

To: Transport & Health Policy Makers, & Practitioners
From: Professor Adrian Davis
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Subject: Essential Evidence 4 Scotland No.34 Planning for cycling in the dispersed city

Top Line: Cycling is unlikely to become a mainstream mode of transport without an adequate network of cycle lanes and paths, intersection treatments and bicycle parking. In addition, reducing the attraction of alternatives is also important.

There is a consensus in studies in mature cycling countries such as the Netherlands that a combination of pull and push conditions must be applied in order to increase cycling mode share and improve real and perceived safety of cycling. A 2020 study applied an innovative method to investigate what are perceived by professionals to be the most effective combination of measures that could be implemented in dispersed, low-cycling urban centres, to improve cycling safety and increase cycling mode share.¹ Numerous studies have been carried out which set out the range of physical infrastructure interventions can be made to improve conditions for cycling. This has been divided into those factors which increase the attractiveness of cycling ('pull factors') and those that decrease the attractiveness of alternatives to cycling ('push factors'). In the study, the first method of data collection was semi-structured, conversational style interviews with transport planning and road safety professionals. The second method of data collection was through a Delphi study which asked panel members to enter scores into a theoretical policy framework for cycling policies in low-cycling cities. This was based on their experience and intuition.

The study contributes to addressing the discrepancy in utility cycling numbers between high and low-cycling countries. Some lessons applicable to fulfilling this aspiration have been gathered by drawing on the knowledge of Dutch and New Zealand cycling experts using the Delphi method, seldom used in cycling policy research. The Delphi technique allowed opinions to be gathered for a theoretical setting, improving the understanding of the relative merits of all municipal cycling policy options and allowing application to different dispersed city contexts. The study quantified the respondents' positions and produced a hierarchy of municipal cycling policy effectiveness. The opinions of the panel of utility cycling experts polled reinforce the findings in the literature that the most effective measures to increase utility cycling mode share and improve real and perceived cycling safety in dispersed, low-cycling urban centres are physical infrastructure interventions. Cycling is unlikely to become a mainstream mode of transport without an adequate network of cycle lanes and paths, intersection treatments and bicycle parking. Measures that make driving less attractive relative to cycling such as managing car parking supply and restricting motor vehicle movements are likely to induce demand for cycling. This must, however, be balanced with the generation and maintenance of political and public support, which is also a critical success factor.

The spatial characteristics which define low density, car-oriented urban environments are likely to provide limitations to the potential of cycling in dispersed urban centres. In this regard, the policy shift toward the compact city model and placing greater value on place making in many cities (rather than the dominance of the movement function) will contribute toward creating an environment which is more conducive to non-motorised modes of transport. A thorough understanding of local socio-cultural conditions and prevalent norms, attitudes and beliefs also forms an essential part of the formulation of cycling policy. While the evolution of the urban form is likely to take considerable time in most cases, international examples show that substantial increases in cycling mode share can be reached in settings where concerted policy efforts are made to provide for it.

¹ Adams et al 2020 Planning for cycling in the dispersed city: establishing a hierarchy of effectiveness of municipal cycling policies, *Transportation*, 47:503–527 <https://doi.org/10.1007/s11116-018-9878-3>