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ENVIRONMENT AND HERITAGE**Submission to the inquiry into Sustainable Cities 2025**

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There is increasing recognition that transport plays a major part in life today, contributing to quality of life, access to goods and services, and economic and social development. Current patterns of transport dominated by road motor vehicles are not sustainable and have significant adverse impacts on health and the environment. The Vancouver Principles for Sustainable Transport include the principle that "transportation systems should be designed and operated in a way that protects the health (physical, mental and social well-being) and safety of all people, and enhances the quality of life in communities" (OECD 1996).

One of the questions raised by the inquiry is "**What initiatives can assist in the reduction of automobile dependence?**" (p9). Clearly, stopping the design and building of roads for cars is a necessary first step. Transport needs to think about moving people (not cars). Policies that make it less convenient and more expensive to drive a car have a direct impact on choice of travel mode. This point can be summed up simply by the statement: "If you can't park your car and you know it, you make other plans".

In parallel with restrictions on parking, alternative choices need to be available. Much is written about the need for reliable, safe and comfortable public transport, and walking is a basic component of moving from one place to another. However riding a bicycle is the most neglected of all active transport strategies, and one that holds considerable potential as an alternative for cars over shorter distances and also for increasing levels of physical activity in the community.

**Promoting cycling**

One of the great health promotion challenges of the 21<sup>st</sup> century is how to decrease car dependency and increase the levels of physical activity for whole populations. Physical

inactivity is the second (after tobacco smoking) most significant behavioural cause of ill-health in society.<sup>1</sup>

Physical inactivity is a major modifiable risk factor for cardiovascular disease (CVD) and independently affects other CVD risk factors such as non-insulin diabetes mellitus (NIDDM), total blood-cholesterol level, obesity and hypertension.<sup>2,3</sup> Maximum cardiovascular protection occurs when people move from a sedentary lifestyle or low state of cardio-respiratory fitness to a moderately active or moderate fitness level.<sup>2,4</sup> Almost 50 per cent of Australians are not physically active at a level that is beneficial to health.<sup>5</sup> Perhaps not surprisingly given this low level of physical activity, 56 per cent of Australian adults were considered overweight or obese in 1995,<sup>1</sup> second in the world only to the levels of overweight or obesity reported in the United States of America.

Nationally, the annual direct health care cost attributable to physical inactivity is estimated at \$377 million per year.<sup>6</sup> Further, 122 deaths per year from CVD, NIDDM and colon cancer could be avoided for every one per cent increase in the proportion of the population who achieve adequate physical activity.<sup>6</sup>

How then to reduce car dependency and also increase levels of physical activity in the community? Incorporating incidental physical activity which results from regular lifestyle behaviours has been found to be more cost-effective than physical activity achieved through structured exercise programs.<sup>7,8</sup> Structured group or individual exercise programs clearly have a role for some people, but the growing personal fitness industry has not slowed the increases of population physical inactivity.

Therefore, the concept of 'active transport' is an important one. The term 'active transport' relates to physical activity undertaken as a means of transport.<sup>9</sup> This includes travel by foot, bicycle and other non-motorised vehicles.<sup>10</sup> Among the three major active transport modes (ie public transport, walking and cycling), cycling is currently the least used in Australia, although all three have the potential for substantial increases.

There is considerable capacity to increase the population frequency of cycling. In many European cities the proportion of trips taken by bicycle is over 25 per cent of all trips.<sup>11</sup> Only one per cent of Sydney's population cycles each day, despite the total number of

bicycles owned by Sydney residents being nearly two million<sup>12</sup> and the proportion of households with a bicycle having risen from 32 per cent in 1991 to 39 per cent in 1998.<sup>13</sup> Over half (55%) of car trips in Sydney are less than five kilometres and 33 per cent are less than three kilometres,<sup>14</sup> distances considered easily amenable to cycling.

As Greig points out,<sup>15</sup> while the Dutch have a strong recent history of cycling, the early 1970s saw cycling in Amsterdam shrink to about 4-5% of all trips. It is interesting to note that in Amsterdam in the 1970s there was talk of people riding bicycles as being a nuisance to cars and this generated two years of reputedly fierce debate about whether or not a city with narrow streets, cobble stone surfaces, freezing winter temperatures and sudden downpours could accommodate a rise in people riding bicycles on its roads. The alternate vision was a city for cars, wider roads and fast flowing freeways. In the end, supported by good science, common sense and the damage to national monuments brought on by 'acid-rain' and greenhouse problems, the argument was won in favour of more sustainable transport.<sup>15</sup>

Increasingly health promotion and public health professionals are recognising what cycling advocates have known for years, that political will is required to plan and build an environment that supports and encourages cycling, as well as walking and transport.<sup>16,17</sup> The evidence is strong for why cycling should be encouraged:

- Cycling improves cardiovascular fitness, uses all the major muscle group, strengthens bones and helps prevent osteoporosis, improves circulation, reduces cholesterol levels, relieves the effects of rheumatoid arthritis and like all physical activity, helps people cope better with stress.<sup>18</sup>
- In a large cohort study involving 30,000 people in Denmark followed over 14 years, bicycling to work decreased the risk of mortality 40 per cent after taking into account leisure time physical activity.<sup>19</sup>
- In a cohort study involving 21,000 people in Finland followed over 12 years, people who spent more than 30 minutes a day cycling to and from work had close to a 40 percent lower risk of developing diabetes.<sup>20</sup>
- In a case-control study in Germany with 1246 pre-menopausal women, frequent cycling was associated with a 34 per cent reduction in breast cancer.<sup>21</sup>

- People riding a bike are exposed to 2-3 times less air pollution (volatile organic compounds) compared with people driving cars on the same road.<sup>22</sup>

A common barrier frequently mentioned by people who would like to cycle but do not, is concerns about safety. In the UK, about 140 people are killed each year while riding a bike (almost always involving cars) while around 20,000 others die prematurely from lack of any exercise.<sup>15</sup> In Australia in 2000, 32 people were killed while riding a bicycle.<sup>23</sup> After weighing up the benefits of physical activity from cycling and the risk of injury, the British Medical Association concluded that the benefits clearly outweighed the risks.<sup>24</sup> Every form of human movement involves some degree of health risk, but inactivity is the greater problem.

Unfortunately much of the cyclist injury prevention research and debate focuses on helmet wearing. While the evidence is strong that wearing helmets reduces injury if there is a crash, it does not address the primary cause of most crashes – cars and road conditions. The solution to reducing head injuries to cyclists is not necessarily to make cyclists wear helmets. The focus on bicycle helmets obscures the real issue for cyclists of safer conditions (through better cycleways and marked lanes), education about and enforcement of road rules<sup>25</sup> where drivers endanger cyclists.

Making cycling a normal and common behaviour rather than one needing special protection is better for cyclists. Indeed, the more cyclists there are, the safer it is for cyclists because other road users get used to encountering cyclists on the road.

International research in 14 European countries and 68 Californian cities has found that is less likely for a given person walking or cycling to be struck by a motorist when there is a greater level of walking or cycling.<sup>26</sup> Liveable communities where walking and cycling is encouraged are generally better for everyone!

An analogy with walking serves to highlight the mixed message that compulsory bicycle helmets communicates. Walking is encouraged by all health departments as a great way to achieve physical activity for most people. Imagine if it was mandatory to wear special equipment to go for a walk, such as fluorescent vests. “But we don’t need them” you say. “Ah, but pedestrians are hit by cars all the time, therefore it’s safer to be more

visible” say the injury protectors. And so some people are likely to be put off walking, and cars escape without restrictions such as lower speeds and traffic calming measures despite being the primary cause of injuries.

There has been very little Australian or international research evaluating the effectiveness of infrastructure and environmental changes upon increasing population levels of cycling and physical activity.<sup>27,28</sup> The best example that building and promoting adequate cycleway facilities increases regular cycling comes from Western Australia where the Travelsmart program, which included mass media publicity, and an individualised marketing program to interested people, reported a 53% increase in bike trips at 12 month follow-up.<sup>29,30</sup> Skills in the use of bicycles and in planning travel behaviour were also found to increase cycling.<sup>29,31,32</sup>

Nonetheless, there are positive things happening that improve conditions for cycling. For example, Brisbane City Council has set a target of eight per cent of all trips to be made by bicycle by 2106 and have built an extensive bicycle network to support this.<sup>33</sup> The NSW Government has announced plans to build a NSW Coastline Cycleway through the state, many local governments are implementing Bicycle Plans (of varying quality) and disused rail lines are being converted to cycleways and proving a huge boon for tourism. Even in Sydney with only a variety of local initiatives there has been a 61% increase in the number of people cycling on their journey to work to a destination in inner Sydney.<sup>34</sup>

Despite there being few Australian evaluations of how to increase cycling, the lessons learned from European countries that have substantially increased levels of cycling are very clear.<sup>11,35</sup> They are in practice consistent with the (unfunded) national cycling strategy for Australia<sup>36</sup> as well as state bicycle policies,<sup>37</sup> although the European models go much further with legislative support that favours pedestrians and cyclists. The recommendations of the NSW Childhood Obesity Summit, Transport Section,<sup>38</sup> also follow similar lines (see Appendix 1).

The major areas of policy that can be influenced to encourage cycling include:

- Mixed land use policies that encourage homes and workplaces to be closer together

- Lower motor vehicle speeds
- Area-wide traffic calming measures
- Increased technical skills regarding the construction of cycling infrastructure by local civil engineers and town planners
- Dedicated bicycle lanes (off-road and on-road), that are clearly signposted and marked
- Connecting bicycle lanes with good intersection treatments, including 'bicycle streets' where bikes have right of way
- Seamless connections between cycle ways and public transport
- End of trip facilities (for example, secure bicycle storage, showers and change rooms)
- Extensive driver education
- Traffic regulations and enforcement that heavily favours pedestrians and cyclists (even when pedestrians and cyclists do the wrong thing)
- Restrictions on motor vehicle use, including limited parking

There are already signs that many in the community would like to cycle more, and are beginning to do so despite a sometimes hostile road environment. Commitment, advocacy and political will are all needed. We all need to support and encourage policies and infrastructure projects that create more supportive environments for cycling. This will lead to increased population levels of physical activity and better health, as well as contribute to more livable cities.

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## **Appendix 1: Transport and Planning Recommendations from the NSW Childhood Obesity Summit**

(NSW Government. *Childhood Obesity – NSW Summit*. Legislative Council Chamber, Parliament House, Sydney, September 10-12, 2002.

<http://www.health.nsw.gov.au/obesity/adult/summit/hansard/hansard1209.pdf>. Accessed October 14, 2003.)

- 9.0 That the availability of free drinking water in all public places be ensured
- 9.1 That planning policy and urban design principles for all future greenfield and brownfield sites include cycleways, footpaths, reduced carparking and public transport access to all key trip generators such as schools, hospitals and fresh food shops. These policies and principles need to be underpinned by legislation, funding (public and private) and capacity building for planning, health and transport professionals.
- 9.2 That funding for roads and transport infrastructure and maintenance be aligned with a transport hierarchy that recognises, walking, cycling and public transport to reduce car transport to reduce car dependence. (These criteria are based on similar United States and United Kingdom examples of Transport Equity Act 21 and New Approach to Transport Appraisal).
- 9.3 That implementation of Pedestrian and Access Mobility Plans and Cycle Plans including facilities in urban, regional and local government areas to ensure "continuous path of travel" be accelerated.
- 9.4 That an alliance be established and coordinated by Premier's Department comprised of Planning, Education, Health, Transport, Sport and Recreation, Local Government and other key stakeholders to deliver planning that encourages active transport and access to fresh food.
- 9.5 That the priority given to pedestrians and cyclists in managing traffic flow be increased.
- 9.6 That the introduction and full implementation of the draft State Environmental Planning Policy (SEPP) 66 on integrated land use and transport planning be supported.
- 9.7 That residential streets be re-established primarily as safe places for people, ie play space for children, community social space, active transport, property access and extension of quality living environment.
- 9.8 That councils and schools and other relevant agencies be required to prepare appropriate pedestrian and bicycle access plans for local areas. In particular, schools, sporting facilities and shopping centres should be a standard suitable for a 10 year-old child to ride unsupervised by an adult. That would include safety, signage, pleasant environment and connected to other bicycle paths.
- 9.9 That strategies be implemented and developed to decentralize facilities and services including schools, local food shops, sporting venues and health facilities.
- 9.10 That the NSW Government actively work with Local Government and Police to prioritise road safety audits around schools and modify the environment to maximize the safety of children (such as stringent parking restrictions and enforcement around schools before and after school, a further reduction in speed limits, and demerit points for driver infringing these rules).
- 9.11 That the NSW Government requires public transport services and information to be accessible to children.

- 9.12 That the NSW Government increase penalties including demerit points for motorists who stop in pedestrian zones, bus zones and/or on footpaths and for offences against cyclists and pedestrians generally.
- 9.13 That a range of capacity building programs for individuals and communities should be implemented and evaluated to increase active transport and reduce car use. These programs should include skill development, community learning, organisational practices and partnerships.
- 9.14 That student and parent road safety programs be reviewed and strengthened. These include bike education programs and advice to parents on risks and consequences be provided.
- 9.15 That a culturally appropriate public information campaign to promote active transport for children and parents including people from non-English speaking backgrounds be developed, implemented and evaluated.
- 9.16 That a community and stakeholder network to advocate active transport be developed, funded and supported.
- 9.17 That Australian governments review all tax concessions and repeal those which favour private motor vehicle usage, and substitute new concessions which favour active and public transport.