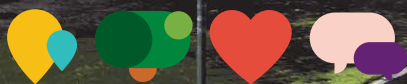


Valuing green infrastructure and public places

CASE STUDY



How a local council improved tree canopy in Moreland, Victoria

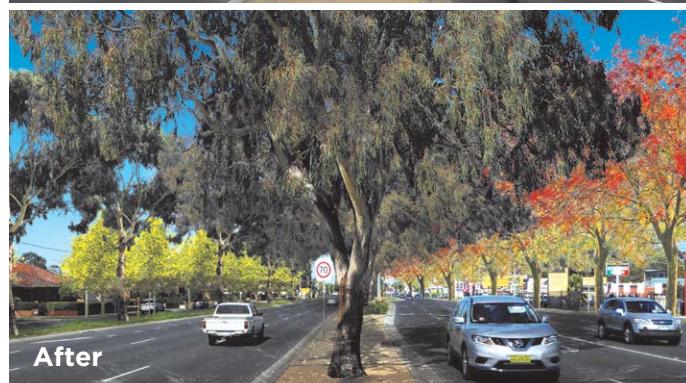
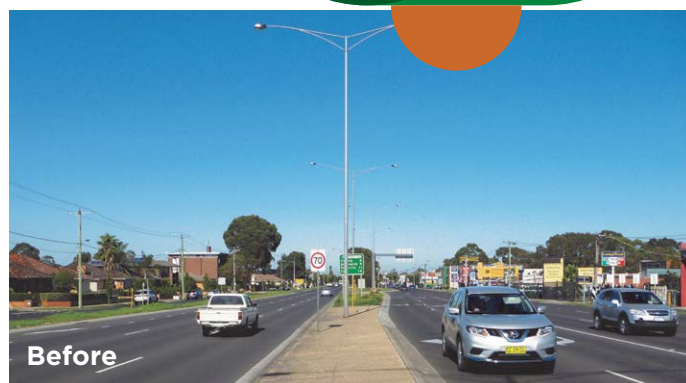
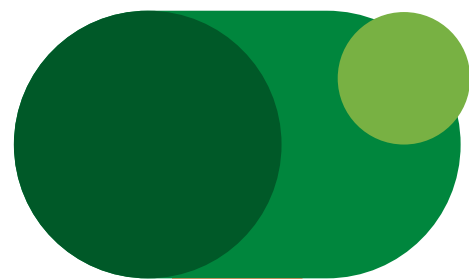
The challenge

The Moreland City Council area experienced a decline in overall tree canopy cover from 15.6% in 2005 to 14.2% in 2016, despite an extensive planting program to increase vegetation and canopy cover. This was largely due to a 24% drop in canopy cover on private land as a result of accelerating urban development, combined with an extended dry period affecting the area.

At the same time, the community was calling for more action to improve the amenity of streetscapes and suburbs, increase vegetation cover and reduce the impact of the urban heat island effect – which would require a significant increase in green infrastructure investment.

Most new tree planting opportunities in the area were in the public realm, which placed the fiscal burden of meeting community expectations on canopy cover squarely with the council – requiring reprioritisation of an already tight budget.

Resident groups and the broader community wanted to understand the benefits that flow from the council's investment in canopy cover.



Sydney Road before and after tree planting (predictive visual)

How they did it

To understand the benefits of improving canopy cover, Moreland City Council estimated the amenity and environmental value of existing trees in the area by:

- **mapping the existing tree canopy across the area**, by undertaking 2 separate methods, including the i-Tree Canopy tool and the Kaspar method, to better understand variation at a suburb level and understand future canopy potential.
- **identifying the air pollution benefits** of Moreland's street trees, including the fact that every year, street trees remove more than 2.5 tonnes of ozone and 2.3 tonnes of air particulates.
- **determining an annual dollar value** for the environmental benefits of trees, including current environmental functions, longevity and overall performance of the forest using the i-tree eco tool. The software uses local hourly air pollution and meteorological data.
- **estimating the amenity value** using the City of Melbourne's existing amenity value formula. This formula is based on an international value that relates to the trunk diameter, which is weighted according to several considerations including species, aesthetics, location and condition.



Gaffney Street before and after tree planting (predictive visual)

The analysis found that Moreland's existing 60,000 street trees were worth an estimated \$271 million in amenity value and provided the community with \$361,073 worth of environmental benefits annually. This value did not account for many other benefits of the urban forest that were not measured (such as tree canopy's contribution to habitat and biodiversity), due to limited data availability.

Outcome

Moreland City Council were able to use the benefit values they estimated to develop and implement their *Urban Forest Strategy*, which will guide sustainable planning, planting, management, resourcing and protection of vegetation across the area. The heart of the strategy is a focus on expanding tree canopy cover by increasing the number of street trees in the area from 58,702 to 65,960.

Valuing green infrastructure and public spaces

Green infrastructure and public spaces are essential for liveability, and provide social, economic, environmental and cultural value to communities.

The NSW Government is creating a sector-specific framework to help better value these important assets. The framework will be used to help prepare economic evaluations, including cost-benefit analysis, to ensure a consistent valuation approach is applied in future projects.

To find out more visit:

dpie.nsw.gov.au/valuegreenpublicspaces

All photographs used in this case study are credited to Moreland City Council.

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