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DELWP Climate Change Policy
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Submission to

Transport, Built and Natural Environment Climate Change Adaptation Action Plans 2022-2026

Introduction

Walking is the most popular form of exercise and one of the most important forms of transport and recreation in Victoria. It is critical that walking is maintained and enhanced in the face of climate change.

Walking rather than driving is a way of mitigating climate change and as a result the state's Climate Change Strategy aims for 25% of transport trips to be undertaken via active transport by 2030. Currently around 90% of active transport trips are made by walking. The role of walking in reducing emissions (and delivering a broad range of health, social and economic outcomes) should be fully embraced by the Government. However, the Climate Change Adaptation Action Plans (AAP) are about adapting to climate change and so that is the focus of this submission.

The Transport and Natural Environment AAPs in particular are highly process oriented and do not tend to specify the more practical actions that might be undertaken in the relevant sectors. Therefore, rather than attempting to specify exactly how the AAPs should be changed, this submission outlines issues and measures that should be considered in a revised AAP or in subsequent work to facilitate adaptation in the relevant sectors.

To discuss any aspect of this submission or for any further information relating to walking, please contact Duane Burt, Principal Policy Advisor on 9662 3975 or dburt@victoriawalks.org.au.

Likely impacts of climate change on walking

Climate change will result in generally warmer or hotter weather and probably a drier climate with more extreme events. Generally speaking this can be expected to make walking less comfortable in the summer and inland parts of the state and possibly more comfortable in the winter and cooler locations. However Victoria Walks considers the former to be more likely to have a significant effect than the latter. Observations of our social media

engagement suggest that summer heat is already a bigger deterrent to walking than winter cold.

Given this, Victoria Walks believes the 'opportunity' identified in Table 9 of the Transport AAP (page 39) is overly optimistic:

“Projected warmer and drier weather may increase community participation in cycling or walking in preference to public transport or driving”

Providing shade over walking paths and minimising urban heat more generally will be increasingly important to maintain summer walking.

Climate change threatens important locations for recreational walking. Sea level rise threatens beaches, coastal walking paths and tracks. Flooding events may damage important recreational paths along waterways. Bushfire will be an increasing risk for natural areas, especially in regional Victoria and the urban fringe.

Climate change mitigation and adaptation could compromise walking if not done well. In the UK, for example, charging of electric vehicles frequently obstructs footpath movement.

While not the focus of this submission, maintaining and enhancing public transport in response to climate change is also very important for walking.

Adaptation imperatives

In summary, climate change adaptation needs to incorporate factors including:

- Increase urban weather protection – shop canopies and street trees for shade
- Need to retrofit existing off-street car parks with trees and avoid constructing new at-grade car parks, along with broader efforts to reduce urban heating from hard surfaces
- Minimise delays in crossing the road that leaves people exposed to the weather while they wait
- Ensure climate change responses such as EV charging do not compromise access to the footpath or other walking paths
- Support adaptation of the public transport system.
- Manage the threat to key recreational corridors along rivers from increased flooding
- Maintain public access to the coast, including walking along the coast, as sea level rises
- Manage increased bushfire risk in recreational open space areas

Adaptation actions – transport and built environment

Weather protection – shop canopies and street trees for shade

Street trees have a broad range of benefits and are important in creating an environment that people want to walk in. The benefits for walkers are both aesthetic and practical, with street trees providing shelter from the sun and, to some extent, rain.

Most significantly, tree canopies can reduce the temperatures of the surfaces they shade by 10-25°C (Heart Foundation 2013).

Provision of utilities in the road reserve can be a significant obstacle to the practical provision of street trees. Government should take a co-ordinating role to minimise the impact of utilities on street trees (and footpath surfaces) and ensure that trees can be planted and maintained to a size and extent that provides good coverage of the footpath.

Along arterial roads, VicRoads/DoT have tended to resist the provision of trees close to the roadway, focusing on the perceived safety risks to vehicle occupants. These risks are contentious and there is evidence to suggest that drivers respond to the perceived risk by reducing speed, meaning streets with trees may in fact be safer for drivers (Naderi, Kweon and Maghelal 2008). In addition, trees planted along the kerb define a pedestrian zone separated from traffic, providing both real and perceived safety benefits for people walking. While we are aware that VicRoads' tree planting policy was reviewed a number of years ago, it should be further revised to provide for greater street tree provision in light of the emerging imperative of climate change adaptation.

It is important to provide street trees adjacent to the footpath to provide shade for walkers. Trees in a central median have aesthetic and general cooling benefits but may not provide optimal shade for people walking.

Councils should be actively encouraged and supported/funded by the Government to provide additional street trees.

Councils should be encouraged to utilise the Principal Pedestrian Network methodology to identify key routes to important locations such as activity centres, in order to prioritise locations for additional shade, in addition to broader improvements to walking infrastructure.

Shop canopies provide weather protection from both the sun and rain in areas with high footfall. Shop canopies should be allowed in the road reserve and required in construction of new buildings in activity centres unless the footpath is already shaded by buildings or trees for the majority of the day. Clause 51.4c of the Urban Design Guidelines for Victoria specify that plans for buildings in activity centres should "As part of a building's design, install continuous weather protection for pedestrian priority streets and public spaces." However, it is not clear that this guidance is always applied as the provisions do not appear to be provided directly in the Victoria Planning Provisions.

Urban heating

Hard surfaces in cities result in urban heat island effects that will be exacerbated by global warming (AILA 2015). This is discussed in the Built Environment AAP and Victoria Walks supports the broader push to address this issue. We also acknowledge the Victorian Government's \$5 million program to plant trees in Melbourne's western suburbs. However this should only be considered as the start of what needs to be an ongoing program of investment.

Victoria Walks believes there should be specific efforts to reduce heat in the street environment. In this context, there is a need to:

- Minimise total hard surface area of roads and car parks
- Utilise materials that reflect rather than absorb heat
- Maximise landscaping and shade.

In particular, large commercial at-grade, off-street car parks incentivise driving and generally deter walking (Eady and Burt 2019). They are also a significant source of urban heat. Despite this, planning scheme provisions continue to require high levels of car parking for commercial development, typically resulting in the supply of parking exceeding commercial demand. There is a need to retrofit existing off-street car parks with trees and resurface with less heat absorbent materials. Planning Scheme requirements for commercial car parking should also be reviewed to:

- Reduce the level of car parking required
- Minimise construction of new at-grade car parks (preferencing parking underground or incorporated into buildings)
- If new at-grade car parking is necessary for some reason, provide good coverage of trees for shade and use materials that minimise heat absorption.

Minimise pedestrian delay

While all road users value their time and dislike waiting, only people walking or riding are exposed to the elements in the street environment while they wait. At times of hot or wet weather there will be a need to minimise delays in crossing the road that leave people exposed while they wait.

Crossing the road can be delayed by vehicle traffic and an absence of a pedestrian crossing, or by the operation of traffic signals, which are generally managed to maximise traffic flow. In a worst case scenario, pedestrians may be required to wait through two signal cycles in order to cross a street with a large central median.

More pedestrian crossings should be provided in locations with high volumes of both vehicle and pedestrian traffic.

Signals will need to be managed to minimise pedestrian delay. A number of signal options such as auto-on and late introduction can improve pedestrian access, often with minimal impact on traffic. All signals should be required to allow pedestrians to cross the street in one movement. Existing and emerging technologies may allow signals to be managed in a time responsive way, to reduce delay specifically during hot or wet weather.

Footpath access

In Europe, where on-street car parking is common, in some cities EV chargers have become footpath obstacles, especially to those with prams or wheelchairs (Laker 2018). It is important to ensure climate change responses such as EV charging do not compromise access to the footpath or other walking paths. If it is necessary to provide EV chargers in a street context, they should be located off the footpath, such as in the car parking lane.

Support adaptation of the public transport system

While our submission focuses on walking specifically, climate change presents challenges to the public transport system. Public transport and walking are highly interdependent – nearly all trips (97%) involving public transport in Melbourne also include walking at either the origin, destination, or both (Eady and Burt 2019). Therefore, maintaining and enhancing public transport in response to climate change is also very important for walking.

Built and natural environment sector adaptation

Maintain public access along the coast

The coast is a very popular location for recreational walking, including beaches and coastal walking paths or tracks. A survey of coastal path users in the UK found the “proportion of those strongly agreeing with positive statements on personal benefits were notably higher than has been reported (via other surveys) for visitors to English National Trails or for English coastal visits in general” (ICF et al 2019). Another UK study found that the closer you live to the coast, the healthier you are (Smedley 2013).

The Built Environment AAP discusses the risks of sea level rise and managing coastal hazards but does not discuss the importance of maintaining public access. It is critical that maintaining public access to the coast and along the coast is built into coastal hazard mitigation. This needs to be considered in at least two ways:

- Providing public land fronting the coast in any managed retreat responding to sea level rise
- Maintaining, upgrading and if necessary replacing paths that are impacted by coastal erosion. This may include building walking paths into coastal protection works such as seawalls.

Maintain public access along waterways

Similar to the coastline, urban waterways are very important locations for recreational walking. People have a preference for environments with both water and greenery (Smedley 2013).

The Built Environment AAP discusses additional flooding risk at length and also notes the need to provide additional tree coverage and water to vegetation in open space areas. However, the need to maintain practical walking access along waterways in the face of increased flooding and storms is not discussed.

Direct risks to walkers

Increased frequency and intensity of storms, flooding and bushfires present direct risks to people walking in natural areas. There will be a need to improve information systems on track closures and alert systems where people may be directly threatened.

Recovery after events

Storms, floods, bushfires or coastal erosion can damage or block tracks in natural areas, leading to track closures. With competing priorities there is a risk that land managers will find it easier to leave tracks in natural areas closed for long periods of time, rather than allocate resources to clear, fix or upgrade them.

A contingency fund should be developed to ensure that tracks can be opened as quickly as possible after damaging events.

The importance of walking

Walking for transport

Despite the fact that most urban areas have been designed primarily for driving, walking remains a key component of the transport system. Our analysis of VISTA data found that 16% of trips in Melbourne are walk-only trips and an additional 8% had at least one walking stage (Eady and Burt 2019).

Distance is obviously a critical factor for walking, with walking especially important for short trips – 63% of trips under 1km and 31% of trips 1-2 km are walked. There is also a strong geographic trend, with older suburbs designed before vehicles became dominant having higher rates of walking. In the inner suburbs, 39% of trip stages are walked, more than twice the proportion (17%) in the outer suburbs (Eady and Burt 2019).

Walking for exercise

Walking for exercise is easily the most popular form of sport or recreation in Australia. The [AusPlay Survey](#) records 8.8 million Australians or 43.6% of the population participating (annual participation), followed by 'fitness/gym' at 6.9 million and swimming at 4.5 million. In addition to those walking for exercise, 1.2 million participate in bush walking, the 8th highest participation rate.

Participation in Victoria is even higher than the Australian average, at 45%.

Walking also has a very high frequency of participation compared to other activities. People who identify as walking for exercise average more than 180 walking sessions per year, in all demographics. Young people and those over 65 average more than 220 times per year. By comparison, gym people go 120-180 times per year, and swimmers swim 50-100 times a year.

It should be noted that walking for recreation and exercise takes place in a variety of contexts from national parks to local urban parks and neighbourhood streets. Footpaths are both transport and recreation infrastructure.

Health throughout life

On average, the role of walking changes throughout the life cycle, but is important at all stages and is particularly significant for younger and older people.

For young people, walking is an avenue to independent mobility and a way of getting around (AusPlay 2019; Garrard 2017), but appears to be particularly important for mental health. In a survey of more than 1,000 Victorians aged 15-20, the most common motivation for walking was "to relax and calm down when I am stressed, anxious or angry" – 84% of respondents (Garrard 2017).

It is well understood that Victoria has an ageing population, but the true magnitude of this phenomenon is not always appreciated. Because older people will be a larger proportion of a substantially increasing population, Government projections anticipate that in 2051 the number of people aged 65+ will be almost *three times* what it was in 2011 (DELWP 2016).

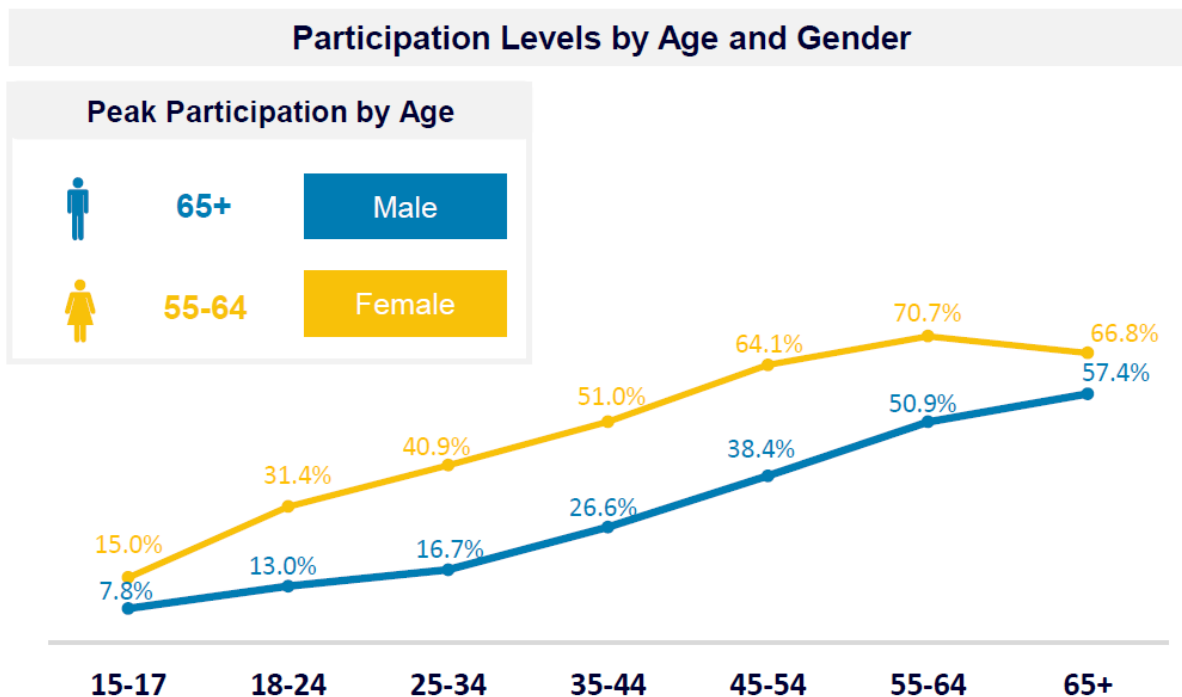


Figure 1: Participation in walking by age and gender (Sport Aus 2019)

Walking is exceptionally important as a form of recreation and exercise for older people. While involvement in organised sport diminishes as people age, walking becomes increasingly important as a form of recreation and exercise, as illustrated in Figure 1.

Physical activity for women

Facilitating physical activity by women is a specific challenge because “twice as many men as women participate in sport” and “...boys have double the sport participation rate of girls” (DHHS 2016)

Women are more likely to participate in non-organised active recreation and walking is particularly important as a form of recreation and exercise for women. The *AusPlay* survey found that 53.7% of Australian women participate in recreational walking at least once a year compared to 33.2% of men.

Accessibility

Walking has considerable potential to meet the needs of people who do not participate in organised sport because of the cost, time commitments, exertion involved, or skills required. Walking is free, accessible any time during the day and almost anywhere. It does not need to be scheduled or co-ordinated with other people.

Exercise is typically strongly correlated with economic characteristics, with lower socio-economic groups getting substantially less physical activity. However walking, especially walking for transport, is comparatively equitable across all sectors of society (see Figure 2).

Walking is very unusual as sport or recreation in that participation is even higher for adults with disabilities (49.2%) compared to the overall population (43.6%). No other sport or recreation has a significantly higher participation rate amongst people with a disability (Sport Aus 2019).

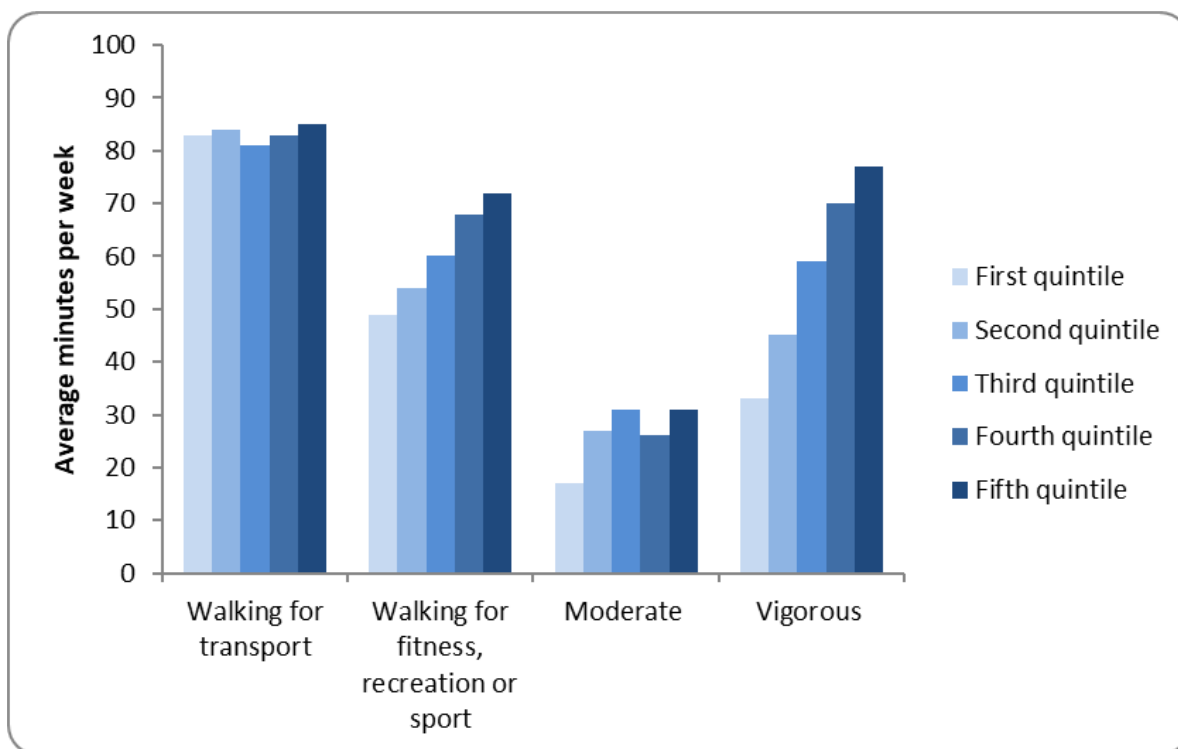


Figure 2 - Average minutes per week spent on physical activity, by SEIFA Index (Garrard 2013)

Value for money

A global review of the cost-benefit of active travel projects for the UK Department of Transport (Davis 2014) found they provide excellent value for money. The report assessed 16 British and international studies of the cost and benefits of walking and cycling programs or infrastructure. It found an average benefit cost ratio (BCR) of 5.95.

The report concludes:

"Consequently, environmental and other interventions to facilitate increased population physical activity through cycling and walking are likely to be amongst the 'best buys' across many areas of public policy i.e. public health benefits, cost savings for health services and for transport planning."

Sustainable development policy

The need to promote walking and address climate change is supported by a wide range of government policy from a local through to global level.

The UN Sustainable Development Goals include:

- 3. Ensure healthy lives and promote well-being for all at all ages
- 5. Achieve gender equality and empower all women and girls
- 11. Make cities and human settlements inclusive, safe, resilient and sustainable
- 13. Take urgent action to combat climate change and its impacts

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