



## Silva Cells in Greenwich, CT 4 Years Later – Case Study

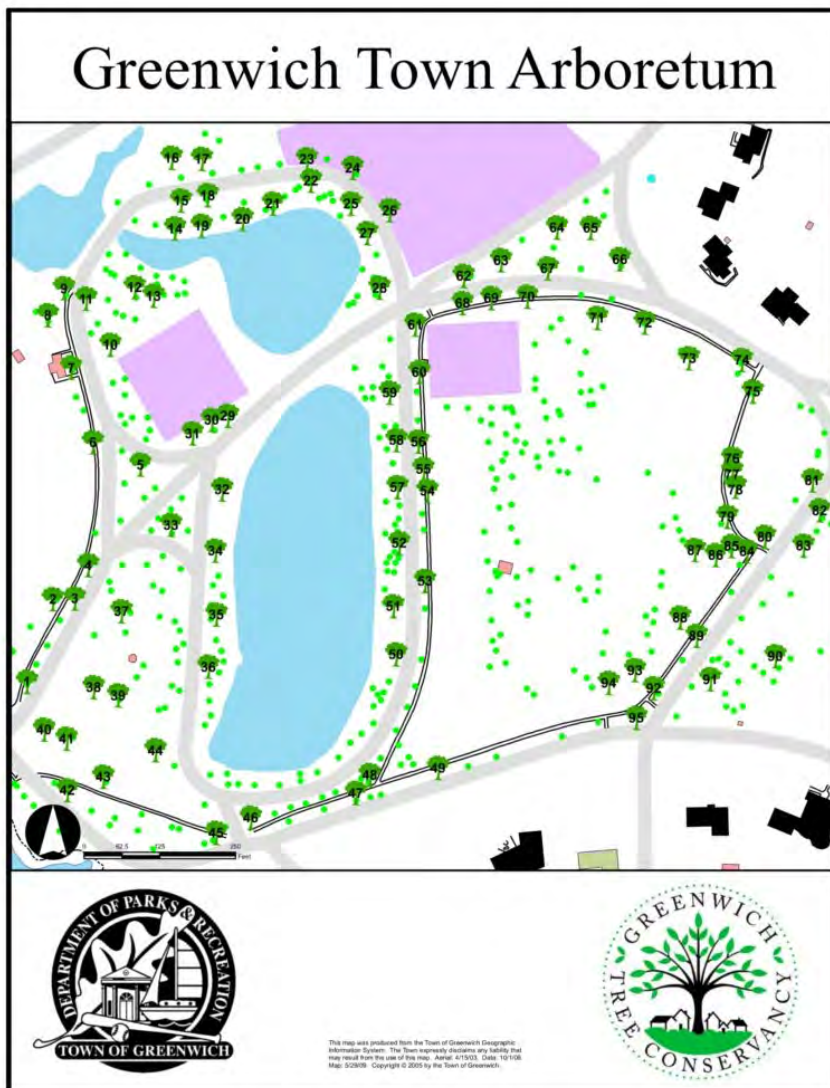
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Yesterday marked the 4-year anniversary of a Silva Cell installation in Greenwich, Connecticut. The results are rewarding. On June 21, 2016, 42 Silva Cells, using approximately 1050 ft<sup>3</sup> (30 m<sup>3</sup>) of soil, were installed along with two Silver Linden (*Tilia Tomentosa*) trees on Greenwich Avenue, in Greenwich, Connecticut.

The town has its own tree conservancy, '[Greenwich Tree Conservancy](http://greenwichtreeconservancy.org/)' (<http://greenwichtreeconservancy.org/>), and their mission is to preserve and enhance the trees of

Greenwich, in part by documenting the trees within the town, and tracking the trees with our Silva Cell's since they were first planted and installed. Their site offers educational resources in tree care, advocacy, and getting together for 'tree parties'. The Greenwich Town Arboretum that the conservancy oversees is an accredited Level II Arboretum. Here is a snapshot of just some of the trees the conservancy is actively managing. They have plans to label trees along Greenwich Avenue where the Silva Cell Lindens are planted soon.



On June 21, 2016, Greenwich Tree Conservancy Executive Director, **JoAnn Messina**  
**(<https://www.linkedin.com/in/joann-messina->**

33608811/) and our Vice President and project manager, Al Key (<https://www.linkedin.com/in/al-key-5b420a8/>), watched the installment of 42 Silva Cells and the two trees at the intersection of Greenwich and Railroad Ave.



*Taken by Al Key on June 21, 2016. Silva Cell installation with soil added via bucket loader, not swept in.*

The street trees are just outside the newly constructed building at 415 Greenwich Avenue. The building architects kept the Victorian style of the distinctly Greenwich aesthetic, which would not be complete without large trees. Silva Cells were included in the construction process thanks to the design team at [Eric Rains Landscape](#)

**Architecture (<https://www.ericrains.com/>)**. Using Silva Cell alleviated the planning obstacles that design teams face.

*"Street trees are among the most difficult planting scenarios that Landscape Architects undertake, but when you get it right, the rewards for the effort are very valuable in terms of urban canopy and its co-benefits like urban heat island reduction, carbon sequestration, and especially real estate value enhancement." -Eric Rains*

Al Key visited the site a few months after construction, in the midst of the driest spell during the summer of 2016 and found that one of the Lindens had died of transplant shock. That tree was replaced and is a bit smaller than the one on the right. Typically, the establishment phase of a transplanted tree's life takes one year for every inch of caliper. High quality loamy soils in Silva Cells have helped shorten this timeline, so they can start contributing to the co-benefits which the Town of Greenwich and **Eric Rains** envisioned 4 years after install.



*August 24, 2016: 2 months after construction. Two Silver Linden  
(Tilia Tomentosa)*



*Two Silver Linden on Greenwich and Railroad Ave. Serving as shade for the restaurant goes and other Greenwich community members. Taken 6/18/20.*

As a result of COVID-19 the town has blocked the bottom portion of Greenwich Avenue to car traffic and converted the sidewalk and part of the road into outside dining, creating space for benches and walkable streets.

In an interesting counterpoint, right around the corner on Railroad Avenue the trees on the right of the photo below were planted at the same time as the Silva Cell trees.



*2 Trees with Silva Cell (left) and 2 trees without Silva Cell (right)  
Photo Credit: JoAnn Messina, June, 18 2020*

The difference? The Railroad Ave trees did not have Silva Cells installed. JoAnn Messina noted, “The trees on Railroad Ave, didn’t use Silva Cell, just look at the comparison!” In fact, **Eric Rains** confirmed these went in with structural soil, so this is this is another example which correlates with the work of **Dr. E. Thomas Smiley at the Bartlett Tree Laboratory and in Conjunction with James Urban, FASLA and others** (<https://www.deeproot.com/blog/blog-entries/research-for-the-greater-good>).

The success of the trees in four years has been a thrill to see. DeepRoot is pleased to see this project progress so successfully. In addition, we are grateful for partner and advocacy groups like the Greenwich Tree Conservancy that help bring success to downtown canopies, arboretums, and help to document the success of a tree’s story.

## Installation Summary:

**Number of Silva Cell** – 42 (2x)

**Amount of Soil volume:** 1050ft<sup>3</sup> in shared rooting volumes

**Amount of Root Barrier:** 26 Panels

**Type of trees:** Silver Linden (Tilia Tomentosa)

**Type of Project:** Street trees

**Application Type:** Commercial

**Project Designer:** [Eric Rains Landscape Architecture](https://www.ericrains.com/)  
(<https://www.ericrains.com/>)

**Project Contractor:** Gateway Development Group

**Installation Date:** 06/21/2016

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