



NBTN ADVISORY NOTE 7

TRAVEL PLANS AND PARKING MANAGEMENT WHY, WHAT AND HOW

**JOHN ELLIOTT
THE LOCAL GOVERNMENT TECHNICAL ADVISORS' GROUP
INDEPENDENT CONSULTANT**

Background and introduction

Effective management of parking is an essential activity for towns, shopping centres, hospitals, universities and many businesses. Most individuals, businesses and other organisations want parking to be provided to meet all their needs or wishes and want it to be free.

For an *individual* developer, substantial parking for a new development has been worthwhile financially in terms of extra rent achieved. For an *individual* business extra parking can reduce staff grumbles to management and allow most staff (at least for those who have a car available) the freedom to drive, albeit at a substantial real cost to the business. The traffic congestion and the problems caused for the transport system when a *number* of developers or businesses achieve their extra parking space is not usually seen as the problem of an *individual* business.

Despite the *individual* advantages of extra parking provision, managing and reducing parking demand has big benefits to all businesses in reduced congestion and substantial savings in cost including rents.

It should be noted that for many years, planners, engineers and politicians (planning committees) demanded that developments have sufficient parking to meet most personal and company demands. This was mainly to try and meet declared business needs and reduce parking on street.

In the last decade or so (longer for inner London) local authorities and central government have become fully aware of the link between parking provision, traffic volumes on the road network and hence congestion. Thus they have generally become much more restrictive on parking space provision. Another important incentive to local authorities and government in restrictive parking standards is the potential reduction in carbon emissions and air pollution from lower traffic volumes and congestion. Some authorities also have declared Air Quality Management Areas – these can be found at <http://www.airquality.co.uk/laqm/laqm.php>.

Parking costs and subsidies

Provision of parking is not a free good, a typical surface level space costs any organisation £400 to £1000 per year per space in running costs and £2000 per space upwards in capital costs; this excludes land costs. Such running costs are: interest / amortisation of construction (or major maintenance), cleaning, lining, security, signing, landscaping, business rates etc. Multi-storey and underground car parks can cost several times these figures. Renting extra parking spaces in a town can cost upwards of £5 per day per space and, if renting offices, a typical extra cost for renting offices with generous parking provision can equate to £1000 per year per space.

Very few organisations consider the subsidy given to those who drive which amounts to £3 or more per day. If individual travellers can drive to an out of town centre or even a business in the heart of an

historic town they get a free parking space. By comparison, relatively little help is often given to those travelling by foot, cycle or bus, to shops or workplaces.

For shorter journeys, free parking substantially distorts behaviour against choosing more sustainable modes. A typical six mile return commute by car has a cost to the individual for fuel of about £1.50 which typically gives a marginal (excluding fixed) costs of about £3. There is therefore a 'subsidy' to drive of at least equal magnitude - for the free parking. For longer journeys the parking subsidy becomes a smaller proportion of the total and arguably less distorting on travel behaviour towards car travel.

What should be done?

Most urban authorities have recognised for many years that control of public parking is an effective way of controlling traffic and have introduced parking charges in public on and off-street car parks; they also prohibit parking in various areas. Furthermore most have introduced enforcement measures to ensure compliance.

Many cities and towns would not function without parking management. For many businesses and organisations, staff grumbling about parking problems can cause hassle for management.

Towns and cities can exert controls through the charge structure that they use at public car parks, planning controls on new developments or Workplace Parking Charges. Workplace Parking Charges are in their relative infancy but have been considered in London for many years and Nottingham more recently.

In order to achieve demand management by effective control of parking, one of the biggest problems appears to be achieving a behaviour change by getting the individual (rather than the company or organisation) to feel the cost of parking as part of the trip. Interestingly a side effect of the Central London Congestion charge is that the demand for parking at central London office car parks appears to be reduced. With the introduction of the Congestion Charge individuals with a free parking space at work have for the first time felt the cost of parking in the form of a substantial charge on top of normal motoring costs for driving in the area. This has changed behaviour significantly; it also has a strong effect on shorter distance trips.

For businesses the driving force to look at parking management is often not mainly for the altruistic reasons of relieving congestion on the road network, atmospheric pollution or global warming, but parking problems from staff causing management hassle.

How practically can parking be managed?

Effective parking management typically doubles the traffic reduction of an otherwise comprehensive travel plan and has been shown to be the most effective tool in a travel plan. However, very few companies or other organisations make good use of effective parking management strategies.

If there is a need or a desire to control parking the range of options available to a business for their workers together with their respective consequences are as follows:

First come first served system

There is normally a very high level of frustration, it is potentially quite expensive to operate in wasted staff time and dealing with complaints. It is also unfair to people who can not arrive very early (e.g. those with child care responsibilities) or for those who have no real alternative to the use of a car; it is expensive in wasted time to a company and impractical for people travelling out to other sites on business and returning.

Where the number of vehicles parked on site is greater than the available spaces damage to both staff cars and company infrastructure often results. There can also be health and safety problems and even access for emergency vehicles could be blocked.

Permit rationing systems

This is where permits are only issued to specific people or to people on specific days to a number that could be accommodated in the available spaces. It is often difficult to predict the relationship between the number of permits on issue and the peak demand for cars that could be parked. This ratio of permits to spaces will normally vary between about 1.1 and 2.0 depending on the characteristics of the business and the travel habits of the permit holders. Some sites may also have a very high short period peak demand at say a shift change.

Permit rationing systems can be described under broad categories as follows:

Specific daily systems allow staff to only park a set number of days each week, for example two days out of five; such systems have been used where members of staff have a similar work pattern each day. For people with no alternative to use a car on a specific day such a system can be difficult for the individual and the business.

Rationing systems for specific people/posts can work where the rationing can be matched to the available supply of spaces. This rationing might be done by seniority, time serving, essential business need, disabilities, unsocial hours working, car sharers, assessment of difficulty or ease of travel by alternative modes (e.g. need to use multiple buses or live a short walk from workplace) and personal circumstances (e.g. child care or carers' responsibilities).

Seniority is often used in businesses and other organisations but has serious drawbacks in: undermining the required culture change necessary for travel plans to work, often sterilising (empty) spaces needed for real essential needs, creating bad relations between staff and bosses and protecting senior managers from understanding the problems other staff face.

For a needs based system it is difficult to design a priority list which can be applied consistently without an extensive bureaucratic process to reduce the numbers to the required amount on a permanent basis. Such systems tend to be undermined by creating exceptions and need to be regularly reviewed as situations change. Permit systems also give encouragement to people not to plan their lives as well as they could, in order to gain the advantage of the permit (e.g. if moving home they will be less encouraged to choose a location where they would not need to drive every day, or to satisfy a 'regular business need' they could make one short business trip each day rather than combining their trips on a single day).

On top of a permit system designed on the basis of need there could be a **charge for permit issue**. While the pricing method will reduce demand it tends to lock staff in or out of travelling by car. Those who have obtained a permit and paid for this feel that they should use their permit every day - there is no incentive to use another mode rather than a car, even on an occasional basis. Similarly those who have no permit and perhaps have a real business or personal need to drive on a particular day will not be able to.

Some organisations try **scaling charges** according to income, however this means that the incentive to change behaviour for those who are possibly most able to change their habits (the lowest paid - who incidentally could be more likely to live closer and/or be more likely and to use cheaper travel modes - walk, cycle, bus or car share) would be less incentivised to do so. Thus the effectiveness in meeting the objective of reducing car demand would be eroded. On a positive side a scaled charge is often easier to sell to staff and a scaled permit charge (permission to park only) combined with a fixed daily use charge could meet some organisation's needs. Nevertheless it is difficult to explain or justify logically why the parking cost should vary with income - petrol costs or train fares don't.

Parking Charges

Charging for parking has traditionally been used as a means of rationing demand in cities and some businesses (e.g. extensively used in hospitals and many Universities). However, for staff, charges are usually fairly low, in some Universities (with scaled charges according to income), as low as 11 pence per day for lowest paid staff. Such charges may produce a small revenue stream (with a larger

revenue stream from more highly paid staff) but do little to change behaviour and meet the real objectives of limiting parking demand.

For a parking charge scheme to be most effective the charge needs to be levied on a daily basis so it influences behaviour on each day that staff may be considering their travel options.

In considering total expenditure of a business and its staff, it should be noted that 'office' parking is normally allowed to be given to staff as a tax free concession. Thus any charging for parking coming from the net pay of staff means a greater tax take and less money available for staff generally. NBTN note 1 gives further information on tax and travel planning.

Parking Reward schemes

A number of organisations provide financial rewards for opting out of a parking space permanently, on a monthly basis or on a daily basis. Opting out permanently was tried by a major employer in West London with a lump sum buy-out. It was found to be impractical if people needed occasional use of a car for business purposes after they had opted out, or if their personal circumstances changed and they had to drive for a period.

A number of companies have introduced permit/reward schemes on a monthly basis, in such cases staff are locked in or out for that month, as described above. Not unsurprisingly staff tend to choose to be locked out during the month that they are taking significant amount of leave or are off site; thus any rewards paid by the company or organisation are less effective in achieving a behaviour change.

The most significant daily reward scheme is that developed at Pfizer where anybody not driving to work on any given day is awarded points which are accumulated until the end of the month and then paid through payroll; this worked out at £2 (taxed) at the Sandwich site and £5 (taxed) at their Reigate site per day. (It should be noted that Pfizer has now abandoned the scheme, at the Sandwich site only, as a cost saving and possibly compatibility with America).

The schemes were designed to be fully automated - the identity card identified when a member of staff is on site, by whatever transport means, and awards points on presence. The same card is used on exit from the car park and deducts points from one of the occupants of the car. The system automatically rewards the greenest travellers most (i.e. walk, bus, cycle and those with the greatest number of people in the car); all such green travellers would not lose their points when leaving work.

The schemes were very popular with staff, particular those making the effort to travel green, and very effective in reducing car use. However the tax take reduced its effectiveness and the cost of the extra budget line of paying people who were already travelling green appeared as a real cost to the organisation (a deadweight cost). At a personal level salaries were effectively increased but more to the less well paid members of the company.

Charge reward schemes

To avoid the financial drain on an organisation of a reward scheme, a charge/ reward scheme can be introduced where people that travel 'green' every day would be in pocket, people that travel 'red' would be out of pocket and those managing a compromise (by car sharing regularly or travelling green on a few days per week or month) could have equal rewards and charges. This could again be worked in points like the Pfizer systems but 'red' travellers would accumulate negative points which would be deducted, probably from untaxed income (please see NBTN note 1 for further information on tax), in payroll. Such a system can avoid a drain on the company and still allow a sufficient gap between the charge and reward to change behaviour and level the playing field between those travelling 'green' and those travelling 'red'. No scheme has yet been introduced although it has appeared to be attractive to a number of organisations.

A number of organisations have developed compromise schemes which use elements of the principles described above.

Whatever method is used there is almost always a need to have some controls or enforcement of the system.

Other issues

Moving on from workers at premises - parking for **shoppers and visitors** is often free or refunded if goods are purchased. While it is quite understandable for businesses or shops to provide such a service to potential customers, it is again far from even handed between travel modes. While some companies do provide a basic bus service very few organisations pay an equivalent amount (to the value of free parking) for those who use other means of transport.

Raising awareness of the issues of travel and subsidies given to motorists is a challenge for government, all local authorities and responsible businesses. Trying to level the playing field between car use and other modes has significant benefits in cutting business costs, reducing traffic and congestion, and limiting environmental intrusion, pollution and carbon emissions.

Information sources/references

- The link between traffic and parking space is widely reported from Buchanan's Traffic in Towns report of 1963 to recent Planning Policy Statements by government.
- Parking costs have been widely discussed at ACT Travelwise, Ground Floor Partners, NBTN and other conferences and seminars.
- Office rental costs have been ascertained by discussions with Chartered Surveyors/ Valuers.
- Changes in traffic and parking with the introduction of the London Congestion Charge were identified as part of the TfL monitoring studies.
- The effectiveness of managing car parking as part of travel plans has been analysed as part of the DfT Smarter Choices research and also the measured experience of Pfizer.
- The pros and cons of different car park rationing systems are from the experiences of the author and colleague members of NBTN, Universities and ACT Travelwise.

John Elliott

johnrelliott@btinternet.com

Tel/fax 01227 765626

Mobile 07810 204400