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EXECUTIVE SUMMARY

BACKGROUND

In 1997, System Three Social Research was appointed to undertake the monitoring and evaluation of the Edinburgh City Car Club. Based on continental models of car sharing, the proposed Car Club was to be established in the Marchmont and Sciennes area of the City as a pilot initiative to test the feasibility of running such schemes in the UK. The Club had the support of the Department of the Environment, Transport and the Regions, The City of Edinburgh Council and The Scottish Office (now the Scottish Executive).

Study approach

The monitoring and evaluation has involved a wide range of activities such as

- attendance at public meetings, planning meetings and advisory groups meetings overseeing the development of the Car Club
- surveys of the population of Marchmont and Sciennes in 1997 and 2000
- analysis of data relating to the use made of Car Club cars
- focus groups and interviews with members, non-members and former members of the Car Club
- interviews with local councillors, the Car Club project manager, and other key actors
- reviews of files relating to the Car Club held by LEEP, The Scottish Office and the City of Edinburgh Council.

The main focus of the study is on the operation of the Club in the Marchmont and Sciennes area although in April 2000, the Club was expanded to 19 additional locations in the City. Analysis of the operation of the Car Club has been hampered by the lack of detailed data relating to the operation of the Club in Marchmont and Sciennes after March 2000.

The City Car Club

The Car Club in Marchmont and Sciennes was launched in March 1999 and operated along a model similar to many continental schemes: members joined the Club, which acted as a service provider managing the rental of the cars, valeting and maintaining the vehicles, and billing.

The distinctive feature of the Edinburgh Club was the sophistication of the telematics-based booking and hire management system.

The management system comprised four principal elements:

- booking software that dealt with vehicle scheduling, fleet management and billing
- hire management and security systems that communicated with the vehicles

- in-car technology that controlled access to the cars and communicated details of hire start and termination, vehicle position and odometer readings to the hire manager
- encoded infra-red key fobs that identified the user to the vehicle.

At its launch the Car Club had six vehicles in Marchmont and Sciennes located at four parking bays. The booking and hire management systems were in Hemel Hempstead, where Budget Rent-a-Car (the contractors operating the Car Club) is based. Booking was principally by telephone using a local contact number although the option to book by email was provided later.

The evaluation has focused on:

- monitoring the early phase of establishing and implementing the Car Club, including looking at the marketing of the scheme
- examining reasons for take up and non-take up of the scheme
- examining satisfaction with the operational aspects of the scheme among members
- assessing the impact of the scheme.

Establishing and implementing the Car Club

The process of setting up a car club in Edinburgh began in February 1996 when Lothian and Edinburgh Environmental Partnership was appointed to carry out feasibility study into the potential market for a car club. The feasibility study was limited in its scope but it concluded that there was sufficient interest and potential to be confident that a car club could operate successfully. The Marchmont and Sciennes area was identified as the area in the city with the greatest potential for successfully establishing a car club and consequently, was selected as the area in which to establish the pilot scheme.

In March 1997, representatives of the Department of the Environment Transport and the Regions, the City of Edinburgh Council and The Scottish Office met to establish an Advisory Group to oversee the implementation of the Edinburgh City Car Club. LEEP was appointed as project managers to implement the Car Club and System Three Social Research was appointed to monitor and evaluate the set-up process and first year of operation.

The set-up period ran from March 1997 to March 1999. The key milestones and events during this period were:

- public consultation and public meetings in the area in June and August 1997 at which local views on the scope, structure and objectives of the Car Club were discussed. A ‘user group’ of interested local residents was formed to act as a ‘sounding board’ for local opinion.
- a baseline survey of travel and transport in the area was carried out by System Three. As part of this, the potential market for the Car Club was reassessed, leading to some concerns about the viability of a Car Club in Marchmont and Sciennes.
- because of planning and security concerns, the booking and hire management systems were developed based on mobile communications and satellite technology, making the

Edinburgh City Car Club technologically advanced in comparison with clubs in other European cities.

- detailed business and financial planning was undertaken which revealed a substantial operating deficit for at least the first three or four years of the Club’s operation.

In response to these developments, and the fact that the public sector partners could not underwrite long-term financial losses, it was decided to put the operation of the Car Club out to tender to private sector operators. Since the cash-flow projections indicated that a Club in Marchmont and Sciennes would never be viable on its own, the operating model changed from a local pilot initiative to a fully-fledged implementation of a Car Club.

The tendering would provide an operator with the right to operate the Edinburgh Car Club, developing the infrastructure and technology funded by the public sector and providing them with a head start in what was hoped to be a developing market for car sharing. Of seven companies invited to tender, three submitted proposals and of these, Budget Rent-a-Car was selected as the preferred bidder based on their:

- three-year commitment to the scheme
- proposals for senior staff input into the management and development of the scheme
- pricing structure
- proposals for discounted day and weekend hire from Budget’s ordinary rental fleet.

The Car Club was launched in March 1999 with six vehicles serving four parking bays. At launch the Club had 35 members, which grew to 95 by the Club’s first anniversary. The table below shows the key performance measures for the Club compared with the projections and business plan prepared by LEEP.

Comparison of actual performance against business plan

| | Business Plan | Actual | Actual compared with Plan |
|-----------------------------|----------------------|---------------|----------------------------------|
| Membership at year end | 116 | 95* | Worse |
| Ratio of members to cars | 20 | 16 | Worse |
| Number of hires per vehicle | 300 | 137 | Worse |
| Average hire length | 4.5 hours | 3.7 hours | Worse |
| Average hire distance | 66 miles | 26 miles | Worse |
| Hires per member per week | 0.5 | 0.35 | Worse |

Note: This might have contained as many as 20 ‘paper’ members who did not use the Car Club at all or used it only once or twice in the whole year.

On each of these measures the Car Club was under-performing. The problem appears to lie primarily in members’ use of the vehicles rather than in the membership figures. While all of these measures are lower than projected – the average hire period and the average number of miles per hire are both substantially lower. This would have had a significant impact on the operator’s revenue.

In April 2000, the Car Club was expanded to provide a further 19 parking locations – some standalone, some clustered in areas in a similar way to Marchmont and Sciennes. In comparison with the first year in Marchmont and Sciennes, these new sites were significantly less successful in attracting members. This appears to be related to a number of factors:

- the selection of the sites in mainly residential areas yielding little daytime use of vehicles
- a shorter lead time than was experienced in Marchmont and Sciennes
- on-going technological problems with the vehicles, especially battery drain but also communications difficulties and problems with key fobs
- local management of the Club was withdrawn in June 2000 when the local Car Club manager was made redundant; after this point the proportion of bookings recorded as failed rose month-on-month.

Reasons for take-up and non-take up

The membership of the Car Club was, on the whole, drawn from a relatively narrow social group. Even by comparison with the population of Marchmont and Sciennes, the membership was characterised by relatively young professional households with lower than average car ownership and higher than average incomes. Reviews of Car Clubs consistently identify members as being typified as young families (35-50 years old), environmentally aware, middle class, and well educated, and the Edinburgh Car Club was no different from this.

Among the membership there was two distinct groups:

- non-car owners who joined out of solidarity and to gain access to a vehicle for journeys that were difficult or expensive by other modes. The trip to IKEA is typically used as an example.
- car owners who had already minimised their driving and were keen to rid themselves of their vestigial dependence on a car.

The rationale for joining among the first group is straightforward and the Car Club filled a gap in their transport requirements that was previously filled by day car hire or borrowing friends' cars. The Car Club was either cheaper or more flexible than these were.

The second group often had old cars that were due for replacement and viewed the Car Club as an experiment at the point of transition between cars. If the Car Club did not work, or did not work for them, they could still buy a car with little additional cost incurred.

People who did not join were, in many respects, very similar to those who did join. For a variety of reasons, older people did not consider the Car Club a suitable alternative to car ownership but for most other people the issue is not the principal of the Car Club but concerns about the practicality of it.

In general, most car owners accept the logic of car sharing – they recognise that cars are expensive and spend the majority of their time idle – however, there is a substantial gap between acceptance of this and actively considering participating in car sharing. Non-members interviewed in this study identified a number of key issues for them.

- they currently have infinite access to a car and do not need to give notice of their intention to use it. The Car Club is inherently less accessible and flexible.
- they can use their car without giving consideration of the cost of each journey. The Car Club would force them to weigh up the cost of each journey. The Car Club is perceived as expensive.

- they can use their car flexibly – starting early, coming back late. The Car Club would force them to stick to a timetable and would penalise lateness.
- they are not dependent on uncertain, inflexible and unreliable alternatives such as buses, taxis and trains.

Most of the marketing of the Car Club did not address these issues and so did not tackle the basic objections held by non-members or bridge the gap between the surface appeal of car sharing and the perception of how it worked in practice.

Users' satisfaction with the Car Club

The study identified two broad views of the Car Club. Among members who made little use of the Car Club, there was a high level of satisfaction with the service. Among those who were regular users, there was criticism of the Car Club both in terms of its long term development and growth and in terms of the performance of the service in the months leading up to Budget's withdrawal.

There were a number of factors that contributed to regular users' concerns about the performance of the Club.

- a rising level of failed bookings – users would find themselves unable to gain access to the car and unable to use it. Budget's management information showed that the proportion of failed bookings rose from less than 5% in April 2000 to 22% in December 2000.
- inefficient billing for vehicle use – a number of users reported errors in their bills (usually in their favour) involving trips either not being charged for or being undercharged.
- problems accessing the booking centre to make bookings
- a decline in the standard of the vehicles – irregular cleaning and minor repairs not being carried out.

The first of these problems reflected known issues with the in-car technology, especially a problem of battery drain caused by the internal communications devices, but up to June 2000 these appear to have been adequately dealt with by the local manager. After his redundancy in June 2000, the proportion of failed bookings rose sharply. The other issues reflect a general decline in the management and operation of the Car Club.

Thus although members were, on the whole, satisfied with the service, by the latter months of 2000, they were also very conscious of a decline in service standards, the plateauing membership figures and the low utilisation being achieved by the vehicles.

The impact of the scheme

For a number of reasons, it is difficult to gauge the impact of the Car Club in Marchmont and Sciennes. First, it did not achieve the projected membership giving fewer members whose experiences and changing travel patterns could be examined. Secondly, it became clear that the composition of the membership was not typical of the area and that the scope for reducing car use was limited. Given the two groups who joined, the increased car use by the non-car

owners appears to have matched the reduced use made by those who joined when they gave up a car.

The survey evidence suggests that during its two years operation in Marchmont and Sciennes, the Car Club was directly responsible for reducing the number of cars on the road in the area by 30.

Conclusions and lessons for the future

Based on the experience of the Edinburgh Car Club, there are a number of conclusions and lessons that we would emphasise for future operators or car sharing schemes.

- the need for clear operational objectives and early business planning
- the need for a method for assessing market potential and identifying potential locations
- the potential need for subsidy of car sharing start-ups at least in terms of research support, marketing (to raise awareness of the Car Club and alternatives modes) and guidance through the complex planning requirements.
- car sharing requires a significant shift in people's attitudes to travel and major alterations to their lifestyle. Awareness raising promotions can prompt questions about these issues but it is unlikely to provide the answers. The shift in 'mindset' required is not a task separate from promoting car clubs. One of the tasks of car clubs is to address the issues that non-members raise.
- early adopters are more willing to accept difficulties with a new and innovative service. For some it is part of the 'adventure' of being first. For the general public, the quality of service is paramount especially if environmental benefits and financial savings are not key selling points. The service needs to be excellent.
- individual members' use of car clubs is concentrated into evenings and weekends. Daytime business use is essential to increase utilisation rates and generate revenue.
- expansion needs to be closely related to membership in order to control fleet costs and to avoid spreading resources too thinly. Some anticipatory expansion is inevitable but this should be organic – growing on the basis of existing growth – rather than striking out into new territory.
- expansion needs to be based on sound information about the potential market. With some qualification, since early adopters may not be typical, the simple tool of ACORN profiling (or similar) offers a mechanism for identifying potential locations.
- marketing is critical to the success of car clubs. After initial awareness raising, one-to-one marketing – meetings, a shop-front, visiting potential members etc – is likely to be more effective than mass marketing.
- early adopters are enthusiastic evangelists and should be encouraged and supported to recruit on behalf of the club.
- car club operators should remain close to their customers either by being based locally or by establishing effective local liaison with members.
- there should be mechanisms for members' views and experiences to help shape the direction of the service.

- early growth might prove illusory, as an innovative venture will easily attract those people who are already or readily convinced. Continuous marketing and one-to-one marketing is needed to attract and convince more members.
- the costs of car ownership are poorly understood and car club pricing can easily appear very expensive. While a simple pricing structure will be easily understood, the more important lesson is to make the whole issue of driving costs better understood.
- significant travel impacts will only be achieved once the membership of car clubs is extended beyond the early adopter group.

CHAPTER ONE – INTRODUCTION AND BACKGROUND

INTRODUCTION

In March 1997, representatives of the Department of the Environment, Transport and the Regions (DETR), the City of Edinburgh Council (CEC) and The Scottish Office (as the Scottish Executive was then known) met to set the terms of reference of an Advisory Group to oversee the implementation of the UK's first major 'City Car Club'. Based on continental models of car sharing initiatives, the Edinburgh City Car Club was to be a pilot initiative in the City's Marchmont and Sciennes area to test the feasibility of the model in the UK. In particular, the Club was intended to assess the potential for pay-as-you-drive car sharing (PAYDCS) schemes to contribute to the growing problems of congestion, car-related pollution and parking pressures in the city.

In May 1997, System Three was appointed by The Scottish Office to undertake the monitoring and evaluation of the City Car Club. Between then and March 2001, System Three monitored the development and implementation of the scheme.

The Edinburgh City Car Club was launched in March 1999 with Budget Rent-a-Car contracted to the City of Edinburgh Council to operate, manage and develop the Car Club. For its first year, the Club operated only in Marchmont and Sciennes. In April 2000, additional parking sites were added to the four Marchmont and Sciennes sites, bringing the total number of parking stations to 23 and increasing the vehicle fleet from 6 to 25. In January 2001, after 21 months of operation, Budget informed the Council of its intention to withdraw from operating the scheme from 31 March 2001 and at the time of writing, the Council was seeking alternative operators for the Club.

Budget's decision to withdraw from the Car Club has cast doubt over the viability of Car Clubs in the UK.¹ The statement that the Car Club was not "economically viable" has been interpreted in the press as the 'failure' of the Car Club concept.² However, Budget's withdrawal from Edinburgh is only partly related to the viability of the Edinburgh Car Club. Across Europe, the company has experienced financial problems resulting in major restructuring, including redundancies. Thus, from Budget's perspective, it is not so much that the Car Club was losing money – that was expected – but that in its current business context, Budget could no longer sustain the operating deficits associated with the Car Club. One of the challenges for this evaluation was to try to separate the Car Club from its operator to determine how, had Budget been able to sustain the Club, it might have progressed.

Study approach

The monitoring and evaluation of the City Car Club has drawn on a wide range of information sources such as:

¹ Piggot A (2001) 'Can car clubs serve as a realistic alternative to private car ownership?' in *Local Transport Today* 8 February 2001.

² The Edinburgh Herald and Post (1/2/01) reported Budget's withdrawal as "City Car Club heading for a cul-de-sac". The Scotsman (25/1/01) put it more bluntly as "Car-sharing club fails".

- attendance at public meetings in Marchmont and Sciennes
- access to the internal files held by The Scottish Office/Executive, Lothian and Edinburgh Environmental Partnership³ and the City of Edinburgh Council, on the development of the Car Club
- individual interviews with the LEEP project manager, the Council transportation convenor and the local councillors for Marchmont and Sciennes
- individual interviews with Marchmont and Sciennes residents who formed a ‘user group’ to work with the Council and LEEP in the run-up to the Club’s launch
- three surveys of residents in Marchmont and Sciennes – the first in September/October 1997 to assess the baseline position in Marchmont (n=456), the second in September 1998 to record changes and test the proposed follow-up approach, and the third in September/October 2000 as the follow-up survey from the 1997 baseline (n=446). The surveys involved a structured questionnaire and a travel diary.
- a survey of Car Club members as part of the 2000 follow-up survey to gather quantitative data on members’ views of the Car Club and their travel patterns (n=38).
- analysis of information relating to Car Club bookings and hires.
- focus groups with members, non-members and lapsed members of the Car Club. A total of eight focus group were undertaken in Marchmont in January 2001.

In addition, the author has maintained close contact with the City Car Club through attendance at regular Advisory Group meetings which have involved representatives of DETR, CEC, The Scottish Office/Executive, LEEP and Budget.

Report structure

This report draws together the available information on the development and operation of the Edinburgh City Car Club from March 1997 to the end of January 2001. The principal focus is on the operation of the Club in the Marchmont and Sciennes area, although the expansion into other areas is discussed. The principal objectives of the research were as follows.

- to monitor both the setting up and early operation of the scheme
- to evaluate the marketing and recruitment strategies
- to measure consumer satisfaction with the operational aspects of the scheme
- to investigate levels of take-up and reasons for non-take-up
- to explore the characteristics of users and their sensitivity to different pricing regimes
- to measure the impact of the scheme on the pilot area, including car ownership, car use, car parking and related environmental quality

³ Lothian and Edinburgh Environmental Partnership (LEEP) was contracted by CEC to undertake a feasibility study and recommend locations for establishing the Car Club. LEEP also undertook project development and management for CEC during the Club’s development and for a period after Budget was appointed to operate the Club.

- to test potential travel impacts of the scheme e.g. whether the scheme reduces car use overall or whether it increases it by providing non-car owners with access to a car, whether it reduces second car ownership, how it affects the size of car used.

The report is structured around these objectives. Chapter Two covers the early implementation of the Club, tracing its development from initial conception to the point where the critical decisions were made on the structure and operational model of the Club. Chapter Three looks at the early implementation of the Club and shaping of the Club to the stage where Budget UK was appointed as the operator for the Club. Chapter Four examines the Car Club in practice and describes the main features of the Club. Chapter Five examines the performance of the Club and draws on operational data, survey findings, focus group discussions and interviews. Chapter Six draws together the findings from the previous sections to discuss the lessons of the Edinburgh experience and make recommendations for future Car Club operators.

BACKGROUND

Pay-as-you-drive car sharing

Car sharing is a relatively new concept with roots in Switzerland and Germany. The first car club was established in Switzerland in 1987, with the concept developing in Germany in the late 1980s and spreading to the Netherlands and other European countries in the 1990s.⁴

The basic concept is a simple one: a public car replaces the private car. Instead of each individual owning and operating a car to undertake a small number of journeys, each has access to a pool of cars that can be hired for short periods (usually a minimum of one hour). With each car used by up to 20 members, car ownership is reduced.

For policy makers, the principal attraction of the Car Club concept is that it also alters the individual's financial arrangements for using a car. With a private car, the principal costs of ownership – the repayments and the depreciation in the car's value – are either up-front, sunk costs or are largely hidden from the user. With the bulk of the costs sunk into ownership, the incentive is to maximise use of the car, as individual trips appear to be very cheap.

With a Car Club, the charge for each trip needs to recover the full cost of the trip and so reflects the capital and revenue costs of the particular trip. With the costs associated with each car trip now transparent, the Car Club allows drivers to make a realistic comparison of the cost of different modes of transport. Various studies have suggested that among Car Club members, car use declines by 30-50%.⁵

Various operational models exist for carsharing, ranging from groups of friends co-owning a car to large customer-oriented service providers. But all share the same basic concept of shared, short-term car hire.

⁴ Hoermandinger, G (1996) "Separating the ownership and use of cars" published on The Carsharing Library at www.carsharing.net/library

⁵ Cited in Sperling et al (2000) *Carsharing and mobility services – an updated overview* published at www.calstart.org/resources/papers/car_sharing.html

There are two main models for the practical arrangements by which members hire cars. For the sake of simplicity, we will refer to these as the Bremen model and the Swiss model after the organisational arrangements practised by StadtAuto in Germany and Mobility in Sweden. The differences between these models, as they were in 1997-98 are significant to the development of the Edinburgh City Car Club. The principal differences are shown in the table below.⁶

| | German (StadtAuto) | Swiss (Mobility) |
|--------------------------|--|--|
| Organisational structure | Independent local clubs | Single national provider |
| Bookings | Contracted to a local taxi firm | National booking centre also online bookings |
| Recording | Members record mileage in a paper-based system | Members record mileage in a paper-based system |
| Access to vehicles | Car keys kept in on-street safes | Car keys kept in on-street safes |
| Ethos | Community-based, environmental | Commercial, mobility service |

In spite of the differences in organisational structures and ethos an international review of car sharing organisations, Sperling et al noted that,

To date, all carsharing organisations, other than those operated by corporations for their employees, began as small local operations, usually with government funding and usually inspired by ideological concerns about car dependence and the negative impacts of cars. Few have thrived. Most have disappeared or been absorbed by larger CSOs [car sharing organisations]. It is difficult to transform a small grassroots CSO, founded on principles of democratic decision making, hostility toward cars, and distrust of corporations, into economically viable businesses.

*To the extent that these organisations have succeeded and expanded, it is because they have adopted advanced information technologies, behaved entrepreneurially, and sought partners.*⁷

The main interesting features of these models is their growth. Mobility started in 1987 with two cars and 28 members and in ten years grew to almost 18,000 members and 800 vehicles. StadtAuto had similar growth starting in Berlin in 1988 with five people sharing a car and growing to 5000 members by 1999.

This model of car sharing scheme is in its infancy in the UK. At the time of writing there were six car clubs operating with a combined total of 42 cars. Of these, 22 were in the Edinburgh scheme and of the others only the Oxford Car Club, operated by Avis, has more than three cars.

⁶ There have been some changes in the German model – previously separate car sharing clubs in German cities have combined into Drive StadtAuto.

⁷ Sperling et al

The policy context

The decision to establish a car club in Edinburgh reflects both national transport policy and the policies developed by the City of Edinburgh Council under its *Moving Forward* strategy. In both Government and local policy, the emphasis is on reducing the impact of the car, while recognising the importance of the car in providing mobility and flexibility for car users. Car Clubs fit into this strategy because they are not themselves anti-car – they simply seek to encourage the use of other modes while still retaining the advantages of a car for some types of journey.

Government policy

The Government interest in city car clubs stems from concerns about the need to develop alternative approaches to tackling problems of traffic congestion and the environmental degradation and health problems associated with exhaust emissions. Although the Edinburgh City Car Club predates the publication of the Government's recent transport White Paper⁸ and the parallel document produced by The Scottish Office⁹, the themes set out in the White Paper reflect the policy considerations behind the decision to support the Club. The key aspect of the White Paper of relevance to the Car Club is the emphasis on improving travel choice. As the Government White Paper expressed it,

Cars in particular have revolutionised the way we live, bringing great flexibility and widening horizons. And we do not want to restrict car ownership – with our vision for a prosperous Britain where prosperity is shared by all we expect more people to be able to afford a car. But the way we are using our cars has a price - for our health, for the economy and for the environment.

The Car Club was seen as one way in which travel decisions could be influenced away from dependence on private cars.

City of Edinburgh Council policy

Similar considerations influenced the transport policy developed by the City of Edinburgh Council. Its policy document *Moving Forward* committed the Council to examining alternative transport options for the City. The Council's membership of the European Car Free Cities network and its decision to part-fund a European review of PAYDCS schemes (undertaken by Cranfield University) also focused attention on the potential for car sharing to contribute to the Council's overall strategy of reducing car use and congestion in the City.

8 *A New Deal for Transport: better for everyone* (1998) Department of the Environment Transport and the Regions, The Stationery Office.

9 *Travel Choices for Scotland* (1998) Scottish Integrated Transport White Paper, The Stationery Office.

CHAPTER TWO – EARLY PROJECT DEVELOPMENT

THE SELECTION OF MARCHMONT AND SCIENNES

In February 1996, the City of Edinburgh Council's Transportation committee agreed to commission Lothian and Edinburgh Environmental Partnership (LEEP) to conduct a feasibility study of the likely market for a PAYDCS scheme in Edinburgh. The feasibility study took the form of postal questionnaires sent to types of individuals that it was thought would be predisposed to car sharing. These included members of environmental organisations and people living in areas experiencing parking stress or who were unable to afford a car.

Organisations that had previously demonstrated an interest in environmental issues were also sent questionnaires. In total, 2,022 questionnaires were sent to individuals and 289 to organisations.

The response rate from individuals was 27% (501 returned) although this varied from only 10% of the questionnaires sent to the selected areas to 35% of those sent to the members of environmental groups.

In spite of the low response rates, it was concluded from the feasibility study that "a scheme would be viable in the majority of Edinburgh on the non-environmental market alone".¹⁰ On the basis of the level of positive response to the car club concept given in the survey, it was concluded, "we can be reasonably confident that in this area sufficient PAYDCS users can be recruited for a viable pilot".¹¹ However, even the report acknowledges that all respondents had done was express 'potential interest' rather than make any commitment and that providing a "professional service"¹² and marketing the Club would be the keys to its success.

It is worth setting out the rationale for the selection of Marchmont and Sciennes.

- 30% of 'environmentally aware' respondents were positive about the Club, although this represents only 35 people out of 116 in the area who were mailed.
- 12% of 'general public' respondents in Marchmont Crescent expressed potential interest, although this is only 18 people out of 267 mailed.
- The population profile and educational qualifications of residents bore some resemblance to that of the members of European schemes.
- Marchmont was densely populated, giving a large number of potential members within easy walking distance of car stations.

The feasibility study did not, however, set out any analysis of travel patterns in the area or make any assessment of the scope for a car club to bring about changes in the level of car use amongst its potential membership. Although cost was cited as likely to be one of the main motivators for joining, how much potential members would be willing to pay to join a car club (or any more general business planning) was outside the scope of LEEP's study. The

¹⁰ LEEP (1997, unpublished) *A report on the prospects for a pay-as-you-drive car sharing scheme in Edinburgh* p.25

¹¹ LEEP, p.38

¹² LEEP, p.29

feasibility study was, therefore, confined to identifying areas of Edinburgh that appeared to offer the best prospects for recruiting members to a car club.

Marchmont and Sciennes

Marchmont and Sciennes is a dense residential area on the south of Edinburgh's main central area.

Housing in the area is predominately large Victorian tenements (see Figure 1) with each building having approximately 10-12 dwellings within it. At the time of the 1991 Census, the population was approximately 13,200 people and 5,824 households. Car ownership in the area was relatively low, with 61% of households having at least one car. However, because of the high population density, the area has severe problems of parking congestion, which are exacerbated to some extent by its position at the edge of the City's parking zone. Some parts of the area are outside the parking restrictions and are felt to attract large numbers of commuters who park in the area and walk or use public transport to reach the city centre.

Although the Marchmont and Sciennes area has some local shops and services, it is also close to the City Centre, which is readily accessible on foot or bicycle across the Meadows. It is also close to the areas of Bruntsfield, Morningside and South Clerk Street, each of which has substantial shopping and leisure services.

Figure 1 – Housing near the City Car Club sites





ESTABLISHING THE CAR CLUB

In parallel with the feasibility study, the City Council approached The Scottish Office in August 1996 to assist in establishing the Club. The Council's case was that existing transport options offered no easily affordable alternative to private car ownership. On the one hand, it was argued that car hire is relatively expensive when a car is required for periods of less than one day, it imposes an administrative burden on the user each time a car is hired and it is often difficult to arrange at short notice. Taxis, while offering convenience, flexibility and high levels of availability, were seen as relatively expensive, especially for long journeys.

This 'gap in the market' between car hire and taxis constituted the niche for a self-drive, short-hire service that could combine the flexibility of taxis with the cost benefits of car hire. The benefits to the user would be:

- greater transparency in the cost of journeys
- convenience, by removing the burdens associated with insurance, administration, repairs, cleaning etc.
- the ability to hire a range of vehicles
- access to better quality vehicles than the user might be able to afford themselves
- financial savings through the release of capital and reduced travel costs.¹³

Combined with these user benefits, wider benefits would accrue to the community through reduced pressure on local parking and anticipated reductions in car use as car club members make more 'rational' travel decisions, switching journeys that would previously have been made by car to buses, walking and cycling. The increased use of more environmentally benign transport would, therefore, also bring environmental benefits.

The Scottish Office sponsored a bid to DETR's research budget to support the Edinburgh Car Club as an innovative policy pilot. Reducing car use was, and remains, a policy priority for

¹³ European experience was frequently cited as reducing driven mileage by 50%, with low mileage drivers accruing savings of approximately £1400 a year.

DETR, the Scottish Office and the Council and testing the applicability of the PAYDCS concept was agreed.

Funding

The funding arrangement for the City Car Club involved input from the City of Edinburgh Council, The Scottish Office and DETR totalling £253,000. Each of the partners made a distinct contribution to the Club's development:

- DETR contributed the bulk of the funding (£150,000) to cover the initial set-up costs
- the City of Edinburgh Council contributed £48,000 (in kind) to meet the cost of developing the parking infrastructure at the parking stations and the project management and consultancy costs of LEEP, and
- The Scottish Office contributed the £55,000 required for the monitoring and evaluation of the pilot.

The funding agreement was reached after a period of negotiation which lasted from August 1996, when the City Council first approached The Scottish Office, to February 1997, when DETR agreed to fund approximately two thirds of the development costs from one of its research budgets. In part, the lengthy negotiation reflects a degree of scepticism about the nature of the project (was it a commercial pilot or a pilot of a policy initiative?), its role in achieving transport objectives and the viability of Car Clubs.

The other significant issue raised as part of the negotiation was the potential for a car club to lead to **increased** car use, as people who were previously excluded from car use by the high entry costs gained access to a vehicle.

Funding for the project was agreed on 27 February 1997, with the DETR transferring funding and accountability for the funds to The Scottish Office. LEEP, working under contract to the City of Edinburgh Council would proceed with the implementation and procurement required for setting up the Club.

Management structures

In March 1997, an Advisory Group, under the chairmanship of The Scottish Office and involving the three partners, was established with the following terms of reference:

- to set up a small-scale City Car Club pilot scheme which might, if successful, be replicated elsewhere in the UK
- to monitor and evaluate the operation and outcome of the pilot scheme in order to develop guidance for other local authorities in the UK wishing to set up similar schemes.

Represented on the group in later meetings were LEEP, as project managers, and System Three, appointed by the Scottish Office to undertake the monitoring and evaluation of the Club.

The Advisory Group initially met approximately every three months to review progress on the development of the Car Club. Between meetings of the Advisory Group, day-to-day

responsibility for developing the Club lay with LEEP under the management of the City of Edinburgh Council.

Public consultation

Early public consultation about the Car Club comprised two public meetings in Marchmont in June 1997 and August 1997. Out of the second meeting a small group of local residents was formed to meet with the Council and LEEP to discuss potential users' views of how the Club should progress. This group met regularly throughout the course of the Club's development although, as we discuss below, the role of the 'user group' changed as the Club developed.

Over the period of establishment, the public consultation highlighted a number of points where the expectations of those attending the public meetings might potentially diverge from the intentions and direction of those setting up the Club. For example,

- a relatively high proportion of attendees at each of the public meetings arrived on bicycles or on foot and were, in their contributions to the discussion, clearly environmentally aware. If the membership of the Club was drawn from this group, who had probably already minimised their use of cars, there appeared to be the potential for the Club simply to lead to the substitution of Car Club journeys for private car journeys rather than to an actual reduction in car use.
- there was a clear demand for the Car Club to provide day hire and weekend hire for longer journeys, reinforcing the reduced potential for replacing short car journeys.
- questions about the use of low emission fuels and engines, electric vehicles etc. tend to support the thesis that many people at the public meetings were primarily motivated by the environmental considerations, some of which are at odds with the practical arrangements for the progress of the Club and its need to be self-financing.

The group of local residents formed from the second public meeting reflected many of these same issues. The group was, as might be expected, interested in being involved in shaping the development of the Club, but it focused on the need for a high quality scheme to be established and adopted a pragmatic approach to the various changes in the organisational structure of the Club.

Monitoring and evaluation

Since the Club was intended as a pilot initiative to test the application of the car club model in the UK, monitoring and evaluation was set up alongside the implementation of the Club. The monitoring and evaluation had two principal roles:

- to monitor developments in the Car Club and the impact of developments on meeting Club objectives.
- to provide information and feedback on public characteristics and attitudes, assisting the development of the Club

As evaluators, we have been conscious of the potential for the observer to influence the development of the Club and have consciously sought to minimise this by making limited

contributions to meetings. However, some influence is unavoidable. Two specific examples have been identified:

- our original proposal to undertake the work discussed the possibility that a pilot scheme might not realise the full benefits of a car club, as the very fact of being a pilot might influence joining decisions and members' behaviour. This is acknowledged as having a particular influence on the thinking of the LEEP project manager towards the development of the Club.
- our analysis and feedback from the baseline survey influenced the financial projections for the Club, while the more general analysis tended to confirm the LEEP project manager's view that the selection of Marchmont and Sciennes had been mistaken and that the Club could not operate viably within that area alone.

The importance of these examples is that both tended to support a change in emphasis for the Club, moving it away from a small, local pilot of the Car Club concept to a larger, city-wide and fully operational club.

FROM ESTABLISHMENT TO IMPLEMENTATION

All of the elements of the Club – funding, location, management structures, implementation arrangements and monitoring and evaluation – were in place by May 1997, almost a year after the first formal approaches were made to bring together the principal partners. The projected launch date for the Club at this point was April 1998, leaving the organisers less than a year. The process of implementing the Car Club was, however, subject to considerable delays as the practical issues of how to set up and run a car club were addressed. In the following section we explore the different factors which have brought about these delays and the impact of these on the Club.

CHAPTER THREE – EARLY IMPLEMENTATION

A number of factors combined to shift the emphasis of the Club away from its original conception as a locally-based pilot of a policy initiative, with the potential for wider application, to become the starting point for a fully-fledged commercial scheme. In the process, early entry to the market for PAYDCS and access to state-of-the-art booking and hire management software developed for the Car Club was granted to a multi-national car hire firm in return for a three-year commitment to funding and operating the Marchmont and Sciennes scheme.

The principal factors influencing the direction of the Club were:

- concerns about the local environmental and visual impact of the parking stations, especially the plan to keep the keys for the cars in the type of on-street safes used in Germany and Sweden and the possibility that larger, on-street lockers would be required for storing baby seats and other accessories
- concerns about the security of the cars
- the investigation of different operating models in Germany and Switzerland and consideration of the implications of these models for the UK
- concerns about the viability of a scheme based solely in Marchmont and Sciennes, analysis of the local car hire market and detailed business planning, which revealed the likelihood of substantial deficits in the early years of the project, and the possibility that a scheme confined to Marchmont and Sciennes would never break even.

PLANNING AND SECURITY ISSUES

At the first public meeting about the Club in June 1997, a presentation outlining how PAYDCS schemes operated in Bremen highlighted a number of issues that might prove problematic in Edinburgh. First, the Bremen schemes operated using mainly off-street parking and used, in some locations, street ‘lockers’ to store child seats, roof racks and other accessories for use by members. Marchmont and Sciennes would, however, use parking stations on the street and it was proposed to have key safes, distinctive road surfacing and CCTV at the parking sites. These were felt likely to have an adverse impact on the visual amenity of the area and lead to difficulty obtaining planning permission for the sites.

The design of the parking stations was in part a reflection of the concern about the security of the Car Club cars. Although the German schemes apparently operated without any special security measures, the Edinburgh scheme was felt to require the on-street security referred to above. In addition there was concern about the extent to which members would accurately report their mileage and fuel use in a paper recording system. A ‘hi-tech’ system was also seen as having a role in monitoring this. The justification for this approach was unclear. Rather it was simply stated that the hi-tech approach was necessary because on-street key safes would be unlikely to withstand sustained vandal attack.

The response to this was to propose a system based on smart cards which would be more secure than key safes and which could be used to identify the driver to the vehicle, adding a layer of security on top of the ignition key. The cost of a hi-tech booking system (£90,000)

possibly using smart card technology was included in the project bid, although without any detailed explanation of how this would operate.

THE GERMAN AND SWISS MODELS

In July 1997, the LEEP project manager visited PAYDCS schemes in Bremen (StadtAuto) and Lucerne (Mobility) to compare the operation and management of the two schemes. The final section of the project manager's report is reproduced below not only because it clearly sets out the differences between the two models but also because, in retrospect, it signposts the developing direction of LEEP's thinking on how PAYDCS in Edinburgh should progress.

The operation of the Swiss Mobility scheme is clearly much more commercial in its marketing and general approach than StadtAuto in Bremen and pays less attention to the co-operative and environmental aspects and benefits. In spite of this, it appears to be delivering environmental benefits in terms of reduced car use in the same way as StadtAuto albeit on a different scale and in a different way. Whatever its nature was when it started, Mobility is now clearly a top-down scheme offering a service to customers rather than a bottom-up scheme controlled and developed by users. StadtAuto in Bremen and the other German schemes are more co-operative in nature and consciously environmental in character but remain local, fragmented and, in the same period, have not attained anything like the scale of operation achieved by Mobility. The Swiss experience clearly demonstrates that a fairly large scale PAYDCS scheme can be developed and run through a centralised and efficient management structure and by appropriate marketing rather than through the development of localised schemes.

If PAYDCS in Edinburgh (and, by implication, PAYDCS elsewhere in the UK) is to make a useful impact on car use and not be only a small-scale demonstrator of a principle, it will need to take on board some or all of the following:

- 1. Minimising running costs through economies of scale in terms of management resources and vehicle and equipment purchase as well as through the use of centralised computer and telematics-based management systems. Set up the scheme as a top-down operation providing a service to users.*
- 2. Facilitate the expansion of PAYDCS by avoiding, from the outset, the current German situation of the development of a number of small local schemes using differing systems.*
- 3. Maximise the return on investment in and expenditure on the initial scheme by using the management infrastructure developed for Edinburgh to run the scheme outside the city as well as within the city. With telecommunications and telematics, this could include Glasgow and cities in the North of England. This would not compromise the effectiveness or relevance of the Edinburgh scheme but would rather make it more attractive to potential members and deliver a greater benefit to Edinburgh.*

4. *Market the scheme primarily as a mobility package and not primarily as a car sharing and environmental scheme. The scheme should have a name that does not tie it specifically to Edinburgh or, for that matter, to Scotland and which reflects the way in which it is to be marketed. This does not mean that Edinburgh will lose its pioneering status in this respect but it will make it far easier to expand the scheme and market its service outside Edinburgh and Scotland to the benefit of Edinburgh if the name is not localised.*
5. *Set up complementary agreements with car hirer/car hirers which has/have depots in Scotland and England.*
6. *Aim to expand the scheme rapidly and not wait for completion of the initial year. At the moment, this scheme is the market leader in terms of development, local and national government support and system development and should exploit this exclusive position to capitalise on the high level of interest that already exists and will be generated when the scheme is launched. After the start up in Marchmont, the needs of potential users in other areas in Edinburgh should be addressed within 3 or 4 months. This could be done through existing expressions of interest (currently totalling nearly 500 of which 150 are in Marchmont). Within the first year, to start responding to and/or stimulating expressions of interest outside Edinburgh.*
7. *The scheme could expand by stimulating demand from local groups and/or responding to expressions of interest from say, a minimum of 40 interested users in a locality (i.e. 2 cars minimum). The scheme would then use its status and scale to procure/buy the vehicles, support the group in negotiating for parking space and then manage the use of the vehicles, giving the local members access to the full benefits of the larger scheme without any of the set-up costs.*
8. *Place car stations in groups (as in Marchmont) and at more dispersed key locations in the city (possibly targeted at business users and at visitors to the city). Look for larger potential business users and site car stations within their premises.*

The Advisory Group accepted these broad conclusions and LEEP's development work proceeded on the assumption that the Club would follow a Swiss model. Indeed, the only significant difference between these recommendations and the form adopted by the Car Club is that rather than simply being a complementary partner, a car hire firm was brought in to run the Car Club and the systems developed to manage it.

THE VIABILITY OF A CLUB IN MARCHMONT AND SCIENNES

The concerns of the project manager about the viability of a localised pilot scheme in Marchmont and Sciennes stemmed from three factors, two of which derived in one way or another from the monitoring work being undertaken by System Three. We have mentioned these already. First, our proposal to undertake the work clearly stated the view that establishing a pilot scheme might not realise the full benefits of a car club.

The fact that the initiative is a pilot (and potentially short-lived) will inevitably influence potential members' decisions to join and will also influence their behaviour as members. The pilot nature of the project may, therefore, undermine some of the project objectives and result in findings which would possibly not arise in a full-scale implementation.

The logic of this was that if the Car Club were to succeed, it would need to be set up as a full-scale implementation of a car club, with sufficient long-term commitment to persuade car owners to make fundamental and permanent changes in their travel behaviour.

Our analysis and feedback from the baseline survey tended to reinforce concerns about the viability of the Club in Marchmont and Sciennes arising from the desired pattern of hires. Essentially, the problem posed by Marchmont and Sciennes is that while the area has parking problems, and while the population may be more environmentally aware, this need not lead directly to membership of a scheme offering car short hires. The survey results showed, for example,

- a lower level of car use for everyday journeys such as travel to work/education, trips to leisure services etc. Since the area is located close to a wide range of shops and leisure services and within walking distance of the City Centre, car use among the population was more skewed towards longer journeys such as holidays and day trips.
- 84% of vehicles were owned outright, making the costs of car ownership more focused on depreciation than repayments, and making the costs of car ownership less transparent
- Of those interested in joining the scheme, 41% said they would sell their current car but 28% said they would keep it for use as a second car. The intention to sell a car was strongest among households with more than one car (48%). This would mean there remained a strong incentive to use the private car for short journeys.
- Interest in the Car Club was highest among non-car owners (20% interested) and households with one car (30% interested). This indicates a strong potential for the Club to lead to increased driving.
- an assessment of the size of the market for the Car Club based on the baseline household survey suggested that 7% of car-owners were potential members, giving a pool of around 500 car-owners from which membership could be drawn.

Taken as a whole, this tended to confirm the project manager's view that there was a significant risk that the Club could not operate viably within one area. A strategy of rapid and early expansion would be required to spread this risk across a number of other sites.

The third factor prompting a change in strategy was the outcome of the business planning, which showed substantial deficits in the Club's early years. This is looked at in detail below.

Acquisition of vehicles

The question of how the car club would obtain vehicles to hire was not adequately addressed in the feasibility study or the funding bids. It was simply assumed that the user charges would cover the costs of the vehicles although where the vehicles would come from in the first place does not appear to have been considered at all. The question of capitalisation would shape consideration of the Car Club's business planning (see below).

Consideration of how and where to acquire vehicles led the project manager to approach six manufacturers with a request for assistance in acquiring vehicles. In essence, the approach set out the novel nature of the Car Club in the UK and its potential to influence modal choice. Association with a car club that would receive substantial publicity might, therefore, benefit the manufacturers.

Two of the manufacturers responded positively – one offering 10 cars leased at no cost, the other offering 5 cars leased for a year at no cost and at cost price for another two years. These offers were not available once Budget was operating the scheme but they are important because of a crucial business planning decision made in relation to how the savings from the free cars would impact on the costs of the scheme. Basically, although the cars would be provided at little or no cost, the business planning assumed that there was a charge and that user costs would need to be set at a level to meet that charge. This had two impacts:

1. the user charges were set to reflect the actual costs of operating the car club as would be found in a real-world situation. Had the user charges not been based on this principle, the pilot would have been compromised by the distortion of costs.
2. the Club would generate additional revenue to cover these notional costs, which could be used for further development of the Club beyond the Marchmont and Sciennes area.

Business planning

We have already noted that while the initial feasibility study sought to quantify the potential interest in a car club, it did not undertake any business planning. Indeed, business planning for the Car Club did not begin in earnest until late in 1997 – 10 months after the funding was put in place. At its inception, the Car Club rested on two key financial assumptions:

- set-up costs would be fully met by the grant from DETR and the in-kind contribution of the City Council
- running costs would be fully met by the subscriptions and charges paid by members.

Issues that were not considered were:

- how Club membership would build up over time
- how the vehicles would be procured and whether this had implications for the corporate structure of the Club
- the detailed charging structure for the Club and how this related to the cost of car ownership and charges for competing modes of transport
- the Club's cash-flow and how any negative balances would be financed.

The detailed business planning for the Club carried out by the project manager at LEEP brought these issues to the fore. In essence, the outcome of the business planning fundamentally altered the character of the Edinburgh City Car Club.

First, no consideration had been given to how membership of the Club would develop. Although it was presumed that membership charges would cover the running costs of the Club, it was not recognised that the Club would start with no members and would only build up to a 'breakeven' membership over a period of time. However, the running costs of the

Club had only a loose relationship with the number of members. The Club would, inevitably start with too few members to cover the initial running costs.

More importantly, the business planning had to consider the long-term financing of the Club, including finance for developing the Club and to replace infrastructure and capital assets purchased by the partners' initial funding. The planning also had to consider the relationship between the administrative costs for the pilot and the impact of early decisions to use a high technology approach to hire management. Although the Club was initially intended to be based in Marchmont and Sciennes for a year prior to expansion, the administration of the Club had to have the potential to service a much larger membership. This created the paradox that if the members in Marchmont and Sciennes were expected to carry all the revenue costs of the Club, the charges would be higher than would be necessary in a 'real world' club. This could be expected to have an impact on joining rates and members' behaviour. Alternatively, if the members of the pilot club did not bear all the costs, who would? There was no provision in the funding to run at a deficit.

Secondly, the business planning had to consider the charging regime for the Club. This had to meet a number of objectives. It had to:

- maximise revenues for the Club
- 'engineer' a mix of journeys that would meet Club objectives, especially limiting the attractiveness of the Club for long journeys since this would meet both modal choice objectives and maximise flexibility in the fleet
- provide financial savings to members.

Apart from concerns about the size of the potential membership in Marchmont and Sciennes, the major factor limiting the project manager's flexibility in determining a charging regime was the price of car hire in Edinburgh. At the time when the business planning was being done, it was possible to hire a car similar to a Ford Fiesta for approximately £19 per day. This set a low upper limit on the total price of a day's journey and, consequently, limited the revenue that could be obtained from the anticipated range of hires. Within this range, the cost of other modes had to be considered. If a Car Club rental was more expensive than a taxi, what was the role of the Car Club? There was a real danger that having persuaded people to make the leap from car ownership to self-drive, short-term car rental, they would simply bypass car rental entirely.

Projections of the running costs of the Club and the projected revenue from membership combined to produce a cash-flow projection for the Club over its first four years of operation. Four operating models were examined and these are summarised below. The significant aspect of these is that each of the models resulted in a deficit for the Club. Only two of the models were likely ever to move into a surplus with only one moving to a financial surplus within four years. This option, of a Car Club across the whole City operated by a private sector provider, was the one pursued.

Table 1 – Business plan projections for the Car Club

| Structure (scope, organisational structure) | Membership | | Hire system | Maximum deficit | Positive balance year |
|--|------------|--------|-------------|-----------------|-----------------------|
| | Year 1 | Year 4 | | | |
| City of Edinburgh, not for profit company | 221 | 740 | Telematics | 226,000 | 5 |
| Marchmont & Sciennes, not for profit | 116 | 232 | Telematics | 161,000 | never |
| City of Edinburgh, private sector provider | 221 | 740 | Telematics | 51,000 | 3 |
| Marchmont & Sciennes, locally managed year 2 | 74 | 176 | Paper-based | 145,000 | never |

THE TRANSITION FROM A CLUB TO A COMPANY

The outcome of the business planning was that none of the organisations involved in establishing the Club were able to make provision to finance the projected deficits of the Club. The Club faced a choice between two ways of resolving the financial problem.

1. to limit the Club to its original conception as a small pilot project based in Marchmont and Sciennes and run this for a year to establish the viability of this model, or
2. to seek a private sector partner who would underwrite the financial deficit of the Club and, if necessary provide funding for expansion in other areas.

The first option could have operated for two years using some of the DETR funding for revenue costs. However, it would run a deficit in year three (when additional funding would be required) and would be unable to expand without facing continuing deficits in each new area.

The second option required a private sector partner, although there were concerns that bringing in a private sector partner, working to the Swiss model, would transform the Club from a policy tool pilot into a commercial pilot. However, it was accepted that a private sector partner offered the best option for securing both the implementation of the Marchmont pilot and, if this proved successful, the longer-term expansion of the concept.

Partnership tendering process

The partnership with the private sector was the outcome of a tendering process initiated in March 1998 when 10 car hire and leasing companies were invited to express interest in tendering to operate the Car Club. The tendering was not for a contract but for the right to operate the Club on behalf of the City of Edinburgh Council. The successful bidder would be expected to provide the funding and management required to operate the Club, initially in Marchmont and Sciennes, with expansion at the bidder's discretion. The bidder would not be paid but would benefit from the development funding provided by the public sector partners, including the parking bays in Marchmont and, crucially, the hire management systems developed to operate the Club.

The seven companies that expressed interest in the bidding were invited to attend a briefing session in Edinburgh at which presentations on the Club were made by LEEP and the companies were given a brief overview of the findings of the baseline survey.

Thus, bidders were aware of the proposed approach to operating the club (the telematics and in-car systems, the telephone booking system etc), and the financial projections for the Club. The prospectus contained various assumptions about utilisation rates ranging from 0.7 hires per vehicle per day (10 hires in 14 days) down to half that rate, to demonstrate the potential deficits of the Club. These projections were based on the Club operating with 10 vehicles and achieving 30 members at start-up. Apart from the scenario with the highest utilisation rate and the lowest cost fleet, each scenario was operating at a deficit at the end of year 4. These ranged from £7,700 to £124,000. Potential bidders were, therefore, aware that there was a significant financial risk in operating the Car Club that would extend for at least the first three years and possibly longer.

Three of the companies submitted proposals, although one withdrew after submitting their bid. Of the two remaining bidders, Budget was selected to operate the Club and confirmed as the preferred operator in August 1998. The key strengths of Budget's bid were:

- a three-year commitment to the scheme (with a review at the end of year 2)
- senior staff input into the development of the scheme and a dedicated local team to run the project in Edinburgh
- a discount on standard hire charges for day and weekend hires
- a pricing structure that would be easily understood by users and which charged for hire time and mileage, meeting the 'marginal cost' pricing objectives for the Club.

CHAPTER FOUR – THE CAR CLUB IN PRACTICE

The Edinburgh City Car Club was launched on 29 March 1999 with six cars at four parking stations in Marchmont and Sciennes. Examining the operation of the Car Club is complicated first because the Club was not confined to Marchmont and Sciennes for long. New stations were added soon after the launch and, in April 2000, another 19 stations were added in various locations around the city.

Secondly, despite repeated requests over a 9-month period, it has not been possible to obtain information that would allow Marchmont and Sciennes to be disaggregated from the user statistics provided by Budget to the Council.

Thirdly, it is not possible to differentiate between aspects of the Car Club that are linked to Budget's own commercial problems, those which might arise in operating any car club and those that arose because of the way this Car Club was set up.

Finally, the various elements of the Car Club are linked to each other – pricing, locations, types of vehicles, utilisation etc – and they all interact. At the very least it makes the description and analysis complicated.

In this section we look at each element of the Car Club to describe how it was set up and operated and to identify and discuss issues that arise. Our primary concern is with the development and operation of the Car Club in Marchmont and Sciennes but we also need to discuss the expansion of the Car Club. This is so for two reasons. First, we cannot separate Marchmont and Sciennes from the other areas in the data. Secondly, there is the likelihood that the expansion into other areas had some impact on Marchmont and Sciennes, not least as it might have affected Budget's decision to withdraw.

This section seeks to address the following aspects of the Car Club in practice.

- How it was set up – looking at how the Club was intended to operate in Marchmont and Sciennes.
- How the Club grew in the area, who joined the Club and why people did not join.
- How the Club was used by members
- How Budget managed the Club, looking at aspects of service provision and the expansion of the Car Club out of Marchmont and Sciennes.

The final part of this chapter attempts to address the central question raised by the Edinburgh Car Club – to what extent was the Edinburgh Car Club on course to meet the target of breaking even within four years.

HOW THE CAR CLUB WAS SET UP

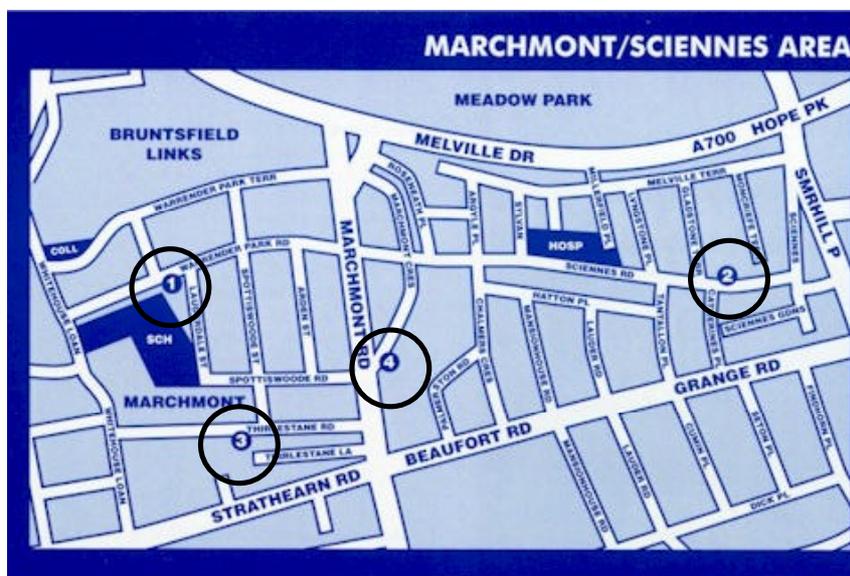
Parking bays

The parking stations for the Club were initially conceived as having distinctive road surfacing – to set them apart from ordinary parking bays – and CCTV as a security measure. The City of Edinburgh Council as the transport authority for the area was responsible for securing the traffic regulation orders required to establish the parking stations. The statutory procedure for

promoting a traffic regulation order (TRO) to allocate spaces for City Car Club cars – which takes approximately six months to complete – was initiated in April 1997.

In common with other parts of Edinburgh, those parts of Marchmont and Sciennes that fall within the city's controlled parking zone have areas designated for residents' parking. These are generally over-subscribed (i.e. more permits are issued than there are parking spaces) so the area outside the residents' spaces is also in heavy demand to accommodate the number of vehicles in the area. The space for the Car Club parking stations was taken from road space that was not already designated for residents' parking, minimising the potential objections to the scheme on the grounds that it was removing space that was already felt to be inadequate. Throughout the planning process only one objection was submitted and, as this was not upheld, the planning was completed in December 1998. When the Car Club was launched, parking bays had been established at four sites in Marchmont and Sciennes as shown in Figure 2 below.

Figure 2 - Locations of Car Club parking bays



On-street provision for parking changed from the initial proposals, reflecting the changes in the hire management arrangements. Only a solid white line on the road and text designating the space as being for City Car Club use distinguished the parking bays. Roadside signs also explain the designation and indicate that the area is a tow-away zone (which carries a vehicle recovery charge of approximately £120). The proposal for CCTV coverage was not implemented because of the cost of installation.

Figure 3 – Warrender Park Road station

Note: The road space from the pole on the left to the end of the car on the right is the dedicated parking space.



Hire management system

The hire management system developed for the Car Club comprises two distinct components:

- a computer-based bookings system which manages the membership, billing and the allocation of cars to members, and
- a GPS-based vehicle security and tracking system which controls access to the vehicles and allows the location of vehicles to be monitored.

The final specification of the system reflected a number of factors:

1. uncertainty about the ownership, quality and future development of the Sharecom system (used by the Swiss schemes and initially proposed as the system to be used in Edinburgh)
2. concerns about the security of key safes and the local planning implications of on-street safes
3. the inherent limitations of smartcard technology (initially proposed) which could provide access to key safes but not to vehicles, implying that if key safes were not appropriate, smartcards had a limited role
4. the visit to Lucerne, where it became clear that Sharecom, which is written in Microsoft Access, had limited scope to support the expansion of the Club and to deal with multiple hires and bookings in real time. Mobility was already considering a GPS-based system for vehicle management.

The system that was developed was designed to address the concerns raised about the booking and security measures initially proposed. It was also designed to facilitate rapid expansion and the development of new clubs without each having to develop their own management functions. New clubs could simply buy into the system established for Edinburgh.

The systems were provided by three companies, each of whom submitted a competitive tender for the design and supply of their element. Each had an established track record in supplying their component parts of the system to other organisations.

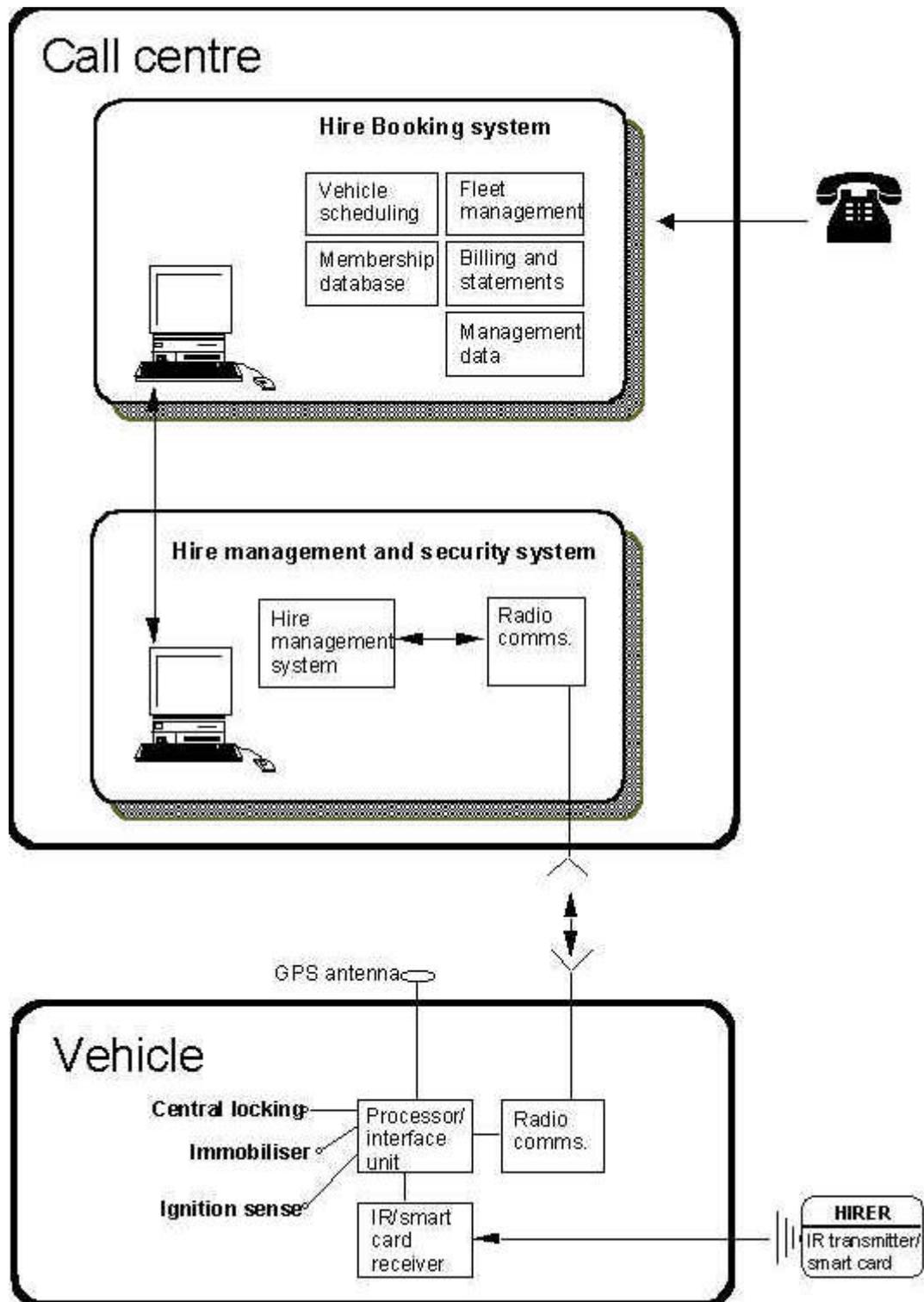
The system that was established for Marchmont and Sciennes saw the hire management system installed at Budget's UK headquarters in Hemel Hempstead. A local (0131) telephone number connected callers to the booking centre to make enquiries and bookings.

How the system works

In its conception, the booking system is relatively simple. Members are issued with a uniquely encoded key fob transmitter similar to those used for car central locking systems. Each vehicle booking is allocated to a member who is identified to the system by their key fob number. Shortly before the start of the hire time, the booking system transmits the key fob identifier to the in-car receiver. To start the hire, the user points the key fob at the in-car receiver. If the number transmitted by the user matches the number expected by the receiver, the system opens the car doors and disengages the vehicle immobiliser. The user can then retrieve the car keys from the glove compartment where they are kept. At this stage the car notifies the bookings system that the hire has commenced and transmits the current odometer reading.

At the end of the hire, the user replaces the car keys in the glove compartment, closes the car door and uses the key fob to engage the locks and immobiliser. The car notifies the booking centre that the hire has terminated and transmits the final odometer reading.

Figure 4 – An outline of the Car Club booking and hire management system
 Source: LEEP, specification for tenderers. Issued by CEC



The combination of booking software linked to in-car communications technology was designed to provide a number of distinct benefits.

- It removes the need for on-street key safes; the keys to the vehicle are kept in the glove compartment and the in-car technology controls the immobilisation of the engine and access to the vehicle.
- The link between the call centre and the vehicle means access to the vehicle is restricted to the user who has booked the car (each user has a uniquely encoded infrared key fob and the identification of the key fob is transmitted to the car).
- Near the end of the hire period, the system can determine the position of the vehicle and whether the car will be available for the next hire. If the car will be late, another is automatically booked to replace it.
- Stolen vehicles broadcast their position allowing them to be tracked and recovered.

Car Club pricing

Apart from an introductory membership fee of £50 for the first 50 members, the Car Club tariff structure has remained static since the scheme was launched (Table 2). This is in spite of substantial increases in petrol prices in that period.

Table 2 – Car club tariffs

| | |
|-------------------------------|--|
| Membership fee | £99 |
| Additional household member | £79 |
| Rate for first hour | £4.50 |
| Rate for each subsequent hour | £2.00 |
| Free hours | Midnight to 8am |
| Amount per mile | 9p per mile for first 20 miles in each hire hour 22p for each additional mile |

This pricing structure was designed to balance two potentially competing interests: the commercial need to encourage membership and to generate sufficient revenue for the Club to be self-financing, and the public policy interest in discouraging car use, especially for short journeys. This balance can be seen in the higher charge for the first hour – designed to discourage short journeys that could be replaced by alternative modes.

The maximum hire was originally set at 8 hours. Members who wished to make longer bookings were offered 24 hours hire from Budget’s normal hire fleet at a discounted rate. In this way, the need for longer hires would not restrict other members’ access to vehicles. To provide the convenience of the Car Club for these extended hires, Budget provided a delivery and collection service to users’ homes.

Vehicles

The Club started with six vehicles: a Ford Mondeo estate, a Ford Focus and four Ford Fiestas. This fleet remained throughout the period covered by this report.

HOW DID THE CLUB GROW?

Membership

The Edinburgh Car Club had received considerable publicity before its launch and throughout the development period LEEP had maintained a database of people who had contacted them to express interest in the Club. By the time the Car Club was officially launched in March 1999, the database contained over 500 people, of whom 156 lived in Marchmont and Sciennes.

At the end of its first month, the Car Club had 35 members, an impressive starting figure although a small proportion of the number that had attended public meetings or contacted LEEP to request information on the scheme. However, six months later, the membership had only reached 58 and by the end of December had climbed to 65. By the end of March 2000 – the anniversary of the scheme – the membership was 95.

It is at this point that the new sites that were to be launched in April 2000 cloud the membership figures. It is unclear how many of the members at March 2000 were based in Marchmont and Sciennes and how many lived in the areas in which another 19 parking stations were to be launched in April 2000. It seems likely that most of the 95 members in March 2000 were based in Marchmont and Sciennes.

The raw numbers do not tell us much about how well the Car Club had progressed, although almost trebling in size in the first year is impressive. Certainly more impressive than the first year of the Mobility scheme in Switzerland, which grew from 28 members in 1987 to 58 in 1988.

The actual growth also indicates that the initial projections for the first year were not overly optimistic about the potential for a Car Club in Edinburgh – the actual membership was just 20 short of the projections for a Car Club operating in Marchmont and Sciennes prepared by LEEP (see Table 1 on page 18).

However, it was also clear that some members had never actually booked a car, joining perhaps to give support to the scheme. Also, the end of March 2000 signalled the point where the original members' subscriptions would become liable for renewal. Since there is no mechanism for members to resign during the course of the year, the passing of members' renewal dates would show the extent to which the first year's growth represented actual growth in active members.

By September 2000, when fieldwork for the follow-up survey was being prepared, the membership list provided by Budget contained only 55 residents in the EH9 and EH10 postal areas that cover Marchmont and Sciennes. Also, there were 22 people whose membership had lapsed. It is difficult to reconcile these figures because the membership data from Budget is somewhat clouded by the inclusion of, firstly, one parking station set up outside Marchmont and Sciennes in September 1999 and, secondly, by the inclusion of all 23 parking

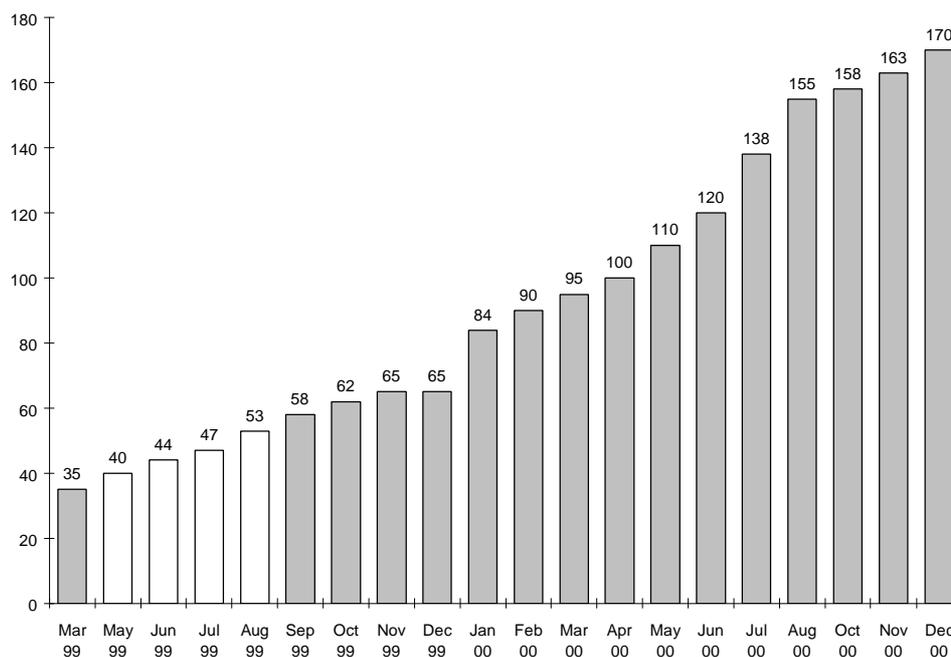
stations in Edinburgh after March 2000. However, the loss of 22 members after March 2000, represents 37% of the members whose subscription would have been liable for renewal by September 2000. This suggests a relatively high proportion of ‘paper’ or supporter members and allows us to estimate a ‘real’ membership base of perhaps only 75. The pattern of membership is shown in Figure 5.

Figure 5 – Car Club membership, March 1999 to December 2000

Source: Budget management reports. No actual membership figures supplied for April to August 1999.

The author has filled in these months to approximate values. Reporting periods were also inconsistent and April 1999 is split across the March and May reports.

September and October 2000 figures combined by Budget



Although the growth trend in Car Club membership appears very strong over the period shown in Figure 5, there are two factors that need to be borne in mind. First, LEEP’s projections for a city-wide Car Club (the model that would break even) was 221 members after the first year. On this measure, the membership looks positive even if some of it is Year 2 membership from Marchmont and Sciennes. Second, membership is not the best measure of the Club’s performance and needs to be considered alongside the vehicle fleet and how members use the fleet.

Use of vehicles

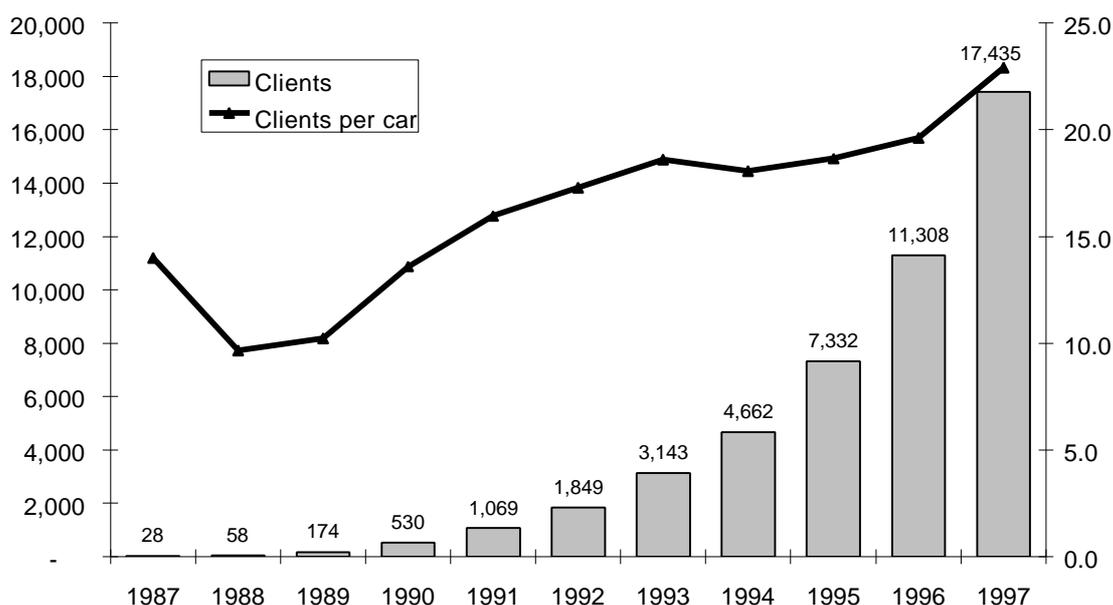
The relationship between the fleet size and Club membership is financially and operationally critical. There are competing pressures in relation to the ratio of members to vehicles. On the one hand, a large number of members using each car increases the efficiency of the scheme, maximises the revenue relative to the capital outlay and maintenance costs and leads to the greatest gains in terms of reducing car ownership and relieving parking pressures. On the other hand, a low number of members per car increases the likelihood of members getting a car when they need one and having the flexibility to extend their hire should they wish to do so.

This was discussed in the initial feasibility study ¹⁴ with the conclusion that an upper limit of 10 members per vehicle would best ensure the success of the scheme from the members' perspective i.e. people who joined the scheme were more likely to view the scheme positively if they had easy access to vehicles when they wanted one. No consideration was given to the commercial impact of this. However, in commercial schemes, the ratio of members to cars is much higher than 10:1. Figure 6 shows the membership growth and member: car ratio for Mobility in Switzerland.

Figure 6 – Membership and member:car ratio for Mobility (1987-1998)

Source: Mobility web site (www.mobility.ch)

Note: membership on left-hand axis, ratio on the right.



Mobility's experience was for membership to grow quickly – averaging 97% per year for the whole period in Figure 6. The member:car ratio started at 14:1 (2 cars for 28 members in 1987) and increased – with some fluctuation – to 23 members per car in 1997.

By comparison, the Edinburgh scheme had too many cars. Based on the ratio of 10 members per car recommended in the feasibility study, the scheme in Marchmont and Sciennes would not need 6 cars until September 1999 – six months after the launch. Based on the more commercial ratio of 20 members per car, which formed the basis of the business planning, the scheme in Marchmont and Sciennes would not need six cars at all in its first year.

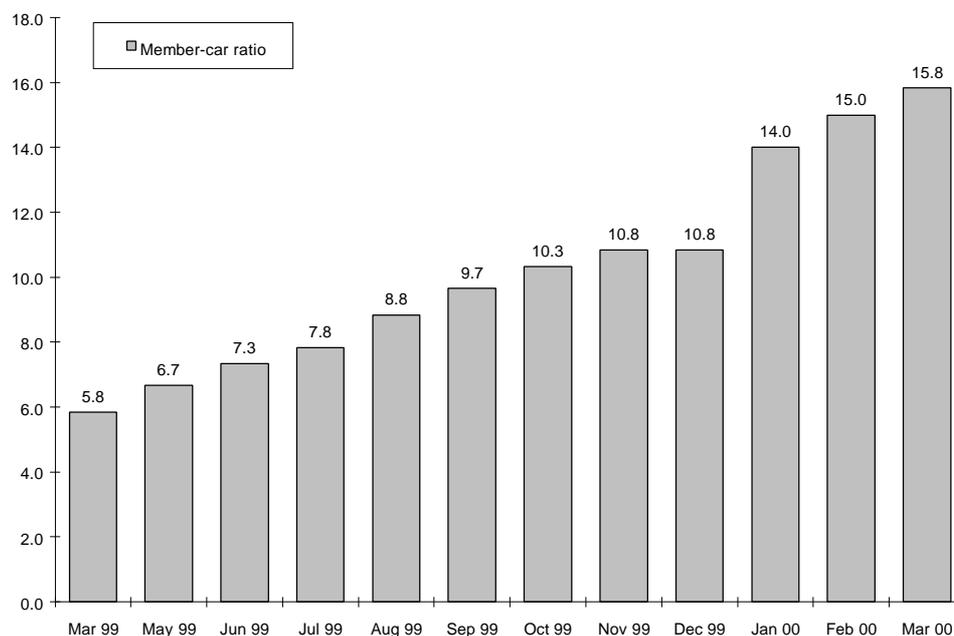
The effect of this is for the cost of providing the cars and maintaining them to be borne earlier than was really necessary, which would have knock-on effects for Budget's revenue. ¹⁵

¹⁴ LEEP, p.31

¹⁵ We have no information on Budget's actual costs. By re-running LEEP's models and comparing the closing balance of the Car Club at the end of Year 4 using constant a 20:1 ratio and the actual fleet size. We estimate that the decision to expand the fleet before the membership figures justified it would have cost Budget approximately £70,000 over a four-year period.

Figure 7 – Member to car ratio in Marchmont and Sciennes (March 99 to March 00)

Source: Budget management information



HOW DID MEMBERS USE THE CITY CAR CLUB?

In terms of the use of Car Club vehicles by members, the experience of Mobility in Switzerland also gives an indication of what would have been expected to happen in Edinburgh – at least by comparison with a mature scheme.

When the structure of the Edinburgh scheme was being considered in 1997, Mobility had approximately 16,000 members using approximately 800 vehicles and making 600 bookings per day. To put this on a scale comparable with Edinburgh, we can say that Mobility was taking 0.27 bookings per member per week, or that on average each Mobility member made a booking approximately once every four weeks.

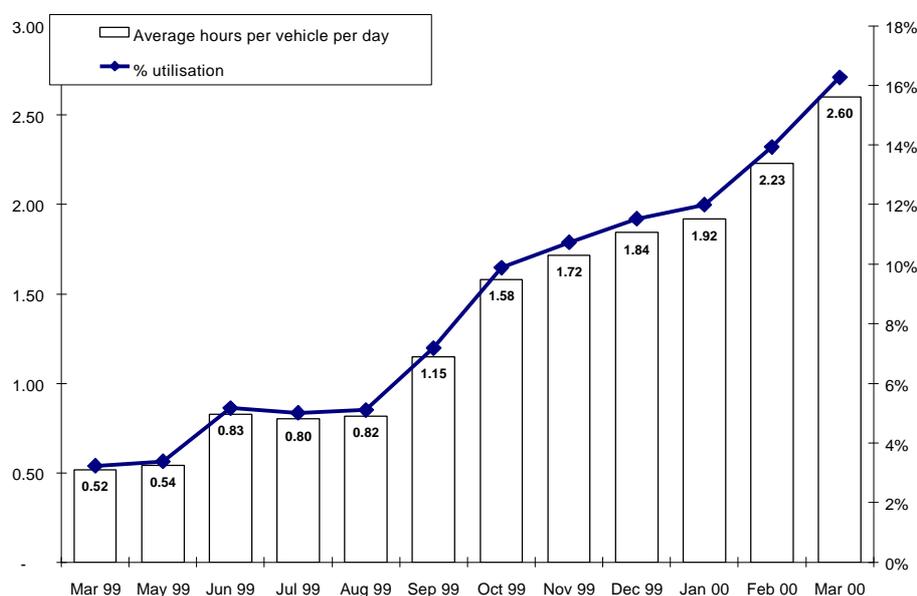
After six months operation, the Edinburgh Car Club had 58 members who made an average of 9.66 bookings per week, or 0.17 bookings per member per week. After 12 months operation, this had risen to 0.35 bookings per member per week. In terms of how often members used the Car Club, Edinburgh was already starting to look like a mature scheme.

It is less easy to judge how the pattern of hires observed in Edinburgh compares with the patterns in other schemes because detailed information like this is difficult to find. Figure 8 shows the average hours use of each vehicle in Marchmont and Sciennes and this as a percentage of the period for which vehicles were available for hire – 16 hours per day.

Figure 8 – Utilisation rate for Car Club cars, March 1999 to March 2000

Source: Budget management information

Utilisation calculated as average hours use per vehicle per day as a proportion of 16 hours availability



At its peak over the first year, vehicles were being hired for less than 3 hours per day or 16% of the required utilisation. Unfortunately, we are unable to undertake any further analysis of this, which might indicate the extent to which the utilisation rate:

- reflects the relative over-provision of vehicles at the launch of the scheme – the same number of bookings with fewer vehicles would lead to substantially higher utilisation
- reflects low day-time use but maximum, or near maximum, evening use. In this case, the high number of cars would be needed to meet peak demand but there would be very little use during the day
- some combination of these factors.

If evening and weekend use by residents required a relatively large number of vehicles the key to increasing utilisation was to recruit businesses who might use the vehicles during the day. We discuss marketing and recruitment below.

The level of utilisation used in the LEEP business planning assumed that each vehicle would be hired 300 times in a year and that hires would last an average of 4.5 hours. Since the business planning indicated that the scheme (on a city-wide level) could break even after four years, it is useful to compare the actual performance of the Car Club against the planning assumptions to assess whether the Car Club was on track to achieve this.

Table 3 – Comparison of actual performance against business plan

| | Business Plan | Actual | Actual compared with Plan |
|-----------------------------|----------------------|---------------|----------------------------------|
| Membership at year end | 116 | 95* | Worse |
| Ratio of members to cars | 20 | 16 | Worse |
| Number of hires per vehicle | 300 | 137 | Worse |
| Average hire length | 4.5 hours | 3.7 hours | Worse |
| Average hire distance | 66 miles | 26 miles | Worse |
| Hires per member per week | 0.5 | 0.35 | Worse |

Note: This might have contained as many as 20 ‘paper’ members who did not use the Car Club at all or used it only once or twice in the whole year.

On each of these measures it seems that the Car Club would have been achieving substantially less revenue than was planned. However, there is one other factor that we can only guess at: the extent to which Car Club members used the discounted day hire from Budget’s normal hire fleet. We have no data for this for the March 1999 to March 2000 period. However, we do have figures for the April – December 2000 period and this shows that Car Club members made 160 day or weekend rentals from Budget separate from their use of Car Club cars. Given the relative cost of the two, there is likely to be some incentive for members to pay a little more to have access to the car for a full day, especially when Budget would deliver and collect the car.

The average Car Club hire for 3.7 hours and 26 miles would cost £12.24. Budget’s discounted day rental for Car Club members was about £21. So it is easy to see how, if members planned a trip that looked more like the business plan average of 4.5 hours and 66 miles (average cost of £17.53) they might well switch to a full day’s hire. There is no saying that Budget would have got this business without the Car Club and with their nearest offices about 4 miles away this is probably very unlikely. So the pattern of Car Club hires probably underestimates the total revenue accruing to Budget from the City Car Club. My estimate is that discounted day hires might represent as much as 39% of the total revenue attributable to the Car Club.¹⁶

Questions arising from Year 1

The first year of any organisation’s life is probably a poor basis on which to draw conclusions but at the end of its first year the Car Club in Marchmont and Sciennes was under-performing on all of the measures used to project its eventual transformation into a viable enterprise. Of course, that is not to say that it would not have become viable. The growth projections were for membership to increase by an average of 50% per year over the four years, but Mobility achieved an average of 100% growth. The questions that arise from Marchmont are less to do with the number of members but the characteristics of the members and how they used Car Club cars, such as

1. Who joined the car club, why did they join and how can we characterise their use of cars?
2. Who did not join the Car Club, why did they not join?
3. How was the Car Club marketed to non-members?

¹⁶ In the April to December 2000 period, the total revenue from day and weekend hires was £14,000. In the same period I estimate hire revenue to be in the region of £22,000. This gives a total ‘Car Club’ revenue of £36,000 of which the day hire revenue is 39%.

4. What operational problems did the Car Club experience that might have impacted on membership?
5. Given the issues of membership, utilisation and service delivery, what impact did the expansion of the Car Club have on Marchmont and Sciennes?

MEMBERS OF THE CAR CLUB

The market for Car Clubs

Every review of car clubs identifies their membership as being primarily drawn from a relatively narrow social group. Car Club members tend to be relatively affluent, middle class, well educated, with above average income and showing concern for environmental issues. For example, Shaheen, in a study of members of CarLink in San Francisco developed the following profile of members.¹⁷

- 50% belonged to households of two or three members.
- An equal number of men and women expressed interest, but of those who actually joined, 60% were male.
- 70% were married.
- 90% were 24-64 years (of which 56% percent were 24-40 and 39% 41-64).
- 60% had a Bachelor's or Master's degree.
- 50% lived in a large- or medium-sized city (greater than 50,000).
- 60% had household incomes over \$50,000 per year.
- 20% were dissatisfied with their current transportation modes.
- 60% of individuals agreed or strongly agreed that vehicle maintenance is a hassle.
- 20% strongly agreed or agreed that vehicles are enjoyable.
- 60% strongly agreed or agreed that congestion is a serious problem.
- 50% agreed or strongly agreed that the environment is a concern.
- 80% agreed or strongly agreed that they like to experiment with new ways of doing things.

Similar profiles emerge from studies in other countries and Sperling provides a useful overview of these.

In Edinburgh, the initial feasibility study conducted by LEEP sought out specifically these types of people to assess the potential for a Car Club, sending questionnaires to members of environmental groups and to residents in relatively affluent areas of the City. It found the interest that it was looking for. As part of the analysis of the baseline survey in 1997, we

¹⁷ Shaheen, S (1999) *Dynamics in Behavioral Adaptation to A Transportation Innovation: A Case Study of CarLink – A Smart Carsharing System* Doctoral thesis cited in Sperling, op cit.

estimated the size of the ‘market’ for the Car Club using driving characteristics and expressed interest in the scheme. The respondents that this analysis suggested might be potential members were characterised by two ACORN groups.¹⁸ The importance of this is that the profiles of these groups fit with the experience of Car Clubs elsewhere and, if borne out by actual membership, they provide a simple mechanism by which areas of potential demand might be identified. In Scotland, the two ACORN groups were “Better-off families” (31% of the potential members) and “Professionals and students in private and rented tenements” (42% of potential members). The “Better-off families” were of particular interest because they were significantly over-represented in the group of potential members – 31% compared with only 16% of the households in Marchmont and Sciennes.

Who joined the Car Club?

In general, the ACORN profiling from the baseline survey proved to be fairly accurate. Looking at the profile of members, three ACORN types account for 93% of members, which are described below in terms of their characteristics on a national basis. The characteristics that suggest that these groups might be potential car club members are also discussed.¹⁹

Type 16 - Well-Off Town & City Areas (20% of members)

These are very high status, high spending urban neighbourhoods containing highly educated, affluent professional people. The greatest proportions are in Outer London - Richmond upon Thames, Barnet and Kingston upon Thames are typical areas. Concentrations are also found in Avon, Surrey, Cambridgeshire, Oxfordshire and Lothian region. The level of population mobility is high.

This group is characterised by concentrations of highly educated people with high levels of car ownership. These households are extremely affluent with 3.5 times more people than average earning £40,000 or more. The proportion of households with two or three cars is 30% higher than average. However, company car ownership is also high. They are very active in their leisure. This group offers the potential for vehicle substitution, since although the main car may be ‘required’ for work, the second cars are likely to be idle for a large proportion of the time. There may be potential for day-time hires but significant potential for evening use of club cars.

Type 19 - Apartments, Young Professional Singles & Couples (17% of members)

These neighbourhoods are populated by single professionals and couples, living mainly in apartments. They are heavily concentrated in London - 46% of the people living in the City of London are in this ACORN Type. Outside London these neighbourhoods are found in places such as Edinburgh, St Albans and Cambridge.

The profile of these households is skewed by the concentration of these households in London but they are interesting because they have higher-than-average ownership of one car

¹⁸ ACORN is a geo-demographic classification system developed by CACI. More information can be obtained from www.caci.co.uk. The baseline study was profiled using Scottish*ACORN, which takes account of distinctive features of Scottish housing. We have profiled members of the Car Club using GB ACORN, in order that this approach can be applied nationally. Scottish addresses all have a GB Acorn code but English addresses obviously do not have a Scottish*ACORN code.

¹⁹ This discussion is adapted from the ACORN user guide published by CACI.

but lower-than-average ownership of more than one car. Again, commuting is generally by public transport so their driving tends to be leisure oriented. Their incomes are very high, with three times the national average earning more than £40,000. They are four times more likely to read The Guardian, 69% more likely to be vegetarian and are willing to pay more for environmentally friendly products.

Type 22 - Academic Centres, Students & Young Professionals (56% of members)

These are predominantly student areas. In addition to students, there are people who work in higher education and young professionals. They are cosmopolitan areas located near universities. ACORN Type 22 neighbourhoods are found all over Britain, but the highest concentration is in Oxford.

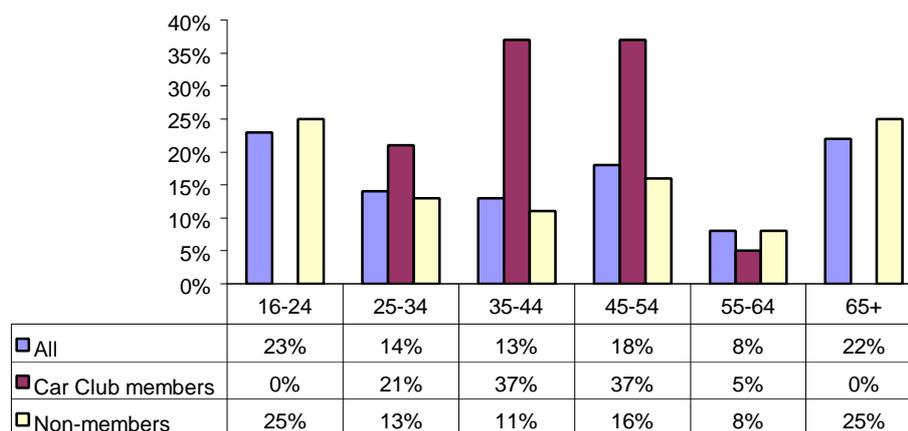
Although this group is unlikely to form the core membership of a car club – they have low car ownership, low incomes, they walk and cycle a lot, and even their leisure is low cost. This group may be occasional users of a car club and even if each member were an occasional user, there are so many of them that they may be a potential source of revenue.

Comparison of members who took part in the follow-up survey in 2000 with the general population also shows that the Marchmont and Sciennes members fit with this general profile of Car Club members.

The Marchmont and Sciennes area has a young population, with 23% of adults aged under 25.²⁰ Car Club members tend to be aged between 25 years and 54 years, with only 5% of members older than this. This ‘key’ age group makes up 45% of the adult population, of whom only 42% say they ever drive nowadays. That means that around 29% of non-Car Club members are in the main market group for the Car Club (Figure 9).

Figure 9 – The age profile of Car Club members and non-members

Bases: All – 446, Car Club members – 38, non-members – 408



²⁰ This is significant because initially people under 25 were likely to have been excluded from the Car Club because of insurance restrictions on young drivers. In the Edinburgh Car Club, the lower age restriction was reduced to 21 years.

There is a roughly even split of men and women in the Marchmont and Sciennes population, with 45% being male and 55% female. However, these proportions are reversed among Car Club members, of whom 55% were male and 45% female.

Around 40% of residents are in professional, managerial and technical occupations and around 50% are in skilled non-manual occupations. Car Club members are more commonly found in professional, managerial and technical than skilled non-manual occupations, with 61% and 37% in these groups respectively.

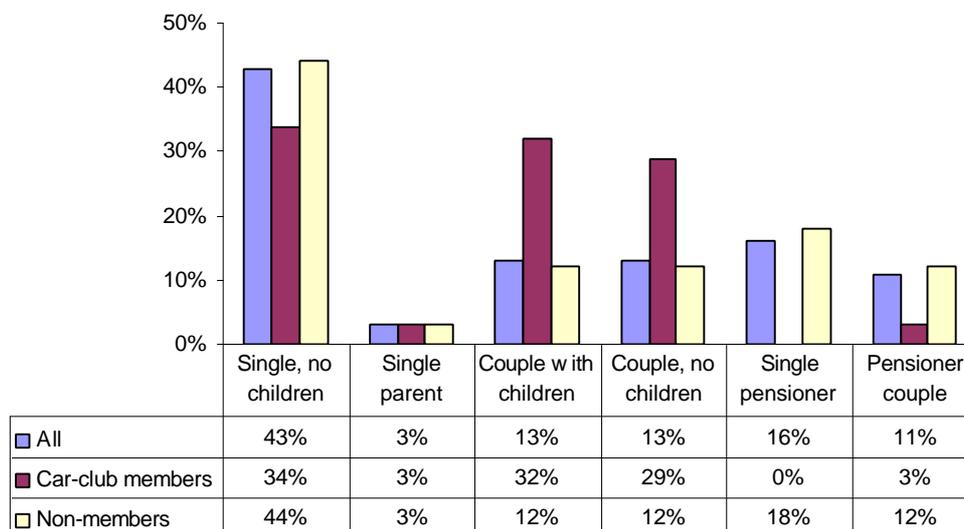
Reflecting the high proportion of students and young professionals in the area, the population is highly mobile, with 19% having lived in the area for less than one year and almost half of residents having lived in the area for less than five years. This is very similar to the baseline population in 1997. This level of population turnover might be expected to limit the attractiveness of the Club to car-owning households planning to stay in the area for a short period. However, it might increase the Club's attractiveness to households without a car as they could postpone purchase but have access to a car.

Car Club members are more likely to be longer-term residents, with only 3% having moved into the area in the year prior to the survey and 30% having moved to the area in the five years before the survey.

The household type of Car Club members also differs markedly from the general population. Over 60% of Car Club members are couples with or without children, compared with only 24% of non-members and only 26% of households overall. Almost 30% of the general population are pensioners, though only 3% of Car Club members are (Figure 10).

Figure 10 – Household type, comparing Car Club members and non-members

Bases: All – 446, Car Club members – 38, non-members – 408



Why did members join and how did they use the Car Club?

We have already seen that the utilisation figures for Marchmont and Sciennes were considerably less than had been planned. Instead of 300 hires per year, the vehicles were each

used an average of 137 times. Instead of an average hire period of 4.5 hours, the average was 3.7 hours. Instead of travelling an average of 66 miles in each hire period (or 14.35 miles in each hire hour) the actual figure was 26 miles (7.14 miles in each hire hour). Looking at the characteristics of the early members, it is not difficult to understand why the figures fell so far short.

The members of the Car Club who took part in the focus groups almost always described themselves as keen cyclists, as environmentalists, as people who had already (months or years previously) given up a car on environmental grounds or who already made minimal use of a car they previously had (or in a few cases, still had). They showed a greater tendency to shop locally and to consciously avoid out-of-town shopping centres wherever possible.

For the non-car owners who joined, the Car Club simply filled a gap in their transport options – something that would allow them to undertake trips that would otherwise have been either expensive by taxi or impossible by public transport. The Car Club was seen as a convenient, practical service that allows them to make these trips while still making a contribution to the environment and congestion in the City.

I think when I gave up having a car, that was a semi-principled decision but when I joined the Car Club that was a practical one. ... There was also an element of supporting an initiative that I hope works.

There were some things that I never did before like going to shops on the edge of town like Dobbies [a garden centre] and suchlike. I simply didn't go there. It was too expensive for me in a taxi and it was a ridiculous idea on the bus. I couldn't go to Ikea. ... In a sense the Car Club's allowed me to go to these places.

In terms of how these people would use a Car Club, the expectation that members would gradually adjust their travel towards other modes, in response to the price signals revealed by a newly-transparent cost structure, is somewhat turned on its head. The adjustment appears to have already been made and the Car Club appears primarily to have been an opportunity for members to relieve themselves of the burdensome necessity of keeping a car for those occasions when other modes would not meet their needs. This aspect of the members bears out the early impressions gained from the public meetings in Marchmont (see page 10) that the early adopters would be more likely to substitute their use of private cars with Car Club cars than to reduce their use of cars.

I heard on Radio 4 about a car club in Frankfurt or somewhere and that Edinburgh was the city in Britain that was actually thinking about setting one up and that was ages before anything actually happened but I think I decided then, that if it ever did happen, regardless of the car situation, that I would go for it because it seemed to fit my profile because I hardly ever need the car. ... We were actually looking for a new car at the time and had been looking for a time. It was a neighbour who quite often saw us walking up and down the street looking for our car - we would park it one weekend and use it the next weekend, so he suggested this.

The other important aspect of members' use of the Car Club, which also reflects the interests expressed in the early public meetings is the use of the Car as a way of accessing relatively cheap and convenient day hire. Budget offered discounted rates and a delivery/collection

service. Although there is no data covering the period when the Car Club was confined to Marchmont and Sciennes, the information from April-December 2000 shows that day and weekend hires were an important aspect of the Car Club.²¹

Deciding to join

Those who had not already given up a car before they joined the Club, tended to have an old car that was due for replacement or that they were, literally, running into the ground and which was on the verge of being scrapped. The same is true of some non-members who were interested in the Car Club concept but were not at a stage where they considered the Car Club to be an option for them.

We are running [our car] into the ground. It has just passed its MOT so we are not interested in the car club this year but maybe next year. Every year we have this debate as to whether we can afford to keep it or whether we should just get rid of the car and be forced to walk a bit more and cycle.

The importance of the old car as a characteristic of Car Club members is that it was previously thought that people would be considering replacing their car every two to three years. If potential members tend to have older cars that they own outright and are in the process of ‘running into the ground’; the period over which people reach the point where they give serious consideration to the Car Club will lengthen considerably.

The advantage of this is, however, that when this point is reached, the decision is greatly simplified. For people with a car that they might trade in, the decision involves assessing the relative costs of the Car Club and the running a car. It also involves weighing up the financial loss from not trading in a car – car dealers give you more than you would get in a private sale. For people simply scrapping a car, or who had a car with little trade-in value, the cost comparison comes down heavily in the Car Club’s favour.

When you're thinking about a new car, the up-front cost is very big and we sat down and did our sums and it's saving us a lot of money

As well as clarifying the cost comparison, joining when you are disposing of a car anyway opens up the opportunity to try the Car Club without making any significant commitment.

... we started using the car club about a year ago when our last car died and we decided that we would give it a go and see how it worked out for us.

The phrase “give it a go” is crucial. Many members who had a car appear to have started out with the intention of giving the Car Club a trial run to test how well the concept worked for them.

We thought we would try it on a trial basis because we still had a car but we could see that it was nearing the end of its useful life and I had just changed

²¹ If we assume that a ‘day’ hire represents 10 hours, then day and weekend hires account for 6,790 hours of use compared with 5,808 hours of Car Club hires in the same period. Although this covers all of the Edinburgh members, there seems no reason to think that the relative balance of ‘day’ hires and Car Club hires is different in Marchmont and Sciennes.

jobs and I didn't need a car to travel to work any more. There were a number of factors but you know... we thought that we would just try it out for a while before we parted with our own car.

It seemed a safe bet, even if it was just for a few months. Our old car was ancient and we were actually facing having to spend quite a lot of money to get us a half-decent reliable car.

The choice you make is between spending several thousand pounds on having a second hand car or do you pay £99 to join the car club. ... if the car club doesn't work out, then you've not lost a lot.

And for the majority, it had worked. Some of the lapsed members, who had not had a car before joining, found that they were making so little use of the Car Club that it was not economical. For the few trips they made using the Car Club, adding the membership fee onto the hire charges meant that each of the trips was very expensive.

The initial membership of the Car Club appears to be typical of early adopters in continental schemes: relatively affluent professionals with a concern for the environment. They fall into one of three broad categories:

- people attracted by the pioneering nature of the Club and keen to support an initiative that they saw as addressing an environmental issue that was important to them, even if they had little use for it themselves
- trialists with nothing to lose – they faced the outlay of a new car and could afford to experiment with the Car Club
- non-car owners who gained an additional way of undertaking journeys that were previously difficult.

The one common feature of all of them is that they made very little use of a car before joining the Car Club and appear to have either substituted Car Club journeys for private car journeys or, where they did not previously have a car, to have increased their car journeys. This is discussed further below.

Who did not join the Car Club?

Nowhere does carsharing capture any significant share of trips. Even in Switzerland, where Mobility has nearly 18,000 members, car sharing accounts for only 0.1% of the total trips made by Swiss residents. Similarly, even by Mobility's estimates, their membership of 18,000 has barely dented the potential market of 1.7 million, capturing only 1% of the market in the past 10 years.²²

There are complex reasons why car sharing does not attract substantially more members and in many respects these are related more to factors unrelated to the Car Club than they are to the appeal of car sharing. Certainly, for the non-members participating in this study, the logic

²² Mobility define their potential market as adults with a driving licence, who do not live in a remote area, and if they work and travel to work by car, could use an alternative means without increasing their journey time by more than 30 minutes.

of the Car Club is compelling – they recognise that cars are expensive and, as one non-member pointed out, spend the majority of their time not being used. What stops this logic being translated into practice is a number of relatively small, but significant, features of car ownership and some important concerns about being a member of the Car Club.

There is, at a general level, a desire among drivers to make less use of their cars.²³ Stradling has found that one third of drivers would like to use their cars less but that only 7% felt that they were actually likely to do so. Similarly, 34% said they would like to use public transport more but only 5% thought they were likely to do so. There are echoes of this in the surface appeal of the Car Club and the gap between appeal and membership.

The Car Club is very well known in Marchmont and Sciennes, with 70% of non-members aware of the scheme. In the focus groups, participants were able to describe the essential features of the Club – how it works, the combination of charges, the period of notice required etc. Most of the non-members had given the Car Club some consideration when they first heard of it and some had tried to weigh up the relative costs and benefits of the Club compared with having their own car.

Non-members did not reject the Car Club out of hand: since they are drawn from the same social milieu as the members, they would be unlikely to. Indeed for many, the Car Club was an attractive idea. However, when they compared the features of car ownership against membership of the Car Club, they decided in favour of ownership. In comparison with the Car Club, ownership was seen as having considerable advantages such as,

- you have a car on your doorstep, either literally or at least nearby, usually not further than a Car Club bay
- you don't directly pay for each journey so the apparent cost of journeys is low
- car ownership costs do not vary substantially over time, which makes travel budgeting easy. For most drivers, these costs can then be forgotten about
- you have infinite access to the car and you know that no one else will be using it when you want it
- you give no notice of your intention to use it
- there is no need to be back by any particular time and apart from your own time, there is no penalty if you are
- you do not need to clean out your possessions from your own car when you finish using it
- you don't depend on any alternative modes of transport, which you consider to be infrequent and unreliable – buses and trains especially.

Of course, many of these are slightly overstated but, for example, when the publicity for the Car Club says that it is convenient, the response is 'how can it be more convenient than my own car?'. When it is publicised that you can book a car with 15 minutes notice the response is 'but I can use my car with no notice'.

²³ Stradling S (2000) 'Who will reduce their car use – and who will not?' Paper to the International Conference on Traffic and Transport Psychology, Bern, September 2000.

You have a transport system on your doorstep and if you need to do something at the drop of a hat, off you go.

For many of the car-owning non-members in the focus groups, the two central planks of the Car Club’s marketing – financial savings and the environment – exerted little leverage in persuading them. Thus, they would comment,

I have got the money so why not.

I don’t have to forego anything to have a car

In any case, the cost comparisons used to justify savings are seen as misleading since they rely on the assumption of a new car depreciating over a relatively short period and do not include the cost of using other modes of transport. The survey of residents from 2000 allows some comparison of residents’ costs of owning a car with the costs of the Car Club.

More importantly, the survey suggests that residents are largely unaware of how much their cars cost to run and maintain. Almost a quarter said they do not know how much it costs to have their car (through repayments or extra tax) while 17% do not know how much their car insurance is. Similarly, 11% do not know what their fuel costs are, 23% do not know how much they spend on servicing and repairs, 21% do not know how much their breakdown membership costs and 11% do not know what is spent on a residents’ parking permit.

The information collected from those who do know what their car costs to run are summarised in Table 4. The mean annual expenditure of all those with access to vehicles in the household is compared with the main Car Club market age groups – those aged between 25 and 55 years.

Table 4 – The average (mean) amount spent on cars annually

Base: All car owners - 212

| | Mean annual expenditure (£) | Aged 25-39 years, mean (£) | Aged 40-55 years, mean (£) |
|------------------------------------|--------------------------------|-------------------------------|-------------------------------|
| Having the car: payments/extra tax | £816.62 | £1284.21 | £910.08 |
| Insurance | £406.54 | £373.94 | £554.14 |
| Fuel | £792.75 | £909.30 | £889.41 |
| Servicing/repairs | £542.13 | £613.33 | £371.60 |
| Breakdown service membership | £100.60 | £71.10 | £111.47 |
| Resident’s parking permit | £89.13 | £86.17 | £106.25 |
| Total | £2,747.77 | £3,338.05 | £2,942.95 |

Looking at total annual expenditure suggests that the main market age groups pay more than average to run and maintain their car. In particular, those aged between 25 and 39 pay far more towards having their car, through payments or extra tax and also buy more petrol and spend more on repairs and servicing. This age group spends less, on average, on insurance and breakdown service membership.

Those aged between 40 and 55 tend to have a higher than average amount to pay for having the car. They also have higher than average insurance premiums and spend more than average on fuel, breakdown membership and resident parking permits. The significance of

these figures is, however, that they are substantially lower than the ‘typical’ costs against which the Car Club is usually favourably compared. In its *Car Club News* published in September 2000, Budget showed the ‘savings’ available through the Car Club by comparing the total cost of running a £10,000 car with those of the Car Club. Based on these figures, people joining the Car Club could save just over £3,000 each year if their mileage was less than 8,000 miles.

However, two things stand out from this. First, the people who joined the Car Club didn’t have new cars worth £10,000. They are more likely to have second-hand cars that they own outright. Thus, they do not experience the same level of depreciation. Secondly, since a high proportion of vehicles are owned outright, the ‘savings’ from the Car Club are wiped since the repayment of the £10,000 loan is assumed to cost £2,984.²⁴

The environmental image of the Club characterises it as the domain of ...

People who eat muesli and wear moccasins. The green-ohs.

The people who I know that use it, use it as a matter of principle because they think that car use or car ownership rather than car use is undesirable. It is socially undesirable. It is rather like owning a Rottweiler or something.

While the features of the Car Club that count against people joining appear to be relatively minor, one significant factor that discourages non-members from seriously considering the Car Club is the reliance on public transport and taxis that would come with membership. These services were seen as poor in comparison with the convenience of a car.

When you want a taxi in Edinburgh, you cannot get one! And the number of times we have said “let’s take a taxi and then you can have a drink, and I say no let’s take the car and I won’t drink” because it is getting home at night that is the problem. We have sometimes walked from the town back home because there just wasn’t a taxi to be had.

The buses in the evening are worse, they are terrible. They are extremely poor up to Marchmont. You cannot rely on a bus at all. If you go to a meeting or something in the town in the evenings, to get back by bus to Marchmont is a work of art. You wait in the cold half an hour and nothing.

The alternatives were also compared with the Car Club in terms of convenience and cost. Essentially, for non-members, what the Car Club appeared to offer was the inconveniences of having your own car at the cost of a taxi!

We live in Strathfillan Road and as far as I know the nearest car club parking space is down in Marchmont Crescent and if you need to go out in the car on a filthy January night it is a ten minute walk before you get to the car ...

²⁴ Of course, an economic analysis of the costs of ownership would incorporate a cost for depreciation and an estimate of the cost of owning outright but this would be a complex calculation and does not reflect the types of comparison made by ordinary members of the public.

I think the reason I didn't go for it was if you use it infrequently and you take it for a run somewhere, assuming you have to pay £5 for your first hour, then you might as well get a taxi.

Thus for non-members, their general approach to the Car Club has been to commend the initiative as a good idea and as ideal for people who make little use of a car but need a car for certain journeys. Even though a number of the non-members fitted into this category exactly, there are still a number of aspects of car ownership where the Car Club is thought to not compare well. While financial savings and the environment – neither of which appear to be strong motivators for non-members – are the main planks of the marketing, it does not address these issues and so does not convert initial interest into membership.

The survey conducted in September 2000 suggests that there is still a substantial market for the Car Club in Marchmont and Sciennes. Amongst non-members, 15% said they would be interested in joining a scheme like the Car Club, although this is less than the 24% in 1997. Apart from people who cannot drive, the main reasons people give for not being interested in joining the scheme are as follows:

- they like the independence of having their own car (24%)
- they do not think it is economical (16%)
- they do not think they would use the car club enough (14%)
- they need a car for work (10%)
- they need a car for long periods (6%)
- they use a family member's or friend's car (6%)
- they do not want to have to plan ahead (5%).

However, people do see possible attractions of a car sharing scheme, with the main reasons being the benefits of a car without the upkeep (which 33% say) or without having to own it (33%). A third of people also say it would be cheaper than owning a car. Over 30% say it would remove the problems of parking while 19% say it would be useful if you do not drive very much. Around 10% talk about the environmental benefits of the scheme while 10% say it would be convenient and 9% say the availability or access to a car would be an attraction.

The main disadvantages people see in the scheme are very similar to the main reasons why people would not be interested in joining the scheme. Around 30% of people are discouraged by the fact that a car might not be available or by the lack of flexibility from not having your own car. Over 20% say the need to plan ahead would be a disadvantage and 14% say it would be a loss of independence. Other disadvantages people mention are the need for a car in case of emergencies (10%), the bureaucracy of the scheme (3%), the penalties (3%) and the perception that journey times would be longer (2%).

Thus there are a number of relatively minor objections to the Car Club that, for non-members outweigh the advantages of convenience and potential savings. Non-members' views of the Car Club can be summed up as simply that they were not convinced by the Car Club, not that they disagreed with it. The role of marketing is therefore important in understanding why non-members were not convinced.

SELLING THE CAR CLUB

Almost two years before the Car Club was formally launched, it was well known in Marchmont and Sciennes. In the baseline survey, almost a quarter of residents were aware of it even though there had been no marketing aimed at attracting members. There had been newspaper articles when the Council's transportation committee had agreed to establish the Car Club, and two public meetings had been held in the area, each attracting approximately 100 people. The local Liberal Democrats had highlighted the Car Club in their local newsletter, which is distributed to homes in Marchmont and Sciennes. Similarly, Spokes, the Lothian Cycling Campaign had mentioned the Car Club in its newsletter, which is distributed widely in the City.

This type of news and word-of-mouth dissemination of the Car Club's development resulted in the accumulation of a database of almost 500 people who wanted to receive information about the Car Club.

By the time of the follow-up survey in October 2000, 70% of residents were aware of the Car Club. The main mechanisms by which people became aware of the Club was through articles in the press (28%) and seeing a parking bay or a Car Club vehicle parked (20%). Being told about the Club by friends, colleagues or neighbours was the first source of information in 14% of cases, while 12% say they recall receiving a leaflet or visiting a public meeting.

The key issue in marketing the Car Club does not appear to be have been raising awareness of the scheme but in taking the superficial interest and novelty of the Club and translating it into membership. However, the balance of the marketing activity appears to have been directed at raising awareness and very little at the types of activities that would address the concerns and issues identified by non-members above (see p. 39).

Budget's marketing activity

Over the course of the period during which Budget was contracted to operate the Car Club, over £200,000 was spent on promotional activities. We would classify these into four broad types of activity to encompass the objectives of the range of publicity activities and events that were undertaken:

- Identity – establishing the basic identity of the Club through developing the logo, letterhead and associated stationery (price lists, membership cards etc.). These are basic items required for communicating with members and prospective members.
- Public relations – this relates to handling press or television enquiries, seeking press or television coverage and similar activities, activities aimed and fostering members' commitment or identification with the Club, handling queries and complaints from members.
- Awareness raising – producing posters, leaflets and other promotional items aimed at increasing or maintaining the profile of the Club. It might also include public meetings and attendance at other meetings, participation in publicity seeking events.
- Selling – creating opportunities to explain the operation and benefits of the Car Club and to address prospective members' concerns or queries. This might include organising public demonstrations of the Car Club. Open days, question-and-answer sessions etc would also be included.

No you wouldn't, although I see a car in the car parking area. There is always a car in the space.

But there must be lots of people who don't want to continue to run a car but still need one occasionally and they probably don't know it exists.

One non-member summed up the problem with the marketing.

I am surprised that there is not more information, repetitive information, as there is quite a turnover of population in Marchmont. If you didn't grab hold of the information when it was first floated then we don't get any reminders about what things are ...Nothing about the car club.

The problem with the marketing strategy seems to be mainly financial – a number of suggestions were made for local marketing in Marchmont and Sciennes aimed at raising both awareness and, crucially, understanding of the Car Club. These involved the creation of mobile displays, magnetic attachments for vehicles and staging 'demonstrations' of the Car Club – having a car at a supermarket car park or similar location where non-members could see the Cars and speak to someone about the Club.

For non-members the Car Club is a good idea but one that doesn't fit their perceptions of their need for a car. The problem with the marketing of the Club is that it did not address the objections non-members were raising in their minds about how they use their cars and how they could make their journeys using a combination of modes of transport. Without that intervention, without someone developing alternative transport packages – rather than simply counterposing a private car with a shared car – the Car Club simply slipped from their thinking.

... it would have needed to have sold to us much harder I think than so far, because like the others I seem to make a leap between my own car and public transport with the occasional taxi. I am not thinking "let's forget about the car and go for the car club". It has just disappeared out of my thinking.

Much of the criticism from members and non-members is levelled at Budget – they were, after all, responsible for the running and development of the Car Club. But the City of Edinburgh Council and the Scottish Executive/Central Government are also criticised for not promoting the Car Club (to the general public) generally as an innovative aspect of a sustainable and integrated transport policy.

Some joint activities were developed. The Council provided a link from its own web site to Budget's Car Club web site. It also included the Car Club in its *A-Z of Council Services*. Between July and December 2000 a flier about the Car Club was sent with all parking permit renewal notices. However, it was pointed out that the City failed to mention, let alone advertise or promote, the Car Club in an edition of *Edinburgh Outlook* that dealt with Council transport policy and initiatives, and which was distributed to every household in the city before Christmas 2000.

USERS' EXPERIENCES OF THE CAR CLUB

Users' views of the Car Club were obtained from two sources: a survey of members conducted as part of the follow-up survey in September/October 2000 and four focus groups with members and lapsed members in January 2001. The survey involved 38 members of the Car Club out of 55 identified as living in the EH9 and EH10 postal areas that cover Marchmont and Sciennes. The focus groups involved 14 members (who had taken part in the survey and agreed to participate in follow-up research) and 8 lapsed members recruited from lists provided by Budget.

Members' satisfaction with the service

From the survey and the focus groups, there appear to be two broad views of the service provided by the Car Club. Light users – perhaps using the Club only two to four times in the course of a year – are generally pleased with the service and have experienced only a few instances of booking failure or other problems. More frequent users, or recent users, while still generally satisfied with the service and strongly committed to the idea and principles of the Car Club, are more critical of the service and the focus groups identified serious concerns with almost every aspect of the service.

In the survey, when asked to rate different aspects of the car club all but one member said that “always getting a car at the time you need one” was good or very good. Only two members responded to the statement “the cars are always clean” by saying the Club was fairly poor or very poor.

However, members were less satisfied with “always getting through to the booking centre”, which 7 members rated poorly and “problems with cars or keyfobs are resolved quickly”, which 17 members rated as either fairly or very poor.

Overall, the survey found that most members were either very satisfied (14) or fairly satisfied (15) with the service provided by the Car Club. 8 members were either fairly or very dissatisfied with the service.

Only 3 members did not intend to renew their membership of the Car Club. 12 had recently renewed their membership and the majority, 23, intended to renew their membership. 29 members said that it was very likely that they would recommend Car Club membership to someone else, while 7 said that this was fairly likely. Only 2 members said that it was unlikely that they would recommend Car Club membership to someone else.

The survey, therefore, provides a picture of a membership that is generally satisfied with the service. Even the lapsed members had not left the Car Club because of any fundamental problems with the service. For these former members, the Car Club had simply proven to be either too expensive for the number of trips they needed to make, or their own personal circumstances had changed, making the Car Club less useful or less necessary. For example, one former member had found that after having a baby, the need to plan ahead and then stick to a timetable determined by the hire period was too difficult. In addition, her partner got a new job that occasionally required a car. In this context, the convenience and flexibility of having a car was seen to outweigh the other benefits of the Car Club.

In spite of the general level of satisfaction, there are a number of aspects of the operation of the Car Club that were criticised by members and which were identified as having become particularly problematic in the period between October 2000 and January 2001.

The Car Club technology

Apart from its size, the implementation of a technologically sophisticated booking and hire management system was the most innovative aspect of the Edinburgh Car Club. The Edinburgh Car Club represented the first significant attempt to provide a hire system that was transparent to the user. The rationale for introducing technology that was untested in this context was primarily to make the interface between the service and the customer as seamless as possible. Users would need to do nothing more than make a booking and use the car. For the operator, the technology offered the potential for real-time management of the fleet and more accurate collection of hire data. Of course, adding a layer of technological sophistication opens up the potential for things to go wrong and in the systems installed for the Car Club, there were four main areas where problems might emerge.

1. the bookings software
2. communication between the bookings software and the hire management software
3. communication between the hire management system and the vehicle
4. communication between the electronic key fob and the vehicle.

Each of the elements of the technology was widely used in different contexts – in fleet scheduling, by ambulance services, in controlling access to buildings and car parks, in tracking vehicles. The Edinburgh City Car Club was the first time that these technologies had been brought together to provide a centralised booking and hire management system and was, to that extent, an experimental application of these technologies. To test the combination in the Car Club, a programme of trials was organised in January 1999.

The trials identified a number of issues with the technology that had to be addressed in the early months of the Car Club. Although the parking bay locations had been tested for the reception and transmission of communications data, there were intermittent problems of communicating with either the GPS satellites or the Paknet data network.

The trials identified one significant problem with the technology: the constant communication between the hire management software and the vehicle caused the car battery to drain. The system in Marchmont and Sciennes had been designed using off-the-shelf components that would normally be installed in vehicles in constant use – police cars, security vans – where the issue of battery drain had not been encountered. A complete solution would require some redesigning of the in-car equipment so a partial solution was put in place that would shut down the communications for 10 minutes in each 15-minute period and between midnight and 8 am.²⁵ At the time of the Car Club's launch, this problem was known about and procedures were in place to change the car batteries when the cars were valeted and recharge them at Budget's office.

²⁵ The booking system was programmed to start hires on the hour and at 15-minute intervals so there was a window between the programmed start times when the car and the booking centre did not need to communicate. There is a solution to this problem but it would have been expensive to retrofit this into the Edinburgh cars.

The second major problem that emerged, and persisted throughout the course of the Car Club, was new members having difficulty using the key fobs. The issue here is that the receiver inside the vehicle has a narrow angle within which it can detect signals from the keyfob. This is a deliberate feature to prevent users from accidentally terminating hires by mistakenly using the keyfob to try to lock the doors during the course of a hire. Because of the narrow angle, new members often found it difficult to gain access to vehicles simply because their pointing was not sufficiently precise. The trials also identified this problem but the receivers were already fitted to the cars and it would have been an expensive exercise to remove them a remount them.²⁶

There were other minor issues – replacing the batteries in the keyfob, occasional failures of the communication between the vehicles and the booking centre, occasional failures of the keyfobs themselves. But on the whole the system worked well and the proportion of the bookings record as failures was maintained at a manageable level until June 2000, when the failure rate started to increase.

Failed hires

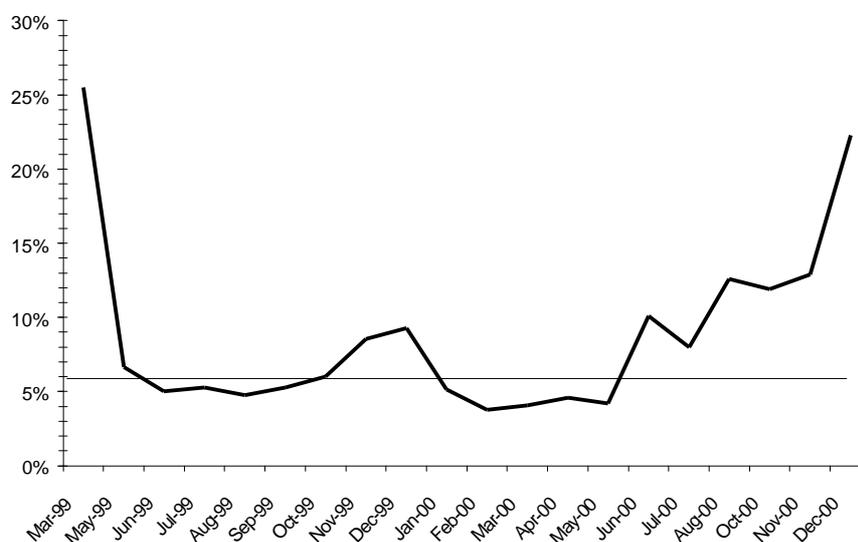
Figure 12 shows the proportion of all hires that were recorded as failures up to the end of December 2000. The first month, with 25% of bookings recorded as failures, shows the initial ‘teething’ problems of the system and the proportion rapidly fell. Leaving the first month aside, the average proportion of failed hires in the first year was 6%. The winter ‘blip’ in November and December 1999 reflects the greater drain on the car batteries caused by cold starts. Batteries were draining faster but this appears to have been acknowledged and accommodated quickly and in January 2000 the proportion fell again.

²⁶ When the same technology was applied in the Oxford Car Club, the receivers were fitted on top of the dashboard facing out of the car. This was more accessible and easier for the user but still required a deliberate effort to align the transmitter and receiver. This appears to have solved this problem. The last 12 cars used in Edinburgh had the receivers mounted in this configuration.

Figure 12 – Failed hires as a proportion of all bookings made in each month

Source: Budget management information

Note: Line represents Year 1 average failure rate calculated with Mar 99 removed



After March 2000, of course, the data shows the performance at all 23 sites rather than just Marchmont and Sciennes. Almost immediately after the expansion, the failure rate started to accelerate. The problem of battery drain remained but now it existed on a larger scale and over a wider area. After June 2000, when Budget's local manager with responsibility for the Car Club was made redundant, the system of maintaining the car batteries seems to have broken down to the extent that by December 2000, the failure rate had increased from 6% to 22%.

For members, the effect was that the Car Club became increasingly unreliable, with the consequence that members were beginning to lose confidence both in using the Club and in the future of the Club. Along with other difficulties they were experiencing (see below), they were beginning to feel that the Club was being wound down. Even if the Club was continuing, some members were beginning to question their continued membership.

Our normal monthly bill for the car club is about £120 between the two of us and last month it went down to £40 and that's not because we wanted any less hires, it's just because there are so many failures.

Recently it's been one in four times.

Pricing

The pricing of the Car Club is a critical aspect of the operation since it is expected to both recover the costs associated with operating the scheme and make drivers conscious of the cost of making individual trips.²⁷ There is a balance to be struck between these goals since it might

²⁷ If the Club is run as a commercial venture, as it was in Edinburgh, the Club must also provide a return to the operator.

be in the operator's interest to use the price mechanism to increase the number of trips made by setting the price below the marginal cost of each trip. We are not in a position to judge the extent to which the prices set by Budget, in discussion with the Council, met commercial objectives. The prices were clearly insensitive to the increasing cost of petrol, not having increased since March 1999. To that extent the pricing would have had some negative commercial impact (revenue not keeping pace with costs) and the costs paid by members would, inevitably have drifted away from the true cost of their trips.

Similarly, differential charging for the first hour and subsequent hours does not reflect differences in cost but is primarily a device to discourage shorter trips. To some extent the hourly charge and the mileage rates work against each other. The higher charge for the first hour (£4.50 compared with £2.00 for subsequent hours) is partially offset by the significantly reduced mileage rate of 9p per mile for the first 20 miles and 22p per mile for subsequent miles. The decision to charge 9p per mile for the first 20 miles of each hire hour also appears to be a distortion of the costs. An average hire of about 4 hours would include 80 miles of travel at 9p per mile, a charge that would not cover the cost of the fuel consumed.

However, for members or prospective members pricing is a sensitive issue and because non-members have difficulty in understanding their own travel costs, the charges levied by the Car Club appear very high. Even for members, having the cost of trips made apparent required some adjustment.

I found it very hard at the beginning to think 'that's a helluva lot of money just to go to a sewing class' per rent or hire. But it's part of the overall picture now of what we used to pay when we paid to have a car at the front door. I found that it took a while to get used to the idea.

For some of the lapsed members, making the cost of trips transparent became a significant barrier to using the cars and, eventually, persuaded them not to renew their membership. For example, one member found that paying £15 to visit a friend for a chat and a cup of coffee began to cause her to think twice about making visits. The member concerned felt that cost of individual trips was beginning to have a negative impact on her socialising.

Other lapsed members simply found that the membership fee of £99 was too high to justify membership. In effect, because they made so little use of the cars, the membership fee doubled the cost of the three or four trips made in the year. Light users would have preferred to see the cost of the membership fee incorporated into the hourly and mileage rates.

In general, the rationale for the membership fee is not really understood. In the survey, 80% of non-members felt there should be no membership fee. Some members thought it was intended to cover the cost of the keyfob. But if this were the case, light users especially would have preferred the membership fee to be a returnable deposit for the keyfob. They felt that this would encourage more people to try the Car Club without making a commitment to it.

In the survey conducted in September/October 2000, about a fifth of non-members (22%) say the Car Club charges are too high. People who do not have a vehicle in the household are less likely to say the charges are too high than those with a vehicle, at 17% and 25 % respectively.

The vast majority of residents – 80% – suggest that membership of the scheme should be free while 9% say a reasonable cost would be £60 or less per annum, 9% say it should cost between £60 and £100 and 2% say it should be more than £100.

People are far less certain about what would constitute a reasonable hourly hire charge, with 80% saying they did not know what a reasonable charge would be. A further 12% suggest under £4.00 an hour while 6% suggest between £4.00 and £7.00 an hour and 2% suggest higher than this.

Similarly, people are largely unsure what would be a reasonable charge per mile for using a Car Club car. Over 80% are unable to suggest any amount, 9% suggest 10 pence or less per mile and 7% suggest between 11 pence and 20 pence per mile.

The implication of this is that for potential operators, pricing and marketing need to work hand-in-hand. If potential members cannot judge their own travel costs and cannot judge whether the pricing of a car club represents good value for money, then one of the key challenges of marketing is, having sold the concept, to help people through the task of determining whether the concept is practical for them.

Budget's booking centre

Like the problem of failed hires, members' experience of contacting Budget to make a booking appears to have got worse over the latter part of 2000. In the survey, "always getting through to the booking centre" was one of two aspects of the scheme that any significant number of members rated poorly.

In the focus groups, recent experiences of making bookings highlighted a number of difficulties that had emerged with the booking system including,

- problems getting through to the booking centre
- being told that the Car Club was 'closed' when calling after normal office hours
- difficulties making bookings for day and weekend hires – one member calling the Edinburgh Ferry Road branch in October 2000 was told that they had "never heard of the City Car Club".

One member best sums up these problems, and their effect on members, in the following description.

It seems to me that if you want an initiative like this to work, chronologically, in terms of the customer, once you're up and running and you're a member, you try to make contact to make a booking. If you want this thing to work, that bit of the process, the whole thing, but that bit especially has got to be superlatively good. It isn't even average. It's appalling. It's just dreadful. Times of 11, 12, 15 minutes, by the watch. I'm not even talking roughly, I mean by the watch because when you've had enough experience you start timing them, so you're not throwing vague numbers around. These are genuine times. Getting someone to answer, getting through to the right person ... You phone and you get the admin department and they clearly haven't got the slightest idea what the City Car Club is, so they then put you through to

somebody else who is in the main, normal, ordinary Budget hire department. They're slightly better clued up but not a lot and eventually they get you through to somebody who knows about the City Car Club. And in between these, there are lengthy periods, minutes on end, when they play adverts at you, at your expense, while you're hanging on trying to get somebody to answer. Now that is infuriating. ... By the time you get through you are furious.

After which, another member commented

And that's it got better!

Vehicle availability

In the survey and the focus groups, the availability of vehicles was considered to be very good although, in the groups, this was tempered by the knowledge that the Club had a relatively low membership. The availability of vehicles was worryingly good and prompted concerns for the future of the Club.

Billing

Along with the booking service, the billing system for the Car Club is the aspect of the service that caused members most concern. Technical difficulties could be accepted with such a complex system and were, at least until recently, seen as an irritation on a par with finding that your own car wouldn't start. The concern with the billing system was that the Club itself was being undermined by Budget's apparent incompetence.

One thing that worries me ... and I don't know that I should be mentioning it is that it seems to take ages for the direct debits to go through. ... I've had bookings that either have got lost completely and I haven't paid for or they're very, very slow.

I had weekend hires go missing that I haven't paid for.

I've had invoices for several months that have never been paid.

I've never been charged mileage

Mileage missed off ... it was missed off in June, July, August and September

At first it was routinely, you hired in January and it came off in June or something but recently it hasn't come off at all. ... It just makes me worry that the thing will collapse when it doesn't deserve to.

Of course, members were slow to complain about not being billed for their trips, but over the longer term it served only to create concerns about the viability of the Club.

The cars

Most members regarded the cars as adequate although there were comments about the limited range available and that some of the types of vehicle initially promised in publicity or implied at public meetings were not available. For example, one member who had tried to hire a van for a few hours was told that these were not available. Another, with five children, who joined in the expectation of being able to make occasional hires of a people carrier, was also disappointed. This member made one hire in the first year and did not renew his membership.

Other members commented on the tendency for cars to become somewhat scruffy: valeting was not frequent enough, especially in the cars that were most often used and in the winter, to keep them acceptably clean.

Repairs and maintenance were also commented upon with users mentioning

- one car that had its wing mirror broken for a few weeks
- a car that was left unusable on an emergency tyre for a week after a puncture
- problems with the availability/functioning of mobile phones in cars
- comment forms for repairs and problems not always available.

Communication with Budget and consultation with members

Even before Budget was appointed to operate the Car Club there was criticism from local councillors that the community was not being adequately consulted about the Car Club. This reflected the early intention of establishing the Car Club as a local pilot project – as more of Club rather than a commercial enterprise. Nevertheless, the issue was taken up by the local councillor, who encouraged council officials to organise public meetings in the area.

When the direction of the Club was changing from a local grassroots pilot to a commercial operation with a city-wide scope and a commercial operator, the rationale for formalised consultation became less and even the ‘user group’ members saw themselves as more of a sounding board than exerting influence. However, at this stage there was again criticism that the user group, organised after the second public meeting was presented with the decision to go out to tender as a *fait accompli*: either there would be a commercial operator or there would be no Car Club.

Shortly after Budget’s appointment, there was criticism of their commitment to the consultation process and to the scheme as a whole. The ‘local team’ promised in Budget’s tender was never put in place and there was no local office for the Car Club.

After the Club was operational, there was some commitment to member consultation although this seems to have reflected the belief of the Budget representative responsible for developing the Club. The user group seems to only have met on a few occasions and these were poorly attended.

... I remember going to one users’ group meeting, then I missed one and never heard of any more.

... I only heard of these user groups from a copy of a letter from a Council official to my councillor reassuring her that these meetings happened

regularly and that all members were invited. I've never ever been invited to these.

The management of the Car Club has changed three times since I've been involved with this and it's like the night of the long knives. They just disappear. ... It cuts off any communication you have with them.

Outside these formal channels, Budget's manager appears to have maintained close contact with members and tried to develop a collective identity amongst members. Indeed, a considerable amount of the marketing by Budget appears to be expenditure aimed at fostering the sense of a Club – sending Christmas cards and a Christmas present to each member, developing a user newsletter, holding a birthday party for the Club on its anniversary.

However, in spite of this personal commitment, there appears to have been little commitment to taking up users' suggestions.

I don't think it's evolved at all in the year. I had some suggestions I made to [Budget's manager]. I had some wonderful conversations on the phone with him and I thought all these wonderful things were going to happen and in a letter he wrote me, he said "watch out in the newsletter for all these great things" and of course nothing ever happened. I just don't think it's evolved in the slightest and I don't feel anyone's taking the slightest note of users' feedback.

Communication appeared to deteriorate substantially after Budget's local manager was made redundant in June 2000.²⁸ Members commented that they now received no information from Budget – the monthly newsletter stopped and the user group meetings ended.

Getting back to when [the Manager] left, when he left, we weren't informed that he was going or why he was going but he was no longer the contact. Pretty much as soon as he left, on the billing information, the contact number was removed. I think it was the very next month - if you have a query with this bill ... that was gone. There are no more bulletins, we used to get information bulletins giving benefits like bus passes and rail information and they have stopped and haven't been reinstated. There were no meetings at that time and I think no communications to members since he left.

Instead, members now report that they get conflicting information: some are told that discounted day hires are no longer available, other are told that delivery of day hire cars has been stopped.

I've got some reservations about it now. Technical problems are really a big issue.

We're considering cancelling our membership and buying a new car because of technical problems in the last 2 or 3 months - becoming unreliable.

²⁸ The explanation for the redundancy was that having expanded the Club, the development role was no longer required.

Others say they would rejoin but only because they want the Car Club to work and they still feel there are significant advantages to them from membership.

CHAPTER FIVE – THE IMPACT OF THE CAR CLUB

How do you assess the impact of a relatively small scheme such as the Edinburgh City Car Club? The scope for observing changes on the area as a whole are limited, although the changing context within which the car club operates is of interest. Even for all the members of the Club, the ability to record change is limited to relatively crude measures of frequency and cost, especially in the absence of detailed information on how individual members of the Club have used the vehicles over time. Nevertheless, in this section we try to tease out some measure of the impact of the Car Club in Marchmont and Sciennes, beginning with an examination of the changing context of the area, as measured in two surveys of residents before considering what information is available for members of the scheme.

THE CHANGING CONTEXT OF MARCHMONT AND SCIENNES

This section examines the context of the City Car Club in terms of the characteristics, experience and attitudes of residents of Marchmont and Sciennes. The results of the baseline survey, conducted in September and October 1997 and the follow-up survey conducted in September and October 2000 are compared to explore the extent to which this context has changed.

The general characteristics of the population have shown very little change over the period since the baseline survey in 1997. The distribution of the population by age, sex, social class, property type and household type recorded in the 2000 survey is within a few percentage points of the baseline distributions. Approximately one quarter of the population are students.

The majority of respondents are satisfied with living in the Marchmont and Sciennes area, with 72% saying they are very satisfied and only 1% saying they are dissatisfied. This is true for Car Club members and non-members and mirrors the high level of satisfaction found in the baseline survey.

The main positive features of the neighbourhood that respondents mention are the closeness to town, the general ‘niceness’ of the area, parks and trees, there being plenty of shops locally and the area being quiet. Closeness to town is particularly important to Car Club members, of whom 82% say this is a positive feature of living in the Marchmont and Sciennes area (compared with 66% of the general population).

Respondents are much less inclined to name negative features of living in the area, though 21% say they have problems parking. Other transport issues that are negative features of the neighbourhood are traffic or congestion and a poor bus service, which are mentioned by about one in ten of the population.

As might be expected, a smaller proportion of Car Club members than the general population says they have parking problems, although 11% of Car Club members still report having parking problems compared with 21% of the general population. However, 21% of Car Club members mentioned traffic or congestion as negative aspects of the area, compared with 11% of respondents generally. Since the two groups are, essentially, living in the same area, this suggests that Car Club members have heightened awareness of this issue.

ACCESS TO AND USE OF VEHICLES

The availability of vehicles

The proportion of households with access to a vehicle was very similar to when the baseline survey was conducted, with 54% of the current population living in a household where there is at least one vehicle available. Compared with Scotland as a whole, this is 10% lower and compared with similar areas, the Marchmont and Sciennes proportion is substantially lower.²⁹ The proportion of households in Marchmont and Sciennes with cars is also substantially lower than the 61% recorded in the 1991 Census. The level of multiple vehicle access is stable, with around 10% of people living in households with access to two or more vehicles. In over 95% of households with a car, the main vehicle in the household is privately owned.

The availability of vehicles is far lower among Car Club members, although 18% still had access to a household vehicle. No members said they have access to multiple vehicles and none had company vehicles. It is clear from the focus groups that at least a few of the vehicles retained by households were kept for personal reasons rather than for regular use (e.g. as a hobby). In others, the Car Club functions as a second car – the main vehicle is used for commuting and the Car Club provides access to a car during the day. Sometimes the vehicle has been kept as an ‘insurance policy’ indicating some uncertainty about the reliability of the Car Club or uncertainty about its future.

Among the general public, 56% of survey respondents had sole use of the household vehicle and 44% shared use. Among Car Club members, all said they shared the cars within the household. Thus, in households where a vehicle remains, the Car Club member is using the household vehicle along with the Car Club.

Vehicle replacement and acquisition

The survey asked respondents who had access to a vehicle within their household how likely they were to replace a car in the 12 months following the survey and how likely they were to acquire an additional car. It also asked those without access to a vehicle how likely they were to acquire one in the following 12 months.

Just under a quarter of residents said they are likely to replace a car within the following 12 months. Only 6% plan to acquire an additional car and only 9% of those without vehicles intend to acquire one. This is a very similar pattern as was found in the baseline population.

Only 1 of the 7 Car Club members with a vehicle in the household said they are likely to replace it while 2 said they were likely to acquire an additional car. Only 2 of the Car Club members without a vehicle in their household say they are likely to acquire one in the 12 months following the survey.

²⁹ In the Scottish Household Survey 88% of households in ‘high income areas’ and 81% in ‘middle income areas’ had access to at least one vehicle.

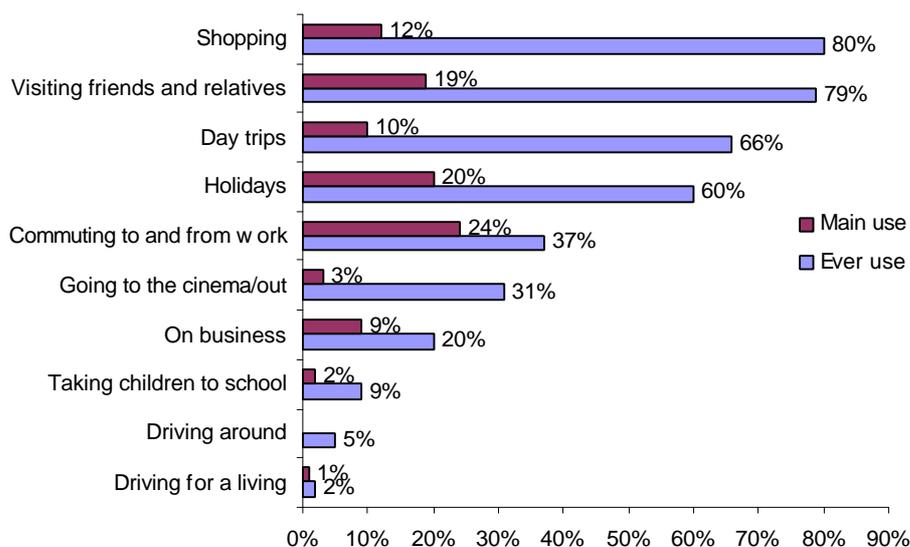
Patterns of car use

As Figure 13 shows, there are differences between what vehicles are ever used for and what vehicles are mainly used for. The most commonly mentioned uses of vehicles are for going shopping, visiting friends and relatives, day trips and holidays. This is true for the general population and Car Club members.³⁰

Although these types of journey purposes are those most commonly mentioned, the **main** uses of vehicles is somewhat different. Among the general population vehicle use is more common for commuting to and from work than for social reasons, with around a quarter of drivers saying this was the main use of their car. However, even if we assume that all the commuting and business use is essential, this still leaves about three quarters of car-owning households where the main vehicle use is something that could be accomplished by using a Car Club car or other modes of transport.

It is striking that, although 1 of the 5 of Car Club members who drive say the main use of their car is for business trips, no members use a vehicle mainly for commuting to and from work. More commonly, the main reasons for using a car, among Car Club members, is for shopping or taking children to school.

Figure 13 – What the general population uses cars for



The average annual mileage recorded in the survey among all drivers in Marchmont and Sciennes was 7,200 miles. The figure for Car Club members was roughly half this, at 3,250 miles. This includes all mileage so should include their use of household vehicles, City Car Club cars and any day hires from Budget’s fleet.³¹ Of course, this is likely to be subject to some degree of error.

³⁰ The results are not shown for Car Club since only 5 Car Club members had vehicles.

³¹ The question in the surveys was “taking everything into account, what would be the total number of miles you personally drive in a typical year?”

CHANGES IN TRAVEL PATTERNS

The travel patterns of the general population have shown some shift towards more ‘green’ modes as Table 5 shows. Although the shifts are generally quite small, they show a higher proportion of the general population:

- cycling and taking the bus to work
- walking to visit friends and relatives
- taking the bus to the cinema
- walking and cycling to local shops

Table 5 also shows a higher proportion of residents driving to the supermarket.

Table 5 – Travel patterns among the general population, 1997 and 2000

Base: 1997 = 455, 2000 = 446

| | Walk | | Cycle | | Bus | | Car driver | | Car pass | | Taxi | | Rail | |
|-----------------------------|------|----|-------|----|-----|----|------------|----|----------|----|------|----|------|----|
| | 97 | 00 | 97 | 00 | 97 | 00 | 97 | 00 | 97 | 00 | 97 | 00 | 97 | 00 |
| Work/education [†] | 35 | 33 | 9 | 14 | 9 | 13 | 17 | 17 | 1 | 1 | * | 1 | * | 1 |
| Local shops | 83 | 88 | 1 | 6 | 3 | 2 | 9 | 5 | 1 | * | 1 | * | - | * |
| Supermarket/main shop | 26 | 24 | 3 | 6 | 12 | 14 | 42 | 46 | 11 | 8 | 3 | 3 | - | - |
| Friends/relatives | 30 | 35 | 6 | 6 | 16 | 17 | 35 | 35 | 7 | 8 | 3 | 5 | 3 | 11 |
| Cinema/nights out | 51 | 56 | 2 | 3 | 9 | 14 | 17 | 13 | 4 | 3 | 8 | 16 | - | - |
| Shopping (clothes, etc.) | 45 | 48 | 4 | 7 | 36 | 35 | 10 | 12 | 2 | 2 | 2 | 1 | - | - |

[†] - respondents in work only

Among Car Club members the use of ‘green’ modes is particularly marked as Table 6 shows. Compared with the general population, car club members are more likely to:

- cycle or use buses to travel to work
- cycle to local shops
- walk or cycle to the supermarket
- cycle or use buses to visit friends or relatives
- walk or cycle to the cinema
- cycle for non-food shopping.

Table 6 – Mode of transport for various trips by Car Club members (CC) and the general population (Pop), 2000

Bases: Population – 446, Car Club members – 38

| | Walk | | Cycle | | Bus | | Car driver | | Car pass | | Taxi | | Rail | |
|--------------------------|------|-----|-------|-----|-----|-----|------------|-----|----------|-----|------|-----|------|-----|
| | CC | Pop | CC | Pop | CC | Pop | CC | Pop | CC | Pop | CC | Pop | CC | Pop |
| Work/education | 24 | 33 | 47 | 14 | 21 | 13 | 5 | 17 | - | 1 | - | * | 3 | 1 |
| Local shops | 84 | 88 | 21 | 6 | 3 | 2 | - | 5 | - | * | - | * | - | * |
| Supermarket/main shop | 29 | 24 | 29 | 6 | 5 | 14 | 42 | 46 | 3 | 8 | - | 3 | - | - |
| Friends/relatives | 18 | 35 | 24 | 6 | 21 | 17 | 24 | 35 | 3 | 8 | 11 | 5 | - | 11 |
| Cinema/nights out | 71 | 56 | 16 | 3 | 18 | 14 | - | 13 | 3 | 3 | 16 | 16 | 8 | - |
| Shopping (clothes, etc.) | 53 | 48 | 32 | 7 | 37 | 35 | - | 12 | - | 2 | - | 1 | - | - |

Thus, Car Club members appear to be more green than the population as a whole but, in this key respect, the population itself appears to be ‘greening’, shifting away from the use of cars for most purposes. Going to the supermarket or doing the main grocery shopping and visiting friends or relatives remain the two main journey purposes for which people use cars, a phenomenon that is also true for Car Club members.

Also, as we have already seen, the lower likelihood of members using cars for journeys was a feature of these people **before** they joined the Car Club and is largely why they joined the Club in the first place. For these early adopters, the assumption that Car Club membership would result in reduced car use was mistaken and lower car use precedes membership.

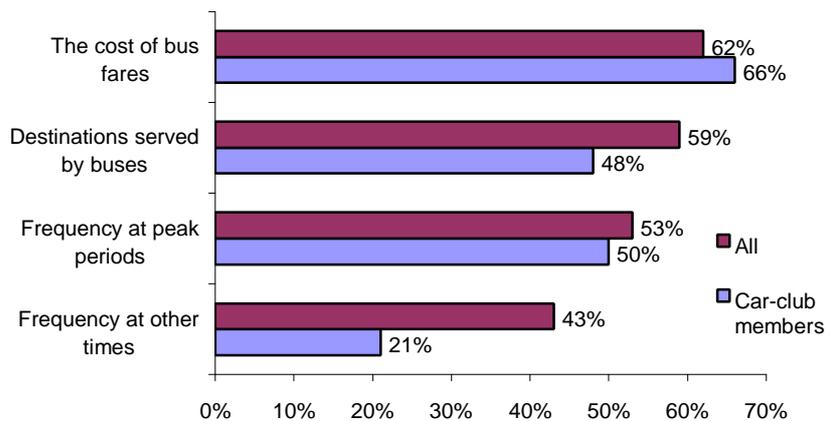
Looking across the wide range of indicators available from the baseline and follow-up survey, the implication is that while Car Club members differentiate themselves by their attitudes and behaviour in relation to transport modes and ‘green’ values, there is a substantial pool of people in the general population who share these values. The second implication of the two surveys is that over time, these values are becoming more widespread, with higher proportions of the population shifting away from using cars for certain types of journey and engaging in other environmental activities.

Bus services in Marchmont and Sciennes

Overall, the cost of fares and the destinations served by buses are viewed more favourably than the frequency of buses. Around 60% of the general population rate the cost and the destinations served as very or fairly good while only around 50% say the frequency of buses at peak times and only around 40% say the frequency of buses at other times is good or very good.

Figure 14 – The rating of different aspects of the bus service as good or very good, by Car Club members and the general population

Bases: All – 446, Car Club members – 38



The Car Club respondents tend to be more critical of the bus service than all respondents generally. This is not, however, because Car Club members use buses more frequently. In fact, an identical proportion of Car Club members (27%) as the general population use buses three times a week or more frequently. A similar proportion of Car Club members as the general population say they never use buses (around 12%).

Over the period covered by the evaluation, the general perception of the bus service is that it has improved. On three of the four measures: peak frequency, destinations and cost, the surveys show an increase in the proportion rating each as good or very good. Peak frequency and destinations show increases of 8% and 13% respectively. There is no change, however, in the rating of off-peak frequency – the measure most needed to encourage modal shift. Forty per cent of residents said the off-peak service was poor or very poor and almost a fifth did not know how to rate the service.

Changes in members' behaviour

The area where change might be most clearly seen is in the changing transport use by Car Club members. In the survey, there were responses from 38 members in total, therefore care should be taken when drawing conclusions. From the survey, the key responses by members indicate that,

- Joining the Car Club has made little difference to the number of journeys made.
- In terms of all modes of transport, more members believe they are making slightly more journeys than before.
- In terms of car journeys, 8 members from 38 believe they make the same number of journeys as before joining the car club, while 15 believe they make more journeys by car and 14 believe they make less journeys by car.
- 30 from 38 make the same number of journey by foot as before, while 7 people now make more journeys by foot
- While under half of the members make the same number of journeys by taxi as before (16), the number making more (13) is roughly equal to those making less (9).

- 26 members stated whether they made more journeys by bicycle than before. 17 of these 26 stated that they made the same number of journeys by bicycle, 8 said they made more, and only 1 said they made less.
- Around half the members surveyed (20) said they made the same number of journeys by bus as before, while 11 said they made more, and 5 said they made less.
- Over half of the member (22 from 38) had access to a car or van before joining the city car club.
- Around a third of the member respondents (12) disposed of a car or van because of joining the car club.
- No car club member disposed of more than one car or van.
- Of the 6 people who have a car in the household, the proportion of their total miles for which they used their own car ranged from 20% to 100%. The average proportion which they used their own car was 61% (But with a standard deviation of 20%).

The data for Car Club members is quite weak but the suggestion from these figures is that there has been very little net effect from the Car Club in terms of travel patterns. There appear to be three major reasons for this. First, the Car Club attracted a number of members who did not previously have access to a vehicle. For these members, use of a car has obviously increased as they now undertake trips that were previously difficult by other means. This will tend to cancel out the reductions by other members. Secondly, the fact that about half of members kept a vehicle, for whatever reason, will partially undermine the gains available for the Car Club. Even where the vehicle is only kept as insurance should the Car Club experiment fail, there is the incentive to use it. Thirdly, a high proportion of members had already clearly minimised their use of a car. The main advantage of the Car Club is that it allows them to stop owning a car rather than stop using it. The scope for reduced mileage is therefore less than would be obtained in a larger scheme.

However, from the figures in the survey, the Club does appear to have resulted in some members either disposing of cars or not replacing vehicles. Of the 38 members surveyed, 12 disposed of a car or van (or did not replace a vehicle) as a result of joining the Car Club. Since the 38 members interviewed represented about 40% of the Marchmont and Sciennes membership, the potential gain in terms of taking cars off the road might be as high as 30.

CHAPTER SIX – CONCLUSIONS AND LESSONS

THE OPERATING CONTEXT FOR THE CAR CLUB

It is difficult to avoid the fact that at the end of March 2001, the Edinburgh City Car Club was suspended, the vehicles supplied by Budget were withdrawn and the parking bays were indefinitely suspended. In any practical sense, the Edinburgh City Car Club ceased to exist. Although the Council had reached agreement with an alternative operator, at the time of writing the Car Club remained in abeyance. On the surface at least, this chapter of the Edinburgh Car Club ended unsuccessfully – in its initial implementation, the City Car Club did not develop into a scheme that was viable in the long term.

However, Budget's withdrawal from Edinburgh is only partly related to the viability of the Edinburgh Car Club. Across Europe, Budget's trading position and the company had been experiencing major restructuring, including redundancies. Thus, from Budget's perspective, it is not so much that the Car Club was losing money – that was expected – but that in its current business context, the operating deficits associated with the Car Club could not be sustained.

While this sets an important context for Budget's withdrawal from the Club, what is more difficult to determine is the impact of Budget's financial pressures on how it operated and managed the Edinburgh Car Club. Perhaps more importantly, we can only speculate on how the Edinburgh Car Club might have developed had the operator not been experiencing severe financial constraints.

SETTING UP AND EARLY IMPLEMENTATION

The setting up and early implementation of the scheme were characterised by a lack of clarity over the objectives of the car club and no clear business planning. The likelihood of a substantial deficit was only identified when the charging structure for the club was being examined. The character of the scheme changed fundamentally in the course of setting the scheme up – from a local 'club' to a Edinburgh-wide and potentially national, commercial pilot. However, the early 'muddling through' resulted at least in the car club being established: something that would have been unlikely had the operating deficit been identified earlier.

The major conclusions and lessons from the early phases of the Car Club are:

- the need for clear operational objectives, business planning etc
- the need for a method for assessing market potential and identifying potential locations
- the potential need for subsidy of car sharing start-ups at least in terms of research support, marketing (to raise awareness of the Car Club and alternatives modes) and guidance through the complex planning requirements.

The experience of European schemes suggests that some measure of public subsidy is required at least in the formative stages. However, this experience tends to be based on the development of more community-based clubs rather than one being operated by a

multinational company. It seems unlikely that a direct financial subsidy for the Edinburgh scheme (over and above the subsidy represented by DETR's development funding and the Council's in-kind support) would have been politically defensible.

MARKETING AND RECRUITMENT

In terms of marketing the Club, we have to conclude that this has been ineffective. Not that insufficient money was directed at marketing and public relations but that a substantial proportion of the effort was misplaced. Successful efforts were made to secure positive press for the car club concept but of the total of £200,000 spent on marketing-related activity, very little appears to have been spent on initiatives that would do more than raise awareness of the Car Club idea and name. In Marchmont and Sciennes, there does not appear to have been any focussed marketing aimed at addressing non-members' barriers to joining after a mailshot in April 1999 (when the Club was set up) and some public meetings in June 1999.

- car clubs require important shifts in people's attitudes to travel and alterations in their lifestyle. Awareness raising promotions can prompt questions about these issues but it is unlikely to provide the answers. The shift in 'mindset' needed is not a task separate from promoting car clubs. One of the tasks of the car clubs is to address the issues that non-members raise.

CUSTOMER SATISFACTION WITH THE SCHEME

There appear to be two broad views of customer satisfaction with the scheme. At a general level, members are strongly committed to the Car Club and when asked general questions about the Car Club in the 2001 survey, the responses were positive.

However, in terms of the detailed operation of the Club, the focus groups with members identified a number of serious problems with customer service.

While these problems did not undermine members' support for the scheme, they had a significant impact on their views of the scheme's reliability and its viability. By the time of the focus groups in January 2001, a number of committed members were reconsidering their membership of the Car Club.

- Early adopters are more willing to accept difficulties with a new and innovative service. For some it is part of the 'adventure' of being first. For the general public, the quality of service is paramount especially if environmental benefits and financial savings are not key selling points. The service needs to be excellent.

TAKE-UP AND NON-TAKE-UP OF THE SCHEME

After the baseline survey, we estimated that there was the potential for the Car Club to attract approximately 7% of car-owning households in Marchmont and Sciennes. This equated to a potential membership pool of 500 households. By March 2000, the anniversary of the scheme, the membership stood at 95 or 19% of the estimated potential membership.

However, after the expansion into other areas, membership grew more slowly, especially when consideration is given to the number of parking stations and vehicles available.

In the LEEP business plan, the membership was projected to grow from 30 at start-up to 116 at the end of the first year. In fact, it grew from 36 to 95, or by 171% rather than 286%. Given the small absolute differences, we would have to conclude that the first year proved to be more or less on target. Overall, by the end of December 2001, the Car Club had 170 members. Thus, although the number of vehicles had grown by a factor of four and the number of parking stations had grown five-fold, the membership was only 1.8 times the final year 1 membership.

It has to be noted that expansion was critical to the success of the Club. The conclusion of LEEP's business planning was that a Car Club confined to Marchmont and Sciennes faced an indefinite revenue deficit. Anyone operating the Club had to increase the membership base (and spread the fixed costs of operating the Club) across more parking stations. Expansion was therefore not an option: the question was how to expand and where to expand.

Our general, although tentative, conclusion is that the simultaneous expansion into 19 new areas was too ambitious and the staff and marketing resources available to Budget at that time (always bearing in mind their wider financial constraints) were spread too thinly. Our reasons for arriving at this conclusion are:

- Marchmont and Sciennes still required significant development work. The first year attrition was not yet apparent but the first year's growth seems at least partially illusory and the post-March shakeout would reveal a substantially smaller 'real' membership.
- The technical problems with the hire management system had not been satisfactorily resolved and it seems unwise to have continued installing the system in new vehicles.
- Budget seems not to have been in a position to fully support the expanded scheme. While the technical problems may have been manageable in Marchmont and Sciennes, the accelerating failure rate of bookings indicates that Budget was not able to manage the problem on a larger scale.

The effect on Marchmont and Sciennes seems to be that the expansion resulted in a generalised decline in the level of service provided by the Car Club, which affected Marchmont and Sciennes members along with other members. In terms of take-up of the Car Club, it seems likely (and again, we can be no more certain than this) that spreading the resources of Budget's part-time representative in Edinburgh over an additional 19 sites would have limited the scope to undertake further development work in Marchmont and Sciennes.

Our principal conclusion about non-take-up is relatively straightforward to state but more difficult to resolve. The basic logic of the Car Club is impeccable – no one objects to the fundamental argument that a private car represents a substantial cost to households and for most of the time the car sits idle. To this extent, car sharing makes sense. Unfortunately, this is not enough to convince people to give up their private cars and join a Car Club.

It needs to be recognised that for most car owners a car is more than simply a mode of transport and giving up a private car is not simply a modal shift. Almost all motorists agree

that 'driving a car gives me freedom to go where I want, when I want'.³² Joining a Car Club involves sacrificing some of this autonomy.

Thus, the decision to join a Car Club is not the win-win scenario that it is often presented as – the convenience of a private car, financial savings, benefits to society, none of the hassle of car ownership. It is a trade-off. At least some of the convenience, flexibility, spontaneity, control and independence associated with a private car are given up and for many people the potential gains seem nebulous.

There are several factors that need to be incorporated into future attempts to develop car clubs:

- Money, for many non-members, is not a strong motivator. The promise of savings is not convincing and the examples given are not convincing. In practice, it is difficult for potential members to test the potential for savings.
- Non-members do not know how they would replace their car trips. They mistrust the bus service and taxis are considered expensive.
- With no strong financial, environmental or practical case being made in favour of the Car Club, it is relatively easy for individuals to identify a few potential problems with being a Car Club member and then dismiss the idea.

The major lesson that seems to arise from the discussion with non-members is first, the need for sustained marketing of the concept of the car sharing and a more realistic presentation of car sharing as a change of lifestyle and a compromise between cost and convenience. Also, understanding that car sharing is not simply a switch from a private car to a hired car is essential. What car sharing is asking people to do is exchange a form of transport that they know and understand (with all its shortcomings) for a complex mix of modes, one of which is completely new and others that are poorly understood.

The third group of interest is those people who joined the Car Club in year 1 but did not renew their membership in year 2. The original forecasts for the scheme had assumed that about 10% of the membership would leave the scheme in each year, either through non-renewal of their membership or by simply not using the vehicles. Either way, the attrition of members would have consequences for the Club's revenue. In fact, between April 2000 and September 2000, the Car Club appears to have lost almost 40% of its membership. The question that needs to be addressed is given the innovative nature of the scheme, is a first-year attrition rate of 40% significant?

Some of the first-year attrition is understandable. It appears that some of the people who joined in the early days of the scheme were more supporters than members – joining as an act of solidarity and, in effect, to make a donation to a scheme they wanted to work even if they had no use for it themselves. The fact that some members never actually hired a car in their first year tends to confirm this.

Some members lapsed because their circumstances changed or they found that in practice, the Club simply did not meet their needs. During the period covered by this evaluation, we have no record of people in Marchmont and Sciennes actually 'resigning' from the Club although isolated examples in other areas have come to our attention. Losing paper members has little

³² In a study by Stradling (2000) 95% of drivers agreed with this statement.

impact on the cash-flow of the enterprise but a sharp decline in numbers does not look good. If these accounted for a large number of the 22 people who did not renew between April and September 2000 then there is little cause to conclude that the concept does not work or that a longer-running club would experience on-going attrition at this level.

Unfortunately, we have no way of determining the relative size of the two types of 'leavers' – the paper supporters and those who found that the scheme did not suit their needs. Even if the two were equally sized, the level of attrition of 'real' members does not seem particularly high in the first year, although a consistent loss at this level would clearly represent a significant problem.

- Individual members' use of car clubs is concentrated into evenings and weekends. Business use is essential to increase utilisation rates and generate revenue.
- Expansion needs to be closely related to membership in order to control fleet costs and to avoid spreading resources too thinly. Some anticipatory expansion is inevitable but this should be organic – growing on the basis of existing growth – rather than striking out into new territory.
- Expansion needs to be based on sound information about the potential market. With some qualification, since early adopters may not be typical, the simple tool of ACORN profiling (or similar) offers a mechanism for identifying potential locations.
- Marketing is critical to the success of car clubs. After initial awareness raising, one-to-one marketing – meetings, a shop-front, visiting potential members etc – is likely to be more effective than mass marketing.
- Early adopters are enthusiastic evangelists and should be encouraged and supported to recruit on behalf of the club.
- Car club operators should remain close to their customers either by being based locally or by establishing effective local liaison with members.
- There should be mechanisms for members' views and experiences to help shape the direction of the service.

THE CHARACTERISTICS OF USERS AND PRICING

The characteristics of users

In general terms the people who joined the Car Club in Marchmont and Sciennes are typical of the early adopters identified in Europe and North America. They tend to be well-educated, middle class professionals, in couple households with members disproportionately male, in their mid- to late-thirties. They are environmentally aware and regard car use as a burdensome necessity and car ownership as a significant cost. In Marchmont and Sciennes, almost half of the members who participated in the survey did not have personal access to a car or van before they joined the Car Club.

In many of these key respects (and particularly in terms of their environmental views and car ownership) the members of the Car Club are significantly different from the population as a whole. Crucially, it makes the early stages of recruitment much easier than longer-term growth. These early adopters represent the low-hanging fruit that is already, or readily,

convinced of the case for a Car Club. Of the members who had a car when they joined many had, it seems, already minimised their car use and had been waiting for this solution to come along to free them from their vestigial dependence on a private car.

Pricing

The pricing of the Car Club was a significant concern for three groups: non-members, lapsed members and Budget. In terms of the price of the Car Club, non-members compare the costs of individual journeys with the apparent cost of a car trip and the cost of undertaking the same journey by taxi (the closest 'hire' alternative). That the Car Club is compared with a taxi in terms of price also leads non-members to question the whole rationale of the Car Club – if it costs the same as a taxi, why not take a taxi and let someone else drive? For most non-members, the membership fee appears to act as a barrier to joining the Car Club. In the survey, 80% of non-members thought the membership fee should be zero and 17% felt it should be less than £100.

Many lapsed members had driven little before joining the Car Club and made little use of the Car Club. For people who need to drive very occasionally the conclusion is probably that the Car Club is not a cost-effective way of undertaking trips.

What lessons can be learned about pricing? First, that asserting that savings can be made has very little impact. What is likely to be more convincing is a personalised calculation of current travel costs and comparison with the Car Club over a longer period. Combined with information on how an alternative transport package can be developed, it is possible to see how interested but sceptical non-members might be won to the practice of car sharing – the idea is readily accepted. The second lesson that we would suggest is that simplicity and transparency are not necessarily key attributes of the pricing structure.

- Early growth might prove illusory, as an innovative venture will easily attract those people who are already or readily convinced. Continuous marketing and one-to-one marketing is needed to attract and convince more members.
- The costs of car ownership are poorly understood and car club pricing can easily appear very expensive. While a simple pricing structure will be easily understood, the more important lesson is to make the whole issue of driving costs better understood.

THE IMPACT OF THE CLUB

Given the size of the Car Club and the time for which it has operated, it would be unreasonable to expect it to have produced significant change in Marchmont and Sciennes as a whole. Certainly on most measures the baseline and final surveys had recorded no significant change in the characteristics of the area or the population.

However, there are some significant changes that indicate generalised changes in Marchmont and Sciennes such as

- the increased likelihood to walk to local shops than before and more likely to walk to visit friends or relatives

- the lower proportion of car owners reporting using cars for commuting, day trips, shopping, holidays and going to the cinema or other social events
- the increased likelihood to recycle, to use 'green' products and to buy organic fruit or vegetables.

To the extent that 'greenness' is associated with membership of a Car Club, the signs are the climate in Marchmont and Sciennes (and by implication, areas like Marchmont and Sciennes) is improving. On each of these measures the Car Club members appear to be more green than the population as a whole.

The main areas where impacts can be seen among Car Club members are in individuals' reporting of their car ownership and travel before and after joining the Car Club. Of the 38 members interviewed in the survey, 16 did not have access to a car before they joined. This seems (and it's difficult to be more certain than this because we're talking about differences among a small group of people) to have cancelled out a substantial amount of the 'gains' from car-owners joining the Club. For example, 15 members reported that they made more journeys by car after joining than they did before, while 14 said they made fewer. Of course, this tells us nothing about whether there are gains in terms of the number of miles driven, just the number of journeys, but broadly, this pattern is seen in the use of other modes of transport.

This picture of relatively little gain needs to be understood against the backdrop of the early members being a group of people who had either already given up a car, and were conscious that they were constrained in their ability to make some types of journey, or had already minimised their use of cars to the extent that there is likely to be little scope for further reductions. The early adopters are perhaps not the best group from which to seek substantial reductions in car use and they do not provide a useful basis on which to compare Edinburgh with continental schemes.

If changes in journey patterns are not clearly discernible, there is a clear impact on car ownership albeit insufficient to register at the area-wide level. Of the 38 members surveyed, 12 disposed of a car or van (or did not replace a vehicle) as a result of joining the Car Club. Since the 38 members interviewed represented about 40% of the Marchmont and Sciennes membership, the potential gain in terms of taking cars off the road might be as high as 30.

- Significant reductions in car use will only be achieved once the membership of car clubs is extended beyond the early adopter group.

APPENDIX 1 – SUMMARY OF MAIN MARKETING ACTIVITIES

- Creation of logo and all marketing material including:
 - Headed notepaper, Corporate folders, Compliments slips, Pricing leaflets (two versions), Information and application forms, Members handbooks (three versions), Membership cards, Driving licence mandate forms, Envelopes – two sizes
- Magnetic signs for cars
- Two stickers for interior windows in the cars themselves
- Parking bay stickers
- Business cards for members
- Christmas cards
- Small promotional items: umbrellas, pens, mugs, furry animals, balloons
- Maps of sites, three versions
- Posters – three variants
- Bus adverts
- Exhibition graphics

OTHER MARKETING ACTIVITIES

December 1998: Mailshot to database of prospective members publicising the imminent arrival of the City Car Club.

March/April 1999: Co-ordinate launch event at City Chambers for various members, local dignitaries and media. Extensive PR coverage of the launch including The Scotsman, Edinburgh Evening news, The Guardian, STV News, Live TV Edinburgh, Kingdom FM, Radio Forth, Scot FM, Fleet News, Scottish Sun, Glasgow Herald. Mailshot to 5,000 addresses in Marchmont/Sciennes area.

Mar – Jun 1999: Public meetings held in Marchmont Sciennes area to promote City Car Club to local residents.

September 1999: BBC “Dream Wheels” report on City Car Club. Discussions with LRT regarding bus advertising. Budget exhibits at the UK Chairs of Transport Conference to promote the City Car Club concept. Lord McDonald, Secretary of State for Transport, endorses the scheme.

A discount on LRT season tickets negotiated for CCC members.

October 1999: City Car Club website set up.

December 1999: Extensive PR coverage of the new parking stations in Morrison Street and Slateford Green in Edinburgh Evening News. Christmas card and golf umbrella sent to all members.

January 2000: Mailshot to 16,000 residential addresses within the catchment area of the new parking bays.

February 2000: "Fleet News" runs a double page spread on City Car Club.

March 2000: PR Coverage of first anniversary from BBC Radio Scotland, STV, The Evening News, The Herald, The Scotsman. Budget appoints Edinburgh-based PR company solely dedicated to City Car Club. Budget's national PR agency continues to handle national City Car Club enquiries. Birthday card sent to all members and other opinion formers.

April 2000: Advertising for 12 weeks in The Scotsman, Edinburgh Evening News and Edinburgh Post. Referral cards issued to Club members. An incentive is available for members who refer new members. The Big Issue runs a double page spread on City Car Club. Posters distributed to amenities within the catchment areas of all of the new parking stations. City Car Club postcards placed in the windows of newsagents in the Edinburgh area.

May 2000: First issue of "City Car Club News," the bi-monthly newsletter for City Car Club members. CCC advertised in "Local Government Business" magazine.

June – December 2000: Local press advertising in Edinburgh including Tolcross News, Stockbridge and Newtown Independent, Broughton Spurtle, Gorgie Dalry Gazette, EH10, The Southsider, The List, and Tenants Voice.

August 2000: City Car Club is promoted at the Fringe Sunday event. A press lunch is held to update local and national journalists on the progress of City Car Club. Extensive press coverage follows in The Herald, Edinburgh Evening News (News section), Edinburgh Evening News (Motoring Section), The Scotsman (Front page of motoring section)

September 2000: Second issue of City Car Club News. A member-get-member incentive is launched to encourage members to recruit other members.