



To: Place Directorate
From: Adrian Davis
Date: 22/06/2016
Subject: Essential Evidence on a page No 149: Motives, perceptions and experiences of electric bicycle owners

Top line: Electric-biking could contribute to healthy mobility by enabling riders to incorporate moderate exercise into everyday travel routines. They could also help to increase accessibility for people unable or reluctant to use conventional cycles.

Across Europe the sale of e-bikes is rising. A recent study has provided the first detailed insight into the motives, perceptions and experiences of e-bike owners in the Netherlands and the UK (Oxford) using e-bikes - where the rider is required to pedal.¹ In-depth interviews with e-bike owners in two countries and cultural contexts reveal common motives, perceptions and experiences of owning and operating e-bikes and also issues specific to each region. Among users in both the UK and the Netherlands there is a sense that e-bikes offer the opportunity to maintain or increase levels of cycling for non-car based everyday travel and recreation, particularly when faced with reduced physical capacity or complex travel patterns that makes conventional cycling more challenging.

The findings support previous studies that suggest that the main motivation for engaging with e-biking in both the UK and the Netherlands is the option it provides for overcoming longer or more complicated journeys (typically 10 km or more) that would otherwise preclude conventional cycling because of the time and physical exertion required.^{2 3} Furthermore, and in line with previous studies, this study also revealed that there is a perception that personal e-bike use is replacing personal journeys that may have otherwise been made by car. The study also revealed the common perception in both regions that e-biking has increased personal physical activity or at least enabled previous levels of cycling to be maintained. E-bikes are perceived to promote engagement in cycling by encouraging more frequent and longer journeys and also allow participants the confidence to discover locations previously untapped by conventional cycling. Positive effects on personal wellbeing were evident in participant narratives around the 'joy of riding'. E-biking could therefore have positive benefits for personal wellbeing.

UK participants, whilst lamenting the lack of 'Dutch style' infrastructure, suggested that e-bikes allow them to 'behave like a vehicle', accelerate out of junctions and keep up with the flow of motor traffic. It is unclear, however, whether this perceived benefit is likely to encourage the wider uptake of cycling in the UK. Finally, the perceived social stigma associated with e-biking identified in past research was also raised in the UK and the Netherlands. Whilst this had not acted as a deterrent to the small number of e-bike users in the Dutch and UK study, it may deter those unwilling to deviate from 'mobility norms' particularly in the UK where there is a low share of cycling for transport and where ebiking is already a 'sub-culture within a sub-culture'.

¹ Jones, T., Harms, L., Heinen, E. 2016 Motives, perceptions and experiences of electric bicycle owners and implications for health, wellbeing and mobility, *Journal of Transport Geography*, 53: 41-49.

² MacArthur, J., Dill, J., Person, M., 2014. Electric bikes in North America: results of an online survey. *Transportation Research Record Journal*, . Transp. Res. Board 2468, 123–130. <http://dx.doi.org/10.3141/2468-14>.

³ Johnson, M., Rose, G., 2015. Extending life on the bike: electric bike use by older Australians. *Journal of Transport and Health*, 2: 276–283. <http://dx.doi.org/10.1016/j.jth.2015.03.001>.