Sweden)

2.27 Hammarby Sjöstad is a lakeside area south of Stockholm city centre. Originally planned for development as part of Stockholm's bid for the 2004 Olympic Games, this formerly disused, polluted brownfield site is now one of Europe's leading eco-towns.

2.28 The bid failed; however work was already under way to clean and redevelop the area for the Olympic Village and it was decided to retain this momentum to create positive change. Formerly derelict and polluted, the site was transformed with an emphasis on ecology and environmental sustainability.

2.29 The construction of Hammarby Sjöstad is still under way. It is envisaged that the area will eventually house some 35,000 people on completion in 2015. In addition there is a new school, church, shops, offices and a park all located on a 7.6 hectare brownfield site within easy reach of Stockholm's inner city.

2.30 Hammarby Sjöstad is a good example of the Swedish “green welfare state” approach to Eco-towns and shows how it can “promote sustainable development, new jobs, growth and welfare” into the future. As well as being ecologically innovative, it is also socially ambitious inline with the Swedish government mandate that all citizens should be provided with a decent, safe, affordable home that will be sustainable in the long term.

2.31 The process of designing Hammarby started with a politically driven commitment to Sweden's sustainability programme and the “green welfare state”. This has since gained global recognition. Emphasis was given to decontamination of the brownfield site, the provision of an effective public transport system to discourage the use of cars, the reduction of energy consumption, and water/waste recycling

Eco Town: Augustenborg, Malmö, Sweden

2.32 Augustenborg has promoted walking, cycling and public transport by focusing on safety and comfort. Planners have sought to reduce local traffic speeds and through-traffic. Although no specific targets were set for modal share, only 20% of households own a car, compared with 35% across Malmö as a whole. A slight increase in car ownership from 19% in 1998 is very small considering that unemployment fell by about 50% during the same period. Approximately 80% of roads have a 30 km/h speed limit, together with traffic calming measures, improved cycling facilities and some measures to reduce through-traffic.

2.33 On a city-wide basis, work is under way to promote sustainable transport. Around 40% of travel to work within the city is by bike, the bus fleet runs on natural gas, and biogas is being phased in, with experiments being conducted in the use of other fuels. A low-emission zone operates for HGVs, and the city is experimenting with coordinated logistics for council deliveries. The aim is to run 100% of the council’s vehicle fleet on clean fuel by the end of 2008. In addition, free parking is available for clean-fuel and low-emission vehicles and a new underground rail link is being built.

2.34 A Green Line zero-emission electric street train service aims to reduce car dependence and improve the mobility options available to residents. The first ‘electric carpool’ in Sweden was organised as a form of local car-sharing in the city (the pool’s vehicles now run on ethanol). The carpool had a fairly constant user group of about 40 households until a recent increase in membership.

Eco Town: Freiburg, Germany – car-free development

2.35 Began in 1998, the neighbourhood of Vauban in Freiburg was planned as Europe’s largest ‘car-free’ development. The historic centre of the city was pedestrianised in the 1970s, and a network of cycle routes was developed over the next couple of decades. There is also an extensive regional public transport system of integrated light rail and bus services. There is little on-street parking in central areas, so those arriving by car are required to pay to use public car parks.

2.36 Freiburg’s cycle route network has been achieved through a mixture of off-road cycle tracks, cycle lanes on carriageways, and traffic calmed streets. There is space for 1,000 bikes in the cycle park by the main railway station.

2.37 The final population of Vauban is expected to be around 5,500 in around 2,000 new dwellings. Most of the housing is in small apartment blocks, built to densities of 90-100 dwellings per hectare. Reducing the need to travel is an important aspect of the development. There are nurseries, schools, small shops and businesses, and two supermarkets within Vauban, providing 600 jobs, although many residents work outside the neighbourhood.

2.38 There is a city-wide car club of around 2,500 people in Freiburg, with a large proportion of members in Vauban. To encourage membership, the local authority worked with public transport operators to broker a deal for a free family public transport pass for households that gave up a car and joined the car club. Around 300 residents gave up a car when moving to the area. Residents of Vauban are allowed to own cars, and around 54% of households do so; but the principle is that they must contribute to the total cost of the infrastructure that use of a car requires. A parking space in one of the car parks at the edge of the development must be rented or purchased (at a cost of approximately £12,500 plus a monthly management fee), and this cost is entirely separate from the cost of buying or renting a home. Residents who choose not to own a car are therefore not burdened with the cost of the infrastructure required for car access and parking.

2.39 A 30 km/h speed limit applies to the main access roads into the development, while within the residential areas car access is only permitted for deliveries, and drivers must drive at walking pace. There is some abuse of the parking arrangements, although most drivers observe the rules.

2.40 Mode shares for Freiburg as a whole in 1999 were:

- walking 23%;
- cycling 27%;
- public transport 18%;
- car passenger 6%; and
- car driver 26%.

2.41 Owing to the access and parking restrictions, there is much greater use of streets by children playing compared with ‘normal’ residential areas and ‘home zones’.

Eco-towns: Amersfoort - The Netherlands

2.42 Amersfoort, a prosperous historic town near Utrecht with a population of around 135,000, has developed three new settlements on its outskirts to provide over 20,000 new homes. The aim was to stay 'small, beautiful and modest', while taking advantage of the government's Ten Year Vinex housing programme. Amersfoort is now designated as 'one of the greenest cities in Europe'.

2.43 Amersfoort has won international acclaim. The centre has been made car free, with local services and public transport links within walking distance of every new home.

2.44 In 1981 Amersfoort was designated a Growth City by the national government, leading to significant increase in the hospitality and trade sectors, the development of a number of business areas and the building of a new station. The population was predicted to increase from 130,000 in 1981 to 160,000 by 2016. Amersfoort therefore needed to grow, but without losing its character or encroaching into the countryside.

2.45 In 1990/1 the Dutch government issued its “VINEX” report on spatial planning, which proposed the building of 455,000 new houses between 1996 to 2005. Of these, 285,000 houses were to be built around cities in suburbs, with the stipulation that they should:

- be compact in order to preserve the countryside;
- be close to existing cities to keep car travel to a minimum;
- be developed around existing or new public transport; and
- be close to shops and employment opportunities.

3. Smarter Choice Measures

Introduction

3.1 In recent years, there has been growing interest in a range of initiatives which are now widely described as 'soft' transport policy measures or 'smarter choices' in promoting walking, cycling and public transport and reducing car use. These seek to give better information and opportunities, aimed at helping people to choose to reduce their car use while enhancing the attractiveness of alternatives. They are fairly new as part of mainstream transport policy and include the following measures:

- Workplace and school travel plans;
- Personalised travel planning, /Individualised Travel Marketing/ Residential Travel Planning (PTP/ITM/ RTP);
- Travel awareness campaigns;
- Public transport information and marketing;
- Car clubs and car sharing schemes;
- Teleworking, teleconferencing and home shopping;
- Cycle and Pedestrian Schemes;
- Leisure Travel Plans;
- Railway Station Travel Plans;
- Car Clubs;
- Car Sharing; and
- Demand Management.

Examples of Smarter Choice Measures and Initiatives

'*TravelSmart*'

3.2 'TravelSmart' has been pioneered in the UK by Sustrans, working in co-operation with *Socialdata* an international social and travel research consultancy, which has pioneered the approach in Germany during the late 1980's. The technique was later exported to Australia and, other parts of Europe, and the US over the past 20 years

3.3 The 'TravelSmart' process also known as Individualised Travel Marketing (ITM) uses direct contact with households offering tailor-made information and support, enabling people to walk, cycle and use public transport more often. It was developed specifically to tackle the subjective barriers preventing greater use of walking, cycling and public transport. In particular, travel behaviour research has shown that a significant proportion of car trips could be made quite feasibly by other modes, but a lack of information and misperceptions about relative journey time and the quality of the alternatives frequently prevents these from being used. It aims to deliver measurable and sustained reductions in car use by encouraging people to make a few changes to their daily travel choices when and where it suits them best.

3.4 There are more than a dozen pilot projects and large-scale programmes dating back to 2001 that have provided evidence of the cost-effectiveness of the TravelSmart programme. TravelSmart programmes have achieved reductions in car use averaging more than 10%, together with significant increases in levels of walking, cycling and public transport use.

3.5 Table 3.1 set out the percentage of the reduction in car trips in a range of the projects.

Table 3.1 - Travelsmart Projects and % Reduction in Car Trips

Project	Scale	Car Trip Reduction (%)
South Perth (Australia)	Large-scale	14%
Goteburg (Sweden)	Large-scale	13%
Viernheim (Germany)	Large-scale	12%
Brisbane (Australia)	Pilot	10%
South Perth (Australia)	Pilot	10%
Gloucester (UK)	Pilot	9%
Portland (USA)	Pilot	8%
Viernheim (Germany)	Pilot	8%
Cambridge (Australia)	Large-scale	7%
Frome (UK)	Pilot	6%
Marangaroo (Australia)	Large-scale	4%

Perth, Australia

3.6 A pilot project conducted by Socialdata in South Perth, Western Australia, in 1999 led to the world's first large-scale TravelSmart programme targeting 35,000 people in the same city during 2000-01. This was successful in achieving a 14% reduction in car trips and increases in walking of 35%, cycling 61% and public transport use 17%.

Quedgeley - Gloucestershire UK

3.7 Gloucester has been at the leading edge of Individualised Travel Marketing (ITM) since 2001 when the city hosted one of the UK's first TravelSmart pilot projects. The Quedgeley pilot project, which ran from April 2001 to March 2002 in Quedgeley, was one of the first two UK trials of *TravelSmart,* the other taking place in Frome, Somerset. The aim was to test Individualised Marketing on a random sample of 500 people living in Quedgeley, using household travel surveys (before and after) to measure effect of the marketing activities on personal travel behaviour. The use of control groups during the travel survey process enabled the analysis to identify changes in the modal choice of the participants that were due to the marketing activities alone.

3.8 Table 3.2 shows the effect of ITM on personal travel behaviour in the Quedgeley *TravelSmart* pilot project. For comparison, the table also shows the final results of the original *TravelSmart* pilot project in Perth Australia, conducted in 1999.

Table 3.2 - Effect of Individualised Marketing on Personal Travel Behaviour

	Gloucester –Pilot Project		Perth - Australia	
Main mode	**Without IndiMark®**	**With IndiMark®**	**Without IndiMark®**	**With IndiMark®**
Walking	27%	30%	12%	14%
Bicycle	2%	3%	2%	4%
Motorbike	1%	1%	0%	0%
Car as driver	44%	40%	60%	54%
Car as passenger	22%	21%	21%	21%
Public transport	4%	5%	6%	7%

Source: Gloucester TravelSmart Pilot Project: Executive Summary, Sustrans

3.9 It should be noted:

- The results are based on the analysis of the household and individual travel surveys conducted before and after the Individualised Marketing campaign, which took place in November-December 2001;
- 'Modal share' refers to the proportion of trips undertaken by each main mode, derived from the average number of trips per person per year;
- These results relate to the behaviour change of all households contacted during the first phase of the Individualised Marketing campaign, i.e. including those that were not interested in receiving further information; and

3.10 Following the success of a pilot project conducted in 2001, Gloucestershire County Council commissioned Sustrans and Socialdata to conduct a large-scale programme across the Quedgeley area of Gloucester. This was one of five TravelSmart projects carried out during 2003-04 with funding from the Department for Transport's Personalised Travel Planning Demonstration Scheme. TravelSmart was successful in achieving substantial increases in levels of walking, cycling and public transport, leading to relative reductions in car trips of 12% across the entire target population of 4,360 households.

3.11 Initial telephone interviews were conducted with the target households to identify those who were interested in making greater use of public transport, walking and cycling. Households in this 'interested group' were offered a range of travel information and incentives including timetables for their local bus stop, personal travel plans, a city-wide cycle map, 'test tickets' for local bus services and a cycle shop discount card. Those who were already regular users of 'environmentally friendly' travel modes were offered further information and a choice of small *TravelSmart* gifts as a 'thank you' from the project team. No further contact was made with people who were not interested in changing the way they travelled.

3.12 The net effect of Individualised Marketing in the Gloucester pilot project was a **9% reduction in car trips.** Around half of these car trips were substituted by walking, a quarter by cycling and the remaining quarter by public transport.

3.13 The detailed evaluation showed that the shift from car travel to walking, cycling and public transport resulted in a **15% increase in average daily exposure to physically active forms of travel**. By marketing local sports and leisure facilities alongside sustainable travel options, the TravelSmart programme also generated increases in participation in other forms of physical activity, including sport.

Barton, Tredworth and White City – Gloucestershire (2005-06)

3.14 In 2005, Sustrans and Socialdata were commissioned by Gloucester City Council to deliver a third project, this time to approximately 4,000 households in the Barton and Tredworth/ White City areas of Gloucestershire. The project was funded mainly by the Active England programme (jointly operated by Sport England and the Big Lottery Fund), and was the first of its kind to promote physical activity as well as sustainable travel. Again, TravelSmart **achieved substantial increases in walking, cycling and use of public transport, this time leading to relative reductions in car trips of 13%**, and in car distances travelled of 11% (a net saving of 3 million car kilometres per year among the target population). The behaviour change recorded among this inner-city area was comparable to that achieved by an earlier TravelSmart programme in the relatively affluent suburb of Quedgeley

3.15 A separate evaluation also showed that the project had been successful in promoting greater participation in sport and other forms of physical activity.

3.16 The outcomes of both ITM campaigns have been corroborated by analysis of bus patronage data provided by local operators Stagecoach. Furthermore, follow-up surveys have shown that the behaviour change achieved by the city's original TravelSmart pilot project in 2001 was sustained for at least three years.[5]

TravelSmart – Current Projects and Outcomes

3.17 During 2007, Sustrans and *Socialdata* completed delivery of large-scale ITM campaigns in Worcester and Peterborough as part of their Sustainable Travel Demonstration Town programmes, and a further programme targeting 50,000 households in Lancashire. These campaigns are being evaluated during 2008.

3.18 In 2008-10 Sustrans and *Socialdata* are working on three large-scale ITM projects targeting a total of 75,000 households in Exeter, Lowestoft and Watford, with funding from the Big Lottery Fund's Wellbeing Programme.

3.19 The outcomes of recent large-scale surveys conducted before and after each ITM campaign as set out in Table 3.3 are derived from detailed travel behaviour surveys conducted before and after each ITM campaign. These take into account 'background' changes and apply to the whole target population approached to take part in the ITM campaign (not just participating households).

3.20 The evaluation of the first stages of the Peterborough and Worcester programmes has shown that the overall changes were achieved at the individual level by switching an average of around 60 car trips per person per year to other forms of transport, or a little more than one trip per week across the population.

3.21 In Peterborough, more detailed surveys also showed that:

- The reductions in car use were concentrated during peak times in the morning and afternoon; and
- There was a 15% reduction in distances travelled by car for day-to-day trips – a total annual saving of over 9 million km.
- Increases in sustainable travel resulted in an 18% increase in daily time spent using physically active forms of travel.

[5] Sustrans

Table 3.3 - Outcomes of Recent TravelSmart ITM Projects

Location	Date	Target Population	Relative Change in car as driver trips	Relative change in trips by sustainable modes (average)
Peterborough (Stage 1)	2005	6,500	-13%	+20%
Peterborough (Stages 2 & 3)	2006	11,750	-10%	+12%
Worcester (Stage 1)[1]	2005	6,300	-12%	+20%
Worcester (Stage 2)	2006	8,600	-12%	+19%
Preston & South Ribble (Stage 1)	2006	10,700	-12%	+36%
Lancaster & Morecambe (Stage 1)	2006	8,500	-12%	+16%

Source: Sustrans Information Leaflet Sheet FF36

(This page is intentionally left blank)

4. Summary

Introduction

4.1 This report has identified a number of examples of current and emerging good practice in eco-towns and Sustainable Urban Extensions (SUEs) in both the UK and abroad, together with smarter choice initiatives that promote modal shift.

4.2 Whilst from the eco town and sustainable extension case studies it has been possible to identify some specific types of transport initiatives and measures being implemented that can contribute to creating more sustainable patterns of development and assisting in modal shift, it has not been possible however from these case studies to identify specific modal shift figures for these types of development. Table 4.1set out the common features with eco- towns and SUEs relating to sustainable transport and modal shift.

Table 4.1 – Common Features of Eco-Town and SUEs relating to Modal Shift

Case Study	Type of Development	Sustainable Transport Initiative
Poundbury - Dorset	SUE	• Priority to people rather than cars • Mixed land use – residential areas, shops and leisure facilities' • Walkable community • Traffic calming measures • Road irregular and winding – naturally controlling speed of vehicles
Upton - Northampton	SUE	• Mixed use development includes primary school, local shops and live-work units • Improved public transport to site an surrounding area • High street and main square serve as focal point to community • Local shopping facilities – reduce need to travel • Improved pedestrian and cycle links in and around site

Newcastle Great Park – Newcastle	Urban Extension	• Mixed use
		• Travel Plan for whole of area with residential, educational and commercial targets
		• Travel Plan includes binding pledges on developers and LPA
		• Travel Plan Targets
		  ○ reducing average of 90% of employees driving to work to a max of 60% by time development complete
		  ○ reduction of children driven to primary school to 10%
		  ○ Increase proportion of residents who travel to work by public transport, walking, cycling or car sharing to more than 50%

Seldown Park - Poole	Eco-Village	• Mixed development • Home Zone – puts residents first and considers the car a

Case Study	Type of Development	Sustainable Transport Initiative
		guest • Location allows direct walking routes to shops, buses and trains • Designed to be pedestrian friendly and keep vehicle speeds below 10 mph • Hard paving without gutters and defined road boundaries shared by people and cars • Informal recreational space • No individual parking spaces marked • Street furniture designed to slow vehicles • Car club provided • Lockable storage for 172 bicycles • 0.7 parking spaces per home – only 60 spaces in village • Broadband internet access to all homes • New residents issues with a travel pack
Hammarby Sjostad - Sweden	Eco-Town	• Mixed development • Provision of effective public transport system to discourage use of cars
Augustenborg - Sweden	Eco-Town	• Promotion of walking, cycling and public transport by focusing safety and comfort • Reduction in local traffic speeds and through traffic • Low-emission zone operated for HGV's
Freiburg – Germany	Eco -Town	• Car-Free development • Centre pedestrianised • Network of cycle routes – mixture of off-road cycle track, cycle lanes on carriageways and traffic clamed streets • 1,000 cycle park in main railway station • City-wide car club • Free family public transport pass for households that gave up car and joined car club • Residents must rent or purchase parking space in car park on edge of development • Residents owning a car must contribute to the cost of the infrastructure • Regional public transport system of integrated light rail and bus services • Little or no on-street parking in central areas • 30 km/h speed limit applies to main access roads • In residential areas car access only permitted for deliveries • Residential areas speed limit is walking pace

Case Study	Type of Development	Sustainable Transport Initiative
Amersfoort - Netherlands	Eco-Town	• Centre car free • Local services and public transport within walking distance of every home

4.3 Extensive travel behaviour research, including research in the three Sustainable Travel Demonstration Towns of Darlington, Peterborough and Worcester, has shown that:

- Most of people's day to day trips are local;
- A quarter of all car trips are less than two miles;
- Most people are concerned about traffic growth and support policies favouring public transport, walking and cycling above car travel;
- Around half of all local car trips could be replaced by sustainable travel modes using existing facilities;
- Lack of information about the alternatives to the car, and motivation to try them out, are key barriers to change;
- Poor perceptions of relative travel time for the single greatest barriers to walking and cycling in place of the car for local trips and yet over short distance travelling by car saves little or no time;
- People perceive door-to-door journey times by car relative to public transport to be around twice as quick as they really are;
- Cycling provides a viable alternative for the greatest share of local car trips, followed by public transport and walking;
- The potential for reducing car use through soft measures is significant and often greater than could be achieved by infrastructure improvements alone; and
- Soft measures can achieve significant reductions in car use through relatively small changes in individual behaviour.

4.4 It has however been possible form the extensive research available on smarter choice measures, particularly the Sustrans Travel Behaviour Research[6], to outline the potential impact of the introduction of smarter choice measures in an area.

4.5 The remaining section of this report sets out a summary of the common features of the eco-towns and SUEs that relate to the promotion of sustainable modes and a range in the reduction of car trips that can be achieved by the introduction of sustainable initiatives.

Estimated Impact of Smarter Choices Measures

Walking Schemes

4.6 From research carried out it is considered a 10% percentage reduction of car trips could be applied. It would be possible to have a higher percentage reduction for trips less than 1km than those 2km trips.

4.7 This needs to be considered alongside other smarter choices initiatives and care taken to not double count.

[6] Travel Behaviour Research Baseline Survey 2004, Sustainable Travel Demonstration Towns, Sustrans and Socialdata, 2004

Workplace Travel Plans (WTP) (including Higher/ Further Education Travel Plans)

4.8 Estimating the impact of WTP would involve identifying all major employers in the study area. The Smarter Choices- Changing the Way We Travel report indicates a 5% (low intensity) or 9% (high intensity impact) reduction in car trips due to WTP implementation.

Area Wide Behavioural Change Marketing

4.9 Travel awareness campaigns aim to improve general understanding of the problems caused by traffic growth and to encourage people to think about their own travel behaviour. Tentative evidence from a York campaign suggested that between 3% - 12% of car drivers may have cut their car use as a result of the campaign. Work carried out in Taunton for the Taunton Transport Strategy Review looked at a 2.4% network reduction in car trips.

Corridor Specific Behavioural Change Marketing

4.10 The impact of area wide behavioural change marketing could be confined to areas where there is a suitable network of walking, cycling and/or public transport routes.

Personalised Travel Planning/ Individualised Travel Marketing/ Residential Travel Planning (PTP/ ITM/ RTP)

4.11 This technique involves providing information and incentives to individuals or households designed to enable them to choose a different pattern of travel behaviour. This will provide benefits for the recipient as well as reducing car use and/or increasing the use of more sustainable transport modes.

4.12 There have been a range of individualised marketing projects in the UK delivering net reductions in car driver trips of 6% (Frome), 6.6% (Darlington), 9% (Gloucester) and 15% (Peterborough). Using the evidence available it is considered realistic that car trips can be reduced between 6% and 9%.

4.13 Care will need to be taken to avoid double counting with other smarter choices interventions.

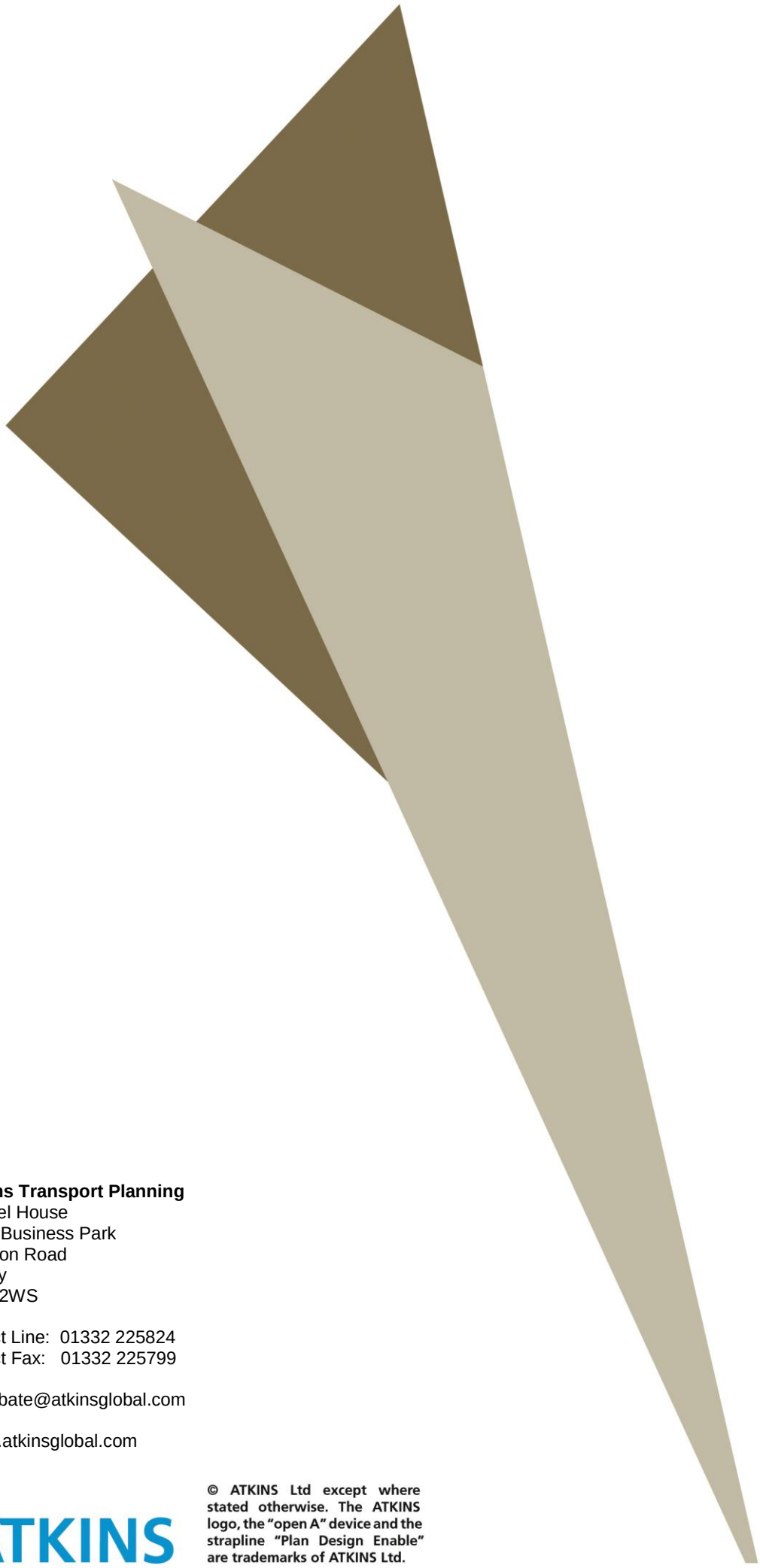
Cycling Schemes

4.14 Cycling provides a viable alternative for the greatest share of local car trips, particularly those less than 5 miles (8 kilometres). In the Sustainable Travel Demonstration Towns cycling provided a viable alternative for the greatest share of local car trips, ranging from 26% in Peterborough to more than a third (34%) in both Darlington and Worcester.

Public Transport Information and Marketing

4.15 Public transport information and marketing projects could include projects promoting an individual bus route serving the people most likely to use it.

4.16 The impact of public transport information and marketing has a strong overlap with public transport schemes and area wide and corridor specific marketing. Care would again be needed to avoid the effect of double



Atkins Transport Planning
Brunel House
RTC Business Park
London Road
Derby
DE1 2WS

Direct Line: 01332 225824
Direct Fax: 01332 225799

paul.bate@atkinsglobal.com

www.atkinsglobal.com