



Introduction

Living Streets Aotearoa is New Zealand's national walking and pedestrian advocacy organisation. We welcome the Climate Change Commission's draft recommendations, and we wish to acknowledge all the hard work that Commission staff have done to get these recommendations ready.

As pedestrian advocates, we are pleased that the Commission has acknowledged the important role walking has to play as a low-emissions form of transport and an integral part of our transport system. However, the Commission's recommendations and assumptions about walking do not fully capture the emissions reductions potential of walking as a form of transport, especially in urban areas and especially in conjunction with public transport.

Our submission covers:

- Improvements to the CCC's recommendations on walking, cycling and public transport.
- Strengthening the Commission's walking assumption for 2030.
- Recommendations to improve the provision of walking and active transport advice in the Commission's future work.
- Appendix: How walking meets the Commission's five criteria for assessing emissions reduction potential

We have included selected references, a number of which have become available since the Commission began drafting its recommendations.

Proposed changes to the Commission’s draft advice

We are proposing changes to the Commission’s Necessary Actions 2 and 16.

The Commission’s draft: Necessary action 2

Develop an integrated national transport network to reduce travel by private vehicles and increase walking, cycling, low emissions public and shared transport

We recommend that, in the first budget period the Government progress the following steps to meet emissions budgets:

1. **Deliver specific and timebound targets to increase low emissions public and shared transport and walking and cycling, and supporting infrastructure through strengthening the direction of the Government Policy Statement on Land Transport.**
2. **Significantly increase the share of central government funding available for these types of transport investment, and link funding with achieving our emissions budgets.**
3. **Improve mobility outcomes through measures including supporting public transport uptake nationally and locally by reducing fares for targeted groups (such as for those under 25 years of age), and improving the quality and integration of services.**
4. **Encourage Councils to implement first and last kilometre travel solutions in their transport networks, such as increased on-demand and shared vehicle and bike services, secure park and ride solutions at public transport, and encouraging micro-mobility options.**
5. **Further government encouragement for working from home arrangements.**

We ask the Commission to **strengthen these recommendations** as follows:

1. Convert these actions from “Necessary actions” to “Time-critical necessary actions”.

Investment in safe, separated walking and cycling infrastructure, and the removal of barriers to active transport, can produce big emissions reductions quickly, as demonstrated for Auckland by MR Cagney’s [Transport2030](#) tool - and we need those reductions to help meet both national and regional emissions reductions targets, including those presently being incorporated in Councils’ long-term plans.

Furthermore, public transport infrastructure takes time and investment - if the Commission prioritises investments in EV infrastructure as more time-critical than investments in walking, cycling and public transport, then this may lead to investments in walking, cycling and public transport being made too late. The Commission’s current priorities are likely to lead to more investment in motorways, rather than more investment in low-carbon transport modes.

2. Strengthen item 2 as follows (added and changed text in italics):

Significantly increase the share of central government funding available for these types of transport investment, and link funding with achieving our emissions budgets. *Allocate 10% of the*

total transport capital budget for pedestrian infrastructure, and a further separate 10% for cycling projects.

This recommendation follows the approach of the Republic of Ireland, a nation of similar population to Aotearoa, as outlined in Department of the Taoiseach, [Programme for Government: Our Shared Future](#) (2020).

3. Strengthen item 4 as follows (added text in italics):

Encourage Councils to implement first and last kilometre travel solutions in their transport networks, such as increased on-demand and shared vehicle and bike services, *encouraging walking, improved footpaths, better walking routes and connections to public transport stops, secure park and ride solutions at public transport, and encouraging micro-mobility options. Encouragement of other active modes and micromobility should not discourage walking.*

Walking is especially important in providing connections to public transport services. By:

- making walking routes wider, safer, and more sheltered
- decreasing severance between public transport stops and walking routes, and
- meeting the walking and footpath use requirements of diverse users, while keeping walking separate from bicycles and micromobility devices,

access to public transport can be made easier, thereby improving the equity of the transport systems.

4. Add a new item 6:

Change taxation and charging regimes to discourage private car use and fund alternatives, including changes to Fringe Benefits Tax.

The current Fringe Benefit Tax (FBT) regime creates perverse incentives. An employee subsidy for annual public transport use or purchase of an electric bicycle is subject to FBT, but the provision of a carpark to staff is not. This undercuts the Government Policy Statement transport targets of increasing use of low carbon modes such as walking, cycling and using public transport. These perverse incentives should be removed.

Changes to the ETS, Road User Charges, and congestion charges are other tools available - provided revenue is directly or indirectly recycled to ensure that transport and access needs are met in a just, equitable way.

The Commission's draft: Necessary action 16

Support behaviour change

We recommend that, in the first budget period the Government embed behaviour change as a desired outcome in its climate change policies and programmes in order to enable New Zealanders to make choices that support low emissions outcomes.

We support this recommendation and want to emphasise its importance in terms of policy on transport mode choice. Recent New Zealand research by Bozovic et al, [*Clearing the path to transcend barriers to walking: Analysis of associations between perceptions and walking behaviour*](#), shows that people choose whether or not to walk for a complex mix of reasons, of which journey distance does not appear to be the most important.

Improving infrastructure, removing physical and social barriers, improving safety and modelling and promoting behaviour change can play an active role in encouraging more people to walk for all or part of their journeys - thereby reducing emissions and improving public health. The UK Department of Transport research review [*Impact of interventions encouraging a switch from cars to more sustainable modes of transport: a rapid evidence assessment \(REA\)*](#) also offers useful guidance.

The Commission's assumption about walking's share of journey distance in 2030

The Commission's advice includes the following assumptions about walking, cycling and public transport:

We also assume that the share of this distance travelled by walking, cycling and public transport can be increased by 25%, 95% and 120% respectively by 2030. Overall, this would see total household vehicle travel staying relatively flat despite a growing population. (Advice report, p. 58)

We welcome the Commission's view that walking, cycling and public transport can be increased, but **we contend that simply holding total household vehicle travel at or near the current level is insufficient in a climate emergency**. In our view, the Commission has not taken sufficient account of the potential for infrastructure investment in low-carbon transport, in combination with transport behaviour change work, to sharply increase the proportion of journeys and journey distance taken by active transport.

Furthermore, the Commission has made some ambitious assumptions about the speed, practicality and completeness of EV uptake, which we are aware other submitters will be addressing. Investing more in walking, cycling and public transport now helps to mitigate against the possibility that the Commission's EV uptake targets will not be met.

The contribution of walking to emissions reductions is highly place-dependent. As walking and cycling advocates have noted in the Commission's public fora, a single nationwide target for walking's journey distance share may not be the best measure, since walking can have a much greater impact in cities.

Furthermore, walking to school can help both to reduce both the emissions associated with the twice-daily "school run" and to establish walking as a primary behaviour.

Mandic et al, [Turning the Tide: From Cars to Active Transport](#) (2019), cited in Chapter 4b of the evidence report, suggests the following targets for walking by 2050:

We recommend that our national targets should be:

- double the proportion of walking trips to 25% of all trips by 2050
- double the proportion of cycling trips each decade so that 15% of trips are by bicycle by 2050
- double the proportion of trips by public transport each decade so that 15% of all trips are by public transport by 2050

We recognise that these targets are ambitious as this would mean reducing the percentage of car trips from 84% in 2018 to 45% by 2050. While this would be a challenge to achieve, we are convinced that aiming for these targets should be a key component of our strategy to improve our national health and environmental wellbeing. (p. 3)

In its 2030 assumptions for walking, cycling and public transport, the Commission should aim to reduce the percentage of car trips and the proportion of total distance covered by car trips, not just hold the line. Our cycling advocate colleagues tell us that the Commission's 2030 assumption of a 95% increase in the share of distance travelled by cycling in 2030 is likely to be met by BAU cycling

growth, especially in the light of the sharp uptake in e-bike purchases: e-bikes, not electric cars, are the electrified form of transport which has proved affordable and attractive to New Zealanders. They are therefore arguing for this assumption to be increased.

Given that walking is such a crucial connector with public transport, and that reliable, widely accessible, affordable public transport services are key to reducing the dominance of our cities by private cars - with their substantial embedded emissions, no matter the fuel used - we submit that a **35% increase in the share of distance travelled by walking** is a better 2030 target assumption for the Commission to use.

Brand et al, *The climate change mitigation impacts of active travel: Evidence from a longitudinal panel study in seven European cities* (2021), shows that active travel does substitute for motorised transport. In their conclusion, under 'Implications for policy and practice', they note:

There is a growing consensus that promoting active travel whilst 'demoting' private car ownership and use should be a cornerstone of strategies to meet 'net zero' carbon targets that are unlikely to be met without significant mode shift away from motorized transport (Creutzig et al., 2018). Comprehensive policy approaches operating at multiple levels (society, city, neighbourhood and individual) carry the most promise for substantial increases for this mode shift. (p. 12)

We support these conclusions.

The Commission's sources of advice

The Commission shows a clear preference for evidence from Aotearoa. While we agree in principle, this carries the risk that recent overseas research that could be applicable in Aotearoa will not be given proper weight, leading to circular arguments along the lines of “it isn't happening here, so it can't happen here”. We contend that a judicious mixture of local and overseas research should be used, especially when overseas research concerns policies and technologies that Aotearoa may consider adopting. We also believe that peer-reviewed research should be supplemented by a diverse range of community expertise and experience.

Therefore, we **recommend** that:

- Following the completion of its present round of advice, the Commission works with academic and community experts to develop walking and active transport targets at a more granular level, city by city and region.
- Experts on walking, and on active transport, public transport and public health should be added to the Commission's pool of advisers for future work.

There are two other areas we encourage the Commission to investigate more closely:

- The role that charging mechanisms - whether via the ETS, via Road User Charges, or via congestion charges - can play in reducing car use, alongside measures that make walking, cycling and public transport more available and more affordable.
- The co-benefits of walking and biophilic cities, as discussed below.

The co-benefits of walking and biophilic cities

Improving the walking environment has benefits beyond an obvious relationship with more people choosing to walk more often. Street trees, green space and green walls and roofs can encourage walking, make denser living more acceptable and directly sequester carbon. For example, 7.8% of Singapore's CO₂ emissions are sequestered by above-ground vegetation in that city-state.

Recent research shows that the perception of a public transport trip is approximately 70% derived from memories of the walking component, despite this being a far smaller part (average 44%) of the average journey. Improving walking also reduces social severance and its consequences.

Four streetscape comparisons show the value of good design principles in Cabanek et al, [Biophilic streets: a design framework for creating multiple urban benefits](#) - see in particular Table 1.

References

Bozovic, T., et al. (2021). *Clearing the path to transcend barriers to walking: Analysis of associations between perceptions and walking behaviour*. Transportation Research Part F: Traffic Psychology and Behaviour: <https://www.sciencedirect.com/science/article/pii/S1369847821000036>

Brand, C., et al. (2021). *The climate change mitigation impacts of active travel: Evidence from a longitudinal panel study in seven European cities*. Global Environmental Change: <https://www.sciencedirect.com/science/article/abs/pii/S0959378021000030>

Cabaneq, A., et al. (2020). *Biophilic streets: a design framework for creating multiple urban benefits*. Sustainable Earth. DOI: <https://doi.org/10.1186/s42055-020-00027-0>

Cope, A. (2018). *What is the carbon emission reduction potential of active travel?* Sustrans: <https://www.sustrans.org.uk/our-blog/opinion/2018/november/what-is-the-carbon-emission-reduction-potential-of-active-travel>

Department of the Taoiseach (2020), *Programme for Government: Our Shared Future*: <https://www.gov.ie/en/publication/7e05d-programme-for-government-our-shared-future/>

Department of Transport (UK) (2021), *Impact of interventions encouraging a switch from cars to more sustainable modes of transport: a rapid evidence assessment (REA)*: <https://www.gov.uk/government/publications/switching-to-sustainable-transport-a-rapid-evidence-assessment>

Hillnhütter, H. *Walking for public transport*, accessed 23 February 2021: https://www.vegvesen.no/_attachment/1592640/binary/1143108?fast_title=Walking+for+Public+Transport.pdf

Jones, R., *The future of urban transport for Māori*, presentation to the Māori Transport Knowledge Topic Hub of the NZ Ministry of Transport Te Manatū Waka on 4 December 2020: <https://www.knowledgehub.transport.govt.nz/assets/TKH-Uploads/Webinar-Series-2020/Maori-and-Transport.pdf>, pp. 13-29.

Mandic, S., et al. (2019). *Turning the tide: From cars to active transport*: <https://www.otago.ac.nz/active-living/otago710135.pdf>

MRCagney, *Transport 2030* (Auckland instance), online tool available at: <https://transport2030.org/auckland>

Neves, A., Brand, C. (2019). *Assessing the potential for carbon emissions savings from replacing short car trips with walking and cycling using a mixed GPS-travel diary approach*. Transportation Research Part A: Policy and Practice. DOI: <https://doi.org/10.1016/j.tra.2018.08.022>

Appendix: How walking meets the Commission’s five criteria for assessing emissions reduction potential

Figure 4.1 in the evidence report explains how the Commission assesses emissions reduction potential:

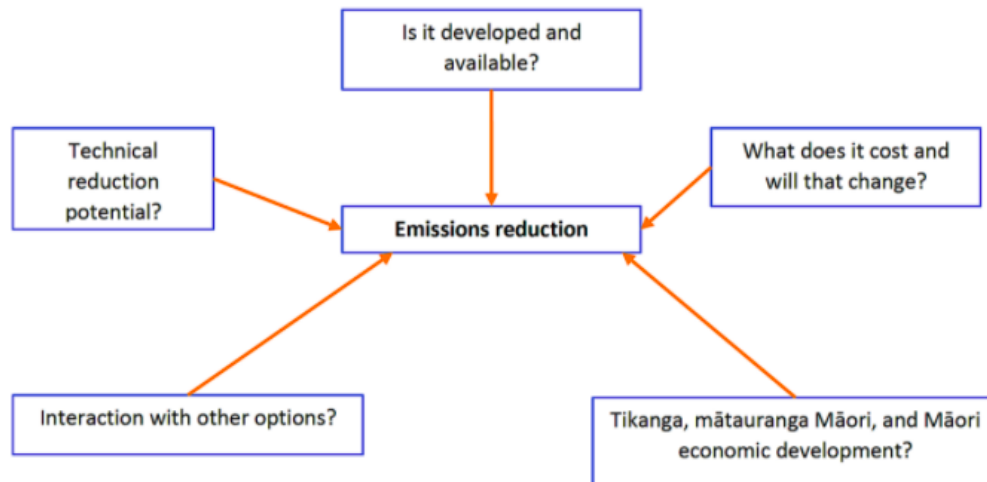


Figure 4.1: Framework for assessing emissions reduction potential

In our view, walking meets all five of these criteria:

1. Walking is well developed and available

Walking is a low-cost, low-carbon form of transport that requires relatively inexpensive infrastructure and can flexibly respond to changing circumstances. The literature on walking, and barriers to walking, in Aotearoa continues to evolve (see, for example, Bozovic et al, [Clearing the path to transcend barriers to walking: Analysis of associations between perceptions and walking behaviour](#)), but makes it clear that walking is a key part of sustainable, low-carbon transport solutions. We acknowledge that some people with disabilities are not able to walk or walk far, and that providing equitable access for them to transport and to the services provided by transport is crucial.

2. What does it cost and will that change?

Walking is high value and low cost, and walking infrastructure and services are cheap, relative to other transport modes. The cost of walking is unlikely to change, and the cost of walking infrastructure relative to other transport infrastructure is also unlikely to change, although desired improvements (e.g. continuous, wider, flatter and safer footpaths) will be marginally more expensive than what is currently provided. When sub-surface infrastructure is being fixed, this also provides an opportunity to improve footpaths.

3. Tikanga, Mātauranga Māori and Māori economic development

Dr Rhys Jones and other Māori researchers have addressed the role active transport (walking and cycling) plays and could play in the future of urban transport for Māori. Dr Jones’ presentation to

the Māori Transport Knowledge Topic Hub (see References) refers to several papers on this topic. We urge the Commission to pay careful attention to the findings of Dr Jones and his colleagues.

4. Interaction with other options

The interaction between walking and alternative transport options is complex, as discussed in the paper by Bozovic et al (op cit). This includes the relationship between safe walking infrastructure and access to transport services for disabled persons, women and other structurally disadvantaged groups.

Walking is a part of (nearly) every journey whether it is by car, public transport or other means. Supporting and encouraging walking as the first choice for travel will facilitate all other trips, and the potential to increase the walk leg of any journey will lessen need for more carbon intensive alternatives.

Living Streets Aotearoa supports safe, separated infrastructure for pedestrians of all ages and abilities, plus users of low-speed mobility devices. We also support the provision of safe, separated infrastructure for users of bikes, ebikes, and other micromobility devices, sometimes known as the 'rori iti' or 'third lane' concept.

We support footpaths being kept clear of obstructions, whether stationary or moving, that create hazards for pedestrians and other footpath users, and discourage people from walking.

We also support design that integrates walking with public transport; walking or wheelchairs is part of every public transport trip. Facilitating better walk connections with public transport is essential for the desired increase in public transport mode share. Getting to the bus stop or train station is the first step to increase both modes and removing these barriers to walking will decrease barriers to public transport use.

5. Technical reduction potential

Neves and Brand (2018) demonstrate that, in a UK context, "walking or cycling can realistically substitute for 41% of short car trips, saving nearly 5% of CO₂e emissions from car travel. This is on top of 5% of 'avoided' emissions from cars due to existing walking and cycling." (source: [What is the carbon emission reduction potential of active travel?](#)) and Brand et al (2021), in a study of seven European cities, show that active travel does substitute for motorised transport. While Aotearoa is not the UK, many lessons from European experience are applicable in New Zealand cities.

Conclusion: walking meets the five assessment criteria the Commission uses when assessing emissions reduction potential.