

Park & Ride – Implications for TRICS Users

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Park and Ride Research Note

TRICS users in response to previous User Group questionnaires have highlighted Park and Ride (P+R) as an area of interest, both for research and data collection.

Research Note in preparation examining the factors behind P+R demand.

This Paper presents the TRICS user with a summary of the work done to date.

What is Park and Ride?



Methodology

Brainstorm of factors behind P+R demand.

Literature Review.

Supplemented by more detailed research of specific case studies:

- Canterbury, New Dover Road.
- High Wycombe, Cressex Island.

Features of Park and Ride Demand

P+R Passengers

- Revenue
- Frequency
- Vehicle Capacities

Peak Hour Traffic entering/ leaving P+R Car Park

- Junction design

Car Park Occupancy

- Car Park Size

Reverse Demand

- Useful extra revenue
- Wider objectives

Some of the factors that affect P+R demand

Price

Journey time and frequency

Destination

Location and Access

Parking availability

Quality of the product

Transport strategy and travel plans

Price



Payment method

- for parking, for travel or for both?
- Concessionary fares implications (see Higgs, 2008).

Group Incentives

Peak vs. Off Peak Differential

- Both have implications for parking duration and peak hour traffic flows.

Price of P+R in relation to the town centre parking charges

- because it is “the most comparable element of the alternative travel choice” (Meek et al., 2009).

Journey Time and Frequency

Minimum of a bus every 15 minutes

Bus Priority

- Bypass car congestion.
- Ensure reliable service.
- Positive marketing message.

Last Buses?

- Chelmsford: Sandon P+R car park is kept open and local buses are used to provide evening return services.



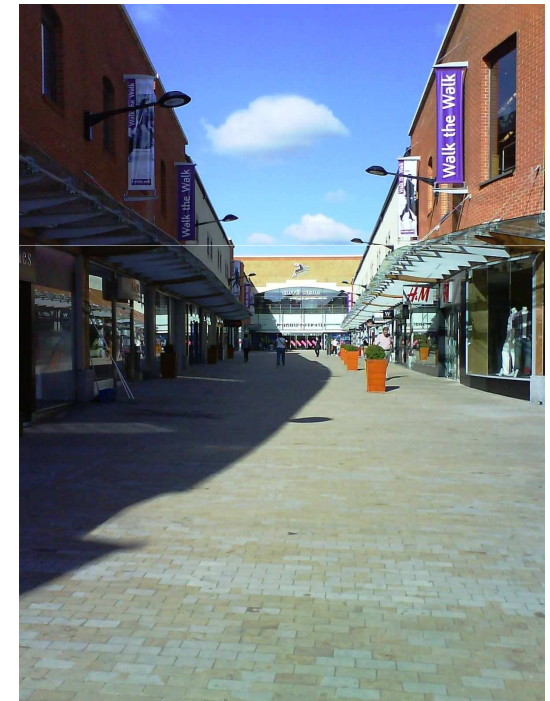
Destination

Significant variation in demand for P+R services,

- Seasonal.
- Difference between weekday and weekend usage.
- Depends on why people visit a town.

Reverse Demand

- Cinema – Loddon Bridge, Reading.
- Coaches – Thornhill, Oxford.
- Cinema & Business Park – Cressex Island, High Wycombe.



Location and Access



Proximity to a key radial route

- Minimises the time lost due to using P+R (Higginson, 2001).
- Visible sites market themselves.
- “Intercept” rates are often quoted, but highly variable.

Not all cars using P+R are “pass-by” traffic!

- Potential for diverted Traffic
- Parkhurst (1995) suggested that up to 35% of P+R users could be people who previously used PT for the whole journey.

Pedestrians/ cyclists may use the site depending on proximity to residential areas.

Parking Availability at the P+R Site

Size of the site

- White (2009) suggests that 400-500 spaces are required for a commercially viable operation.
- Smaller sites can fill up during the morning peak
- No space for off peak demand.
- Sandon P+R, Chelmsford was extended to provide 900 spaces in 2007 as the site would regularly be full by 9.30am (Keable, 2006; Bartlett, 2009).



Parking Availability at the P+R Site

Parking Duration

- Need for maximum parking duration?
- Thornhill P+R in Oxford has a 72 hour max restriction
- Car parking at airports such as Heathrow can be expensive.



Parking Availability in the Town Centre

Plenty of cheap town centre parking will prevent P+R from reaching its full potential.

Quality and type of town centre parking available.

- E.g. multi-storeys.

Amount of Private Non Residential parking outside local authority control.

- Retail parks.
- Offices.



Quality of the Product

Service quality considered key (Meek et al. 2009)

Waiting facilities

Security

Vehicle Comfort

Dedicated service?

Park Mark Accreditation

Variable Message Signs (VMS)



Supporting Transport Strategy and Travel Plans

P+R in Oxford part of a wider Transport Strategy to reduce the impact of car traffic in the city centre.

University of Chester includes P+R as part of their Green Travel Plan.

Kent County Council staff relocated to County Hall offered P+R tickets to encourage them not to travel into the centre of Maidstone.

Canterbury, Kent

3 Purpose built full-time sites:

- A28 Wincheap (WEST)
- A2050 New Dover Road (SOUTH)
- A28 Sturry Road (NORTH-EAST)
- Sites open 0700-1930, with a service every c. 8 minutes



New Dover Road

Most popular

- Capacity reached by mid-morning leading to greater congestion as users are forced to seek city centre car parking facilities.

Other uses

- A courtesy mini bus shuttle service runs to the Canterbury College campus.
- Service to take patients and staff to the Kent & Canterbury Hospital is planned.
- A number of National Express coach services pick up and drop off at the site.
- 15 minutes free parking provided so that parents can drop off their children at nearby schools.

Comparison between Canterbury sites

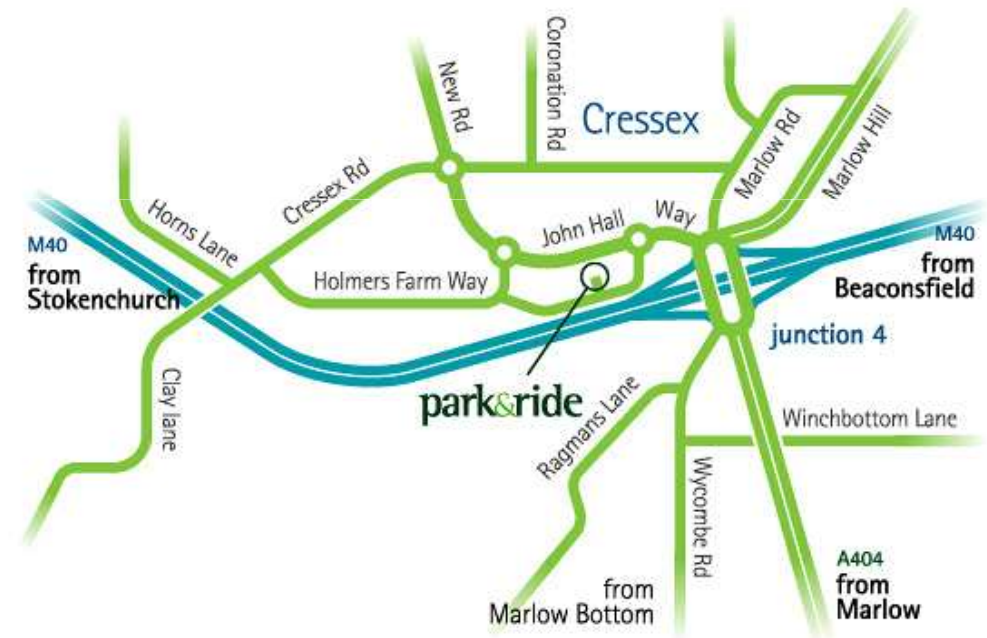
Within one city we have found significant differences between usage of P+R sites (2007 surveys).

Car Park	Bays	Weekday Count		Weekend Count	
		Empty	% Empty	Empty	% Empty
New Dover Rd P&R	600	36	6%	213	36%
Sturry Rd P&R	598	208	35%	285	48%
Wincheap P&R	599	83	14%	164	27%

Congestion on A28 Sturry Rd is a major problem for bus services affecting P+R demand.

Cressex Island, High Wycombe

Open since Sep 2005
Service every 15 minutes
from 0700-2015
Service calls at Hospital,
railway station, Eden
Shopping Centre returning
via Cressex Business Park
Took on role of former
“Cressexexpress” bus
from railway station



Source: Wycombe District Council

Cressex Island, High Wycombe

Example of a multi-functional site which results in two different types of users of the car park facilities.

- P+R.
- Cinema/ restaurant.

Surveys carried out July 2008.



Cressex Island, High Wycombe

Three types of P+R Bus User

- P+R – arrive by car.
- Walk+Ride – walk to site from local area.
- Local Bus users – trips NOT to from P+R site, e.g. town centre to Cressex Business Park.

Day	Park and Ride	Walk and Ride	Local Bus
Weekday	49%	7%	44%
Saturday	68%	8%	24%

Conclusion

A large number of factors that need to be considered when forecasting demand for each element of P+R

- Local nuances can be key
- Every site can be a winner or loser!
- P+R demand is a symptom of land use, transport and economic relationships within a region.

Should be part of a clear transport strategy/ vision for a town/city and should not be separate from this.

- “Towns which have no (P+R) sites usually have three things in common – cheap parking, excess spaces and significant sites outside the control of the local authority” (TAS 2007).

Conclusion

Not something to be taken lightly

- Very few Park and Ride services are commercially operated without public subsidy (Meek et al. 2009).

Can be expensive to build

- Scheme cost >£5m requires Major Scheme Business Case (MSBC) which needs a robust modelling exercise.
- See Access York MSBC for an example.

Recommendation

- TRICS could include P+R sites in database.
- But large number of variables would make it difficult for the user to establish robust trip rates.

References

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- All pictures **Jacobs**, except Nottingham tram: www.thetrams.co.uk/net/lineone and Canterbury bus, Canterbury City Council.