

## Submission to the House of Representatives Inquiry into Sustainable Cities 2025

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### Introduction

The Discussion document asks,

*“...how government policy might ensure that developed areas retain an Australian life-style without diminishing the future of Australian eco-systems.”*

Leaving aside for the moment whether there should in fact be moves to restore some of the eco-systems that we have destroyed, the concept of “Australian life-style” does deserve brief comment.

For many years, Australia has had a home-centred culture. About 70% of dwellings have been privately owned – one of the world’s highest proportions of home ownership. Traditionally, this has been a free-standing dwelling on a block large enough for front garden with play space at the rear and in the immediate post-war years, a vegetable garden that gave a degree of self-sufficiency, even in urban areas. Favoured by an equable climate, it favoured out-door entertaining and was a life-style given considerable encouragement in the post-war housing boom by Sir Robert Menzies. Right from the outset in 1949, the house construction industry was fuelled by an intake of migrants that has typically contributed about half of our population growth. It is not surprising that the housing industry that includes developers, builders and financing agents, has long supported a sizeable migration program, and that it has been little concerned about urban sprawl. As Betts puts it,

*“...as more people are accommodated in existing cities, some property owners make windfall gains, land developers, speculators and builders enjoy easy profits, and people who are more affluent can continue to buy living space which used to be available to the majority (Betts, 1999,52)*

Having said this, as will be seen below, there are now, fortunately, some developers and Builders’ organizations that are taking very socially responsible positions with respect to house design.

Just as we cannot make decisions about “Activity Centres” ear-marked in our cities for more intensive development without considering the capacity of such centres to afford a full range of the services required to live the good life, so we cannot discuss urban growth without considering migration policies. Most migrants settle in our capital cities. It is not rocket science therefore to say that a migration policy should be a subset of a population policy. Thankfully at last, governments have realized that we have been mining our land and rivers and destroying the ecological base on which our economic activity depends. Some such as Dr Tim Flannery suggest that we have long passed our sustainable population levels given our current systems of production, consumption and transport. We argue that the immigration targets in the fifty millions plucked out of the air by some prominent businessmen, without consideration of Australia’s ecological base, and therefore carrying capacity, should be ignored. We have international obligations and refugee intakes should be our priority in a rationally-based program. At the same time we should increase our foreign aid several times to bring it up to internationally agreed levels and assist

economic, political and social development of countries from which many economic migrants currently come.

Recently, urban consolidation policies such as those pursued by the Victorian government and rising incomes have enabled more affluent people to embrace high-rise apartment accommodation in the inner city of Melbourne (the city with which we are most familiar). Although this has marked a significant departure from the model of the house on the proverbial “quarter-acre block,” the proportion of such dwellings still remains low and the drive is still towards home ownership in leafy middle south-eastern suburbs for the affluent and out on the perimeter for the less so. Immigrants still strongly desire home ownership, not so much because war-time neglect led to parlous living conditions as it did in Sicily for example, but because people are attracted to the sense of spaciousness that the suburban image evokes. Unfortunately, as will be seen below, the space is increasingly inside the house only.

So, when we talk of “an Australian life-style,” we are in fact talking of many forms of habitation. In Melbourne they include: affluent privately owned and rental accommodation of the central city; gentrified, older inner suburbs; affluent south-east and southern middle-ring suburbs; private dwellings and flats in middle-income areas in the outer middle areas, increasing numbers of low-income rental income flats around the Bay; and private dwellings on the sprawling outer suburbs for families with children and often two parents working. In addition, there are the people living in regional centres and on semi-rural plots who commute on freeways to the cities. Some of the urban non-commuting poor are displaced to declining rural centres where they can obtain increasingly cheap housing. Falling off the radar completely are the homeless who in Victoria in 2001 numbered 20,305, an increase of 14% since 1996 (Colebatch, 19/11/03.) Different living styles require different solutions.

Both authors of this submission have lived abroad. The first one’s periods of residence in Toronto, Durham, London, Auckland, Milwaukee, and Berlin suggest that there are alternatives to the Australian examples. They illustrate to varying degrees what almost every commentator argues: urban form and transport development must be addressed together. **There is no substitute for integrated planning and co-ordination.**

This raises another matter. When even the briefest perusal of the literature that we have been able to make indicates very clearly that there is no shortage of ideas for achieving sustainable living and transport, why have we made such timid moves in that direction? Surely, the advice to governments should be “**JUST DO IT!**” (if for once we can invoke Nike!) The fact that we have seen little action and yet another enquiry has been set up, suggests the need for a cultural change, one that involves Governments boldly taking hold of these ideas. When they are manifestly supported by logic, evidence and historical and comparative perspective, surely they argue to be put into practice. It requires government at the Federal, State and local levels to accept the fact that while free market policies might foster economic growth, in themselves they do not create a good society. Economic policy is not social policy. All markets have rules. We simply need more to apply to land development and house construction.

The three tiers of government need to focus on people's needs and adopt appropriate regulations, incentives, disincentives and educational programs to direct the suppliers of housing and transport and their customers in sustainable directions. Learning by the mistakes of others we can look at the and look at the consequences of freeway construction and social policies in the US for example. After oil companies and motor manufacturers succeeded in persuading politicians to pull up rail and tram tracks, the US Federal government embarked on extensive post-war funding of freeways. This led to an exodus of the more affluent Whites to the suburbs. Nowhere is the effect seen more clearly than in Milwaukee, WI. The impact of freeway construction combined with a lack of any wage justice for lower level workers and the abandonment of social policy to markets, have produced colossal and lacerating social divisions. And these lead to crime and suffering. In 1998, in Milwaukee, people – mostly young Black men – were murdering one another at 24 times the Australian national murder rate, mostly in drug wars born of despair. The gap in income levels is also widening in Australia and these divisions are being played out geographically in our cities with the poor again being most isolated and enduring the worst housing and community facilities.

**Consider:**

**Cities follow the example of Fremantle and encourage the settlement of artists into the city, people who have some sense of the aesthetic and a capacity for lateral thinking.**

The Brundtland Report and the Rio Summit put to an end the idea that in our economic planning we can ignore social justice questions or environmental ones. Unfortunately, this principle does not always flow through to practice. Those engaged in saving trees or suburbs, and particularly their own properties, sometimes forget that financially strapped people have little financial, educational, and often time to be environmentally concerned. They also often don't own any property to protect.

In this submission, we wish to focus a little on **housing, transport and urban lighting** while of necessity taking in aspects of the other areas the discussion document has outlined. Again, we mainly have the example of Melbourne in mind. What might seem disproportionate emphasis on urban lighting is intentional, given that it has had such little public discussion to date. With respect to water savings, the Victorian Government's Green Paper *Securing Our Water Future* seems to us to be a comprehensive, balanced and forward-looking statement about that resource although it is almost silent on social justice matters. The devil of course will be in the implementation detail.

**Urban Form And Housing**

There is considerable discussion about the increasing proportion of dwellings inhabited by one or two people. In Boroondarra, Vic. for example 49% are one-person and two-person households (Storer, 2003) Some of these will previously have been homes in which children, now adults, were raised. The challenge is to provide housing diversity to meet different needs, cope with change in need, and provide services for a progressively aging population. Communities are surely enriched by the presence of a diversity of family forms, ethnic backgrounds and socio-economic circumstances.

**Consider:**

**Councils regularly update demographic data for municipality and publicize them, alongside comparative state and national data.**

### Healthy living

Outer-urban local governments, in the past at least, seem to have done little to relate house building to a range of other issues. They have been happy to address such matters as construction, stormwater disposal, and placement on the block but not considered distance from transport for example. In the euphemism of a Metricon employee, when one of the authors enquired about homes in Sunbury and Melton, 35 and 38 kms from the GPO, “*Sometimes the train station might be a little bit away.*” Even though the Confederation of International Contractors’ Association (Newman, 2003,16) commits to many of these healthy living requirements, and the Australian State of the Environment Report 2001 lists them also, few developers talk with clients about their commitment to: building in sympathy with the physiography, siting for maximum solar energy, access to broad-band computing, freedom from noise, healthy internal air, freedom from external pollution, access to medical and other services and so on.

#### Consider:

**Local Governments demand that house sales are accompanied by check list showing availability within easy access of essential elements for “healthy living.”**

### Reducing the lust for gigantism in housing

Part of the problem lies in the confluence of Governments’ desire to reduce sprawl and consumer fashion. Even though Australian goals for blocks per hectare are less than half current British goals, reducing block size is seen in Victoria as a means of curbing sprawl. It is as if home buyers defiantly want space, even if it has to be inside the house rather than around it. As one writer put it recently,

*“The bubble in housing prices will eventually deflate, either gradually or with a sharp bang. But whatever happens we will be left with a housing stock that will continue to require the use of large amounts of greenhouse-emitting energy to keep heated in winter and air-conditioned in summer – especially as so many of the largest houses are built in mock-Georgian, mock-Tuscan, mock-French chateau styles that lack solar-friendly features such as eaves and verandahs.”* (Duxbury, 5/11/03)

The result is that there is no longer space for trees that create shade and absorb CO<sub>2</sub>. Nor is there space for children to play, so they adjourn to the computer games and TV, eat, accumulate more calories, and get fat.

We were provoked into calling Metricon by an advertisement on commercial radio that said “*Get five squares free.*” Metricon’s houses in Sunbury, Melton and Craigburn range in size from 20 to 40 squares. In the authors’ childhood, 12 squares were considered adequate for a family and, it has to be emphasized, at a time when families of five were very common. As Newman says (2003,18), average house area has increased 3% per annum since 1990 while average occupancy numbers have continued to decline. The average Western Australian home is 2.4 times the area of the average British 3-bedroom home. Newman goes on to say that even with relatively cheap construction costs, a 15 sq. metre reduction in floor area would save (\$ 9000) not to mention the opportunity costs if this were invested. The money saved could also be invested in energy-saving features – not, writers stress – as add-ons but built into the design. Heating and cooling combined account for about 25% of residential energy use.

**Consider:**

**Local governments publish literature made available to all real estate agents showing the money that can be saved initially, and over the long term, by replacing some space with sustainable features. They should work with builders and developers to ensure that the latter offer clients a range of energy saving features in return for some reduction in floor area.**

It is not as if all architects are insensitive to the problems of siting of housing. Anne McIntyre of McIntyre Partnership put it as follows:

*“If you don’t design the house to suit the environment, you’re going to have to pay a disproportionate amount on the lighting, heating and cooling.”* (Adams, 22/10/03)

The Green Building Council of Australia has devised a rating system designed to promote sustainability in house design by identifying categories weighted as follows:

*“Management 10%, Indoor Environment Quality (also known as Health and Wellbeing) 20%, Energy 25%, Transport 10%, Water 12%, Materials 10%, Land Use and Ecology 8% and Pollution 5%”* (Marino, The Age, News 26/10/03)

The Chairman of the Council’s technical committee acknowledged criticism from environmental organizations that it was theoretically possible to achieve a four- or five-star rating while scoring zero in the energy category. Barton Group calculated also that

*“...a four-star rating can be achieved getting zero for the energy category and less than half the maximum points in the indoor environmental and materials categories.”* (Marino, The Age, News, 26/10/03)

Another property developer with interests in several sustainable energy organisations said that the Green Star system

*“...would deliver ratings to buildings without minimum performance standards and without the compulsion to deliver claimed design performance.”* (Marino, The Age, News, 26/10/03).

Nevertheless, it seems to us that a revised ratings system is a way of promoting sustainable house design.

**Consider:**

**(a) Federal, State and Local governments work in partnership to implement a revised rating system designed to produce environmentally sustainable house construction. This would take account also of the concept of “embedded energy.”**

**(b) It be made mandatory at the point of sale for energy consumption figures to be made available to potential purchasers.** (Lumb et al., 2000, 73)

**Catering for youth**

The suburbs have copped a bit of stick from academics (Mees, 2003), but surely some of the criticism is deserved. Worthy of disapproval are: the energy wastage both in houses and travelling from them, the increasing waste of water with block size, phosphate fertilizer usage, the destruction of farm land and biodiversity as sprawl relentlessly proceeds, and so on. But often the social effects are neglected. Most of our suburbs provide far too little for our young people to do. Both authors are from rural towns where in the forties and fifties, for boys particularly, there were innumerable ways of enjoying oneself. Today, papers frequently describe the unsympathetic response residents have to urban kids’ efforts to indulge their fantasies by building cubbies and bridges or provide physical excitement by skate-boarding.

Certainly the causes of youth suicide are complex but living in an Australian suburban recreational desert is likely to contribute to one of the highest youth rates in the world.

**Consider:**

**Councils engage youth in a permanent youth advisory committee and ensure that maximum possible appropriate sporting, cultural and other recreation facilities are available**

**The social and physical benefits of local parks**

Young and elderly people alike, benefit from the availability of local parks. Those over 65 are an increasing proportion of the population. In Kingston (Vic. Pop. 130,000), there is an expected increase of 19% in this age group in 13 years' time and since women live longer than men, they will disproportionately be female (Kingston 2001 Socio-Demographic Profile). Small neighbourhood parks within easy walking distance provide a place for people to meet and chat. Older folks, no longer wanting or able to drive but needing exercise, will use accessible parks. Younger mothers minding small children make friends with other mothers similarly engaged. The lead author was struck by the example of small cities in Spain where elderly people were seen in streets chatting in hollow squares of three bench seats. Conversation was earnest because they could face one another. We need first to think of the desirable activity and then plan and build accordingly.

Parks are obvious places for children to: play; build muscle tone; strengthen arteries and bones and thus ward off later heart attack and osteoporosis, improve cardio vascular performance; and through the exercise, improve their spirits. *Planning News* (June, 2003,12) stated that “*Obesity and over weight is (sic.) a significant health problem for the entire Australian community including children, youth and adults.*” More recently, the sub-heading of an Age article read, “*Third of primary pupils are overweight: studies.*” (Robotham 27/10/03)

**Consider:**

**Local governments ensure that their municipalities have at least the minimum possible walk-accessible park/population ratio determined by independent expert opinion and publicize their location, and where applicable, the activities available in each. They should acquire rather than renounce land to ensure that acceptable park/population ratios are maintained.**

**Street Lighting**

While most people are aware of the fact that street lights use energy and that light pollution is a problem, they are little aware of the impact of street lighting on biodiversity.

**Energy use**

It has been estimated that one third of all US light is wasted at a total cost of about 30 million barrels of oil valued at about \$US 2 billion per annum One half of the light pollution arises from direct upward lighting and one half from reflections off the ground and buildings. All outdoor night-time lighting accounts for about 3.6% of US electricity costs (Hunter, n.d.) Hunter identifies four ways in which light pollution harms the environment: 1. Use of non-renewable fossil fuels. 2. The production of the electricity contributes to water and air pollution (In the city of Kingston – pop. 130,000 – street lighting contributes 51% of the Council's greenhouse gas emissions. [Kingston CCP Report Update]) 3. Monies wasted could have been spent on other services – an opportunity cost loss. 4. “*Urban sky*

*glow hinders professional and amateur astronomy and deprives the public of its view of the night sky.*” Interestingly, he does not mention the impact on biodiversity.

Much energy is wasted by inappropriate street lighting design that projects a proportion of light into the sky. Light reflected upwards shines on water vapour particles and dust pollution, making it impossible to see the night sky. Other areas of wastage occur include the following: unnecessary internal lighting of buildings outside work hours, car parks illuminated all night, floodlighting, advertising signs kept on all night, and sky beams.

### **Light pollution and astronomy**

According to the Guardian Weekly (Brown and Sample 9-15/10/03) the UK had a great tradition of both amateur and professional astronomy, yet 80% of the members of the Society for Popular Astronomy could not see the Milky Way from their homes. Australia too has *“been at the forefront of world astronomical research for more than 100 years”* according to another writer (Lay, n.d.) Lay presents the night sky as part of our heritage. In the Victorian Mallee of the 1940s we were captivated by the Aurora Australis flashing low on the horizon, and as night fell darkly, the crystal-clear Milky Way shone like white-hot metal, and undimmed, constellations such as Orion and the Southern Cross provoked endless speculation.

Lay reminds us that the constellations were named some 5000 years ago and that serious study of astronomy began in China more than 4000 years ago. Their obliteration by light he suggests is a loss of heritage, just as “urban consolidation” can mean loss of suburban heritage. The loss of these stellar wonders represents a loss of diversity, all the more acute as our cities seem hostile to natural and cultural diversity. We pave one third of our urban environment with roads and car-parks. We replace self-sustaining native trees and shrubs with prim, inoffensive knee-high exotic bushes and white roses ranged symmetrically around pocket lawns. We bow to consumer and monopoly logic, bid goodbye to the local family hamburger shop, and usher in innumerable look-alike Kentucky MacBurger outlets.

### **The impact of lighting on biodiversity**

As Gerhard Eisenbeis pointed out (24/7/03) illumination of Europe’s night skies has been massive: in Italy, for example, an increase of 27 times between 1971 and 1998. This world-wide lighting up of our world, so graphically illustrated in the world map derived from orbiting space-ship photos, has had a significant effect on biodiversity. It has resulted in a decline in populations of insects, amphibians, reptiles, birds and mammals and seriously interfered with the growth in plants.

Using his own empirical data, Eisenberg has calculated that in Germany, 1,230 million insects are killed every night, mainly by street lighting. This occurs from what he terms a “captivation effect,” a “crash-barrier effect” and a “vacuum cleaner effect.” (Eisenbeis, 24/7/03.) Artificial lighting interferes with the mating, dispersal and migration of moths. It also disturbs their feeding, oviposition, nocturnal vision and possibly, circadian rhythms (Frank- Light Pollution Awareness Website). While paradoxically, concentrations of insects increase

predation by birds, bats and spiders, overall, the deaths represent a severe loss lower down on the food-chain. Insects do perform other functions too.

Nocturnal birds use the moon and stars for navigation during their bi-annual migrations (e.g. to the Werribee or Edithvale wetlands sites). When they fly through brightly lit areas they become disoriented and often crash into brilliantly lit towers or buildings, or circle such flood-lit towers as the Victorian Arts Centre until they drop from exhaustion. Johannes Molenaar and colleagues have demonstrated that street lighting reduces bird breeding habits over several hundred metres from the light source (Light Pollution Awareness Website.)

All bats, most smaller carnivores and rodents, 20% of primates and 80% of marsupials are nocturnal. To avoid predators, some animals – like snakes, salamanders and frogs – reduce their movements under a full moon and tend to hunt more on moonless nights. Others forage just after dusk. In some areas however, lighting never allows darkness to fall.

Among the vegetation processes affected by light are seed germination, stem elongation, leaf expansion, conversion from a vegetative state to a flowering one, flower development, fruit development and senescence. There is also some evidence that leaf fall in deciduous trees has been affected by street lighting (Light Pollution Awareness Website.)

If there are these effects upon all other living forms, is there not likely to be an effect on human health? Eisenbeis affirms that this is so.

**Consider:**

**(a) All municipal councils be urged to install low pressure sodium lamps with downward directing covers for street lighting.**

**(b) Municipal councils complete an audit of all night lighting to assess what lights are unnecessary and what retrofitting of old, inefficient or inappropriate lights is required and enlist the support of all businesses in this venture.**

**© State and Municipal governments follow the Adelaide City Council example and replace existing traffic lights with Light Emitting Diode (LED) technology.**

## **Urban Transport**

The single most important idea that emerges from the best writing about sustainable living is that there are mostly multiple solutions to the challenges of urban life. Transport is clearly a good example. Planning now needs to encourage walking, cycling, and movement by train, tram, bus, taxi and car in that order for a variety of reasons, some of which are listed below.

Equally, the literature stresses the need to combine provision of jobs, services and housing types with public transport planning. That is, through demand management the need for movement is reduced (Chambers, n.d.) Armstrong provides maps for example, to show that people in the outer suburbs of Perth have to drive further than inner suburban counterparts for a litre of milk (Armstrong, n.d.) On the matter of health, there is some US evidence that in poorer car-based suburbs fast food outlets are common, less fruit and vegetables are consumed, and obesity and diabetes soar.

However, as the British 1994 Royal Commission on Pollution said, urban planning is a necessary but not sufficient condition for successful public transport (Mees, 2000, 286). The new trams on the Box Hill line in Melbourne are speedily efficient - a considerable gain given that the average tram speed of other trams is estimated to be about 14 kph. Nevertheless, an emphasis on engineering solutions alone will not increase patronage. We need to think about matters of speed, frequency, connections, comfort and safety for all journeys, including the majority, non-commuter ones. At this point however, it is important to say that there is one engineering solution that if adopted, would greatly speed up both rail and road traffic and significantly reduce greenhouse gas emissions caused by idling, waiting motorists. We refer to the need to avoid end of station, train/tram/road crossings such as occur in Burke Road, Gardiner in Melbourne (Simpson, 2003 – See Appendix.)

**Consider:**

- (a) **Follow the example of Zurich and allow trams to operate traffic signals. Provide separation barriers to enable freer passage for trams**
- (b) **The Victorian and possibly other State governments consider the environmental costs of not building overpass separation of train, tram and car in such crossings as that in Burke Rd. Gardiner.**

As will be shown below, the quality, frequency and convenience of public transport service are very important (Mees, 2000, 286). The ones he mentions that appear to be lacking in Melbourne include: an integrated route structure which maximises opportunities for interchange and reduces duplication and overlap; fast, frequent and reliable service on the trunk (rail, busway etc) routes; high service on all routes (cross-suburban as well as radial) throughout the day and evening; matching hours of operation on the different routes serving interchanges and either co-ordinating time-tables or providing very frequent services.

Moreover, while there must be inducements to use public transport, under certain conditions there must also be deterrents to the use of cars (Mees, 2000, 27-8.) Groningen, Bogota, Singapore and London have all introduced car-free days in the inner city, instituted odd/even number-plate access, or banned them permanently (Suzuki and Dressel, 286, 287) Still, car ownership increases. There are plenty of examples of new apartments going up in the inner and near-inner city of Melbourne, each with car garaging space. The net result is that denser living doesn't decrease car usage and congestion; it increases it. Some of these inner city dwellers might be impressed by evidence that if an average household reduced their car ownership by one vehicle, they would be able to accumulate an additional \$750,000 (today's dollars) in superannuation over their working life (Armstrong, 2002.) While time of public transport travel in outer suburbs is an issue, especially with such infrequent and unco-ordinated services, it is also the case that culturally, we always think "car." Mees also stresses that simply subsidizing public transport as it is will achieve only marginal increases in patronage (Mees, 2000, 85) The system must be convenient in all its forms.

Although the adverse effects of a car-based city are well known, they bear repeating.

The roads needed to serve the houses in the sprawl to the outer fringes have eaten up prize horticultural land and reduced biodiversity although, thankfully, the Victorian government has recently capped this sprawl (Ellingsen, 2003). Attention has appropriately been given to the CO<sub>2</sub>, methane, nitrous oxides and other greenhouse gases produced by automobiles, with consequences for respiration, damage to the nervous system and other health effects to humans and crops, forests and plants (Chambers, 2002,28.) In addition, as Whitelegg points out, noise pollution also takes its toll. This includes: sleep disturbance, hearing loss, interference with speech communication (try an outdoor restaurant on Lygon St. Carlton!), and a range of consequences for mental health, performance and residential behaviour (Whitelegg, n.d. 2) . Early books on traffic calming showed very clearly that there was an almost linear inverse relationship between the width and busyness of roads and neighbourhood interaction.

**Consider:**

**State governments explore the economics of providing mandatory exhaust tests on purchase as applies in Wisconsin.**

**State governments consider varying motor registration rates according to recency of engine tune-ups.**

**EPAs give greater publicity to reporting of vehicles with excessive exhaust emissions.**

*“The “ping, ping, ping of the final Mentone Primary School bell sounds. Still clad in their tennis whites and the moisture of exertion still on their brows, mothers squeeze their immaculate 4WDs into the rows of vehicles now surrounding the school, ready to greet their offspring.”*

How many of those 4WDs have been put to rural labour? A caller to the ABC asks, wouldn't it be a good idea to spend the \$6000 excise reduction attached to each of these vehicles, - ones that are an increasing proportion of new vehicles - on improved taxi transport access to the disabled? (ABC 621, 17/10/03) Why do we subsidize above average price vehicles whose fuel efficiency less than one third what the European Lupo can achieve and thus promote greenhouse gas production? Why don't the kids just walk home? Women working? Not these women but yes, increasingly. Safety? Perhaps. Distance because of school consolidations? In some cases. (Morris et. al. 2002) Whatever the causes, the trend is world-wide it seems. While in 1970, 80% of the children in the UK walked or cycled to school without an adult present to supervise their journey, by 1990 that percentage had declined to about 8 (Whitelegg, n.d., 1.) Given that Britain always had higher urban densities than Australia – and currently has much more ambitious urban consolidation plans – there are obviously factors other than urban density operating.

Childhood obesity that was mentioned earlier has multiple causes, including excess consumption of carbohydrates and low consumption of high fibre fruit and vegetables but lack of exercise is certainly a major cause. More walking would help.

In the City of Darebin's Integrated Travel Plan we learn that road accidents cost Australia \$15 billion each year, a figure that is difficult to contemplate much less count (Darebin, n.d, 39) What is not amenable to quantification however, is the suffering that the deaths and injuries cause. Policing, mandatory seat belts and speed cameras have reduced the accident numbers in Victoria from 351 to 296 so

far this year (Gray, 19/11/03). However while accidents don't kill as many Australians as the population of Bendigo annually as occurs in China, eventually, the number of deaths here will return to previous levels with population increases. In Britain, private transport is responsible for 40% of accidental deaths (Mees, 2000, 17.)

Urban sprawl makes car ownership inevitable but since lower income families are forced to seek cheaper housing in the outer suburbs, there is a greater disparity between the percentage of income spent by lower income households and those in higher income brackets. According to VCOSS, the lowest paid 20% of the population spends 21.4% of their income on transport while the highest paid spend 10.3% (Duffy, 1998.) As Whitelegg puts it, the construction of tolled inner-urban freeways such as Melbourne's city link makes speedy road travel the preserve of the relatively affluent (Whitelegg, n.d.) and is thus a contribution to social division. He agrees that expenditure on local projects (bigger footpaths – many US cities have none - speed restrictions in residential areas, bike paths, bus lanes, local buses) involves cash transfer to the relatively poor and vulnerable in society. Even the language, he says, is different for road and public transport expenditure. We “invest” in the former but “subsidize” the latter. One might also argue that the language of the former is appropriate to the users.

As indicated, a measure of our priority given to automobiles is that one third of our cities is either roads or parking lots. Currently the Victorian State government spends 94% of its transport costs on roads and 6% on public transport (Mees, 2003.) This is similar to the road/rail expenditure ratio of the Federal government and as a result, Australia has the highest volume of road freight per capita in the world (Darebin, 37). Urban rail produces an average of about a half the per capita greenhouse production of cars per kilometre but in peak hours only a fraction of the latter.

How should we respond to all of this? As Mees says, we should use a supply-based rather than a demand-based approach to public transport. Although he doesn't say it, contrary to the Victorian government and Federal government's concern if not obsession with surpluses, we might consider deficit budgeting and boost the availability of public transport as a first step. It is to be noted that in the debate about current Federal surpluses, the National Party are arguing for investment in infrastructure rather than offering tax cuts. It is not as if there are not advantages for increasing rail provision besides the fact that a single track of railway can move 20-50,000 people per hour – 8-20 times the capacity of a lane of freeway. A double-track railway also requires 2-5 hectare/kilometre with 10 ha./km for a six-lane freeway (Chambers, 2000,20).

We need to take note of the example of cities such as Vancouver, Toronto, Berlin, Groningen, and put money into light rail, bus lanes, bicycle lanes, community renting of cars, integrated management, co-ordinated services linking bus and train arrivals and more frequent service. The Vancouver Long Range Transportation Plan for example had the following priorities: walking, cycling, transit, goods movement and then private automobiles (Mees, 2000, 76). In the four southern capital cities we have weather suitable for cycling. Currently it accounts for 2-3% of all trips in Australia, In the Netherlands it is 29% and in

Denmark 18% (Darebin, 2001.) Allowing for differences in size, with careful thought about the needs of cyclists (better protected and more extensive bike lanes, showers, lock-ups, transport on buses etc) we could increase the proportion of distances travelled here. Woe-betide the person in Berlin who lingers on the bicycle tracks that form the edge of the wide footpaths in many areas of the city. To do so is to risk being by a mother carrying her babe in the seat behind her. Berlin, like Oregon State has experimented with community operated and rented cars in much the same way some Dutch cities do with bicycles.

**Consider:**

**As a first step towards moving towards community car hire, taxi operators might be encouraged to publicize how many taxi trips are required to offset the estimated annual \$10,000 needed to purchase and operate a medium-sized car.**

**Conclusion**

At heart of all that we have said is the need for governments to act on the information that is freely available – both in the literature and in the daily life of cities elsewhere that information technology and rapid travel make so accessible to us. In a free-market economy, we still need to plan, develop and integrate urban settlement and transport systems that meet the needs of people of all ages, identities and socio-economic circumstances and not merely the wants of a few out for a fast buck or those seduced into a life of eternal bliss by the houses and cars on offer in the glossy brochures. Above all, governments need to collaborate with ordinary citizens; assume they are intelligent; eschew spin and token “consultation”, and engage people in the way that a healthy democracy demands. Some local governments are certainly trying (Storer, 2003).

**Appendix:**

**How not to solve tram/car/railway intersection problems:**

(We are indebted to Brian Simpson for this account)

*“A tram-train crossing at the out-bound end of station – Burke Rd Gardiner. (conservatively, this section of Burke Rd handles 45,000 cars daily since it leads onto a freeway – Authors) 8.00: booms close for out-bound train approaching Gardiner (prepared for overshoot). Train stops at Gardiner at about 8.02. After about a minute at Gardiner station, train pulls out – slowly – over tramlines. Takes about 2 minutes to clear crossing. Now 8.05. But train approaching from Glen Iris in about a minute, so boom stays shut. At 8.06, this train starts rattling over tramlines. Takes about 2 minutes to clear crossing and pull into Gardiner station. 8.08 booms open. Total time for booms down – about 8 minutes. It is not impossible, and I’ve seen this happen, that by this stage another outbound train is approaching. In anticipation of this, the booms remain closed, stretching the boom closure time to about 11 minutes. You can imagine what the peak-hour traffic in Burke Rd. in both directions is like by the time this happens. Unless it all clears before the next train, the situation compounds.”*

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