



## Park and Ride... good or bad?

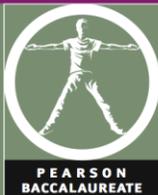


*Photo 1: The Pear Tree Park and Ride, on the northern edge of Oxford*

### Park and Ride schemes (P&R)

The concept of a Park and Ride (P&R) scheme is relatively simple – motorists park their cars in a car park on the edge of a town, and then take a bus (or other form of transport) to their final destination. This should reduce the number of vehicles going to the final destination, namely city centres.

The idea of Park and Ride originated in the 1960s with experimental services operating in Oxford, Nottingham and Leicester. The existing Oxford Park and Ride scheme started in 1973 and is the oldest continuously operating service in the UK (Photo 2 – next page).



## Why P&Rs?

Local authorities and small historic towns implemented P&R schemes to improve accessibility and air quality. During the 1990s P&R evolved from being based largely around small- and medium-sized historic cities to a range of urban areas. By the year 2000, there were about 70 P&R in the UK and by 2005, 92 P&R in 40 cities.



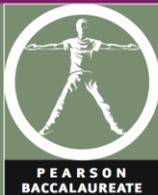
P&R schemes have been considered as particularly suitable for historic towns with narrow streets. The positive comments from P&R users relate to cost, reliability, waiting facilities and parking availability. However, the main negative comments from users also relate to cost and reliability.

## Disadvantages of P&R schemes

According to Friends of the Earth (Birmingham), further park and ride expansion is inappropriate for the 21st century, as it does not significantly contribute to more sustainable transport provision or offer any substantial environmental benefits.

They listed a number of concerns like:

1. P&R does not necessarily reduce overall traffic levels - it simply redistributes it.
2. Vehicle miles and atmospheric pollution may increase.
3. Most bus based Park and Ride schemes are subsidised by local authorities. Alternatively, the funding towards P&R could be used to develop more bus routes and cheaper bus journeys etc.



4. P&R with free car parking is a subsidy to car drivers. It makes car use more attractive by removing or reducing the cost and stress of parking in city centres and town centres.
5. P&R schemes increase the social exclusion of those without access to a car.
6. Large areas of land devoted to car parking is an inefficient use of land which could be put to another more productive use.

Since the mid-1990s there has been growing opposition to P&Rs. This was due to a combination of building on green land (sometimes green belt land), damage to the environment, localised congestion and pollution, and effect on local amenities.

According to the Campaign to Protect Rural England (CPRE)

*Increasingly large areas of countryside are buried under tarmacadam in the name of sustainable transport. But 'almost every trip relies on using the car at one end. We need to reduce traffic levels overall and improve public transport closer to where people live to provide genuine transport choices. If this continues, every major town in England will have a necklace of car parks around it'.*

## Environmental impacts

There is some debate over the environmental impacts of the Park and Ride scheme. On the one hand, they replace a vegetated surface with an impermeable one. This increases the risk of flooding, and may lead to a reduction in water quality (oil and particulate matter may wash over the surface contaminating groundwater and streams). In addition, the change in land use removes valuable habitats for flora and fauna. Tarmacking the surface cuts off air and water getting to the soil and so the soil is essentially killed off. On the other hand, it is unlikely that P&R schemes directly lead to a decline in biodiversity, as any rare species present could prevent the P&R scheme from being built. There are others that believe P&R schemes are compatible with floodplains, since during times of floods, vehicles can be moved away from the P&R. Moreover, it is possible to use semi-permeable materials (bricks with holes in them) that would allow some drainage and aeration of the soil.



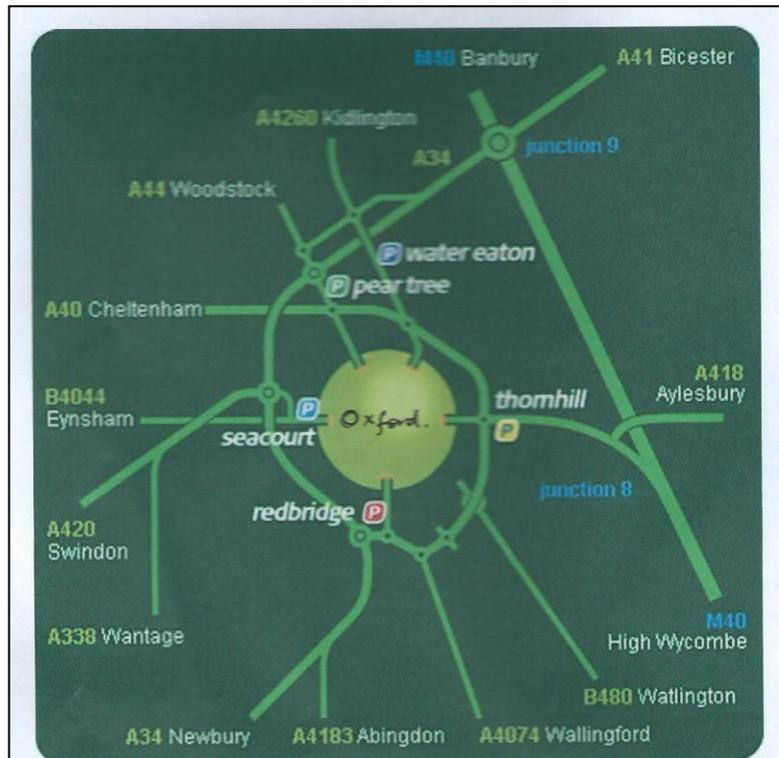
## Case study: Oxford's Park and Ride scheme

Oxford's transport problem is severe and has important effects. For example,

- Up to 80 000 vehicles a day converge on the city and its 15,000 parking spaces.
- At peak times, the three-mile trip from the Pear Tree roundabout to locations close to the city centre is 30 minutes of congestion, delay, frustration and increasing air pollution.

There are now five P&R schemes in Oxford (shown on the map below). One of them, Water Eaton is adjacent to the new Oxford Parkway railway station that will open in 2015, and provide a rail link to London Marylebone. **Congestion** and **pollution** had forced the planners to develop the Park and Ride Scheme.

- Over 35% of visitors to central Oxford arrive by car
- Park and Rides intercept 18% of Oxford-bound cars during off-peak times and 38% at peak times
- Park and Rides are having an adverse effect on rural bus services as over 1000 potential bus users use Park and Ride instead
- Park and Ride has prevented Oxford from becoming an inner city car park
- Each Park and Ride scheme takes up to 12 ha of good quality green belt land.





## Success?

Success depends upon the original objectives. One of the main reasons for success appears to be economic - increased usage and more visitors to small historic towns. On the other hand, P&R has been less successful in reducing traffic flows and congestion. P&R appears to be popular at a local level and appears to have high user satisfaction. However, at a national level it may be contributing to increased emission of greenhouse gases, and so is not necessarily a good policy.

As issues of climate change and peak oil become ever more important at a local- and global-scale, transport strategies that focus on increased use of cars might not be the best policy. Alternatives to P&R include Free Cycle Hire (Barclay's Bikes or Boris bikes), Carriageway relocation, Improved cycle networks, Guided Bus services, and hybrid cars.

## Questions

- 1 Briefly outline the impacts of P&R on air quality.
- 2 How may P&R lead to an increase in the number of vehicles on the road?
- 3 Suggest how P&R may influence water quality.



## Suggested answers

**1** P&R increases the air quality in central areas because there are fewer vehicles travelling there. However, it decreases the air quality in the vicinity of the P&R and also decreases air quality in suburban areas as more motorists may use those streets for driving/parking.

**2** Some rural residents may decide to use a P&R, especially if the cost of parking/taking the bus is cheaper than using an unsubsidised rural bus. Alternatively, some residents may decide to drive to a P&R and take the bus, whereas in the past they used another bus service/cycled.

**3** An increase in the amount of impermeable surface leads to increased run-off and risk of flooding. In addition, pollutants from vehicles – oil, particulates, lead etc – may be deposited on the ground. Water flowing over the surface may pick up these pollutants, and this leads to deterioration in water quality.