

Car Share and Car Clubs: potential impacts

Final Report

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Executive Summary

Following a review of literature, a programme of interviews with professionals in the field, surveys among the public, analyses of costs and a review of key factors in the operating environment, we have drawn the following conclusions on the role and prospects for car clubs and for car sharing:

- Membership of a car club would result in financial savings for people who would otherwise own and run a new/newish car, but whose annual mileage is low. Also, depending on the charging structure adopted by the club, it can provide a saving for short trips made by people who do a high annual mileage. A simple comparison of costs would, however, be misleading for two reasons: firstly because it is difficult to persuade drivers to take the fixed costs of car ownership into account and secondly because people put a high value on convenience. People are unlikely to be persuaded to join car clubs simply because they can save money by so doing.
- The decision to join a car club must be seen as part of a wider decision to adopt a multi-modal lifestyle making use of car club cars for some journeys but using public transport, taxis, hire cars, bicycles or walking for others.
- There is considerable mutual advantage from co-operation between public transport operators and car club organisers.
- Car clubs can bring reductions in car traffic if their members would otherwise be car owners. The opposite effect would occur if the members would not otherwise be car owners.
- Car clubs cannot compete in terms of cost with ownership of an old car for which the depreciation is minimal. This will make it difficult to achieve the environmental benefit to be gained by persuading owners to scrap inefficient/polluting vehicles.
- Car clubs might reduce social exclusion by offering access to a car to people who do not currently own one. However, this potential benefit is likely to be elusive for two reasons: firstly because car club membership is not cheaper than ownership and use of an old car and secondly because the disadvantaged groups are not likely to be easy to serve (insurance costs, sparse population, culture, inability to raise the required deposit).
- The strongest prospect for car clubs is in densely built-up areas with good public transport and a shortage of parking. The potential for incorporating car clubs into new low-car developments is particularly attractive.
- The introduction of workplace parking levies could help to spawn car clubs - depending on the interpretation of exemption rules.
- A useful body of expertise has been built up by the relatively small group of people currently involved in the organisation of car clubs.
- Car clubs currently suffer from an image problem - they are invisible to most people and misunderstood by others; some people are off-put by their 'green' image, and some transport planners see them as a threat to conventional public transport, walking and cycling.
- Car sharing can make a useful contribution towards reduction in traffic levels.
- Car sharing can offer a more cost-effective method of providing mobility to certain communities than is possible with conventional public transport.
- Car sharing is likely to abstract revenue from conventional public transport.
- Car sharing can make a useful contribution towards reducing the need for parking spaces at places of employment.
- Car sharing can be encouraged by provision of priority measures for HOVs.
- Car sharing is likely to be encouraged by the introduction of workplace parking levies and road-user charging.
- The amount of informal car sharing is likely always to be greater than that of organised car sharing.
- Good practice in the organisation of car sharing schemes is well established.
- Potential exists for an increase in the number of organised car sharing schemes.

Following an extensive review of potential policy options, we proposed 34 topics which could be taken forward to the next phase of work. After a series of discussions with the Steering Group and provision of further information on 17 proposals, four areas of further work were specified and agreed. Separate reports have been produced for each of the following topics:

1. Car Clubs in New Developments
2. The Role of Local Authorities and Public Transport Operators in Successful Car Clubs
3. The Potential Role of Car Sharing and Car Clubs within Socially Disadvantaged Groups
4. The role of Internet Matching Services.

Summaries of each of these reports are included within section 7 of this document.

The report on car clubs in new developments concludes that they have great potential and could make a significant contribution to the achievement of sustainable urban environments. Eighteen recommendations are made for actions and research to promote the establishment of successful car clubs in new developments. The recommended actions are designed to

- raise awareness and create an appropriate brand image
- achieve support for the concept
- secure funding to support car clubs during their early years
- provide guidance on practical issues, and
- increase the attractiveness of car clubs in new developments to potential members.

The report on the role of local authorities and public transport operators in the development of car clubs conclude that local authority involvement is crucial to the success of car clubs and that that the involvement of public transport operators in a joint arrangement to provide discounted fares for club members can provide an important catalyst to their growth. Eighteen recommendations are made – 9 of which are the same ones made in the previous report. The recommended actions are designed to :

- raise awareness and create an appropriate brand image
- achieve support for the concept
- secure funding to support car clubs during their early years, and
- provide guidance on practical issues.

The report on the role of car clubs and car sharing in improving the accessibility of disadvantaged groups concludes that they may have such a role for certain groups and that this may lead to cost savings. We identify six situations in which particular potential exists. We identify nine barriers to the realisation of this potential and make fourteen proposals for action or research to help overcome these barriers.

The report on the role of Internet matching services concludes that the current sites are having minimal impact and are struggling to survive but that they do have a potential role in certain specialist niches. The arguments for and against government action are rehearsed. Actions and research are suggested which could help to overcome some of the existing barriers to the success of Internet matching sites and thereby realise more of their potential. Briefly, these are:

- Selection of for one or more Internet matching services for Government support
- Support for selected sites
- Promotion of the use of localised matching services
- General support for car sharing
- Ensuring wider access to Internet matching services
- Promotion of Internet Matching for Car Sharing to Special Events
- Associated research

The report ends with a list of ideas for further work which emerged during the first two phases of the project but which were not pursued further.

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Much of the material reported here and in the supplementary reports was gathered via interviews and discussions with people who are directly involved with car clubs or car sharing. Without their willingness to share their thoughts and opinions with the research team, the project would not have been possible. I have not attributed views or opinions to individuals and accept that some of those who participated in discussions with my colleagues or myself may not agree with all the conclusions reached. I accept full responsibility for any failure on our part to understand or represent their opinions.

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Contents

1	Introduction	1
2	Summary of Findings from Phase One.....	2
2.1	Findings from the Literature Review.....	2
2.1.1	<i>Car clubs</i>	<i>2</i>
2.1.2	<i>Car sharing.....</i>	<i>3</i>
2.2	Findings from the Interviews and Surveys	4
2.2.1	<i>Benefits and disbenefits of car clubs</i>	<i>4</i>
2.2.2	<i>Factors affecting the performance of car clubs.....</i>	<i>5</i>
2.2.3	<i>Benefits and disbenefits of car sharing.....</i>	<i>6</i>
2.2.4	<i>Factors affecting the amount of informal car sharing.....</i>	<i>7</i>
2.2.5	<i>Factors affecting the performance of organised car sharing schemes.....</i>	<i>7</i>
2.2.6	<i>Other comments on car clubs and car sharing.....</i>	<i>8</i>
3.	The Operating Environment	10
3.1	Cost Comparisons.....	10
3.2	Key Trends in the Operating Environment.....	13
3.3	Policy Scenarios	14
3.3.1	<i>Changes in the operating environment which might favour car clubs:.....</i>	<i>14</i>
3.3.2	<i>Changes in the operating environment which might favour car sharing.....</i>	<i>15</i>
3.4	Types of Community in which Car Sharing and Car Clubs might be encouraged..	15
3.4.1	<i>Car Clubs</i>	<i>15</i>
3.4.2	<i>Car sharing.....</i>	<i>16</i>
4	Conclusions on the Potential Role of Car Clubs and of Car Sharing.....	18
4.1	Car clubs.....	18
4.2	Car Sharing.....	19
5	Potential Policy Interventions	20
5.1	To Encourage Car Clubs	20
5.1.1	<i>Direct financial support or other assistance for one or more car clubs</i>	<i>20</i>
5.1.2	<i>Sponsorship of third parties to provide assistance, advice and services for existing or nascent car clubs</i>	<i>21</i>
5.1.3	<i>Increased Publicity for the concept of car clubs</i>	<i>22</i>
5.1.4	<i>Encourage greater involvement by the private sector in the organisation of car clubs.....</i>	<i>23</i>
5.1.5	<i>Working with local authorities to bring about initiatives to favour car clubs</i>	<i>23</i>
5.1.6	<i>Working with other agencies to promote the development of car clubs.....</i>	<i>24</i>
5.1.7	<i>Designation of car clubs as a form of public transport.....</i>	<i>24</i>
5.1.8	<i>Development of analytic capability to assess the likely impact of measures to promote car clubs.....</i>	<i>25</i>
5.2	To Encourage Car Sharing	25
5.2.1	<i>Increased general assistance for the organisers of car sharing schemes</i>	<i>25</i>
5.2.2	<i>Provision of financial support and other assistance to selected car sharing schemes.....</i>	<i>26</i>
5.2.3	<i>Publicity to promote car sharing and/or car sharing schemes</i>	<i>26</i>
5.2.4	<i>Working with local and national highway authorities to introduce initiatives which would specifically favour car sharing.....</i>	<i>27</i>
5.2.5	<i>Working with other agencies to develop initiatives which would encourage car sharing.....</i>	<i>27</i>

5.2.6	<i>Development of analytic capability to assess the likely impact of measures to promote car sharing</i>	28
6.	Preliminary Assessment of Potential Interventions	29
6.1	Criteria for selecting interventions for further investigation	29
6.2	Discussion of candidates for further investigation	29
6.2.1	<i>Investigating the scope for involvement of planners and developers in the establishment of car clubs</i>	30
6.2.2	<i>Investigating the scope for involvement of employers in the establishment of car clubs and/or car sharing schemes</i>	32
6.2.3	<i>Investigation of the possibility of encouraging car sharing and/or car clubs among ethnic minority groups</i>	34
6.2.4	<i>Investigating the scope for establishment of car sharing and/or car clubs in rural areas</i>	35
6.2.5	<i>Investigating the scope for solving the problem of insurance cover for car clubs and car sharing schemes</i>	38
6.2.6	<i>Investigation of the role of Internet-based car sharing matching services</i>	39
6.3	Assessment of potential topics	40
6.4	The Steering Group's selection	42
6.4.1	<i>Car Clubs in New Developments</i>	42
6.4.2	<i>The Role of Local Authorities and Public Transport Operators in Successful Car Clubs</i>	42
6.4.3	<i>The Potential Role of Car Sharing and Car Clubs within Socially Disadvantaged Groups</i>	43
6.4.4	<i>The role of Internet Matching Services</i>	44
7	Findings from Phase Three Studies	45
7.1	Car Clubs in New Developments	45
7.1.1	<i>To raise awareness and create an appropriate brand image:</i>	45
7.1.2	<i>To achieve support for the concept:</i>	46
7.1.3	<i>To secure funding to support car clubs during their early years:</i>	46
7.1.4	<i>To provide guidance on practical issues:</i>	47
7.1.5	<i>To increase the attractiveness of car clubs in new developments to potential members:</i>	47
7.2	The Role of Local Authorities and Public Transport Operators in Successful Car Clubs	47
7.2.1	<i>To raise awareness</i>	48
7.2.2	<i>To achieve political support:</i>	49
7.2.3	<i>To secure funding to support car clubs during their early years:</i>	49
7.2.4	<i>To provide guidance on practical issues</i>	49
7.3	The Potential Role of Car Sharing and Car Clubs within Socially Disadvantaged Groups	50
7.4	The role of Internet Matching Services	51
8.	Other Proposals	53
Appendix I:	Documents Consulted During Phase One of the Work	54
Appendix II:	Consultees	57
Appendix III :	Questionnaire Used with Members of the Public	58
Appendix IV:	Assumptions used in compilation of Tables 3.1-3.3	62

1 Introduction

The current project was established to assess a variety of policy questions with regard to car clubs and car sharing. The work was seen to include a number of tasks:

- To identify through a literature review (plus correspondence and phone calls) examples of schemes overseas and identify the factors underlying their success or failure.
- To assess the scope of car sharing and car clubs for improving personal access to jobs, goods and services (with particular attention paid to the implications for rural area and minority groups, including young drivers, those with mobility problems and ethnic communities).
- To identify barriers to further take-up and effective development in England and recommend measures to encourage further schemes in ways which support the Government's integrated transport and sustainable development objectives.
- To consider the financial implications of such schemes, with particular emphasis on any cost savings to users of such schemes should they give up ownership of a car but also including any other affected groups, such as public transport operators.
- To consider the scope for pilot projects or demonstration studies and provide recommendations for further work to identify schemes which might be promoted by DTLR and/or The Motorists' Forum.

The contract was awarded in June 2001. The work was divided into four phases. During **Phase One** information was gathered from published sources, interviews were undertaken with experts and professionals in the field, and the general public were consulted through interviews, questionnaires and a focus group. During **Phase Two** the information gathered was analysed and assessed to identify key themes and factors influencing the operating environment, and in order to specify potential policy interventions. Four of these policy interventions were assessed in greater detail during **Phase Three** and the findings from the work were brought together and presented in a Final Report during **Phase Four**.

This Report begins with a summary of the findings from the literature review and interviews. The next section examines the costs and other key factors affecting the environment in which car clubs and car sharing must operate. This is followed by our conclusions on the potential role of car sharing and car clubs. A list of potential policy interventions is then presented and discussed. The final section presents the results of our more detailed investigations of four topics selected by the Steering Group.

2 Summary of Findings from Phase One

This section of the interim report summarises the findings from literature review, the interviews with professionals and experts, and from the surveys of public attitudes and experiences.

A list of the documents consulted during Phase One is shown in Appendix I, It was compiled on the basis of our knowledge of the field, the results of a literature search and the addition of recent documents recommended to us by consultees.

A list of individual experts and professionals to be consulted during Phase One was compiled on the basis of our knowledge of the field supplemented by recommendations from the Steering Group and consultees. Care was taken to include a balance of views from those with practical experience in the establishment and support of car sharing or car clubs, from those with a policy background and from those capable of a more detached perspective. Since representatives of all these perspectives will need to be contacted in Phase Three and it would neither be appropriate or possible to interview all of the same people for a second time, it was necessary to be selective in the choice of people for the Phase One Interviews. The resulting list is shown as Appendix II. The interviews were conducted during July, August and September 2001.

Members of the public were consulted during August and September 2001. A focus group was held with existing, occasional and lapsed car sharers. Members and ex-members of Edinburgh City Car Club were interviewed by telephone and e-mail. Self-completion questionnaires (see Appendix III) were distributed in a rural area in North Yorkshire, a wealthy area in Leeds and in a deprived area in Leeds. The survey respondents included car owners, non-car owners, city residents, rural residents, people with high and low incomes, young people and old people, members of ethnic minorities and people with mobility problems. There is however, no suggestion that they are a representative cross section of society.

2.1 Findings from the Literature Review

2.1.1 Car clubs

The literature on car clubs is limited in nature. Much of the documentation issued in recent years is produced by those with an interest in the field and is poorly referenced. There is little academic work on the subject of car clubs and it has not been possible to examine and substantiate all the claims that have been made for the success of car clubs.

The literature suggests that whilst there are approximately 50 car clubs in continental Europe and North America. This figure is difficult to substantiate because several of the clubs mentioned in the literature are no longer in existence and because there is no clear definition of what constitutes a separate club – some are based on a small group of friends while others can have a membership of several thousand. The most successful clubs are in Germany, Switzerland, Germany and the Netherlands, the best known being *Mobility Carshare* (a nationwide club in Switzerland), *StatdAuto* (in

Bremen) and *StattAuto* (in Berlin). There are fewer than a dozen car clubs in the UK (the best known being the Edinburgh, Bristol, Cranfield and Leeds) – none of which approach the scale of the continental schemes mentioned above.

It is suggested that better integration between modes as well as higher quality public transport is responsible for the greater proliferation and success elsewhere in Europe.

It is notable that many successful schemes in Europe evolved from local initiatives with significant input from individuals acting as ‘green entrepreneurs’.

The literature suggests that membership of a car club will be cheaper than car ownership for people whose annual mileage is less than 8000 miles. The savings, relative to the full cost of car ownership, increase as annual mileage decreases.

A number of benefits of car clubs are identified in the literature. The main benefits for members are seen to be access to cars at lower cost than car ownership (if car use is not high), access to cars by non car owners and access to specialist vehicles at relatively low cost. The main benefits for the community are seen to be reduced car use, reduced social exclusion, increased sense of community and encouragement of a multi-modal lifestyle involving greater use of local facilities (thus encouraging more environmentally sustainable land-use patterns). It is further suggested that, since car clubs result in a more realistic marginal cost for car use, a more efficient transport system will result.

Although most of the literature is fairly rose-tinted, it does identify some potential disadvantages of car clubs. It is acknowledged that membership of a car club would be less convenient than car ownership for most people and that the environmental benefits would be negated if increased trips by former non-car owners outweigh reduced trips by former car owners.

The literature identifies a number of factors required for successful operation of a car club. These include:

- support, financial or otherwise, from government and commercial organisations – particularly during the start-up phase;
- a committed core of enthusiastic members, often referred to as “early adopters”;
- good publicity and information;
- partnership with public transport and car rental companies;
- well-located parking bays and car stations – close to residential areas and public transport nodes;
- a dense development pattern with restricted availability of parking for ‘normal’ cars; and
- reliable technology.

2.1.2 Car sharing

There is a considerable amount of literature concerning car sharing extending back to the 1970’s. It includes several papers on the potential contribution of car sharing to transport policy and analyses of issues such as the interaction between car sharing and public transport. The literature also contains analyses of several car sharing schemes and identifies good practice in the organisation of such schemes. It is, however, not

easy to establish the current full extent of car sharing in the UK. The National Travel Survey can be used to estimate the amount of sharing for different types of journey but does not allow for a distinction between organised car sharing and informal car sharing.

The advantages quoted for sharers include reduced costs, increased companionship and greater comfort than is available on public transport. The advantages quoted for employers include reduced parking requirement, access to a larger employment pool and enhanced employee welfare. The advantages quoted for the community include reduced car mileage and reduced need for loss-making public transport.

The potential disadvantages quoted for sharers are reduced independence and flexibility. The potential disadvantages for employers are seen as the need to devote resources to the organisation of a scheme and the added excuse for absenteeism, lateness or inflexible work hours (“my lift did not show up / I have to leave now, my lift is waiting”). The potential disadvantages for the community are seen to be a potential loss of revenue to public transport and a possible increase in car mileage.

2.2 Findings from the Interviews and Surveys

Sections 2.2.1 – 2.2.6 represent a distillation of the points made by our professional and lay contacts.

2.2.1 *Benefits and disbenefits of car clubs*

Perceived benefits for members included:

- non car owners achieve access to cars and obtain greater mobility thereby;
- cost savings for previous car owners who do not need to use a car very often;
- increased status (being seen driving a nice car);
- access to new vehicles;
- access to a wide range of vehicle types (eg people carriers / city cars / utility vehicles);
- freedom from responsibility of car ownership (maintenance, insurance, fear of vandalism, space taken up in driveway or garage)
- no need to own a second car;
- enhanced sense of community.

The perceived disbenefits for users included:

- reduced independence and ability to make spontaneous journeys;
- reduced status (if previous car was a good one);
- club vehicles not available to young drivers in the household;
- difficult access to parking stations (particularly in sparsely populated areas);
- frustration when no car available;
- frustration if technology is unreliable;
- problems caused by irresponsible behaviour of other club members; and
- minimal saving (if do a high mileage or if previous vehicle was old/cheap to run).

The perceived benefits for the community included:

- car clubs encourage a more integrated and rational choice of modes (with public transport, walk, bicycle, taxi, car club car and car-rental being used as and when appropriate and with an overall reduction in car mileage);
- car clubs may serve to wean car owners away from car use;
- car clubs can reduce social exclusion of non car owners;
- greater use of local facilities resulting, in the long term, in more sustainable land-use patterns; and
- enhanced sense of community.

The perceived disbenefits for the community included:

- car clubs may encourage non car owners to use cars thus leading to increased traffic and reduced revenue for public transport;
- for non car owners, car clubs may act as a stepping-stone towards car ownership;
- if non car owners are encouraged to use cars, they may reduce their use of local facilities – with adverse long term consequences for land-use patterns; and
- resources devoted to car clubs would be directed away from modes higher up the “sustainable transport pecking order” (i.e. walking, cycling and public transport).

2.2.2 Factors affecting the performance of car clubs

The greater success of car clubs in Germany and Switzerland was commented on by several people (although a number of Swiss residents were only vaguely aware of the car club concept). Reasons for the comparative success of car clubs in Germany and Switzerland was attributed to several factors:

- *The better provision of public transport in these countries.* It is noted that the car club concept is a multi-modal concept and cannot function effectively in the absence of good public transport and/or taxis.
- *Effective integration of car clubs with public transport and other modes.* The availability to club members of discounts on Swiss public transport is seen to be a significant selling point (the effect of the recent establishment of a similar arrangement in Bristol, involving Firstbus, will be worth watching). The interoperability of the Bremen Autokarte smartcard which facilitates access to car club cars, including payment, as well as payment on public transport, was thought to be very attractive. The availability to club members of subsidised taxi services and free bicycles was also praised. It is notable that public transport operators in Switzerland perceive car clubs not as a competitor but as a complement to their services and are actively involved in promoting the concept. The recent offer by Bristol Firstbus of free bus travel for year to car club members who sell their car may be an indication that this attitude to car clubs could take root in the UK public transport industry.
- *Different attitude to car ownership.* It is suggested that UK people are more individualistic in outlook and more proprietorial about their cars. This may be a national characteristic or may simply reflect the higher cost of car ownership in the UK (European countries tend to have lower car ownership costs, higher car ownership but lower car usage – “it is as if the ownership is no big deal in Europe whereas, in the UK it is a significant investment and so brings status”).

Other factors affecting the performance of car clubs, for which there is no particular difference between the UK and Europe, include:

- *Existence of a committed organiser.* Some of the greatest successes have been attributable to the efforts of a small number of dedicated individuals. The concept seems to work particularly well if it results from a strong local initiative.
- *A receptive local population.* The early schemes were typically in middle class areas with a strong interest in environmental and social issues.
- *The availability of well-located parking stations.* Ideally they are located for convenient access from residences and public transport nodes with good security and an attractive design.
- *Suitable type of area.* Ideally a fairly densely built-up area with a shortage of parking places.
- *Reliable technology.* The positive experience of Bremen was contrasted with problems experienced in Edinburgh.
- *Effective marketing.* There is a perception that neither the general public, nor local authorities, understand what car clubs are. The former can make it difficult to recruit members and the latter can be a particular problem in gaining support for new schemes.

2.2.3 Benefits and disbenefits of car sharing

Our discussions with professionals and the public identified a similar list of benefits and disbenefits to that already available in the literature. There were, however, some differences of emphasis.

The following benefits were identified for car sharers:

- more comfortable than public transport;
- greater personal security than walking, cycling or public transport;
- potential cost savings for drivers and their passengers;
- access to preferential car parking spaces (where provided);
- companionship.

Against which were set the following disbenefits to sharers:

- reduced independence and flexibility (for driver and passenger);
- potentially less personal security than when driving alone;
- may not want companionship!

The main benefits for the employers who organise a scheme at their workplace were seen to be:

- reduced need for parking spaces;
- access to a larger employment market;
- increased corporate identity and employee welfare.

Against which were set the following potential disbenefits for employers:

- resources required to establish and maintain the system;
- possible excuse for absenteeism, lateness or inflexible work hours.

The main advantages for the community were seen to be:

- potential reduction in car mileage (if the sharing is between two or more people who formerly drove solo);

- reduced need for loss-making public transport (only if car sharing can meet the needs of all the former passengers).

Against which were set the following potential disbenefits to the community:

- reduced revenue for public transport (may make services financially non-viable);
- potential increase in car mileage (if the existence of a car sharing scheme encourages more car ownership – on the grounds of reduced cost, or if the diversions required to pick up passengers are significant).

2.2.4 Factors affecting the amount of informal car sharing

The factors thought to influence the amount of informal sharing include:

- *The provision of special privileges for high occupancy vehicles.* High Occupancy Vehicle (HOV) lanes were frequently mentioned. The evidence suggests that they can have a very positive effect on levels of sharing. (eg recent Leeds evidence). An interesting variant on the HOV lane, popular with authorities in the USA, is the “High Occupancy Toll” (HOT) lane. HOT lanes allow multi-occupant vehicles to use a toll lane free of charge. Some HOT lanes are former Toll lanes, Others are former HOV lanes into which toll-paying vehicles are now allowed (contrary to expectation, the number of multi-occupancy vehicles actually *increased* when the toll was imposed – perhaps the value of the perk was more apparent when others were seen to be willing to pay for it). Other privileges offered to high occupancy vehicles include exemption from road user charges (Singapore example) and special/reduced price parking spaces.
- *Ambient levels of car ownership and quality of public transport.* Sharing is greatest where car ownership is low and public transport poor.
- *Costs of car use.* Other things being equal, sharing increases with the cost of car use. This implies that an increase in fuel prices or parking charges, or the introduction of a workplace parking levy, or road user charging, will tend to result in increased sharing.

2.2.5 Factors affecting the performance of organised car sharing schemes

The factors identified above for informal sharing do, of course, also apply to organised sharing. The following additional factors were identified as important to the success of an organised car sharing scheme. Again the list echoes the points made in the published literature:

- *The need for total commitment by the organiser.* At employment sites this implies designation of a member of staff to run the scheme, provision of incentives (see below), allowing matches to be arranged during work hours, toleration of occasional lateness due to problems with a lift.
- *The need for clear incentives for participants.* By far the most effective is seen to be the provision of parking spaces which would otherwise not be available and/or the provision of parking spaces at desirable locations (near the office entrance or near the car-park exit). Other incentives being provided include financial rewards for not driving solo (Pfizer).
- *A sensitive and efficient matching system.* Taking account of home and work location, desired departure/arrival time, and personal preferences in respect of smoking, music and gender of travel partner.

- *Provision of emergency back-up travel in case the driver fails to turn up.* This is normally in the form of a taxi – although it is noted that this may not be satisfactory in the morning peak when taxis are often booked up with school runs, therefore a back up individual within the company may be needed. It appears that the provision of back-up is not expensive because, in practice, it is rarely called on.

2.2.6 Other comments on car clubs and car sharing

A number of other issues were raised during our interviews with professionals. Among these, the following were put particularly strongly:

- Marketing and publicity for car clubs should emphasise the financial advantage that car clubs can bring to members. The “green” image of car clubs may act as a deterrent.
- Organisers of car clubs need a great deal of advice and assistance. It is suggested that this advice and assistance will best come from people who have already had direct experience of setting up car clubs.
- Advice and assistance for car club organisers is available through the Community Car-Share Network (CCSN), a not-for-profit organisation funded through a combination of grants and charges for its literature. Its current grant funding expires in two years time.
- Unless car clubs receive financial assistance to take them through the set-up stage, they necessarily have to adopt cheap, do-it-yourself, low-technology solutions which may not appeal to the mass of potential members.
- Although a high-tech approach is generally recommended for car clubs, it is vital that it is completely reliable.
- Local authorities can be very helpful in the establishment of car clubs (provision of finance, provision of sites for parking stations, help with publicity and marketing, adoption of helpful policies in respect of parking controls and planning consents) but most are unaware of the potential role of car clubs as part of a sustainable, multi-modal, transport system.
- It is suggested that the introduction of a workplace parking levy may lead to the introduction of car clubs at work. This might come about if employers sought to avoid the charge by converting employee parking spaces to business-use parking and providing, instead of company cars, a pool of cars for business-use during the day and for employees’ use outside work hours. (One must however question whether ‘car clubs’ of this type would be desirable and whether use of spaces in this way would be seen as a loophole by the local authorities and if so would they seek to close it and succeed in doing so. It might also be that the cars in this type of car club would be taxed as if they were ordinary company cars).
- Insurance is a significant item of expenditure for car clubs. Currently negotiated packages effectively rule out the possibility of membership by the young or elderly.
- Young people are quite keen on the idea of car clubs as a way of gaining access to a car, however their involvement in car clubs is restricted because of the cost of insurance. It is noted that, if this problem could be overcome, there might be great benefits from getting young people to appreciate the benefits of this form of car “ownership” before they taste the delights of conventional ownership. (the contrary view is that it might simply hasten their migration to car ownership).

- Elderly people have a vehicle-use profile which might ideally suit car club membership – but tend to be put-off by the perceived complexity and inconvenience of car clubs.
- Car club membership will be beyond the financial reach of many groups in society – particularly because of the need for a down-payment of the membership fee.
- It is, in practice, very difficult to establish car clubs in areas where social exclusion is greatest (low density rural, high insurance risk and apathy in poor neighbourhoods, expense of providing adapted for use by disabled people);
- If car clubs can attract people who previously drove old and polluting vehicles, this should bring environmental benefits.
- It is thought that great potential exists for the establishment of car clubs in connection with new developments with restricted parking availability. Some such schemes are currently being established.
- There is a latent demand for car sharing at many workplaces.
- The potential to match people with other compatible drivers/passengers is much increased if the size of the matching pool can be increased. “There must be a role for the establishment of databases covering a number of adjacent organisations”.
- Although there is initial reaction by drivers against the introduction of high occupancy vehicle lanes, if well designed they are accepted and appreciated over time. (Leeds example)
- Car sharing schemes are easier to set up than car clubs. Car clubs might develop from initial informal car sharing arrangements.
- Car sharing, particularly informal car sharing, can exist with a much smaller critical mass than is required for a car club. It may therefore be much more suitable than car clubs in rural areas.
- Some communities see public transport as inappropriate for females. Car sharing or car clubs may have a role in reducing the social exclusion which can result from this attitude.
- The availability of subsidies may distract car club operators from the task of establishing a financially viable scheme.

3. The Operating Environment

3.1 Cost Comparisons

Tables 3.1- 3.3 compare the costs per journey for different modes of transport under various assumptions. The costs for owner-drivers is compared with that for car club members, hire car users and public transport users. Different calculations are presented for different types of car and for public transport users with and without a season ticket. Four usage scenarios are presented; short and long journeys by people with a low or high annual mileage respectively.

We have included the full costs of car ownership and have allocated these costs to individual journeys on the basis of annual mileage. This allows a fair comparison with other modes even though most drivers ignore the fixed costs of ownership when thinking about individual journeys.

The detailed assumptions behind the calculations are outlined in Appendix IV. Clearly there is room to question some of the assumptions used. For example:

- Should the costs of all modes except car be increased to allow for the costs of getting to the pick-up point?
- Is it realistic to assume that car owners will take out breakdown cover (as per AA website)? – some drivers will obviously choose not to do so and their car cost should be decreased accordingly.
- Are our assumptions about the cost of car-rental realistic? What allowance should be made for CDW etc?
- Are our assumptions about the costs of car club membership and car rental rates realistic for the scenarios in which car purchase costs change (they should change at less than the change in car purchase cost to allow for fixed costs of administration, but by how much less?)

Given these uncertainties, the figures in tables 3.1-3.3 must obviously be treated with caution. But some interesting patterns are clearly apparent.

The patterns which emerge from table 3.1 are as follows:

- Public transport is always cheaper than any of the other options (The fact that it is not everyone's preferred mode serves to emphasise that cost is not the only consideration);
- Car sharing, based on two people sharing the petrol costs, is only marginally cheaper than driving solo;
- Ownership and use of an old car is much cheaper than using a car club car regardless of the length of journey or annual mileage;
- Short journeys using a car club car are cheaper than owning a large new vehicle;
- Long journeys using a car club car will be more expensive than ownership and use of a car;
- Typical car rental is more expensive than a car club except where a person who does a low annual mileage rents a small car for a long journey;
- A cheap car rental is cheaper than a car club except for short journeys by a person with a high annual mileage;

- A cheap car-rental is less expensive per journey than owning and using a new car, regardless of size;
- A cheap car-rental is more expensive per journey than owning and using an old car for short journeys except for long journeys by someone with a low annual mileage;
- A typical car rental is more expensive than owning and using a car.

A number of comments should be made at this stage. Firstly these figures suggest that a current owner of an old car will not save money by becoming a car club member. He might of course want to join a car club in order to enjoy the greater comfort and reliability of a new car, but he could achieve this at lower cost by using a cheap rental car. Secondly, owners of large new cars could save money on short journeys if they sold their cars and became car club members. Our figures confirm that there is scope for car owners to save money by joining a car club, but not if they own and run an old car. This latter point suggests that there may be limited scope for the environmental gain associated with attracting people away from inefficient and polluting vehicles.

Tables 3.2 shows the effect of decreases in the costs of car purchase and fuel. The relativities are broadly the same as in Table 3.1 except, of course, that the cost advantage for petrol-cost sharing and for public transport are eroded somewhat (although the fact that cheap car hire is less expensive than holding a season ticket and using it only for a few journeys is quite artificial – one would not buy a season ticket in such circumstances). There is a slight tilt away from car rental and car clubs relative to car ownership. This is due to the fact that their costs will include items which do not decrease in line with car purchase and running costs.

Table 3.3 shows the effect of an increase in the costs of car purchase and fuel. The changes mirror those shown in table 3.2. The main effect is to increase public transport's cost advantage and to increase the savings to be made by sharing petrol costs. There is also a slight tilt in favour of car clubs and car rental relative to car ownership.

Table 3.1 cost per journey (£) at current prices

	Car Ownership – driving solo or (sharing)			Car Rental			Car Club	Public Transport With (without) season ticket
	New large car	New small car	Old car	Cheap	Typical Small car	Large car		
Short journey High user	11.87 (11.37)	8.60 (8.23)	3.66 (3.29)	11.66	40.30	57.22	10.10	2.36 (4.05)
Short journey Low user	19.99 (19.50)	14.37 (14.00)	9.72 (9.35)	11.66	40.30	57.22	17.07	5.89 (4.05)
Long journey High user	29.22 (23.39)	23.02 (18.65)	19.11 (14.74)	19.66	48.30	67.89	41.82	7.73 (11.85)
Long journey Low user	37.35 (31.52)	28.79 (24.42)	25.78 (21.41)	19.66	48.30	67.89	51.54	19.33 (11.85)

Table 3.2 cost per journey (£)-assuming a 20% reduction in the cost of car purchase and petrol cost

	Car Ownership – driving solo and (sharing)			Car Rental			Car Club	Public Transport with (without) season ticket
	New large car	New small car	Old car	Cheap	Typical Small car	Large car		
Short journey High user	11.39 (10.68)	8.28 (7.98)	3.51 (3.21)	11.51	40.15	57.02	9.95	2.36 (4.05)
Short journey Low user	18.67 (18.28)	13.55 (13.25)	9.57 (9.27)	11.51	40.15	57.02	16.93	5.89 (4.05)
Long journey High user	26.61 (21.95)	21.10 (17.61)	17.36 (13.87)	17.91	46.55	65.55	40.08	7.73 (11.85)
Long journey Low user	33.90 (29.23)	26.37 (22.87)	24.04 (20.54)	17.91	46.55	65.55	49.62	19.33 (11.85)

Table 3.3 Cost per journey (£) Assuming that car purchase costs and petrol costs are each increased by 20%

	Car Ownership – driving solo and (sharing)			Car Rental			Car Club	Public Transport With (without) season ticket
	New large car	New small car	Old car	Cheap	Typical Small car	Large car		
Short journey High user	12.39 (11.80)	8.92 (8.47)	3.81 (3.36)	11.81	40.45	57.41	10.25	2.36 (4.05)
Short journey Low user	21.50 (20.91)	15.20 (14.76)	9.87 (9.42)	11.81	40.45	57.41	17.22	5.89 (4.05)
Long journey High user	31.88 (24.89)	24.94 (19.69)	20.86 (15.62)	21.40	41.49	70.22	43.57	7.73 (11.85)
Long journey Low user	40.99 (34.00)	31.22 (25.98)	27.53 (22.29)	21.40	41.49	70.22	53.29	19.33 (11.85)

3.2 Key Trends in the Operating Environment

A number of key trends in the operating environment are likely to affect the popularity of car sharing and car clubs:

- *Car ownership has been increasing fairly steadily.* If this trend continues it will reduce the potential role of car clubs and car sharing as means by which non-car owners can gain access to a car.
- *An increasing proportion of the population have a driving licence.* This increases the pool of non-car owners who might want to join a car club as a means of gaining access to a car.
- *It is becoming increasingly difficult and expensive to park cars in city centres and, more latterly, in residential areas.* This should favour car clubs and car sharing.
- *Changes to the taxation of company cars are likely alter the number of people with subsidised car ownership* (the introduction of “green” criteria from April 2002 onwards should reduce the number of large company cars but might result in an increased number of small company cars). If the net result is a reduction in the number of people with subsidised car ownership this may encourage car clubs as a means of accessing a car for occasional use (the contrary effect would be expected if the net effect is to increase the number of people with subsidised car ownership).
- *The environmental and safety standards required via the MOT test are rising.* This results in the removal of many old cars from the vehicle stock. Other things being equal this reduces the availability of cheap access to car ownership. If it continues, this trend will tend to favour car clubs.
- *The costs of car purchase have been falling.* Harmonisation of UK prices with those of cars elsewhere in the EU would intensify this trend and tend to result in increased car ownership and thus reduce the pool of potential car club members and potential passengers in car sharing arrangements.
- *The Ten Year Plan envisages a 20% reduction in motoring costs by 2010.* The freezing of the fuel tax escalator and the EU’s call to harmonise fuel taxation levels across Europe suggest an end to the trend towards increased fuel taxation. A reduction in motoring costs will reduce the advantage to be gained by car sharing. Its effect on car clubs is less clear cut although, since the mileage payment in a car club is more obvious than that in a privately-owned car, it may work in favour of car clubs.
- *Significant increases in the cost of public transport relative to that of car ownership and use have been apparent in recent years.* Although, as shown in Table 3.1, the cost of public transport use is still lower than the true cost of car use, the perceived marginal cost of public transport use exceeds that of car use for many journeys. Continued decrease in the attractiveness of public transport will tend to favour car sharing but will reduce the attractiveness of car club membership as part of a multi-modal lifestyle.
- *Priority measures for high occupancy vehicles are increasingly on the agenda.* The success of the HOV lane in Leeds may lead to wider adoption of the concept. Such measures provide a clear incentive to car sharing.
- *The introduction of road user charging in nine urban areas, and in a number of rural areas, is envisaged in the Ten Year Plan.* If this happens, the cost of car use will increase and this will tend to lead to an increase in car sharing.

- *The introduction of workplace parking levies in twelve urban areas is envisaged in the Ten Year Plan.* If this happens it will lead to an increase in the cost of car parking and this should favour car sharing and, depending on the interpretation of the regulations, may also favour car clubs (see discussion in sections 2.2.6).

3.3 Policy Scenarios

This section of the report develops some of the themes introduced in section 3.2 by discussing some potential policy developments which might have a positive impact on the prospects for car sharing and car clubs. With few exceptions, the impact of these potential developments on car sharing and car clubs is likely to be a minor consideration in the minds of the responsible policy makers but may nevertheless help to swing a decision at the margin.

3.3.1 Changes in the operating environment which might favour car clubs:

- *Increasing the taxation on company cars.* If this led to a reduction in the number of company cars more families would be left with one (or zero) cars and would thus stand to gain from belonging to a car club.
- *Establishment of work place parking levies.* The establishment of employer-based ‘car clubs’ might be encouraged by the introduction of levies on employees’ parking spaces – depending on the interpretation of “employees’ cars”.
- *Increasing the costs of private car ownership* (for example via increases in VED). This would obviously tip the balance of advantage, albeit quite marginally, away from car ownership and towards car clubs. However, such a move would disadvantage those who can only just afford car ownership and so might be seen as having a negative effect on social inclusion. Also, any increase in the costs of car ownership might, for political reasons, have to be accompanied by reductions in the cost of car use – such as by reducing fuel tax. The net effect of such changes might be to increase car use by car owners.
- *Reducing the costs of car use* (eg by reducing fuel tax). Since the (reduced) cost per mile is likely to be more clearly perceived by a car club member than by a car owner the net effect might be to encourage car clubs. (But note, as above, that this is likely to lead to increased car use by car owners and that, to preserve the income of the Exchequer, the final costs of car ownership might need to rise – a move which could disadvantage the low-income car owner and so increase social exclusion).
- *Improving the provision of public transport and the attractiveness of taxis and of hire cars.* These would all tend to encourage car owners to consider reducing their car ownership in preference for a mixture of modes of which car clubs might be one.
- *Reducing the maximum allowances for parking spaces in new developments.* The resulting pressure on parking space would make multiple car ownership less attractive and so might encourage investigation of alternatives such as car clubs.
- *Increasing the severity of the MOT test.* As outlined in section 3.2, this would reduce access to cheap car ownership and so favour car clubs. This could be an important development because car clubs cannot compete with the ownership of cheap old vehicles. It would have beneficial effects on safety and the environment but might reduce social inclusion.

3.3.2 Changes in the operating environment which might favour car sharing

- *Introduction of priority measures for high occupancy vehicles.* This could have a significant impact on the amount of car sharing. The introduction of these measures is further discussed in section 5.2.4.
- *Introduction of work-place parking levies.* If employers pass on the fee to their employees there is a direct encouragement to share or to use public transport. If they do not pass it on they will themselves want to reduce their outgoings by charging their employees to park on the premises or by reducing the number of spaces – either of which would tend to encourage car sharing.
- *Increased levels of fuel taxation* (and, perhaps payment of third party insurance liability via a levy on fuel usage). This would increase the cost of car use and would thus provide drivers with a greater incentive to share. However, as was clear from table 3.1, the saving to be gained by sharing is not great. Also, since an increase in fuel price is unlikely to be politically acceptable without a corresponding reduction in the costs of car ownership – such as by abolishing VED, the net effect might be to encourage car ownership and this might in turn lead to a reduction in the number of potential passengers..
- *Introduction of road user charging* – (particularly on commuter routes). This would increase the cost of running a car and so provide more incentive to share cars.
- *Improved public transport, more/cheaper taxis and more accessible/cheaper car hire services.* Such changes might lead to an increase in car sharing since they would tend to reduce the benefit to be derived from car ownership and, if this were followed by a decrease in car ownership, there would probably be some increase in car sharing. Also, the knowledge that these modes would be available as a back-up service in the event that a lift was not available on a given occasion, could make people more ready to enter car sharing arrangements. However, improvements in public transport and taxi services could tend to lead to reduced car sharing in as much as they provide an alternative. (The net effect is difficult to assess!).
- *Reducing the maximum allowances for parking spaces in new developments.* The resulting pressure on parking space would make multiple car ownership less attractive and so might encourage car sharing.

3.4 Types of Community in which Car Sharing and Car Clubs might be encouraged

3.4.1 Car Clubs

The populations which appear most likely to adopt the concept are:

- residents in newly built residential areas* (if the club is offered as part of the ‘welcome pack’ to new arrivals it might be possible to introduce people to car clubs before they developed other travel habits).
- occupants of new developments of start-up offices and businesses*
- occupants of newly built mixed developments* (as above but offering a more promising profile of usage throughout the day)
- residents in ‘car-free’ or ‘low car’ developments*
- students/staff/employees at out-of-town campuses or business parks*

- environmentally/socially aware, high/medium density, middle class neighbourhoods with a strong sense of community*
(* In all these cases success is likely to be greatest where the level of service provided by public transport is good and the availability of parking is restricted).

The greatest potential for environmental benefits (reduced car use) from car clubs is to be found within areas of high car ownership.

The greatest scope for reduced social exclusion as a result of car clubs will be among the following groups:

- the young (but there are problems with insurance for such groups);
- the elderly (but they may be reluctant to accept so novel a concept);
- disabled or mobility-impaired groups (but some would resent being stigmatised in this way);
- ethnic minorities (but support of ethnically orientated groups might create dissension);
- the urban poor (but there may be insurance problems in some neighbourhoods); and
- low/zero car ownership households in rural areas (but sparse population makes it difficult to find critical mass).

It is clear that the populations to which car clubs offer the prospect of reduced social exclusion would, for one reason or another, be most difficult to service. It is also probable that a concomitant of reduced social exclusion would be increased car use. Not only would this conflict with environmental objectives but, if reduced use of public transport were to reduce the income to some marginal services, and if access to cars caused people to abandon their local shops, the eventual net effect on social exclusion might also be undesirable.

The high car owning, environmentally/socially aware, middle class seem to offer good prospects for success and for environmental benefits but clearly would not feature in a list of those who are socially excluded.

Although the considerations outlined above might lead one to target particular communities as potential sites for car clubs, experience suggests that the key factor in determining the success of a scheme is the presence of a champion within the local community – schemes cannot be imposed from above.

3.4.2 Car sharing

The populations which are most likely already to be engaged in informal car sharing are:

- Close-knit communities (well-established networks, stable populations, large families, high proportion of people employed by one employer);
- Areas with low car ownership which have poor public transport and an absence of local facilities (making it difficult to function without a car);
- Areas where trip patterns are amenable to lift giving (significant amount of travel from areas with a relatively dense pattern of origins to other areas with a relatively dense pattern of destinations);

- Areas where high parking charges, or HOV facilities, offer an effective incentive for car sharers.

The populations which offer the greatest scope for organised car sharing are:

- Areas which have the characteristics noted above, but which do not already have a well developed network of informal car sharing. Potential reasons for there being no established networks include:
 - the population includes a large proportion of newcomers or visitors;
 - the travel patterns are relatively new (e.g. new development, changed patterns of employment, recent loss of local facilities); or
 - the public transport services have only recently been withdrawn.
- Areas where a change in transport policy is likely to favour car sharing (e.g. introduction of HOV facilities, reduced availability of cheap parking facilities).
- Areas where an employer, or group of adjacent employers, is motivated to encourage car sharing (e.g. to reduce the need for on-site parking spaces, to attract non-car owning employees, or to comply with planning regulations).

The greatest scope for reduced social exclusion as a result of car sharing will be among non-car owners and among those car owners who feel unable to use their cars (e.g. because of concerns over safety or security or because they do not have access to parking facilities at the destination). There is thus likely to be a particular relevance for low income groups, the young, the elderly and the disabled or mobility-impaired – note, however, that elderly people are generally more concerned about security issues and may be reluctant to share journeys with “strangers”.

The greatest potential for environmental benefits (reduced car use) from an increase in informal or organised car sharing will be within areas of high car ownership. Any increase in car sharing, particularly among low car ownership groups, may reduce revenues to public transport and increase overall levels of car traffic. Not only would this conflict with environmental objectives but, if reduced use of public transport were to reduce the income to marginal services, or if improved access to cars caused some people to abandon their local shops, the eventual net effect on social exclusion might also be undesirable.

4 Conclusions on the Potential Role of Car Clubs and of Car Sharing

4.1 Car clubs

Our main conclusions are as follows:

- 1 Membership of a car club would result in financial savings for people who would otherwise own and run a new/newish car, but whose annual mileage is low. Also, depending on the charging structure adopted by the club, it can provide a saving for short trips made by people who do a high annual mileage. A simple comparison of costs would, however, be misleading for two reasons: firstly because it is difficult to persuade drivers to take the fixed costs of car ownership into account and secondly because people put a high value on convenience. People are unlikely to be persuaded to join car clubs simply because they can save money by so doing.
- 2 The decision to join a car club must be seen as part of a wider decision to adopt a multi-modal lifestyle making use of car club cars for some journeys but using public transport, taxis, hire cars, bicycles or walking for others.
- 3 There is considerable mutual advantage from co-operation between public transport operators and car club organisers.
- 4 Car clubs can bring reductions in car traffic if their members would otherwise be car owners. The opposite effect would occur if the members would not otherwise be car owners.
- 5 Car clubs cannot compete in terms of cost with ownership of an old car for which the depreciation is minimal. This will make it difficult to achieve the environmental benefit to be gained by persuading owners to scrap inefficient/polluting vehicles.
- 6 Car clubs might reduce social exclusion by offering access to a car to people who do not currently own one. However, this potential benefit is likely to be elusive for two reasons: firstly because car club membership is not cheaper than ownership and use of an old car and secondly because the disadvantaged groups are not likely to be easy to serve (insurance costs, sparse population, culture, inability to raise the required deposit).
- 7 The strongest prospect for car clubs is in densely built-up areas with good public transport and a shortage of parking. The potential for incorporating car clubs into new low-car developments is particularly attractive.
- 8 The introduction of workplace parking levies could help to spawn car clubs - depending on the interpretation of exemption rules.
- 9 A useful body of expertise has been built up by the relatively small group of people currently involved in the organisation of car clubs.
- 10 Car clubs currently suffer from an image problem - they are invisible to most people and misunderstood by others; some people are off-put by their 'green' image, and some transport planners see them as a threat to conventional public transport, walking and cycling.

4.2 Car Sharing

Our main conclusions are as follows:

- 1 Car sharing can make a useful contribution towards reduction in traffic levels.
- 2 Car sharing can offer a more cost-effective method of providing mobility to certain communities than is possible with conventional public transport.
- 3 Car sharing is likely to abstract revenue from conventional public transport.
- 4 Car sharing can make a useful contribution towards reducing the need for parking spaces at places of employment.
- 5 Car sharing can be encouraged by provision of priority measures for high occupancy vehicles.
- 6 Car sharing is likely to be encouraged by the introduction of workplace parking levies and road-user charging.
- 7 The amount of informal car sharing is likely always to be greater than that of organised car sharing.
- 8 Good practice in the organisation of car sharing schemes is well established.
- 9 Potential exists for an increase in the number of organised car sharing schemes.

5 Potential Policy Interventions

This section of the report presents a number of potential policy interventions drawn up in the light of our findings from the literature review and interviews and from our analysis of cost structures and of key influences on the operating environment. The section is divided into two subsections dealing with the promotion of car clubs and car sharing respectively.

5.1 To Encourage Car Clubs

5.1.1 Direct financial support or other assistance for one or more car clubs

The main idea here is to create ‘flagship’ clubs whose success could then be used in future publicity for the concept. However it might also create an opportunity to learn from the experience gained.

A particularly important question is whether the support should be directed towards an existing scheme or a new one. New schemes may be seen as more in need of financial support than established ones because of the cash-flow problems they are bound to experience during the initial stages. The contrary view is that, among new start-ups, there are bound to be a significant proportion of schemes which are simply not viable in the longer term and that it is wiser to support schemes that have managed to survive the traumas of an unassisted birth. It would generally be accepted that additional support for an existing club which can demonstrate a need for such support and can indicate how it would benefit from such support would be less risky than equivalent support for an entirely new club.

It is at this point perhaps worth sounding a warning note about providing temporary subsidies. There is always the risk that the existence of the subsidy will result in the adoption of equipment, procedures and pricing structures which would not be viable once the subsidy is withdrawn. Also, the attention of the scheme organisers may become diverted from the task of running the scheme and towards winning a subsidy. This problem may be particularly relevant in respect of new schemes where there is obviously a risk that attention becomes focussed on designing a scheme which will attract a subsidy rather than on one which will be sustainable in the longer term.

If it is nevertheless decided to pursue the option of providing financial support for one or more car clubs, the next question to be addressed is how to select the club(s). One approach would be to decide on the type(s) of scheme to be supported and then seek candidate(s) which most nearly meet that description. Our preferred variant on this approach would be to decide on the criteria to be met, announce these to existing and potential operators and invite requests for support. Applicants would be required to indicate the level of support they require and the objectives they would expect to meet if it were provided. They would also be asked to provide a business plan indicating their prospects for continued financial viability beyond the period for which support is requested.

In allocating the funds it would be important to take advice from organisations who are knowledgeable in the field and to avoid spreading support too thinly. This latter point is particularly important if the intention is to create flagship schemes.

In selecting clubs to be supported it is important to be clear about the relative importance of different objectives of the exercise. For example:

- *If it were to select the club(s) most likely to succeed*, there would be reason to select one of the most promising of the existing schemes and/or one which serves a middle class population in a densely populated city with a shortage of parking spaces and a very supportive local authority and public transport operator.
- *If it were to select the club(s) most likely to be relevant to growth areas for the concept*, it might be best to select one in a new high-density development.
- *If it were to select club(s) which, although not assured of success, would provide the most interesting lessons for the future*, it might be useful to select a combination of schemes which cover a range of approaches (eg high-tech v. low tech, low cost v. premium service) or which address particularly important market niches (eg rural area, ethnic minority, urban poor).

5.1.2 Sponsorship of third parties to provide assistance, advice and services for existing or nascent car clubs

Sponsorship of third parties to provide professional advice/assistance and specialist services/products might overcome some of the problems associated with direct financial support for scheme organisers but might tend to stifle innovation. It is suggested by some that it would risk creating an orthodoxy in an area where, the greatest successes have been associated with individual commitment and enthusiasm of the kind that is more likely to come from individual scheme organisers. Nevertheless, it is clear that would-be organisers of car clubs would benefit from wider availability of advice and assistance during the crucial period of setting up a new club and that clubs can benefit from easy access to products services and advice. It is also clear that such advice should be of the highest standard.

If support is to be provided via third parties, the question becomes how to target their contribution. One option would be to consult widely and then specify the products, services or assistance required and put the tasks out to tender. Another would be to hold a competition between potential providers, inviting them to come forward with their own proposals for the provision of products, services, advice and assistance. The competitors would be required to demonstrate that they had a good track record, were properly equipped and that their proposal would yield real benefits. They might also be asked to indicate the criteria against which they would want their contribution to be judged.

The following list indicates the kind of initiatives which might be put out to tender or which might come forward as suggestions if a competition were to be held.

- Provision of an insurance package – ideally one which does not effectively rule out participation by people under 23 years of age.
- Preparation of guidance on the establishment of car club parking stations in different types of location (guidance already exists on the design of such features, the continuing need is rather for guidance on the processes by which space for such facilities can be obtained).
- Provision of suitable booking/accounting software (although in fact the view of practitioners is that adequate systems are already available).

- Preparation of a guide for property developers and managers on how to organise a car club within a new development (CCSN have already started work on this).
- Preparation of a guide for local authorities on the development of a strategy for promoting car clubs (this is further discussed in section 5.1.5).
- Provision to scheme organisers of best practice advice on the choice of vehicles, access technology, station locations, booking and accounting systems, insurance (advice is already available from CCSN, this advice might be placed on the DTLR website as is current advice on travel plans).
- Preparation of publicity material for use by scheme organisers (some such material is already available from CCSN, there may be a case for extending the range of material available).
- Provision of access to a network of people who have direct experience of dealing with the problems which occur when seeking to set up a car club (this is already provided by CCSN).
- Provision of assistance to an organisation wishing to establish a car club in a particular type of community (CCSN's existing guidance might be extended to include particular advice for organisers wishing to establish schemes in particular types of community - see above for list of some potential communities).
- Provision of training courses for would-be scheme organisers.

5.1.3 Increased Publicity for the concept of car clubs

It is clear that most members of the public are not aware what a car club is or how it might benefit them. This lack of understanding is a serious problem for people seeking to establish a new club or expand an existing one.

Initial publicity should stress the benefits that car clubs can bring to members. The concept of car clubs as part of a multi-modal lifestyle – using public transport, taxis, cars, bicycles or car club cars as appropriate, would be emphasised. The environmental benefits should be mentioned but, given the lack of evidence of the success of efforts to change behaviour by appeals to people's consciences, should not be the main theme. Indeed, it has been suggested that it would be wise to disassociate car clubs from their current 'green' image.

Initial publicity could include use of TV documentaries drawing on the success of existing schemes in Europe (and in the UK when convincing evidence becomes available), press briefings and 'placement' of the concept into TV/radio soaps.

The initial publicity should be aimed at consciousness-raising. Later phases should put more emphasis on explaining how to go about joining/forming a car club and should include contact details for those wishing to pursue the idea. Once a scheme has been established in a particular community, the nature and purpose of the publicity would change, with emphasis being placed on what is available locally. The preferred media would also change to the local press, posters and leaflets. One other way to advertise a local club is to ensure that the parking station and fleet of vehicles are very visible (although this may raise security issues and may not suit all clientele).

One issue to consider in designing the publicity is whether it should be general or whether it should be designed to appeal to particular target groups. Advertising professionals would advise the latter approach but this raises the question of who the

target population might be. Once a scheme is established the answer may be self evident but prior to that it will be necessary to consider the trade-off, highlighted in section 3.4, between targeting the communities most likely to respond and those most whose participation would bring greatest benefits. In which context we note that, since the tangible benefits of car clubs are greatest for those who do not currently own a car, publicity is likely to be most successful among non car owners and that this could adversely affect mode split.

5.1.4 Encourage greater involvement by the private sector in the organisation of car clubs

The involvement of more car suppliers, software suppliers, consultancies, service providers and hire-car companies in servicing the car club sector could be encouraged in various ways. For example:

- the opportunities could be publicised through professional and bureaucratic channels;
- a wider range of organisations could be included on tender lists; and
- tenders might be awarded to newcomers in preference to equivalent established operators.

Extra competition should result in efficiency gains but is not without risk. Award of a contract to a newcomer who did not have real knowledge of the issues, or was not fully committed to the success of the exercise could result in problems. More generally, if the market failed to expand, some of the existing operators who have built up an expertise in the area might find their margins so squeezed that it becomes impossible for them to continue serving the sector – the net effect could be the opposite of that intended! This point is further addressed in section 5.1.8.

5.1.5 Working with local authorities to bring about initiatives to favour car clubs

As has recently been demonstrated in Bristol, close working between car club promoters and local authorities can be very effective. Local authorities can help to broker support from local organisations – particularly public transport operators and taxi companies. They may be able, through their own funding sources or those provided by external bodies such as the European Community and various Challenge Funds, to provide resources to support local car clubs. They have the power to influence key aspects of the environment in which car clubs operate – residential densities and parking provision. They may be prepared to use their powers to influence property developers to include provision for car clubs in new developments. They may be able to offer prime locations as parking stations, to offer preferential access to general parking facilities or to adopt a favourable interpretation of the exemptions to workplace parking levy charges.

The list could be extended but the point is already made, local authorities can do a great deal to assist car clubs. But will they choose to do so? Two policy interventions suggest themselves; the first is to investigate and document the range of assistance that a local authority might provide, exploring the powers and tools already at their disposal and identifying any that might usefully be added. The second is to work with one or more local authorities to develop a model strategy to promote car clubs.

5.1.6 Working with other agencies to promote the development of car clubs

Examples might include:

- Working with public transport operators to persuade them of the benefits to be gained by teaming up with car club organisers to provide incentives such as discounted fares for car club members, discounted car club membership for regular users of public transport, or a free public transport pass for car club members who sell their own car). Evidence from Switzerland, Germany and, more recently, Bristol, might be persuasive here.
- Working with insurance companies to overcome the current barriers to membership of car clubs by young people. If successful this initiative could lead to social inclusion benefits but it must be admitted that the prospects are limited unless additional funds are available (there are a number of ways in which such funds might be used to make the premiums affordable or defray the risk to the insurers).
- Working with property development/management companies to promote the establishment of car clubs in new developments. The prospects for this type of scheme are bright and the potential benefits in terms of traffic reduction and accessibility benefits are clear. (Some work is already underway on this topic).
- Working with major employers, particularly, those based at out-of-town campuses or employment parks, to promote the establishment of car clubs at their sites. The prospects for this type of scheme are quite bright and the potential benefits in terms of traffic reduction and accessibility benefits are clear.
- Working with rural agencies (The Countryside Agency, National Park Authorities, rural County Councils and Tourist Boards) to promote car clubs as a contribution to the solution of rural accessibility problems or as a means of encouraging tourists without cars. Note that CCSN are already pursuing a similar initiative, funded by the Countryside Agency.
- Working with those sections of DTLR responsible for preparing Planning Guidance Notes and guidance on the preparation of Local Transport Plans to ensure that the potential role of car clubs is recognised and that the need for a strategic policy is required to encourage them.

5.1.7 Designation of car clubs as a form of public transport

Thus making them eligible for tax advantages such as partial rebate of fuel duty and exemption from VAT on charges to customers. Designation might also open doors to sources of subsidy and make car clubs more obvious recipients of support from Challenge funds.

Such designation would, however, be controversial. There are those who regard the taxation advantages enjoyed by conventional public transport as too precious to share with other modes. They would see any extension of such privileges to car clubs as anathema. On the other hand, a dramatic measure such as this might have a great effect on the perception of car clubs by local authorities. They might come to see car clubs as a legitimate form of public transport and more readily consider them as candidates for support and encouragement.

5.1.8 Development of analytic capability to assess the likely impact of measures to promote car clubs

It is clear that in the success, or otherwise, of car clubs is largely determined by ‘soft’ factors which are not easily quantified. The importance of the enthusiasm, skill and commitment of the local organiser is a particularly obvious example of this. It is therefore very difficult to predict how successful a particular scheme will be – although, with the accumulation of experience, organisations and individuals working in the field claim that they are better placed to make such predictions than they were even a few years ago.

Experience is useful but is not yet widespread within the consultancy community. There may therefore be a role for a toolkit which could be used by others to explore the potential impacts and the receptiveness of the target population. Particular examples might include:

- a standardised market research tool designed to assess levels of interest and possible take up. This would probably involve a questionnaire and/or methods of profiling the population; and
- the publication of rules of thumb to determine minimum the population sizes/densities required for successful operation of car clubs.

Expertise in the planning and operation of car clubs is invaluable but is currently limited to a relatively small number of individuals. If there is to be an increase in activity in this area, it will be important to nurture and disseminate this expertise. One idea, mentioned in section 5.1.2, is to provide advice openly via the Web, another would be to sponsor the development of tools as described above. One should, however, consider whether the wider availability of second-hand expertise would actually enhance standards in the industry or whether it might undermine the viability of existing practitioners.

5.2 To Encourage Car Sharing

5.2.1 Increased general assistance for the organisers of car sharing schemes

The general aim would be to encourage the spread of good practice. Assistance is, of course, already available to organisers of car sharing schemes courtesy of specialist consultants and under initiatives such as Travel Plans. We are led to believe, however, that there is potential to increase the amount and range of assistance provided. There may be a role for government in promoting the use of relevant products and services. This might be achieved in various ways. For example through:

- provision of effective matching software;
- testing and approval (“kitemarking”) of matching software;
- design and distribution of publicity material;
- design and distribution of advice packs for would-be organisers;
- design and provision of training courses for would-be organisers; and
- provision of complete car sharing scheme packages with all administration provided by a specialist outside body (but note that this concept may sometimes conflict with the conventional wisdom which stresses the importance of commitment and involvement by the host organisation).

Further investigation is required before it is possible to begin to specify what improvements might be appropriate

The products and services mentioned in this section might help to increase the membership of organised car sharing schemes but would have no effect on ad hoc car sharing between friends and relatives and could not easily be targeted on particular types of scheme (see below).

5.2.2 Provision of financial support and other assistance to selected car sharing schemes

In addition to the general assistance to scheme organisers mentioned above there may be a case for more targeted assistance to selected schemes. This approach might promote the establishment of schemes to meet needs that would not otherwise be met and/or might help to build up ‘flagship’ demonstration schemes. The issues mentioned in section 5.1.1 in respect of the choice between new and existing car clubs, and the potentially distorting influence of financial subsidy, apply also to car sharing schemes. But, given the lower set-up costs involved, may be less important for car sharing schemes than for car clubs.

The assistance might be targeted via a ‘top-down’ rational assessment of need and potential or via the promotion of individual initiative via a competition whereby would-be organisers are invited to indicate the assistance they require and how, if they receive it, they would meet designated objectives. The objectives could be set so as to encourage schemes which produced the best results in terms of the environment, traffic, accessibility and social inclusion.

Examples of proposals which might be favourably received could include:

- establishment of multi-employer schemes;
- establishment of schemes in areas subject to a workplace parking levy, a road user charging scheme or a significant reduction in parking supply (eg associated with introduction of a Controlled Parking Zone or Home Zone);
- establishment of schemes in corridors with HOV facilities;
- establishment of neighbourhood schemes in rural areas where conventional public transport is being withdrawn;
- establishment of an internet-based national database to facilitate sharing for ad hoc long distance journeys; and
- a scheme whereby an employer allocates all his parking spaces to car sharers.

A competition approach would encourage the involvement of the private sector (eg consultancies, software suppliers and service providers) in the organisation of car sharing schemes. It might also attract and encourage employers to set up schemes among their own employees – although experience suggests that provision of a subsidy may attract some organisations who are not fully committed to the concept – and that, without full commitment, failure is inevitable.

5.2.3 Publicity to promote car sharing and/or car sharing schemes

Most people have experienced ad hoc car sharing or lift-giving but may be unfamiliar with the concept of organised car sharing schemes. A publicity campaign which

simply urged people to share cars or which sought to suggest that there were unexpected benefits from so doing is unlikely to be very effective except during fuel shortages.

It might, however, be useful to use targeted publicity to familiarise potential scheme organisers or sponsors with the concept of organised car sharing schemes and to emphasise the benefits of establishing such a scheme. Employers might thus be targeted with leaflets outlining benefits such as the reduced need for employee parking spaces, access to a wider workforce, enhanced corporate identity and improved employee welfare. This does, of course, already happen as part of Green Travel Initiatives but there may be a case for widening its scope.

Further investigation is required before specifying what improvements might be appropriate.

5.2.4 Working with local and national highway authorities to introduce initiatives which would specifically favour car sharing

Examples might include:

- introduction of more High Occupancy Vehicle (HOV) lanes
- introduction of High Occupancy Toll (HOT) lanes
- designation of key links or areas of a network as being exclusively for HOV's
- designation of some parking spaces as being for HOV's only

Experience suggests that such measures can be a very effective means of increasing car occupancies. It is clear that, in so doing, they reduce car traffic, but it is likely that, other things being equal, they will abstract some patronage from public transport. If the introduction of such initiatives could be negotiated and carefully monitored, the results could prove very attractive to highway authorities seeking to make better use of their network and/or meet traffic reduction targets.

The measures would encourage car sharing irrespective of whether the sharers are friends, colleagues or relatives or whether they belong to an organised scheme. It is therefore difficult to target the social impact except by choosing locations or links which are used by the groups one wishes to target. For example, if one wished to maximise the reduction in car use, one might target links currently used by people with high car ownership.

It must be recognised that the introduction of HOV lanes is not generally popular with motorists – although there are indications that the protests die away if the scheme can be designed to provide obvious benefits. The problems of enforcement can not be ignored but, again, the evidence is that they are not insurmountable.

5.2.5 Working with other agencies to develop initiatives which would encourage car sharing

A number of examples of this are already in place but some additional effort might be worthwhile. Examples include:

- Working with the sections of DTLR responsible for production of guidance on Local Transport Plans and Travel Plans in order to ensure that the guidance on the role and practice of car sharing is as good as it can be.
- Working with Local Authorities to develop a strategy to encourage car sharing in their area.
- Working with DfES to promote car sharing for the school run. A recent initiative has already resulted in software for sharing the school run. The net effect on car usage is probably in the desired direction but there is obviously a risk that such software might result in lifts being given to children who previously walked.
- Working with the NHS and local hospitals in respect of shared transport to hospitals, and other outpatient facilities (a re-invigorated hospital car scheme?).
- Working with rural agencies (The Countryside Agency, National Park Authorities and rural County Councils) to promote on the use of car sharing to improve non car owners' access to facilities in rural areas.
- Working with rural agencies (Tourist Boards, The Countryside Agency, National Park Authorities and rural County Councils) to promote car sharing among visitors to rural areas.

5.2.6 Development of analytic capability to assess the likely impact of measures to promote car sharing

As with car clubs, the success of organised car sharing schemes is largely determined by factors which are not easily quantified and it is therefore difficult to predict how successful a particular scheme will be. Car sharing is not a new concept and, as one might expect, considerable effort has already been devoted to the development of tools with which to explore the potential impacts of car sharing in a given area. It is generally agreed, however, that the existing tools are far from adequate. It is suggested that it would be useful to develop three new tools:

- a standardised market research tool designed to assess levels of interest and possible take up. This would probably involve a questionnaire and/or methods of profiling the population;
- a tool for analysing the composition of the traffic on links, or at destinations, where HOV facilities might be provided (this would probably involve a development of 'select link analysis'); and
- rules of thumb to determine minimum the population sizes/densities required for successful operation of organised car sharing schemes.

6. Preliminary Assessment of Potential Interventions

6.1 Criteria for selecting interventions for further investigation

A car club or car sharing scheme would clearly be regarded as successful if it:

- *attracts a large number of users;*
- *is (or soon becomes) financially self-supporting;*
- *reduces road traffic; and*
- *provides enhanced accessibility, particularly for disadvantaged groups.*

Section 3.4 identified the circumstances in which one might expect these criteria to be met, or be in conflict. It is clear that the accessibility criterion is likely to conflict with the financial-sustainability and travel-reduction criteria and that a political decision will have to be made on their relative importance. The conflict between the accessibility and traffic reduction criteria is fundamental but that between accessibility and financial sustainability may be tractable. One approach, which recognises that enhanced accessibility may not be achieved without continuing subsidy, is to combine the accessibility and financial criteria as “*to provide enhanced accessibility, particularly for disadvantaged groups, more cost-effectively than could be done otherwise*”.

Additional criteria that should be considered when selecting topics for further investigation:

- *the prospects for widespread application or emulation;*
- *the fit with other aspects of government policy (e.g. social inclusion, urban renewal, enhanced rural economy, provision of IT, wider access to education and health);*
- *the value of lessons learned or of material produced; and*
- *a desire to avoid overlap.*

6.2 Discussion of candidates for further investigation

Applying these criteria to the potential interventions outlined in Section 5, we identified 34 separate interventions as worthy of being considered further in Phase Three of the project. The list included 10 proposals to sponsor flagship schemes (6 relating to car clubs and 4 to organised car sharing schemes), and 24 proposals relating to the provision of advice or the development of strategy/procedures. These proposals were outlined and evaluated in an Interim Report to the Steering Group.

The Steering Group expressed interest in 14 of these proposals and added 3 additional proposals of its own. The Steering group considered that these 17 proposals fell into six themes:

1. Investigating the scope for involvement of planners and developers in the establishment of car clubs
2. Investigating the scope for working with property developers/managers and planners to promote incorporation of car clubs into new developments.
3. Investigation of the possibility of encouraging car sharing and/or car clubs among ethnic minority groups

4. Investigating the scope for establishment of car sharing and/or car clubs in rural areas
5. Investigating the scope for solving the problem of insurance cover for car clubs and car sharing schemes
6. Investigation of the role of Internet-based car sharing matching services

We were asked to provide further guidance on what work could be done under each of these six themes within Phase Three of the project. This guidance, originally provided in a Supplementary Report, is presented below.

6.2.1 Investigating the scope for involvement of planners and developers in the establishment of car clubs

The justification for further work in this area is based on the following observations:

- There is greater scope to establish car clubs at new developments than at existing ones (*It is important to locate car-club parking stations close to end users and access points for other modes – this is more easily achieved by planning for them in advance than by attempting to fit them in later. If a car club can be in place before new residents/tenants move in, it is easier to persuade them to experiment with a new mode (e.g. a car club) because they will not yet have developed a routine or lifestyle based on car use in the new locality.*)
- The encouragement of a multi-modal lifestyle among residents of new developments would help in the pursuance of targets for traffic reduction and increased use of public transport. (*Potential environmental benefits.*)
- Planners are keen to find ways to persuade developers to reduce the provision of parking spaces (*Planning policies favour low car development, but it can be difficult to persuade developers to reduce the provision of parking space.*)
- Existing planning guidance (e.g. PPG3, PPG13) emphasises the benefits of high density housing developments and the government’s targets for development of housing on brownfield sites will necessitate high-density development of such sites. Car clubs might offer a means by which to achieve this aim (*reference to car clubs in supplementary planning guidance notes, or even in LTPs, might be a very effective way to publicise the concept.*)
- Developers could benefit from a policy which reduced the need for on-site provision of parking spaces. (*High densities produce bigger profits and the provision of parking spaces in high density developments is expensive. However, other things being equal, limited provision of parking space reduces the attractiveness of the development to purchasers. Provision of a car club (with first year membership fees already paid) might be seen as a positive feature and might be marketed to offset any perceived shortage of parking spaces. Advance sales of units within the BedZED development suggest that the provision of a car club can indeed offset the effect of limited parking provision.*)
- Car clubs might be organised by existing property management companies (*Such companies already supply other services to residents/tenants in new developments, provision of a car club might be seen as a natural extension to their role. Section 106 agreements might provide a means of securing the necessary infrastructure and services – viz recent experience in Southwark.*)
- Car clubs are most likely to be successful in high density mixed developments where parking is in short supply (*High densities yield the critical mass of potential users which is necessary for efficient fleet utilisation. Mixed developments yield*

heterogeneous trip patterns which also help to ensure good fleet utilisation. Shortage of parking is a major incentive for people to join a car club).

- New high-density residential developments tend to attract young, affluent, single residents (*this profile is ideally suited to the car club concept*).
- The success of a flagship car club in a prestigious new development could encourage other developers to seek to adopt the idea and might also help to improve the image of car clubs as features of a desirable lifestyle. (*Potential publicity benefits, developers would want to help to spread the word*).

Potential reasons for not wishing to pursue work in this area in Phase III of the project include:

- The absence of an obvious rural dimension (*A new development in a rural area, even if at high density, would not offer the same potential – but see below*).
- To the extent that occupiers of new developments are likely to be of above average income and not suffering from social exclusion, the investment of public funds in this type of scheme raises equity issues. (*Further work should include an assessment of the potential application of the concept among residents of new housing designed for low income people. It should also investigate whether, given the concern over equity, the benefits to society are likely to be sufficiently great to warrant public investment in the promotion of such schemes*).

These points notwithstanding, we suggested that considerable scope existed to pursue this topic area further within Phase III of the project. We identified the following as potential areas for further work:

- 1 *Investigating the scope for working with property developers/managers and planners to promote incorporation of car clubs into new developments.*** Work on this topic would need to consider a range of issues including: development control conditions, supplementary planning guidance, planning agreements and guarantees; the ongoing involvement of property management companies; funding arrangements; and the number, location and timing of potential sites. The work would build on the Good Practice Guide for developers and planners contemplating the incorporation of car clubs into new low-car developments which the Regional Assembly for Yorkshire and the Humber have recently commissioned from CCSN. (The Guide is due to be issued as part of the Regional Assembly's Regional Planning Guidance in January 2002). The Phase III work would involve discussion with experienced scheme organisers, developers and planners and with occupiers of new residential and mixed developments.
- 2 *Investigating the scope for sponsorship of car club(s) at new residential or mixed developments with good public transport links and restricted parking.*** Work on this topic would be closely related to that proposed for topic 1 but with an emphasis on the identification of the added value to be gained by sponsoring one or more schemes and on the identification of candidate schemes to receive such support. Considerable advantage might be gained by 'adopting' one of the new developments where car clubs are already being planned (e.g. BedZED, Grand Union Village, Southwark, or Deptford). Alternatively, one might try to find a site in a rural area. (See Section 5.1.1 for a discussion of the relative merits of sponsoring new and existing schemes).

The Steering group suggested that topics involving the involvement of public transport operators and local authorities be considered under the same heading as those involving planners/developers. The justification for further work in this area is based on the following observations:

- Good public transport appears to be one of the pre-requisites for a successful car club. (*Swiss evidence of success of discounted public transport fares for car club members. Importance of public transport as a back-up service*).
- A successful car club can result in increased use of public transport and so be in the interests of public transport operators. (*Car clubs as part of a multi-modal lifestyle. Recognition of this by Swiss public transport operators and by First Bristol. Need to convince sceptical public transport operators that this is in fact the case – tendency of some people to see car clubs as in competition with public transport*).
- There appears to be considerable scope for a mutually beneficial relationship between car clubs and public transport in the UK (*First Bristol are showing the way but is this well enough known? Which other companies might be interested?*).
- The active and enthusiastic involvement of local authorities in the establishment of car clubs can be very beneficial. In addition to financial support, a local authority may be able to facilitate the provision of good locations for car parking stations, contacts with local organisations and transport suppliers, technical support with planning matters, access to data with which to assess the potential market, coordination with other local initiatives and planning policies, publicity, profile and credibility. (*Past experience suggests that active involvement of this kind can be more important than financial support*).

Work in this area could have two foci. We therefore proposed topics 3 and 4:

- 3 *Examine the case for sponsorship of a car club which can demonstrate that it has good public transport, restricted parking, and the active involvement of a local authority and public transport operator.*** A key question would be whether to provide further support for a scheme such as Bristol which can already demonstrate these features or whether to sponsor a new scheme. (Again, see Section 5.1.1 for pros and cons)
- 4 *Dissemination of information indicating the benefits that car clubs can offer to public transport operators.*** This topic would involve working with public transport operators (notably, but not exclusively, First Bristol), experienced car club operators, PTE's and local authority personnel involved in the promotion of public transport. We note that the Steering Group were minded to consider this topic at a later stage but we would suggest that it could have immediate value.

6.2.2 *Investigating the scope for involvement of employers in the establishment of car clubs and/or car sharing schemes*

The justification for further work in this area is based on the observations that:

- People tend to be nervous of getting involved in schemes organised by bodies of whom they have not previously heard. The involvement of their employer lends credibility and offers some assurance that, if things go wrong, they may have some comeback. *This phenomenon has been noted in the context of car sharing schemes and may also apply to employer-organised car clubs.*
- People tend to be nervous of sharing lifts with strangers. *A fellow employee, even one they have not previously met, is not likely to be regarded as a complete*

stranger. If a lift is arranged through work, it should be possible to arrange to meet the driver/passenger in advance before committing to a long-term arrangement.

- Active and enthusiastic involvement of an employer is known to be an important feature of the most successful car sharing schemes. Classic examples of the ways in which an employer can contribute to the success of a scheme include: the provision of an on-site organiser; permission to use of internal communications networks and databases; provision of time and space for sharers to meet during work hours; provision of incentives such as preferential access to parking spaces on site; and an indulgent attitude to occasional lateness due to a failed lift. While there is little direct evidence to suggest that car clubs benefit from the active involvement of employers, there is good reason to expect this to be the case (some recent evidence from Sweden).
- It is well established that employers can sometimes benefit from the encouragement of car sharing among their employees (reduced parking requirement, compliance with planning requirements, access to larger pool of employees – particularly after a relocation of premises, enhanced corporate image). *Where such benefits have been demonstrated, some employers have been keen to set up a car sharing scheme for their employees.*
- Despite the shortage of direct evidence, it is clearly possible argue that employers should benefit from the establishment of car clubs based on their work place (means of offsetting the cost of a pool of vehicles required for business use? reduced requirement for employee parking? access to larger pool of employees? employee welfare enhanced by providing them with access to a pool of vehicles for private use? enhanced corporate image?). *If these benefits can be demonstrated, some employers are likely to be interested in pursuing the concept but would require expert advice and assistance.*
- The introduction of a workplace parking levy might encourage employers and employees to seek ways of reducing their requirement for parking spaces. It might therefore provide a good stimulus to the development of employer-based car sharing schemes and, depending on the interpretation of the regulations, of employer-based car clubs.
- Out-of-town sites are particularly attractive for organised car sharing because of the type of trip patterns they engender and because they often promote a stronger sense of common identity than an equivalent city-centre site. This latter characteristic may also make them attractive as potential locations for car clubs but is unlikely to overcome the reduced opportunity for round-the-clock utilisation of club vehicles.

We identified five potential topics which might be pursued in Phase III of the project:

- 5 Sponsorship of a car club designed for employees of a major employer.** We believe that sponsorship of a car club at an out-of-town site well served by public transport would yield particularly useful lessons, but we see value in relaxing these constraints in order to extend the net. *Work during Phase III would seek to establish the prospects for employer-based car clubs at different types of locations, to identify potential sites, to establish the type and level of support that might be needed, to gauge the level of interest and estimate potential impacts. The work would involve discussions with employers, site managers, and experienced scheme organisers. A particular issue to be considered would be whether to seek to build on the success of an existing scheme (such as the*

Cranfield Campus Car scheme) or whether to seek to establish a new scheme which might have greater potential for success and emulation (One particularly interesting suggestion is to seek to establish a club based at a hospital campus where there is a clear need for a pool of cars for official use during work hours, a large workforce on low-medium incomes who might be very interested in getting access to a car for private use, a sense of community and, generally, a proactive employer)

- 6 Sponsorship of a car club at the premises of major employer in area with good public transport links and where introduction of workplace parking levy is expected.** *This topic could have considerable potential if and when the widespread introduction of workplace parking levies comes about. Although there is every reason to complete the necessary research in advance of its being required, we understand that the Steering Group do not want to pursue this issue at the current stage. We therefore did not consider it further.*
- 7 Sponsorship of a car sharing scheme at an out-of-town employment site.** *The potential role of car sharing at such sites has been known for many years. A number of schemes were established in the 1970s and 1980s and several more are now being established in the context of Green Travel Plan initiatives. (The Pfizer scheme is a good example). Given the existence of these schemes it is not clear that there is a need to sponsor any new schemes to fulfil a similar role. There may however be a case for bringing together the experience from such schemes to provide advice and encouragement for firms interested in doing likewise.*
- 8 Sponsorship of a car sharing scheme at the premises of major employer in area where introduction of workplace parking levy is expected.** *(see comment on topic 6 above, but note that, unlike the car club case, the potential contribution to car sharing is not dependent on a legal argument over the definition of what constitutes an employee's car)*
- 9 Sponsorship of a car sharing scheme among employees of a group of adjacent employers.** *There are many examples of employer-based car sharing schemes, but most are related to one large employer. It has long been recognised that, if several adjacent employers could combine forces, the operating costs might be shared and the potential for compatible matches could be significantly increased. Previous attempts to achieve this desirable outcome have not been very successful. This may be because the potential sharers are less happy about sharing with people from other firms, because the logistics are significantly more complicated or because the organisational task is more difficult. It is suggested that, against a background of increased pressure on parking space and employer awareness of "green" transport initiatives and planning policies, the time may be ripe for an attempt to establish a flagship car sharing scheme among a group of adjacent employers. *If this topic were pursued in Phase III, the aim would be to identify the best type of location (city-centre/out-of-town, size of pool, type of organisations, level of public transport service, parking availability, etc), to identify some candidate sites, to determine the type and level of assistance required, to establish levels of interest among potential participants and estimate likely impacts. This would involve discussion with local authorities, experienced car sharing scheme organisers, employers and employees.**

6.2.3 Investigation of the possibility of encouraging car sharing and/or car clubs among ethnic minority groups

The justification for further work in this area is based on the following observations:

- Ethnic communities tend to have strong internal networks – particularly through their religious organisations, this may make it easier to organise co-operative ventures such as organised car sharing or car clubs in such communities.
- Some members of ethnic groups (e.g. Asian Women) are reluctant to use public transport and, if they have no car, their mobility may be thereby reduced. Car sharing or car clubs may be able to alleviate this.

There are, however, reasons to be sceptical about the prospects for success for such schemes within ethnic communities:

- The existing networks may already provide access to informal car sharing at a level commensurate with needs and aspirations of community members. Any attempt to supplement existing arrangements may be unnecessary and may perhaps be regarded as patronising.
- It may not be easy to persuade community leaders that they have anything to gain from the initiative and there may be some suspicion of government motives in wishing to become involved in private transport arrangements. Without the active support of community leaders, progress will be difficult or impossible.

The Steering Group suggested that consideration should be given to further work relating to car sharing schemes in such communities. We therefore identified two potential topics which might be pursued in Phase III of the project:

10 ***Sponsorship of car clubs within ethnic minority communities.** Work in Phase III would seek to identify communities where this might be done, establish the steps that would need to be followed and the resources required, consult with community members to establish levels of interest and estimate likely impacts. Discussions would be held with local community liaison officers, community representatives and experienced car club organisers.*

11 ***Sponsorship of organised car sharing within ethnic minority communities.** The work in Phase III would be as specified for topic 10 above. Discussions would be held with local community liaison officers and community representatives.*

6.2.4 Investigating the scope for establishment of car sharing and/or car clubs in rural areas

The justification for further work in this area is based on the observations that:

- Encouragement of car sharing and car clubs might be more cost-effective than conventional public transport as a means of delivering accessibility in rural areas.
- The withdrawal of conventional public transport services might be a good time to introduce a car club or organised car sharing scheme. *Obligation on local authority to provide some sort of replacement service. Eligibility for Rural Challenge funds. Ready market of ex-public transport users looking for an alternative means of access.*
- Car sharing and car clubs might complement other rural transport initiatives (e.g. social car schemes, shared taxis, flexible-route buses).
- The organisation of rural car sharing and car clubs might be linked to existing networks (which tend to be strong in rural areas).
- The organisation of rural car sharing and car clubs might be linked to ongoing IT access initiatives.

- Car sharing or car clubs might be a cost-effective means of offering mobility to car-less visitors to rural areas. (*Depressed state of rural tourism following Foot and Mouth Epidemic – need for help. The UK’s right-hand-drive rule can be daunting to some potential tourists – a lift giving scheme might appeal to them*).

There are, however, several reasons to be cautious about the prospects for the success of attempts to encourage organised car sharing or car clubs in rural areas:

- Low population densities make it difficult to achieve the critical mass within a relatively small area which is required for a viable car club.
- Given the poor level of public transport and the low population densities, it may be difficult for car club members to access the car and secure storage may not be easy to achieve. (*Potential solutions include appointing a “keeper” to look after the vehicle and deliver/collect it from users*).
- Informal car sharing is already widespread in rural areas and there may be no scope for additional benefit from an organised car sharing scheme.
- To the extent that organised car sharing and/or car clubs succeed in providing additional accessibility, this is likely to imply additional car mileage (*environmental issue*).
- Car clubs are of little use to non-drivers, indeed if a car club provides increased mobility for non-car owning drivers, this may lead to reduced custom for local facilities and if this leads to closure or rationalisation of such facilities, non drivers will actually be worse off.

The conditions which offer the best prospects for car clubs and car sharing are set out in Section 3.4. It is clear from those sections, and from the points outlined above, that the prospects for car clubs and car sharing in rural areas are not particularly bright. Having said that, the best prospects for the establishment of rural car clubs will be in areas where:

- there is a substantial population base within a relatively small area (e.g. a market town);
- the journey patterns are diverse (a mix of educational, work-related, shopping and social trips which result in a relatively un-peaked pattern of demand for the cars);
- the perceived advantages of, or need for, personal car ownership are relatively low (perhaps due to the existence of good, well advertised, public transport services, a well developed informal car sharing network, the availability of local facilities and/or home delivery services, substantial opportunities for home-working, or the existence of parking problems - such as might be found in a historic town);
- there is a well developed sense of community with informal networks in place;
- there is a groundswell of interest in the car club concept (and people on the ground who have the energy, contacts and talents to help it to happen);
- something is causing people to re-assess their transport arrangements (e.g. changed employment patterns, change in availability of local facilities, introduction of parking restrictions, new housing bringing in a substantial population of incomers);
- the local authority and public transport operators are supportive.

Similarly, the best prospects for the establishment of rural car sharing schemes will be in areas where:

- there are a substantial number of people making journeys from one relatively small area to another (e.g. shopping, education or health-related trips from a community without the relevant facilities to a nearby town which does, work trips by people in one community to a major employment site some distance away);
- car ownership is relatively low (perhaps due to parking difficulties or, more probably, to the presence in the population of a substantial number of low-income, young, elderly, or disabled people, or of car-less visitors);
- public transport provision is poor (or more specifically, does not serve the journeys for which car sharing is being considered);
- something is causing people to re-assess their transport arrangements (e.g. changed employment patterns, change in availability of local facilities, introduction of parking restrictions, reduced provision of public transport, new housing bringing in a substantial population of incomers);
- there is a well-developed sense of community or common interest;
- a high profile local organisation (e.g. the local authority or a major employer) is keen on the idea and is willing to put in the effort required to make it happen.

CCSN are currently examining the prospects for car clubs in rural areas on behalf of the Countryside Agency. The work will involve the establishment of sixteen pilot schemes which, between them, offer good prospects for success and yield important lessons for application elsewhere. The Agency intend that the schemes will be established in a range of types of area (e.g. peri-conurbation, peri-urban, small market town, tourist honey pot) and include a range of types of car club (e.g. community run, employer-led, rigid booking). A major criterion in the selection of pilots is that there should be a strong interest and enthusiasm for the idea from within the local community. The first four pilot schemes have recently been identified.

Our view was that, given the existence of the Countryside Agency contract, further work on car clubs in rural areas should not be given a high priority within the current project. Nevertheless, of the fourteen types of policy initiative discussed in Section 5, we considered that the following would be most applicable in rural areas:

- provision of financial support or other assistance for rural car sharing scheme(s) which offer good prospects of success and which might have widespread applicability;
- working with rural agencies to identify niches in which car clubs or car sharing might offer part of a cost-effective solution to rural accessibility problems for residents and visitors;
- identification of appropriate analytical tools to support the appraisal of proposals develop car clubs and car sharing schemes in rural areas.

Our proposals for further work during Phase III were therefore:

12 Sponsorship of new or expanded car sharing schemes in a rural neighbourhood where public transport is being withdrawn. Work on this topic within Phase III of the project would establish a procedure for identifying potential locations and for assessing the prospects for success at each such location. Advice would be provided on methods for estimating the size of the potential market, the value of the benefits to be obtained, the costs of establishing and running a car sharing scheme, and the prerequisites for success. A typical candidate site would be identified. Indicative cost estimates would be compared with the cost of providing accessibility via conventional public transport. The work would involve

discussions with rural agencies (e.g. National Park Authorities, Countryside Agency, rural County Council Officials), a synthesis of appropriate analytical methods, and interviews among potential users.

13 Working with rural agencies to identify opportunities to promote car sharing among visitors and non car owners in rural areas. Work on this topic within Phase III of the project would identify the circumstances (niches) in which car sharing might offer part of a cost-effective solution to rural accessibility problems. It would seek to estimate the size of the potential markets, to identify other components which would need to be in place, and to assess the potential costs and benefits of such schemes. The work would involve discussions with rural agencies (e.g. National Park Authorities, Countryside Agency, rural County Council Officials, Tourist Boards) and interviews/questionnaires among potential users.

14 Provide an assessment of 'gaps' in the work on rural car clubs being conducted under the Countryside Agency's Contract with CCSN. This topic is suggested as a means of overcoming the uncertainty which currently exists about the scope of the Countryside Agency project. It would seek to identify issues which are likely to be omitted from the CCSN work and would examine how best to fill any important gaps which became apparent. The work would involve discussions with CCSN and the Countryside Agency and the synthesis of progress reports and other documents produced by CCSN up to the end of January 2002.

15 Develop a framework for assessing the relative merits of competing proposals for developing car clubs and car sharing in rural areas. This topic would involve further development of the ideas and opinions expressed in this report and its predecessor together with advice on appropriate analytical techniques. The framework would facilitate the assessment of proposed interventions against the criteria outlined in Section 6.1.

6.2.5 Investigating the scope for solving the problem of insurance cover for car clubs and car sharing schemes

The justification for further work in this area is based on the following observations:

- Insurance companies see particular risks with car clubs in respect of accidents involving young or elderly drivers and theft, or attempted theft, of/from club cars parked at insecure locations. It is also suggested that they have a general concern about driving standards of people driving cars which do not belong to them. Insurance companies have not been persuaded that car clubs are an important enough market for them to warrant favourable treatment.
- CCSN have negotiated insurance terms for car clubs but the standard package does not include cover for young drivers (under 23) or elderly drivers (over 76). Claims are subject to significant excess charges and this leaves clubs exposed to uninsured risks.
- The cost of insurance is a significant part of the cost of operating a car club and the occurrence of a series of uninsured event could have serious repercussions for club finances.
- Insurance may be particularly difficult to obtain in the case of car clubs in deprived areas (this has serious implications for any attempt to establish clubs among socially excluded groups).
- A number of suggestions have been made as to how this problem might be overcome. Examples include: creation of a mutual re-insurance fund (funded by a levy on car clubs or with government assistance) to help clubs faced with uninsured

- losses; extending existing corporate insurance policies (for employee schemes), and government support (financial or moral) to persuade insurers to extend their cover of excluded groups.
- The insurance position in respect of car sharing was established in the late 1970s following government pressure (in the wake of the 1974 petrol crisis, government viewed car sharing as an energy saving measure and sought to remove obstacles to its growth). Although there is a restriction on the maximum reward that a driver can receive from a passenger (there must be no element of profit), most drivers are unaware of this and so it is hard to argue that it is a significant constraint on the growth of informal car sharing. It does, however, become an issue in social car schemes and in some variants of organised car sharing schemes and there is therefore a case for reviewing the situation.

We proposed one topic in this area:

16 Investigating the scope for solving the problem of insurance cover for car clubs and car sharing schemes. Phase III work on this topic would seek to establish the true extent of the problem for car clubs and of the potential problem for car sharers, identify a range of potential solutions to these problems and, for each solution, identify the people and organisations who would need to be involved, the role that would be required of government, the resource implications and the likely benefits. The work would involve discussion with car club organisers, insurance companies and ABI, and personnel from relevant government departments (DTLR, Inland Revenue?).

6.2.6 Investigation of the role of Internet-based car sharing matching services

The justification for further work in this area is based on the following observations:

- Few people can have failed to speculate that many travellers must be making long distance journeys between the same locations at about the same time and that, if only they knew of each other's existence, they could get together and reduce costs. This is the germ of the idea which, over the decades, has given rise to a variety of proposals for traveller-matching services.
- The Internet appears much better placed than any previous medium to support the provision of this kind of service.
- Several companies/individuals have produced software to support the matching of drivers and would-be passengers for one-off journeys. Several such services are now available via the Internet.
- A variant on the concept might be applied in rural areas (*the main problem for rural car-sharing is the low probability of finding two or more people wanting to make the same journey and if an internet service could encourage more people to provide details of their journeys, this problem might be partly overcome*).
- It has been suggested that, since such services appeal to a similar constituency to that of car clubs (non car owners needing access to a car for one-off journeys) there could be some mutual benefit in a linked service – e.g. via a single website or telephone number.

Potential drawbacks which might constrain the growth of this concept include:

- Travellers' reluctance to reveal details of their intended journey to strangers (*security/anonymity should be achievable, but if people **think** there is a security issue then there is one!*)

- Traveller's reluctance to commit to a long journey with a stranger (*Many drivers are reluctant to stop for a hitch-hiker, they may be even less inclined to give a lift to someone they have not even seen. Many people are afraid to hitch for lifts – they may be even less likely to accept a lift from someone who has obtained their details via the Internet*).

It can be asked whether the encouragement of this type of lift-giving is a legitimate use of public funds because:

- The main beneficiaries (young, computer-literate, non-car owners) are not a notably disadvantaged group. If they want this service, should they not be expected to pay the market price?
- There is no obvious environmental benefit to the community (*The main impact is likely to be reduced use of long distance public transport rather than reduced car traffic- indeed, since it provides an opportunity for a group of travellers to reduce the cost of a journey by car – it may generate car traffic*).

If there were to be work on this concept within Phase III of the project we suggested that it should be:

17 Internet-based car sharing matching services. The work would explore public attitudes to the concept (particularly the security issues), examine the possibility that it could overcome the insufficient-journeys problem which constrains car sharing in rural areas, and examine the possibility of providing such services jointly with a car club. *The work would involve discussions with internet matching service providers and with car club organisers and interviews with potential users.*

6.3 Assessment of potential topics

Our assessment of each of the 17 topics identified in Section 6.2, using the criteria of success outlined in Section 6.1 is summarised in Table 5. (ticks indicate a positive result – the more ticks the better). Clearly this evaluation is not an exact science and some of the scores may be open to debate.

Table 5: Assessment of topics for more detailed investigation in Phase Three of the Project

Topic No.	Abbreviated title	Measures of success					Measures of usefulness		
		number of users	financially sustainable	reduces road traffic	increases access	cost-effective increase in access	how widely applicable?	fit with policy?	value of lessons?
1	Scope for working with developers etc re CC	na	na	na	na	na	✓ ✓	✓ ✓ ✓	✓ ✓ ✓
2	Sponsorship of CCs in new developments	✓ ✓	✓ ✓	✓	✓	✓	✓ ✓	✓ ✓ ✓	✓ ✓ ✓
3	Sponsor CC with good support from PT op and LA	✓ ✓	✓ ✓	✓	✓	✓	✓ ✓	✓ ✓ ✓	✓ ✓ ✓
4	Disseminate benefits of CCs for PT operators	na	na	na	na	na	✓ ✓	✓ ✓ ✓	✓ ✓
5	Sponsor CC at major employment site	✓	✓ ✓	✗	✓	✓	✓ ✓	✓ ✓	✓ ✓
6	Sponsor CC at employer site where WPL is expected	✓	✓ ✓	✗	✓	✓	✓	✗	✓ ✓
7	Sponsor CSS at out-of-town employment site	✓ ✓ ✓	✓ ✓ ✓	✓ / ✗	✓	✓	✓ ✓ ✓	✓ ✓	✓
8	Sponsor CSS at employer site where WPL is expected	✓ ✓ ✓	✓ ✓ ✓	✓	✓	✓	✓	✓ ✓ ✓	✓ ✓
9	Sponsor CSS among adjacent employers	✓ ✓ ✓	✓ ✓ ✓	✓	✓	✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓
10	Sponsor CC in ethnic community	✓	✗ ✗	✗	✓ ✓	✗	✓	✓ ✓	✓ ✓
11	Sponsor CSS in ethnic community	✓	✓ ✓	✗	✓	✓	✓	✓ ✓	✓ ✓
12	Sponsor CSS in rural area losing its PT	✓	✓ ✓	✓	✓ ✓	✓ ✓ ✓	✓ ✓	✓ ✓ ✓	✓ ✓ ✓
13	Work with rural agencies to find niches for CSS	✓ ✓ ?	✓ ✓ ?	✓ / ✗ ?	✓ ✓ ?	✓ ✓ ✓ ?	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓
14	Assess scope of the Countryside Agency project	na	na	na	na	na	✓ ✓	✓ ✓	✓ ✓
15	Develop framework to assess rural CC and CSS	na	na	na	na	na	✓ ✓	✓ ✓ ✓	✓ ✓
16	Seek to solve insurance problems for CC and CSS	✓ ✓	✗	✗	✓	✓	✓ ✓	✓	✓ ✓
17	Internet-based car sharing matching services	✓	✓ ✓ ✓	✗	✓	✓ ✓	✓ ✓	✓	✓ ✓

6.4 The Steering Group's selection

Following discussion of the points outlined in section 6.2 and the assessment presented in Section 6.3, the Steering Group asked us to draw up proposals for further work on four topics:

1. Car Clubs in New Developments
2. The Role of Local Authorities and Public Transport Operators in Successful Car Clubs
3. The Potential Role of Car Sharing and Car Clubs within Socially Disadvantaged Groups
4. The role of Internet Matching Services

Our proposals, indicating the issues which we thought it important to cover and our proposed study method, are presented in sections 6.4.1- 6.4.4.

6.4.1 Car Clubs in New Developments

Issues to be Considered:

- Current activity in the field (car clubs in new developments, car rental 'city clubs'.....)
- Indicative estimate of potential market size (numbers of new developments)
- Advantages and disadvantages to planners, developers and occupiers
- Factors influencing the success of car clubs in new developments
- Barriers to uptake by planners, developers and occupiers
- Barriers to expansion of car clubs in new developments
- Barriers to continued survival of car clubs in new developments
- Ways to overcome the barriers (e.g. promotion of flagship schemes - new or adopted, dissemination of good practice advice through planning guidance or other guidance from governmental bodies, involvement of professional bodies)
- Recommendations for action and/or further research

Study Method

- Digest existing guidance documents
- Discussions with developers, planners, property management companies, estate agents, car rental companies, (to include developers and planners with experience of establishing and maintaining such schemes – e.g. BedZED, Stockholm, Southwark, Grand Union Village, Deptford).
- Interview/discussions with occupiers of new developments (including sites with/without car clubs or local car rental opportunities)

6.4.2 The Role of Local Authorities and Public Transport Operators in Successful Car Clubs

Issues to be considered:

- Advantages (and disadvantages) to car clubs from active involvement of local authorities
- Advantages (and disadvantages) to car clubs from active involvement of public transport operators

- Advantages (and disadvantages) to local authorities from car clubs
- Advantages (and disadvantages) to public transport operators from car clubs
- Examples of good practice
- Real and perceived barriers to involvement of local authorities (quoting examples / reasons for non-involvement)
- Real and perceived barriers to involvement of public transport operators (quoting examples / reasons for non-involvement)
- Ways to overcome the barriers (e.g. promotion of flagship schemes -new or adopted, dissemination of guidance on good practice, inclusion in official or supplementary guidance notes, publicity for success stories)
- Recommendations or action and/or further research

Study Method

- Discussions with CCSN, Smart Moves, BEST, local authority officers and Champions, public transport operators
- Re-examine Swiss and German literature for examples of difference made by forming link with local authority or public transport operator

6.4.3 The Potential Role of Car Sharing and Car Clubs within Socially Disadvantaged Groups

Issues to be Considered:

- Profile of target groups (low income, ethnic minority, disabled, elderly)
- Determination of bodies to be involved (e.g. local authority, community organisations, mobility-related charities)
- Have these bodies considered seeking to promote car sharing or car clubs (why/why not ?)
- Potential benefit from car clubs (e.g. to provide accessibility via a reliable car)
- Potential benefit from car sharing (e.g. for people unable/unwilling to drive, regular lift as social event for isolated elderly or disabled people)
- Cost-effectiveness of car sharing and car clubs compared to other mechanisms for delivery of accessibility.
- Risks (e.g. further isolation of those unable to participate – particularly if increased accessibility leads to further rationalisation of local facilities)
- Real and perceived barriers to car clubs among target groups (e.g. insurance, cost, low driving licence tenure, elderly reluctance to innovate, disabled need for door to door service, lack of critical mass, pre-existing arrangements within the community)
- Real and perceived barriers to car sharing among target groups (shortage of drivers, lack of matching service, complex trip patterns, pre-existing arrangements within the community)
- Potential links with other initiatives (action areas, demand responsive transport services, wider-access initiatives for health, education, training and life-long learning)
- Ways to overcome the barriers (e.g. dissemination of evidence on cost-effectiveness, flagship schemes based on model solutions, trials of model solutions)
- Recommendations for action and /or further research

Study Method

- Discussion with relevant professionals and organisations (health, community health, community liaison officers, housing action area managers, local transport coordinators)
- Discussions with community representatives/representative bodies
- Cost analysis – desk study using secondary sources
- Devise model solutions and seek comments from interested parties

6.4.4 The role of Internet Matching Services

Issues to be Considered:

- Brief review of current matching services (how many, what functionality and interface? where? how many users?)
- Potential roles (e.g. link with transport brokerage as part of integrated provision of accessibility)
- Real and perceived barriers to acceptance and growth (attitudes to security, attitudes to Internet interface, access to Internet, ‘the digital divide’, critical mass required, costs and revenues)
- Ways to overcome barriers (e.g. local organiser or interface, subsidy, official endorsement.....)
- Recommendations for action and / or further research

Study method

- Internet search and queries
- Discussion with service providers
- Interviews with potential users
- Devise model solutions and niches and seek comment from interested parties

7 Findings from Phase Three Studies

Sections 7.1-7.4 summarise the conclusions of the four projects conducted during Phase Three of our work. There is some overlap in the recommendations for the first two reports but they are listed in full for ease of reference.

7.1 Car Clubs in New Developments

This report addresses the role and prospects for car clubs in new developments. It concludes that they have great potential and could make a significant contribution to the achievement of sustainable urban environments.

Eighteen recommendations are made for actions and research to promote the establishment of successful car clubs in new developments as follows:

7.1.1 *To raise awareness and create an appropriate brand image:*

1. Actions should be taken to raise the profile of the car club concept among the general public. The prime means of achieving this would be to seek media coverage by:
 - distribution of professional-quality publicity material to selected journals, newspapers, lifestyle magazines, TV and radio programmes;
 - ministerial attendance at a high-profile launch for a car club at a prestigious new development (this could be linked with adoption of a flagship scheme - see below);
 - seeking to have the concept included in the storyline for a TV or radio soap opera (but see below for discussion of appropriate image).
2. DTLR should give immediate consideration to adopting one or more of the car clubs now being established in new developments with a view to its promotion as a high profile flagship scheme to demonstrate the concept in a UK context.
3. DTLR should consider designation of an official symbol, logo or pictogram for car club parking points and inclusion of the same within the Highway Code. Car clubs should be encouraged to display the logo prominently on their vehicles.
4. Actions should be taken to raise the profile of the car club concept among local authorities (officers and elected members). This might be done in several ways:
 - The visibility of car clubs should be raised within government documents. DTLR should consider adding suitable words to the next versions of PPG13, PPG3 and to the guidance notes for the preparation of funding bids, Regional and Local Transport Plans, Travel awareness strategies, Green Travel Plans, Homezones, Controlled Parking Zones and Air Quality Management areas. Transport for London and the Regional Assemblies should be encouraged to mention car clubs in their relevant documents for use by their constituent authorities.
 - Local authorities should be encouraged to include reference to car clubs in local design guides and Supplementary Planning Guidance - perhaps requiring active

consideration to be given to the establishment of car clubs in all new developments over a certain size.

- A ministerial statement should be made indicating government support for the car club concept in the context of sustainable urban mobility and the revitalisation of city centres.
 - DTLR should consider inviting local authority opinion leaders to an event, hosted at ministerial level, at which the contribution of car clubs to the achievement of transport planning objectives and the encouragement of city centre living is emphasised.
 - DTLR's Urban Policy Unit should consider mentioning the role of car clubs in new developments at the forthcoming Urban Summit (in Birmingham in October 2002).
5. Action is needed to raise the profile of the car club concept among developers. We suggest that a key means of achieving this could be to invite senior people from the industry to an event, hosted at ministerial level, at which the contribution of car clubs to the encouragement of city centre living is emphasised.
 6. The term "car sharing" should be avoided in official documents or publicity material to refer to car clubs.
 7. Publicity material destined for the public arena should emphasise the dynamic city lifestyle aspects of car club membership rather than its environmental credentials.

7.1.2 To achieve support for the concept:

8. Independent research be undertaken to establish the robustness of the European evidence and to seek reliable evidence from the existing UK schemes. Given that existing UK data is likely to prove inconclusive we further recommend that a robust monitoring programme be devised and that its implementation should be a condition of government support for car clubs.
9. Government literature on car clubs should emphasise that car clubs are most likely to reduce car use if they can be made to appeal to former car owners.
10. Thought should be given to the possibility and consequences of targeting financial support towards financially disadvantaged members of car clubs via reduced subscriptions.

7.1.3 To secure funding to support car clubs during their early years:

11. Further investigations should be conducted to explore what level of contributions might realistically be expected from developers of different types of scheme in different circumstances.
12. The scope and limitations of Section 106 agreements and the tariff approach be further explored as a means of securing developer support for car clubs be further explored.

13. DTLR should consider how best to facilitate LTP/LIP related bids for funds to support car clubs and, more generally, to consider how funds intended for such initiatives can be protected within an overall allocation.
14. A report should be commissioned to explore the funding mechanisms available and to produce guidance for local authorities on how and where to seek funding.

7.1.4 To provide guidance on practical issues:

15. A revised and enlarged edition of the Good Practice Guide for Planners and Developers should be produced for planners and a separate version should be produced for developers with executive summaries of each published in the relevant professional journals.

7.1.5 To increase the attractiveness of car clubs in new developments to potential members:

16. Research should be conducted in an attempt to discover how far restrictive parking policies can be taken in different types of area before the adverse effects get too serious.
17. Consideration should be given to the specification of minimum standards necessary to secure public funding for car clubs.
18. Research should be conducted to establish the maximum acceptable fees and charges and that this be used to help determine the level of financial support needed for new clubs.

7.2 The Role of Local Authorities and Public Transport Operators in Successful Car Clubs

This report addresses the role of local authorities and public transport operators in the development of car clubs.

We conclude that local authority involvement is crucial to the success of car clubs (except perhaps those designed for special target groups such as employees of a particular organisation, where local authority involvement may be desirable but is not essential). We note that, although there are very many ways in which local authorities can assist car clubs, the provision of funding and an appropriate parking policy are perhaps the most important. We note that the promotion of car clubs can fit very well with local authorities' transport and planning policies.

We conclude that the involvement of public transport operators in a joint arrangement to provide discounted fares for club members can provide an important catalyst to the growth of car clubs, and that both sides can benefit from co-operation in areas such as marketing and smartcards.

We have made eighteen recommendations for action or research designed to overcome barriers to the involvement of local authorities and public transport

operators in the development of car clubs. There is some overlap between these eighteen and those identified above (items 1-3 and 6-13 are equivalent to recommendations in section 7.1). However, for completeness, all eighteen are listed here below.

7.2.1 To raise awareness

1. Actions should be taken to raise the profile of the car club concept among the general public. The prime means of achieving this would be to seek media coverage by:
 - distribution of professional-quality publicity material to selected journals, newspapers, lifestyle magazines, TV and radio programmes;
 - ministerial attendance at a high-profile (re)launch of a car club (this could be linked with adoption of a flagship scheme - see below);
 - seeking to have the concept included in the storyline for a TV or radio soap opera.
2. DTLR should give immediate consideration to adopting one or more car clubs with a view to its promotion as a high profile flagship scheme to demonstrate the concept in a UK context
3. The designation of an official symbol, logo or pictogram for car club parking points and inclusion of the same within the Highway Code should be considered and car clubs be encouraged to display any such logo prominently on their vehicles.
4. Actions should be taken to raise the profile of the car club concept among local authorities:
 - the visibility of car clubs within government documents should be raised. DTLR should consider adding suitable words to the next versions of PPG13, PPG3 and to the guidance notes for the preparation of funding bids, Regional and Local Transport Plans, Travel awareness strategies, Green Travel Plans, Homezones, Controlled Parking Zones and Air Quality Management areas. Transport for London and the Regional Assemblies should be encouraged to mention car clubs in their relevant documents for use by their constituent authorities
 - Local authorities should be encouraged to include reference to car clubs in local design guides and Supplementary Planning Guidance notes – perhaps including a requirement for serious consideration to be given to the establishment of car clubs in all new developments over a certain size.
 - A ministerial statement should be made indicating government support for the car club concept in the context of sustainable urban mobility
 - DTLR should consider inviting local authority opinion leaders to an event, hosted at ministerial level, at which the contribution of car clubs to the achievement of transport planning is emphasised
5. Particular action is needed to raise the profile of the car club concept among public transport operators. We suggest that a key means of achieving this could be to invite senior people from the industry to an event, hosted at ministerial level, at which the contribution of car clubs to increased use of public transport is emphasised.
6. We recommend that the term “car sharing” should not be used in official documents or publicity material to refer to car clubs.

7.2.2 To achieve political support:

7. Independent research should be undertaken to establish the robustness of the European evidence and to seek reliable evidence from the existing UK schemes. Given that existing UK data is likely to prove inconclusive we further recommend that a robust monitoring programme be devised and that its implementation should be a condition of government support for car clubs.
8. Government literature on car clubs should emphasise that car clubs are most likely to reduce traffic levels if they can attract former car owners.
9. Thought should be given to the possibility and consequences of targeting financial support towards financially disadvantaged members of car clubs via reduced subscriptions.

7.2.3 To secure funding to support car clubs during their early years:

10. DTLR should consider how best to facilitate LTP/LIP related bids for funds to support car clubs and, more generally, to consider how funds intended for such initiatives can be protected within a overall allocation.
11. A report should be commissioned to explore the funding mechanisms available and to produce guidance for local authorities on how and where to seek funding.
12. Further investigations should be conducted to explore what level of contributions might realistically be expected from developers of different types of scheme in different circumstances.
13. The scope and limitations of Section 106 agreements and the tariff approach should be further explored as a means of securing developer support for car clubs.
14. The benefits to the local authority of corporate membership should be quantified and, if the case is convincing, the results should be circulated to local authority departments responsible for procurement and finance.

7.2.4 To provide guidance on practical issues

15. We recommend that the production of guidance for local authorities should be given priority and that, when available, it should be launched with appropriate publicity and an executive summary suitable for elected members. The guide should cover the following aspects:
 - Evidence of impacts (traffic, parking, accessibility)
 - Sources of funding (special government grants and funds, LTP grants, Section 106 agreements, European funds, charitable grants)
 - Incorporation into the Local Transport Plan and strategy documents (with advice and examples highlighting the relationship with other elements such as parking policy, CPZ implementation, Road user charging, Workplace parking levies, Planning policy, PPG13, PPG3, Green Travel Plans, Travel Awareness)
 - Co-operation with property developers
 - Co-operation with public transport operators
 - Technology options
 - Selection of a club operator
 - Use of criteria to identify schemes worthy of public support. Such criteria, which would define, and help to promulgate, good practice, might cover aspects such as inter-operability, financial soundness, insurance and

maintenance of vehicles, quality of service, access by disadvantaged groups and arrangements for usage monitoring

- Monitoring of impacts.
16. We recommend that training courses should be provided for local authority personnel interested in promoting car clubs and that these courses should be endorsed by DTLR in its advice on sustainable transport and land use planning.
 17. We recommend that DTLR should include mention of the role of car clubs in its guidance on the preparation of LTPs, RPG, SPG, and in the next revision of relevant PPGs.
 18. We recommend that contacts be made to establish whether the role of the Dutch organisation, *Stichting van Gedeeld Autogebruik*, goes beyond that played by CarPlus in the UK, and if so, to consider what might be learned from the Dutch model.

7.3 The Potential Role of Car Sharing and Car Clubs within Socially Disadvantaged Groups

It is clear that car clubs and car sharing may have a role to play in the provision of accessibility to some disadvantaged groups and that this may lead to cost savings. We conclude that particular potential exists for:

- Agencies who provide transport services to join forces to make more efficient use of their vehicles (adapted and otherwise) within a car club;
- Agencies to join forces to develop a car sharing database for use by clients and others in their locality (perhaps as part of wider brokerage service);
- Agencies to sponsor suitable clients to join existing car clubs;
- Residents of social housing within new city centre housing schemes could be included within new car clubs established on those sites;
- Innovative re-direction of existing funds (e.g. of Motability grants to support adaptation of car club vehicles);
- Small scale local initiatives.

It is also clear that significant barriers exist to prevent car clubs and car sharing playing a significant role in the provision of accessibility to some disadvantaged groups. We conclude that the most immediate barriers are:

- Lack of understanding of the car club concept;
- Lack of reliable data on the relative costs of provision by different means;
- Institutional inertia (fed by professional jealousy, lack of time to consider new modes of provision, lack of understanding of the concept of car clubs and a belief that, since the concept would not be appropriate for all clients, it is not worth considering);
- A concern not to further erode the market for conventional public transport:
- The fact that some clients would require delivery/pick-up arrangements;
- The fact that some clients would require specially adapted vehicles;
- The difficulties likely to be experienced when attempting to introduce a car club within a deprived community (difficulty posed by annual fee, lack of commitment within the community, vandalism, insurance problems...).

- Concern among some car club organisers as to the possible negative effect on their brand image.

We have made recommended eight actions and have proposed six research projects to help overcome these barriers and realise the potential. Briefly, they are:

1. Establishment of an interdepartmental team.
2. Production of publicity material to familiarise the provider communities with the concepts of car clubs and car sharing.
3. As a second stage, and pending completion of the necessary research, production and distribution of more detailed information and advice for the provider communities.
4. Provision of a training course, based on this material, for personnel in the provider communities.
5. Actions to raise the profile of the car club concept among the general public.
6. Encouragement of developers of high density low-car housing projects which incorporate social housing to establish car clubs within their developments.
7. Establishment of demonstration schemes to cover a range of issues.
8. Encouragement of existing car clubs to approach providers of services to disadvantaged groups with a view to their becoming corporate members of the club (with grant aid to assist extension of the vehicle fleet to include a appropriate vehicles).
9. Further research on the costs of alternative models of provision. Access to detailed accounts of provider organisations will be required.
10. Research to characterise, identify and quantify clients' precise needs.
11. Attitudinal research to establish what value the clients put on different services and how they might react to different models of provision
12. Exploration, with car club organisers, of whether and how the profile of membership fees might be made more attractive to people on low incomes.
13. Exploration and resolution of the potential conflict between the image of car clubs which some car club organisers wish to promote and the use of car clubs by disadvantaged groups.
14. Research to further develop and evaluate the models of provision (nine are identified as being particularly worthy of consideration).

7.4 The role of Internet Matching Services

Following a review of currently available Internet matching sites and a discussion of their potential role, the results of surveys and discussions among suppliers and potential users are presented and analysed. The following conclusions are drawn:

- Although car sharing of the type that can be facilitated by Internet matching sites can bring benefits to participants, its net impact on the transport system may not be positive.
- The most obviously beneficial role of liftsharing, from a government point of view, is that it may offer a cheap way of providing a level of accessibility to some non-car owners. However, many of the potential beneficiaries are not readily able to use the Internet.

- Although there are a large number of Internet matching sites available, the level of usage is generally very low. Most sites do not have a large enough user base to allow them to offer users a good prospect of a successful match.
- The number of sites to choose from, and the out-of-date information on some of them, is a deterrent to potential users.
- Concerns about personal security, common to all forms of liftsharing are, for some people, compounded by the anonymity of the Internet and/or concerns about data security.
- Internet matching sites can and do offer a useful service in matching people travelling to special events. This role could usefully be expanded.
- Matching may be more successful if it is based on Intranet and group-specific sites linked to other sites than through a single site for everyone.
- Internet matching sites could usefully be linked with more general transport brokerage services.

Fifteen separate proposals are made for actions or research designed to help overcome some of the existing barriers to the success of Internet matching sites and thereby realise more of their potential. They fall under the following headings:

- Selection of one or more Internet matching services for Government support
- Support for selected sites
- Promotion of the use of localised matching services
- General support for car sharing
- Ensuring wider access to Internet matching services
- Promotion of Internet Matching for Car Sharing to Special Events
- Associated research

8. Other Proposals

As noted in Section 6.2, our work in Phases One and Two of the project resulted in over thirty proposals for further work. Although many have been picked up within the four topic areas pursued in Phase Three, there are inevitably several which remain on the table. For the sake of completeness, we list them here.

- Sponsorship of car club(s) at
 - out-of-town employment sites with good public transport
 - at premises of major employer in area with good public transport links and where introduction of workplace parking levy is expected
- A competition among existing car club organisers for additional funding
- A competition to supply products and services to car clubs
- Development of tools to predict impacts of
 - car clubs
 - measures to encourage car sharing
- Sponsorship of new/expanded car sharing schemes:
 - in an area to be affected by road user charging
 - among employees of a group of adjacent employers
 - in an area to be affected by a workplace parking levy
 - in an area in which a HOV facility is planned
 - in a rural neighbourhood where public transport is to be withdrawn
- Work with Highways Agency explore the potential for a High Occupancy Toll Lane
- Work with DTLR sections responsible for local transport planning guidance to improve treatment of car sharing
- Work with local authorities to explore:
 - the possibility of a more pro-active strategy to encourage car sharing
 - the potential for HOV-only zones within city centres
 - the possibility of introducing parking spaces for exclusive use of HOVs
- Work with rural agencies to promote car sharing among visitors and non car owners
- Work with Insurance companies to produce a more attractive package for car clubs
- Clarification of the position of work-based car clubs in respect of company car tax and the Workplace Parking Levy.
- Analysis of National Travel Survey data to determine trends in car sharing.
- Further investigation of the relative costs of car clubs and car ownership to identify the 'switch points' where the cost advantage moves from one to the other.
- Provide an assessment of 'gaps' in the work on rural car clubs being conducted under the Countryside Agency's Contract with CCSN.
- Development of a framework for assessing the relative merits of competing proposals for developing car clubs and car sharing in rural areas.

Appendix I: Documents Consulted During Phase One of the Work

Abraham, J. E. (2000) Carsharing: A survey of preferences in *Carsharing 2000: Sustainable Transport's Missing Link*, The Journal of World Transport Policy & Practice, Journal of the Commons, January 2000, Eco-Logica Limited, Lancaster

Armitage, R. (1999) 'Hire Intelligence' (car sharing in the UK), *Surveyor*, 4.12.97

Ball, C. (2001) in Local Transport Today, Editorial feature article, Can car clubs serve as a realistic alternative to private car ownership? *LTT*, 08/2/01

Bonsall, P. W. (1984) What makes a car-sharer? *Transportation*, Vol. 12, pp. 117-145, Elsevier Science, Amsterdam

Bonsall, P. W. (1981) Car Sharing in the United Kingdom. A policy appraisal, *Journal of Transport Economics and Policy*, January 1981, pp. 35-44

Bonsall, P. W., Spencer, A. H. and Tang, W. S. (1981) ITS YORKSHARE – Car-sharing schemes in West Yorkshire, *Traffic Engineering and Control*, January 1981, pp. 29-34

Bonsall, P. W. (1980) Car-sharing - where are we now? *Traffic Engineering and Control*, January 1980, pp. 25, 27

Britton E. (2000) Executive Summary in *Carsharing 2000: Sustainable Transport's Missing Link*, The Journal of World Transport Policy & Practice, Journal of the Commons, January 2000, Eco-Logica Limited, Lancaster

Budget spokesman in Local Transport Today, Can car clubs serve as a realistic alternative to private car ownership? *LTT*, 08/02/01

Cairns S. (2001) 'Car clubs- the transport impacts' (*Swiss Experience*), *Town and Country Planning* 70, 5 May p144

CCSN website (updated 26/6/01, accessed 28/6/01) www.carshareclubs.org.uk

CCSN (2000) *CC3.2: The European experience*, Community Car Share Network, Leeds

CCSN (2001) *Prospects for Rural Car Share Clubs*, Community Car Share Network, Leeds

CCSN (2002) *A Good Practice Guide for Planners and Developers, Achieving low car housing: the role of car share clubs*, January 2002, CCSN for the Regional Assembly for Yorkshire and Humberside

CfIT Secretariat (2000) *Physical Integration*, Commission for Integrated Transport

Cousins (1998) A model of car availability in car-sharing schemes of different sizes in *Traffic Engineering and Control*, February 1998, No. 39, pp. 90-94

Cousins (1999) Carsharing kit: Why wait for cars to come to you? in *Journal of World Transport Policy and Practice*, Vol. 5, No. 3, pp. 219-222 and (2000) in *Journal of the Commons*, January 2000

Cousins, S. (1999) 'Car clubs ride again' *Town and Country Planning* 70, 5 May p142

DETR (2000) *Our Countryside: the future*, HMSO, Norwich or at www.defra.gov.uk/wildlife-countryside/ruralwp/, accessed 4/7/01

DETR (2000a) *Transport Statistics Bulletin, National Travel Survey: 1997/99 Update*, TSO, London or at <http://www.transtat.dtlr.gov.uk/>, updated 3/5/01, accessed 23/7/01

DETR (1999) *Transport's New Deal: The Research We Need to Achieve It*, www.dtlr.gov.uk/itwp/paper/, accessed 4/7/01

DETR (1998) *Sustainable Transport: A fairer, more inclusive society*, www.dtlr.gov.uk/itwp/paper/, accessed 4/7/01

Dibble (2001) *Manchester Airport Employee Car Club*, *CCSN Car share clubs conference*, 14/03/01, Vauxhall Recreation Centre, Luton

Ecolo, (1999) *CarSharing in Europe* CDROM, Ecolo, Bremen

Energie 2000 (referred to from CCSN 2002 – above)

Enoch M (2001) How public and private organisations can support city car clubs: a worldwide review, Working Paper 6 Integration into Urban Planning (DRAFT in November 2001), Mobility Services for Urban Sustainability (MOSES) project, DG TREN,(obtainable from the author at the Open University)

Glötz-Richter, M., (2001) *Car Share clubs – working with Public Transport Operators*, *CCSN Car share clubs conference*, 14/03/01, Vauxhall Recreation Centre, Luton

Grayling, T. (2001) *Social exclusion and sustainable mobility*, Paper presented to a joint *IPPR & Social Exclusion Unit seminar*, 14 June 2001, Institute for Public Policy Research, London

Harms and Truffer (1998) in Shaheen, S., Sperling, D. and Wagner C. (2000) *A Short History of Carsharing in the 90's* in *Carsharing 2000: Sustainable Transport's Missing Link*, The Journal of World Transport Policy & Practice, Journal of the Commons, January 2000, Eco-Logica Limited, Lancaster

Lane, B. in *Local Transport Today*, Can car clubs serve as a realistic alternative to private car ownership? *LTT*, 08/02/01

Lightfoot, G. (1997) in Shaheen, S., Sperling, D. and Wagner C. (2000) *A Short History of Carsharing in the 90's* in *Carsharing 2000: Sustainable Transport's Missing Link*, The Journal of World Transport Policy & Practice, Journal of the Commons, January 2000, Eco-Logica Limited, Lancaster

Litman, T. (2000) *Carsharing benefits to consumers and society* in *Carsharing 2000: Sustainable Transport's Missing Link*, The Journal of World Transport Policy & Practice, Journal of the Commons, January 2000, Eco-Logica Limited, Lancaster

Litman, T. (1999) *Evaluating Carsharing Benefits*, Victoria Transport Policy Institute, Victoria, BC, Canada

Local Transport Today, Editorial feature article, Can car clubs serve as a realistic alternative to private car ownership? *LTT*, 08/02/01

- Moxley, K., Vauxhall Motors (2001) Why Vauxhall Motors supports car sharing initiatives, *CCSN Car share clubs conference*, 14/03/01, Vauxhall Recreation Centre, Luton
- Muheim (1998) in *A Good Practice Guide for Planners and Developers, Achieving low car housing: the role of car share clubs*, June 2001, CCSN for the Regional Assembly for Yorkshire and Humberside
- Nolder, J. and Quinlan, S., Sheffield Hallam University (2001) *Community Car Share Network RideSmart Programme Assessment*, June 2001, Community Car Share Network, Leeds
- Pratch (1974) in Bonsall, P. W. (1981) Car Sharing in the United Kingdom. A policy appraisal, *Journal of Transport Economics and Policy*, January 1981, pp. 35-44
- Roberts, A. (2001) in *Local Transport Today*, Editorial feature article, Can car clubs serve as a realistic alternative to private car ownership? *LTT*, 08/2/01
- Roberts, A. (2000) An Introduction to Car Share Clubs, *Information Sheet no. 224, Shell Better Britain Campaign*, Birmingham
- Saxon, I (2001) 'Cornerstones of cost and Convenience' (experience of the Avis Carvenience car sharing scheme in Oxford) *Town and Country Planning* 70 5 May p144.
- Shaheen, S., Sperling, D. and Wagner C. (2000) A Short History of Carsharing in the 90's in *Carsharing 2000: Sustainable Transport's Missing Link*, The Journal of World Transport Policy & Practice, Journal of the Commons, January 2000, Eco-Logica Limited, Lancaster
- Smart Moves website (updated 13/7/01, accessed 10/7/01) www.smartmoves.co.uk
- Stradling, S., Meadows, M and Beatty S. (2000) Symposium: Motives for Car Use Identity and Independence: Two dimensions of Driver Autonomy, at the *ICTTP 2000 International Conference on Traffic and Transport Psychology*, Bern 4-7 September 2000.
- Stradling, S., Meadows, M and Beatty S. (2000) Symposium: Reducing Car Use Identity and Independence: Two dimensions of Driver Autonomy, at the *ICTTP 2000 International Conference on Traffic and Transport Psychology*, Bern 4-7 September 2000.
- System Three Social Research (2001) Monitoring and Evaluation of the Edinburgh car club, Confidential Report to the Central Research Unit of the Scottish Executive.

Appendix II: Consultees (in Phase 1 of the work)

Richard Balcombe – Rural transport Experiments

Chas Ball – Managing Director of Smart Moves Ltd

Dr Sally Cairns – Research Fellow at Centre for Transport Studies UCL

Miranda Carter – Mobility and Social Inclusion Unit, Cabinet Office

Professor Steve Cousins – Campus Cars, Cranfield University

Alistair Duff - Transport Policy Advisor, BAA Heathrow

Eleanor - BedZed

John Elliot – Pfizer

Michael Froemming

Geoff Gardner - Travelwise Office North Yorkshire County Council

Steve Grayson – Ridesmart DTLR

Michael Glotz-Richter - City of Bremen, Department for Building and the Environment

Tony Kirk - Passenger Transport Manager at Milton Keynes

Mark Lambert – DTLR Rural Bus Challenge

John Lewis – Director General of the British Vehicle Rental and Leasing Association

Margaret Longes - DTLR School Transport Advisory Group

Karen Lucas – Social Exclusion Unit, Cabinet Office

Iain Macbeth – Staff Travel Co-ordinator Beeston Nottinghamshire

Heather McInroy – Responsible for setting up car share scheme at Heathrow

Alison Pilling – METRO and author of Catching Them Young report

Jo Rathbone – Coventry Car Share

Antonia Roberts – Development Manager at the Community Car Share Network

Tom Rye – Transport Research Institute, Napier University

James Ryle – Rural transport initiative for Sustrans

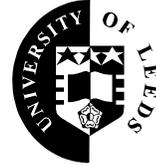
Tim Scurlock – Vauxhall Motors

Graham Simpkins – Sustainable Transport Manager for Milton Keynes

Dr S Stradling - Reader in the Behavioural Aspects of Transport, Department of Psychology & Sociology at Napier University

Linda Strudwick – Founder Member of Co-Drive Ltd Leeds

Appendix III : Questionnaire Used with Members of the Public



Dear Sir or Madam,

What do you think of the idea of Car sharing and Car Clubs?

The Institute for Transport Studies at the University of Leeds has been asked by the Department of Transport, Local Government and the Regions (DTLR) and the Motorists' Forum to explore the potential for car sharing. We would like to hear your views on the subject and most particularly to discover whether you have had any good or bad experiences when sharing lifts or with a car club.

The questionnaire should take no more than a few minutes to complete and can be returned to us in the Freepost envelope provided. Thank you for your help. I can assure you that your replies will remain completely confidential, yours sincerely,

P. W. Bonsall.

- Have you ever given lifts to someone on a regular basis?
 No Yes, but not now Yes, I still do
- Have you ever received lifts from someone on a regular basis?
 Yes, I still do No Yes, but not now
- Have you ever been a member of a car club?*
- Have you ever seriously considered any of the above?
 No and I wouldn't Yes, but not now
 Yes, but I wouldn't now

*car club an organisation whose members get access to a pool of cars

1. What do you think the possible advantages of regular car sharing are for the **lift giver**?

- **Saving money?**
 No, not a factor Yes, a factor Yes, a major advantage

- **Having company on the journey?**
 No, not a factor Yes, a factor Yes, a major advantage
- **Someone will return the favour one day?**
 No, not a factor Yes, a factor Yes, a major advantage
- **Do you think there are any other advantages?** -----

- **What would you say is the main advantage for lift givers?** -----

2. What do you think the advantages of car sharing for the **lift taker**?

- **Saving money?**
 No, not a factor Yes, a factor Yes, a major advantage
- **Having company on the journey?**
 No, not a factor Yes, a factor Yes, a major advantage
- **Not having to rely on public transport?**
 No, not a factor Yes, a factor Yes, a major advantage
- **Not having to own a car?**
 No, not a factor Yes, a factor Yes, a major advantage
- **Not having to worry about drinking alcohol?**
 No, not a factor Yes, a factor Yes, a major advantage
- **Do you think there are any other potential advantages?** -----

- **What do you think is the main advantage for lift takers?** -----

3. What are the **disadvantages** of car sharing for the **lift giver**?

- **A reduction of flexibility/independence?**
 No, not a factor Yes, a factor Yes, a major advantage
- **A reduction of privacy?**
 No, not a factor Yes, a factor Yes, a major advantage
- **Do you think there are any other potential advantages?** -----

- **What do you think is the main disadvantage for lift givers?** -----

4. What are the **disadvantages** of car sharing for the **lift taker**?

- **A reduction of flexibility/independence?**

No, not a factor Yes, a factor Yes, a major disadvantage

- **A reduction of privacy?**

No, not a factor Yes, a factor Yes, a major disadvantage

- **Do you think there are any other potential disadvantages?** -----

- **What do you think is the main disadvantage for lift takers?** -----

5. What are the **possible advantages of car sharing clubs**?

- **Saving money?**

No, not a factor Yes, a factor Yes, a major advantage

- **Getting access to a vehicle without having to buy one?**

No, not a factor Yes, a factor Yes, a major advantage

- **Getting access to a range of vehicle types?**

No, not a factor Yes, a factor Yes, a major advantage

- **Do you think there are any other potential advantages in car sharing clubs?**

6. What are the **possible disadvantages of car sharing clubs**?

- **A reduction in the flexibility/convenience of private ownership?**

No, not a factor Yes, a factor Yes, a major disadvantage

- **Costing more than private ownership?**

No, not a factor Yes, a factor Yes, a major advantage

- **Are there any other potential disadvantages in car sharing clubs?**

7. Why do people **stop giving lifts**?-----

8. Why do people **stop taking lifts**?-----

9. Why don't more people **give or take lifts**? -----

10. Why don't more people **join car clubs**?-----

11. If you have had a **good or bad experience** with car sharing or a car club we would like to hear about it. Please describe the experience below

Thank you for taking part in this survey

If you would be prepared to talk to us further about these questions, please give your name and telephone number below so that we can call you.

Name ----- Telephone number -----

It would help us to understand your answers if you would kindly provide further information by marking your answer to the following

Your gender: Female Male

Your age: Teens 20s 30s 40s
 50s 60 or over

Do you hold a full driving licence? No Yes

How many drivers are there in your household?

How many cars are available to members of your household?

Appendix IV: Assumptions used in compilation of Tables 3.1-3.3

General assumptions

- Current prices include petrol at 81 pence per litre
- A short journey is a 8.5 mile round trip over 3 hours
- A long journey is a 100 mile round trip over 8 hours
- High user of a car is estimated to drive 10,000 miles per annum and make an average of 400 journeys, a high user of a car club is somebody who uses the club 150 times per year, a high public transport user is somebody who uses it five times per week, 45 weeks per year
- Low user of a car is estimated to drive 1,000 miles per annum and make an average of 100 journeys, a low user of a car club is somebody who uses the club 24 times per year, a low public transport user if somebody who uses it twice a week, 45 weeks per year

Car Ownership

- A new large car is estimated to cost £15,000 paid off over 4 years at 8.7% APR
- A new small car is estimated to cost £7,500 paid off over 4 years at 8.7% APR
- A very old car is estimated to cost £800 paid off over 4 years at 0% APR. No depreciation
- Other fixed costs are : VED and insurance, breakdown cover and depreciation based on the average figures provided on the AA website.
- Running costs are oil, tyres, servicing, repairs and replacement, plus petrol in pence per litre. Figures are based on the averages provided on the AA website. Petrol has been used as a guide for simplicity, clearly the principles would be the same for other fuels.

Car Sharing

- The petrol portion of the cost has been divided by two as it is common for only these costs to be shared. In reality, savings may be less than suggested here as not all journeys will be shared.

Car Hire

- “Cheap” is based on Easy Rentacar prices plus fuel costs
- “Typical” is an average of Budget and Avis prices plus fuel costs
- A small car is a Corsa or equivalent
- A large car is a Vectra or equivalent
- Figures are for weekdays – it is not possible to hire for a single day at the weekend in many cases
- Rental cost is unaffected by changes in car purchase cost

Car Club

- Costs of the car club depend on the scheme joined, the type of vehicle used and whether or not you are classed as a low or high user. High users pay a higher membership fee, but benefit from a reduced mileage rate and from having the initial outlay spread over a number of journeys. The costs used are based on the average cost structures published by CCSN and assume use of a mid range vehicle.
- Membership costs are assumed to be unaffected by changes in car purchase costs.

Public Transport

- Season ticket is a METRO (West Yorkshire) card which covers Rail zones 1-3 and travel throughout the county by bus (£530 pa)
- For journeys without a season ticket, an average of the peak and off-peak charge has been used, based on two one way tickets using a combination of bus and rail

