



Urban greening for a healthier west





Note: The focus of Greening the West is Melbourne's six western municipalities: Brimbank, Hobsons Bay, Maribyrnong, Melton, Moonee Valley and Wyndham. The following information has been taken from the Greening the West Strategic Plan. The strategic plan along with a full list of references is available for download from greeningthewest.org.au

What is Greening the West?

Greening the West is a regional initiative that aims to deliver positive health and social outcomes in the western suburbs of Melbourne through urban greening. It is driven by a steering committee consisting of the following partners:

- City West Water
- Brimbank City Council
- City of Melbourne
- City of Melton
- City of Moonee Valley
- City of Yarra
- Department of Environment and Primary Industries
- Department of Health (Vic)
- Friends of Lower Kororoit Creek
- Hobsons Bay City Council
- Hume City Council
- LeadWest
- Maribyrnong City Council
- Melbourne Water
- Parks Victoria
- Regional Development Australia
- Urban Development Institute of Australia
- VicRoads
- Western Water
- Wyndham City Council
- Yarraville on the Nose Community Group

Greening the West seeks to inspire the implementation of urban greening in all forms, from pot plants to rooftops, walls, nature strips, private backyards, car parks, sporting fields, streetscapes, waterways, parks, community gardens and nature reserves.

Our vision:
To enable sustainable,
liveable and healthy
communities through
urban greening.







What are the driving forces?

Greening the West builds on several important agendas, including **preventive health, economic development, environment and planning**, all of which are key to a sustainable city. It is supported by the Australian Government and the Victorian Government through the Office of Living Victoria, Parks Victoria, Department of Health and Department of Environment and Primary Industry, as well as by the local councils and a wide range of state organisations, including three of Melbourne's water corporations: City West Water, Western Water and Melbourne Water.

Notably, since the matter of urban vegetation goes hand in hand with that of irrigation, Greening the West also concerns the development of **more advanced water management**. City West Water has in recent years been at the forefront of the promotion of alternative water sources, and a number of projects that will supply alternative water for irrigation are already underway.

City West Water's Integrated Water Cycle Management Strategy outlines the potential of future integration of new water cycle management measures to **enable a healthy, liveable and prosperous Melbourne**. Factors such as **climate variability, population growth and trends in water use** were analysed in order to deliver a **diverse, resilient and robust supply system** that incorporates recycled water and harvested stormwater.



Why are we focusing on the west?

While the characteristics of the western municipalities are diverse, they face similar challenges with regard to **health and wellbeing**, **the environment** and **the economy**. Urban greening can provide a low-cost alternative in addressing all of these broad issues. In exploring the issues and opportunities outlined on the following pages, it should be noted that the express priority of Greening the West is the health and wellbeing of residents.





Health and wellbeing

Greener urban environments can offer low-cost preventive strategies to **improve community health, reduce heat stress, increase amenity and foster social cohesion**. Lifestyle-related disorders, heat stress, environment-related illness and mental health issues pose a significant burden to Australia. The economic costs of this burden go beyond the immediate treatments of diseases, extending to loss of productivity, unemployment and insurance costs; and the social impacts are immeasurable.

Lifestyle-related diseases

Almost 60 per cent of Australians aged 15 and over do not do enough physical activity to benefit their health, and the ramifications of this collective inertia are immense. Obesity alone is estimated to cost the nation around \$58 billion per year.

This is of particular concern in the west, where levels of physical inactivity, obesity and type 2 diabetes exceed the state average.

Improving the quantity and quality of urban green spaces within close proximity to residents can assist in promoting physical activity. Street trees with broad canopy cover offer shade and amenity that may lead residents to utilise active means of transport.

Heat-related illness

Heatwaves are responsible for more Australian deaths than any other natural disaster, and projections indicate that the annual number of days above 35°C is likely to increase, from the nine days currently experienced in Melbourne to up to 21 days by 2070. Whilst heatwaves can affect anybody, demographics show that the some vulnerable segments of the population in Melbourne's west are at high risk, with large proportions of very young (0-4 year old), older people (65+), as well as a high percentage of people with disabilities.

Thoughtfully placed vegetation can provide cooling through shading and evapotranspiration, the evaporation of water from within leaves. Evapotranspiration is a very cost- and energy-efficient means of temperature regulation. The microclimate surrounding plants can provide significant relief to people during heatwaves.

Mental illness

One in three Australians will suffer from depression or anxiety at some point in their lives, making mental illness Australia's leading cause of non-fatal illness. It is also the largest contributor to the disability burden in Victoria, costing the state an estimated \$5.4 billion a year through healthcare costs and the associated impacts on workforce participation and productivity.

Research indicates that there is a clear correlation between quality green space and low distress. People who visit green, open spaces generally reap a wide range of benefits, including improvements in mood and lower levels of anxiety, stress and depression. Greener urban environments also create opportunities for many of the interactions that build social cohesion within a community.

Environment-related disorders

Thanks to changes in car and manufacturing technology, air quality has improved noticeably over the past few decades. Diesel emissions are however on the rise in urban areas, and their impacts on health include respiratory disorders, strokes, heart attacks, adverse birth outcomes, neurotoxicity and cancer.

Planting vegetative barriers will assist in filtering and capturing the diesel particulate matter, thereby reducing residents' exposure to these toxic emissions. In this regard, targeting transport corridors will be of special importance.

2 Environment

Urban greening provides a range of ecosystem services such as **temperature regulation, air quality improvements and carbon-dioxide storage** as well as **improved habitat and stormwater and catchment benefits** that assist in creating a truly liveable city.

Climate change mitigation and adaption

Urban greening can help slow global warming by absorbing carbon dioxide. Decreasing the use of cars, air conditioners and heaters, will also reduce emissions of greenhouse gases. However, in order to cope with the extended droughts, increased heatwaves and intense storms, urban greening needs to be carefully planned, planted and maintained. When correctly managed, green space will then not only thrive, but also protect the community from the wind, flooding and heat events that are likely to occur due to the changing climate.

Waterway and bay health

The great potential of water-sensitive urban design is becoming progressively more evident. For instance, urban vegetation can slow and divert stormwater flows to reduce erosion and other structural flood damage as well as remove sediments and pollutants before the water reaches the bay or is used for irrigation.

Increased vegetation for habitat

Many flora and fauna species in the west have been lost or are threatened due to urban sprawl and roadways, and whole ecosystems have been destroyed or fragmented. Strategic planting of appropriate mixes of plant species can improve natural habitat, promote biodiversity and create the migration corridors necessary to ensure the genetic health of existing wildlife populations.

Population growth and urban development

Melbourne's western suburbs are growing rapidly; the project area is expected to house an additional 250,000 people in the coming years and become home to over 1 million people by 2021. Low-density estates with inadequate public transport make the car the key mode of travel to workplaces, services and shops. Victoria also has the largest house sizes in the world where there is often little to no room for private gardens. Green open spaces are also commonly replaced by roads, houses and car parks, which increases the size of the urban heat island and makes for a poor microclimate and biodiversity as well as increased electricity consumption. Future city planning should therefore include the provision of (Hobsons bay) shaded walkways, reducing the distance between homes and green space, improving the quality and diversity of open space and encouraging greening in private space.



Economy

Many of the social and environmental benefits of green infrastructure have been known for some time. It is less well known that urban greening also creates wealth through higher property values and increased retail expenditure as well as reducing energy and stormwater costs.

Reduced energy costs

Recent increases in residential electricity prices are largely due to investments made to cope with increased peak demand, and studies show that urban greening can reduce the load on utilities by lowering temperatures between 6 and 12 degrees. Urban greening can have significant effects on temperatures and energy use throughout a city, and local effects can be very drastic, with major savings on electricity as well as added protection of critical infrastructure from UV damage, thermal expansion and melting. As a guide, California's city trees have been estimated to save \$500 million in electricity costs alone.

Higher property values and retail expenditure

The green attractions of an area can have significant impacts on the value of real estate. One study saw an investment in street trees increase the value of adjacent houses by 9 per cent. Similarly, consumers have been found to be willing to pay 12 per cent more in retail precincts with more street trees.

Reduced contamination and retrofitting costs

By harnessing stormwater as a resource rather than regarding it as a liability, integrated water management can reduce erosive stormwater flows and prevent contaminated runoff from entering waterways. This approach provides a low-cost solution with many co-benefits. New York City calculates that they will save \$2.5 billion by investing in green water-sensitive urban design rather than using traditional solutions.



What do we hope to achieve?

The Greening the West steering committee has set clear goals and targets to achieve the long-term vision of **sustainable, liveable** and **healthy communities**.

1

Maximise urban greening

- Double tree canopy cover in the west by 2050
- Green space to be **increased by 25%** by 2030

2

Improve quality and functionality of green space

- Ensure quality and **well-designed green open space** for all communities

3

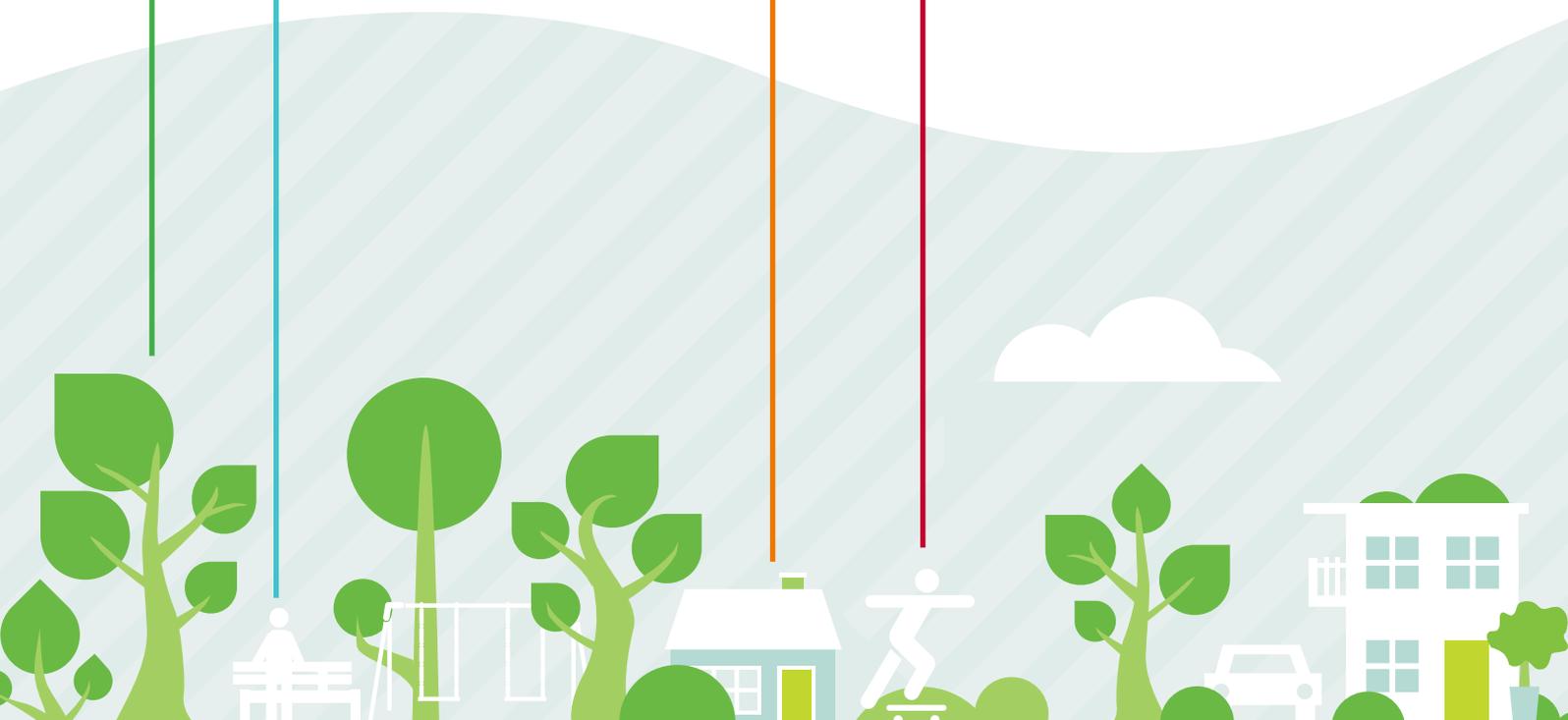
Increase the use and interaction of residents in green space

- All residents to have access to quality **green space within 400 – 500 metres from their home**
- Enhance the range of facilities to **maximise use and participation**
- Improve tree canopy cover to promote **connectivity between urban places**

4

Improve the health and social wellbeing of residents

- Improve the **health indicators** of the west



5

Showcase the economic and intrinsic value of urban green space

- Create a business case for each green space project

6

Improve environmental quality

- Ensure quality and well-designed green open space for all communities

7

Advocate green spaces to all levels of government and key stakeholders

- Annually showcase five Greening the West projects
- Increase engagement and investment from stakeholders and government bodies
- Lobby all levels of government and stakeholders to maximise greening outcomes
- Each council to establish a tree protection overlay

8

Maximise sustainable water supplies to establish and maintain green space

- Identify opportunities for alternative irrigation of green space
- 25% increase in supply of alternative water for green space by 2030



What are the challenges?



Finance

The return on investment cannot be measured using conventional means. By employing recently developed assessment tools, Greening the West will lead the way in encouraging greater private investment in urban greening.



Planning

New houses are very large in relation to the lots they occupy, resulting in minimal private green space, often with the absence of trees. If we are to see more green backyards, we need to encourage developers and home owners to value trees and green space as an asset.



Limited knowledge

There is still much to learn about appropriate vegetation for the various environments in the west. Important questions include adequate soil moisture for healthy and sustainable vegetation growth; risks associated with pests and diseases; and the long-term accumulation of contaminants in soils, particularly in stormwater retention and tree pits in new urban developments



Collaborative issues

A number of well-intentioned urban greening projects are currently being undertaken in isolation from each other, but only cross-border collaboration between local governments and private-sector stakeholders can ensure optimal outcomes of urban greening. Building a collaborative culture is key to the success of Greening the West.





How are we going to succeed?

To overcome the challenges and achieve the targets set out, Greening the West will be guided by four strategic directions:

Direction 1

Plan for community health & wellbeing

A holistic approach to planning will be undertaken to ensure public open spaces are accessible, functional and provide cool spaces for passive and active enjoyment.

Direction 2

Advocate for policy & institutional change

Advocacy for greater levels of funding for urban greening will form part of the ongoing agenda of Greening the West, with special emphasis on maintenance budgets. Green space must be properly cared for in order to yield optimal results.

Direction 3

Communicate, connect & educate

Greening the West will create a public conversation on valuing our green assets beyond their aesthetic worth alone. This will be done through traditional mass communication as well as through demonstrations of urban greening in action.

Direction 4

Promote collaboration & secure commitment

Cross-council-border collaboration is key to the success of Greening the West. It will bring a wide range of benefits, including increased influence and economies of scale as well as shared access to technical experts, knowledge and monitoring and management systems.

What is next?

With the vision *“to enable sustainable, liveable, healthy communities through urban greening”*, an immediate focus of Greening the West is to educate both stakeholders and the public that the environmental and aesthetic values of trees are surpassed by less obvious advantages relating to health, wellbeing, social cohesion and economy.

Spreading knowledge will pave the way for the investments required to reach the targets set out by Greening the West and ensure that any measures taken are appropriate to the challenges posed by the natural environment of the west.

For more information and to download the Greening the West Strategic Plan, please visit greeningthewest.org.au



