

Travel Planning (Residential and Community)

Introduction

This record of evidence forms part of the work undertaken by UKERC's Technology and Policy Assessment team relating to its project on policy strategy for carbon emissions reduction in the passenger transport sector. The material was produced alongside the project's main report and since it supports that report, it was judged appropriate to make this material available to a wider audience. The main report itself '*What Policies are Effective at Reducing Carbon Emissions from Surface Passenger Transport?*', and the supporting evidence can be found at:

<http://www.ukerc.ac.uk/ResearchProgrammes/TechnologyandPolicyAssessment/TPAProjects.aspx>

Explanation of Content

Evidence on this policy measure has been collected by the TPA team on the basis that it has, or may have, the potential to result in carbon dioxide emissions reductions in the passenger transport sector. This evidence document begins with a summarised description of the policy measure. The evidence itself follows the summary and is presented in table form.

Each piece of evidence has been assigned a separate row and tabulated using four columns:

- Year of publication, arranged chronologically, beginning with the most recent year
- Name of author, including where applicable additional cited authors (and year); and a Reference ID number.
- Type of evidence:
 - Evidence containing quantitative information is denoted by the letter 'Q'
 - Qualitative evidence is denoted by the letter 'C' for 'comment'
- The evidence itself

The evidence was originally gathered and assessed using several sub-headings. The purpose of this was primarily internal i.e. to facilitate the handling of evidence and the production of the main report. These sub-headings have been retained here as follows:

- Policy Measures and Carbon Savings
- Other potential CO₂ Impacts i.e. outside of the immediate policy influence
- Other Benefits e.g. air quality improvement or traffic congestion reduction
- Policy Costs and/or Revenues i.e. to local or national government
- Business and Consumer Costs
- Unintended Consequences e.g. rebound effect
- Reasons/Arguments for Carbon Savings Achievement or Failure
- Policy Suitability for the UK

A list of references follows the evidence tables. Note that the Reference ID numbers are allocated by Reference Manager, the referencing software used by the TPA team.

Any charts, figures and tables referenced in the evidence are not reproduced here but can be found in the original publication or evidence material.

Where no relevant evidence was found for a particular sub-heading, this has been noted.

Policy Description

The evidence recorded here covers policies which encourage or require the establishment of ‘Personal Travel Plans’ – a package of measures targeting residential populations including whole communities with the aim of reducing the number of car journeys made.

Evidence Tables

Carbon Savings and Policy Measures

Year	Author	Type	Evidence
2007	ECMT (ref 11272) citing Pramberg, 2004 and citing AGO, 2002	Q	State governments in Australia are planning a [community travel plan] to encourage modal shift from single-occupancy car trips that will target 180,000 households between 2008 and 2012. Based on existing large-scale programmes in Australia, it is estimated the initiative will save approximately 1.2 Mt CO ₂ over the four years at a cost of around 9 EUR per tonne of CO ₂ avoided (citing Pramberg, 2004). That represents 0.3% of Australia’s transport sector projected greenhouse gas emissions in 2010 (citing AGO, 2002).
2007	Parker (ref 11472)	Q	In the UK, PTP has been reported to reduce car driver trips by 11% (amongst the targeted population) and reduce distance travelled by car by 12%. In terms of mode share, this is a decrease in car driver trips of 4 percentage points, with walking the main beneficiary, having, on average, a reported increase of 3 percentage points.
2007	Parker (ref 11472) citing DfT, 2004	Q	Reported evidence suggests that PTP can lead to a 7–15% reduction in car driver trips amongst the targeted populations in large urban areas. In smaller urban and rural areas, the reduction in car driver trips is more modest at 2 – 6% (citing DfT, 2004).
2007	Parker (ref 11472) citing DfT, 2005	Q	Citing DfT pilot studies testing different approaches to PTP, Parker (2007) says all seven residential pilots saw a modal shift from car use, with estimated reductions over a year ranging between 0.05 million and 6.2 million car kilometres. The cost per car kilometre saved varied between 3p and 18p per kilometre (or between 2p and 10p if monitoring and evaluation costs are excluded) (citing DfT, 2005).
2007	Parker (ref 11472)	Q	Summarised in Table 5.11 are reported change in trips, by time of day and gender. The most noticeable trend is for consistently higher reductions in car use by females than males. Reported change in trips by spatial distribution are shown in Table 5.12, demonstrating how, based upon the limited evidence, the focus of trip change is placed upon an increase in trips within the local suburb

Other CO₂ Impacts

Year	Author	Type	Evidence
			No specific evidence found.

Other Benefits

Year	Author	Type	Evidence
2007	Parker (ref 11472)	C	PTP schemes have seen other reported benefits suggests Parker (2007) including: <ul style="list-style-type: none"> • increased walking and cycling, and associated health benefits; • increased public transport use (with resultant increase in revenue for PT operators); • increased viability of local shops and businesses
2007	Parker (ref 11472)	C	PTP provides outcomes which are relevant beyond transport, most notably in the health, environment, economic development and planning sectors. In Victoria, Australia, a number of economic, environmental and social policy goals have been evaluated through the TravelSMART key performance indicators. These are summarised in Table 5.14.

Policy Costs and/or Revenues

Year	Author	Type	Evidence
2007	Parker (ref 11472)	Q	Positive PTP (personal travel planning) cost–benefit figures, typically in the order of 1:30 over a 10-year period, are reported by Parker (2007). The cost-effectiveness of PTP is improved as the scale of implementation is increased. Large-scale UK PTP projects have demonstrated a value for money estimate (in the first year) of between £0.02 and £0.13 per vehicle kilometre saved. PTP typically costs between £20 and £38 per household targeted.
2007	Parker (ref 11472) citing DfT, 2005	Q	The DfT conducted pilot studies to test approaches to PTP: All seven residential pilots saw a modal shift away from car use, with estimated reductions over a year ranging between 0.05 million and 6.2 million car kilometres. The cost per car kilometre saved varied between 3p and 18p per kilometre (or between 2p and 10p if monitoring and evaluation costs are excluded) (citing DfT, 2005).
2007	Parker (ref 11472)	Q	A cost-benefit analysis for the TravelSmart project in Australia found a cost–benefit ratio of 1:77 over 25 years and 1:44 over 10 years. It estimated that in the first year of an AUS \$1 million investment programme, the return would be at least AUS \$490,000. The assessment of rate of return in the first year is shown in Table 7.1.
2007	Parker (ref 11472)	Q	In the UK there is less evidence of comprehensive CBA. However, TfL have analysed their projects, resulting in positive and encouraging cost–benefit ratios. The first

Year	Author	Type	Evidence
			projects undertaken by TfL were analysed and produced a 1:31 cost–benefit ratio, indicating a strong business case for PTP. Table 7.2 summarises the performance of the PTP case studies examined (where information is available). Unsurprisingly, the larger the project, the smaller the cost per household - see Figure 7.1. TfL projects during financial 2006/07 show economies of scale in larger projects – see Fig 7.2 (but this scale of operations brings significant logistical implications for project delivery).

Business and Consumer Costs

Year	Author	Type	Evidence
			No specific evidence found.

Unintended Consequences

Year	Author	Type	Evidence
			No specific evidence found.

Reasons/Arguments for Carbon Reduction Achievement and/or Failure

Year	Author	Type	Evidence
2007	Parker (ref 11472)	C	The greatest success is likely to be where PTP is in an area of discrete, self-contained communities with appropriate local facilities, good community networks and locally recognised problems of congestion. The area should ideally have good levels of accessibility (by all sustainable transport modes), combined with excess capacity on the public transport system. A stable (non-transient) population, plus a wider sustainable transport investment programme, will further enhance the capability of success.
2007	Parker (ref 11472)	C	There are some barriers to PTP’s implementation and development: <ul style="list-style-type: none"> • Attitudinal – scepticism over validity of claims of success, and lack of understanding/ acceptance of projects from political and media interests, as well as the public. • Localised barriers –including high traffic speeds, a poor public transport offer, and an ‘unfriendly’ street scene, which restricts a possible shift to sustainable modes. • Organisational – e.g. lack of funding, lack of capacity to deliver programmes and lack of business planning and project management skills in transport planning sector. • Assessment – impaired ability to demonstrate performance of projects, including difficulties

Year	Author	Type	Evidence
			with transparent data analysis and the overall evaluation methodology
2005	DfT (ref 11516)	Q	In 2002, the Department for Transport funded a series of 14 pilot projects on personalised travel planning, which aimed to assess the effectiveness of the techniques in a range of different contexts. All seven residential pilots saw a modal shift away from car use, with estimated reductions in car use over a year ranging between 0.05 million and 6.2 million car kilometres. Evaluation of the UK pilot studies concluded that the success appeared to be largely due to ‘well-chosen target populations, sizeable intervention groups, and well-orchestrated individualised marketing and personal travel planning’.
2003	Goodwin & ECMT (ref 11497)	C	Policies that seek to minimise travel demand through planning can be undermined if transport services are not appropriate.

Policy suitability for UK

Year	Author	Type	Evidence
			No specific evidence found.

References

DfT 2005 – 11516 - Personalised travel planning: evaluation of 14 pilots part funded by DfT, Department for Transport, London.

ECMT 2007 – 11272 – *Cutting Transport CO2 Emissions - What Progress?*

Goodwin, P. & ECMT 2003 – 11497 - Managing the Fundamental Drivers of Transport Demand, OECD, Paris.

Parker, J., Harris, L., Chatterjee, K., Armitage, R., Cleary, J., & Goodwin, P. 2007 – 11472 - *Making Personal Travel Planning Work: Research Report*, Integrated Transport Planning Ltd, Nottingham.