

An Unknown Urban Forest

by Evan Mason

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It is often said that parks are the lungs of the city. But just as parks help clean the air and cool the city, so do an often neglected resource: the thousands of privately owned front and back yards of the city's rowhouses and apartment houses. The tools to green the city are right under our noses — and [PlaNYC2030](#) and most of New York City's citizens are missing them.

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While Mayor Michael Bloomberg's PlaNYC highlights and relies on the substantive and undeniable environmental benefits of publicly owned open space, privately owned public space is barely even on the city radar screen. As environmental concerns move front and center and urban open spaces are increasingly threatened, these back yards suddenly appear to be a valuable resource that we can no longer afford to disregard.

Environmental Benefits of Open Spaces

A [groundbreaking 1996 study](#) conducted by the U.S. Forest Service found that New York City trees remove over 2,000 tons of air pollution a year and store over 1.3 million tons of carbon annually. Think of trees actually cleaning the air, mitigating the pollution from cars and coal burning industries. These trees are the heavyweights of the global and the local environment — to overlook their value is foolhardy and short-sighted.

Maintaining and planting trees also cools the ambient air during the hot summer months and is an effective mitigation strategy to impact the urban heat island effect — a term used to convey the fact that urban, asphalt-laden centers can be as much as 10 degrees hotter than their surrounding, greener areas. If trees have the ability to make areas cooler, use of air conditioning is likely to decrease where trees are more abundant.

Other environmental benefits of tree planting and open spaces relate to the fact that permeable surfaces allow rain water to percolate slowly into our water table, instead of flooding our aging water treatment system — of particular concern because when the city's drains are overwhelmed by a quick influx of heavy rains, [untreated sewage overflows](#) into our waterways.

It is slowly seeping into our collective urban consciousness that cities cannot look to the Amazon forests only to combat global warming. We too must become ever more active stewards of our environment. Just as more of us are recycling, using compact florescent light bulbs and eschewing plastic bags (slowly!), public discourse should zero in on ways that encourages everyone — tenants, landlords and private property owners — to maximize the environmental benefits of existing open spaces.

New York City Back Yards

While “city backyards” might seem like an oxymoron, our city has a lot of them -- even in Manhattan. Wherever 19th century rowhouses survive — Harlem, the upper east and west sides, Park Slope, East New York and many other areas — significant, but hidden open spaces composed of adjoining back yards flourish. On the Upper West Side alone, these rear yards total over 100 acres of open space — that is about one-eighth the size of the entire Upper West Side and almost 14 percent of the size of Central Park.

If we were to add up all the open spaces in private back and front yards in the entire city, we would find that there are many hundreds of acres of privately owned open spaces that are overlooked by individuals and city planning and environment officials alike — and we can reason that these back yards have similar environmental benefits as the trees and open spaces in our parks. The lungs of the city are comprised of publicly and privately owned trees and open spaces, but air that is cleansed is shared by us all.

Soon, we might find out just how much these open spaces contribute to the city's climate.

[LANDMARK WEST!](#), an Upper West Side community based preservation advocacy group, is partnering with [Columbia University Center for Climate Systems Research](#) and the City University of New York's [Institute for Sustainable Cities](#) to analyze the micro-climates in sample rowhouse blocks on the Upper West Side. This project will quantify the environmental benefits of rowhouse back yards. Just as it was important for the city to study publicly owned trees and open spaces before it devised its PlaNYC environmental initiatives, it is important to collect solid scientific data as a foundation on which to develop public policy with regard to privately owned open spaces, to maximize the potential environmental good that these back yards offer the city.

The findings of the LANDMARK WEST! partnership could also determine whether and to what degree these back yards reduce ambient air temperature, alleviating the urban heat island effect, and reduce air pollution, improving air quality. Other useful information, such as measuring permeable surfaces, will be gathered to calculate how much rainwater these backyard surfaces divert from New York City's water treatment system, thus reducing its burden (and associated costs) during peak rains.

PlaNYC Environmental Initiatives

If the city is serious about planting one million trees by 2030, it must also encourage preservation and maintenance of existing trees, be they on private property or public land. City agencies should not approve building permits without considering the environmental effects and all associated costs of demolition, and it should not approve rear yard additions and other building projects that destroy trees or reduce permeable surfaces without considering the associated environmental and economic costs.

Otherwise, the city will spend millions planting street trees in the neighborhood front yards, while trees in backyards are destroyed or die because property owners have not embraced the cultural shift that will be needed to maximize the environmental benefits of these hidden open spaces. A sustained commitment to the principles PlaNYC 2030 and extensive coordination within and between our many city departments and public and private citizens will be critical if the goals are to be realized.

Unfortunately, this coordination and commitment is already coming up short. Even the Parks Department is violating some basic tenets of PlaNYC. According to the [New York Times](#), the department is seeking to cut down 14 trees at Union Square; on Randall's Island, an unspecified number of trees were felled to make way for sports fields and countless trees were also destroyed (some say more than 400) to make way for the new Yankee Stadium. Not only were these trees uprooted and killed, but the newly installed fields are made of synthetic turf, a material which increases temperatures markedly, violating yet another central tenet of PlaNYC. Making the internal PlaNYC contradictions even more apparent, asphalt was installed to replace pavements instead of using permeable pavement surfaces, as forward-thinking urban planners are doing. While there are myriad political

impediments to some of the city environmental initiatives, some initiatives involve less money but a lot more coordination, commitment and imagination.

The city must assist community based projects — such as the LANDMARK WEST! Project — to quantify the environmental benefits of trees and open spaces in the city's back yards, to shed light and provide guidance to green these overlooked back areas. Imagine the possibilities if we nurture each little piece of open space we already have. The city will be a healthier — and a more pleasant — place to live.

Evan Mason is Special Projects Coordinator at LANDMARK WEST!, a non-profit community group working to preserve the best of the Upper West Side's architectural heritage from 59th to 110th Streets between Central Park West and Riverside Drive.

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