

To: Transport & Health Policy Makers, & Practitioners
From: Professor Adrian Davis
Date: 12th August 2021
Subject: Essential Evidence 4 Scotland No.42 Residential Parking: Use of Maximum Standards

Top Line: Use of Maximum Standards can help reduce parking demand, influence car ownership levels and support sustainable transport modes.

Despite the fact that almost every private car trip involves two parking acts and that cars spend over 90% of the week parked, the transport research community has, for the most part, concentrated on the study of the problems of congestion, safety and the environment caused by vehicles in motion. Even though the application of parking pricing and supply restrictions is “the most widely accepted and readily accepted method” of limiting car use it is a topic that has received comparatively little study upon which to ground development of policies for the future.¹ Moreover, research shows a clear relationship between guaranteed parking at home and a greater propensity to use cars for journey to work trips even between origin and destinations pairs that are reasonably well and very well served by public transport.²

Minimum off-street residential parking requirements are used in many cities as a way to accommodate parking demand associated with new residential development. In some cases, variations to these requirements are used in the form of reduced (or eliminated) minimums and/or maximum parking requirements to more actively manage parking demand.³ Residential parking permits are usually offered at a fraction of the cost. For example, in the Netherlands, the highest annual permit fees in the country are in the centre of Amsterdam and cost €500 while the market value of a parking permit is around €3600 (2011 prices). Theory indicates that cheap residential parking reduces the (fixed) costs of owning a car and thereby increases vehicle demand.⁴

In a study in Melbourne, Australia, maximum parking standards (MPS) were applied with new apartments to seek to more actively manage car parking.² The research used household car ownership data from the Australian census as a proxy for off-street residential parking demand, while controlling for a range of built environment, public transport, demand management and socio-demographic variables. The results highlighted the importance of public transport service quality, car parking requirements and demographics in influencing car ownership within and immediately outside the parking maximum standards areas. Results also showed that car ownership was generally lower in each case area affected by a PMS compared to corresponding control areas (within 800m outside of a PMS). The PMS appear to be appropriate for the areas they have been applied to, in that the parking requirements are more aligned to average car ownership levels.

These results suggest there is considerable scope for lowering residential parking requirements in such areas. However, the authors note that this is much easier said than done, particularly where financial resources and the political appetite for such reform are insufficient. It is suggested that an incremental approach can produce good results by starting where there is support with elected officials, the community and other stakeholders, and later building support for larger, more comprehensive parking reform.⁵

¹ Marsden, G. 2006 The evidence base for parking policies—a review, *Transport Policy*, 13: 47–457

² Winberger, D. 2012 Death by a thousand curb-cuts: Evidence on the effect of minimum parking requirements on the choice to drive, *Transport Policy*, 20: 93-102.

³ De Gruyter, C., Davies, L., Truong, T. 2021 Examining spatial variations in minimum residential parking requirements in Melbourne, *Journal of Transport Geography*, 94: 103096.

⁴ Ostermeijer, F. et al, 2019 Residential parking costs and car ownership: Implications for parking policy and automated vehicles, *Regional Science and Urban Economics*, 77: 277-288.

⁵ Willson, R., Roberts, M. 2011 Parking demand and zoning requirements for suburban multifamily housing. *Transportation. Research. Record*, 2245: pp. 49-55.