

CITIES FOR TOMORROW

Befriending Trees to Lower a City's Temperature

A program in Melbourne, Australia, that tracks every public tree — and even gives each an email address — is seen as a way to manage climate change.

By Peter Wilson

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MELBOURNE, Australia — High in the branches of a 122-year-old Dutch Elm, two workers in a bucket crane framed by the city's skyline used a chain saw to slice large limbs from the top of the tree.

Office workers strolled past, seemingly enjoying the afternoon sunshine of Flagstaff Gardens, the city's oldest public park, while the workers carried out their "reduction pruning" aimed at controlling the tree's bulk to help improve its vitality and extend its lifespan.

It is one of the most time-tested forms of tree maintenance, but at ground level the workers' supervisor, Jake Shepherd, added a high-tech wrinkle.

Mr. Shepherd, a 27-year-old Englishman, touched a yellow circle on a portable electronic device. The circle was within a map of the park that is part of the city's elaborate tree database and it instantly turned green to register that this specific elm was back in top shape.

Across town in the Queen Victoria Gardens, another crew recorded the results of its own maintenance work so that it also could be entered into the database, a crucial part of an innovative forest management scheme that has attracted attention around the world because of its successful focus on community engagement.



An arborist performed "reduction pruning" on a mature Eucalyptus Botryoides tree in Queen Victoria Gardens in Melbourne, to help improve its health and extend its life. Alana Holmberg for The New York Times

New York, Denver, Shanghai, Ottawa and Los Angeles have all unveiled Million Tree Initiatives aimed at greatly increasing their urban forests because of the ability of trees to reduce city temperatures, absorb carbon dioxide and soak up excess rainfall.

Central Melbourne, on the other hand, lacks those cities' financial firepower and is planning to plant a little more than 3,000 trees a year over the next decade. Yet it has gained the interest of other cities by using its extensive data to shore up the community engagement and political commitment required to sustain the decades-long work of building urban forests.

A small municipality covering just 14.5 square miles in the center of the greater Melbourne metropolitan area — which sprawls for 3,860 square miles and houses 5.2 million people in 31 municipalities — the city of Melbourne introduced its online map in 2013.

Called the Urban Forest Visual, the map displayed each of the 80,000 trees in its parks and streets, and showed each tree's age, species and health. It also gave each tree its own email address so that people could help to monitor them and alert council workers to any specific problems.

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That is when the magic happened.

City officials were surprised to see the trees receiving thousands of love letters. They ranged from jaunty greetings — “good luck with the photosynthesis” — to love poems and emotional tributes about how much joy the trees brought to people's lives.

Members of the public were subsequently recruited to help with forestry programs such as measuring trees and monitoring wildlife, and politicians were left in no doubt about how much Melburnians valued their trees.

City of Melbourne councilors of all political stripes agreed on the ambitious goal of increasing their tree canopy cover to 40 percent of public land by 2040, from 23 percent in 2012.

Their plan is on track after a decade and has been gradually replacing many of the grand European elms and London plane trees that shade the city's widest boulevards, moving instead to indigenous species such as eucalypts and other trees better able to cope with climate change.

Abigail Brydon, a 40-year-old project manager for a telecommunications firm, echoed the widespread affection for the city's greenery as she took a walk past the elm that was being worked on by Mr. Shepherd and his team.

“I have always loved the city's trees and parks but more than ever during lockdown,” she said, explaining that she was halfway through her twice-daily “sanity check” of a 15-minute walk around the park.

“A lap of the park clears my head, then I can go back inside and get back to work,” she said. “There are even more people now than there used to be sitting under the trees and wandering around, and Covid hasn't stopped the city from keeping the park fantastically maintained.”

Lemon-scented gum trees were planted in 2016 along Flinders Street, on the edge of Melbourne's central business district. The native trees replaced mature London plane trees. Alana Holmberg for The New York Times

A walk around the central business district showed a series of recent plantings, including a spindly stand of lemon-scented gums on Flinders Street; new “green” tram tracks on Southbank; and a row of 7-foot camphor laurels near the theaters on Exhibition Street.

Melbourne's outbreak of talking to trees was noticed far and wide, particularly among urban planners such as Gillian Dick, who helps to plan the forests of Glasgow.

Ms. Dick planned to pay tribute to the Melbourne experience on March 30 when she addresses a global online event on urban ecosystems, the Nature of Cities festival, about ways to encourage city dwellers to appreciate their local trees.

“In Glasgow we have set up a website and a Twitter account to capture community stories about what the city's trees mean to people, to give us some background information for developing our forest and woodland strategy,” Ms. Dick explained in a telephone interview.

“It's no good planting millions of trees if you are not going to have the community buy-in to sustain the long-term support you need to make a success of those trees, and if you look around the world at that sort of community engagement with trees, Melbourne's experience is just amazing.”

“They accidentally discovered the latent desire of people to say how much the trees meant to them.”

Cathy Oke, a former Green Party city councilor who played a pivotal role in Melbourne's tree policies, said data and evidence-based decisions had been crucial since the city revamped its forest strategy in 2012 after discovering that a 12-year drought had left 40 percent of its trees declining or dying.

Many of its most impressive trees were planted in large batches as far back as 1875, meaning that whole blocks of trees would die at the same time and need to be replaced by immature trees unless they were steadily replaced in advance.

“We learned from what other cities were doing, especially New York with its planting of a million trees,” said Dr. Oke, a researcher in urban sustainability at the University of Melbourne.

A landscape crew planted trees along Sheridan Avenue in the Bronx in 2008 as part of New York City's million trees project started under the administration Mayor Michael R. Bloomberg. Rob Bennett for The New York Times

The program has evolved to focus not only on trees but also on biodiversity including flowers, insects and native animals. Rohan Leppert, a councilor who now leads the forest program, says the city will soon launch an online "biodiversity visual."

"In all these things, we are bending over backward to do hyperlocal consultations to find out what trees people want in their own streets because these sort of changes work best when you do them *with* the community, not *to* the community," Mr. Leppert said.

"We are determined to keep at it for the long term because keeping the city cool by planting trees is the single most cost-effective thing we can do to mitigate against climate change," he said, noting that a healthy tree canopy can reduce a city's temperature by 4 degrees to 6 degrees Celsius, or 7.2 to 10.8 degrees Fahrenheit.

James Fitzsimons, the director of conservation and science for the Nature Conservancy Australia, said the city of Melbourne's successful forest strategy had not been matched across the wider metropolitan area, but attempts were underway to get a more united approach to forestry.

"The big challenge is that there is talk about Melbourne doubling its population size by 2050, so housing is becoming much denser and we're losing native vegetation," he said.

Gregory Moore, an expert on ecosystems and forests at the University of Melbourne, said another major problem was that planning laws controlled by the state of Victoria did little to protect greenery on private land, allowing development that contributed to the annual loss of 1.5 percent of canopy cover across the greater metropolitan area.

"A good tree cover can save you an enormous amount in health spending alone by reducing deaths in heat waves and getting people outside and taking more exercise," he said. "Politicians and bureaucrats seem to think that all of these benefits from planting trees are simply too good to be true, but I think they will eventually get the point when economists keep telling them how much money they will save."