3. Workplace travel plans

3.1 Introduction

Commuting to work by car makes up a large proportion of all car traffic, particularly during the morning and evening peak periods. In the early 1990s, the idea of workplace travel planning began to gain ground in Britain, based on successful experience in the Netherlands and the US. A workplace travel plan can be described as a package of measures put in place by an employer to try and encourage more sustainable travel, usually meaning less car use, particularly less single occupancy car use. Travel plans usually primarily aim to address the commuting habits of employees, although many also incorporate measures aimed at travel during the course of work, including business and delivery travel, and also travel by patients, students, shoppers, tourists, or other visitors to the employer's site. Local authorities are often involved in both developing their own travel plan, and also encouraging other employers to develop their own, site-specific travel plans. Local authorities have developed a range of measures to encourage the development of travel plans, (as discussed in section 3.7).

The biggest study so far of British workplace travel plans was carried out by Cairns, Davies, Newson and Swiderska (2002). This reviewed existing literature and added its own new results based on analysis of best practice in 20 organisations, employing over 69,000 staff.

There is also valuable research on travel plan effectiveness from the Netherlands and US. Other British studies have examined the differing levels of take-up of travel planning in the private and public sectors, and between large and smaller organisations.

As background to the current study, we were interested in evidence from the literature on the following questions:

- How effective are workplace travel plans?
- What take-up of workplace travel plans is there already?
- What are typical costs of workplace travel plan initiatives?

In later parts of the chapter, this information is analysed in conjunction with the interview information from seven local authorities about their travel plan work, and their plans for the future.

3.2 Literature evidence about the effectiveness of workplace travel plans

The British study of 20 organisations implementing workplace travel plans (Cairns et al. 2002) looked at a range of private and public sector organisations, all selected as examples of good practice in workplace travel planning. It found substantial variation in their effects on car use. At one extreme, the mobile phone company Orange had cut the number of staff driving to work from 79% to 27%. This extremely good result was in part due to re-location from a business park to a city centre site close to a rail

station. At the other extreme, Boots headquarters in Nottingham had cut car drivers from 65% to only 62%, whilst coping with a large influx of staff from a town centre site to its main offices on an out-of-town business park.

Table 3.1 shows the changes in car use achieved at the different organisations involved in the study.

Table 3.1: Changes in commuter car use at British organisations with travel plans

Organisation	**Cars per 100 staff*~**		**%-point shift**	**%change**
	Before	**After**		
Orange (Temple Point)	79	27	52	-66
Bluewater	69	31	38	-55
Plymouth Hospitals NHS Trust	>78	<54	>24	>-31
Computer Associates	89	74	15	-17
Buckinghamshire County Council	71	56	15	-21
Addenbrooke's NHS Trust	<74	<60	>14	>-19
Wycombe District Council	77	65	12	-16
Orange (Almondsbury Park)	92	80	12	-13
Nottingham City Hospital NHS Trust	73	61	12	-16
Marks and Spencer Financial Services	<95	<83	>12	>-13
BP	84	72	12	-14
Vodafone	<84	<75	>9	>-11
University of Bristol	44	35	9	-20
Egg	62	53	9	-15
AstraZeneca	<90	<82	>8	>-9
Government Office for the East Midlands	<45	<38	>7	>-16
Pfizer	75	68	7	-9
Agilent Technologies	71	65	6	-8
Stockley Park	<88	<84	>4	>-5
Oxford Radcliffe Hospitals NHS Trust (JR site)	58	54	4	-7
Boots	65	62	3	-5
Average	74	61	> -14	> -18
National Travel Survey comparison	59			

Reproduced from Cairns et al. (2002)

* 'Cars per 100 staff' relates to the number of commuter cars arriving per 100 staff at the time of the earliest and latest monitoring at each organisation. Staff who were parking off-site were counted as bringing a car. Staff using Park-and-Ride services for commuting were not counted as bringing a car.

~ Where inequality signs have been used, changes in car numbers have usually been inferred from figures about the total proportion of staff commuting by car. This usually gives a conservative estimate of change, as it does not allow for reductions in the number of commuter cars arriving per 100 staff achieved by increased car sharing, or, in the case of Vodafone, increasing proportions of people who only commute by car for some days each week.

Taken overall, the 20 organisations had reduced the number of cars driven to work by 14 for every 100 staff. This represented an average reduction of 18% in the proportion of commuter journeys being made as a car driver. This is the average – the medians were similar, with a median reduction of at least 12 cars per 100 staff, and a median percentage reduction of at least 15%, showing that even after giving less emphasis to the few extreme cases, organisations were typically achieving sizeable cuts in car use.

On average, the organisations had nearly doubled the proportion of staff commuting by bus, train, cycling and walking. Car sharing had also been successful. Several organisations mentioned that some staff had given up a second car as a result of the travel plan.

A number of factors were examined, to try and identify why some travel plans were more successful than others. In general, the study found very few generalisations that could be made – for example, some organisations had achieved success by focusing on a range of modes, whilst others had been relatively successful by only focusing on one, such as train use or car sharing. There were examples of considerable success from all types of geographical location. It was shown that being located in an urban area meant that an organisation was likely to start with a lower level of car use, but it did not determine the degree of change or the 'end' level of car use that it could achieve – instead, the quality of the plan was likely to 'over-ride' the location effect. All of the travel plans had involved some 'real' changes in employees travel options, such that it was not possible to assess the effects of plans that were about awareness raising only. However, the one factor that did emerge as being important was parking. Specifically, for the 13 travel plans which had addressed parking, either by restricting the number of staff entitled to park in the organisation's car park, introducing charges or providing specific incentives payments to those giving up a parking space, the average reduction in the proportion of commuter journeys being made as a car driver was >24%, and the median was 17%. For the 8 travel plans which had not addressed parking, the average reduction in the proportion of commuter journeys being made as a car driver was >10%, and the median was 9%.

There is more evidence about the effectiveness of British travel plans from a separate study by Napier University, Open University and WS Atkins (2001). This assessed government department travel plans, based on issues of process rather than on actual 'before' and 'after' monitoring of car use. Aspects of each travel plan were awarded points on a weighted system (for example, a maximum of 250 points for 'plans and measures', 100 points for monitoring, and so on). Using the framework, the study assessed a sample of government department travel plans and found that they achieved an average score of 29%. This study highlights the problem that organisations can be required to draw up a travel plan, but it is more difficult to oblige them to make it a *good* travel plan.

Detailed evaluation of the effects of travel planning in the US and the Netherlands is reported by Organisational Coaching/Schreffler (1996). Their research involved a comparison of 20 paired case studies from the two countries. The organisations examined included a large hospital, a large manufacturer, a government (local/national) organisation or utility, a bank, insurance or telecommunications organisation, a major university, an airport, a consultancy firm and a smaller employer with less than 250 employees. Examples chosen were all considered to be 'success stories'. Results from both countries showed considerable reductions in car travel with remarkably similar averages across the two sets of case studies. Programmes in the US revealed a range of vehicle trip reduction rates from 6% to 49% with an average of 19%. For programmes in the Netherlands, where reductions were recorded in vehicle kilometres, the range was from 6% to 32% with an average reduction of 20%.

A study by Shoup (1997) focussed on the role of financial incentives in changing travel behaviour. It looked at eight Californian employers, who were required by law to offer a cash allowance as an alternative to free parking at work. This cash-out programme reduced the proportion of people driving alone to work by between 3% and 22%, with an average reduction of 13%. The average reduction in vehicle miles travelled was 12%.

A study of 49 US employers by TCRP (1994) (reported in Organisational Coaching / Schreffler 1996) found an average vehicle trip reduction of 15.3%. It was able to demonstrate that workplace travel programmes combining 'sticks' and 'carrots' were the most effective. Employers providing only information did not realise any trip reduction results. Those providing commute alternatives (such as van pools) realised an average 8.5% reduction, while those providing financial incentives (such as transit subsidies) realised an average 16.4% reduction. Employers providing *both* financial incentives *and* services realised the largest reduction in vehicle use, at an average of 24.5%.

The conclusion that travel plans combining both sticks and carrots are the most effective is echoed in a Dutch study by Ligtermoet (1998). This included a review of other Dutch data plus new results from 40 Dutch organisations. Plans with 'basic' measures (such as car-sharing schemes) achieved vehicle kilometre reductions of 6-8% (or 10% if only the sample 40 organisations are considered). Plans with 'luxury' measures (such as public transport subsidies) and / or 'push' measures (such as parking management) achieved reductions in the range 15 – 20% (or 23% if only the sample 40 organisations are considered).

In another review of Dutch travel plan experience, Touwen (1999) concluded that travel plans consisting of communication/marketing measures, basic measures such as car pooling and cycle leasing, and organisational measures such as flexitime achieved an average reduction of 8% in kilometres travelled by employees driving alone to work. If luxury measures (such as company buses) and disincentive measures (principally parking management) were added, the average reduction was about 20%.

The findings of the studies described above are summarised in the table below. In brief, they suggest that travel plans typically reduce car use by 15-20%, with perhaps higher reductions of 20-25% from plans incorporating measures such as parking management and bus subsidy, and perhaps lower reductions of 5-15% for plans that do not incorporate such measures, However, all plans are individual, and results vary significantly from organisation to organisation.

Table 3.2 Summary of literature evidence about the effects of travel plans

Study	Conclusion
Cairns et al (2002)	A selection of good practice travel plans reduced commuter car driving by an average of at least* 18%. Plans which included parking management measures achieved an average reduction of car driving of >24%, compared with >10% for those that did not.
Organisational Coaching and Shreffler (1996)	Successful travel plans in the US typically reduce vehicle trips by 19%. Successful travel plans in the Netherlands typically reduce vehicle mileage by 20%.
Shoup (1997)	Eight Californian employers offering cash for parking had reduced single occupancy driving by an average of 13% and vehicle miles by 12%.
TCRP (1994)	49 US employers with travel plans had achieved an average vehicle trip reduction of 15%. Averages for different types of plans were: 9% if offering commuting alternatives only (such as van pools)

	16% if offering financial incentives only (such as bus fare subsidy) 25% if offering financial incentives and services
Ligtermoet (1998)	40 Dutch employers (plus an unspecified numbers of others from review work) provided information about different types of plans. This suggested average reductions in vehicle kilometres of: 6-10% for plans with 'basic' measures 15-23% for plans with 'luxury' measures
Touwen (1999)	Information from different types of Dutch travel plan suggested average reductions in single occupancy vehicle kilometres of: 8% for plans with 'basic' measures 20% for plans with 'luxury' measures

* Data and analysis in several of the cases were judged to lead to an underestimate (of unknown size) of the effects of the travel plan work on car commuting, as discussed further in the footnote to table 3.1..

3.3 Literature evidence about take-up of workplace travel plans

Adoption of travel plans in Britain is growing fast, particularly amongst public sector employers.

A study published in 1998 (University of Westminster 1998) found that only 3% of local authorities had implemented a travel plan on a permanent basis and 4% on a trial basis.

Three years later, a survey by Steer Davies Gleave (2001) found a substantial increase in take-up. SDG surveyed 388 local authorities, and (randomly selected) 1000 businesses, 60 hospitals and 40 higher education establishments to gauge take-up of travel plans by these organisations. They found:

- Of the 289 local authorities responding, 24% had a travel plan in place and 45% were developing one.
- Out of 554 businesses responding, only 7% had a travel plan or were developing one. However, larger businesses were much more likely to have a travel plan. Amongst businesses with over 300 staff, 21% already had a travel plan and 10% were considering one.
- Out of 45 hospitals responding, 62% had a travel plan in place or were in the process of developing one, and another 22% were thinking about doing so.
- Of the 29 higher education establishments responding, 52% had a travel plan or were in the process of developing one, and another 10% were thinking about doing so.

Research by Addison and Fraser in 2002 further highlighted that the planning process is increasingly being used as a mechanism for requiring travel plans. This should provide a further spur to travel plan development (although their research also showed that local authority use of the planning system is very varied across the country, and there are concerns about the meaningfulness of planning requirements, given difficulties with monitoring and enforcement). This issue is discussed further in section 3.9.3.

Data supplied for this project by the Department for Transport shows that local authorities expect take-up of travel plans to continue to grow, in both public and private sectors. Table 3.3 shows local authority's predictions of the number of travel plans likely to be implemented between 2001/02 and 2006/07, based on their annual progress reports. The figures suggest about two-thirds of shire district local authorities will have a travel plan by 2006. It is not possible to estimate the proportion of highway authorities that will have a travel plan because the data is reported per work site rather than per authority, but the figure is likely to be as high or higher. Figures for further and higher education establishments suggest slightly over half will have a travel plan by 2006. Figures for hospitals suggest lower take-up, which is surprising given the requirement from the NHS Executive for them to consider their traffic impact. However, other data supplied by NHS Estates indicates that 27% of hospital sites had already implemented a travel plan by 2002/03 (and the difference between the two sets of figures may be an artefact of how local authorities are reporting hospital travel plans to the Department for Transport). Figures for employers suggest about 3600 will have implemented a travel plan by 2006. If we assume almost all these travel plans will be at work sites with over 100 staff, the proportion of larger (>100 staff) workplaces with a travel plan in 2006 will be 11%.

Table 3.3: Number of travel plans local authorities expect to implement between now and 2006

	01-02	02-03	03-04	04-05	05-06	06-07	total with travel plans	number of organisations in England	% with travel plan by 2006-07
Local highway authority site	28	53	65	48	45	16	255*	150	
Shire district	18	36	34	27	20	12	147	238	62%
Further/higher education establishments	28	43	75	51	47	23	267	519	51%
Hospitals	52	68	55	35	33	16	259	1200	22%~
Employers	401	688	656	695	708	421	3569	31,376#	11%#
Total	527	888	885	856	853	488	4497		

Figures are based on Department for Transport analysis of local authority annual progress reports.
* Figures for local highway authority travel plans are reported per site rather than per authority, so it is not possible to estimate the proportion of highway authorities with travel plans.
~ Figures for hospitals may underestimate the proportion covered by a travel plan (possibly because local authorities report one travel plan for a hospital with several sites). Data supplied by NHS Estates suggests 126 Trusts had implemented travel plans by 2002/03, at 322 hospital sites out of 1200, or 27% of hospitals.
# Figure is for the number of workplace sites with 100 or more staff, based on the assumption that almost all travel plans are likely to be implemented at these larger sites. Hence figure of 11% is the number of work sites of over 100 staff with travel plans by 2006-07.

These figures are approximate, being based on informed guesses by local authorities. However, they are consistent with the general picture emerging from the University of Westminster and Steer Davies Gleave studies, namely that, proportionally, take-up of travel plans is higher in the public sector than in the private sector; that take-up is growing fast; but that there are a still a large number of organisations without travel plans that could be encouraged to develop them. Meanwhile, the largest *number* of plans being developed is in the private sector. It is notable that local authorities are

predicting fewer travel plans being implemented in 2006/07 than in previous years. This is probably because local authorities simply did not know at the time they completed their APR returns how many travel plans might be implemented several years in the future. However, there is a concern that the fall-off might be because local authorities judge that by 2006 they will have reached most of the easy targets. If this is the case, and if further expansion of travel plan activity is considered to be desirable, further incentives and encouragement might be needed to persuade employers (especially in the private sector) to adopt travel plans.

Finally, Rye (2002) used the SDG data on take-up in different sectors to estimate the current effect of travel plans on total distance travelled to work by car. He assumed that travel plans were reducing car use for the trip to work by an average of 6%. (This is probably a reasonable assumption in the early days of most travel plan programmes, although, as highlighted in section 3.2, it would be inappropriate for more mature and well-developed plans). Applying this figure across 62% of hospitals, 40% of higher education institutions, 60% of government organisations and 11% of larger private sector companies, he concluded that workplace travel plans may already be affecting roughly 12% of the workforce and reducing car trips (and car mileage) for the journey to work by roughly 0.7%. His calculation was about the national impact of travel planning, and did not attempt to distinguish between areas where travel planning has been intensively promoted and those where it has not yet been developed.

3.4 Typical costs of workplace travel plans

Cairns et al. (2002) included some information on the average cost to an organisation of implementing a travel plan. The lowest gross annual cost was £2 per full-time equivalent employee (at Agilent Technologies, where the most successful measures were a 33% discount on train fares and service improvements, paid for by ScotRail as part of a partnership arrangement). The highest annual cost was £431 per full-time equivalent employee (at Vodafone, which had 10 dedicated bus services and payments for staff who gave up their parking permits). The median annual running cost was £47 per full-time equivalent employee, which is notably cheaper than the £300-500 often quoted as the annual cost of running a parking space.

Six organisations had considerably reduced their costs by recycling car park revenues, with four reducing their costs to zero. The cost of the travel plan did not relate directly to the degree of change that was achieved, or the overall level of car use at the end. Rather, it was the appropriateness of the measures and overall strategy that was the key to travel plan effectiveness.

In the US, the review of previous research by Organisational Coaching / Schreffler (1996) found that the annual cost of transportation demand management (TDM) programmes ranged from $8 to $105 per employee, but in most cases was closer to $30. Some TDM programmes realised net savings through parking income. However, the 20 paired Dutch and US companies examined in the same study had spent rather more than this. Their costs were in the range $100 - $200, with an average of $187.

3.5 Selection of workplace travel case studies

To complement the evidence from the literature review, we carried out interviews with seven local authorities involved in promoting travel plans in their area. In selecting travel plan case studies, there were many potential local authorities to choose from. However, rather fewer were able to provide data to show what their travel plan work was achieving. This is partly because good travel plan work involves engaging with an organisation which then also puts its own resources and staff time into sustainable travel. It can therefore be difficult for the local authority to identify how much any change in travel can be attributed to their input (as opposed to changes introduced by the organisation). Also, it may be difficult to disentangle travel plan work from other initiatives that are taking place in the area. On one level, travel plan work is distinctive in that it involves taking an organisational/employee perspective - and it is presumed to be relatively effective precisely because it aims to address problems at that level of detail. However, many of the solutions, such as altering bus services or road conditions around a site, may be done as part of other work taking place through the local transport plan anyway. Local authorities also stress that all organisations are different, which makes them reluctant to produce averaged or generalised results from a number of organisations. Finally, it should be noted that although workplace travel plan work is relatively widespread, the resources and staff dedicated to it still tend to be relatively small scale which, apart from anything else, limits the ability of those involved to undertake staff travel monitoring.

Our final selection of workplace travel plan case studies was based on a combination of those places which were known to have a reasonable amount of data about the effects of their work, and those places which were undertaking work on other soft factor initiatives as well as workplace travel plans (on the basis that this might provide interesting insights about the synergies between initiatives).

The final places chosen to study workplace travel plans were:

- Birmingham
- Bristol
- Buckinghamshire
- Cambridgeshire
- Merseyside
- Nottingham
- York

During the case study selection process, we also collected some information about Surrey.

Some case studies about other soft factors also provided insights on factors influencing travel to work:

- the car sharing schemes in Milton Keynes and Buckinghamshire
- the use of personalised journey plans as part of South Yorkshire PTE's Travel Options Planning Service (TOPS)
- tele-working and tele-conferencing at British Telecom
- elements of the travel awareness campaign in York.

3.6 Details of chosen workplace travel case studies

Some key features of the seven workplace travel plan case studies are summarised here. In the next section we look in more detail at the different approaches they adopted.

Birmingham: Birmingham City Council co-ordinates an initiative called Company TravelWise. The council's approach is to offer companies a menu of options that the council can provide, rather than expecting each company to develop its own travel plan. Some 165 companies are affiliated to Company TravelWise.

Bristol: Bristol City Council's workplace travel plan programme currently involves contact with 85 employers. The programme involves development and support for travel plan networks as well as advice to individual employers to develop their own plans. There is an award scheme for companies which have successfully cut car commuting, and grants to enable employers to develop particular measures.

Buckinghamshire: Buckinghamshire County Council's workplace travel plan initiative is branded 'Travel Choice'. One of its notable successes is the county's travel plan for its own staff, which has cut single-occupancy car commuting from 71.3% to 49.4% over five years. Having proved the concept can be successful via their own plan, the council is now working with another 32 companies and organisations based in the county.

Cambridgeshire: A 'Travel for Work Partnership' is jointly funded by the county council, two district councils, the University, Addenbrooke's Hospital and the Primary Care Trust. At the time of the interview, 44 members of the partnership were considered to be developing travel plans, and most of the commentary in this chapter is about their work. Meanwhile, another 50 – 60 employers have separately been engaged in travel planning via the planning system.

Merseyside: Workplace travel planning is co-ordinated through a partnership between the five Merseyside local authorities and Merseytravel, known as Merseyside Travelwise. Following a major expansion of staff in 2001, Merseyside Travelwise is now developing travel plans with 57 organisations.

Nottingham: Nottingham was a pioneer of the workplace travel planning concept, with the introduction of its first plans in the early 1990s. There are now 25 organisations with active travel plans (35 in the Greater Nottingham LTP area) and the council has specifically prioritised working in depth with these organisations, in preference to engaging with an increasing number. The city's plan to introduce a workplace parking levy is encouraging employers to invest in travel plans.

York: Although the council had only had a dedicated workplace travel co-ordinator for six months at the time of our interview, 30 York employers were engaged in travel planning at some level.

3.7 Tactics used to promote workplace travel plans

The tactics used to promote workplace travel plans showed some variation between the different case studies. Some authorities engage in intensive work with a small number of organisations, while others adopt a broad-brush approach, providing information and general support to many companies.

York is a good example of a local authority with an intensive approach. The council carries out staff travel surveys for companies, gives detailed feedback on the results and advises on the best initiatives to start with. It can assist companies in drawing up a plan, and can also help secure grants, for example from the DfT cycle projects fund.

In contrast, Birmingham has more of a broad brush approach. Rather than working with individual companies to draw up a tailored workplace travel plan, the council has developed a standard travel plan, Company TravelWise, and companies are invited to implement the elements of it that they are attracted to. Some companies simply want to receive public transport information mailings from the council, CENTRO and Travel West Midlands, while others request specific help from the TravelWise team, for example in resolving a problem with bus routes, or poor access from a business park to a station. Where such help is requested, the TravelWise team are eager to provide it: the broad-brush approach sits alongside tailored support where it is requested.

Whichever approach is adopted, it is clear that in order to 'get a foot in the door' with companies, the local authorities need to be able to offer something in return. Sometimes interest is generated by parking problems or local authority restrictions on parking. The local authorities are also usually able to offer incentives to engage companies in travel planning. The main incentives used are described in more detail below, and include:

- Discounts on public transport, and spending on public transport infrastructure
- Information about public transport
- Cycle initiatives
- Walking initiatives
- Centrally co-ordinated car-sharing schemes
- Grants to develop travel plans, or to provide specific infrastructure.
- Attachment of conditions to planning permission

Alongside these incentives, all the case studies used various publicity techniques to attract the interest of companies, and offered networking opportunities to support companies in developing their travel plans.

- **Discounts on public transport and spending on infrastructure**

In three of the case studies, the local authority had negotiated special deals with public transport operators, which were available to some or all organisations with travel plans.

In Birmingham, the partnership between the council, CENTRO and Travel West Midlands has made it possible to offer a 50% discount on an annual season ticket to staff at companies affiliated to Company TravelWise, if they give up driving to work.

In York, the main bus company, First York, offers a six-month free bus pass to commuters who give up driving to work.

In Buckinghamshire, the county council has negotiated a 34% discount with Chiltern Railways, and a 50% discount with Arriva. Discounts were available to family members as well as employees, and covered all journeys, not just the journey to work. This was a particularly good deal, but required negotiation on an organisation by organisation basis. At the time of the interview, the Council had also helped to negotiate discounts for the police, and for the private company Ercol.

In Cambridgeshire, the council had worked in partnership with Addenbrooke's Hospital to build a new bus station on the hospital site, which has resulted in a large increase in bus use.

- **Information about public transport**

Birmingham organises regular mailings of public transport timetables and other information to Company TravelWise affiliates. All affiliates are also offered branded Company TravelWise notice-boards, for displaying information. In York, individual journey planners for employees are free, and the council is piloting customised public transport information with a 'lifestyle' leaflet promoting buses to Norwich Union. In Buckinghamshire, providing organisations with public transport information (and persuading them to display it), was seen as a good way of starting a dialogue with an organisation without scaring them off. South Yorkshire PTE has developed tailored public transport information for workplaces as a key part of its general public transport promotion work.

- **Cycling initiatives**

In Bristol, the local authority has a service level agreement of £30,000 a year with local organisation Lifecycle to provide 125 adult cycle training sessions, up to two Sheffield racks per SME, to work with up to 12 employers on Bicycle User Groups and to provide tailored cycle route advice to individuals. Organisations can then opt to receive these services. In Cambridgeshire, the Travel for Work partnership has helped in the development and distribution of a cycle route map, runs adult cycle training sessions and has a specific grants scheme for installing cycle parking.

Various local authorities have also negotiated discounts on cycle equipment for travel plan organisations. In Cambridgeshire, the Travel for Work Partnership has negotiated discounts for members at local cycle shops. In Birmingham, about 20 of the companies affiliated to Company TravelWise are termed 'support companies'. These companies offer discounts to Company TravelWise affiliates for equipment such as cycle parking stands.

- **Walking initiatives**

Local authorities were promoting walking in different ways. Buckinghamshire was piloting a 'walk-share' scheme, to match people who might want to walk together (for example, for security reasons, particularly on winter evenings). In Merseyside and York, there has been a lot of awareness-raising work relating to the health benefits of walking. For example, Merseyside produces walking maps with 'calorie counts' used for different routes. In Nottingham, Nottingham City Hospital has worked in partnership with the council on pedestrian improvements.

- **Car-sharing**

County-wide car-sharing schemes operate in Cambridgeshire and Buckinghamshire, and a city-wide scheme operates in York. In Bristol, a car-share scheme has been developed for the Temple Quay central business site. The Milton Keynes car share scheme is aimed at journeys to work in the central business area.

- **Grants to assist in developing travel plans**

In Nottingham, the county and city councils have set up a grant scheme, TransACT, to encourage small and medium businesses to develop travel plans. Companies receive up to £20,000 to fund works arising from travel plans. In Bristol, companies can receive grants of up to £5000 to fund 40-50% of the costs of their travel plan initiatives. In Buckinghamshire, the council has held prize draws for companies, with the prize being a covered cycle shelter, and in Cambridgeshire, there is a grant scheme for cycle parking. Merseyside had not introduced a grants system at the time of the case study interview, but was planning to do so.

- **Planning permission**

Attitudes varied to the use of the planning system to promote travel planning. For example, in Birmingham, it was used very proactively – as all planning approvals for developments with 50 or more employees include a condition that the company must join Company TravelWise. In contrast, Nottingham tries to avoid securing travel plans through the development process, preferring that travel plans are entered into voluntarily on the basis of 'business benefits'. This issue is discussed in more detail in section 3.9.3.

- **Publicity and information**

Buckinghamshire has placed strong emphasis on 'feel-good' publicity to attract interest in travel plans and increase brand recognition of Travel Choice. This has included events such as Green Roadshows, business breakfast and dinners, advertising (on bus backs, and at cinemas) and a wide range of promotional materials such as branded Frisbees and post-it pads.

The Cambridgeshire Travel for Work Partnership has a dedicated website, regular newsletters and various email circulation groups. Buckinghamshire, Nottingham and Merseyside have all produced their own guides for employers, explaining how to draw up a travel plan.

All the case study authorities considered that an important part of their work is to meet with employers, and many mentioned that they often attended meetings with employees to provide information, for example about public transport options.

However, some, such as Cambridgeshire, mentioned that they are still relatively reactive in terms of who they work with, due to resource constraints, and are careful not to 'over-advertise', for fear that they would not be able to meet demand. Nottingham has decided that local authority time is best spent working with the 25 largest employers in the city, and is concentrating time and effort on those companies.

- **Commuter planner clubs and forums**

Most of the case study authorities organise regular meetings of employers to share ideas about travel plans. In Nottingham, a Commuter Planners Club meets quarterly,

and there are also sub-groups bringing together employers from a particular geographical area to tackle issues of common interest. For example, employers based near the train station have worked with Central Trains on promotions.

Bristol has similar networking opportunities, with an Avon Green Commuter Club and sub-groups such as the Temple Quay Employers Group. Birmingham has set up groups or clusters of companies, some of which focus on a particular geographical area while others are sector specific – for example, there is a hospital group and there are plans for a college group.

- **Monitoring**

The local authorities' approach to monitoring progress was quite variable. Some offered to undertake travel surveys as part of the 'package' that they could offer to organisations. Others did not. This issue is discussed further in section 3.10.

3.8 Staffing and budgets for workplace travel planning

The seven workplace travel plan case studies had quite similar staffing levels and budgets. These are illustrated in table 3.4.

3.8.1 Current budgets

Total annual expenditure (including staff costs within the local authority *and* in outside agencies such as the PTE in Birmingham) lay within the range £52,000 - £200,000. The lowest spending authority was York, which is also the smallest area in terms of population and workforce. The highest spending authority was Nottingham, which has a substantial programme of travel planning grants to businesses.

In some local authorities, almost all the budget was consumed by staff salary costs, with little left over for publicity materials or other incentives to encourage take-up of travel plans. The most marked example of this was in Birmingham, where Company TravelWise had no dedicated budget (although this was due to change). About £12,000 a year was secured from other budgets within the local authority and from external sponsorship, for information materials and Company TravelWise noticeboards. At the other end of the spectrum, Nottingham allocated £100,000 a year to its grant scheme to encourage small and medium sized enterprises to develop travel plans. Clearly local authorities where there is less funding available to promote workplace travel plans are likely to have to find other tactics to interest companies in adoption of travel planning measures: examples include the discounts on public transport travel negotiated in York and Birmingham, and the proactive approach to incorporating travel planning into planning conditions in York and Cambridgeshire.

Table 3.4: Comparison of staffing and budgets for workplace travel plans (summer 2003)

		Birming-ham[3]	Bristol[4]	Bucking-hamshire[5]	Cambridge-shire (TfW)[6]	Merseyside[7]	Nottingham[8]	York[9]
Length of time scheme has been running		5 years	5 years	5 years (3 mainly)	6 years	5 years (2 mainly)	8 years	5 years (1 mainly)
Number of companies local authority is working with		145	60	33	44	57	35	30
Number of employees in companies with WTP		136,000	29,960	21,700	34,000	55,870	52,000	26,187
Proportion of workforce covered by travel plans		29%	13%	11%	12 or 29%	8%	28%	29%
Staff time in local authority / PTE and outside agencies initially[1]		1 fte	0.25 fte	1 fte	1 fte	1 fte	1 fte	0.3 fte
Staff time in local authority / PTE and outside agencies once scheme established		3 fte	1.25 fte	1.5 fte	1.6 fte	3 fte	3 fte	1.5 fte
Estimated expenditure in first *intensive* year[2]	Capital	0	0	£14,000	0	0	0	0
	Revenue	£27,000	£10,000	£77,500	£25,000	£98,000	£25,000	£52,000
Estimated expenditure in most recent year	Capital	0	0	£25,000	0	0	0	0
	Revenue	£97,000	£130,000	£82,500	£57,500	£98,000	£200,000	£52,000

1 'Staff time initially' gives staff time when the local authority first began travel planning.
2 'First intensive year' is usually the year when the local authority first began travel planning, but for Buckinghamshire, Merseyside and York it is the year when the authority significantly scaled up its activity.
3 Birmingham first year expenditure assumes one full-time post, estimated at £25,000, plus small additional costs. Expenditure in most recent year includes estimated £25,000 for one post at CENTRO as well as city council costs.
4 Bristol first year expenditure assumes a quarter of a full-time post plus £4000 for promotional work. Most recent year figure includes £65,000 for salaries and £65,000 for grants and promotional materials.
5 Buckinghamshire began workplace travel planning roughly five years ago, and initial staff time refers to this date. Expenditure figures cover only the period of more intensive activity, from about 2000 when the county started promoting travel plans to other organisations (not just its own staff). Estimates of first intensive year expenditure are based on 2001/02 figures to which are added cost of 1.5 staff posts at an estimated £25,000 per post. Current year expenditure estimates are based on figures for 2003/04 plus 1.5 staff posts at £25,000 per post.
6 All figures relate to Cambridgeshire Travel for Work initiative only; council planning department work and Travel Choices personalised travel planning initiative excluded. Lower figure for proportion of workforce covered by travel plans relates to workforce for entire county; higher figure for workforce in Cambridge City and South Cambridgeshire, where most travel planning work has been focussed. First year expenditure assumes one full-time post estimated at £25,000. Expenditure in most recent year includes £35,500 for the Travel for Work Partnership (which includes staff costs) and £22,000 for individual projects.
7 Merseyside began travel planning five years ago, and initial staff time refers to this date. Expenditure figures cover only the recent period of more intensive activity, when there have been three fte staff delivering workplace travel plans as part of a team of seven. Expenditure has been calculated by assuming that 3/7ths of the total revenue budget for travel planning in Merseyside is for workplace travel work.
8 Nottingham first year expenditure assumes one staff post at £25,000. Current year expenditure includes actual cost of workplace travel staff, including the TransACT co-ordinator at the Chamber of Commerce.
9 York began travel planning five years ago, and initial staff time refers to this date. Expenditure figures cover only the period of more intensive activity of nearly one year during which a full-time staff member has been in post.

We compared funding levels for workplace travel planning with those for school travel planning in Buckinghamshire, Merseyside and York. All three areas have given a lower priority, in terms of budget and staffing, to workplace travel. Even leaving aside capital funding (which tends to be higher for school travel work because it includes safe routes infrastructure), revenue funding for promotional work was lower for workplaces than for schools. In Buckinghamshire, annual revenue spending on workplace travel plans is £82,500, compared to an estimated £184,500 on school travel. In Merseyside, revenue spending on workplace travel plans is £98,000, compared to an estimated £156,000 on school travel. In York, revenue spending on workplace travel plans is £52,000, compared to £63,000 on school travel. These disparities seem surprising when one reflects that travel to work accounts for a far greater proportion of mileage than travel to school, and the potential to affect overall traffic levels is therefore greater.

3.8.2 Current levels of staffing

Most of the case studies had between one and two full-time equivalent posts dedicated to workplace travel plans within the local authority. In Birmingham and Nottingham there were additional posts in outside agencies (the PTE and the Chamber of Commerce respectively) with which the local authority was working closely, bringing the team of people promoting workplace travel planning to three. Merseyside Travelwise had the largest complement of in-house staff dedicated to travel planning: out of seven travel planning staff, there were two full-time posts dedicated to workplace travel plans, and two other staff working some of the time on workplace travel.

Partnerships with other agencies were common. For example, as highlighted, in Birmingham the local authority works closely with staff from CENTRO and the local bus operator Travel West Midlands, and in Nottingham the local authority funds a post in the Chamber of Commerce to administer their travel planning grants scheme. In Cambridgeshire, much of the proactive promotion of travel plans is carried out by the Cambridgeshire Travel for Work Partnership, which is jointly funded by three local authorities, two health bodies and the university.

In several cases, additional staff had been recruited relatively recently. For example, in York, a full time member of staff had only become dedicated to working on workplace travel plans within the previous six months (at the time of our interview). Generally, staffing levels were increasing, but the withdrawal of the DfT bursaries at the time interviews were carried out was giving rise to anxiety that some staff posts would be lost.

Cambridgeshire was able to provide some comparative data on staffing levels, based on a review that they had carried out of travel plan activity by other local authorities. This suggests that across the country, local authority staffing levels for travel planning are generally somewhat lower than those reported from our case studies. Of ten local authorities for which data had been gathered (none of them the same as our case studies), seven had the equivalent of 1 full-time post, two had 0.5 or 0.6 fte posts, and one had 2 fte posts.

3.8.3 Changes over time in staffing and budgets

When the case study local authorities began their travel planning work, they all spent quite low sums of money, with typically one full-time or part-time staff post and a revenue budget of a few thousand pounds. There was little up-front expenditure which might be considered as a capital cost. Although all the case studies have been involved in some form of travel planning work for between five and eight years at the time of our interviews, several had only recently increased staffing to the level at which it became possible to engage in a thorough way with a significant number of companies. This is one reason why some local authorities were able to report rather few 'after' monitoring results, as discussed later.

3.8.4 Costs per employee

It is interesting to see how the cost per employee targeted varies between the case study areas. Data for this is shown in table 3.5. Birmingham, which has reached many people relatively quickly, is working with employees at a cost of 70 pence a head. In contrast, Buckinghamshire is still at the stage of persuading employers to engage with them, such that overall costs are relatively expensive – approximately £5 per employee. Cambridgeshire, York and Merseyside are all operating at a cost of about £2 per head, whilst Bristol and Nottingham (who both now offer a grants scheme for employers) are spending about £4 a head. It could be argued that once travel planning work is underway, initial costs will work out at £2 per head, but that as additional incentives are needed to engage more 'reluctant' employers or to encourage the implementation of more substantial measures, the cost will rise to about £4 per head.

Table 3.5: Cost of workplace travel plans per employee targeted

	Cost per employee targeted (£)
Birmingham	0.7
Bristol	4.3
Buckinghamshire	5.0
Cambridgeshire	1.7
Merseyside	1.8
Nottingham	3.8
York	2.0

Calculation based on expenditure (capital + revenue) in current year and staff affected by travel plans in current year

It should be noted that this is the cost to the local authority of encouraging the take-up of travel plans amongst other organisations. This is different to the costs quoted in section 3.4, which related to the typical costs *to the employer* of implementing a travel plan. In many cases, the costs to the employer are likely to be greater, since the travel plan is likely to involve the introduction and facilitation of alternative travel options. However, as discussed in 3.4 and in the chapters on telework and teleconferencing, there is also the opportunity for the employer to recoup their costs through parking revenues, better use of site space etc., and some employers have managed to introduce very cheap but effective travel plans, via, for example, negotiation of public transport discounts with operators in return for agreeing to market their services to staff.

3.9 Comparison of case study findings on the scale of workplace travel planning

3.9.1 Number of employees and companies engaged in travel planning

The scale of local authorities' travel planning work can be assessed either in terms of the number of organisations they are working with, or the number of staff covered. The scale of work in the case study areas at the time of our interviews is shown in table 3.6.

Table 3.6: Summary of local authority engagement on travel plans (summer 2003)

Location	Number of staff in companies with WTP	Number of companies local authority is working with	% staff	% companies
Birmingham	136,000	145 (+20*)	29	0.5-0.6
Bristol	29,960	60 (+25#)	13	--
Buckinghamshire	21,700	33	11	--
Cambridgeshire	34,000	44 (+16*)	29 or 12~	0.5 or 0.3
Merseyside	55,870	57	8	--
Nottingham	52,000	35 (+265#)	28	0.5
City of York	26,187	30	29	0.6

*These are support companies – e.g. cycle shops – and non employer steering group members such as Cambridge cycling campaign.
These are members of travel plan networks who are largely inactive, or with whom the council has little involvement
~ First figure is the % of employees in the two main target districts (Cambridge City and South Cambridgeshire). The second figure is for the percentage of all employees in the county.

Most city authorities (Nottingham, Birmingham and York) had managed to engage organisations representing about 30% of staff. Bristol's engagement had been relatively lower, with 13% of staff affected.

In contrast, the larger authorities (Cambridgeshire, Merseyside and Buckinghamshire) had engaged organisations representing 8-12% of employees (although in Cambridgeshire the proportion of employees engaged in travel planning rises to 29% if one looks only at the City and South Cambridgeshire, where most travel planning work is concentrated). It should be noted that Birmingham, although a larger authority, had engaged with a large proportion of its organisations and workforce, presumably due to its distinctive broad-brush approach.

In total, there are about 2.2 million employees in the seven areas, of which about 356,000 (16%) had become engaged in travel plans by summer 2003.

All locations had engaged with only small fraction of total companies in their local area, and preferred to concentrate their efforts on the larger employers.

It is difficult to compare these with the national figures given in section 3.3, where the data provides information about engagement levels of different types of organisation,

rather than proportions of employees. However, a tentative suggestion would be that some of our case study areas have already managed to achieve above average take up of travel plans (compared to local authority estimates for 2006), particularly in urban areas. This issue is discussed further in section 3.9.5.

3.9.2 Evolution of approach

Table 3.7 explains how the different local authorities have developed their work on travel plans over time.

Table 3.7: Details of the evolution of local authority approaches to travel planning

Location	
Birmingham	The city council began writing its own travel plan in 1997. In 1998, the standard 'Company TravelWise' service was launched. By 2001, 101 organisations were affiliated. By summer 2003, there were 165 affiliated organisations. The council has deliberately prioritised breadth over depth. There is no specific targetting – involvement is voluntary or via the planning process. Larger organisations show more interest - most of the top 100 employers in the city are members. The council is now developing groups of workplaces, including sector-specific (e.g. hospital and college groups) and area-based groups (e.g. Castle Bromwich, with Jaguar, Goodyear and Baxi Fires).
Bristol	Bristol began work on travel planning in 1997/98, and began to develop networks including the 'Green Commuter Club'. In 2000, 26 organisations were involved. By 2002, this had grown to 69, and by summer 2003, there were 85 members of the club. The LTP indicated 9 major target sites – Temple Quay (town centre business site); United Bristol Hospital Trust; Bristol University; City of Bristol College; Bristol City Council; Central city area; Cabot Business Park; Southmead and Blackberry Hill hospitals; and Avonmouth & Brislington trading estates. In general the approach is to target major employers, key sites such as hospitals, and major leisure complexes. There has also been an emphasis on the public admin/banking/insurance industries (50% employees) and hotels/manufacturing sector (33% employees). A recent priority is the tourist businesses along the harbour side. Increasing interest in travel planning has meant that the authority is now developing a more reactive approach, and is working with organisations involved through the planning process.
Buckinghamshire	The county started with work on its own travel plan in 1998. It was expected that many organisations outside the local authority would want to work with them to develop travel plans but this did not turn out to be the case. The lack of interest has led, instead, to intensive work with fewer organisations. In 2000/01, they were working with 11 organisations, whilst by 2001/02, 19 travel plans had been introduced. In 2002/03, 24 plans had been implemented – and by summer 2003, the total was 33. In 2003, they were proactive in targetting all businesses with >100 staff (around 80 in total), with a 20% response rate. They are also targetting local

	business parks, including Cressex Globe Park and Slough Trading Estate. They feel that there are particular opportunities when a company relocates. They also try to engage organisations at a relatively low level (e.g. persuading them to display public transport information) and then build on the relationship. Their work tends to focus on organisations in the urban centres of Aylesbury, High Wycombe and Amersham. They have had problems engaging with the health sector.
Cambridgeshire	The Travel for Work Partnership was set up in 1997, as a development of the Cambridgeshire Cycle Friendly Employers Partnership. By 1998, there were 25-30 members, and numbers have grown gradually since then. In general, they have found that there is more interest from larger organisations and public sector organisations. Their work is mainly focused on Cambridge City and South Cambridgeshire – the economically booming parts of the county. There has also been close involvement of the health sector.
Merseyside	In 1998, a member of staff was appointed to work on sustainable travel issues, including some travel plan work. In 1999, a second staff member was appointed (with a similarly broad remit). Work on travel plans really took off with the appointment of 2 bursary post holders specifically for travel plans in 2001. Merseyside now targets all partner local authorities, health and education sites; large employers; tourism and leisure sites; and strategic investment/Objective 1 areas. When a dialogue begins with an employer, the team works intensively with that employer, although it is hoped that there will be spill-over into other organisations in the local area.
Nottingham	Nottingham has specifically focused their work on the 25 largest organisations and would probably dedicate additional resources to working more intensively with them rather than working with new organisations. Work in the area began with the County Council's travel plan in 1992. In 1995, the City (and county) set up a 'Commuter Planners Club'. Initially, this had 10 members (representing 10-15,000 staff) – cherry picked to be the largest employers in the city. By summer 2003, there were 300 members, although only 35 were attending regularly. Two city based sub-groups of the club were set up in 1999 (South Side and North Side Employers Groups). Area wide travel plans are now also being completed for business parks and clusters of companies. For example, organisations near the train station worked with Central Trains on promotions, and one – Capital One – now has more than 15% staff arriving by train.
City of York	Some work on travel plans has taken place since 1998, but a dedicated officer was only appointed in 2003. In 2000, there were 5 organisations with travel plans and 16 developing them. By 2002, there were 12 with plans and 11 developing them (representing 24000 or 27% of employees). By summer 2003, there were about 30 organisations involved in travel planning. Initially, large public sector employers were targetted. This was

	followed by targetting all employers with over 300 staff. The rationale was that it was easier to find the right person to work with; these organisations were more likely to have problems with recruiting and parking; and the council's intervention was more likely to be effective. The City prioritised intensive working with these organisations. They are now starting to work with smaller employers and business parks and may go for a more broad brush approach. Over time, their approach has become more focused, putting more emphasis on 'health and lifestyle', and carefully tailored individual advice such as journey planners for employees.

The information from table 3.7 provides the following insights:

- At least two local authorities (Birmingham and Buckinghamshire) started work by developing travel plans for their own local authority
- At least four local authorities have engaged organisations by developing networks of interested employers - specifically, the Company TravelWise scheme in Birmingham, the Green Commuters Club in Bristol, the Travel for Work Partnership in Cambridgeshire, and the Commuters Planners Club in Nottingham.
- Nottingham was the earliest to start work on travel planning (1995). It was followed by Bristol (1997), Birmingham (1997) and Cambridgeshire (1997). Although the other three authorities (Buckinghamshire, Merseyside and York) theoretically began work around the same time, in practice major work on travel planning has only taken place in these areas in the last few years.
- All local authorities are seeing a growth in the number of employers that they engage with. However, Nottingham has developed a unique approach, in that it is choosing to concentrate the majority of its efforts on the top 25 largest employers.
- As travel planning work has developed, those responsible are increasingly engaging with the planning system (as discussed in more detail in section 3.9.3). Several are also choosing to set up sector-specific or area-based groups (including business parks), for example in Birmingham, Bristol, Buckinghamshire and Nottingham.
- All local authorities are targeting larger organisations and public sector organisations. The majority have been successful at engaging with the health sector, although Buckinghamshire has had problems with this.
- Work is often focused on areas of economic growth. In some cases, particularly Bristol and Merseyside, initiatives are taking place in partnership with regeneration work, although in Merseyside there has been some concern about conflicting objectives, which is in the process of being resolved.

Figures 3.1 and 3.2 show how the numbers of engaged organisations and employees have changed over time. Almost all local authorities are engaging an increasing number of organisations over time. The rate of growth is similar in six of the case study areas, but much higher in Birmingham, where the council's distinctive approach has led to engagement with a far higher number of employers and employees.

Figure 3.1: Growth in number of employers covered by travel planning work

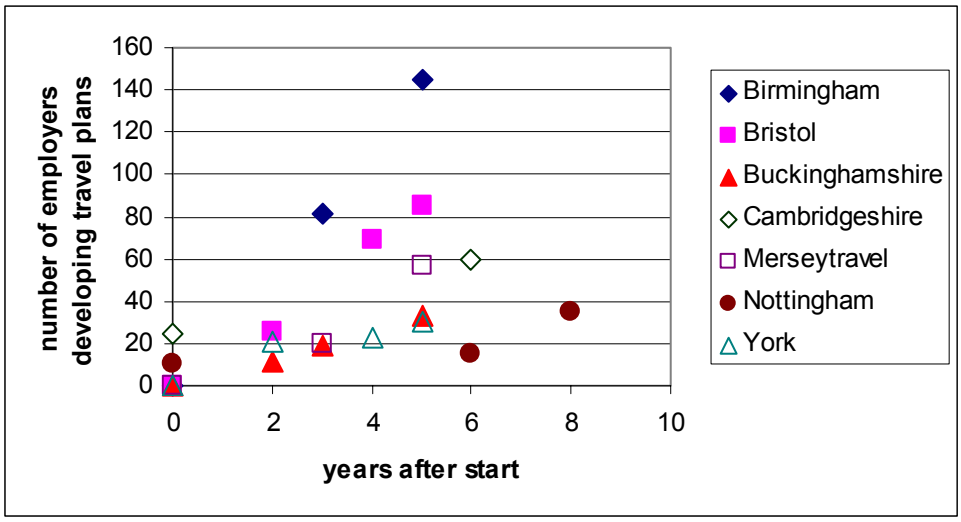
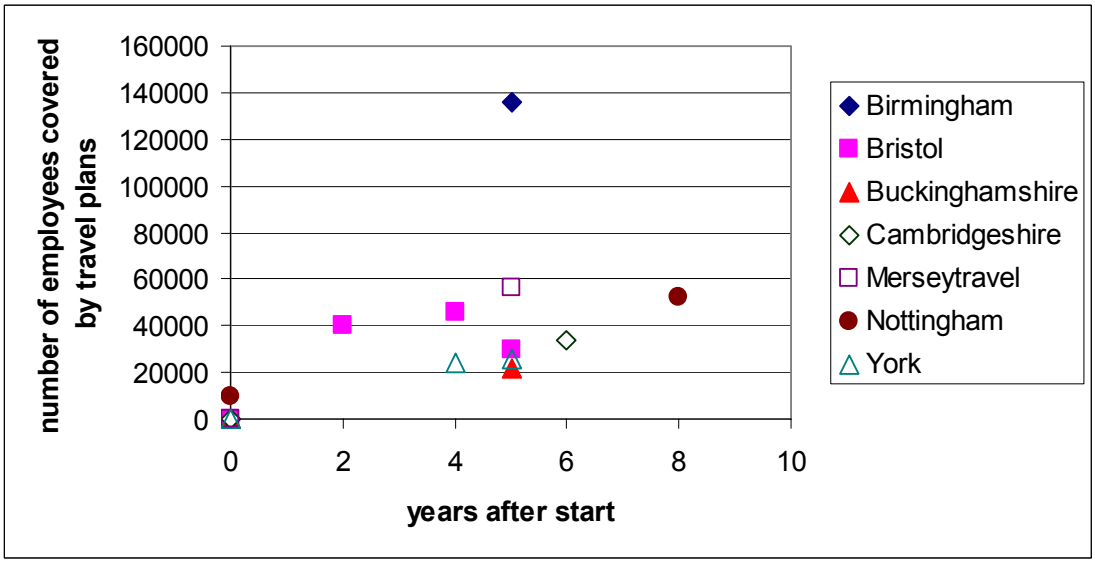


Figure 3.2: Growth in number of employees covered by travel planning work



3.9.3 Use of the planning system

It is now useful to look at how the planning system is used in relation to travel planning, since this is becoming an increasingly important mechanism for engaging organisations, as examined in depth in recent Department for Transport research by Addison and Fraser (2002). The experience of our case study areas is summarised in table 3.8.

Table 3.8: Use of the planning process (summer 2003)

Location	
Birmingham	53% of organisations have been involved due to planning requirement. Planning conditions are used to require all new developments that will have 50+ employees to join Company TravelWise. If a company is already a member, the planning condition will require them to remain active in Company TravelWise. Companies are also asked to produce reports of activity.

Bristol	Travel planning conditions are increasingly being included in section 106 agreements.
Buckinghamshire	Planning applications that are expected to generate significant traffic are generally required to include a commitment to a travel plan. However, this is sometimes difficult to achieve because the county is not the planning authority, and not all district councils are as proactive as they might be in ensuring a travel plan is made a planning condition.
Cambridgeshire	The planning process is used to require travel plans and developer contributions to travel measures. Different levels of commitment to travel planning are required, depending on the nature of the development. However, there is little link between development control and the Travel for Work Partnership at present – organisations required to implement travel plans as a planning condition are left to undertake the implementation themselves.
Merseyside	There have been a few occasions when S106 agreements have been used to require travel plans, although the system is not well developed. There have also been concerns about mismatching between the aims of travel planning and attracting inward investment. Supplementary Planning Guidance is being drawn up to address this.
Nottingham	The city council prefers travel plans to be entered into voluntarily. Seven of the 25 large employers have been subject to planning requirements (largely relating to parking allocations), although they were already engaged in travel plan work. Planning applications for new developments with more than 50 parking spaces are referred to the Transport Partnership Officer for comment.
City of York	The travel plan officer scrutinises all planning applications and advises on inclusion of travel plan issues in planning conditions. She spends 10-15% of her time on this work, and perhaps another 10% on issues (including enforcement) relating to old planning permissions with travel plan conditions.

In summary, all local authorities use the planning system to require travel plans. However the approach taken was very different in different locations at the time of our interviews. In Bristol, Buckinghamshire and Merseyside, the approach was still relatively informal, although in Merseyside, supplementary planning guidance was being drawn up due to concerns about streamlining travel planning with regeneration work. The approach was more formal in the other four authorities although different approaches were still taken.

Both Birmingham and Nottingham had guidelines regarding use of planning conditions. In Nottingham, all proposals for new developments with more than 50 parking spaces were being referred to the travel plans officer for consideration. However Nottingham prefers that the planning system is used as little as possible, believing that travel plans are more effective if they are entered into voluntarily. In Birmingham, all developments that will have more than 50 employees are required to join Company TravelWise. This has been a major means of recruiting organisations to Company TravelWise.

In Cambridgeshire, the planning system was also being used to involve developers in travel work. There are guidelines for developer contributions (a fixed fee per trip generated, with the amount depending on location). However no formal link was being made between a planning condition to draw up a workplace travel plan and referral to the Travel for Work Partnership.

The most intensive use of the planning system was in York, where the travel plan officer scrutinises all planning applications and advises on the inclusion of travel plan initiatives in planning conditions.

3.9.4 Quality of travel plans

We were interested in the proportion of travel plans in each case study area that were felt by the interviewees to be 'fully-fledged', including some degree of parking management, since these are the travel plans that are likely to deliver the greatest reduction in car use. Table 3.9 shows the breakdown of employers and staff covered by fully-fledged travel plans, those with more limited travel work not including parking management, and those just starting a travel plan. The figures are approximate, and discussion of this point led several local authorities to express concern that no clear definition exists of what constitutes an effective travel plan.

Table 3.9: Breakdown of organisations involved based on their degree of involvement in travel planning work (summer 2003)

Location		Considering or starting plan	Some travel work (but not parking management)	Fully fledged travel plan including parking management
Birmingham~	Employers	10%	60%	30%
Bristol*	Employers	30%	30%	39%
	Staff	7%	48%	46%
Buckinghamshire	Employers	18%	42%	39%
	Staff	38%	6%	55%
Cambridgeshire	Employers	59%	12%	29%
	Staff	36%	1%	63%
Merseyside	Staff	7%	38% - some work but mainly awareness raising or only a few initiatives 12%	42%
Nottingham	Employers	29%#	--	71%
	Staff	4%		96%
City of York	Employers	30%	13% some work; 43% full travel plan without parking management	13%
	Staff	46%	1% some travel work; 19% full travel plan without parking management	34%

~ Figures for Birmingham based on the council's frequency of contact with organisations
* Figures for Bristol are based on the length of time companies have been developing travel plans
# Figures for Nottingham assume 35 engaged organisations. There are another 265 CPC members.

At the time of our interviews, both Cambridgeshire and Nottingham were planning to develop the Department for Transport travel planning evaluation tool, in order to provide themselves with some way of assessing travel plan quality. In the case of Nottingham, this was linked to their need to assess whether to award companies rebates on the workplace parking levy. In Cambridgeshire, the aim was to develop an accreditation scheme for travel plans which could assist the planning division with their work.

Table 3.9 demonstrates that local authorities have focused on working with larger organisations first. They also appear to have been relatively successful. By summer 2003, between 34% and 96% of staff that have been affected by travel plan work were considered to be in organisations with fully fledged travel plans including parking management. After this, they appeared to fall into two groups. In Buckinghamshire, Cambridgeshire, York and, to some extent, Merseyside, about a third to half of all staff covered by travel plans were working for organisations which were just starting out. In Bristol, Nottingham (and possibly Birmingham), rather few staff were working for organisations which were at this early stage.

3.9.5 Types of organisation engaged in travel planning

Local authorities were also asked to give the breakdown of the different kinds organisations that they are working with. The results are shown in table 3.10.

Table 3.10 demonstrates that, proportionally, engagement is generally higher with public sector organisations, although numerically, local authorities are typically dealing with larger numbers of private companies. The majority of local authorities themselves have travel plans, and a significant fraction of both the health and education sectors have plans (typically between 29 and 80%). Engagement with larger organisations is relatively successful (possibly in the order of 20 to 40% of organisations with more than 300 staff), typically representing engagement with 10-30 companies per se. Most local authorities are also working with small and medium enterprises, although usually only a tiny fraction of the total number. It is notable that Birmingham is working with considerably more than any of the other local authorities, presumably because of its distinctive approach. As mentioned previously, several local authorities have chosen to focus on business parks as key target areas. It should be noted that several interviewees highlighted the problem of whether a travel plan should be defined by organisation or by work site – which explains, for example, why the figures in the local authority column are significantly different.

As discussed earlier, comparisons with national data (as given in section 3.3) are problematic, as the data are in different formats. However, we tentatively suggest that our case study areas are doing at least as well, if not better, in terms of their level of engagement with organisations in their area.

Table 3.10 Breakdown of organisations involved in travel planning by sector (summer 2003)

Location	LA	Ed.	NHS	GP	Public	<300	>300	Other
Birmingham	1 (100%)	12 (80%)	12 (60%)	4	16	65	33	2
Bristol	33 sites	2	3	n/a	12	13	22	
Buckinghamshire	2 (40%~)	3	3	1	2	10	9	2
Cambridgeshire*	5 (100% or 83%)	5 (2%*)	6 (29% or 14%)	2 (3%)	8 (2%)	4 (<0.1%)	11 (31% or 20%)	3
Merseyside	6 (100%)	11	12	n/a	n/a	36		n/a
Nottingham	1 (100%)	4	2	n/a	n/a	n/a	25~	n/a
City of York	1 (100%)	3-6 (38-60%)	6 (66%)	0	7	5	8 (36%)	n/a

Notes:
LA = Local authority
Ed = Further / higher education
NHS = Health (excluding GP surgeries)
GP = GP surgeries
Public = Other public sector or voluntary organisation
<300 = Private sector organisation with <300 staff
>300 = Private sector organisation with >300 staff
Where a percentage is given in brackets after the total, this refers to total proportion of organisations of that type which the local authority has engaged with. For Cambridgeshire, figures are given for both the proportion of organisations in the two districts where most of the work has taken place, and for the county as a whole.
* for Cambridgeshire, percentage figures were derived from comparisons with the number of workplace business units. This may have led to some data oddities – in particular, the figure for engagement with higher education establishments may be misleadingly low, as the university travel plan probably covers a number of 'workplace business units'.
~ These figures are inferred from the case studies, rather than being reported directly by interviewees.

3.9.6 Summary of case study data about the scale of travel plan work

Typically, local authorities representing urban areas had managed to engage with organisations employing about 30% of staff, whilst the larger, county authorities had engaged with organisations employing 8-12% of staff. Despite its size, Birmingham had managed to engage with organisations representing a relatively high proportion of staff, given its distinctive approach. Averaged overall, about 16% of the workforce in our case study areas was working for organisations with travel plans by summer 2003. Many authorities had begun by developing their own travel plan and/or developing a network for employers, and are now developing more sophisticated strategies, including use of the planning system, and encouraging sector specific or area based groups of employers to work together, partly as a way of reaching small and medium sized enterprises. In terms of travel plan quality, all case study areas felt that at least a third of staff covered by travel plans were in organisations with relatively fully-fledged plans. However, there was then a divide, where some authorities were working with a considerable number of organisations that were just starting out,

whilst other authorities were building on earlier work with organisations that already have travel plans. Nottingham was distinctive in its explicit prioritisation of intensification at organisations with existing travel plans (and relative disinterest in engaging new organisations). In terms of the types of organisations involved, the case study data reflect national figures suggesting that, proportionally, engagement with the public sector is greater, whilst numerically, authorities are working with larger numbers of private companies. Information from two areas suggested that the authorities had managed to engage with approximately 20-40% of companies involving more than 300 people. This compares with national data suggesting that local authorities aim to engage with 11% of companies employing more than 100 staff by 2006.

3.10 Comparison of findings about the effects of workplace travel plans on car use

3.10.1 Effects of travel planning amongst engaged organisations

Many local authorities have limited monitoring data about the effect of their travel plan work. This may be due to resource limitations, reliance on individual companies to administer surveys (who may be reluctant to do so) and concerns about the reliability of data received from companies. Local authorities may also be reluctant to take the credit for what individual organisations achieve (since the organisation has often put in its own resources), or to compare organisations, given their differing nature. In particular, Nottingham was concerned with reliability of results (given that organisations might have an incentive to report a particular result in relation to the workplace parking levy); York and Cambridgeshire were reluctant to attribute the achievements of individual organisations solely to the travel plan work of the local authority; and most of the case study areas highlighted that different organisations faced different opportunities and constraints.

In York, Cambridgeshire and Birmingham, survey work is done for the organisations who participate in travel planning work, with the analysis taking place at the local authority. In Bristol, organisations undertake their own survey work, but the results are assessed as part of the council's awards scheme. In Nottingham and Merseyside, the local authority relies on results submitted by individual organisations, based on survey work that they have undertaken themselves. Buckinghamshire was still developing its monitoring programme, but had detailed results for its own staff.

In looking at the effect of travel plan work, we were interested both in results or estimates of the overall effect across all organisations, and data from individual organisations. All case study locations were able to provide data for individual organisations, and these are given in table 3.11. The data for Birmingham is for organisations with at least a 10% response rate to a survey carried out by the local authority. Merseyside, Buckinghamshire and York only had data about one travel plan organisation. Nottingham and Bristol provided results for those organisations where information was readily available, which were probably those that were performing well. Cambridgeshire provided data for a selection of organisations which had reasonable response rates for their general survey and for Addenbrooke's, the flagship organisation in their area.

Table 3.11: Results from individual organisations about commuter journeys

Organisation	Staff	Car driver or SOV		Car share or 'multi-mode'		Cars per 100 staff		% point Change	% change
		Before	After	Before	After	Before	After		
Birmingham									
Priory Hospital 1998-2001	300	79	59	10	5	84	61.5	**-22.5**	**-26.8**
Northfield Medical Centre 1999-2001	50	86	59	2	21	87	69.5	**-17.5**	**-20.1**
WS Atkins 2001-2003	767*	53	30	--	--	53	30	**-23.0**	**-43.3**
City council economic development department 1999-2003	387*	50	29	22	32	61	45	**-16.0**	**-26.2**
City council transportation department 1997-2001	578*	48	35	20	34	58	52	**-6.0**	**-10.3**
Dental hospital 1998-2001	400	34	28	15	23	41.5	39.5	**-2.0**	**-4.8**
Royal Orthopaedic hospital 2000-2002	500	62	74	17	8	70.5	78	**+7.5**	**+10.6**
Compass Group 1999-2003	520*	61	69	9	16	65.5	77	**+11.5**	**+17.6**
HM Prison 1999-2001	650	64	90	19	0	73.5	90	**+16.5**	**+22.4**
Bristol									
Orange	700	60	27	--	--	60	27	**-33.0**	**-55.0**
Norwich Union	1300	37	21	--	--	37	21	**-16.0**	**-43.2**
University of Bristol	5000	36	32	--	--	36	32	**-4.0**	**-11.1**
Arup	109	41	38	--	--	41	38	**-3.0**	**-7.3**
Buckinghamshire									
Buckinghamshire County Council 1998-2003	2200	71.3	49.4	--	7	71.3	52.9	**-18.4**	**-25.8**
Cambridgeshire									
Addenbrookes NHS Trust 1993-2002~	4977	<74.0	42.0	--	7	<74.0	<49	**>-25.0**	**>-33.8**
Government Office for East of England 2001-2002	290	69.5	42.5	3.4	11.9	71.2	47.7	**-23.5**	**-33.0**
Cambridge City Council 2000-2002	800	34.7	30.8	22.2	6.1	45.8	33.9	**-11.9**	**-26.0**
Chamber of Commerce 2001-2002	18	56.6	49.5	18.9	10.8	66.1	54.7	**-11.4**	**-17.2**
Cambridge University 2000-2002	6250*	35.7	27	10	8.6	40.7	31.3	**-9.4**	**-23.1**
Cambridgeshire County Council (county hall) 1999-2002	1100	51.0	44.0	15.0	15.3	58.5	51.7	**-6.9**	**-11.7**
Generics 2000-2002	220	65.7	67.5	14.3	7.4	72.9	71.2	**-1.7**	**-2.3**
Merseyside									
St Helen's College 1999-2002	800	77	63	13	17	83.5	71.5	**-12.0**	**-14.4**
Nottingham									
Nottingham City Hospital NHS Trust 1997-2000	3500	72	55	2	11	73	60.5	**-12.5**	**-17.1**
Government Office for the East Midlands 1997-1999#	245	<45	<38	--	--	<45	<38	**-7.0**	**-15.6**
Boots	7500	--	--	--	--	65	62	**-3.0**	**-4.6**
City of York									
Local Government Ombudsman 1998 -2002	85	73	68	5	6	75.5	71	**-4.5**	**-6.0**

* = staff numbers have changed between the first and second surveys – where this has occurred, an average of the staff totals has been included here.

All Birmingham surveys have a 'multi-mode' category. This is given in the 'Car share or other column'. A conservative estimate would be that the majority of these people travel by car. An optimistic estimate would be that the majority of these people do not travel by car. Therefore, we have taken a mid-way estimate – assuming that at any one time, perhaps half of these people are likely to be driving to work.
~ GOEM (Nottingham) only has figures for all car users.
# In the first survey at Addenbrooke's, car users were not separated. To ensure that the results are not overstated, we have used the figures for overall car users for the latest survey results too. In reality, if car sharing has increased as a result of the travel plan work, greater change will have been achieved than is recorded here.

Only one authority – Cambridgeshire – has aimed to collect results about the overall effect of its travel plan work, although there have been some problems with interpreting the results of its annual survey. Meanwhile, the Nottingham interviewee gave his opinion about the overall effect of work, Merseyside had an opinion about 'common' modal shifts achieved, and Birmingham has a target that they expect all affiliated organisations to aim for. These estimates of overall effect are reported in table 3.12. The results in table 3.11 were also used to derive average results for each case study area, which are given in table 3.12. None of these averages should be taken at face value, as every local authority involved would want to put caveats on them. However, given the lack of more robust information, they provide a starting point for understanding what travel planning can achieve.

Table 3.12: Averaged results from individual organisations
(note caveats given in text)

	Total staff	**Change in number of cars per 100 staff***	**% change***	**% change, weighted by staff numbers**
Overall average	33,169	-9.8	-15.8	-17.8
Birmingham average	4152	-5.7	-8.7	-7.5
Bristol average	7109	-14.0	-32.2	-21.3
Cambridgeshire average	12,555	-12.9	-21.0	-27.3
Nottingham average	11,245	-7.5	-12.3	-8.7
Buckinghamshire	2200	-18.4	-25.8	--
Merseyside	800	-12.0	-14.4	--
York	85	-4.5	-6.0	--
Nottingham opinion	*10-15% reduction in SOV trips from 'good' travel plan*			
Merseyside opinion	*10% reduction in SOV trips over 2-3 years common.*			
Birmingham target	*All affiliated organisations to reduce car use by 10%*			

* The figures in these columns have been calculated by averaging the before and after 'cars per 100 staff' for the companies involved, and then calculating the changes in the averages. (Simply averaging the percentage changes produces similar results – for example, for the overall average, the average change in the number of cars per 100 staff would be -9.9, and the percentage change would be -16.6%.)

Averaged across all 26 organisations (representing over 33,000 staff), the weighted average reduction in traffic was 17.8%. This is remarkably close to the 18% reduction

recorded in Cairns et al. (2002). Although seven of the organisations were the same in both studies, this should not have affected the overall results. This is because only the three from Nottingham are reporting the same results as in Cairns et al. (2002). The two from Bristol are reported here as achieving less than in that study (presumably due to use of different survey periods), and Buckinghamshire County Council and Addenbrooke's are reported as achieving more than in that study, as they have undertaken surveys after 2002. Moreover, it is notable that these results are drawn from a range of different types of local authority area, including the conurbations of Merseyside and Birmingham, the historic towns of Nottingham and York, and the mix of urban and rural situations comprising Buckinghamshire and Cambridgeshire. (These areas also vary considerably in relative wealth and levels of car ownership).

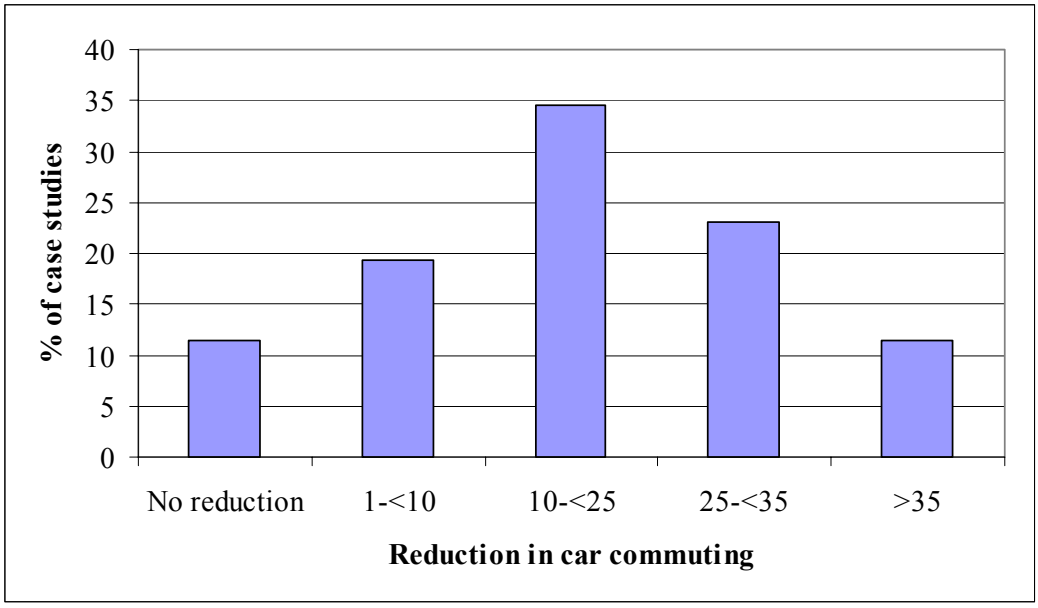
For the four case study areas with data from several organisations, the area-wide average varied from -7.5% to -27.3%. These figures should not be taken as implying greater success in some case study areas than others, since they are based on few data points. However, it is interesting that Birmingham, with its distinctive broad-brush approach, had the lowest area-wide average. This is compensated for by the fact that Birmingham city council is working with a greater number of employees than any other case study area. Looking at the data for the individual organisations we were given, Bristol and Cambridgeshire had high area-wide averages of 20–30%. In Bristol, the high average may be because the organisations that have been quoted are considered to be success stories. However, it is notable that Bristol provided information about four organisations in the process of developing travel plans with equally ambitious targets (North Bristol NHS Trust: >10,900 staff, 10% cut in SOV trips; UBHT: 5000 staff, 11.4% cut in SOV trips; IKEA: 600 staff, 25% cut in SOV trips; BBC: 900 staff, 35% cut in SOV trips). In Cambridgeshire, the high level of achievement may be because organisations become part of the Travel for Work Partnership on a voluntary basis, and would therefore be expected to start with a positive motivation to make a difference to travel habits. (Results were not available for Cambridgeshire organisations that became involved via the planning system).

Three local authorities - Buckinghamshire, Merseyside and York - could only provide information about one organisation. This is because they have started major work on travel planning relatively recently. Although Buckinghamshire started travel plan work in 1998, it took two years and 13 committee reports before it was possible to implement a plan for the council itself, and work with other organisations only started subsequently. Substantial work in Merseyside only began with the appointment of two bursary post holders for workplace travel plans in 2001, whilst a dedicated officer for travel plan work was only appointed in York in 2003. Given the recent nature of their work, it is encouraging that they are already able to report results from organisations which have achieved a measurable reduction in traffic.

As well as the average results, it is also interesting to look at the distribution of individual travel plan results. It is immediately apparent that the achievements of employers differ widely. In some cases, a travel plan appears to have had no effect as car driving has increased (three examples from Birmingham). Others have achieved a modest reduction in car driving (three organisations report reductions of less than 5%) or more substantial reductions. Specifically, there were 18 organisations which had reduced car driving by more than 10%, including 9 organisations which reduced car

driving by more than a quarter. The distribution of results for the 26 organisations is illustrated in Figure 3.3.

Figure 3.3: Distribution of individual travel plan results



This distribution demonstrates clearly that the overall average result (17.8%) is not giving a biased reflection of what travel plans can achieve, as individual plans are relatively uniformly distributed around that point. Clearly, there are some high performers (achieving traffic reductions of over 35%), and some disappointments (where travel planning appears to have made no difference), however the majority reduce traffic by between 1% and 35% with a typical plan achieving reductions in the range 10-25%. One caveat, however, is that these are all, almost certainly, relatively well developed plans and would not include the typical experience from organisations which are only just beginning their work.

Finally, as highlighted in the introduction, it should be noted that travel plan work is not always aimed only at the commuter journey. Many organisations also aim to affect business mileage. For example, in Bristol, the Environment Agency (Westbury site) aims to reduce business mileage by 10%, whilst Faber Maunsell aims to reduce business mileage by 5%. Bristol Zoo is reporting reductions in car travel from its travel plan, which aims to affect over 700,000 visitors per annum.

In summary, then, the results support the conclusion of the literature review outlined in section 3.2 and summarised in table 3.2 - that fully fledged travel plans typically reduce car driving by an average of 15-20% at individual sites. The results lend weight to the argument that these are not 'freak' outcomes achieved at a few successful companies, but that this scale of car use reduction is occurring at many locations where travel plans have been introduced.

3.10.2 Effects of travel planning on overall levels of commuter traffic

The previous section demonstrates the considerable success the case study areas have had in influencing car use amongst the organisations with which they are working. But how much impact has this had on overall levels of commuter traffic?

To estimate this, we used two approaches, set out in table 3.13. These are based on information from the case study interviewees about (a) the overall proportion of their workforces that were engaged in travel planning, and (b) what proportion of travel plans are fully-fledged as opposed to being at a more basic stage.

The first approach (model A) assumed that the average effectiveness of travel plans across all organisations engaged so far was to reduce car use by 5% overall. This provides a lower bound for estimates of overall impact. This is extremely conservative, since we know that much higher reductions in car use are reported from surveys of individual firms in the case study areas, and it is lower, even, than the average result achieved by surveyed employers in Birmingham (-7.5%), with its relatively broad brush approach.

The second approach (model B) assumed employees in organisations with fully fledged travel plans (including parking management) reduced their car use by 18%, whilst those in organisations actively undertaking travel work achieved reductions of 10%. Organisations at the early stages of travel planning work are assumed to have made no difference to the travel of their employees. Again, this is still a relatively conservative scenario, since the literature suggests that even basic travel plans can be expected to reduce car use by 6-10%, whilst fully fledged travel plans with parking management will typically achieve reductions in the order of 20-25%. We use this model to avoid overstating the effects of current work. We note that it clearly underestimates the future potential of travel planning work since, with the exception of Nottingham, very few areas consider that the majority of travel plans in their area are fully developed.

Overall, so far, travel planning may have reduced overall levels of car commuting by 0.4 – 1.5% using our conservative assumptions (model A), or by 0.7 – 3.3% under model B.

Interestingly, the models imply both broad-brush and targeted approaches can work well. In their target areas, according to our calculations, both Birmingham with its extensive broad-brush approach and Cambridgeshire, with its more narrowly focused, but in-depth approach, have achieved about the same (3.3% reduction in model B).

Table 3.13 Effect of travel planning on overall levels of commuter traffic

	Birming-ham	Bristol	Bucking-hamshire	Cambridge-shire A~	Merseyside	Nottingham	York
Proportion of workforce affected by travel plans	29%	13%	11%	29%	8%	28%	29%
Model A (all travel plans reduce car use by 5%)							
Reduction in commuter traffic +	1.5%	0.7%	0.6%	1.5%	0.4%	1.4%	1.5%
Model B							
Proportion of fully-fledged travel plans (-18%)	30%*	46%	55%	63%	42%	96%	34%
Proportion actively undertaking travel work (-10%)	60%*	48%	6%	1%	12%	0%	20%
Proportion with travel work just starting (0%)	10%*	6%	39%	36%	46%	4%	46%
Reduction in commuter traffic +	3.3%	1.7%	1.2%	3.3%	0.7%	4.8%	2.4%

~ Cambridgeshire A: calculations are based on the districts of Cambridge City and South Cambridgeshire, where most work has taken place.
+ In model A, reduction in commuter traffic = 0.05 x proportion of workforce affected by travel plans. In model B, reduction in commuter traffic = [proportion of 'good' travel plans x 0.18 + proportion of 'average' travel plans x 0.10] x proportion of workforce affected by travel plans.
* Reflects frequency of contact between employers and Birmingham city council, rather than quality of travel plan.

3.11 Other effects of workplace travel planning

As well as effects on car use, various other benefits were reported from the travel plan work. These included:

- **Increases in bus use and associated ticket revenue.**

- **Increases in walking and cycling, with associated health gains.**

- **Improved social inclusion.**

Travel planning was closely associated with the WorkWise scheme in Birmingham, the Joblink scheme in Merseyside, a WorkWise project in Meadows in Nottingham, and the regeneration of the Avonmouth area in Bristol. All these initiatives aim to increase access to work (and travel plans have provided one way of entering into communications with employers).

- **Better conditions for employees.**

Flexible work patterns and occasional work from home have made childcare arrangements easier. Employees are reported to have experienced less commuting stress. Bicycle user groups and car sharing schemes were felt to have improved social interaction.

- **Improved staff recruitment and retention.**

Improvements in travel options, combined with the benefits reported in the previous bullet are reported to make an employer more attractive to new staff and to improve employee retention. For example, Computer Associates, a business software company based in Berkshire (whose travel plan was reviewed by Cairns et al 2002), estimate that staff turnover has reduced from 15% p.a. to 7.5% p.a. as a result of their travel plan (according to PR material produced by the car share software company JamBusters, who have worked with Computer Associates).

- **Good PR for businesses.**

For example, Norwich Union in York received positive PR from funding a bus service.

- **The opportunity to contribute to environmental management standards such as ISO 14001.**

Corus Rail and Portakabin in York had used their travel plan work for this, as had St Helens College in Merseyside.

- **Financial savings.**

For example, Buckinghamshire County Council estimated that it had saved £60,000 - £75,000 on annual parking costs.

- **Better estate management**.

For example, Addenbrooke's Hospital in Cambridgeshire was able to develop its site more intensively as less space was needed for car parking.

- **Less noise, congestion and pollution, and better conditions for freight distribution, associated with reductions in car use.**

- **Better security and less fear of crime from better car parking management.**

There are also a number of reported benefits that arise from synergy between travel plans and other transport initiatives. These are discussed in the next section.

3.12 Synergies between workplace travel planning and other policies

The case study local authorities identifed various examples of synergy between workplace travel planning and other policies.

First, car restraint measures were seen as an important lever to persuade employers to draw up travel plans. In Buckinghamshire, restrictions on town centre parking coupled with car parking charges for county council employees had increased the effectiveness of the council's own travel plan. In Birmingham, high long-stay parking charges have encouraged employers to join Company TravelWise. In York, the lack of town centre parking has encouraged people to leave the car at home.
Interviewees felt that further traffic restraint would increase the effectiveness of travel plans. The workplace parking levy was mentioned in Nottingham as a future key policy; road user charging in Bristol was highlighted as a useful potential measure that would stimulate travel planning; and in Cambridgeshire, interviewees felt that both road user charging and the workplace parking levy would be helpful.

Second, measures to improve alternative modes had made travel plans more effective. Such measures included area-wide car sharing schemes; showcase bus routes; cycle routes; improvements in public transport, cycling and walking information; and improvements in pedestrian infrastructure. For example, employees at Nestlé in York will benefit from a planned new cycle route, whilst pedestrian improvements around York station have made people feel that it is safer to take the train and walk to the city centre. Bus showcase routes were mentioned as helpful in Birmingham, Bristol and Merseyside. In Merseyside, walking promotion measures such as calorie count walk maps and 'Walkabout'guides were seen as usefully contributing to travel plan work.

Travel plans have also benefited from wider travel awareness campaigns. Notably, the Big Wheel campaign in Nottingham and the travel awareness work in York were both mentioned as making it easier to work with employers (and travel plans are seen as one strand of work that takes place under their 'umbrella').

Conversely, travel plans have acted as an umbrella for other soft initiatives. For example, a citywide commuter car sharing scheme has been established in Cambridgeshire, whilst a business park car sharing scheme has been established for Temple Quay in Bristol. In Birmingham, the national 'Share-a-journey' site is marketed to employers as part of the 'Company Travelwise' package. Personalised travel planning is also being undertaken for commuter journeys in Cambridgeshire, with two of the lead organisations that have been involved in travel plan work. In Buckinghamshire, the authority is investigating and developing tele-centres (for tele-

working and video-conferencing) which they can then make available to other employers.

Travel plans have also acted as a conduit to promote other schemes. Examples include the health promotion campaigns in Merseyside, and the Joblink and Workwise bus services in Merseyside and Birmingham respectively. For example, the Joblink services now serve Jaguar cars and Liverpool John Lennon airport. In many cases, the travel plan work has provided opportunities for information dissemination to employees about new or improved bus services or cycle routes.

It was felt that travel plans had funded or initiated schemes with wider benefit. For example, Somerfield/Wincanton at Lea Green, St Helens, are intending to put a bus turnaround on their site for buses which serve the Parr Strategic Investment Area. In Cambridgeshire, buses funded for Alconbury airfield operate as public services; an increase in frequency of the 113 public service from Haver Hill to Addenbrooke's hospital has benefitted all users of the route; and private shuttle bus services from Cambridge train station to the Genome Campus at Hinxton Hall operate as public services in the opposite direction.

Synergy between promoting workplace travel plans and school travel plans has been variable, however there are clearly opportunities for promoting both at once. For example, in Merseyside, these initiatives are undertaken in parallel, and there is a degree of a 'informal neighbourhood targeting' to try and achieve synergistic benefits by working with both schools and workplaces in the same area.

Finally, interviewees felt that as the concept of travel planning has become more familiar, it has also become more acceptable. For example, in Buckinghamshire, the interviewee felt that far fewer people were opposed the concept of travel planning than when the work started. In Bristol, attendance at Green Commuter Club meetings is steadily increasing.

3.13 Relationship between spending and impact for workplace travel planning

In setting out to evaluate the relationship between costs, scale of travel plan work and effectiveness, we used a similar model to that used to assess the impact of travel planning on overall levels of commuter traffic. The calculation is set out in table 3.14.

As discussed in section 3.10.2, the first approach (model A) assumes that the average effectiveness of travel plans is to reduce car use by 5% overall. The second approach (model B) assumes employees in organisations with fully fledged travel plans have reduced their car use by 18%, whilst those in organisations actively undertaking travel work achieve reductions of 10%. Organisations at the early stages of travel planning work are assumed to have made no difference to the travel of their employees. As

highlighted previously, model A is extremely conservative, whilst model B is less so, although it may still be an underestimate of what travel planning has achieved[1].

[1] Neither model should be taken as an indication of what travel planning can achieve, since much work is still at a relatively early stage, as discussed earlier in section 3.10.

Table 3.14 Calculation of cost-impact ratios for workplace travel plans

	Birming-ham	Bristol	Bucking-hamshire	Cambridge A~	Merseyside	Nottingham	York
length of time scheme has been running intensively (years)	5	5	3	6	2	8	1
estimated total expenditure, with capital costs annualised # (£)	310,000	350,000	243,700	247,500	196,000	900,000	52,000
staff affected by travel plan in current year	136,000	29,960	21,700	34,000	55,870	52,000	26,187
% driving (2001 census)	56	51	72	52	55	45	48
number of drivers affected by travel plans +	76160	15160	15624	17748	30617	23244	12622
Model A							
driver reduction (all travel plans -5%) ++	3808	758	781	887	1531	1162	631
kilometres saved in current year ##	27052032	5384747	5549645	6304090	10875073	8256269	4483382
total kilometres saved **	108208128	21538987	16648934	28368403	27187683	45409478	8966764
cost per kilometre saved (pence)	0.3	1.6	1.5	0.9	0.7	2.0	0.6
Model B							
good travel plans (-18%)	30%*	46%	55%	63%	42%	96%	34%
average travel plans (-10%)	60%*	48%	6%	1%	12%	0%	20%
travel work just starting (0%)	10%*	7%	38%	36%	45%	4%	46%
driver reduction ++	8682	1983	1641	2030	2682	4017	1025
kilometres saved in current year ##	61678633	14086498	11654254	14423757	19053128	28533665	7281012
total kilometres saved **	246714532	56345990	34962762	64906907	47632820	156935157	14562025
cost per kilometre saved (pence)	0.1	0.6	0.7	0.4	0.4	0.6	0.4

~ Cambridgeshire A: calculations are based on the districts of Cambridge City and South Cambridgeshire, where most work has taken place.

Total expenditure is estimated, assuming linear growth from expenditure in first intensive year to expenditure in current year, with capital costs annualised at 3.5%. The expenditure data used as the basis for this calculation are given in table 3.2.

+ 'Number of drivers affected by travel plans' is calculated by applying the percentage of people driving according to the 2001 census figures to the total number of staff affected by travel plans.

++ In Model A, driver reduction = 0.05 x number of drivers affected by travel plans. In model B, driver reduction = [proportion of 'good' travel plans x 0.18 + proportion of 'average' travel plans x 0.10] x number of drivers affected by travel plans.

'kilometres saved in current year' is derived by assuming that each driver was previously driving for 240 working days and making a daily round trip of 29.6kms, (the average distance of a commuter journey by car according to the 2001 'Travel to work in GB' personal travel factsheet produced by the DfT and ONS).

** 'total kilometres saved' assumes linear behaviour change in car kilometres saved, from zero in year 1 to current year figure, plus some behaviour change in future years, declining by 40% per year after current year if no further money is spent.

* Reflects frequency of contact between employers and Birmingham city council, rather than quality of travel plan.

For both models, cost was taken as the total expenditure over the period the programme had been running. This was estimated from case study data on expenditure in the first intensive year and the current year of each workplace travel programme, with the assumption that expenditure grew linearly between the two. All expenditure was treated as revenue, except for Buckinghamshire where there were some capital costs. These were annualised at 3.5%.

We also assumed that impact increased linearly, from zero in the first intensive year to current levels. Even if no more money were to be spent, we assumed there would be some impact in subsequent years, but this would decline at the rate of 40% a year.

Cost-impact ratios range from 0.3 pence to 2 pence per kilometre saved in model A, or 0.1 pence to 0.7 pence in model B. Differences in cost per kilometre probably relate to a range of factors, including whether the area is easy or difficult territory for travel planning; congestion levels (and hence willingness of employers to become involved); the proportion of the workforce based in larger, more-easily targeted organisations; and how far advanced travel planning work is, with costs appearing higher in both early and later stages.

We were also interested in how much the case study authorities might need to spend in order to influence the entire workforce. Here, we made the assumption that costs per head would be about £2, as suggested in section 3.8.4. No allowance was made either for the greater difficulties in engaging more reluctant employers over time, nor for reduced difficulties due to snowball effects among residents' and employers' networks. The results are shown in table 3.15. They show that in every case, greater funding is likely to be necessary to roll out travel planning programmes to sections of the workforce who are not presently targeted. The budget in Nottingham would have to at least double; budgets in York, Bristol, Buckinghamshire and Cambridge City / South Cambridgeshire would have to increase four times; and budgets in Birmingham, Merseyside and the county of Cambridgeshire would have to increase by a factor of ten or more.

Table 3.15: Budget needed to work with entire workforce in case study area, compared to current budget

	Total workforce in area	Annual budget required to work with whole workforce * (£)	Ratio of required budget to current budget
Birmingham	475000	950000	9.8
Bristol	231800	463600	3.6
Buckinghamshire	205902	411804	3.8
Cambridgeshire A ~	118396	236792	4.1
Cambridgeshire	275685	551370	9.6
Merseyside	700000	1400000	14.3
Nottingham	188000	376000	1.9
York	90000	180000	3.5

* 'Annual budget required to work with whole workforce' based on spending £2 per head.
~ Figures for Cambridgeshire A are based on the districts of Cambridge City and South Cambridgeshire, where most work has taken place.

3.14 Future impact of workplace travel plans

The future impact of workplace travel planning depends on:

- The number of workplaces where it is appropriate and effective, and the proportion of the workforce that these cover
- The effectiveness of travel plans at these organisations.

3.14.1 What proportion of the workforce might be covered by travel plans?

In trying to understand what proportion of the workforce might be covered by travel plans in future, we asked case study interviewees two sets of questions: first, how much impact did they think their work might have by 2006 and 2011 under currently planned resources; and second, what might be possible by these dates if resources were not a constraint.

Unsurprisingly, interviewees found it quite difficult to predict future levels of implementation, particularly for the more distant date. However, three local authorities, York, Buckinghamshire and Birmingham, were able to provide some information on this.

York: In York, the interviewee estimated that by 2006 there would be full travel plans for 30 organisations, with some 20 organisations at an earlier stage of development, and that travel plans would cover some 35% of the workforce, in line with the council's target. By 2011, the coverage would not be much higher – perhaps 40% of the workforce might be covered by a travel plan.This assessment was based on the assumption that resources would stay the same as at present, at least until 2006. If resources were not a constraint, the council could develop travel plan work more rapidly, and extend it to more small organisations, perhaps covering 40% of employees by 2006.

Buckinghamshire: In Buckinghamshire, the interviewee suggested that the council might be working with 75 organisations by 2006. New organisations might be smaller than those with which the county is already working, with an average of, say, 75 staff. Travel plans would cover about 25,000 people, or 12% of the workforce by 2006. By 2011, workplace travel plans might be in place for 150 organisations, covering 30,000 employees or 15% of the workforce. Again, this assessment was based on the assumption that resources would remain roughly the same as at present, with 1.5 fte staff in the council promoting workplace travel planning.

Birmingham: In Birmingham, the interviewee estimated that about 300 companies, covering 180,000 – 200,000 employees, or 40% of the workforce, might be engaged in Company TravelWise by 2006. By 2011, the scheme might cover 500 companies and 220,000 employees, or 46% of the workforce. This is in line with the targets in the West Midlands Local Transport Plan, for 40% of the workforce to be affiliated to Company TravelWise by 2006 and 50% by 2011. It was based on the assumption that the number of staff promoting travel planning might increase to about 4 – 6 by 2006, and 6 – 8 by 2011.

The growth rates predicted by interviewees in all three case studies are slower than growth rates achieved in those areas to date. This seems to be because interviewees felt that they were already working with most of the larger companies, and that extending travel planning to smaller organisations would pose greater challenges and require more intensive work. (However, it may also be that natural conservatism crept in, with interviewees finding it difficult to envisage working with many more organisations than at present.) If this is right, it suggests that there may be an upper limit to the proportion of the workforce that can be readily targeted, and that this upper limit lies somewhere between 15% (the Buckinghamshire estimate) and 40 – 50% (the estimates in York and Birmingham), perhaps depending on the type of area and the nature of the workforce.

3.14.2 Future effectiveness of travel plans

In five of the case study interviews, interviewees highlighted the potential to increase the effectiveness of travel plans over time.

From the York, Buckinghamshire and Birmingham estimates discussed in section 3.14.2, it seems that some local authorities will reach an upper limit of companies that they consider are worth targeting. After this, several mentioned that they will specifically turn their attention to improving the effectiveness of existing travel plans as the best way of achieving further results. The Nottingham interviewee corroborated this view, since Nottingham's whole approach is to focus on the 25 largest companies in the city with active travel plans (who are responsible for about 80% of all the car parking spaces). Nottingham's aim is to increase the effectiveness of the initiatives at these organisations, rather than spread travel planning to more companies, and there is clearly felt to be the potential to increase the effectiveness of the travel plans at these locations.

The York interviewee suggested that the proportion of companies with parking management as an element in their travel plan was likely to increase over time. This would result in an increase in average travel plan effectiveness.

The Birmingham interviewee cautioned that repeat monitoring at individual companies could show car driver mode share going up as well as down. However, where the trend is in the wrong direction he aims to understand the reasons for this and works with the company to tackle them as far as possible.

3.14.3 Future resources for travel planning

Local authorities were asked about their 'fantasy' budgets for travel plan work: that is, what level of staff and resources they would ideally like by 2006 and 2011, and how much they thought could be achieved with this level of support. The opinions of those authorities which felt able to comment are summarised in table 3.16. All local authorities felt that resource constraints were the key issue in how their work could or would be scaled up. Nonetheless, it is interesting that even the most 'extravagant' wish list would only result in costs of under £500,000 by 2011 – a relatively modest sum compared to other schemes being undertaken by the local authority. It may be that many travel planners have become rather used to operating on a shoe string, and find it difficult to think big about scaling up their work. Staffing levels were put at

between 2.5 and 14 staff (though the figures may not be strictly comparable for the different case studies since some include staff time in non-dedicated travel planning posts, for example in development control.)

Table 3.16: Ideal level of resources by 2006 and 2011, and what it might achieve

	Birming-ham	Bristol	Buckingham-shire	Cambridge-shire~	York
2006					
Number of staff promoting travel planning	4 – 6	7		11	
Budget			£90,000	£350,000	
Number of companies with travel plans	300	120*	75		45
Number of staff covered by travel plans	180–200,000		25,000		
Proportion of workforce covered by travel plans	40%		12%		40%
2011					
Number of staff promoting travel planning	6-8	7		14	2.5
Budget				£455,000	£104,000#
Number of companies with travel plans	500	220*	150		
Number of staff covered by travel plans	220,000		30,000		
Proportion of workforce covered by travel plans	46%+		15%		40%

~ Figures are for both the Travel for Work partnership and the planning division of the local authority
* Based on interviewee's view that about 20 organisations per year may become involved in travel planning through planning obligations. Others are likely to become involved independently of planning obligations.
# Based on interviewee's view that approximately double the current budget would be needed to cover 40% of the workforce.
+ Based on interviewee's estimate. The West Midlands local authorities have recently set a target that 50% of employees should be covered by a travel plan by 2011.

3.15 Key issues for scaling up workplace travel planning

The case study interviewees identified similar issues as likely to influence the success of travel plans in future.

- **More demand management measures, including more support from central government for promoting more sustainable transport**

It was felt that more 'stick' measures would get more businesses involved in travel planning, as discussed in section 3.12. Specifically, in Nottingham, it was felt that the introduction of the workplace parking levy would lead to increased priority for commuting issues; Bristol felt that the proposals for road user charging, if implemented, would have a big effect; and Cambridgeshire felt that road user charging or some form of workplace parking levy would both encourage more companies to get involved.

Interviewees also felt their job would be easier if they were 'backed up' more by the government, with more visionary and supportive messages and policies about sustainable transport in general and travel plans in particular. It was felt that when councils were preparing to take politically tough decisions, such as the introduction of the parking levy in Nottingham, they needed more overt support. The government could also help by engaging with business organisations, developers and trade unions to encourage them to support travel plans.

- **Poor quality alternatives to driving**

Lack of the right 'hard' infrastructure, such as cycle parking and poor quality bus services, was identified as a constraint by three case study interviewees. The Bristol interviewee highlighted the difficulties caused by inadequate co-ordination of bus services, particularly when bus companies altered routes or fares, while the Merseyside interviewee felt that the existence of the PTE made travel planning work easier.

- **Need for more fiscal incentives**

Four interviewees suggested central government could encourage greater take-up and effectiveness of travel plans by reforming the tax system so that travel plan incentives were not taxed, and so a greater distinction was drawn between more and less polluting forms of transport. The Buckinghamshire interviewee said he would like to be able to say to companies: 'if you are doing x, y or z as part of your travel plan, you can get a 10% reduction on business rates.' Merseytravel pointed to their plans to introduce a grants scheme for businesses as likely to increase the number of companies engaged in travel planning.

- **Planning conditions and requirements for companies to have a travel plan**

While the role of the planning system was welcomed, one interviewee commented that revisions to PPG13 to make it 'sharper, with less room for interpretation' would be helpful. It was also suggested that legislation requiring all organisations to have a travel plan (similar to regulations on disability access and affordable housing) would be very helpful. Meanwhile, the York interviewee suggested a requirement for companies to increase the cost of workplace parking, or to buy pool cars, might be enforced through better use of planning obligations. It was also suggested that travel plan measures could come about through environmental management systems, if certification required them and companies refused to use other companies without certification.

- **Funding**

Increased staff resources would enable travel plan officers in local authorities to spend more time supporting individual organisations. For example, the Cambridgeshire interviewees suggested that increased staff resources would enable them to be far more proactive, to work with all the big organisations and business parks, and probably a number of other organisations, and to 'test the boundaries' in terms of what they expected of developers. In many of our case studies, constraints on funding, and the overemphasis on capital funding were highlighted as inhibiting the development of travel planning. The loss of travel plan bursary posts was felt to be unhelpful, both because it 'sent the wrong message' about the importance of travel plans, and because it had been one way of addressing shortages of revenue funding. The Cycle Projects Fund was welcomed as an effective way of motivating employers,

and it was suggested that a repeat cycle projects fund and a walking fund would be helpful.

- **Area wide approach**

Travel planning might become more commonplace in smaller organisations if it was part of a neighbourhood or area-wide approach. As discussed in section 3.9.2, such clustering is developing in Birmingham, Bristol, Buckinghamshire and Nottingham. In Merseyside, areas are being targeted for workplace and school travel plans at the same time.

3.16 Policy implications relating to workplace travel

- The potential to offer further tax incentives for workplace travel plans could be examined. Rebates on business rates may be one possible mechanism to explore.
- There is potential to strengthen the wording in PPG13 to help local councils enforce effective travel plans as part of new developments.
- National government could give greater explicit support for policies aimed at car restraint and traffic management, to help bolster local authorities who undertake such policies – which may, in turn, help to motivate organisations to become involved in travel planning.
- Nationally led education of developers, trade unions and public transport operators about travel planning could be useful.
- Dedicated cycling and walking funds could provide an incentive for companies to become involved in workplace travel planning.
- The government could consider whether to require all organisations to develop travel plans. One interviewee commented that although this might be initially resisted, it would become accepted, as with legislation on disability and affordable housing.
- Following loss of the travel plan bursaries, there is a risk that fewer local authorities will employ dedicated travel plan officers. Mechanisms for increasing the revenue funding allocated by local authorities to travel planning could be considered.
- There is a disparity between the resources allocated to workplace travel planning and those for school travel planning in some local authorities. There could be substantial traffic reduction benefits if resources for workplace travel planning were increased to match those for school travel.
- Local authorities could be encouraged to introduce standard monitoring systems for travel plans, to make it easier to assess the value of this work.
- There may be opportunities to strengthen the links between travel planning and environmental management standards such as ISO14001.
- As experience of using the planning process grows, local authorities would appreciate greater sharing of information.
- As travel planning develops, it may be appropriate for local authorities to develop area–based strategies, which can engage small and medium enterprises, and which dovetail with improvements to infrastructure and public transport which may be taking place for other reasons.

3.17 Acknowledgements

We would like to thank the following people for their help with the workplace travel plan case studies:

Individual	***Organisation***
Graham Amis	Cambridgeshire County Council
Rosemary Bryant	Buckinghamshire County Council
Sarah Collins	Cambridgeshire County Council
Paul Cook	Cambridgeshire County Council
Mike Cooper	Birmingham City Council
Helen Davies	Birmingham City Council
Sarah Dewar	Merseyside TravelWise
Stefan Dimic	Buckinghamshire County Council
Mike Ginger	Bristol City Council
Will Haywood	Cambridgeshire County Council
Wyn Hughes	Addenbrooke's NHS Trust, Cambridge
Daniel Johnson	City of York Council
Jeremy Prince	Nottingham City Council
Helene Vergereau	City of York Council
Mark Webb	Cambridgeshire Travel for Work Partnership
Joseph Whelan	Cambridgeshire County Council
Barbara Wilcox	Cambridgeshire County Council
Eileen Woods	Cambridgeshire County Council
Tim Carter	Cambridgeshire County Council

In addition to the main case study interviewees, we would like to thank:

Individual	***Organisation***
Lyndon Mendes	Surrey County Council
Margaret Longes	Department for Transport

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