

Victorian inquiry into environmental infrastructure for growing populations.

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Healthy planet, healthy people

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Submission to the Environment and Planning Committee of the Victorian Legislative Assembly

<https://www.parliament.vic.gov.au/968-epc-la/inquiry-into-environmental-infrastructure-for-growing-populations>

Terms of Reference

An inquiry into the current and future arrangements to secure environmental infrastructure, particularly parks and open space, for a growing population in Melbourne and across regional centres.

Doctors for the Environment Australia (DEA) is an independent, self-funded, non-governmental organisation of medical doctors in all Australian States and Territories. Our members work across all specialties in community, hospital and private practice. We work to minimise the public health impacts and address the diseases caused by damage to our natural environment.

Doctors for the Environment welcomes the opportunity to comment on the inquiry into environmental infrastructure for growing populations. DEA would also welcome the opportunity to appear before the Legislative Assembly's Environment and Planning Committee if required.

Doctors for the Environment Recommendations:

- **That exercise is acknowledged as a critical determinant of health and that environmental infrastructure is designed to both encourage exercise and facilitate active transport.**
- **That the urban heat island effect, and the health risks associated with heat stress are addressed in urban planning**
- **That geographical and socioeconomic inequities in access to open spaces and active transport options are addressed**
- **That human health is considered in all policies related to planning environmental infrastructure**

Introduction

The environmental and social conditions in which people live and work are now widely accepted as important determinants of health and illness. Doctors for the Environment Australia strongly endorses the WHO *Health in All Policies* framework, namely, that all public policies should ensure that health and well-being, including the environmental and social determinants of health, are taken into account.¹

¹ Health in All Policies: Framework for Country Action 2013
<https://www.who.int/healthpromotion/frameworkforcountryaction/en/>

Cities designed around road transport can reduce access to green space and options for active transport, and through fragmentation and poor design increase social isolation, particularly for older people and those who are disabled. Changes in lifestyle now cause most of the burden of ill-health in our communities through a range of factors, including inadequate physical activity.

Plan Melbourne 2017-2050

This submission will focus on Melbourne. The population of metropolitan Melbourne, where 70% of Victorians live, is nearly 5 million at present and forecast to grow to around 6.3 million by 2031.²

The Victorian Government, in **Plan Melbourne 2017-2050** is aiming for Melbourne to become more sustainable and resilient, which will include reducing net greenhouse gas emissions to zero by 2050. It aims to foster active transport, with reduced dependency on cars. Furthermore, it predicts that Melbourne will be cooler, greener and more liveable, with enhanced access to open space within the next thirty years.

The Victorian Greenhouse Gas Emissions Report (2018) showed that roughly 20% of emissions arise in the transport sector.³ By 2050 Melbourne's transport network will need to cope with an additional 10.4 million trips each day.⁴

Active Transport Victoria (ATV) was set up by the government in 2016 to promote walking and cycling and the *Victorian Cycling Strategy 2018-2028* now outlines how ATV will work with Councils and government agencies, including VicRoads, to provide a safer, lower-stress and better-connected network.⁵

How will this be measured? VISTA, the Victorian Integrated Survey of Travel and Activity monitors travel within the community, including cycling, but does not report on walking.⁶ Local community audits could help educate the community as well as assess change and any barriers to equitable progress.

The Transport for London Authority has developed a Pedestrian Comfort Guidance tool⁷, to assess roadway and crossing comfort for pedestrians, with the aim of encouraging walking and reducing pressure on public transport. It provides a method for analysing what induces

² Planning Victoria report 2019 https://www.planning.vic.gov.au/_data/assets/pdf_file/0030/453369/FINAL-Plan-Melbourne-Addendum-2019.pdf

³ Victorian Greenhouse Gas Emissions Report 2019 https://www.climatechange.vic.gov.au/_data/assets/pdf_file/0016/443014/Victorian-Greenhouse-Gas-Emissions-Report-2019.pdf

⁴ Plan Melbourne 2017 https://www.planmelbourne.vic.gov.au/_data/assets/pdf_file/0004/377113/Plan_Melbourne_2017_Outcome_3_PDF.pdf

⁵ Victorian Cycling Strategy 2018-28 <https://transport.vic.gov.au/getting-around/walking-and-cycling>

⁶ Victorian Integrated Survey of Travel and Activity Vista <https://transport.vic.gov.au/about/data-and-research/vista>

⁷ Pedestrian Comfort Guidance for London 2019 <http://content.tfl.gov.uk/pedestrian-comfort-guidance-technical-guide.pdf>

a perception of crowding, whether street furniture is optimally placed, and what factors should be addressed to improve infrastructure for pedestrians.

Plan Melbourne 2017-2050 outlines the concept of the 20-minute neighbourhood. This has a focus on 'living locally', meaning that, ideally, most everyday needs would be within a 20-minute walk from home, with additional bicycle and supporting public transport options. According to Walks Victoria an average healthy adult walking at 4.8 km/hr can walk 800 metres in 10 minutes. Important factors when considering the design of open spaces are proximity, size, connectivity and quality, such as attractiveness and availability of facilities.^{8 9}

The importance of exercise and green space as a determinant of health

While exercise is a key component of a healthy lifestyle and an effective preventive health strategy, there is now abundant medical evidence to support exercise being prescribed as part of the treatment of many conditions. These include osteoarthritis, back pain, diabetes^{10 11}, cardiovascular disease depression and cancer.^{12 13 14} Regular, graded exercise is not only preventive, but may reduce the reliance on medication in some cases.¹⁵

Increasing active transport could also help reduce car use and road congestion, with a reduction in air pollution and additional health benefits such as improving the health of those with chronic conditions affected by poor air quality (including asthma, chronic obstructive pulmonary disease and cardiovascular disease).¹⁶

The *Active Victoria Report* in 2017 found that about 60% of Victorians were not meeting the current Australian recommendation to have 2.5–5 hours of moderate, or 1.25–2.5 hours of vigorous physical activity per week.¹⁷

Overall, women participate in sport at lower rates than men and many other groups are not sufficiently active for good health. While on average 79% of Victorians play sport or report

⁸ Giles-Corti B et al. Increasing Walking: how important is distance to attractiveness, and size of public open space? *Am J Prev Med.* 2005 28(2):169-76. <https://pubmed.ncbi.nlm.nih.gov/15694525/>

⁹ Francis J et al. Quality or quantity? Exploring the relationship between Public Open Space attributes and mental health in Perth, WA. *Soc Sci Med* 2012 74(10):1570-77 <https://pubmed.ncbi.nlm.nih.gov/22464220/>

¹⁰ Australian Government Institute of Health and Welfare. Insufficient Physical Activity. 19 July 2019 <https://www.aihw.gov.au/reports/risk-factors/insufficient-physical-activity/contents/physical-inactivity>

¹¹ Williams A et al. Type 2 diabetes and the medicine of exercise. *Aust J Gen Practice* 2020 49(4) <https://www1.racgp.org.au/ajgp/2020/april/type-2-diabetes-and-the-medicine-of-exercise>

¹² Cormie P et al, Exercise medicine in cancer care. *Aust J of Gen Practice* April 2020 49(4). <https://www1.racgp.org.au/ajgp/2020/april/exercise-medicine-in-cancer-care>

¹³ Cancer Council. Exercise for People Living with Cancer. March 2019. <https://www.cancervic.org.au/downloads/resources/booklets/exercise-and-cancer.pdf>

¹⁴ Cormie P et al, Clinical Oncology Society of Australia position statement on exercise in cancer care. *Med J Aust.* August 20 2018;209(4):184-187. <https://pubmed.ncbi.nlm.nih.gov/29719196/>

¹⁵ Lee M et al, Effect of physical inactivity on major non-communicable diseases worldwide. *Lancet* 2012 July 21;380(9839):219-29 <https://pubmed.ncbi.nlm.nih.gov/22818936/>

¹⁶ DEA Policy Paper on Ambient Air Pollution 2017. <https://www.dea.org.au/air-pollution-policy-healthy-planet-healthy-people-dea/>

¹⁷ Active Victoria: A strategic framework 2017-2021 https://sport.vic.gov.au/_data/assets/pdf_file/0018/55602/download.pdf

some recreational activity, only 17% of non-English-speaking residents, 30% indigenous residents, 24% of people with a disability and 51% of those who are disadvantaged socio-economically, do so.¹⁸

Important factors when considering the design of open spaces are proximity, size, connectivity and quality, such as attractiveness and availability of facilities.^{19 20}

Several studies have shown young people are more likely to use parks and sports centres when they are closer to where they live.^{21 22 23}

A Perth study also assessed the impact of the quality of open spaces on stress levels and found that residents who lived closer to higher quality green open spaces were more likely to record lower levels of stress than those who lived near those of lower quality, regardless of whether the facilities were used.²⁴ Spending time in a green, or natural, environment, whether for passive recreation or active exercise, has been shown to assist with anxiety and depression, and also boost self-esteem.²⁵

Place-making

Place-making aims to enhance a sense of belonging, by tapping into local history, culture or environmental significance and using the vision of the community in a creative way to reshape a locality or area.

The National Heart Foundation of Australia also promotes this strategy as a way to encourage walking, saying that place-making has the potential to turn a street from a route into a destination.²⁶

¹⁸ Sports and Physical recreation: A statistical overview. 2012

<https://www.abs.gov.au/ausstats/abs@.nsf/mf/4156.0>

¹⁹ Giles-Corti B et al. Increasing Walking: how important is distance to attractiveness, and size of public open space? *Am J Prev Med.* 2005 28(2):169-76. <https://pubmed.ncbi.nlm.nih.gov/15694525/>

²⁰ Francis J et al. Quality or quantity? Exploring the relationship between Public Open Space attributes and mental health in Perth, WA. *Soc Sci Med* 2012 74(10):1570-77 <https://pubmed.ncbi.nlm.nih.gov/22464220/>

²¹ University of WA – centre for the built environment and health.

https://www.sph.uwa.edu.au/data/assets/pdf_file/0011/264575/fact_sheet_on_healthy_public_open_space_design_for_multi-users_and_multi-uses.pdf

²² Vic Health Active Transport: Children and young people. December 2009

https://www.vichealth.vic.gov.au/~media/resourcecentre/publicationsandresources/active%20travel/active_transport_children_and_young_people_final.pdf

²³ Collins P et al, The impact of built environments on young people's physical activity patterns *Int J Env Research and Pub Health.* December 2012 9(9):3030-50

https://www.researchgate.net/publication/233828981_The_Impact_of_the_Built_Environment_on_Young_People's_Physical_Activity_Patterns_A_Suburban-Rural_Comparison_Using_GPS

²⁴ Giles-Corti B et al. Increasing Walking: how important is distance to attractiveness, and size of public open space? *Am J Prev Med.* 2005 28(2):169-76. <https://pubmed.ncbi.nlm.nih.gov/15694525/>

²⁵ Barton J and Pretty J. What is the best dose of nature and green exercise for improving mental health? A multi-study analysis. 2010. *Env Sci Technol* May 15;44(10):3947-55

<https://pubmed.ncbi.nlm.nih.gov/20337470/>

²⁶ Heart Foundation. Blueprint for an active Australia 2019. <https://www.heartfoundation.org.au/Activities-finding-or-opinion/physical-activity-blueprint>

place

Urban heat island effect, climate change and the health risks associated with heat stress

Heatwaves have been called ‘silent’ killers and, without reduction in greenhouse gas emissions, they are predicted to become more frequent, more intense and longer in duration.²⁷ High urban density, non-porous dark surfaces and areas with sparse greenery trap heat during the day and impede cooling at night producing urban heat islands. Increasing urban greenery improves the aesthetic quality of neighbourhoods, while helping to reduce the urban heat island effect, reduce air pollution and sequestering carbon.

Urban heat island mapping has been carried across Victoria and a heat Vulnerability Index (VHHEDA – a combined assessment of vulnerability to heat, poor health, economic disadvantage and access to green space) has also been developed. Local Government Areas have been rated between 1 and 5 on the VHHEDA Index, with the lowest score representing the greatest vulnerability.²⁸

Equity in access to Melbourne’s parks and open spaces

There are large disparities in health across the socio-economic gradient. On average, people in the lowest tiers do worse on almost all health measures. For example, in 2016 according to surveys by the Australian Institute of Health and Welfare, diabetes was 2.6 times more prevalent among the lowest socio-economic groups than the highest, coronary heart disease and stroke 2.2 times higher for the lowest groups and lung cancer 1.6 times more common.²⁹

Professor Billie Giles-Corti, Director of the Urban Futures Enabling Capability platform at RMIT, has led research for two decades into the social impact of the built environment, and the implications for health and well-being.³⁰ She argues that access to green space is important for mental health, especially those who are socio-economically disadvantaged and draws attention to the inequity of opportunity and access within several Australian cities, including Melbourne. In her opinion, open space needs to be fit for purpose, rather than planned for on a per capita basis, and that the needs of the community should be canvassed and taken into account.³¹

²⁷ Carey M et al. Extreme heat threatens the health of Australians. *Med J Aust* 2017; 207(6) <https://www.mja.com.au/journal/2017/207/6/extreme-heat-threatens-health-australians>

²⁸ Centre for Urban Research, RMIT. Where should all the trees go? 2020 https://2020vision.com.au/media/162691/wsattg_combined-lr.pdf

²⁹ Australian Institute of Health and Welfare. Australia’s Health 2016. <https://www.aihw.gov.au/reports/australias-health/australias-health-2016/contents/summary>

³⁰ Centre for Urban Research, RMIT <https://www.rmit.edu.au/research/our-research/enabling-capability-platforms/urban-futures>

³¹ Astell-Burt, T., Feng, X., Mavoa, S. et al. Do low-income neighbourhoods have the least green space? A cross-sectional study of Australia’s most populous cities. *BMC Public Health* 14, 292 (2014) <https://doi.org/10.1186/1471-2458-14-292>

Across metropolitan Melbourne, for example, 15% of the municipality of the City of Melbourne is public open space³² and 9.9% of the City of Boroondara³³, whereas only 5.3% of the City of Greater Dandenong. For new Greenfield communities that are to be developed on the growing edge of Melbourne, it is proposed there will be roughly 20% open space.³⁴

Equity is not only related to socio-economic status. Disability, as well as gender and cultural issues need to be addressed. Community consultation can help reveal specific needs and deficiencies, as well as being a vehicle for raising awareness among the community, as well as policymakers.

Management of Green Space

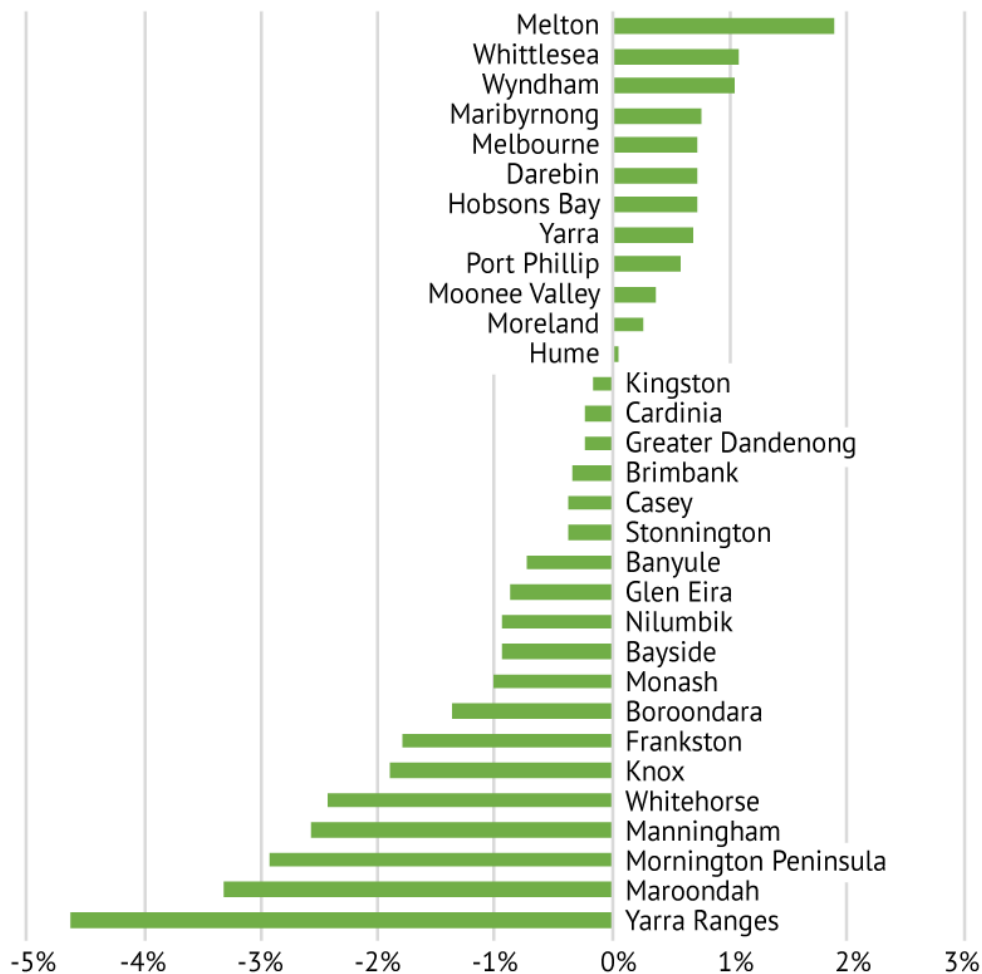
A study under the auspices of the Clean Air and Urban Landscapes Hub (CAUL), CSIRO, RMIT and the University of Western Australia showed that Melbourne lost 2000 hectares of green space between 2014 and 2018.³⁵ This included shrubs and trees on private land and in public parks, as well as streetscapes. Among the reasons identified were loss due to changed climatic conditions, such as drought and heat stress, housing development and ageing stock. There was a wide variation across the Metropolitan area as shown in the following table:

³² City of Melbourne Open Space Strategy <https://www.melbourne.vic.gov.au/community/parks-open-spaces/Pages/open-space-strategy.aspx>

³³ City of Boroondara Open Space Strategy <https://www.boroondara.vic.gov.au/planning-building/planning-controls-and-policies/open-space-strategy>

³⁴ Victorian Planning Authority. Six fast facts about Greenfields communities. <https://vpa.vic.gov.au/greenfield/more-information/greenfield-6-fast-facts/>

³⁵ Centre for Urban Research, RMIT. Urban Vegetation Cover Change in Melbourne 2014-2018. July 2018 <https://gleneira.files.wordpress.com/2019/07/urban-vegetation-cover-change.pdf>



Source: ABS urban centres and localities

Local government comparison of tree cover changes 2014-18 in urbanised areas

There are now many projects aiming to ameliorate the situation. Building on the research of the 2017 report by RMIT *Where should all the trees go?*³⁶, its successor *Where could all the trees be?*³⁷ is due to be released in October 2020. These studies provide up-to-date information about mapping the tree canopy and the optimum location for placement to help reduce heat and improve drainage.

In addition, the *Which Plant Where* research at the University of Western Sydney for Green Spaces Better Places offers information about tree species that are more tolerant to drought and rising global temperatures and therefore more suitable for a drier and warmer future.³⁸

³⁶ Centre of Urban Research, RMIT. *Where should all the trees go?* 2020 https://2020vision.com.au/media/162691/wsattg_combined-lr.pdf

³⁷ *Where could all the trees be?* 2020 benchmarking research. <https://www.greenespacesbetterplaces.com.au/news/where-could-all-the-trees-be-2020-benchmarking-research-in-progress/>

³⁸ *Which Plant Where?* <https://www.greenespacesbetterplaces.com.au/news/how-adaptable-are-common-urban-tree-species-under-drought-conditions-press-release-which-plant-where/>

The Greening the West initiative is a partnership between 23 organisations, including Councils, Victorian government agencies, such as VicRoads and Parks Victoria, RMIT, industry, and community groups, including indigenous members.³⁹ The project proposes a strong health focus, as well as addressing economic development, the environment and planning, stating that:

*Greener urban environments can offer low cost preventive strategies to improve community health, reduce heat stress, increase amenity and foster social cohesion.*⁴⁰

It aims to develop and revitalise green spaces across the western suburbs by:

- increasing green space by 25% by 2030 and doubling tree canopy in the west by 2050
- providing access to quality green space within 400-500 metres of houses in the district
- increasing tree canopy cover to improve connectivity between open spaces and creating urban habitat cover
- maximising sustainable water supplies for green spaces, with a 25% increase in alternative water by 2030
- improving the health and well-being of residents.

All forms of greening, large and small, are included in the brief, from pot plants to carparks and waste spaces, to nature strips, roof tops and nature reserves.

The projects include planting 1 million trees and the Greening the Pipeline Project, that will revitalise the 27-kilometre Main Outfall Sewer from Brooklyn to Werribee, thus connecting communities and providing opportunities for exercise and relaxation.

Other environmental infrastructure projects and planning already in place

The City of Knox has developed a *Principal Pedestrian Network* in collaboration with the Department of Economic Development, Jobs, Transport, and Resources. Characteristics such as generous footpaths, shade and weather protection, seating and priority over other transport modes at intersections have been incorporated to help promote walking and to give Council a strategic tool for lobbying the Government, especially VicRoads, when negotiating transport issues.⁴¹

Extensive mapping of the options for walking to shops, schools, health-care centres and open spaces was done. A high level of access to large open spaces within one kilometre from home, in addition to closer and smaller open spaces was able to be demonstrated. Importantly, education about transport has been linked to the project. There are Active Transport Committees at schools, and promotion of local walking groups.

³⁹ Greening the West. <https://greeningthewest.org.au/about/>

⁴⁰ Greening the West <https://greeningthewest.org.au/wp-content/uploads/2014/08/Greening-the-West-Strategic-Plan-overview.pdf>

⁴¹ Knox Principal Pedestrian Network June 2017.

https://www.knox.vic.gov.au/Files/Plans/Knox_Principal_Pedestrian_Network_Final_Report_web2.pdf

By contrast, when Melburnians were restricted to an hour of exercise daily during the COVID-19 lockdown, surveys showed that 135,000 homes, or about 340,000 people, had little or no access to parks within the five-kilometre range that was the permissible distance from home.⁴²

In 2018 the **City of Darebin** surveyed whether households had access to an open space precinct within 500 metres of their homes across the municipality. The result showed that 7.4% did not meet this benchmark.⁴³

The City of Darebin has a rating of VHHEDA of 0.5 on the Heat Vulnerability Index and a higher proportion of medium and high-density dwellings than metropolitan Melbourne overall. In 2019, after community consultation, the Council endorsed its *Breathing Space* plan to improve the quality, as well as the amount of public open space. The residents living in areas of high population density were considered to have a higher need as less private open space was available for them.

Plans to upgrade the quality of the open spaces included seating, lighting, shade trees and planting, accessible toilets and paths that would allow a wider range of people to use the space. The Council proposed that this initiative could be funded if the open space levy paid by developers were to be increased from 5% to 10%. A higher levy would ensure better health outcomes for all residents but authorisation rests with the Victorian Planning Minister and a decision is still pending.

The City of Moreland has a rating of 1 on the VHHEDA index. It is highly urbanised, and has a high proportion of older residents, who are considered to be at higher risk during heatwaves. Measurements showed that during heatwaves most parts of the municipality were four to seven degrees warmer than rural areas nearby.⁴⁴

The Moreland Urban Heat Island Effect Action Plan 2016/2017- 2025/2026 was prepared in collaboration with the community and experts from industry, Monash and Melbourne Universities. Implementation strategies ranged from refurbishment of buildings to energy-saving initiatives, including a transition to electric vehicles. The Tree Finder tool⁴⁵ was offered to encourage residents to plant suitable species around their homes and, in addition, the Council undertook to plant an additional 5,000 trees each year. Priority was given to hot spots where greater vulnerability was likely, such as pedestrian and bicycle precincts, and playgrounds.⁴⁶

⁴² Centre for Urban Research, RMIT. Urban Vegetation Cover Change in Melbourne 2014-2018. July 2018 <https://gleneira.files.wordpress.com/2019/07/urban-vegetation-cover-change.pdf>

⁴³ Breathing Space – the Darebin Open Space Strategy. September 2019. <https://www.yoursaydarebin.com.au/33984/documents/119864>

⁴⁴ Moreland City Council. Moreland Urban Heat Island Effect Plan. June 2016. <https://www.moreland.vic.gov.au/globalassets/areas/esd/esd-uhie-urban-heat-island-effect---action-plan---final-draft-for-council-june-2016.pdf>

⁴⁵ Moreland Tree Finder tool <https://www.moreland.vic.gov.au/globalassets/areas/esd/esd-uhie-urban-heat-island-effect---action-plan---final-draft-for-council-june-2016.pdf>

⁴⁶ Moreland City Council. Moreland Urban Heat Island Effect Plan. June 2016. <https://www.moreland.vic.gov.au/globalassets/areas/esd/esd-uhie-urban-heat-island-effect---action-plan---final-draft-for-council-june-2016.pdf>

The City of Greater Dandenong is the most culturally diverse municipality in Australia. The 2016 Census revealed that the median weekly gross income among the residents of Greater Dandenong was the lowest of any Melbourne municipality and that 6.8% of the population were severely disabled, compared to 5.5% for the whole of the metropolitan area. In August 2020 the Council adopted *the Greater Dandenong Open Space Strategy 2020-2030*, following a community consultation. It acknowledged the *Plan Melbourne* strategy for 20-minute neighbourhoods and assessed who is using open space, for what purpose, and who is missing out. Respondents were asked to rank options for improvement. The highest priority was given to improving the quality of existing open spaces, followed by tree planting and greening of open spaces. Among the specific requests collected during the consultation were more walking paths, more exercise stations and more signage and wayfinding information.⁴⁷

The Council noted that the community's preferred form of exercise was walking, and it is aiming to improve the connection between existing trails within the region, with priority given to the suburbs with the least open space at present.⁴⁸

Connectivity between green open spaces is an important factor in promoting use according to Professor Giles-Corti and research in the United States and Europe corroborate this finding.⁴⁹ Green open spaces connecting other bike or walking paths increase participation in physical activity as well as the length of time spent exercising.⁵⁰

Ecological connectivity is another important consideration in the planning of parks and green spaces, to enhance habitat linkages along streets and between open spaces. Private gardens are also important in this respect.

While councils can regulate and actively manage the community landscape the contribution of residents needs to be valued, guided and promoted, perhaps even supported by incentives. For example, the **City of Melbourne** has developed guidelines for street gardens and provides free garden advice.⁵¹

The City of Hume was ranked as the third most disadvantaged Local Government Authority in the Melbourne metropolitan area on the 2016 Index of Relative Socio-Economic Disadvantage, a reflection of the large number of low-income, unskilled and poorly educated residents within its community.

⁴⁷ Dandenong Ordinary Council Meeting 200824 <https://greaterdandenong.com/document/33950/council-minutes-24-august-2020>

⁴⁸ Greater Dandenong Open Space Strategy 2020-2030 <https://greaterdandenong.com/document/25797/open-space-strategy>

⁴⁹ Giles-Corti B et al. Increasing Walking: how important is distance to attractiveness, and size of public open space? *Am J Prev Med.* 2005 28(2):169-76. <https://pubmed.ncbi.nlm.nih.gov/15694525/>

⁵⁰ Griffith University. Green and open space planning for urban consolidation. 2010 https://research-repository.griffith.edu.au/bitstream/handle/10072/34502/62968_1.pdf

⁵¹ City of Melbourne. Gardens for Wildlife. <https://www.melbourne.vic.gov.au/community/greening-the-city/urban-nature/pages/gardens-for-wildlife.aspx>

A VicHealth survey across Victoria in 2015 showed that the City of Hume had a larger proportion of residents who did not engage in any physical activity during the week compared with the rest of Victoria (30.5% compared with 18.9%). There were also fewer people who engaged in physical activity on four or more days each week compared with the average for Victoria (33.9% in Hume as compared with 41.3% for Victoria). The three most popular non-organised physical activities nominated by the active residents were walking (46.9%), jogging or running (12.6%), and cycling (7.1%).⁵²

The City of Hume has a VHHEDA Index rating of 0.5, which makes it one of the most vulnerable areas of Melbourne for the adverse effects of heatwaves and heat stress. Being on the western edge of the city it is undergoing rapid change. Between 2016 and 2026 the population is predicted to grow by 37% and the proportion of people older than 65 by 50%. In 2019 the Council developed a comprehensive emergency *Heat Health Plan*⁵³ and is in the process of reviewing the *Hume Health and Well-being Plan*, as it is required to do every four years. This will initiate an open space strategy. Given that the City of Hume is a Greening of the West partner it is surprising that there is little information available on its website at present about any of the issues related to this project. There does not appear to be a holistic approach to health and environmental issues by the Council, which is of concern, in view of the disadvantages conferred by the low socio-economic status of the community and its rapidly expanding elderly population.

By contrast the **City of Wyndham**, another collaborator in the Greening of the West has undertaken several community consultations to help develop the *Wyndham Pedestrian and Cycle Strategy*. This has grown from an earlier *Integrated Transport Strategy* including an Active Transport Strategy.

The City of Boroondara has undertaken several place-making projects, inviting the community to contribute to the reimagining of local spaces. There has been a high level of participation in sharing ideas and options.⁵⁴

COVID-19 – impetus for change?

The impact of COVID-19 has brought a heightened awareness of illness and health measures, both physical and psychological. The restrictions imposed to help contain the spread of infection have been especially tight in Melbourne. Exercise has been one of the four reasons for leaving home. The increase in daily exercise that has resulted could be a catalyst for long-term change in behaviour if there are supportive programs and infrastructure.

⁵² City of Hume VicHealth Indicators Survey. 2015. https://www.vichealth.vic.gov.au/-/media/VHIndicators/Interface/Vic161_Hume_indicator_v5.pdf?la=en&hash=E23BBA41E740E3D95FD6FD5C8A3002F034203ABE

⁵³ City of Hume Heat Health Plan. January 2020. <https://www.hume.vic.gov.au/Your-Council/Our-City/Council-Plans-Reports-and-Policies/Council-Strategies-and-Plans/Heat-Health-Plan?>

⁵⁴ City of Boroondara. Placemaking. <https://www.boroondara.vic.gov.au/about-council/projects-and-major-works/placemaking>

Bicycle Network has measured a three-fold use of recreational bike paths during the pandemic. However, it advises that there are inadequate facilities to cope with the rapid change and says that more connected, accessible and attractive spaces are needed. It is proposing that all three levels of government join forces to build pop-up bike lanes and encourage cycling.⁵⁵

An online poll of 1,000 Victorians, including 771 in Metropolitan Melbourne, in June 2020 by VicHealth assessed attitudes and behaviour about travel before and during the COVID-19 restrictions:

- 76% of the overall sample indicated they would like local councils and the Victorian Government to adapt infrastructure to make walking and cycling safer.
- One-third said that inadequate lighting was a deterrent to walking more.
- Two-thirds said that they would be more likely to use bikes for transport if bike lanes were separated from the road.

The *Victorian Cycling strategy 2018-2026* advocated pilot trials of inexpensive buffer materials to test proposed changes to road infrastructure, with subsequent review to assess their efficacy.⁵⁶

Some Councils, including City of Moreland, City of Yarra and City of Melbourne have been spurred by the pandemic to construct bike lanes, install zebra crossings and reduce road speeds. The Municipal Association of Victoria (MAV) is urgently calling on the Victorian Government for assistance, requesting delegation of the powers for road adaptation, and for funding for the necessary infrastructure.⁵⁷ This request is also backed by over 100 medical and public health experts, including Doctors for the Environment Australia.⁵⁸ Most Councils when surveyed by MAV and VicHealth had plans to improve walking and cycling infrastructure within the next 12 months, but 80% said that funding was an obstacle.⁵⁹

Conclusion

Attention to urban design, urban planning and infrastructure, needs to occur with health as a priority, alongside environmental and economic considerations. Neighbourhoods that support an active transport and recreational lifestyle for all can bring an economic dividend, with support for local business, a healthier population and reduced health costs.⁶⁰

⁵⁵ VicHealth. Footpaths and bike lanes key to active transport post coronavirus. 27 August 2020. <https://www.vichealth.vic.gov.au/media-and-resources/media-releases/footpaths-and-bike-lanes-to-help-active-travel>

⁵⁶ Analytics and Policy Observatory. Victorian cycling strategy 2018-28: increasing cycling for transport. January 2018. <https://apo.org.au/node/131516>

⁵⁷ The Conversation. Physical distancing is here for a while. 29 April 2020. <https://theconversation.com/physical-distancing-is-here-for-a-while-over-100-experts-call-for-more-safe-walking-and-cycling-space-137374>

⁵⁸ <https://cdn.bicycles.net.au/wp-content/uploads/2020/04/200422-PublicHealthLetter-cycling-walking-covid-australia.pdf>

⁵⁹ Municipal Association of Victoria. Councils call for funding support to increase walking and cycling opportunities. August 2020. <https://www.mav.asn.au/news/councils-call-for-funding-support-to-increase-walking-and-cycling-opportunities>

⁶⁰ Heart Foundation. Blueprint for an active Australia 2019. <https://www.heartfoundation.org.au/Activities-finding-or-opinion/physical-activity-blueprint>

Urban greening plays an important role in liveability, making our suburbs more attractive and more comfortable, as well as helping to mitigate climate change. While councils can regulate and actively manage the community landscape the contribution of residents also needs to be valued, guided and promoted.

Particular attention is needed with respect to access to open space and the health inequalities experienced by those on the lowest rungs of the socio-economic ladder. Affirmative action, including assistance with funding, is needed to help redress the gap. Infrastructure alone is not the complete solution, but it is nonetheless a critical component alongside raising community awareness through consultation and education.⁶¹

Plan Melbourne 2017-2050 outlines collaboration across government departments and other sectors of government. Local Councils can pin-point areas of need and help drive projects, but collaboration offers a wider scope, as in the Greening of the West project and the City of Moreland's response to heat mapping.

⁶¹ Astell-Burt T et al. Do low-income neighbourhoods have the least green space? A cross-sectional study of Australia's most populous cities. BMC Public Health 2014;14:292.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4005631/>