



The City of London's Journey: Green Infrastructure & Urban Forestry



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City of London Urban Forest Strategy *Enhancing The Forest City*



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www.london.ca



B&A Blackwell



London

London is the Forest City.

Vision

*A healthy, diverse, and extensive urban forest for
today and the future.*

Mission

Plant more, protect more, maintain better.



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Why Are We Doing This?


Major Step Towards Ensuring a Sustainable Urban Forest



2020 to 2023 Business Plan

Service: Roadway Maintenance

\$0.17	1.98%
Cost per day for the average rate payer (2020 to 2023)	Percentage of the 2020 to 2023 City of London Net Property Tax Supported Budget



2020 to 2023 Business Plan

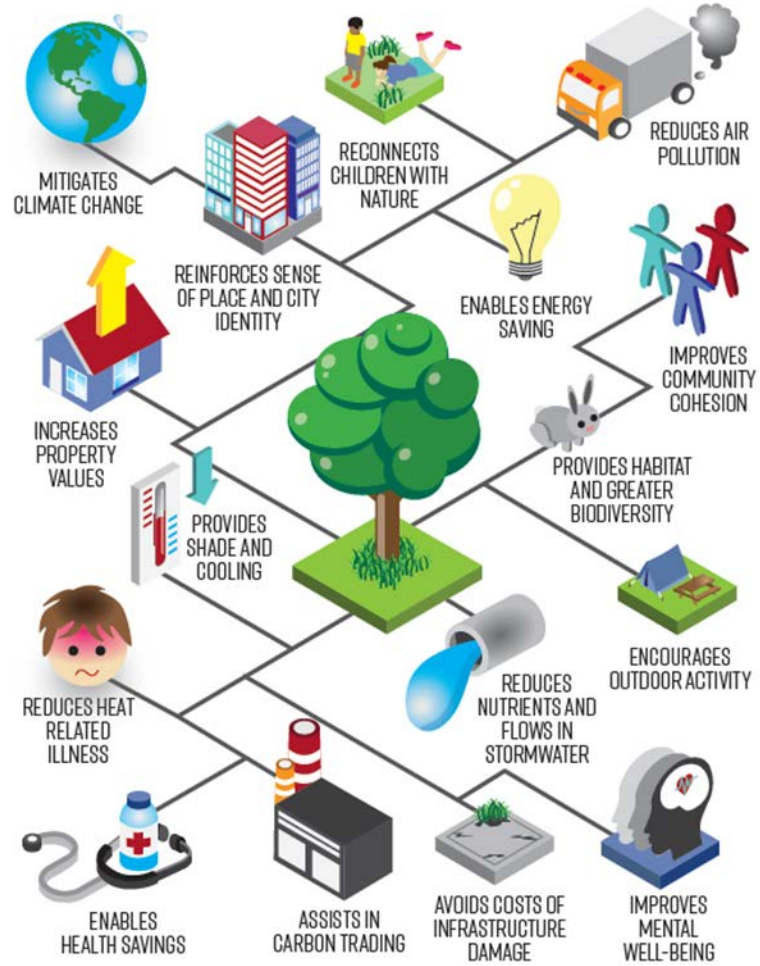
Service: Urban Forestry

\$0.07	0.76%
Cost per day for the average rate payer (2020 to 2023)	Percentage of the 2020 to 2023 City of London Net Property Tax Supported Budget



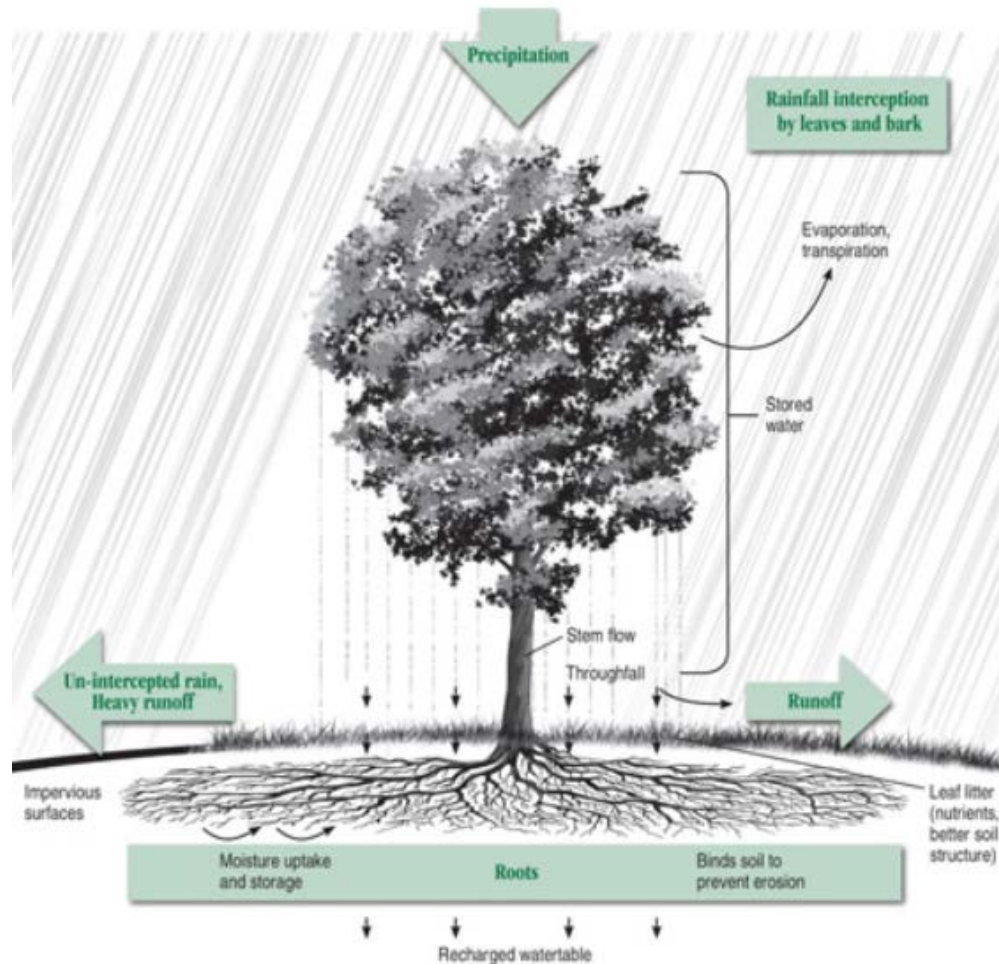
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BENEFITS OF AN URBAN FOREST



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How Can Trees Be Infrastructure?



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How Can Trees Be Infrastructure?



City of London
Dundas Place - Flex Street
Grey to Green



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What We Learned & How to Get Started Defining Trees as Assets

- **What asset information do you need?**
- What are your assets? What do you know about them?
- What is the asset replacement value?
- It is a Continuous Improvement Process



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What We Learned & How to Get Started Defining Trees as Assets

What asset information do you need?

- Do not necessarily start with completing an inventory as the first step in the process
- Look at how other assets condition has been rated and/or defined
- There are potentially things that could be captured and/or left out in the inventory work; impacting costs and time e.g., tree height

From our experience it was helpful to look at the definitions of the condition ratings in advance; tree health vs wear & tear over time

- Defined our own categories with new inventory completed in 2019 to align with CAM



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Industry Examples of Condition Rating Definitions:

5-EXCELLENT (E): no apparent health problems; good structural form

4-GOOD (G): minor problems with health and/or structural form

3-FAIR (F): more serious problems with health and/or structural form

2-POOR (P): major problems with health and structural form

1-DEAD (D): tree is dead

Excellent: Tree of possible specimen quality, unique species or size with no discernible defects.

Good: Tree has no significant structural defects or health concerns, considering its growing environment and species.

Moderate: Tree has noted health and/or minor to moderate structural defects. This tree can be retained, but may need mitigation (e.g., pruning or bracing) and monitoring post-development. A moderate tree may be suitable for retention within a stand or group, but not suitable on its own.

Poor: Tree is in serious decline from previous growth habit or dead

5-EXCELLENT: tree is without any visible symptoms

4-GOOD: no apparent problem with

3-FAIR: minor problems with

2-POOR: major problems with

1-VERY POOR: extreme problems



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What We Learned & How to Get Started Defining Trees as Assets

What are your assets? What do you know about them?

- Define & group your assets and how data will be collected
- Used information we already had existing canopy cover analysis and tree inventory
- Canopy Cover (Top Down)
 - Woodlands Size (SR)
 - LiDAR available?
- Tree Inventories (Bottom Up)
 - Life-cycle costs

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Advantages to Starting a New Tree Inventory

- Brand new slate! Set yourself up for success!
- Learn from other's experiences
- Best Management Practices (BMPs) are in place
- New technologies that make the process easier and more efficient
- More options to consider for data collection:
 - Summer Students
 - **Citizen Scientists (open data)**
 - Community Inventory
 - Consulting/Contractor



Click on image to close

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Continuous Improvement Process

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What We Learned & How to Get Started Defining Trees as Assets

What is the asset replacement value?

We considered and discussed at length prior to the release of O.Reg 588/17:

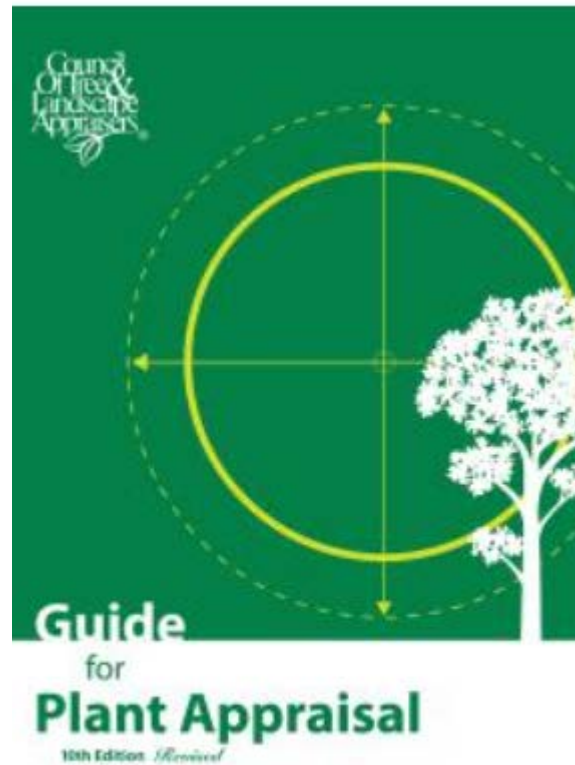
- Timber
- Real Estate
- Human Health Benefits
- Ecosystem Benefits – iTree Analysis
- Eventually ruled out as not practical
- Methods are not acceptable accounting practices
- Best Management Practices are now in place
- Recommended that municipalities use replacement methods
- What we landed on was replacement costs but uniquely for London



Skip this step!

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Guide for Plant Appraisal, 10th Edition, Revised
By Council of Tree and Landscape Appraisers



Click on image above for a larger view.





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Functional Replacement Method Trunk Formula Technique

Client name _____ Date _____ Case # _____
 Phone _____ E-mail _____
 Address _____

Subject tree
 Species _____

1. Trunk diameter* (D) _____ in. @ _____

2. Condition rating _____ %
 Health _____
 Structure _____
 Form _____

3. Functional limitations _____ %
 4. External limitations _____ %

Functional replacement tree
 Utility or benefit to be replaced _____
 Replacement plan _____

5. Trunk diameter* (D) _____ in. @ _____
 6. Cross-sectional area (line 5)² × 0.7854 = _____ in²

Replacement nursery tree
 7. Trunk diameter* (D) _____ in. @ _____
 8. Cross-sectional area (line 7)² × 0.7854 = _____ in²
 9. Nursery tree cost Source: _____ \$ _____

Calculations
 10. Unit nursery tree cost (line 9 ÷ line 8 or from RPAC) \$ _____ /in²
 11. Basic functional replacement cost (line 6 × line 10) \$ _____
 12. Depreciated basic cost* (line 11 × line 2 × line 3 × line 4) \$ _____

Additional costs
 Cleanup _____ \$ _____
 Nursery tree installation _____ \$ _____
 Aftercare _____ \$ _____
 Hardscape _____ \$ _____
 Other _____ \$ _____

13. Total additional costs* (sum additional costs) \$ _____

Total functional replacement cost (line 11 or 12 + line 13) \$ _____

Rounded \$ _____

* Diameter and cross-sectional area may be replaced with plant area, volume, or height as appropriate.
 * Apply depreciation and add additional costs if appropriate for the assignment.

1. Repair Method Direct Cost Technique - [Download File](#)
2. Reproduction Method Trunk Formula Technique - [Download File](#)
3. **Functional Replacement Method Trunk Formula Technique - [Download File](#)**
4. Reproduction Method Cost Compounding Technique - [Download File](#)
5. Functional Replacement Method Cost Compounding Technique - [Download File](#)



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What We Learned & How to Get Started Defining Trees as Assets

It is a Continuous Improvement Process

- Challenging when just starting out or trying to turn around a big ship
- CAM is still a very new process
- Plans are updated every 5 years
- Opportunity to make modifications and improvements
 - Woodland evaluation project
 - Tracking of new woodland work



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Thank-you!
Questions?