

Tanglewood-Hillsdale Tree Inventory

Summary

Between June 28 and October 15 Tanglewood-Hillsdale Community Association undertook a project to take an inventory of all the trees in the neighbourhood. This was able to get done because of a 16-week Canada Summer Jobs Grant.

The neighbourhood has seen significant losses to its tree population due to natural weather events and the emerald ash borer and currently has a tree canopy that is the third lowest in the City of Ottawa.

Over 2500 trees were counted and assessed for their species, size and health. That data was put together in a Google My Map to visualize the tree canopy in the area. The report identifies species that are doing well, ones that are doing poorly and areas with a higher or lower density of trees.

Going forward it is recommended that the neighbourhood develop a tree planting tree committee and set annual tree planting goals in order to maintain and increase a healthy tree canopy. It is also important that the community association educates homeowners on the importance of planting trees through the City's Trees in Trust program and partnering with community organizations in order to increase the number of trees in the neighbourhood.

Neighbourhood

The area of Tanglewood-Hillsdale is a community bounded by the CN rail tracks on the north, West Hunt Club Road on the south, Roydon Place/Merivale Road to the east and Woodroffe Avenue to the west. It is part of Ward 9, Knoxdale-Merivale in the City of Ottawa. According to the Ottawa Neighbourhood Study, the Tanglewood sector of the neighbourhood was built between 1968 and 1986, while the Hillsdale portion would have been predominantly built in the 1980s. Statistics Canada data from 2016 says 4725 people live in Tanglewood. Tanglewood-Hillsdale has two large parks, Medhurst and Tanglewood Park, both have play structures, fields and courts. The neighbourhood also has a community centre with various activities and services at both the east and west side. Towards the eastern side of the community, Hydro One has a large generating station. There are three walking/bike paths that go through the hydro corridor and border the forest at West Hunt Club Road.

It may be fair to say that many of the older trees in the neighbourhood were likely planted at the time of the subdivisions development. However, the neighbourhood has seen significant damage to its tree population. The ice storm of 1998 caused some trees to succumb to the weight of all the ice that fell. Those still surviving today may have been permanently damaged. The Emerald Ash Borer is an invasive species that arrived in the City of Ottawa in 2009 and led to over 50,000 tree removals. Tanglewood-Hillsdale was not immune to seeing large numbers of trees damaged and needing to be cut down. Then in September 2018, the southern portion of the neighbourhood was hit by a tornado. It caused many mature trees to be toppled over by the wind and some others needing to be cut down after the fact because of damage.

According to a ‘Tree Canopy Assessment’ published in 2019 by the City of Ottawa, City of Gatineau and the NCC the average tree canopy across all wards is 38 percent. Knoxdale-Merivale, that is the Ward Tanglewood-Hillsdale, is a part of the third lowest tree canopy in the City of Ottawa at 25 percent.

Tree Inventory

The purpose of a tree inventory is to collect information on tree health, species and size. This helps maintain a healthy tree canopy and ensure trees are planted and maintained properly. By completing a tree inventory it is the hope that Tanglewood-Hillsdale would maintain and increase a healthy tree canopy.

Methodology

It was necessary to print a large map of the area. I counted trees on the front yards first. I started with the streets on the northwest side of the neighbourhood and moved east. Went down Medhurst and again moved east from the southwest portion of the neighbourhood, finishing with Woodfield. Once all the streets trees on front yards were counted I proceeded to collect data from trees in the parks, along the bike paths and finally in the forest. Using tools like Google Maps I then observed what houses may have trees in the backyard. Once I observed those houses, I knocked on their door in order to request permission to survey their tree.

Once at the tree I collected its location, type of species, measured the circumference in order to extract the diameter and took some basic notes on the health condition of the tree. All this information was recorded and put into an inventory sheet.

Findings

A total number of 2506 individual trees were counted and assessed in front yards, back yards, parks and pathways. The findings below will break down the statistics of the trees by street they are planted in, species, size and health.

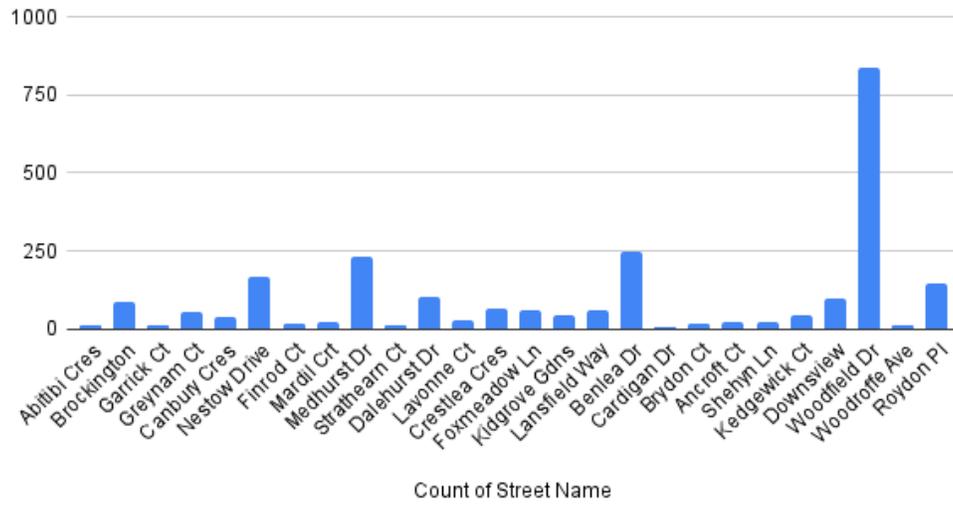
I also conducted a broad observation of the forest in the south of the neighbourhood between West Hunt Club and the southern bike path. However, all the statistics that will be presented below do not include the forest since it is a very basic sample of the trees in that area. The topic of the forest will be addressed in a separate section.

Streets

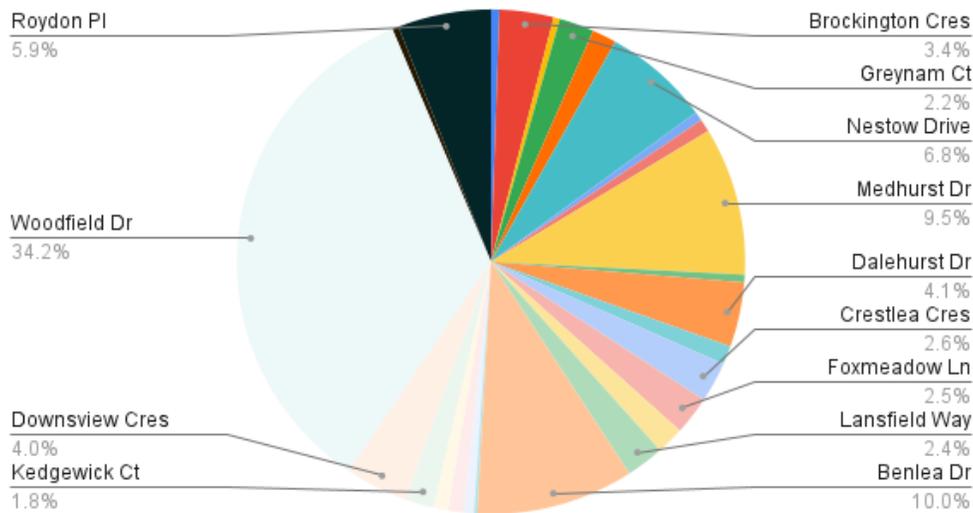
Woodfield has the most trees with 704, Benlea is next with 245, then Nestow with 166 and Roydon and Medhurst both have 145 trees.

Naturally, the streets with the least amount of trees are those courts or blocks that are the smallest. In some instances, the rail tracks and bike path/hydro corridor provide many backyard trees for houses. This can be the case along Brockington, Canbury, Nestow, Lansfield, Benlea and Downsview.

Count of Street Name



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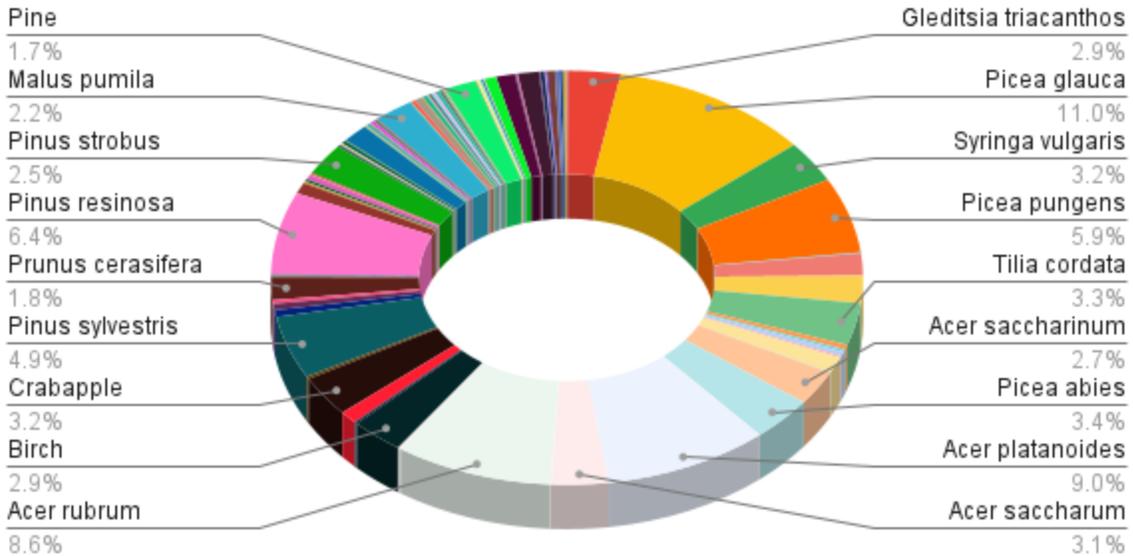


Species

Of the various species in the neighbourhood, *picea glauca* was counted the most, a total of 268 times. The other trees seen the most in the neighbourhood were *acer platanoides* (Crimson King and Norway Maple) 220 times, *acer rubrum* 211, crabapple 195 and *pinus resinosa* 156 times.

There were over twenty species of trees that were counted on very numerous occasions and commonly observed in the neighbourhood. Many of the species of tree in the neighbourhood are found often. Of course, there are some exceptions and some trees that are unique to the neighbourhood and found very exclusively.

Count of Tree Species

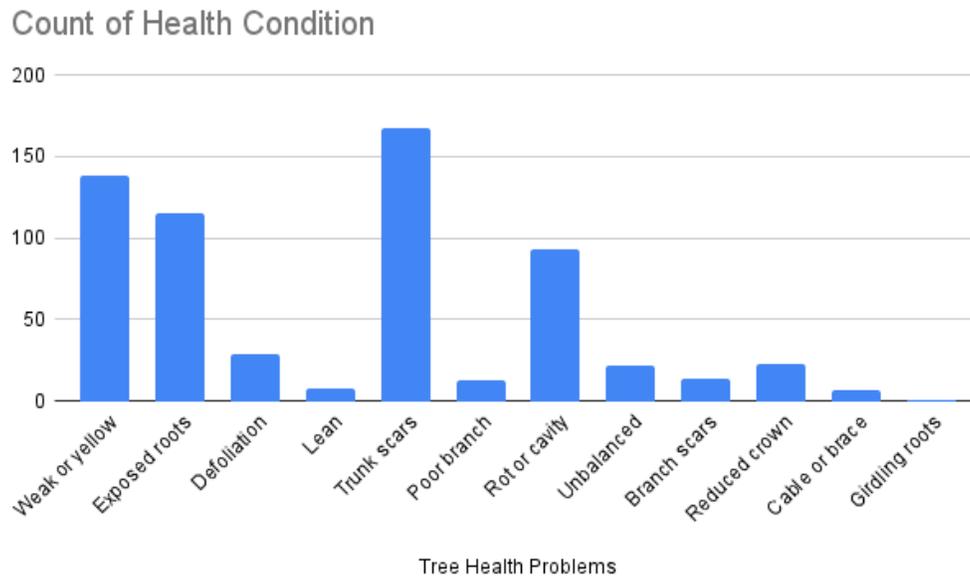


Diameter

Due to the many trees that are found in backyards, the majority of trees, 704 cannot have their diameter observed. 408 trees have a diameter at breast height of 31-40cm, 376 trees have a diameter of 1-10cm, 374 trees are 21-30cm and 225 trees have a diameter of 41-50cm.

Health Condition

From my observations, the vast majority of trees are in good condition and healthy. A total of 186 trees had observable, trunk/branch scars or poor branch attachment. Defoliation/weak foliage was noted in 157 trees and exposed roots impacted 113 trees. A rot/cavity was observed on 92 trees, 44 trees had observable issues with their crown and only 7 were impacted by a cable above or brace holding their limbs together.



Forest

A sample of the trees in the forest between West Hunt Club and the bike path was collected. This data is not overwhelming nor is it meant to provide information about every type of tree in the forest. West Hunt Club was constructed in the early mid 90s beyond the bike path. If the trees were planted it would have been time. The forest does have many poplar trees that were planted in 1967 by the Boy Scouts. The poplar trees are closest to the road. The forest also has many maple trees, they are closest to the bike path.

Species Doing Well

Tilia cordata: From my observations this tree is always very full of leaves and rarely has any issues with its trunk or rotting. It would be a good tree to continue planting.

Quercus rubra: Many of these trees are doing well. Few have observable issues. However, they do drop quite a bit of acorns and are not the most clean type of tree.

Lilac & Crabapple: These species of tree generally do pretty well. They do not get that big and for the most part do not have too many major issues. These types of trees may be good to plant along the hydro corridor because they do not get that big and won't get in the way of the hydro wires.

Species Doing Poorly

Gleditsia triacanthos: I have heard many complaints from residents about this specific honey locust tree. It gets very big and some dislike that it always seems to be dropping something. More importantly, its roots spread very far just beneath the ground. This causes damage to people's driveways and yards. On Kedgewick many of the locusts are planted and at this time many are suffering from weak foliage.

Maple: A variety of different maple trees are all suffering from rotting. Of the 92 trees that were identified with a rot/cavity, 69 of them were maple trees.

Opportunities To Plant Trees

94-90, 80-78, 20-14 Brockington front

19-23 Greynam front

60-42, 14-2 Canbury front

132-114, 110-98, 43-35 Nestow front

141-149, 144-146 Medhurst front

Kidgrove Gardens

38-30 Lansfield

16 Benlea front

Hydro corridor

94-90, 84-70, 35-25, 64-50, 10-2 Brockington back

35-45, 54-46/36-44, 1-11 Greynam back

58-36, 14-2 Canbury back

132-116 Nestow back

8-16 Mardil back

2-10, 29-35, 57-69 Medhurst back

8-1 Strathearn back

292-294, 278-276, 280 Dalehurst back

13-27 Foxmeadow back

19-5 Kidgrove back

42-30 Lansfield back

16-14 Benlea back

7, 17, 39, 53-55, 415 Woodfield back

Areas With Many Trees

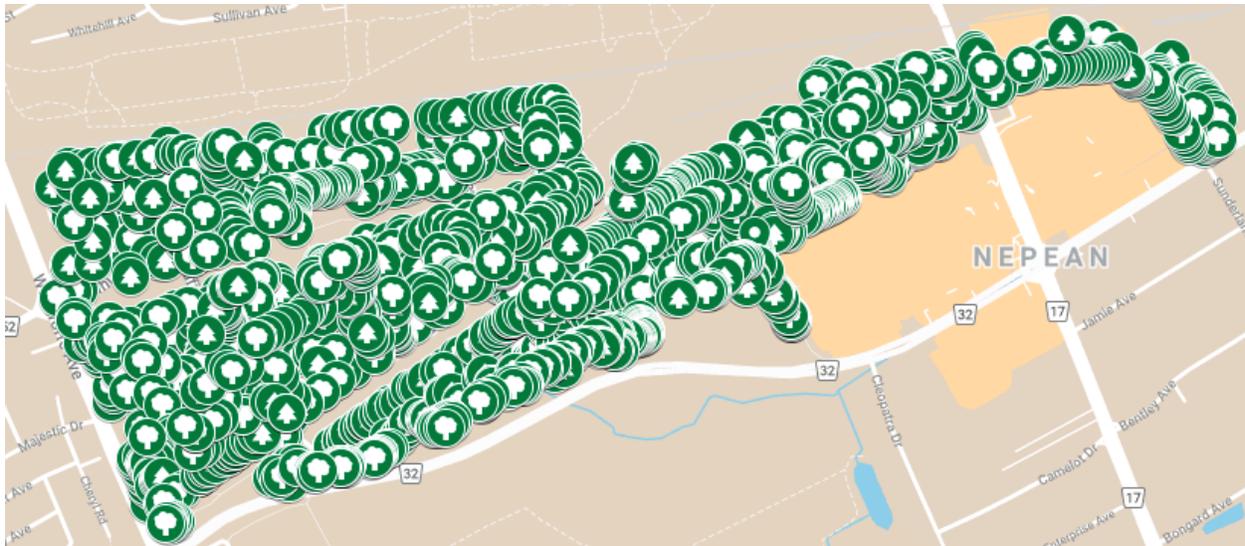
Generally the townhouse/condominium groups have many trees planted on their property. However, in some cases many of the trees planted seem to be old. The townhouses along Medhurst seem to have the most new or recently planted trees (this is likely because their trees were majorly impacted by the tornado).

Both the Medhurst and Tanglewood Park have many trees. Both of the parks also have many new trees planted. In the years to come this will increase the shade and enjoyability of the parks.

Google My Map

The City of Ottawa has a map with the species and size of trees across the city. It offers understanding of the types of trees across the city and helps ensure a healthy green canopy. I

have completed a similar project for the trees in our neighbourhood. The hope is that it helps the neighbourhood see areas with good tree coverage and areas that need improvement. It is the type of thing that can be updated regularly as trees are planted in order to provide an accurate picture of the neighbourhood's tree inventory. The map can be found [here](#).



Going Forward

With the above data the community association is able to build awareness and education surrounding the need to plant trees and actual tree planting.

Further Research

More work needs to be done on evaluating trees in backyards. There are still many trees in backyards that have not been identified. The extra step of door knocking and asking permission to evaluate a tree in the backyard is a significant barrier to getting information off the tree. The community will need to develop creative ways to get a more accurate sample of trees in backyards.

More work needs to be done on evaluating trees that have been identified as having health issues. People with more expertise would be able to provide advice on what to do with those trees that aren't doing so well and how to go forward.

Education

There is a need to increase awareness and engagement in the neighbourhood surrounding the importance of the tree canopy and having healthy trees.

City View Community Association has developed a tree committee in order to protect and renew the urban tree canopy. If Tanglewood-Hillsdale wishes to take serious action it would be useful to have a committee solely focused on planting trees, educating constituents and regenerating an aging tree canopy.

Tree Planting

The City of Ottawa has an annual tree planting goal of 125,000 new trees. In order to increase the tree canopy in the Tanglewood-Hillsdale neighbourhood it would be helpful that the neighbourhood develops its own annual tree planting goal. This would help to ensure that we continue planting new trees and increasing our tree canopy.

The City of Ottawa is committed to planting trees to enhance both streets and parks. It is recommended that the areas identified with a lack of trees see an increase in tree planting in the years to come.

The City of Ottawa's Trees in Trust program provides opportunities to homeowners who lack a tree on their City-owned street frontage to receive one for free. It is necessary that the community association makes homeowners aware of this program and encourages them to request a tree by calling 3-1-1 or by making a request [here](#).

The neighbourhood also has partnered with Ecology Ottawa in the past for their free tree giveaway event. The neighbourhood should continue to partner with this organization for their tree giveaway and in other ways to ensure the neighbourhood prioritizes keeping it green.

APPENDIX

Total # of Trees - 2506 (excluding forest) 3008 total

Abitibi - 13 total (7 front, 6 back)

Brockington - 84 total (44 front, 40 back)

Garrick - 10 total (4 front, 6 back)

Greynam - 54 total (35 front, 19 back)

Canbury - 38 total (25 front, 13 back)

Nestow - 166 total (62 front, 104 back)

Finrod - 14 total (7 front, 7 back)

Mardil - 20 total (10 front, 10 back)

Medhurst - 145 total (94 front, 51 back)

Strathearn - 12 total (10 front, 2 back)

Dalehurst - 101 total (75 front, 26 back)

Lavonne - 29 total (13 front, 16 back)

Crestlea - 63 total (37 front, 26 back)

Foxmeadow - 60 total (28 front, 32 back)

Kidgrove - 43 total (23 front, 20 back)

Lansfield - 59 total (36 front, 23 back)

Benlea - 245 total (118 front, 127 back)

Cardigan - 5 total (5 front, 0 back)

Brydon - 16 total (6 front, 10 back)

Ancroft - 24 total (4 front, 20 back)

Shehyn - 23 total (21 front, 2 back)

Kedgewick - 44 total (25 front, 19 back)

Downsview - 98 total (40 front, 58 back)

Woodfield - 704 total (402 front, 302 back)

Tanglewood Park - 131 total

Medhurst Park - 95 total

Woodroffe - 10 total

Roydon - 145 total (136 front, 9 back)

Bikepaths - 53 total

Forest - 502 total (sample)

Species of Tree (excluding forest)

Pine - 42

Picea pungens - 143

Picea glauca - 268

Picea abies - 84

Pinus resinosa - 156

Pinus sylvestris - 119
Pinus strobus - 60
Tilia cordata - 80
Tilia americana - 21
Gleditsia triacanthos - 95
Syringa vulgaris/Lilac - 84
Crabapple - 195
Prunus cerasifera - 45
Celtis occidentalis - 31
Maple - 71 (could not be identified)
Acer saccharum - 76
Acer saccharinum - 65
Acer platanoides - 220 (includes Crimson King & Norway Maple)
Acer rubrum - 211
Quercus rubra - 52
Amelanchier - 20
Birch - 72

Diameter

1-10cm - 376
11-20cm - 152
21-30cm - 374
31-40cm - 408
41-50cm - 225
51-60cm - 100
61-70cm - 43
71-80cm - 12
81-90cm - 7
91-100cm - 6
100+cm - 10
NA - 710

Health

Crown Problems - 44
Defoliation/Weak Foliage - 157
Rot/Cavity - 92
Exposed Roots - 113
Branch/Trunk Scars/Poor Attachment - 186
Cable/Brace - 7
N/A - 1775

Google My Map

<https://www.google.com/maps/d/u/0/edit?mid=1sEgGajRPOVnbj9NuNUXGdKevxSnGvCVM&usp=sharing>

Tree Counting Inventory Sheet

<https://docs.google.com/spreadsheets/d/1xN9mTQyAoPXDyQ0SILNT9jRspoAkhy4VLS2eAovSE2A/edit?usp=sharing>

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NCC Tree Canopy Assessment

http://ncc-website-2.s3.amazonaws.com/documents/FINAL_Tree_Canopy_Assessment_EN.pdf?mtime=20190923125127

Ottawa Neighbourhood Study - Tanglewood

<https://www.neighbourhoodstudy.ca/99tanglewood/>

Ecology Ottawa

<https://www.ecologyottawa.ca/treecampaign>

City View Tree Committee

<https://ourcityview.ca/tree-committee/>

City of Ottawa - trees and urban forests information

<https://ottawa.ca/en/living-ottawa/environment-conservation-and-climate/trees-and-urban-forests>

City of Ottawa - Tree Inventory Map

<https://open.ottawa.ca/datasets/tree-inventory/explore>