

# Improving Air Quality with Car Clubs and Car Sharing Schemes

## Local Authority Briefing Sheet

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Car clubs and car sharing provide an alternative to private car ownership and solo trips. Each measure makes significant reductions in car miles driven through changes in travel behaviour and in the number of cars on the road, maximising the efficiency of the reduced number of cars in use. The combined effect is a reduction in local air pollution and the emission of climate changing gases.

### **Car clubs**

A car club provides its members with quick and easy access to a car for short term hire. Members can make use of car club vehicles as and when they need them. All they have to do is:

- **Book** - for as little as half an hour at a time, using telephone or internet. The booking can be made well ahead of time or with a few minutes notice.
- **Unlock** - cars are located at designated parking bays in the local area and accessed using the member's smart card
- **Drive** – Once inside the driver enters a pin and drives away, returning the car at the end of the journey. It is possible to extend the booking if necessary
- **Pay** - Pay-as-you-go charges include fuel and maintenance costs. A subscription charge is paid monthly or annually.

**Car sharing schemes** match people making similar journeys to allow them to travel together for regular commuter trips or longer one off journeys. Some schemes are national, internet-based and open to the public; others are restricted to a particular business or group.

### **Fewer car miles driven**

Car clubs result in a reduction in car miles driven, with members walking or cycling more, using public transport more often or simply re-arranging how they make journeys and traveling less. Belonging to a car club makes it easier for residents to meet their transport needs without running their own car, or in some cases without owning a second car. This means people are free to choose the best option for each journey. Research in the UK and overseas has found significant changes in travel behaviour once the link between car use and car ownership is broken. Car club members typically drive less and make more use of public transport, cycling and walking.

In the UK, former car owners increase their use of non-car transport modes by 40% after joining a car club. Two-thirds of those who owned a car before joining saw their mileage fall, by an average of around 25%.

ECI, University of Oxford 'UK car clubs: an effective way of cutting vehicle usage and emissions?' Matthew Ledbury 2004

It is estimated that there will be 1 million users of car clubs by 2015.  
Carplus



### More efficient use of cars

A shift to newer, more carbon efficient and better maintained cars of car club fleets means that car club vehicles are normally more carbon efficient than the average private car. People joining car clubs often give up a polluting 'old banger', thereby further reducing emissions.

The 2005 CityCarClubs data revealed that 45% of private cars that were replaced by use of a car club car were more than 10 years old.

CityCarClubs, 2005

### Use of cleaner fuel technology

The impact of car clubs on air quality can be increased yet further with the use of low emission and alternative fuel vehicles. A few examples of schemes which also use alternative fuels include:

- **Hourcar** in Hebden Bridge which uses biodiesel made from vegetable oil.
- **WhizzGo** have LPG vehicles in some London bays, and plan to use a fleet running on 30% bio-diesel in Manchester and "stop and start" Citroen cars into York, whereby the vehicle's engine cuts out automatically when stopped at a junction or in a queue of traffic.

### Less cold starts

It takes around 2 miles for engines to reach optimum temperature during which emissions are at around 20% more per mile.

Private car use average journey length is 6.8 miles so around 10% of the distance driven is under cold start conditions, whereas club car drivers average journey lengths are 30-50 miles, because members tend to combine many reasons for travel within one trip to make the hire more efficient. So only 2% of the distances driven are under cold start conditions.



### Sheffield Case Study

Sheffield City Council has the only dedicated car club officer post in the country in a local authority which is funded by DEFRA as part of an overall air quality improvement plan. The aim is to support the car club as a measure which can contribute to emission reductions through behavioural change. The following is an extract from the proposal adopted by the Cabinet on 28 June 2006.

*"The development of a car club is integrated within the Local Transport Plan, Sheffield Development Framework and the corporate Travel Plan. It links to the county-wide Travelwise and Care4Air initiatives and has a headline objective of contributing to improving air quality".*

### Car sharing improving air quality

60% of car drivers would be willing to share a car to work if there was someone suitable to travel with.

Reed employment agency

The average car commuter drives 19 miles a day. Cutting that by half through car sharing would save 648kg of carbon dioxide over one year.

Environment Agency

### Easing congestion

Car sharing reduces the number of commuter cars at peak times whilst car club schemes promote modal shift to public transport walking and cycling. Improving traffic flow also helps cars run more efficiently and reduces the build up of local pollution.

On the Leeds HOV lane, the journey times of those travelling in shared cars decreased by 3.5 minutes and those travelling in the non HOV lane saw a decrease of 1.5 minutes. The buses also reported significant reductions in journey times.

### Leeds City Council HOV Information Sheet

#### Information and support

Call Carplus on 0113 234 9299 or email [info@carplus.org.uk](mailto:info@carplus.org.uk) for tailored advice and support services in car club and car share scheme development.

You can download good practice guides, information sheets and research from our website at [www.carplus.org.uk](http://www.carplus.org.uk)