

**URBAN FOREST
STRATEGY
MAKING A GREAT
CITY GREENER
2012-2032**



CITY OF MELBOURNE

4. PRINCIPLES & STRATEGIES

4.3.1 Increase canopy cover

Canopy cover is a key criterion by which we measure the urban forest's ability to produce benefits for the community and the environment. Large canopied trees provide greater environmental and health benefits than smaller canopies – depending on the scale, up to 75% more benefit per tree.

Increasing the number of trees within our municipality is important, but we must plan properly to achieve the greatest environmental and health benefits. It is more important to improve the extent of canopy cover across the municipality than to simply increase the number of trees. Analysis of aerial imagery combined with canopy cover modelling suggests that the municipality can accommodate a significant increase in canopy cover.

Identification of new opportunities for tree plantings is central to increasing canopy cover throughout the municipality. A great proportion of the City of Melbourne's public space – and by far the most intensively used space – is in streets, providing the most important targets for increasing canopy cover. In precincts such as North and West Melbourne with only a 20% canopy cover, streets are an obvious priority for tree planting.

A recent study on the urban heat island effect in Melbourne recommends that one of the most cost efficient and effective mitigation strategies is to ensure a minimum canopy cover of 30% with a leaf area index (a measure of shade density) of 5.3 within the municipality. Thermal images taken of the city identify particular areas that absorb more heat than others and highlight the cooling effect of canopy cover and green spaces. This mapping also locates areas that are a high priority for increasing canopy cover.⁴⁹

The City of Melbourne in partnership with Monash University is monitoring microclimate conditions at streetscape level beneath different tree canopy configurations. Weather stations have been installed in Bourke Street in the CBD, and Gipps and George Streets in East Melbourne. Data from these stations highlights temperature differentials between shaded and open streets. When used in conjunction with thermal imagery, this helps to identify opportunities to increase canopy cover where it will provide thermal comfort benefits to people during periods of heat. This data also provides guidance around spatial patterns of canopy distribution.⁵⁰

The private realm occupies 68% of the area of the municipality and can therefore contribute significantly to the urban forest. However, a study conducted by three Melbourne councils suggests that private realm trees have reduced in number considerably since the 1970s. This is due largely to infill development, competing land uses and increasing land prices. Protection and enhancement of private realm vegetation is therefore an important component of the urban forest strategy.⁵¹

Modelling for the development of linear transport routes into medium-rise high density corridors demonstrates that development pressure on the surrounding suburbs can be alleviated. These lower-density suburbs can act as the 'green wedges' for increased green infrastructure, both in streetscapes and in private gardens.⁵²

TARGET: The City of Melbourne's canopy cover will be 40% by 2040.

Actions:

- Conduct a thorough spatial analysis to identify areas of low canopy and include selected areas in planting programs for the next 20 years.
- Provide the best planting conditions possible for new trees to ensure maximum canopy potential, including below ground spaces and water.
- Select the most appropriate vegetation type and species for each location given spatial and climatic constraints and neighbourhood character.
- Ensure that the overall urban design for places ensures that spaces and streets are best designed for our urban forest and for people.
- Review and update Council's Tree Precinct Plans which detail the locations and species for increasing canopy cover.
- Encourage increased canopy cover where possible in the private realm.
- Promote the retention of open space on private land, especially in areas and in configurations that allow for the planting of canopy trees.
- Ensure that management regimes over the urban forest are adaptive to reflect its dynamic nature.