

**To:** Transport & Health Policy Makers, & Practitioners  
**From:** Prof Adrian Davis, TRI, Edinburgh Napier University  
**Date:** 21<sup>st</sup> October 2019  
**Subject:** Essential Evidence 4 Scotland No 17 Co-benefits of active travel

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Top line: Co-benefits are benefits derived from measures firstly to reduce carbon emissions. However, benefits to health, and other sectors such as the environment, and energy security, are often substantial.

Amid growing concerns about the effect of increasing levels of obesity and physical inactivity, climate change, population growth, increased traffic congestion and declining oil supplies, many sectors are now promoting active transport as an alternative to driving motor vehicles.<sup>1</sup> Co-benefits as a concept has emerged from the recognition of the need for a steep carbon energy descent across all sectors and across all countries.

In the road transport sector, where carbon emissions have risen across the UK against a backdrop of declining emissions in other sectors, there is clearly a need for concerted action. Part of the rationale for making a step change in active travel infrastructure and behaviour change support is the contribution which could be made to carbon emissions reductions. By way of example, a study from 2009 stated that:

“The societal benefits of even a modest increase in those who are physically active could be large. This includes carbon reduction, and other potential benefits such as improved academic attainment as a result of increased physical activity time.”<sup>2</sup>

While carbon reduction is at the core of efforts to particularly reduce urban private motorised transport journeys the physical activity benefits have been increasingly demonstrated in academic studies. For example, significant health gains could be made if government targets for reductions in private car travel and increases in active transport were achieved in Brisbane, Australia.<sup>3</sup> In this study researchers estimated the effect of achieving active transport targets by 2026 (5% cycling, 15% walking and 14% public transport). A significant increase in active transport translates into substantial improvements to population levels of physical activity, health gains and health care costs savings. Health benefits from increases in physical activity are significantly higher than the potential negative effects of increases in air pollution and road trauma exposure. However, for such shifts to occur, investments are needed to ensure safe and convenient travel.

In addition, studies have also assessed the economic value of health (including injury) and carbon reduction benefits of increased active travel. A study in two provincial cities in New Zealand reported on the cost-benefit outcomes after the cities had introduced a range of measures to improve the safety of the urban environment for ‘novice users’ to walk or cycle. The cost was \$11.m for infrastructure and \$1.9 for education/promotion spending. Leaving other benefits aside, health (predominantly) and carbon emission benefits fully justify the investment in active travel. The benefit/cost ratios were found to be around 11:1 i.e. for every £1 invested there is an £11 return of benefits on that investment.

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<sup>1</sup> Giles-Corti, B, et al, 2010. The co-benefits for health of investing in active transportation, *NSW Public Health Bulletin*, 21(5-6), pp. 122-127.

<sup>2</sup> Woodcock, J. et al, 2009. Public health benefits of strategies to reduce greenhouse-gas emissions: urban land transport, *The Lancet*, 374, Issue 9705, pp. 5-11.

<sup>3</sup> Zapata-Diomed, B. et al, 2017. A shift from motorised travel to active transport: What are the potential health gains for an Australian city? *PLOS ONE*, 12(10): e0184799.