

14. Conclusions

14.1 Overview

In recent years, there has been growing interest in a range of transport policy initiatives which are now widely described as 'soft' measures. Soft measures usually seek to give better information and opportunities which affect the free choices made by individuals, mostly by attractive, relatively uncontroversial, and relatively cheap improvements. They include:

- Workplace and school travel plans;
- Personalised travel planning, travel awareness campaigns, and public transport information and marketing;
- Car clubs and car sharing schemes;
- Teleworking, teleconferencing and home shopping.

Following this review, we can say that sufficient evidence now exists to have some confidence that soft factor interventions can have a significant effect on individual travel choices.

In this concluding chapter we bring together both the research conclusions from the literature and case studies, and also the policy issues, barriers and difficulties which the case study interviewees discussed with the study team.

The assessment focuses on two different policy scenarios for the next ten years. The '**high intensity**' scenario identifies the potential provided by a significant expansion of activity to a much more widespread implementation of present good practice, albeit to a realistic level which still recognises the constraints of money and other resources, and variation in the suitability and effectiveness of soft factors according to local circumstances. The '**low intensity**' scenario is broadly defined as a projection of the present (2003-4) levels of local and national activity on soft measures.

The main features of the high intensity scenario would be

- A reduction in peak period urban traffic of about 21% (off-peak 13%);
- A reduction of peak period non-urban traffic of about 14% (off-peak 7%);
- A nationwide reduction in all traffic of about 11%.

These figures represent a cautious estimate of the impacts of significantly scaling up work on soft factors from its current level. The scenario described is one where soft measures have benefited from a high intensity policy build-up over a period of about ten years. This would require commitment at local government level (though at a varying scale in accordance with local conditions) and by national government also.

It would necessarily involve more resources than are currently committed to this area, but at a level which we judge, based on the interviews carried out, to be within the range of what could feasibly be made available and used efficiently, should local and national government choose to do so. We have not estimated an upper limit of how

much could be achieved by seeking to go beyond these short and medium term constraints.

We emphasise that, even under our scenario of intense implementation, there will be particular types of location where certain soft factor policies would be less appropriate, and that it would be unrealistic to assume that all authorities could achieve the same effects as those particularly impressive individual achievements that have only occurred in a small minority of cases.. Therefore we assume more widespread, but not universal, application of soft factors, achieving results from soft factor interventions which are in line with *typical* current achievements from authorities that have prioritised such interventions.

With these rather cautious assumptions, our calculations suggest that soft factor interventions offer very acceptable value for money. Using current DfT practice for estimating the value of the effects on travel times of a reduction in the number of vehicles, each £1 spent on soft measures could produce benefits of about £10 on average, and considerably more in congested conditions. Inclusion of values for potentially positive effects on safety, health or the environment would further increase the value for money. This gives a good margin of robustness to changes in assumptions or methods of calculation.

The figures are subject to a number of caveats. They are based on a generally conservative interpretation of the evidence, analysed by 'hands-on' methods which do not depend on the assumptions, simplifications and mechanisms of traditional transport modelling. However, there is inevitably a degree of doubt as to their robustness. We would broadly recommend that the margins of statistical error assumed (upwards as well as downwards) should be similar to those applied to policy assessments from the Department's National Transport Model generally.

In addition, the review has also revealed the critical importance of the policy context, with specific issues that are so fundamental that they should always be emphasised at the same time as the optimistic picture described above:

First, these figures do not represent a forecast, they represent a potential. If implementation is at a lower level, inadequately funded, or inconsistent, the effects, unsurprisingly, will be substantially less. Calculations we have made about 'low-intensity' implementation, in which soft factors are not given increased policy priority compared with present practice, are estimated to be considerably less than those of the high intensity scenario, including a reduction in peak period urban traffic of about 5%, and a nationwide reduction in all traffic of 2%-3%. These smaller figures also assume that sufficient other supporting policies are used to prevent induced traffic from eroding the effects, notably at peak periods and in congested conditions. Without these supportive measures, the effects could be lower, temporary, and perhaps invisible. Effects at this scale could still be worth having from a cost-benefit point of view, because of the benefits brought to the individuals affected, but might not be seen as making a significant contribution to mainstream transport strategy.

Thus, the difference between the high and low intensity scenarios is not a statistical error band driven by uncertainty about economic trends. It derives from the different

assumptions about the policy priority and momentum that local and national government may, in future, choose to give to soft factor initiatives.

In either case, soft measures, which, in intent and style, are so different from road construction, do share one important feature with it: any substantial initial reduction in congestion has the potential to cause induced traffic, which erodes the benefits. To spell this out, those individuals choosing to reduce their car use may be simply replaced by other individuals who are attracted by the freer road conditions to increase their car use.

In 'Managing our Roads' (DfT 2003), the Government stressed the importance of 'locking-in' the benefits of congestion reduction policies by demand management measures to control induced traffic. This review has found that the same condition is vitally important for delivering the full potential of soft measures. Without this, soft measures can still succeed in changing *which* individuals are using cars, therefore potentially resulting in benefits for individuals, but may have much less effect on area wide traffic levels, congestion or environmental impacts. Broadly, those experienced in the implementation of soft factors locally support this logic of 'locking-in' usually expressing it in terms of soft measures being part of an integrated transport strategy, or needing to be supported by complementary measures. They frequently emphasise that achieving overall reductions in traffic depends on some or all of such supportive policies as re-allocation of road capacity and other measures to improve public transport service levels, parking control, traffic calming, pedestrianisation, cycle networks, congestion charging or other traffic restraint, other use of transport prices and fares, speed regulation, or stronger legal enforcement levels.

14.2 Summary results of research literature and case studies

14.2.1 Overall impacts

Seven separate published estimates of the overall effect of differently defined packages of such measures were examined (including the Halcrow study leading to the 5% figure given in Department for Transport guidance on the multi-modal studies). The results of these studies, about the potential traffic reduction from soft factors, range from a lowest figure of 4% of national traffic and a highest of 20% overall, and up to about 30% for some specific urban locations (although the latter figure also included the effect of additional supporting hard measures). These results can be interpreted in relation to our low and high intensity scenarios. They suggest that, at the lower intensity application, there is scope for soft measures to reduce traffic levels by about 4% or 5% at the national level, with a range around this according to local circumstances. Taking the studies as a whole, they suggest that, with higher intensity application (and emphasising the importance of supportive hard measures either by assumption or explicitly) the estimated potential effect of soft factor interventions on traffic levels would be a reduction of 10% to 15% as a national average, and 15% to 20% in favourable local conditions. (These figures represent only the central bands that emerge from the 7 studies – the full distribution was wider).

Our own high intensity estimate of 11% falls towards the lower end of the central band of the other studies, and our estimated 22% for urban peak periods is slightly

above the central band, but well within the range of results as a whole. Our low intensity estimate of 2%-3% is somewhat lower than the 5% figure given in the Department for Transport guidance to the multi-modal studies (derived from Halcrow, 2002), although the difference is probably within the range of uncertainty of both studies.

Thus, both our low intensity and high intensity estimates appear to be in line with informed professional opinion.

14.2.2 Impacts of soft measures considered separately

For the present study, the overviews mentioned above were augmented by examination of detailed international published literature on specific instruments of policy, and case studies based on twelve UK local authority areas, and also the experience of British Telecom. These case studies covered 24 different single or combined soft factor initiatives.

The main findings were as follows.

- Workplace travel plans typically reduce commuter car driving by between 10% and 30%, though the best ones achieve significantly more than that. Typical cost to the local authority is £2-£4 per head. So far, city authorities prioritising workplace travel plans have typically managed to engage with organisations representing about 30% of the workforce, whilst county authorities have managed to engage with organisations representing about 10%.
- School travel plans, on average, cut school run traffic by between 8% and 15%, with high performing schools commonly achieving reductions of over 20%, and, sometimes, considerably more. Many local authorities are devoting more resources to school travel work than to workplace travel plans, and some expect to reach nearly all schools in their area in the next 10 years.
- Personalised travel planning initiatives typically report reductions in car use of 7%-15% in urban areas, and 2-6% in rural and smaller urban areas. Costs for large scale implementation are likely to be considerably cheaper than pilot projects, being in the order of less than £20 per head, (with some suggesting figures of half this magnitude).
- Public transport information and marketing has delivered clearly recorded increases in bus use, with evidence suggesting that it can cause patronage increases from service improvements to double. City-wide budgets for such work of £60,000-£300,000 per year (including public and private sector investment) have helped to deliver city-wide increases in bus use of 1.5%-5% a year, when combined with other improvements.
- Travel awareness campaigns vary in nature, from relatively general campaigns to closely targetted intensive approaches. Both types report evidence of car use reductions, although intensive approaches tend to achieve higher levels of individual change. Many are now focusing on the positive health benefits from alternative transport policies. In many cases, travel awareness campaigns are used

to win support for, and perhaps intensify, other specific initiatives, and the value of national awareness campaigning was identified in relation to many of the other soft factor initiatives.

- Car clubs have been associated with a reduction of about 5 private cars per car club vehicle. They require start-up funding in the order of £50,000 to £150,000 per club which should lead to them becoming self-financing. In the absence of evidence, there has been a tendency to set unrealistic timescales for breaking even, perhaps partly to justify public funding. Initially, car club initiatives have been focused on high density urban residential locations, although emerging information from rural pilots suggests that low-cost operational models can make clubs viable in rural areas too.
- Organised car-sharing has effects on overall car use, but these depend on other factors, including parking regimes, the balance of users drawn from car driving or from other modes, and the amount of informal car sharing already taking place. Set up and running costs vary significantly and are primarily determined by the extent of associated publicity and marketing that takes place.
- Teleworking is growing rapidly, and typically currently results in a reduction of between 2 and 6 home-work journeys per teleworker per week. Evidence suggests that changes in car use for other purposes, or by other household members, or due to changes in home location, do not substantially offset these reductions, and, in some cases, there may be further cuts in car use. Costs are likely to be offset by business savings.
- Teleconferencing typically reduces business travel by between 10% and 30% in organisations that promote its use. Many commentators suggest that there is great potential for more widespread use of teleconferencing, however public sector promotion may be needed to ensure mainstream adoption. Business savings could be substantial, in terms of reduced travel costs and more efficient use of staff time.
- Home shopping currently accounts for less than 5% of the grocery market, but is estimated to reach 10%-15% over the next decade, leading to potential reductions of 7-11% of all food shopping traffic. Meanwhile, investment in better drop off facilities for all types of home shopping could reduce travel for customers in some circumstances (where their alternative is travelling to a more remote collection point) and could also substantially improve the efficiency of delivery vehicle operations.

14.2.3 Costs of implementation

For the different soft factors, the cost of facilitating choices by individuals to reduce their car use in most cases ranged from about 0.1 pence to 10 pence per vehicle kilometre saved, depending on the soft factor and method of cost attribution. Our calculations suggest that it is reasonable to take a public expenditure cost of 1.5 pence per vehicle kilometre saved as an indicative figure for a well-designed package of different soft initiatives, i.e. £15 for removing each 1000 vehicle kilometres of traffic. Current official practice calculates the benefit of reduced traffic congestion, on average, to be about 15p per car kilometre removed, and more than three times this

level in congested urban conditions. Thus, as outlined in section 14.1, on average, every £1 spent on well-designed soft measures could bring about £10 of benefit in reduced congestion alone, more in the most congested conditions, and with further potential gains from environmental improvements and other effects, provided that the tendency of induced traffic to erode such benefits is controlled. There are also opportunities for private business expenditure on some soft measures, which can result in offsetting cost savings.

There are reasons for expecting the relationship between cost and impact not to be linear. There may be economies of scale which reduce the unit costs of large initiatives; there may be learning and the development of better methods which increase the effectiveness of soft measures; and there may be diminishing returns especially as the achievable limits to behavioural change are approached. The first and second of these would lead to unit costs becoming lower as a programme of soft measures is built up, and the third would lead to the unit costs becoming higher. A sensible hypothesis might be that, in the early stages of extensive soft factor implementation, unit costs will fall, and, at later stages, as saturation of effect is approached, they will increase. Although available data do not yet allow these hypotheses to be fully checked, there are some indications that, currently, in some situations, the unit costs of implementing soft factors are falling, consistent with the reality that most soft factors interventions have so far only been implemented in a relatively small scale way. Within the time scale and assumptions of the high intensity scenario, we would not expect that diminishing returns are likely to set in.

14.3 Issues of implementation and policy

All the literature reviewed, and the case study interviews, have stressed the importance of the policy context of soft factor interventions, and have also discussed various problems, constraints, barriers to successful implementation, and 'wish-lists' of improvements that would make implementation easier. At local level, officials concerned with developing soft measures often feel that their work is still not recognised as being of central importance in transport strategy, which is affecting resources, political support, career expectations and profile. There is also a perception that the relevant professional skills are not widely available or given sufficient importance.

The discussion below attempts to synthesise the main policy arguments and issues from the case study interviews and published literature, though it should be remembered that there is a range of different views on all these matters, with consensus not yet having been widely tested.

14.3.1 National strategy

Soft measures are always described as making a contribution to overall transport policy, but this is often an aspiration rather than embedded reality. There could be greater use of specific practical applications in which hard measures (a) create a greater demand for the new opportunities given by soft measures, and (b) 'lock in' their benefits so they are not eroded by induced traffic. This would arise naturally from traffic reduction targets such as those provided for in the Traffic Reduction Acts, where a long term strategy for an area would be implemented by coherent use of all

available policy instruments. Most of the interviewees have suggested to us that they would welcome a clear national strategy about traffic reduction as this would help to integrate separate initiatives, an issue which we did not pursue for this study. In any case, local traffic reduction could be supported by national guidelines, information and advice on how soft measures might contribute to this goal: there is a widespread local view that national support can help to give credibility, demonstrating both that traffic reduction is an officially approved policy objective, and that soft measures can make a valuable and concrete contribution to this.

14.3.2 Funding mechanisms

Most soft measures are funded via local authority revenue budgets, and most specific initiatives are locally designed and launched. Therefore the views, priorities and constraints in local authorities are likely to be decisive in determining what happens in practice. Some local authorities have successfully made the case to their district auditors that soft measures, being part of a package of hard and soft measures, can be funded from capital budgets, and this has given them a great flexibility which they see as important. Others cannot do this, or think that they cannot. If soft measures are to be applied more intensively and extensively than at present, greater flexibility in funding them via capital programmes would be required, or alternative revenue sources would need to be found. This is particularly true to avoid short term contracts, and associated rapid turnover, of staff with the skills to implement soft factors.

14.3.3 Requests for supportive national policies

Many soft measures require stronger supporting action from other areas of local and national policy. Those national policies most frequently mentioned by our interviewees were:

- More employers could be persuaded to develop workplace travel plans if further tax incentives were offered. One mechanism mentioned by interviewees was business rate rebates; alternatives might include tax credits for travel plan revenue measures, or enhanced capital allowances for infrastructure.
- Some interviewees argued that travel plans could be made a statutory requirement for schools (as part of their health and safety responsibilities to pupils) and for other organisations (drawing parallels with legislation on disability and social housing, which, although initially seen as an unacceptable burden on the private sector, are now widely accepted).
- Planning policy guidance was felt to be inconsistently applied, and two tier authorities in particular felt that PPG13 could be strengthened to ensure planning authorities required effective travel plans as part of new developments. It was suggested that Section 106 planning gain agreements could be used more frequently to secure personalised travel planning programmes and car clubs for new residential developments – and that, as innovative use of the planning system occurred, it was important to disseminate good practice.
- Public transport information and marketing can only be as good as the product, and if bus services are poor quality, infrequent, or do not connect, marketing will not deliver significant patronage increase. The lack of directive powers for local authorities and PTEs to set the framework for public transport was felt to be an

obstacle to the provision of good public transport services. It was also argued that OFT constraints are perceived to inhibit cooperative arrangements on joint information, marketing, ticketing, and timetabling arrangements between operators. National clarification that this is encouraged would be welcomed.

- There are some groups that local authorities find hard to engage with – for example, leisure providers, property developers and trade unions for workplace travel planning; and retailers for home shopping. Greater work with these groups at national level might make achieving local buy-in from such groups easier. Technical advice for companies interested in telework or teleconference solutions might also be appropriate.
- The majority of interviewees commented that it was often hard to gain credibility for soft policies – not least because knowledge and evidence about them was sparse. Consequently, greater dissemination of existing national experience could be helpful for achieving local acceptability.

14.3.4 Need for other local policies which support soft measures

The most important local policies to support soft measures were identified as follows:

- Reallocation of road capacity, parking restraint, congestion charging and workplace parking levies were all felt to be important in order to 'lock in' the benefits of soft measures; to motivate organisations to become involved in travel planning; and to provide the space necessary for high quality public transport, walking and cycling provision.
- Traffic calming, 20mph limits, safe crossing facilities and parking restrictions outside schools were felt by some interviewees to be an important part or counterpart to school travel planning programmes.
- Traffic orders for dedicated parking spaces for car club vehicles could be fast-tracked, to reduce the long time gap between canvassing potential car club members in a new locality and providing a car. Special parking arrangements for car sharers could also help to substantially generate interest in car sharing schemes.
- For home shopping, vehicle access restrictions, specific parking rights, and investment in local drop-off facilities could all help to persuade retailers to invest in more efficient and less polluting logistics systems.

14.4 Issues of analysis, methodology, and implications for modelling and forecasting

As foreshadowed in chapter 1, the work has revealed a number of quite serious measurement problems, which affect all calculations of the impact of soft measures, in some cases substantially – though it should be said that similar issues will also need to be addressed for many other types of transport initiative. The five most important identified problems are described in the following sections.

14.4.1 Recognition of responses other than mode switching

Many of the policy objectives, reviews and individual studies have expressed their targets and outcomes in the form of shifts in the proportion of trips by each mode, then converting these into traffic impacts by re-calculating the figures as vehicle

kilometres. However, they have done so in different ways, in some cases simply by assuming that all origins, destinations and average journey distances stay the same, others by allowing for differential impact on journeys of different lengths, and a few by allowing for an effect on wider dimensions of choice such as destination, number of journeys, time of day, and patterns of trip tours at the household level. Analysis which treats mode shift as the only behavioural response is unlikely to be able to make a full assessment of the impact.

Overestimates of impact may occur if a particular soft measure is only effective for short journeys, but is assumed to be equally effective for journeys of all lengths. For example, a health awareness programme specifically aimed at encouraging people to walk instead of driving for short trips might have a large effect on number of car trips but a small effect on car mileage.

Underestimates may occur because:

- no allowance is made for average distance or longer car journeys switching to closer destinations, which then make switching to walking or cycling more realistic;
- switching from car to public transport is most likely to be associated with a shift from diffuse patterns of origins and destinations to more concentrated patterns reflecting public transport routes, with, for example, a focus on city centres.

The former effects mainly apply when considering shifts in mode within a stable pattern of journey length, and the latter to shifts in the distribution of journey length itself, which is especially likely over the periods of time in which people change their home, job and shopping preference for other reasons. It is therefore a logical hypothesis that overestimating effects might be more likely in the short run, and underestimating them might be more likely in the longer run. However, we have not yet found evidence to confirm this.

14.4.2 Dynamic build-up of effects over time

Most studies of the effects on behaviour of hard measures, such as studies of changes in price (involving econometric analysis of time series data) or studies of the expansion or contraction of road capacity (involving analysis of traffic counts), have concluded that effects on behaviour can build up over a period of several years. Theory, logic and intuition, but little evidence, suggests that this build-up process could also apply to the similar behavioural responses involved in some soft measures, and, if so, those studies with a short period will underestimate the impacts of such measures, after allowing also for the effects in the longer term of other factors (eg income, car ownership etc) which may be operating in the opposite direction.

Other soft factors, however, may have the effect of shortening the behavioural response period, by making immediate information available, and alternatives worth considering, which would otherwise only filter through to some travellers much more slowly, or not at all. Further, some soft initiatives seem to need reinforcement or refreshment after a period.

Although some studies have continued empirical monitoring for a longer period, when considering future impacts, it is most common only to allow for delays due to feasible timescales of implementation, not those due to the behavioural timescales of response.

14.4.3 Synergy and interactions

A recurrent theme in earlier reviews has been the strong argument that synergies and interactions are likely between soft measures, and between soft and hard measures.

Local experience rarely if ever presents a 'pure' experimental context where only one instrument is changed at a time, or controlled combinations of instruments are implemented. Therefore the observed effects will always, to some extent, include effects of a combination of variables, but not in a way which allows definite attribution of importance to each, or the statistical measurement of interaction effects.

In local experience the initiators of soft policies have formed a strong impression of specific synergies and interactions at work, as reported in Chapters 3 to 13. The most frequently cited examples of positive synergistic interactions are those in which (a) one soft measure increases the effectiveness of another and (b) soft measures interact with hard measures. In each case, the main mechanisms are: strengthening awareness, intent, or the range of opportunities available; reaching thresholds enabling larger responses; or reducing offsetting effects which would undermine the impact of the soft factor intervention. There are also often synergies with non-transport policy objectives.

There were some concerns about circumstances where the interaction may be negative, namely:

- Car-based initiatives such as car clubs or car-sharing are intended to encourage a less car-based lifestyle, but they may have the opposite effect for some people, subtracting from public transport, walking or cycling. For car clubs the available evidence suggests the net effect so far has been small (that is, non car owners who join car clubs show little change in their travel patterns), partly because cost regimes make car use unattractive for regular trips. For car-sharing, the evidence is less clear, but common sense suggests that car-sharing might be more appropriate in areas where public transport is relatively poor (e.g. rural areas) than in areas where it is good.
- When approaching saturation levels of effect for particular markets, further reductions in car use will be increasingly difficult, and it would then risk double counting to assume that the effects of separate soft factor initiatives, aimed at the same journeys, would be additive. It is unlikely that this applies often at present, but it would become material in the event of intensive, sustained and successful implementation of soft measures over a number of years.
- If soft instruments succeed in reducing car use in conditions of congestion, sufficiently to have a noticeable effect on that congestion, induced traffic effects must become important. This has been identified as a potential problem throughout the report. As highlighted, if this occurs, soft measures may have large effects on individual behaviour but small or zero eventual net effects on

traffic levels. Consequently, demand management measures aimed at avoiding induced traffic offsetting the results of soft measures are a key requirement to achieving their full potential.

- It has been suggested that enthusiasm for soft factors is enhanced by high congestion and related problems. To some extent, success in overcoming these problems could reduce their potential effectiveness, though the other benefits from soft factor measures would still apply.

Overall, the main significance of arguments about both synergies and negative interactions is that consistent application of soft and hard measures will increase the speed at which maximum realistic behavioural shifts are achieved, and inconsistent or partial application will substantially undermine the likelihood of having much effect at all at the network level, though effects at the individual level could still occur.

14.4.4 Prospective and retrospective bias

When carrying out systematic comparisons of alternatives for policy appraisal, it is usual to imagine or model a world of identical base conditions, where the same people with the same economic and social circumstances are making different travel decisions because of different transport costs, opportunities or information. There are some features of soft policy instruments which make it difficult to fit real world observations into this framework.

One case applies prospectively, when selecting in advance a specific sample of the population for information or opportunities not aimed at everybody. When a reduction in car use is then observed, it is necessary to distinguish how many of the target group would have made the observed change in their behaviour even without the intervention. It is known that, in any two time periods, a substantial proportion of the population will reduce their car use even without policy intervention, though they will be offset, or more than offset, by different people who increase their car use. This is important both for calculation of the overall change, but also for attribution of the size of the soft impact.

Another case applies retrospectively, especially when relying on research methods asking 'what did you do before?' or 'why?'. There is a well-documented tendency for people to recall and describe events and motives in such a way as to justify their current choices, to themselves or to the interviewer, which can influence both estimation of the size of a change and its attribution to different causes.

Both of these effects can be allowed for, in principle, by suitably rigorous controls. Not all studies have attempted to do so, and those that have frequently record controversy and argument about whether the controls are well defined and the inferences valid. It is worth noting that similar caveats and issues of interpretation apply to assessment of conventional or 'hard' policies, though are often not taken into account.

14.4.5 Monitoring

As a new area of policy, there is a wide range of practice on monitoring, and a sensitivity to its cost. There is some wry puzzlement about expectations or requirements that a much larger proportion of the overall expenditure should be spent on monitoring soft measures than has ever been considered for traditional hard policies. This is seen as a barrier to implementing cheap, potentially good value measures which is not imposed on expensive, potentially poor value measures. Moreover, there is also an increasing awareness of the difficulty of measuring complex changes to travel behaviour with precision, for the reasons discussed above.

Guidelines on monitoring methodologies could help ensure useful data was gathered at least cost. However, to be useful, this should not be seen as an additional burden of proof required for soft measures, but part of a general approach to monitoring the effects of all important policy initiatives and projects. (This is especially important since it is now argued that the degree of certainty about the impacts of traditional hard measures is no greater than that for the new policy packages).

There is a particular lack of empirical evidence about the traffic impacts of teleconferencing; car sharing schemes (in particular, what participants 'did before'); travel awareness campaigns (in terms of behaviour change, not simply attitude modification); and home shopping schemes. It is also clear that nationally funded pilot projects on some of the other soft factors (notably the personalised travel planning pilots and the original Sustrans Safe Routes to School project) have played, or are playing, a key role in helping to increase the knowledge base about the role of such measures in the UK. Further pilot projects, with careful monitoring, could help to reduce the current lack of data about some of the less well understood soft factors. The 'Sustainable Travel Demonstration Towns' project should also provide an invaluable source of data about the combined impact of introducing a co-ordinated package of such measures.

14.5 Recommendation

Although 'soft factors' still remains, in part, a label of convenience rather than being coherently and rigorously defined, there is nevertheless a growing body of practical experience and theoretical understanding of the role for such measures in transport policy. Soft factor interventions provide a number of different ways of giving more reliable information, better informed traveller attitudes, and more benign or efficient ways of travelling.

Such policies, separately or together, have been undertaken for a wide range of different objectives including reducing congestion; increasing revenue for transport companies; improving health by encouraging more physical activity; improving social inclusion; reducing environmental damage and saving commercial costs for employers. The most common specific feature linking these different policies has been that they have the potential to impact on levels of car use.

We conclude that these soft measures, in a favourable wider policy context, could be sufficiently effective in reducing traffic that they merit serious consideration for an

important role in transport strategy for the foreseeable future, prima facie offering very good value for money, and few disadvantages.

We stress that the substantial future traffic reduction identified here should be seen as the potential that soft factor interventions offer, not a forecast of probable impacts. Particular attention would be needed to ensure the benefits from soft factor interventions are 'locked in', via demand management measures to control induced traffic. Such measures, if well designed, could also have further beneficial effects on travel choices and traffic conditions in their own right. In this report, we have not taken any of these further effects into account.

It is important to include the impact of soft measures in national forecasting exercises, though we do not find helpful the practice that this can be done simply by subtracting a certain percentage of traffic, whatever figure that may be. The effects of soft policies will depend on the scale of implementation chosen, as an act of policy, by central and local government, associated, and interacting, with other policies being assessed, including prices, service improvements, traffic control and management, and infrastructure changes.