

Update to the Houston Barnard Streetscape Plan

Prepared for The Garden Lovers Club

by

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Introduction

The Houston Barnard Neighborhood is in Brighton, NY. The area includes Ambassador Drive, Sandringham Road, Trevor Court Road, and Esplanade Drive. The neighborhood was built in the 1920s and '30s and exhibits diverse architectural styles. A unique feature of the neighborhood is the streetscape tree planting of alternating linden trees and Douglas-fir trees. These historic trees are original to the neighborhood and help elevate the character of the area (see Figure 1). Their unique location, between the sidewalk and the houses rather than the more conventional location between the sidewalk and the street, helps create wide allées and grand avenues.



Figure 1. Newly planted linden trees and Douglas-fir trees in 1928 on Sandringham Road.

Remnants of the original plantings can still be seen in the neighborhood (see Figure 2). However, the remaining trees are close to 100 years old and many are showing biological and structural decline (see Figure 3). In order to maintain the trees of this historic planting, neighborhood home owners will need to play an active role in supporting the care and maintenance of the trees.

The Garden Lovers Club is an advocate for these trees. It has commissioned this report which will assess the streetscape trees and recommend ways for homeowners to maintain them and the many benefits they provide to the neighborhood. The recommendations provided are also applicable to the other landscape trees found in the neighborhood. Preserving this streetscape will benefit the neighborhood's tradition and atmosphere.



Figure 2. Mature linden and Douglas-fir trees in 2015 (from Google Street View) on Esplanade Drive near Clover Street. These trees are from the original streetscape of the neighborhood.



Figure 3. Mature linden and Douglas-fir trees in October of 2020 on Esplanade Drive near Clover Street. Note the missing Douglas-fir to the left of the driveway and the declining Douglas-fir top at the right of the photo.

2002 Inventory, Assessment, and Recommendations

In 2002, the Garden Lovers Club asked Andrew Pleninger of Urban Forestry LLC to do a sample tree inventory analysis of the streetscape and make recommendations. Mr. Pleninger found that linden trees made up approximately 29% of the population. Douglas-fir trees made up approximately 22% and “other” trees made up approximately 11%. The vacancy rate (sites where a tree could be planted) was approximately 38%. Of the lindens, 54% were in good condition, 15% were in fair condition, and 31% were in poor condition. The Douglas-firs were in worse condition with 30% in fair condition and 70% in poor condition. Based on this information, the report states the following:

“The sample inventory data has provided a picture of the current condition of the streetscape and information from which to make projections about the future condition and management needs. The thirty-eight percent vacancy rate indicates trees are being lost. The condition of the trees indicates the Douglas fir trees will be lost at a higher rate than

the lindens. As a result, time will continue to claim more trees at a faster rate. In addition, the tight spacing between the trees is accelerating losses. The Douglas fir are being crowded out by the lindens and there is competition for nutrients. Trees growing close together shield each other from damaging winds. If a tree is lost or removed, the adjacent trees are more prone to windfall or damage. This is why large gaps in the tree rows are developing in the neighborhood.”

“After a tree is lost homeowners are often planting replacement trees. As the sample revealed, eleven percent of the tree species were not consistent with the streetscape design. This will obviously continue to happen if residents are uninformed or uninterested in preserving the streetscape design.”

Recommendations made in 2002 included periodic inspections by an independent ISA Certified Arborist and planting streetscape trees consistent with the historic design. Increasing the space between plantings from 25’ to 40’ and increasing the diversity of tree species was also recommended.”

2020 Assessment

After walking the streets of the Houston-Barnard Subdivision in the spring and summer of 2020, the trends described in 2002 are still in progress. The linden and Douglas-fir plantings remain fragmented. There are fewer Douglas-fir trees. These changes can be seen between 2015 and 2020 in Figures 2 and 3 (above) where one Douglas-fir tree to the left of the driveway has been removed and another shows a dead top and severe decline in the right side of the photo. Other Douglas-firs are being further crowded out as the neighboring linden trees increase their crown size (see Figure 4) or are showing stress and decline as they age (see Figure 5).



Figure 4. A Douglas-fir tree crowded by a linden behind it. Figure 5. A declining Douglas-fir with a thinning canopy.

New trees have been planted, but the locations don’t always follow the original streetscape placement or the 2002 placement recommendation (see Figure 6). Many of the lindens that remain have structural issues like cracks and decay (see Figure 7). Some trees have clearly not been inspected in many years as indicated by broken cables and large crotches at risk of failure (see Figure 8).



Figure 6. Red maples planted in place of lindens and closer than 25' apart.

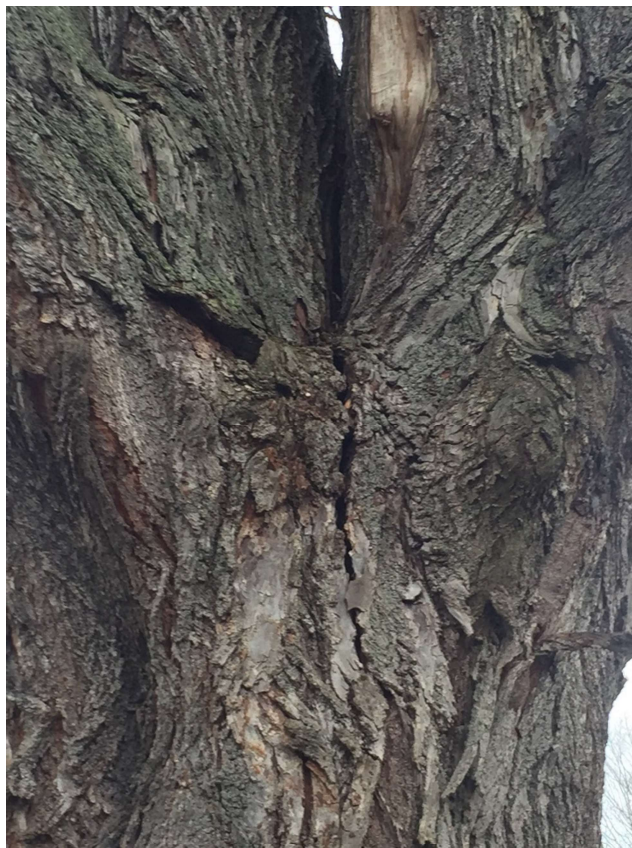


Figure 7. Cracked main crotch of a linden tree.

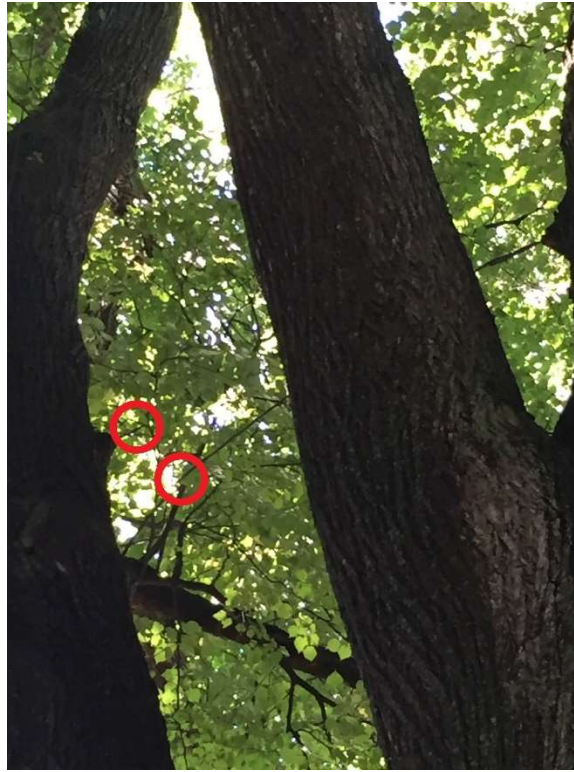


Figure 8. A broken support cable in a linden tree. The two broken ends are circled in red.

Although there are challenges, there are still many wonderful trees that can have a long future ahead of them. With proper care and maintenance, the remaining fragments of the original planting can be preserved, restored, and enhanced. Replicating the original linden and Douglas-fir planting in its entirety may not be feasible. However, the spirit and historical character can be an inspiration to the care and stewardship of the streetscape moving forward.

Recommendations

The following recommendations are not only relevant to the trees of the streetscape, but to all landscape trees.

- **Periodic health and risk inspection by an ISA Certified Arborist-** Having a tree inspected by an arborist will help manage and maintain its health and structure. Biological and structural problems can be found early and mitigated before they have a major impact on the tree (see Figure 9). Expenses will also be lowered by regular maintenance. A 3 - 5 year inspection cycle generally makes sense for a healthy mature tree. More frequent inspections may be necessary for declining or stressed trees. As Mr. Pleninger stated in his 2002 report, hiring a consulting arborist who is independent of a tree service company to inspect and make recommendations can help ensure objectivity and prevent unnecessary services. Reputable tree care companies and arborists are listed at the end of this report.
- **Support healthy soil-** Providing healthy soil is the most important part of keeping a tree healthy. In many instances, the soil doesn't need much of anything. Other times, problems like nutrient imbalances and compaction (especially from construction activity in close proximity to a tree) can stress or kill a tree. A soil test is an easy way to see what might be missing from the soil (the Cornell Cooperative Extension offers soil testing services for a modest fee). It will also be a guide as to what type of amendments (e.g. fertilizer or aeration) will be appropriate. Organic mulch is also a fantastic and easy way to help the soil around a tree. As long as the mulch is not piled against the trunk, it can benefit the soil and the roots of the tree.
- **Replant trees-** The streetscape can only be maintained by replanting trees as they decline and are removed. Replanting with the original species of linden and Douglas-fir is okay. However, increasing the diversity of species helps prevent the spread of insect infestations and diseases as well as the overall resiliency of the tree population. The following trees are suitable replacements for the linden trees: Crimean linden, silver linden, American basswood, willow oak, scarlet oak, and shingle oak. The following trees are suitable replacements for

the Douglas-fir trees: Carolina hemlock, blue spruce, white fir, and dawn redwood. Trees that have relatively large crowns at maturity (such as oaks and lindens) should be planted approximately 40' apart to provide enough room.

- **Ensure the proper planting technique and maintenance of new trees-** Many newly planted trees are given challenges from the day they are planted. Ensure that the tree isn't planted too deep. The trunk flare (where the trunk transitions outward to the roots) should be above the soil grade and should not be buried in mulch (see Figure 10). Roots should not grow in a circle. They should grow radially outward and should not girdle (i.e. cross over) the trunk. Adequate water should be provided for at least the first growing season as newly transplanted trees are often missing close to 90% of their root system. Do not add fertilizer at planting. Wait until the tree is established (one to two growing seasons) and perform a soil test first. Newly planted trees don't always need to be staked. If the tree is supported by stakes and wires, ensure the wires are removed from the tree with in one to two years (long before the wires begin to girdle the tree) (see Figure 11).
- **Structure prune young trees-** Many structural issues seen in mature trees could have been prevented with a handsaw if they were found when the tree was young (see Figure 12). A tree should be structurally pruned about 3 times between planting and medium age to establish a sound trunk and branch architecture; once at planting, once about 5 years after planting, and then again at around 15-20 years after planting (depending on species and location).



Figure 9. A beech tree on Sandringham Road in 2015 (on the left, from Google Street View) and from 2020 with what is likely an untreated phytophthora infection.



Figure 10. Mulch applied too heavily is burying the trunk flare.



Figure 11. The wires around the trunk of this tree are beginning to girdle it.



Figure 12. Two young lindens showing structural problems that should be corrected with pruning now before they become significant defects.

Conclusion

The streetscape of the Houston Barnard Neighborhood is a historic treasure. It is iconic to the area and ties the neighborhood together. The remaining fragments of lindens and Douglas-firs can be safely maintained and even somewhat restored with new plantings. Regular inspections and sound tree care practices will support the trees as they age and ensure their health and safety.

Resources

Houston Barnard History:

- Intheneighborhoodreadingmap.weebly.com/history.html
- Rocwiki.org/Houston_barnard_tract

Rochester, NY tree care companies and arborists:

- Bartlett Tree Experts, Noreen Riordan, (585) 385-4060, <https://www.Bartlett.com/locations/rochester-ny.cfm>
- J. Galiley Arbor Consulting LLC, Josh Galiley, 646-732-2883, [Facebook.com/J Galiley Arbor Consulting](https://www.facebook.com/JGalileyArborConsulting)
- Northwoods Tree Care, Brian Krawczyk, (585) 303-0278, Northwoodstreecare.com
- Monster Tree Service, Jason Beardsley, (585) 617-0564, <https://www.whymonster.com/rochester/>
- Arnold's Tree Service, Jeremy Arnold, (585) 749-7284, [Facebook.com/Arnolds Tree Service](https://www.facebook.com/ArnoldsTreeService)
- High Falls Tree Service, (585) 467-9310, highfallstreesvc@hotmail.com
- Birchcrest Tree and Landscape, (585) 288-3572, Birchcrestlandscape.com
- Davey, (866) 506-5342, <https://www.Davey.com/local-offices/rochester-tree-service/>