



Guelph's Private Tree Protection By-law Update



Key Issues and Options Report

Prepared for



January 2024



Acknowledgements

This report was developed with input and support from the consulting team members, and with input and guidance from the City project team members.

City Project Team

City Project Manager

- Timea Filer, Urban Forestry Field Technologist, Forestry and Sustainable Landscapes

Planning Lead

- Leah Lefler, Environmental Planner, Planning and Building Services

GIS and Technical Support

- Vadim Sabetski, Urban Forestry GIS Technologist, Forestry and Sustainable Landscapes

Communications Lead

- Michelle Williams, Strategic Communications Advisor, Strategic Communications and Community Engagement

Communications Support

- Tracy Suerich, Engagement Coordinator, Strategic Communications and Community Engagement

Consulting Team

Project Manager

- Margot Ursic, Principal Planning Ecologist and Facilitator, Grounded Solutions Services Ltd. (operating as Grounded Solutions)

Community Engagement Lead

- Amanda Kennedy, Certified Professional Facilitator, A. Kennedy Consulting Ltd.

Research and Engagement Support

- Mollie Roskies, Research Associate, A. Kennedy Consulting Ltd.

GIS, Research and Engagement Support

- Rob Aitken, Senior Ecologist and GIS Specialist, Terrastory Environmental Consulting

Senior Advisor (Urban Forestry, Arboriculture)

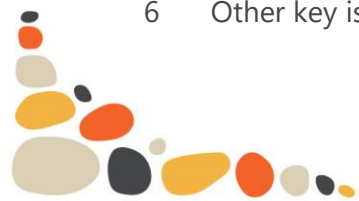
- Philip van Wassenauer, Senior Urban Forestry Consultant, Urban Forest Innovations Inc.

Cover image credit: City of Guelph, M. Ursic



Table of Contents

- Acknowledgements i
- Executive summary 3
- 1 Introduction..... 13
 - 1.1 Why does Guelph’s private tree bylaw need to be updated? 14
 - 1.2 What is the purpose of this update? 15
 - 1.3 What are the key tasks and timeline for this update? 15
 - 1.4 What are “private lands” in the context of this update? 16
 - 1.5 What is included in this report?..... 16
- 2 Key findings of the background review 18
 - 2.1 Guelph’s tree canopy cover provides valuable services..... 18
 - 2.2 Guelph’s private tree bylaw is a critical part of the planning toolkit 18
 - 2.3 Many trees in Guelph are already regulated by the Heritage Act 20
 - 2.4 Guelph has a long history of regulating trees on private lands 21
 - 2.5 Best fit is as important as best practices for private tree bylaws 22
 - 2.6 There are some overarching best practices for private tree bylaws 24
 - 2.7 Private tree bylaw resourcing has been challenging 25
- 3 Key findings from the tree data analyses..... 27
 - 3.1 Most of Guelph’s trees are relatively small (young) 27
 - 3.2 Most of Guelph’s tree cover is on private land 30
 - 3.3 About half of the tree canopy cover in Guelph is currently regulated 30
 - 3.4 Regulating more canopy cover would likely mean capturing more lots 33
- 4 Community perspectives..... 36
 - 4.1 Community feedback on the private tree bylaw 2010-2022 36
 - 4.2 Overview of phase 1 engagement activities and audiences 37
 - 4.3 Key themes, issues and ideas from phase 1 engagement 37
- 5 Identification of feasible options for updating Guelph’s private tree bylaw 39
 - 5.1 Identification of possible alternatives 39
 - 5.2 Development and descriptions of evaluation criteria 43
 - 5.3 Application of the evaluation criteria 47
 - 5.4 Assessment of preferred alternatives 48
 - 5.5 Recommended options for phase 2 engagement 53
- 6 Other key issues for the phase 2 engagement 55



6.1	Potential regulation of replacement trees.....	55
6.2	Options for private tree bylaw compensation	55
7	Concluding remarks and next steps.....	58
8	Glossary of key terms	60
9	Sources.....	62
	Appendix A. Overview of private tree bylaws among comparator municipalities.....	65
	Appendix B. Application of evaluation criteria* to the nine private tree bylaw update alternatives considered.....	78

Acronyms

DBH	Diameter at Breast Height
GRCA	Grand River Conservation Authority
ISA	International Society of Arboriculture
NHAP	Natural Heritage Action Plan
NHS	Natural Heritage System
PCCP	Peel Climate Change Partnership
UFMP	Urban Forest Management Plan



Executive summary

Guelph is reviewing its Private Tree Protection By-law. This report summarizes findings from the research, analyses and engagement completed to date (i.e., October 2022 to December 2023). The report is intended to inform (a) Council decision-making in early March 2024 and (b) community decision-making during the second round of engagement planned for spring 2024.

Background

Bylaws that regulate trees on private lands are one of the tools municipalities in Ontario can use to help protect and enhance local tree canopy cover¹. Having a private tree bylaw typically means that the landowner needs a permit from the municipality before damaging or removing² a regulated tree on their property³.

Guelph was one of the first municipalities in Ontario to implement a private tree bylaw in 1986. Today, this bylaw continues to be a useful planning tool to

- deter unnecessary or pre-emptive tree damage or removals;
- provide opportunities to educate others about the vital services provided by trees and tree care; and
- require replacement tree plantings when removal or damage of regulated trees is permitted (e.g., to accommodate development and intensification).

Implemented in conjunction with other City planning tools and stewardship programs, Guelph's [Private Tree Protection By-law](#) continues to help protect, sustain and enhance the local tree canopy cover.

Why does Guelph's private tree bylaw need to be updated?

Guelph's private tree bylaw was last updated in 2010 when most of the new development in the city was occurring in "greenfield" (or previously undeveloped) areas. However, since 2010, the planning and environmental context in the city has changed substantially. Key changes include the need to

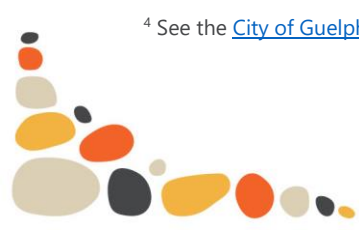
- accommodate more intensification within the city's current boundaries;
- mitigate and adapt to climate change⁴; and
- be aligned with updated municipal policies and guidance related to trees including
 - the new [Strategic Plan 2024-2027](#), which specifically identifies updating the private tree bylaw as a key action for mitigating the impacts of climate change by increasing tree canopy coverage; and
 - the Official Plan, which establishes a 40 per cent tree canopy cover target for the city, and the [One Canopy Tree Planting Strategy](#) (approved by Council in 2023) which re-affirmed this target.

¹ In Guelph, the term "tree canopy cover" is used to capture trees across the city, on public and private lands, both within and outside the City's Natural Heritage System (NHS). Although the term "urban forest" is typically used to capture all trees in an urban area, in Guelph the City's Official Plan defines "urban forest" as specifically applying to trees outside the NHS, and so "tree canopy cover" is used instead.

² Note that in private and public tree bylaws the legal terms (from the Municipal Act) for the activities potentially prohibited or regulated in relation to trees are "injure" and "destroy". However, in this report the terms "damage" and "remove" are used as plain language alternatives.

³ In this report the term "property" is used interchangeably with land, lot and parcel. See the Section Glossary for the definition of "lot".

⁴ See the [City of Guelph Climate Adaptation Plan, Final Report, July 2023](#).



A review and update of the City's private tree bylaw was also recommended by the City's [Urban Forest Management Plan 2013-2032](#), which recognized regular review of municipal tree bylaws as a best practice, particularly in growing municipalities like Guelph.

Guelph's private tree bylaw update is being informed by a comprehensive background review, analyses of local data, and extensive engagement to ensure a transparent and balanced approach is used to inform the ultimate direction for updating the bylaw.

To date, Guelph's private tree bylaw has been used as a regulatory rather than a prohibitive tool, and City Council and staff have confirmed this approach is to continue. This means that trees may be removed (e.g., to accommodate development, if they are severely diseased or dead). However, losses to the tree canopy cover are to be mitigated through private tree bylaw tree compensation requirements and the planning process, as well as through voluntary initiatives and incentives (e.g., Guelph's [Take Root program](#) offering free trees to residents).

What is the purpose of this update?

The purpose of updating Guelph's private tree bylaw is to ensure that it

- can be implemented effectively and equitably along with other planning and regulatory tools, to help the City meet its tree canopy cover targets and urban forest objectives; and
- supports a healthy and climate resilient community by maximizing opportunities for tree retention on private lands and ensuring tree replacement through education and regulation.

What are the key tasks and timeline for this update?

The process for developing an updated private tree bylaw will include comprehensive research, analysis and engagement before going to Council with a final recommendation, as shown in the timeline below (Figure ES-1).

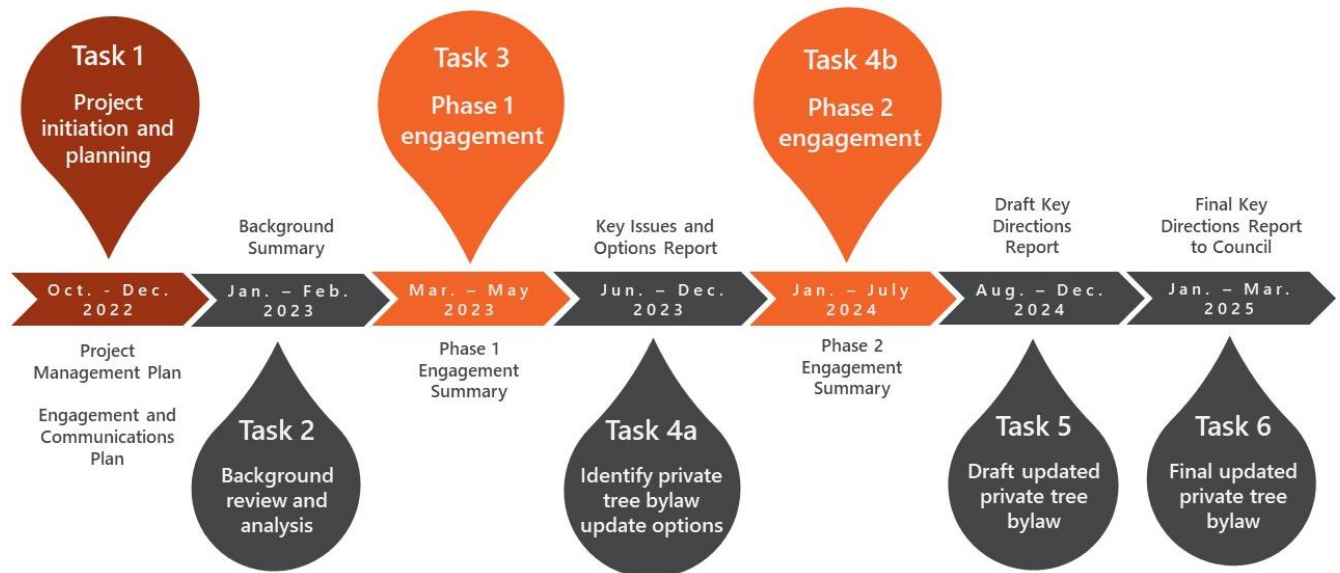


Figure ES-1. Overview of the timeline, tasks and key deliverables for Guelph's private tree bylaw update



Task 1 (project initiation and planning), task 2 (background review and analysis), and task 3 (phase 1 engagement), were completed between October 2022 and May 2023. A summary of the phase 1 engagement outcomes and feedback can be found on the [Have Your Say](#) page for this project.

This report is the main deliverable for task 4a. The key issues and options in this report are being presented to Council and the community during the phase 2 engagement (task 4b) in the spring of 2024. The phase 2 engagement feedback will then be considered with the findings of research and analyses, and input from City staff, to develop a draft and final updated private tree bylaw (tasks 5 and 6) over 2024 and 2025.

What are the key findings from the background review?

About two thirds of Guelph's comparator municipalities (i.e., 19 of 30) currently have private tree bylaws. Such bylaws continue to be considered a best practice and a valuable municipal planning tool.

Private tree bylaws vary widely in terms of the sizes of trees and the types and sizes of private lands they apply to.

Guelph's current [Private Tree Protection By-law \(number 2010-19058\)](#) regulates trees of at least 10 centimetres (cm) diameter⁵ on private lots greater than 0.2 hectares (ha)⁶ in the city, and has focused on trees on relatively large lots in the city since it was first passed.

Additional key findings

- Guelph's tree canopy cover provides valuable services, including helping the community adapt to and mitigate some of the impacts of climate change.
- Guelph's private tree bylaw is a critical part of the City's planning toolkit.
- There are some overarching best practices for private tree bylaws relevant for Guelph, cited below.
- The current private tree bylaw is not fully resourced, but in-house resources have been identified to ensure that it can be.

The best practice directions considered most relevant to Guelph indicate that a tree bylaw is most effective if

- a) it has been developed with careful consideration for the issues and/or objectives it is intended to address, as well as the local context;
- b) it is implemented with outreach and education so that people in the community are aware of and generally understand the bylaw; and
- c) adequate resources are allocated to implement and enforce the bylaw and, when deemed appropriate and necessary, available to charge violations.

What are the key findings from the tree data analyses?

The City has invested resources to better understand the trees that make up its canopy cover since Guelph's private tree bylaw was last revised in 2010. The primary source of new tree-related information is the [Guelph Urban Forest Study \(2019\)](#) which assessed tree species, condition and canopy cover across the city. The data and mapping developed for this study was used to inform analyses by the consulting team for this process.

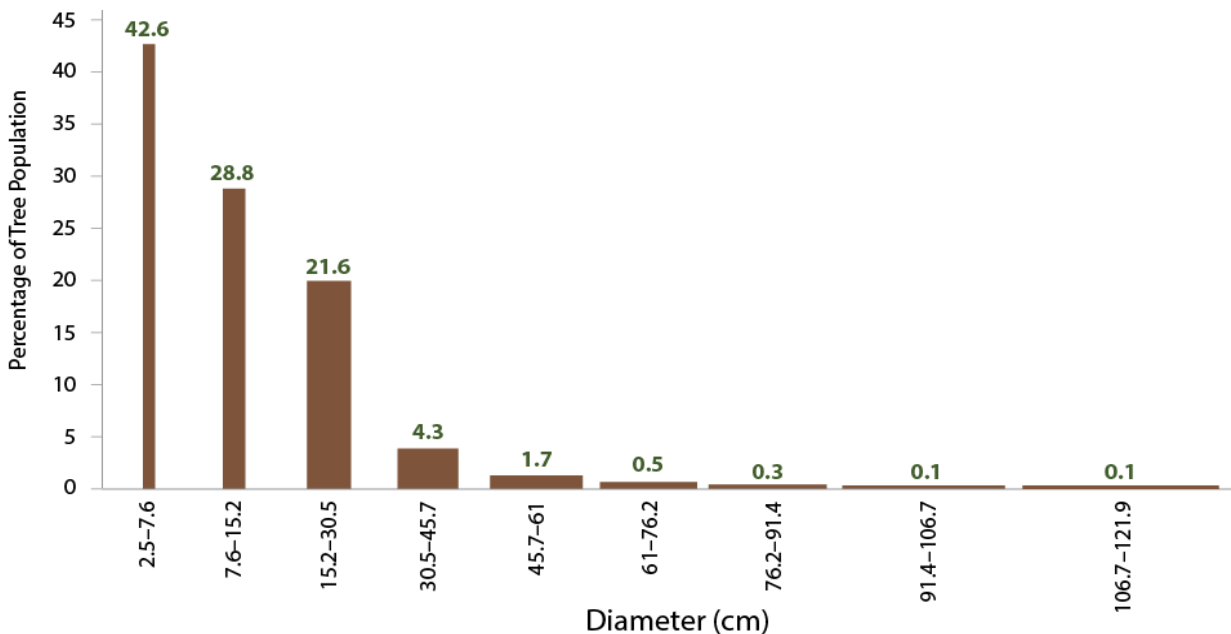
⁵ Tree diameter is generally measured to determine the width of the tree trunk. To ensure consistency, this measurement is made using the "diameter at breast height" (DBH) at about 1.4 metres (m) (equivalent to 4.5 feet) from the ground. In this report the term tree "diameter" means "DBH" for all trees taller than 1.4 m.

⁶ For reference, 0.2 ha is about the size of a standard hockey rink.



Key findings of these analyses

- More than two thirds of Guelph's tree canopy cover is growing on private property⁷.
- Most of Guelph's trees are relatively small (young) (i.e., less than 30 cm diameter) (Figure ES-2).
- The current private tree bylaw
 - regulates trees of at least 10 cm diameter on 45 per cent of lands in the city which contain about 50 per cent of the existing tree canopy cover; and
 - if its scope were expended, could regulate trees on an additional 21 per cent of the lands which are private and contain about 19 per cent of Guelph's tree canopy.
- Trees on 34 per cent of lands in the city which contain about 31 per cent of the tree canopy cover cannot be regulated by a private tree bylaw because they are exempt, mainly because they are in public ownership. (Most of these trees could, however, be regulated under a public tree bylaw, which the City is expected to develop in the near future).



Source: Guelph Urban Forest Study 2019

Figure ES-2. Trees in different size classes in Guelph (in per cent)

⁷ For this update process "private lands" includes all lands that could be regulated under a private tree bylaw. This includes all properties other than those owned by the government (e.g., the City of Guelph, County of Wellington, Province of Ontario) or with an active aggregate license. Notably, this approach differs from that used for other recent and related studies such as the Guelph Urban Forest Study (Lallemant and KBM 2019). Specifically, the proportion of tree canopy cover in Guelph identified on private lands in the Guelph Urban Forest Study was 53 per cent because tree canopy cover on the GRCA, school board and University of Guelph lands was counted separately. However, using the approach described above for this process, the proportion of canopy cover on private lands in Guelph is 69 per cent.



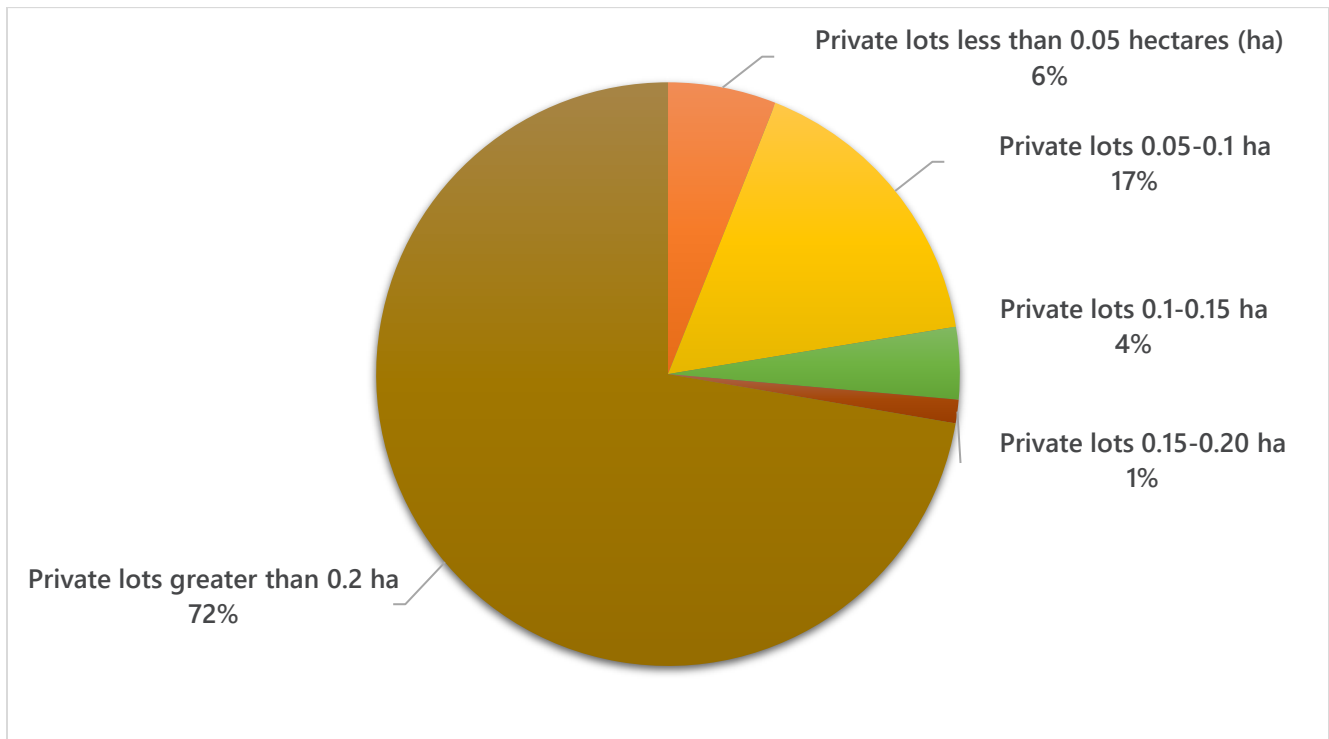


Figure ES-3. Private tree canopy cover captured by private lots in different size classes

What has the community said so far?

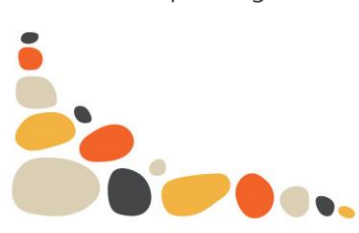
Councillors and City staff have been hearing differing perspectives on the current Private Tree Protection By-law since it was last updated in 2010. Strong support for and opposition to expanding the scope of the bylaw were both expressed when the current Private Tree Protection By-law was passed by Council in 2010, and during the engagement for the City's Urban Forest Management Plan in 2012.

More recently, community perspectives related to tree issues were documented during engagement for (a) the [Urban Forest Management Plan update](#) (2019), and (b) the [One Canopy Tree Planting Strategy](#) (2022). Feedback from both of these engagements indicated continued support for reviewing Guelph's private tree bylaw and for enhanced efforts to preserve mature trees in the City.

The first phase of engagement for this update (including a survey, web presence, and community open houses) took place between March 6 and April 14, 2023. Feedback included

- broad support for efforts to protect and preserve mature trees and expand the city's tree canopy cover;
- lack of knowledge about the private tree bylaw (e.g., of the 296 survey respondents, half did not know that the current private tree bylaw regulates trees of at least 10 cm diameter on lots greater than 0.2 ha); and
- requests for the updated private tree bylaw to be practical, including keeping or adding appropriate permit exemptions (e.g., for removals of dead or high-risk trees).

Many participants felt that the current private tree bylaw is due (or overdue) for an update. Opinions on whether, and how, to expand its scope were quite varied, although more than half of the participants were supportive of expanding the scope of the bylaw in some way.



Key challenges related to the current private tree bylaw identified by those engaged in phase 1, in order of most to least frequently raised, included concerns about

- established tree replacement and/or compensation rates being inadequate;
- compensation fees being too onerous for some residents;
- the added bureaucracy and costs associated with a private tree bylaw;
- lack of or poor enforcement and monitoring of the current and the pending updated bylaw;
- too many trees (and particularly mature trees) being removed to accommodate development; and
- the need for more education and outreach related to the private tree bylaw.

More details about the phase 1 engagement process and results can be found in the What We Heard summary on the [Have Your Say](#) page for this project.

Identifying feasible options for updating Guelph's private tree bylaw

The process used for identifying feasible options for updating Guelph's private tree bylaw consisted of

1. identification of a list of possible alternatives;
2. developing a suite of evaluation criteria;
3. screening the possible alternatives against the established criteria to identify preferred alternatives;
4. assessing the preferred alternatives, including consideration of the anticipated resourcing required for each preferred alternative (developed by City staff); and
5. recommending at least three feasible options for consideration by Council and the community as part of the phase 2 engagement process.

For this update the consulting team was tasked with

- identifying at least three feasible options for updating Guelph's private tree bylaw, including the resourcing implications of each option; and
- developing and applying a transparent and balanced process for identifying the options, including evaluation criteria for screening possible alternatives.

Alternatives and screening criteria considered

- the scope and area of application of the current Private Tree Protection By-law;
- relevant existing conditions in Guelph (e.g., known tree sizes, lot sizes, estimated tree canopy cover captured by different lot sizes);
- the local planning context;
- relevant best practices and precedents among the comparator municipalities;
- feedback from the community; and
- key operational and financial aspects of bylaw implementation.

Ultimately a total of nine alternatives were identified based on combining

- regulation of trees with diameters at least (A) 50 cm, (B) 20 cm, or (C) 10 cm
- on private lots (1) greater than 0.2 ha, (2) greater than 0.1 ha, or (3) of all sizes.

Nine possible alternatives were considered against six screening criteria (as described in [Section 5.2](#) of this report and shown in [Appendix B](#)). The five alternatives ranked as "moderate" and "high" (as shown in [Table ES-1](#)) were considered preferred alternatives and subject to further assessment.

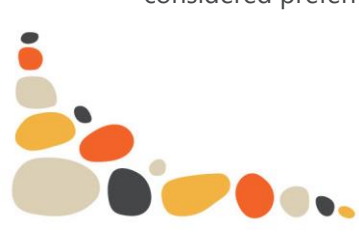


Table ES-1. Outcomes of the private tree bylaw alternatives screening process

List of alternatives in centimetres (cm) and hectares (ha)	1. Proportion of trees regulated	2. Proportion of tree canopy cover regulated	3. Level of protection compared to current private tree bylaw	4. Alignment with community perspectives	5. Level of complexity	6. Impact to City resources	Ranks*
Trees of at least 50 cm diameter alternatives							
1A. Trees of at least 50 cm diameter on private lots greater than 0.2 ha	1	1	1	2	3	3	L
1B. Trees of at least 50 cm diameter on private lots greater than 0.1 ha	1	1	1	2	3	3	L
1C. Trees of at least 50 cm diameter on all private lots	1	3	2	2	3	2	H
Trees of at least 20 cm diameter alternatives							
2A. Trees of at least 20 cm diameter on private lots greater than 0.2 ha	1	1	1	1	3	3	L
2B. Trees of at least 20 cm diameter on private lots greater than 0.1 ha	2	1	1	2	3	2	L
2C. Trees of at least 20 cm diameter on all private lots	2	3	2	3	2	1	H
Trees of at least 10 cm diameter alternatives							
3A. Trees of at least 10 cm diameter on private lots greater than 0.2 ha	2	1	2	1	3	3	M
3B. Trees of at least 10 cm diameter on private lots greater than 0.1 ha	3	1	2	2	3	2	H
3C. Trees of at least 10 cm diameter on all private lots	3	3	3	3	1	1	H

* Ranking relative to all nine alternatives: "L" = low ranking alternative, "M" = moderately ranked alternative, "H" = high ranking alternative

Options recommended for consideration during the phase 2 engagement

The five alternatives that ranked "moderate" or "high" were considered preferred alternatives for further consideration, as follows, including consideration of estimated resourcing requirements associated with each option developed by City staff. Preliminary opportunities and challenges associated with each preferred alternative were identified (see [Table 5-3](#) in the report).

To be considered "feasible", options being put forward needed to (a) provide, as a minimum, a comparable level of tree regulation as the current and in-force Private Tree Protection By-law, and (b) be supportable by Council from a resourcing perspective (i.e., have new estimated annual resourcing requirements that could be supported if that option was selected). The preferred alternatives were then considered in terms of their feasibility as shown in [Table ES-2](#) below.



Table ES-2. Feasibility assessment of the preferred alternatives for updating Guelph's private tree bylaw

Option (preferred alternative)	Level of regulation	Minimum new costs (annually)*	Feasibility assessment	Recommended option?
Option 1 (Alternative 3A): Trees of at least 10 cm diameter on private lots greater than 0.2 ha	Same as the current private tree bylaw	\$0**	<ul style="list-style-type: none"> Level of regulation considered feasible as it is the same as the current private tree bylaw Can be implemented within the available capacity identified, so considered feasible 	Yes
Option 2 (Alternative 3B): Trees of at least 10 cm diameter on private lots greater than 0.1 ha	Somewhat more than the current private tree bylaw	\$0**	<ul style="list-style-type: none"> Level of regulation considered feasible as it is the slightly more than the current private tree bylaw Can be implemented within the available capacity identified, so considered feasible 	Yes
Option 3 (Alternative 2C): Trees of at least 20 cm diameter on all private lots	Comparable to or more than the current by private tree bylaw (i.e., trees between 10 and 19 cm diameter would no longer be regulated on lots greater than 0.2 ha, but trees of at least 20 cm diameter would be captured on all private lots)	\$235,000	<ul style="list-style-type: none"> Level of regulation considered feasible as the loss of regulation of trees between 10 and 19 cm diameter would be expected to be offset by the bylaw being applied to all private properties (not just lots of at least 0.2 ha) New resourcing costs considered high but still feasible 	Yes
Option 4 (Alternative 1C plus Alternative 3A): Trees of at least 50 cm diameter on all private lots	Alternative 1C alone - less than the current private tree bylaw (i.e., trees between 10 and 49 cm diameter would no longer be regulated on lots greater than 0.2 ha)	\$113,000	<ul style="list-style-type: none"> Level of regulation feasible if Alternative 1C is combined with Alternative 3A as this would provide the same level of regulation as the current private tree bylaw plus regulation of larger trees on lots smaller than 0.2 ha New resourcing costs considered moderate and feasible 	Yes - if combined with Alternative 3A
Option 5 (Alternative 3C): Trees of at least 10 cm diameter on all private lots	Much more than the current private tree bylaw	\$447,000	<ul style="list-style-type: none"> Level of regulation considered feasible as it is the much more than the current private tree bylaw New resourcing costs considered too high to be considered feasible 	No – new resourcing costs too high

* A total of \$105,000 of existing capacity to support implementation of the private tree bylaw has been identified by City staff.

** Estimated that this option can be implemented within the current capacity identified.



Based on the screening and assessment process outlined above, the following four options (outlined in [Table ES-3](#)) are being recommended for consideration through the second phase of engagement.

- **Option 1: Current private tree bylaw scope** - Regulation of trees at least 10 cm diameter on private lots greater than 0.2 ha.
- **Option 2: Current private tree bylaw tree size on smaller private lots** - Regulation of trees at least 10 cm diameter on private lots greater than 0.1 ha (rather than 0.2 ha).
- **Option 3: Trees at least 20 cm diameter on all private lots** - Regulation of trees slightly larger than what is currently regulated (20 cm rather than 10 cm diameter and greater) but with the scope expanded to all private lots across the city.
- **Option 4: Current private tree bylaw scope (Option 1) plus larger trees on all private lots** - Regulation of (a) trees at least 10 cm diameter on lots greater than 0.2 ha (i.e., current bylaw scope), plus (b) trees at least 50 cm diameter on all private lots.

Based on the feedback received, irrespective of the option selected, the updated private tree bylaw is to be implemented with an outreach and communications plan intended to raise and maintain awareness about Guelph's private tree bylaw.

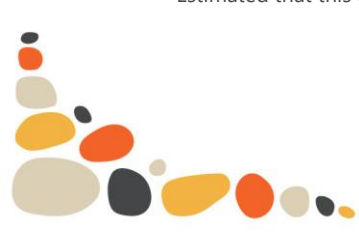
Table ES-3. Overview of the recommended options for updating Guelph's private tree bylaw

Option	Number lots regulated	Area of land captured (hectares)	Approximate total tree canopy cover* regulated (per cent)	Approximate private tree canopy cover** regulated (per cent)	Minimum new costs (annually) ***	Comments
Option 1: Trees of at least 10 cm diameter on private lots greater than 0.2 ha	1,929	4036	~50	~72	\$0 **	This scope is the same as the current private tree bylaw and can be implemented within the current capacity identified.
Option 2: Trees of at least 10 cm diameter on private lots greater than 0.1 ha	3,882	4287	~55	~77	\$0 **	This is a moderate expansion in scope from the current private tree bylaw and can be implemented within the current capacity identified.
Option 3: Trees of at least 20 cm diameter on all private lots	37,187	5914	~69	~100	\$235,000	This option applies to all the tree canopy cover on private lands, excluding trees up to 19 cm diameter.
Option 4: Option 1 plus trees of at least 50 cm diameter on all private lots	37,187	5914	~50 to 69	~72 to 100	\$113,000	This option applies to all the tree canopy cover on private lands, excluding trees up to 49 cm diameter on lots 0.2 ha and smaller.

* "Total tree canopy cover" is based on all the tree canopy cover in the City of Guelph, on private and public lands.

** "Private tree canopy cover" is based on all the tree canopy cover on private lands in the City of Guelph.

*** Estimated that this option can be implemented within current capacity identified. See [Table 5-4](#).



Note that all options, including Option 1 (i.e., the current private tree bylaw scope), will require various updates to bring the bylaw into alignment with other related policies, regulations and technical guidelines, as well as housekeeping edits to support implementation.

Additional recommendations

Other more minor opportunities to update Guelph's current private tree bylaw, beyond potentially updating the scope of the bylaw, have been identified as part of the assessment work completed. These include revisions to bring Guelph's private tree bylaw into alignment with current policies, regulations and technical guidelines, as well as process and housekeeping edits to facilitate implementation. Irrespective of the option ultimately selected for updating its scope, Guelph's private tree bylaw is expected to be revised to address these opportunities.

While most of the required updates will be somewhat technical and fairly minor, a few more substantive changes are also being considered. It is being recommended that these potential changes are put forward at this time so that they can be considered by Council and the community as part of the phase 2 engagement.

Based on the findings of research completed, input from the first phase of engagement, and discussions with City staff, this report recommends that in addition to the four options above that the following be considered through the phase 2 engagement process

- a. **Equity considerations - options for offsetting potential tree compensation costs for residents (if the private tree bylaw scope is expanded to more private lots);**
- b. **Further expanding regulation - possible regulation of replacement trees through the private tree bylaw; and**
- c. **Ensuring appropriate tree compensation - options for updating the approach to tree compensation (in accordance with the guidance approved in the 2019 Tree Technical Manual).**

Concluding remarks

The options and recommendations above have been identified with careful consideration for information gathered through an extensive background review, analyses completed for this process, feedback gathered through the first phase of engagement, and input from City staff.

Today in Guelph, there is more pressure on lots of all sizes for development and re-development. This pressure comes at a time when mature trees are increasingly recognized for the valuable services they provide, including helping the community mitigate and adapt to climate change by cooling and shading public and private spaces.

Ultimately, Guelph's updated private tree bylaw is expected to maintain and/or improve the level of protection it currently provides to help the City meet its tree canopy cover target of 40 per cent by 2070 to support a healthy and climate resilient community.

The next step is to seek input from Council and the community on the options for updating the City's private tree bylaw, as well as feedback on other key issues related to the update process. The input gathered during phase 2 engagement will be a key consideration in finalizing the direction for updating Guelph's Private Tree Protection By-law.



1 Introduction

Bylaws that regulate trees on private properties are one of the tools municipalities in Ontario can use to help protect and enhance local tree canopy cover⁸. Having a private tree bylaw typically means that the landowner needs a permit from the municipality before damaging or removing⁹ a regulated tree on their property. Private tree bylaws can prohibit tree removals but are typically used to regulate the process so that unnecessary tree damage and/or removals are avoided, and tree replacements and/or compensation can be secured.

City Council and staff have indicated that the private tree bylaw should continue to be used as a primarily regulatory (not a prohibitive) tool. Guelph is expected to achieve a growth forecast of 208,000 people and 116,000 jobs by 2051, with 46 per cent of all future residential growth being directed to existing built-up areas. This is an increase of approximately 58,000 people and 31,000 jobs over the next 25 years or so. It is understood that some trees will need to be removed to accommodate this growth.

However, the City is also committed to providing homes in livable, safe and complete communities that include trees¹⁰. Therefore, losses to Guelph's tree canopy cover are expected to be mitigated through the planning and/or tree permitting process, as well as through other voluntary initiatives and incentives (e.g., the City's new [Take Root program](#) offering free trees to residents).

Having a private tree bylaw as part of the municipal planning toolkit is considered a best practice in Ontario and elsewhere (e.g., PCCP 2021; Webber et al., 2020; Yung 2018), particularly where it is implemented with:

- other complementary planning tools;
- ongoing education and communication; and
- adequate resourcing to administer and enforce it.

The City of Guelph was one of the first municipalities in Ontario to implement a private tree bylaw in 1986. Today, about two thirds of Guelph's comparator municipalities (i.e., 19 of 30) have one as well (see [Appendix A](#)).

Private tree bylaws vary widely in terms of the sizes of trees and the types and sizes of private properties they apply to. Guelph's current [Private Tree Protection By-law \(number 2010-19058\)](#) regulates trees of at least 10 centimetres (cm) in diameter¹¹ on private lots greater than 0.2 hectares (ha)¹² in the city, and has focused on trees in relatively large lots in the city since it was first passed.

⁸ In Guelph's the term "tree canopy cover" is used to capture trees across the city, on public and private lands, both within and outside the City's Natural Heritage System (NHS). Although the term "urban forest" is typically used to capture all trees in an urban area, in Guelph the City's Official Plan defines "urban forest" as specifically applying to trees outside the NHS, and so "tree canopy cover" is used instead.

⁹ Note that in private and public tree bylaws the legal terms (from the Municipal Act) for the activities potentially prohibited or regulated in relation to trees are "injure" and "destroy". However, in this report the terms "damage" and "remove" are used as plain language alternatives.

¹⁰ City News, November 22, 2022: [Council approves City's recommendations in preparation for changes stemming from Bill 109 and Bill 23](#).

¹¹ Tree diameter is generally measured to determine the width of the tree trunk. To ensure consistency this measurement is made using the diameter at breast height (DBH) at about 1.4 metres (m) (equivalent to 4.5 feet) from the ground. In this report the term tree "diameter" means "DBH" for all trees taller than 1.4 m.

¹² For reference, 0.2 ha is about the size of a standard hockey rink.



However, the planning and the environmental context in the City continues to evolve, and Guelph's private tree bylaw needs to be reviewed and updated to ensure it is helping to meet the City's tree canopy cover targets and aligned with the current policies, regulations and guidelines.

Guelph's private tree bylaw update is being informed by a comprehensive background review, analyses of local data, and extensive engagement to ensure a transparent and balanced approach is used to inform the ultimate direction for updating the bylaw.

The purpose of this report is to summarize the key findings and issues identified to date, and to show how this information was used to identify feasible options for updating the private tree bylaw using a balanced and transparent approach. These options, along with a few other key issues, are being presented to Council and the community for feedback as part of the engagement for this update in the spring of 2024. This feedback will be key to informing the direction for the private tree bylaw updates.

1.1 Why does Guelph's private tree bylaw need to be updated?

Guelph's private tree bylaw was last updated in 2010 when most of the new development in the city was occurring in what are called "greenfield" (or previously undeveloped) areas. In 2010, expanding the scope of the bylaw to all private lots in the city was considered but Council ultimately decided to continue to focus the City's resources on regulating trees on relatively large lots, where most of the development was occurring at that time.

Since 2010, the planning and environmental context in the city has changed. Key changes include the need to

- accommodate more intensification within the city's current boundaries;
- mitigate and adapt to climate change, with the protection and planting of trees being a central part of the City's [Climate Adaptation Plan](#) (Matrix Solutions Inc. 2023); and
- be aligned with updated municipal policies and guidance related to trees including
 - the new [Strategic Plan 2024-2027](#), which specifically identifies updating the private tree bylaw as a key action for mitigating the impacts of climate change by increasing tree canopy coverage; and
 - the Official Plan which establishes a 40 per cent tree canopy cover target for the city, and the One Canopy Tree Planting Strategy (approved by Council in 2023) which re-affirmed this target.

Strategic Theme: **Environment**

Objective 9: **Be a leader in climate action**

Initiative 9.3: **Mitigate the impacts of climate change by increasing tree canopy coverage**

Improve urban forest sustainability and enhance our climate change resilience by increasing Guelph's tree canopy coverage, providing more shade, cleaner air and improved water filtration.

Supporting action 9.3.1: **Update the Private Tree Protection Bylaw to regulate the destruction and injuring of trees**

Future Guelph: Strategic Plan 2024-2027



A review and update of the City's private tree bylaw was also recommended by the City's [Urban Forest Management Plan 2013-2032](#), which recognized regular review municipal tree bylaws as a best practice, particularly in growing municipalities like Guelph.

1.2 What is the purpose of this update?

The overall purpose of updating Guelph's private tree bylaw is to ensure that it:

- can be implemented effectively and equitably along with other planning and regulatory tools, to help the City meet its tree canopy cover targets and urban forest objectives, and
- supports a healthy and climate resilient community by maximizing opportunities for tree retention on private lands and ensuring tree replacement through education and regulation.

1.3 What are the key tasks and timeline for this update?

The process for developing an updated private tree bylaw will include comprehensive research and engagement, as shown in the timeline (Figure 1-1) below, before City staff go to Council with a final recommendation.

Task 1 (project initiation and planning), task 2 (background review and analysis), and task 3 (phase 1 engagement), were completed between October 2022 and May 2023. A summary of the phase 1 engagement outcomes and feedback can be found on the [Have Your Say](#) page for this project.

This report is the main deliverable for task 4a. The key issues and options for updating the private tree bylaw identified in this report will be presented to Council and the community for feedback during the phase 2 engagement (task 4b) in the spring of 2024. This feedback will then be considered with the findings of research and analyses, and input from City staff, to determine the final direction for and content of the updated private tree bylaw (tasks 5 and 6) over 2024 and early 2025.

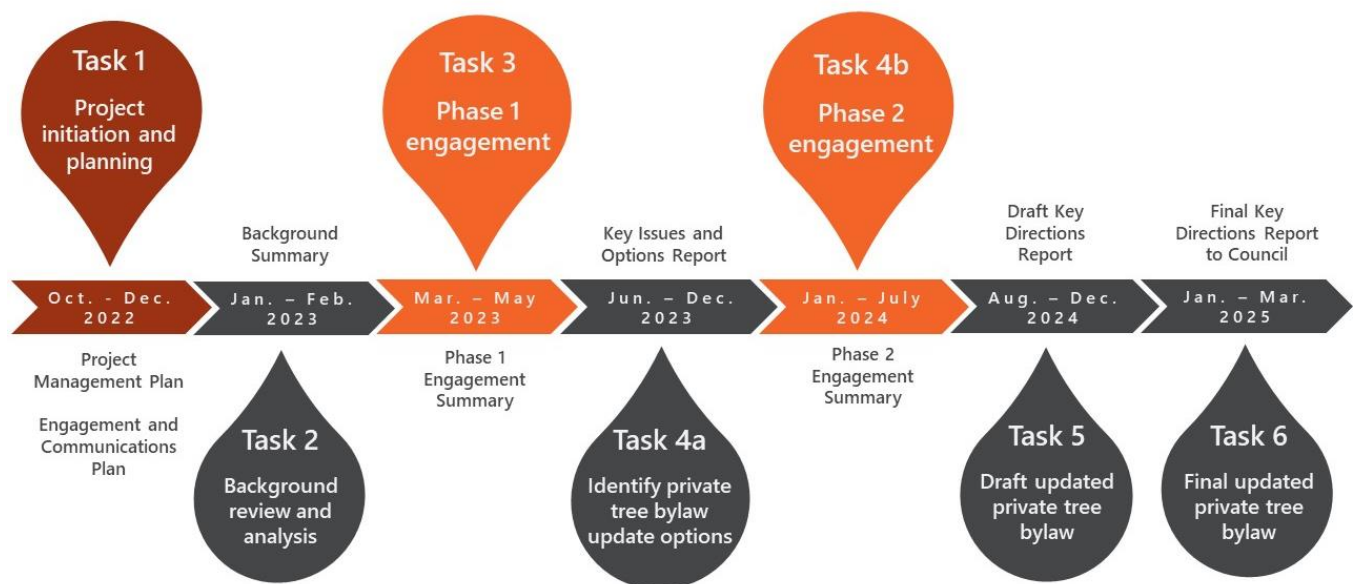


Figure 1-1. Overview of the timeline, tasks and key deliverables for Guelph's private tree bylaw update



1.4 What are “private lands” in the context of this update?

Land ownership can be categorized in different ways. For this update, “private lands” (also referred to as private lots, parcels or properties) are all lands in Guelph except for those owned by a municipal, provincial or federal government agency, plus active pits and quarries. [Table 1-1](#) summarizes the classification of private versus public for the purposes of this update, and provides some explanatory notes.

Table 1-1. Categorization of private lands versus public lands in the context of this update in the City of Guelph

Private land classification for this update	Public land classification for this update
cemeteries	active pits and quarries***
Grand River Conservation Authority (GRCA)	City of Guelph
private (e.g., lands owned by private residents, businesses, industries)	County of Wellington
school boards and academic institutions (e.g., University of Guelph)	Government of Canada
railways	Province of Ontario
utilities (e.g., Alectra)**	Township of Puslinch

** Under the applicable legislation, a tree bylaw cannot be applied to works (such as line maintenance activities) undertaken by utilities companies on private lands, however the trees on lands owned by utilities companies can be regulated.

*** Although active pit and quarry lands are usually privately owned, under the applicable legislation works impacting trees on these lands cannot be regulated by a private tree bylaw and so they have been included in the public lands category for this update.

Notably, this approach differs from the classification of private versus public lands used for other recent and related studies such as the Guelph Urban Forest Study (Lallemand and KBM 2019). Specifically, the proportion of tree canopy cover in Guelph identified on private lands in the Guelph Urban Forest Study was 53 per cent because tree canopy cover on the GRCA, school board and University of Guelph lands was counted separately. However, using the approach described above for this process, the proportion of canopy cover on private lands in Guelph is 69 per cent (see [Section 3.3](#) for more detail).

1.5 What is included in this report?

This report:

- summarizes key findings and issues from the background review ([Section 2](#));
- summarizes key findings and issues related to the data analyses undertaken ([Section 3](#));
- summarizes recent and relevant feedback from the community, including from the first phase of engagement for this update (spring 2023) ([Section 4](#));
- describes the process for and outcomes of identifying feasible options for updating Guelph’s private tree bylaw, including consideration of estimated resourcing requirements for different options ([Section 5](#));
- discusses other key issues to be considered through the phase 2 engagement process ([Section 6](#)); and
- provides concluding remarks and outlines next steps ([Section 7](#)).

A glossary of key terms is provided in [Section 8](#) and links to all the documents cited are included in [Section 9](#), except in the few cases where the document is not available online. Links to some key sources are also provided within the report itself on first reference.





Credit: M. Ursic

Figure 1-2. Mature oak tree being retained in advance of development on these lands in the City of Guelph



2 Key findings of the background review

This section summarizes the key findings of the background review focussing on issues and findings that relate to the alternatives and options being considered for updating Guelph's private tree bylaw.

2.1 Guelph's tree canopy cover provides valuable services

The Guelph Urban Forest Study (Lallemand and KBM 2019) estimated there are approximately 2,973,000 trees across the city and that these trees provide over \$5.6 million in services each year. This includes \$1.9 million in home energy savings, \$2 million in pollution removal, \$930,000 in avoided stormwater runoff each year, and \$740,000 in carbon sequestration. Trees in Guelph were also estimated to store about 200,000 tonnes of carbon valued at \$22.6 million.

2.2 Guelph's private tree bylaw is a critical part of the planning toolkit

Private tree bylaws, like the one currently in place in Guelph, can be a critical part of a municipality's planning toolkit. Having such a bylaw is a well-established best practice in Ontario, particularly in urban and urbanizing areas (Fitzgibbon and Summers 2002; OWA 2013a,b; Yung 2018; Webber et al., 2020; PCCP 2021).

The intent of Guelph's private tree bylaw is to help protect, sustain and enhance the local tree canopy cover by having a regulation that

- a) deters unnecessary tree removals;
- b) creates opportunities to educate people about the vital services provided by trees and tree care;
- c) can prohibit pre-emptive tree removals (i.e., in advance of having an approved development application);
- d) supports the retention of regulated (and other) trees by creating opportunities for City staff to work with private landowners to avoid and/or minimize unnecessary tree damage and/or removals;
- e) requires a permit to damage and/or remove a regulated tree, allowing for some municipal oversight to ensure that tree removals are done properly (i.e., as per the applicable guidelines);
- f) requires replacement tree plantings and/or financial compensation when regulated trees are removed or damaged;
- g) facilitates tracking approved tree removals and replacements, as well as violations; and
- h) provides a legal basis to ensure that
 - trees identified for protection are not damaged;
 - tree replacement works are completed and/or financial compensation is provided as approved; and
 - if necessary and warranted – charges can be laid and violations can be prosecuted.

Guelph's Private Tree Protection By-law is not implemented in isolation or without the technical guidance. It supports a number of city plans and policies, as summarized in [Table 2-1](#).



Table 2-1. Summary of planning tools and their relationship to the private tree bylaw in Guelph

Planning tool	Brief description and relevance to the private tree bylaw
Future Guelph: Strategic Plan 2024-2027	<p>The Strategic Plan identifies caring for the local environment as one of four strategic themes, and specifically identifies updating the private tree bylaw as one of the priority actions (Supporting Action 9.3.1) to help improve “urban forest sustainability and enhance our climate change resilience by increasing Guelph’s tree canopy coverage, providing more shade, cleaner air and improved water filtration.”</p>
Guelph Official Plan (February 2022 consolidation)	<p>The Official Plan includes a wide range of policies related to trees related to</p> <ul style="list-style-type: none"> (a) wooded natural areas in the Natural Heritage System (NHS); and (b) trees outside the NHS (defined in the Official Plan as the urban forest**. <p>Development and site alteration is generally not permitted in the NHS. Where trees of at least 10 centimetres (cm) diameter are approved for removal, the Official Plan requires replacement and/or financial compensation (aligned with the Tree Technical Manual cited below).</p> <p>Policy 4.1.6.1.3 specifically states: “Destruction, injury or removal of trees on private property, will be regulated by the City’s Private Tree Protection By-law or its successor”. This policy effectively elevates the legal status of the Private Tree Protection By-law during the planning process and reinforces the City’s practice to apply requirements for tree protection, replacement and compensation in a generally consistent manner within and outside of the planning process.</p>
The City of Guelph Zoning By-law (2023-20790)	<p>The natural heritage system (NHS) zone applies to lands designated significant natural areas and natural areas as well as the floodway portion of the regulatory floodplain in the Official Plan. The purpose of this zone is to protect natural heritage features and areas, and to provide opportunities for compatible recreation and to experience nature. The NHS zone may be applied to entire lots or portions of lots where the NHS occurs.</p> <p>Uses permitted in the NHS zone include conservation use and legally existing uses, buildings and structures. The Zoning Bylaw also establishes building setbacks from the NHS zone.</p>
<p>City of Guelph Urban Forest Management Plan 2013-2032 (UFMP 2013-2032)</p> <p>City of Guelph Urban Forest Management Plan Implementation Update and Second Phase Plan Report (2020) (UFMP Update 2020)</p>	<p>The UFMP 2013-2032 provides direction for urban forest management, planning, protection, planting, maintenance and community collaboration and engagement over a 20-year period. The UFMP 2013-2032 includes a range of measures to support tree establishment and preservation on both public and private lands across the city.</p> <p>The UFMP 2013-2032 includes support for Guelph’s private tree bylaw and a recommendation to review it, including consideration of its effectiveness and resourcing requirements.</p> <p>The UFMP Update 2020 summarizes actions completed to date and provides target dates for the next suite of priorities, including the private tree bylaw update starting in 2022.</p> <p>Both reports recognize the many challenges related to maintaining and enhancing tree canopy cover in a growing urban area in a context of climate change. They also recognize the need and opportunities for building community resilience to climate change by protecting and enhancing local tree canopy cover and diversity on public and private lands.</p>
Guelph Urban Forest Study 2019	<p>The Urban Forest Study is Guelph’s first comprehensive study of the species, condition and canopy cover of trees across the city based on a combination of desktop analyses/remote sensing and field work.</p>



Planning tool	Brief description and relevance to the private tree bylaw
	The data collected and analyses completed have been instrumental to informing the alternatives and options identified for updating Guelph's private tree bylaw (see Section 3 and Section 5).
City of Guelph Tree Technical Manual (December 2019)	<p>This manual includes guidance and specifications for tree inventory, protection, establishment, replacement and compensation as applicable within and outside of the NHS.</p> <p>It helps implement the private tree bylaw directly by providing specific guidance about the four types of tree compensation accepted by the City and when each might be appropriate. It also describes compensation requirements in cases of unauthorized injury to or removal of trees and identifies when securities related to trees may be held by the City.</p>
Natural Heritage Action Plan (September 2018)	The NHAP broadly recognizes that trees can be negatively impacted by climate change and can also be of great value in helping the community adapt to climate change stressors. The NHAP is meant to work with and support the City's UFMP, including explicit support for, among other actions, the review and update of Guelph's Private Tree Protection By-law.
City of Guelph Climate Change Adaptation Plan (2023)	This plan includes a broad range of actions including five actions supporting continued tree protection and establishment, as well as related monitoring. The plan also recognizes linkages between local climate change mitigation and adaptation and these tree-related actions and states "increasing Guelph's tree canopy ... promotes shade and lessens the impact of a warmer ambient temperature, and also promotes stormwater infiltration and uptake which lessens the impact of high intensity rainfall events."
One Canopy Tree Planting Strategy	<p>The One Canopy Strategy Identifies and will implement actions to increase tree planting efforts on public and private land across the city. The goal is to plant at least 3.6 million trees over the next four decades or so years to achieve 40 per cent tree canopy cover by 2070.</p> <p>Financial compensation collected through Guelph's private tree bylaw will help support some of the identified actions,</p>

** The term "urban forest" is typically used to capture all trees in an urban or urbanizing jurisdiction. However, in the City of Guelph's Official Plan the "urban forest" is defined more narrowly to mean "plantations, woodlands, hedgerows, treed areas and individual trees outside the City's Natural Heritage System" (NHS). This has been done intentionally to separate treed areas in the NHS which are subject to very restrictive policies from trees outside the NHS which are subject to more flexible policies that still support sustaining Guelph's tree canopy cover but allow for the removal and replacement of trees where appropriate.

2.3 Many trees in Guelph are already regulated by the Heritage Act

Trees with cultural heritage value or interest may be protected through the Ontario Heritage Act (1990) and the related policies in the City's Official Plan. Trees can be protected through the Ontario Heritage Act by being:

1. listed as a heritage attribute on an individually designated property (Part IV, section 29);
2. identified for conservation in a heritage district guideline (Part V, section 41); or
3. designated independently outside of a designated property or district.

There are currently no individually designated "heritage trees" in Guelph. Designating individual trees under the Heritage Act is a complex process and trees must meet a suite of criteria related to their cultural heritage value to qualify. Therefore, while it may be appropriate for certain trees, the Ontario Heritage Act is generally not used to support the protection of, or regulate activities related to, large numbers of trees across a municipality. This is typically done through a tree bylaw enabled under the Municipal Act (2001).



Designated heritage districts are another tool under the Ontario Heritage Act (1990) that can be used to, among other things, regulate trees deemed to provide cultural heritage value. In Guelph, there is currently one designated heritage district (i.e., [Brooklyn and College Hill Heritage Conservation District](#)) which has been in place since 2015, and another being studied (i.e., [Ontario Reformatory Heritage District](#)).

The Brooklyn and College Hill Heritage Conservation District By-law regulates trees of at least 20 cm diameter located in front or side yards of private and public properties that contribute to the street canopy and the neighbourhood's cultural heritage character. These regulated trees cannot be damaged or removed without consultation with Heritage Guelph and a heritage permit from the City. In addition, Guelph's Private Tree Protection By-law applies to trees of at least 10 cm diameter on private lots greater than 0.2 ha in this district (and across the city). Trees in the Brooklyn and College Hill Heritage Conservation District on lots that are 0.2 ha or smaller that do not contribute to the street canopy and the neighbourhood's cultural heritage character are not currently regulated.

Guelph's current private tree bylaw defines "heritage trees" (although the definition needs to be updated) and requires consideration of heritage trees, or applicable heritage designations, when deciding whether or not to issue tree bylaw a permit.

The Ontario Heritage Act prevails over municipal bylaws. As such, any private tree bylaw requirements related to designated heritage trees, properties or districts must complement applicable Ontario Heritage Act regulations, and cannot replace them.

Once a direction for updating Guelph's private tree bylaw has been confirmed, one of the updates will be to ensure that the definition of and guidance related to heritage trees in the bylaw are aligned with the relevant Official Plan policies and any relevant changes to the Heritage Act coming out of Bill 23¹³.

2.4 Guelph has a long history of regulating trees on private lands

Regulation of trees on private property in Ontario is not new. Larger municipalities have been able to pass bylaws regulating tree cutting in privately-owned woodlands since the 1940s and most municipalities have been enabled to pass bylaws regulating trees on private lands since the 1980s (LRC 2005). The City of Guelph was one of the first municipalities in Ontario to have a bylaw regulating tree removals on private lands in 1986, and many other municipalities across southern Ontario have followed suit (see [Appendix A](#) for some examples).

The Municipal Act is the primary legislation that enables tree bylaws. It is supported by legal definitions for woodlands, good forestry practices and boundary trees found in the Forestry Act (1998). The Municipal Act gives municipalities the authority to regulate the "injury or destruction" (note the terms "damage and removal" are used in this report) of individual trees and of trees in woodlands on publicly and privately owned lands.

Although the Municipal Act gives different tree bylaw authorities to different tiers of government (e.g., regional or upper tier municipalities are authorized to regulate private woodlands), because Guelph is a single tier municipality it has the ability to regulate both individual trees and trees in woodlands.

¹³ [Bill 23](#) was passed by the Ontario government in late 2022 and includes a number of substantive amendments including some related to the Heritage Act.



The Municipal Act allows municipalities to develop tree bylaws that

- require permits and impose conditions to a permit;
- establish fines for non-compliance;
- order discontinuation of activities or remedies;
- apply administrative penalties; and
- order remedial actions.

Guelph's Private Tree Protection By-law includes sections and clauses that speak to each of the elements above.

In addition, the Municipal Act includes what are called statutory exemptions for the following.

- Tree works undertaken by
 - a municipality;
 - a licensed surveyor undertaking survey work; and
 - an authorized electric utility company constructing or maintaining transmission or distribution systems.
- Trees damaged or removed in accordance with
 - an approved plan (including site plans and draft plan conditions) under the Planning Act;
 - an active license for a pit or quarry; and
 - a permit to create or expand a pit or quarry under the Aggregate Resources Act.

To serve as an effective legal tool, a private tree bylaw should also be aligned with other relevant federal, provincial and municipal regulations that may apply. For Guelph's private tree bylaw the most relevant regulations include

- the federal Migratory Birds Convention Act (1994);
- the provincial Endangered Species Act (2007) and Conservation Authorities Act (1990); and
- Guelph's Brooklyn and College Hill Heritage Conservation District By-law (2014), Power of Entry By-law (2009), Property Standards By-law (2000), Site Alteration By-law (2016), and Yard Maintenance By-law (2008).

There are also some recently updated policies in the City's Official Plan and guidance in the City's Tree Technical Manual (2019).

All of the regulations, policies and guidelines noted above will need to be considered through Guelph's private tree bylaw update process to ensure there is alignment, with a particular focus on acts and policies that have been introduced or updated since the private tree bylaw was last updated in 2010.

2.5 Best fit is as important as best practices for private tree bylaws

There is no "best practice" for private tree by-laws, but the approach taken should be one of "best fit".

City of Guelph Urban Forest Management Plan 2013-2032

There is no specific best practice when it comes to private tree bylaw scope. This is mainly because although private tree bylaws are all based on the same legislative framework (outlined in [Section 2.4](#)) and tend to share similar structural elements and components, each one is tailored to address local concerns within a unique environmental, land use planning, social and economic context.



As part of the research for this update, private tree bylaws among Guelph's 30 comparator municipalities were reviewed. This research found that among the comparators, 27 have private tree bylaws that regulate trees in privately owned woodlands and 19 have private tree bylaws that regulate individual trees on all or specified portions of private lots (see [Appendix A](#)).

The private tree bylaws reviewed can be grouped into two broad "types". Those that were found to

- regulate trees above a specified diameter (e.g., equal to or greater than 20, 30 or 50 cm) on all private lands (e.g., Brampton, Cambridge, Markham, Richmond Hill, Vaughan); or
- regulate trees starting from smaller specified diameters (e.g., equal to or greater than 7.5, 10 or 15 cm) but only on specified private lot sizes (e.g., Guelph, Kitchener, Ottawa) and/or specified areas based on established mapping or zoning (e.g., Ajax, London, Whitby).

Examples of the different scopes among the comparators' private tree bylaws is presented in [Table 2-2](#). These examples provide a range of precedents in southern Ontario which were used to help inform the range and types of possible bylaw update alternatives to consider in Guelph (see [Section 5.1](#)).

Table 2-2. Summary of planning tools and their relationship to the private tree bylaw in Guelph

What is regulated on private lands in centimeters (cm) and hectares (ha)	Example municipalities
Trees of at least 7.5 cm diameter on all lots	City of Peterborough
Trees of at least 15 cm diameter on all lots	City of Kingston, City of Mississauga, Town of Oakville
Trees of at least 20 cm diameter on all lots	City of Burlington, City of Cambridge, City of Markham, City of Vaughan, Town of Richmond Hill
Trees of at least 30 cm diameter on all lots	City of Brampton
Trees of at least 2.5 cm diameter in designated Tree Protection Areas	City of Pickering
Trees of at least 10 cm diameter in specified lands with pending development approvals and/or environmental sensitivities	City of Brantford
Trees of at least 10 cm diameter on lots greater than 0.4 ha (i.e., 1.0 acres)	City of Kitchener
All trees in specified environmentally sensitive areas	City of Kingston, Town of Ajax, Town of Whitby
All trees on lots greater than 1.0 ha (i.e., 2.65 acres) On lots up to 1.0 ha, trees of at least 30 cm diameter in the urban area and at least 50 cm diameter in the suburban areas	City of Ottawa
Trees of at least 50 cm diameter on all lots All trees in designated Tree Protection Areas	City of London



2.6 There are some overarching best practices for private tree bylaws

Although there is no specific best practice for the scope of private tree bylaws, there are some overarching best practices that emerge from reviews and assessments related to private tree bylaws in Ontario completed over the past two decades. These sources, which have been considered for this update, include

- four reviews of selected tree and woodland bylaws in Ontario (i.e., Fitzgibbon and Summers 2002, Glasgow and FitzSimmons 2018, Yung 2018, Webber et al., 2020);
- the Forest Conservation By-law Committee and Lower Tier Tree By-law Advisory Group (2013) tree bylaw templates and information packages (OWA 2013a,b), which include recommendations related to the different components of private tree bylaws; and
- the Peel Region Urban Forest Best Practice Guide 1: Best Practices Guide for Urban Forest Planning in Peel (PCCP 2021), which includes a suite of 14 best practice directions for private tree bylaws in urban and urbanizing jurisdictions, listed below.

The following fourteen best practice directions¹⁴ were originally identified in relation to potential and existing private tree bylaws in the Town of Caledon's settlement areas, the City of Brampton and the City of Mississauga.

1. Have separate bylaws for trees on public versus private lands.
2. Communicate a clear purpose for the bylaw.
3. Define key terms in accordance with applicable legislation.
4. Tailor the bylaw to the municipal context.
5. Select specific exemptions that limit bureaucracy.
6. Consider other applicable legislation in prohibitions.
7. Balance cost recovery with incentives for compliance.
8. Include permit conditions that support bylaw objectives.
9. Include an appeals process.
10. Create a bylaw that can be enforced.
11. Avoid schedules to the bylaw.
12. Ensure there is adequate political support.
13. Ensure there are resources to support implementation.
14. Implement ongoing outreach and education.

These best practice directions are considered relevant and appropriate for Guelph with numbers 4, 10, 12, 13 and 14 being most relevant to the identification of options for updating the scope of Guelph's private tree bylaw.

Irrespective of the scope of the tree bylaw, best practices indicate that a tree bylaw is most effective if

- it has been developed with careful consideration for the issues and/or objectives it is intended to address, as well as the local context;
- it is implemented with outreach and education (i.e., so that most people in the community are aware of and generally understand the bylaw); and
- adequate resources are allocated to implement the bylaw and, when deemed appropriate and necessary, available to enforce it.

¹⁴ This guidance does not replace local legal counsel which should be sought as part of the development of any municipal tree bylaw.



2.7 Private tree bylaw resourcing has been challenging

As noted above, one of the best practices for private tree bylaws, whatever the scope, is to ensure that adequate resources are in place to implement, administer and enforce it. The available guidance specifically indicates this should include a commitment by the municipality to

- provide sustained education and outreach;
- maintain appropriately trained bylaw officers that understand arboriculture/forestry, know how to conduct a thorough investigation and gather evidence;
- have the tools and staff to administer the bylaw; and
- make the resources available to demonstrate the municipality is willing and able to enforce the bylaw.

The research undertaken for this update found that, over the past three years or so, while City staff from various departments have generally been able to work together to ensure the existing private tree bylaw has been adequately administered and implemented, that it has been challenging without a dedicated coordinator.

In addition, although administration and implementation of the current private tree bylaw have been getting done with existing resources, the available resources have not been sufficient to undertake other important tasks (such as proactive outreach and education, and follow-up monitoring after replacement trees have been confirmed as planted as part of the private tree bylaw).

Partial analysis of current private tree bylaw time allotment in Guelph

Some data related to the time requirements for the designated tree bylaw inspectors (excluding administrative support and support from the By-law or Legal divisions) was collected by City staff between 2019 and 2022. This data has been summarized in [Table 2-3](#). Notably, the data for 2019 and 2022 is only for about half of each of those years.

As the current private tree bylaw focuses on larger lots, the number of permits issued per year is relatively low compared to other municipalities with bylaws regulating trees on all private properties. However, the permits issued tend to be somewhat complex and for multiple trees and/or groupings of trees.

Based on the available data (see [Table 2-3](#)), over the past three to four years Guelph has

- issued between 10 and 15 permits per year;
- denied one permit per year on average;
- approved between eight and 18 permit exemptions per year (e.g., a golf course with an approved tree management plan, removal of trees that are diseased and/or dead); and
- dealt with a total of 17 permit violations and charges.

Although this data only captures a portion of the City's resource requirements, it does suggest that on average it takes about an hour for a designated tree bylaw Inspector to deal with a permit inquiry and about five hours to review and process a permit, typically including a site visit.



Table 2-3. Summary of City Planning staff time spent on Guelph's private tree bylaw 2019 to 2022

Private tree bylaw permit-related tasks	2019*	2020	2021	2022*
Total number of inquiries	27	32	70	51
Number of permits issued	5	15	10	11
Number of permits denied	0	0	1	1
Total staff time per year (hours)	23.8	65.6	60.9**	33.8
Average staff time per inquiry (hours)	0.9	2	0.9	0.7
Average staff time per permit (issued and denied) (hours)	4.8	4.4	5.5**	2.8

* Data collection started October 1, 2019 and includes up to and including September 20, 2022, therefore numbers are incomplete for both 2019 and 2022.

** The 2021 staff time included a total of 14 violations identified, but 13 of them were addressed through compliance with a retroactive permit, and therefore can be considered comparable to a "permits issued" process. One violation resulted in charges being laid.

Overview of current private tree bylaw resourcing in Guelph

Currently, work related to implementing Guelph's private tree bylaw is shared among multiple staff and multiple departments/divisions¹⁵ on a part-time and as-needed basis, without a dedicated coordinator.

Primary private tree bylaw responsibilities have been sitting with Planning and Building Services (Planning) with support from City Forestry and Sustainable Landscapes, Parks, Public Services (Forestry) as well as By-law and Legal. To date, most of the administration and implementation of the by private tree bylaw has been undertaken by four staff in Planning and Building Services with expert knowledge of trees (i.e., three Environmental Planners and one Landscape Planner) designated as tree bylaw inspectors, on a part-time and as-needed basis. Part-time administrative support has also been provided by Planning, with implementation and enforcement support from Forestry and Sustainable Landscapes, By-law and Legal Services as needed on request.

However, once the updated private tree bylaw has been approved and funded, the primary responsibilities for administering and implementing it will be shifting to Forestry and Sustainable Landscapes staff (in Parks), with Planning staff taking on more of a support role focused on applying private tree requirements through plan review. City By-law and Legal Services will continue to provide advisory and enforcement support on request.

As noted above, although the current private tree bylaw administration and implementation have been adequately managed by City staff in Planning, there have been ongoing challenges related to the lack of a dedicated coordination role and insufficient resources to undertake other important tasks (such as proactive outreach and follow-up monitoring) related to the bylaw. These challenges are expected to be addressed starting in 2024 when the recently approved position of a new Forest Technologist to help administer the private tree bylaw is to be filled. This, in conjunction with shifting the primary responsibilities for overseeing the private tree bylaw from Planning to Forestry and Sustainable Landscapes (in Parks), is expected to streamline coordination, oversight and implementation of the private tree bylaw going forward.

Depending on the outcome of this update process, the scope of the current private tree protection bylaw may be expanded in 2025. Council approval of the updated private tree bylaw is expected to be contingent on a commitment to resource it in accordance with the estimates developed by City staff (see [Section 5.4](#)).

¹⁵ City staff from the following departments and divisions have been identified as playing some role in the implementation of the private tree bylaw: Corporate Services (Information Technology, Finance, Legal and Risk), Planning and Building Services, Strategic Communications and Community Engagement, Public Services (Forestry and Sustainable Landscapes, and By-law).



3 Key findings from the tree data analyses

The City's understanding of the trees that make up its canopy cover has increased substantially since Guelph's private tree bylaw was last revised in 2010. The primary source of new tree-related information has been the Guelph Urban Forest Study (Lallemand and KBM 2019) which assessed the species, condition and canopy cover of trees across the city. This study also identified opportunities for expanding tree cover and estimated the value of some of the services provided by trees in Guelph.

The data and mapping developed for the Guelph Urban Forest Study was used to undertake some of the analyses for this process. This report section pulls together and presents the relevant data and graphics developed and used to help inform Guelph's private tree bylaw update process.

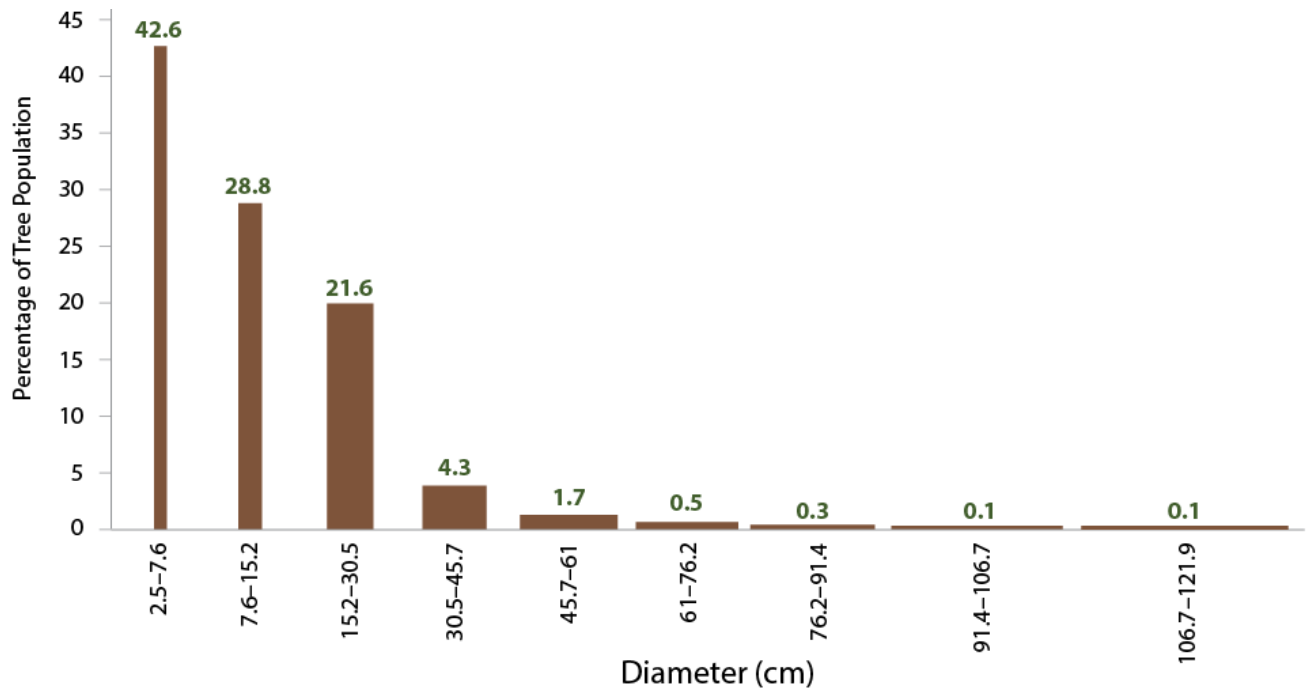
3.1 Most of Guelph's trees are relatively small (young)

As part of Guelph's Urban Forest Study, field-based tree data was collected from 208 plots, with at least 20 plots in each land use type (e.g., residential, commercial, open space including natural heritage system). They found that over 70 per cent of the trees are in good or excellent condition and that the sizes of trees in Guelph are heavily skewed towards the smaller and medium size classes, as shown in [Figure 3-1](#).

Tree size can be used as a proxy for tree age, and having a diversity of age classes is one of the key strategies for sustaining a relatively stable population of trees over time. Research on street trees suggests having about 40 per cent of trees under 20 cm diameter, 30 per cent of trees between 20 and 40 cm diameter, and the remaining 30 per cent over 40 cm diameter can be a good target to work towards for trees outside of natural areas (Richards1983).

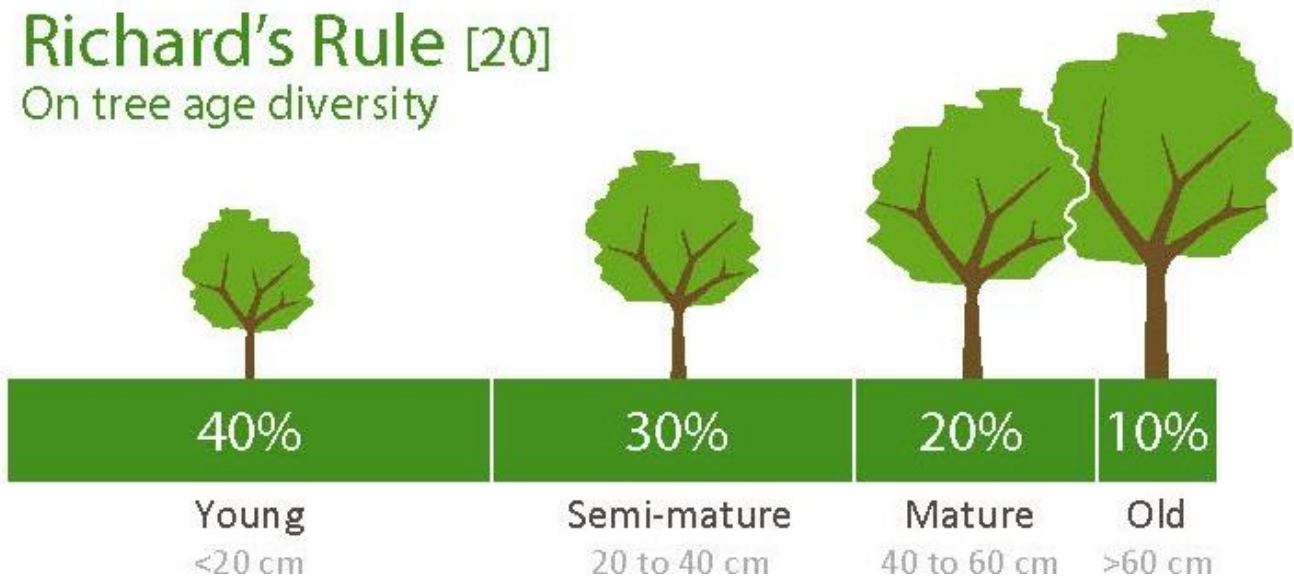
Trees are very diverse and can grow to different sizes depending on many factors including their species (i.e., genetics), geographic origin, and current growth and habitat conditions (e.g., quality of soils, amount of shade, amount of space, etc.). However, as shown in [Figure 3-2](#), based on work done on planted street trees in an urban setting, trees under 20 cm diameter can be considered "young", trees between 20 and 40 cm diameter can be considered "semi-mature", trees between 40 and 60 cm diameter can be considered "mature", and trees over 60 cm diameter can be considered "old".





Source: Guelph Urban Forest Study 2019

Figure 3-1. Trees in different size classes in Guelph (in per cent)



Source: City of Vancouver Urban Forest Strategy 2018

Figure 3-2. Illustration of "Richard's Rule", a generalized rule for target tree age/size diversity classes for street trees in northeastern America





Credit: T. Suerich, City of Guelph

Figure 3-3. Sample pieces of tree trunk ranging in diameter from 10 to 30 centimetres (cm)

The approximate proportions of trees in different size classes across the City were further extrapolated into 10 cm diameter classes, as shown in [Table 3-1](#), to help inform the private tree bylaw update process. Based on this data extrapolation, it is estimated that 78 per cent of the trees in the city are under 20 cm diameter (i.e., considered young as defined by “Richard’s Rule” shown in [Figure 3-2](#)), 18 per cent of the trees are between 20 and 40 cm diameter (i.e., considered mature), 3 per cent are between 40 and 60 cm diameter, and the remaining one 1 per cent are over 60 cm diameter (i.e., considered old).

Table 3-1. Estimated numbers and proportions of trees in different size classes in Guelph**

Tree diameter ranges in centimetres (cm)	Numbers of trees in Guelph	Per cent of trees in Guelph
less than 10	1,523,365	51
10-19	804,851	27
20-29	436,674	15
30-39	79,260	3
40-49	66,774	2
50-60	32,346	1
more than 60	29,730	1
Totals	2,973,000	100

** These estimates were based on the analyses done by the Guelph Urban Forest Study (2019) as shown in [Figure 3-1](#) assuming an even spread of trees within each size class.

In addition to being approximations, these numbers are always changing (e.g., as trees grow over time, are removed and are established). Nonetheless, this data suggests that Guelph’s current private tree bylaw’s threshold of regulating trees of at least 10 cm diameter is likely to capture about half of the trees on private lands, and that increasing this threshold above 30 cm diameter would significantly reduce the numbers of regulated trees.

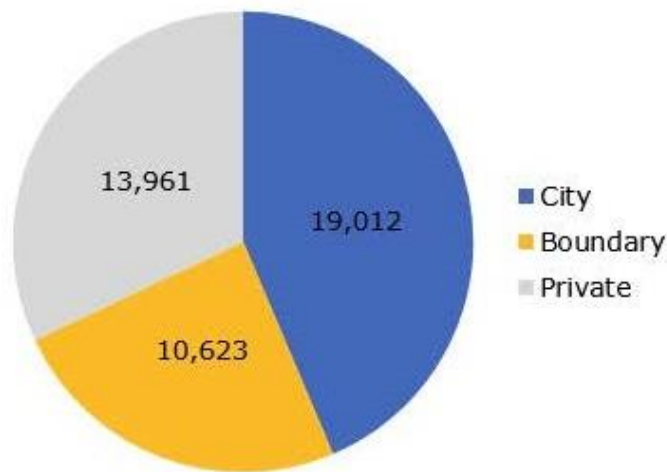


3.2 Most of Guelph's tree cover is on private land

The Guelph Urban Forest Study estimated overall tree canopy cover in the city to be about 23 per cent in 2019. This study, using a conservative approach to which lands were considered "private", found more than half of Guelph's tree canopy cover (i.e., 53 per cent) to be on private lands.

Analyses completed for this update, which used a more inclusive definition of "private lands" (as described in [Section 1.4](#)), found that about 69 per cent of Guelph's tree canopy cover grows on lands that may be regulated by a private tree bylaw (see further breakdowns in [Section 3.3](#)).

In addition, there are many trees that border private and public lands (called "boundary trees"¹⁶) which have shared ownership. As shown in [Figure 3-3](#), of the more than 43,000 street trees in Guelph, almost a quarter of them are boundary trees.



Source: Guelph Urban Forest Study 2019

Figure 3-3. Ownership of street trees in Guelph

These findings underscore the important role private landowners in the city play with respect to sustaining local tree canopy cover.

3.3 About half of the tree canopy cover in Guelph is currently regulated

Analyses (based on the data and mapping completed for the Guelph Urban Forest Study) were undertaken to determine (a) the proportions of lots actually and potentially subject to the bylaw ([Figure 3-4](#)); and (b) approximately how much of the current tree canopy cover is actually and potentially ([Figure 3-5](#)) subject to Guelph's current Private Tree Protection By-law.

Note that the private tree bylaw regulates trees of the specified minimum size and greater on lots above the minimum specified size, but the private lots/lands themselves are not regulated under this bylaw.

¹⁶ In Ontario, the term "boundary tree" is defined in the Forestry Act (1998) as "every tree whose trunk is growing on the boundary between adjoining lands" and under this act such trees are the common property of the owners of the adjoining lands.



In looking at the total number of lots in the city (i.e., 40,832) (Figure 3-4)

- less than 5 per cent of lots are captured under the current private tree bylaw;
- over 86 per cent of lots are not captured because they are too small (i.e., 0.2 ha or less); and
- the bylaw does not apply to the remaining 9 per cent per cent of lots, mainly because they are in public ownership¹⁷.

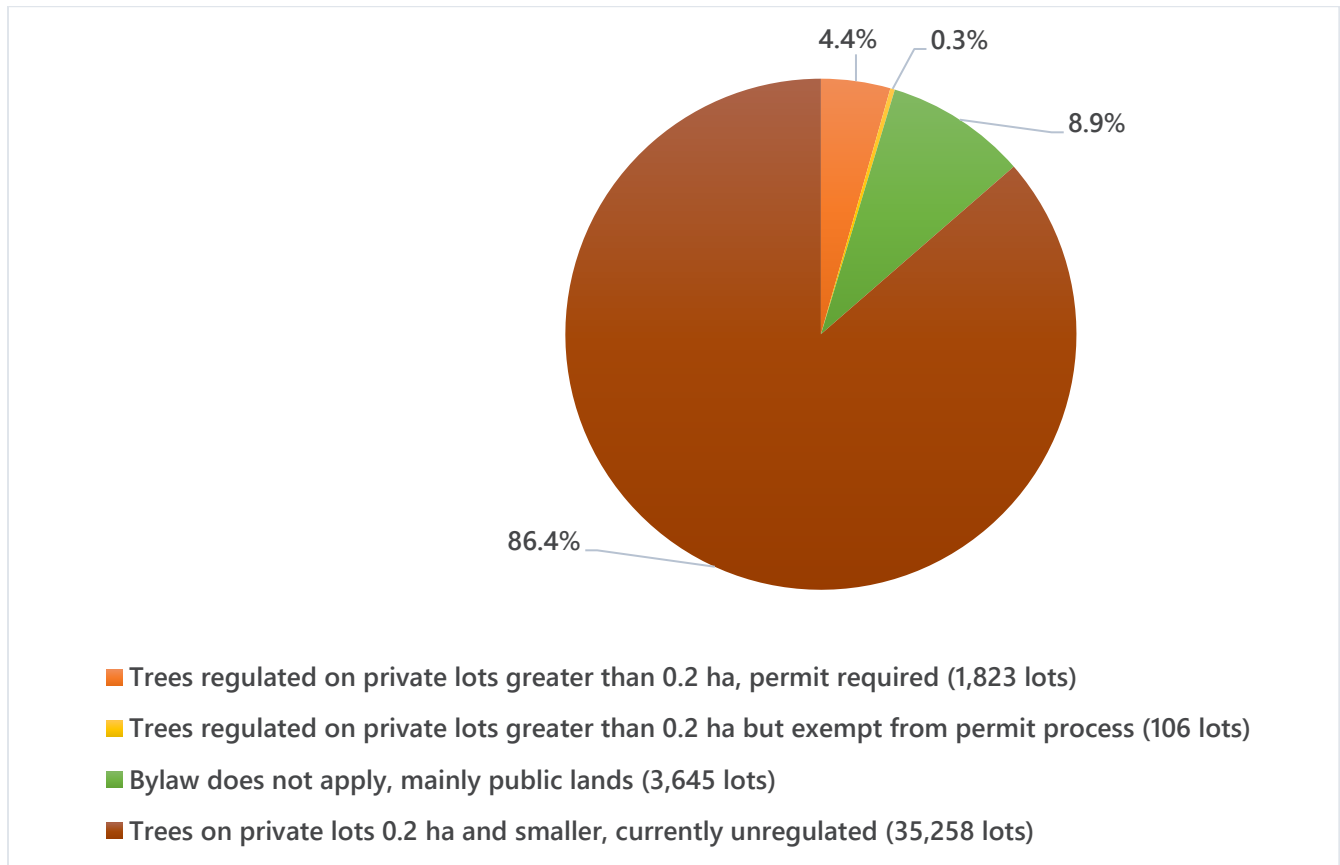


Figure 3-4. Proportions of lots in Guelph on which trees of at least 10 cm diameter are regulated or unregulated under the current private tree bylaw

However, in looking at the total area of the city (i.e., 8.9 square kilometres) (Figure 3-5)

- 45 per cent is captured under the current private tree bylaw;
- 21 per cent is not captured because it is comprised of private lots that are 0.2 ha or less (but could potentially be captured in part or in whole through a private tree bylaw); and
- the bylaw does not apply to the remaining 34 per cent of the land, mainly because the lands are in public ownership.

¹⁷ Public lands are primarily owned by the City of Guelph but also include some others like the Province.



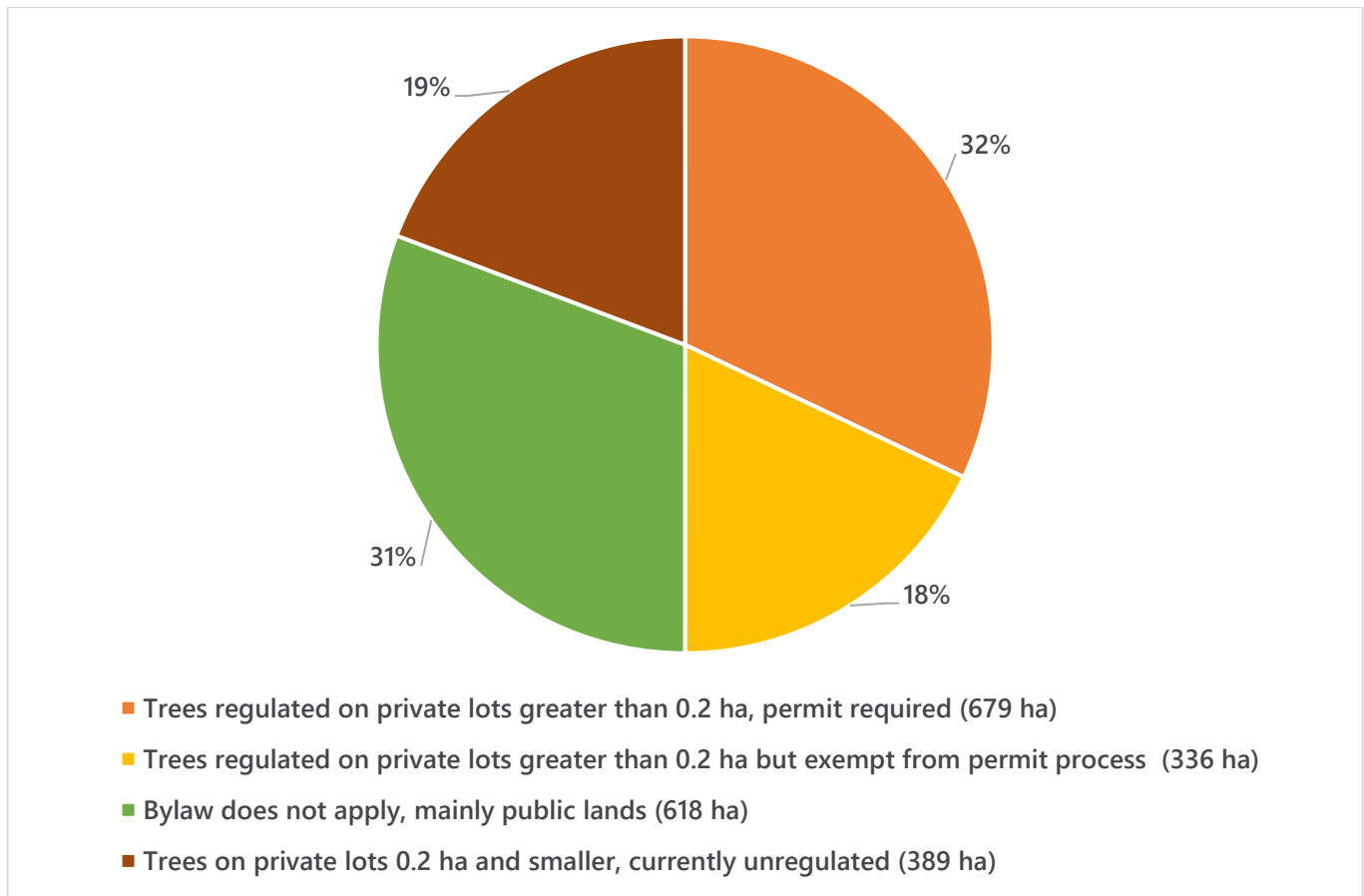


Figure 3-5. Proportions of total tree canopy cover regulated and unregulated under the current private tree bylaw

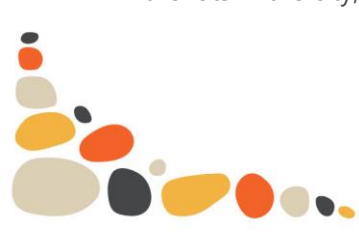
A graphic synthesizing the findings described above showing the lands and proportions of total tree canopy cover that are regulated and unregulated under Guelph’s current private tree bylaw is provided in [Figure 3-6](#).

Key findings related to Guelph’s current Private Tree Protection By-law are as follows

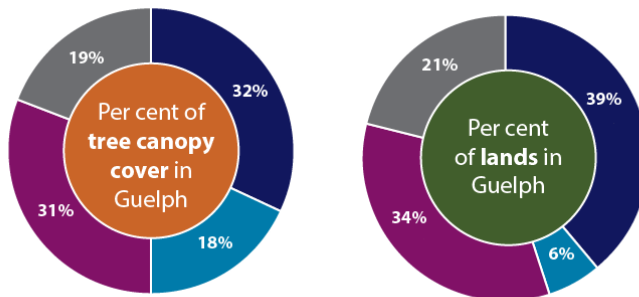
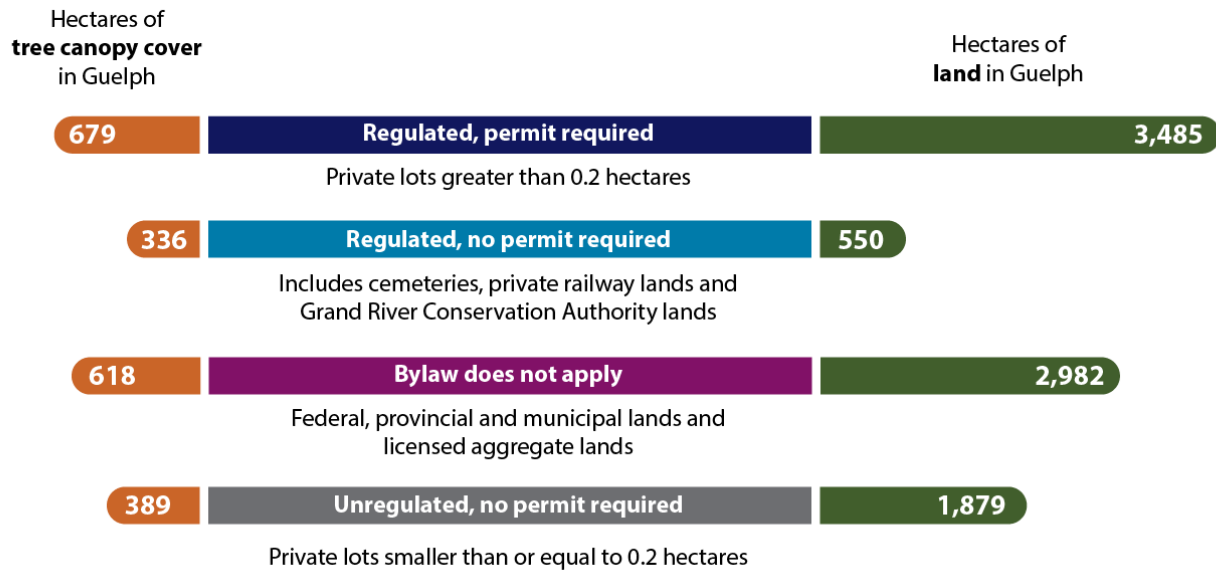
- forty-five (45) per cent of lands in the city which contain about 50 per cent of the tree canopy cover are captured;
- thirty-four (34) per cent of lands in the city which contain about 31 per cent of the tree canopy cover are not captured by the private tree bylaw because they are exempt, mainly because they are in public ownership; and
- the remaining 21 per cent of the lands in the city containing about 19 per cent of Guelph’s tree canopy cover are also not captured by the private tree bylaw, but could be captured (in whole or in part) if the scope of the current bylaw was expanded.

Notably, a public tree bylaw – which the City is expected to develop in the near future – could regulate most of the trees on public lands (i.e., 31 per cent of the current tree canopy cover).

It is also notable that even through the current private tree bylaw regulates trees on less than 5 per cent (1,929) of the lots in the city, these relatively large lots contain about 50 per cent of the tree canopy cover in Guelph.



What is regulated and unregulated under Guelph's current Private Tree Protection By-law?



These numbers are approximations and are subject to change.

Figure 3-6. Graphic illustration of the proportions of land and total tree canopy cover on which Guelph's current private tree bylaw does and does not apply

3.4 Regulating more canopy cover would likely mean capturing more lots

Support for expanding the scope of Guelph's private tree bylaw in some way was expressed by many of the participants engaged through the first phase of engagement for this process (see Section 4). Given that the current Private Tree Protection By-law's scope is focused on private lots greater than 0.2 ha, one obvious option would be to consider expanding the scope to capture some or all the remaining private lots in the city. Therefore, some additional analysis was completed to estimate how much additional canopy cover could potentially be captured by regulating trees on private lots of 0.2 ha and smaller.



Assessment of lot sizes in Guelph found that dividing private lots into range classes of 0.05 ha made sense, as the bulk of private lots in the city are currently 0.1 ha (a quarter of an acre) or less. For context, 0.1 ha is about half the size of a standard hockey rink.

The additional analyses examined the

- numbers of private lots in different size classes and the area they cover (Table 3-2 and Figure 3-7);
- per cent of total tree canopy cover (i.e., canopy cover on public and private lands across the city) captured by different size classes of lots (Table 3-3); and
- per cent of private tree canopy cover captured by different size classes of private lots (Table 3-4 and Figure 3-7).

Table 3-2. Numbers of lots and area covered by different size classes of private lots*

Ranges of private lot size classes in hectares (ha)	Number of private lots	Total area in hectares (ha)
Not captured by the current private tree bylaw (35,258 lots and 1878.7 ha in total)		
• less than 0.05	18,219	644.4
• 0.05-0.1	15,086	982.5
• 0.1-0.15	1,578	187.3
• 0.15-0.2	375	64.5
Captured by the current private tree bylaw		
• greater than 0.2	1,929	4035.5
Totals	37,187	5914.1

* For this update "private lands" (lots) includes all lands that could be regulated under a private tree bylaw. See Section 1.4 and Table 1-1.

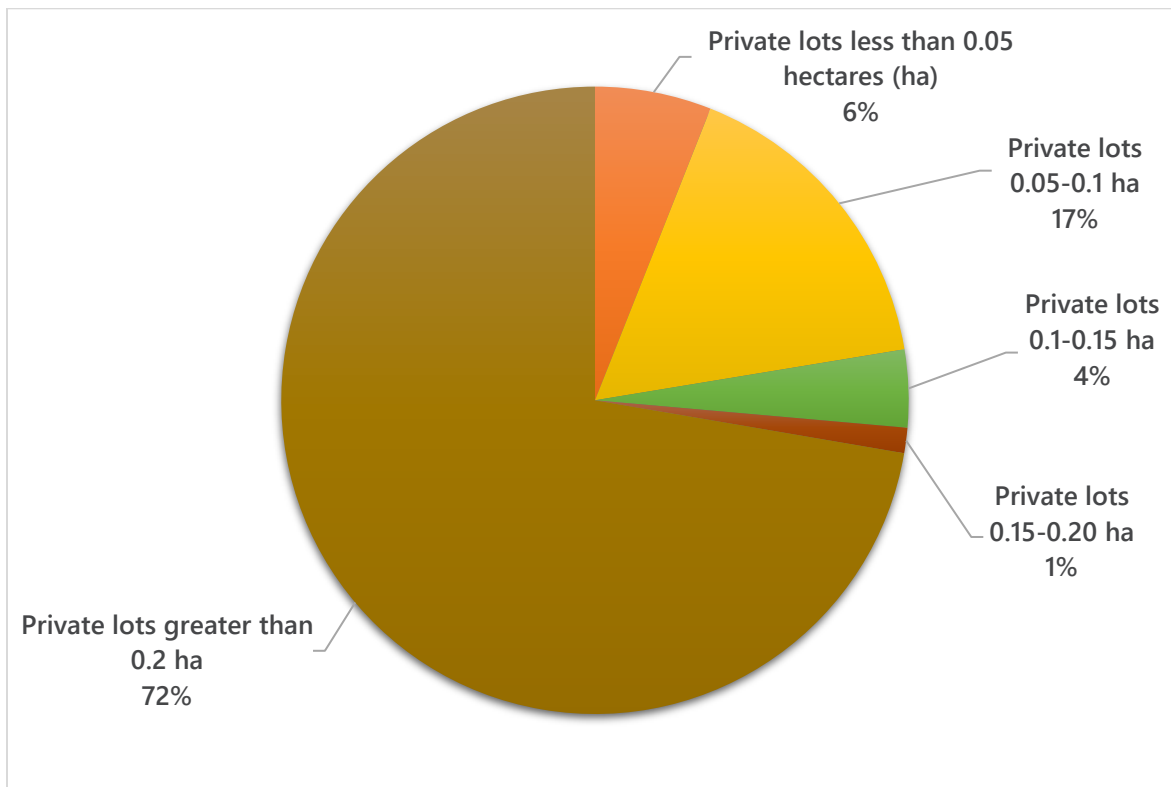


Figure 3-7. Private tree canopy cover captured by different size classes of private lots



Table 3-3. Total tree canopy cover* captured by different size classes of lots

Ranges of private** and public lot sizes in hectares (ha)	Area of tree canopy cover in hectares (ha)	Per cent of total tree canopy cover*
Not captured by the current private tree bylaw		
• private lots less than 0.05	83.63	4
• private lots 0.05-0.1	230.68	11
• private lots 0.1-0.15	55.81	3
• private lots 0.15-0.20	18.86	1
Captured by the current private tree bylaw		
• private lots greater than 0.2	1014.45	50
Private tree bylaw does not apply		
• public lands, all lot sizes	618.47	31
Totals	2021.89	100

* "Total tree canopy cover" is used in this report when all the tree canopy cover on private and public lands is considered 100 per cent.

** For this update "private lands" (lots) includes all lands that could be regulated under a private tree bylaw. See [Section 1.4](#) and [Table 1-1](#).

Table 3-3 shows how much of the total tree canopy cover (i.e., on public and private lands across the city) is captured by different size classes of lots, while [Table 3-4](#) and [Figure 3-7](#) show how much of the private tree canopy cover (i.e., on private lands only) is captured by different size classes of private lots. The reason for this specific focus on private lots is that is where the scope of Guelph's private tree bylaw already does or could apply.

Table 3-4. Private tree canopy cover* captured by different size classes of private lots

Different ranges of private lot** sizes in hectares (ha)	Area of private tree canopy cover in hectares (ha)	Per cent of private tree canopy cover*
Not captured by the current private tree bylaw		
• less than 0.05	83.63	6
• 0.05-0.1	230.68	17
• 0.1-0.15	55.81	4
• 0.15-0.2	18.86	1
Captured by the current private tree bylaw		
• greater than 0.2	1014.45	72
Totals	1403.43	100

* "Private tree canopy cover" is used in this report when all the tree canopy cover on private lands is considered 100 per cent.

** For this update "private lands" (lots) includes all lands that could be regulated under a private tree bylaw. See [Section 1.4](#) and [Table 1-1](#).

The current private tree bylaw applies to private lots greater than 0.2 ha, captures nearly 2,000 lots, and about 50 per cent of the total tree canopy cover and 72 per cent of the private tree canopy cover. In comparison, expanding the scope of the current by law to regulate trees

- on private lots greater than 0.15 ha would capture 375 additional lots containing about 51 per cent of the total tree canopy cover and about 73 per cent of the private tree canopy cover;
- on private lots greater than 0.1 ha would capture almost 2,000 additional lots containing about 54 per cent of the total tree canopy cover and about 77 per cent of the private tree canopy cover;
- on private lots greater than 0.05 ha would capture over 17,000 additional lots containing about 65 per cent of the total tree canopy cover and about 94 per cent of the private tree canopy cover; and
- on all private lots would capture over 35,000 additional lots containing about 69 per cent of the total tree canopy cover and virtually all of the private tree canopy cover.



4 Community perspectives

This section provides an overview of

- relevant feedback received from the community prior to the private tree bylaw update being launched ([Section 4.1](#));
- the engagement completed so far as part of this process ([Section 4.2](#)); and
- the highlights of the feedback documented during the phase 1 engagement ([Section 4.3](#)).

More details about the phase 1 engagement process and results can be found in the What We Heard summary on the [Have Your Say](#) page for this project.

4.1 Community feedback on the private tree bylaw 2010-2022

City staff have been receiving both criticism of the current Private Tree Protection By-law and support for regulation of trees on all private properties since it was last updated in 2010. These sentiments were expressed and documented when the current Private Tree Protection By-law was passed by Council in 2010 and were also shared by some during the engagement for the City's Urban Forest Management Plan 2013-2032.

More recently, community perspectives related to tree issues were documented during engagement for (a) the [Urban Forest Management Plan update](#) (2019), and (b) the [One Canopy Tree Planting Strategy](#) (2022). Feedback from both of these engagements indicates some continued support for reviewing Guelph's private tree bylaw and for enhanced efforts to preserve mature trees in the City.

- In 2019, a total of 170 people completed an online survey to inform the Urban Forest Management Plan Implementation Update. When asked if they think there is benefit in a review of the current Private Tree Protection By-law, 77 per cent of respondents indicated they somewhat or definitely agree.
- In 2022, 254 participants were engaged to inform the One Canopy Tree Planting Strategy. Most respondents indicated support for the City's intent to expand tree cover across the City, but also recognized there are challenges to finding space on both public and private lands. Opportunities identified by many of the respondents included protecting and maintaining existing trees, and in particular mature trees.

City staff also solicit feedback from the local Urban Forest Working Group. This group of interested and knowledgeable community members meets with City Forestry staff periodically to provide input on various tree-related initiatives in Guelph. There are also several community organizations who actively advocate for trees and/or participate in tree stewardship (e.g., the Guelph Urban Forest Friends, Trees for Guelph, Nature Guelph). Representatives from these organizations have provided feedback about the private tree bylaw previously and have been engaged through this process.



4.2 Overview of phase 1 engagement activities and audiences

Meaningful, broad and accessible community engagement has been identified as an integral component of the review and update of Guelph's Private Tree Protection By-law. Two phases of engagement are being undertaken, as follows:

- **phase 1 engagement**
 - Objective: To gather perspectives and seek input on the current Private Tree Protection By-law, as well as ideas for opportunities to improve it
 - Timing: March 6 – April 14, 2023 (completed)
- **phase 2 engagement**
 - Objective: To gather perspectives and seek input on identified options identified for updating the Private Tree Protection By-law, as well as other key issues identified through the research and engagement completed
 - Timing: late April to May, 2024

For both phases of engagement, an online survey is the main tool for data collection supplemented with a range of virtual and in-person events (e.g., information sessions, pop-ups) to provide the community with opportunities to hear directly from City staff and the consulting team, share their thoughts and ask questions.

Both phases include broad outreach to the community using social media and other communication tools as well as targeted outreach to Council, Indigenous Nations, City staff in various departments, selected committees to Council, and a range of individuals, organizations, agencies and institutions based in Guelph.

Given the technical nature of private tree bylaws, one of the tactics selected to supplement the engagement are focus groups targeting individuals and/or organizations with some knowledge of Guelph's private tree bylaw and/or private tree bylaws in general.

During the phase 1 engagement focus groups were held with: Council, City staff, two Council-appointed advisory committees (i.e., Heritage Guelph and the Natural Heritage Advisory Committee), private property owners (including residential homeowners), local developers and builders associations (including the Guelph-Wellington Development Association (GWDA) and Guelph and District Homebuilders Association (GDHA)), tree care professionals who work in Guelph, community organizations with an interest in trees, and local agencies and institutions with specific interests in trees and/or the private tree bylaw (e.g., the University of Guelph, Grand River Conservation Authority (GRCA), utilities companies).

4.3 Key themes, issues and ideas from phase 1 engagement

Themes and issues heard from the phase 1 engagement participants included

- broad support for efforts to protect and preserve mature trees and expand the city's tree canopy cover;
- lack of knowledge about the private tree bylaw (e.g., of the 296 survey respondents, half did not know that the current private tree bylaw regulates trees of at least 10 cm diameter on lots greater than 0.2 ha); and
- support for an updated private tree bylaw that is practical, including keeping or adding appropriate permit exemptions (e.g., for removals of dead or high-risk trees).



In addition, many participants felt that the private tree bylaw is due (or overdue) for an update. Opinions on whether to and how to expand its scope were quite varied, although more than half of the participants were supportive of expanding the scope of the bylaw in some way.

The following were the responses from the 296 survey respondents when asked about potential changes to the scope of the current private tree bylaw¹⁸

- sixty (60) per cent agreed that the scope of the private tree bylaw should be expanded to larger trees (e.g., at least 50 cm diameter);
- fifty-eight (58) per cent agreed that the private tree bylaw should be expanded to specified areas;
- fifty-three (53) per cent agreed that the private tree bylaw does not need to be expanded; and
- forty-one (41) per cent agreed that the scope of the private tree bylaw should be expanded significantly (e.g., to apply to all private lots).

Key challenges related to the current private tree bylaw identified by those engaged in phase 1, in order of most to least frequently raised, included concerns about

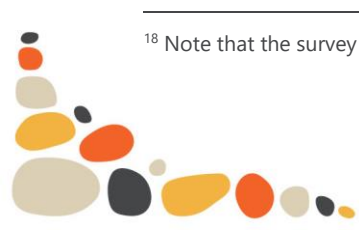
- established tree replacement and/or compensation rates being inadequate
- compensation fees being too onerous for some residents;
- the added bureaucracy and costs associated with a private tree bylaw, particularly for the typical resident;
- concerns about lack or poor enforcement and monitoring of the current private tree bylaw;
- concerns about too many trees (and particularly mature trees) being removed to accommodate development and intensification; and
- the need for more education and outreach related to the private tree bylaw.



Image credit: Grounded Solutions

Figure 4-1. City Forestry staff talking to a resident at a community pop-up during the phase 1 engagement

¹⁸ Note that the survey respondents could select more than one option, so the totals add up to more than 100 per cent.



5 Identification of feasible options for updating Guelph's private tree bylaw

As part of this process the consulting team was tasked with

- identifying at least three feasible options for updating Guelph's private tree bylaw, including the resourcing implications of each option; and
- developing a transparent and balanced process for selecting the options, including evaluation criteria for screening the list of alternatives.

The process used for identifying feasible options for updating Guelph's private tree bylaw, as described in this section of the report, consisted of

1. identification of a list of possible alternatives (Section 5.1), including discussion of some alternatives considered but not selected;
2. developing a suite of evaluation criteria (Section 5.2), including discussion of some criteria considered but not selected;
3. screening the possible alternatives against the established criteria to identify preferred alternatives (Section 5.3);
4. assessing the preferred alternatives for feasibility, including consideration of the anticipated resourcing required for each preferred alternative (developed by City staff) (Section 5.4); and
5. recommending at least three feasible options for consideration by Council and the community as part of the phase 2 engagement process (Section 5.5).

5.1 Identification of possible alternatives

There are two key aspects to consider related to the scope of the current private tree by-law in Guelph: (1) what size of tree is regulated on privately-owned lands (as measured using diameter in cm), and (2) where trees are regulated on privately-owned lands (e.g., size of lot, type of land use designation).

As noted in Section 3, Guelph's current tree canopy cover is about 23 per cent. The analyses undertaken for this update (as shown in Section 3) found that the current private tree bylaw – which applies to private lots greater than 0.2 ha – captures about half (i.e., 50 per cent) of the current tree canopy cover, leaves about 19 per cent of the current tree canopy cover on private lands unregulated, and is not applicable to the remaining 31 per cent of current tree canopy cover which occurs on public lands (i.e., mainly lands owned by the City of Guelph but also some properties owned by the Province and other public institutions).

Further to this tree canopy cover analysis, and as indicated in Table 2, reducing the lot size regulated from 0.2 ha to 0.1 ha would add about another 4 per cent of canopy cover to what would be regulated (so 54 per cent), while regulating all private lots would increase the proportion of tree canopy cover regulated to about 69 per cent of the City's total tree canopy cover. However, it is important to recognize that these canopy cover estimates do not distinguish the canopy provided by trees of different diameters, and so depending on the minimum diameter of tree regulated more or less of this tree canopy cover will be regulated.



In this context, a range of possible combinations of tree sizes and private lot types were identified in consultation with the City project team based on:

- existing conditions in Guelph in terms of known tree sizes, lot sizes and proportion of current tree canopy cover captured (as described in [Section 3](#));
- precedents (e.g., regulations, plans, policies and/or guidelines) for using the selected measures in Guelph;
- precedents for using the selected measures among the comparator municipalities with private tree bylaws (as summarized in [Appendix A](#)); and
- feedback gathered through the phase 1 engagement process (see [Section 4](#)).

The three tree sizes considered for regulation and the potential areas of application to private lands are presented in [Table 5-1](#) and [Table 5-2](#) respectively with the key reasons for their selection.

Table 5-1. Sizes of trees that could be regulated under Guelph's updated private tree bylaw

Tree diameters** in centimetres (cm)	Rationale for selection***
1. At least 50 cm diameter	<ul style="list-style-type: none"> • Tree sizes – about 2 per cent of trees across the city are more than or equal to 50 cm diameter but these large trees tend to provide exponentially more tree canopy cover than smaller trees, so have greater “per tree” value in terms of the associated benefits and services • Precedents in Guelph – regulating trees more than or equal to 30 cm diameter • Considered during the 2010 private tree bylaw update process • Precedents among comparators – trees more than or equal to 50 cm diameter regulated by private tree bylaws in London and Ottawa • Engagement feedback - some participants expressed support for broader regulation of mature/larger trees
2. At least 20 cm diameter	<ul style="list-style-type: none"> • Tree sizes – about 25 per cent of trees across the city are more than or equal to 20 cm diameter • Precedents in Guelph – regulating trees more than or equal to 20 cm diameter • Aligns with current regulation in Guelph’s Brooklyn and College Hill Heritage Conservation District and was considered in Guelph during the 2010 private tree bylaw update process • Precedents among comparators – trees more than or equal to 15 cm diameter • Regulated by private tree bylaws in Kingston, Mississauga and Oakville; trees more than or equal to 20 cm diameter regulated by private tree bylaws in Cambridge, Burlington, Markham, Richmond Hill, Vaughan • Engagement feedback – some participants expressed support for broader regulation of established trees
3. At least 10 cm diameter	<ul style="list-style-type: none"> • Tree sizes – about 50 per cent of trees across the city are more than or equal to 10 cm diameter • Precedents in Guelph – regulating trees more than or equal to 20 cm diameter aligns with the current private tree bylaw and current tree inventory requirements • Precedents among comparators – trees more than or equal to 10 cm diameter are regulated by private tree bylaws in Kitchener and Brantford (notably both under review) • Engagement feedback – some participants expressed support for the size of tree regulated to remain the same as the current private tree bylaw

** Diameter as measured at 1.4 metres (4.5 feet) from the ground.

*** Refer to [Appendix A](#) which includes a summary of the different private tree bylaws among the comparator municipalities.



Table 5-2. Sizes of private lots where Guelph's updated private tree bylaw could be applied

Areas of application in hectares (ha)	Rationale for selection***
A. Private lots greater than 0.2 ha**	<ul style="list-style-type: none"> • Current lot sizes – this captures 5 per cent of the private lots in the city (i.e., 1,929 lots) and about 50 per cent of the total tree canopy cover • Precedent in Guelph – the same as the current private tree bylaw scope • Precedents among comparators – similar to the current bylaw in Kitchener (which is under review) • Engagement feedback – some participants expressed support for the area of application of the private tree bylaw to remain unchanged
B. Private lots greater than 0.1 ha**	<ul style="list-style-type: none"> • Current lot sizes – this would capture 11 per cent of the private lots in the city (i.e., 4,258 lots) and about 54 per cent of the total tree canopy cover • No known precedents for using this size in Guelph or elsewhere • Engagement feedback – more than half of participants were supportive of considering smaller or lot sizes
C. All private lots (irrespective of size)	<ul style="list-style-type: none"> • Current lot sizes – this would effectively capture 100 per cent of private lots in the city (i.e., 38,891 lots) and about 69 per cent of the total tree canopy cover • Precedents in Guelph – considered during the 2010 private tree bylaw update process • Precedents among comparators – precedents in place among multiple municipalities with private tree bylaws (e.g., Cambridge, Burlington, Markham, Richmond Hill, Vaughan) • Engagement feedback – some participants were supportive of considering all lot sizes

** For reference, 0.2 ha is about the size of a standard hockey rink and so 0.1 ha would be about half of a standard hockey rink.

*** Refer to [Appendix A](#) which includes a summary of the different private tree bylaws among the comparator municipalities.

Ultimately a total of nine alternatives were identified based on combining

- regulation of trees with diameters at least (A) 50 cm, (B) 20 cm, or (C) 10 cm
- on private lots (1) greater than 0.2 ha, (2) greater than 0.1 ha, or (3) of all sizes.

The following list of alternatives was identified for screening based on all possible combinations between [Table 1](#) and [Table 2](#). Alternatives that were considered but ultimately not included are discussed in [Section 5.1.1](#).

1A. Trees of at least 50 cm diameter on private lots greater than 0.2 ha

1B. Trees of at least 50 cm diameter on private lots greater than 0.1 ha

1C. Trees of at least 50 cm diameter on all private lots

2A. Trees of at least 20 cm diameter on private lots greater than 0.2 ha

2B. Trees of at least 20 cm diameter on private lots greater than 0.1 ha

2C. Trees of at least 20 cm diameter on all private lots

3A. Trees of at least 10 cm diameter on private lots greater than 0.2 ha

3B. Trees of at least 10 cm diameter on private lots greater than 0.1 ha

3C. Trees of at least 10 cm diameter on all private lots



5.1.1 Alternatives considered but not selected for screening

Several other alternatives were considered with respect to both tree sizes potentially regulated and specified areas where the private tree bylaw might apply. These other alternatives and the reasons for ultimately excluding them are provided below.

Alternatives considered but not selected related to tree sizes

The following alternatives related to tree size regulated were considered but ultimately not selected for screening.

- **Trees of at least 15 cm diameter.** Not selected because this size was considered too similar to the other sizes being put forward and there was no technical basis for selecting a tree size between 10 and 20 cm diameter.
- **Trees of at least 30 and 40 cm diameter.** Not selected because (a) they were also considered similar to the size of mature trees being put forward (i.e., 50 cm diameter), and (b) would not be expected to capture many more trees than the 50 cm diameter threshold based on the relatively small tree sizes in Guelph (see [Table 3-1](#)).
- **Regulation of all trees irrespective of size.** Not selected because although it would potentially regulate many more trees (and presumably more future canopy) it was not considered a feasible or appropriate alternative for Guelph because it would (a) be very complex to implement and enforce, (b) require a very high level of additional resourcing (especially if the bylaw is expanded to smaller or all private lots), and (c) place a very heavy burden on private property owners in terms of both documentation and compensation for trees approved for removal (especially if the bylaw is expanded to smaller or all private lots).

In addition, the current regulation of trees equal to or greater than 10 cm diameter is on the small end of the spectrum in looking at comparator municipalities (see [Table 2-2](#)), there are no known precedents for regulating trees of all sizes on all private lots, and regulating trees smaller than 10 cm diameter would be inconsistent with the City's current guidelines and practices which use 10 cm diameter as a minimum size for tree inventories. Furthermore, while some participants indicated support for regulation of all trees on all lots, many qualified their position by indicating support for regulation of trees above a certain size diameter.

Alternatives considered but not selected related to specified areas

The following alternatives for areas of application were considered but ultimately not selected for screening.

- **Private lots greater than 0.15 ha.** In terms of selecting an alternative focusing on smaller private lots in the city, 0.15 ha was discounted because the tree canopy cover expected to be captured would be very similar to the current private tree bylaw. As noted in [Section 3.4](#), expanding the current private tree bylaw to regulate trees on private lots greater than 0.15 ha would only capture 375 additional lots containing about 1 per cent more of the tree canopy cover whereas expanding the bylaw to regulate trees on private lots greater than 0.1 ha would capture almost 2,000 additional lots containing about 5 per cent more of the tree canopy cover on private lands.
- **Heritage conservation districts and heritage trees:** There are currently no trees designated as heritage trees under the Ontario Heritage Act in Guelph. However, there are trees in Guelph's Brooklyn and College Hill Heritage Conservation District that are regulated through the bylaw for that district, as well as some trees listed as heritage assets on properties designated under the Ontario Heritage Act in the city. A private (or public) tree bylaw is legally required to support (and cannot contravene) any protections provided through the Ontario Heritage Act. Therefore, it was not considered appropriate to present regulation of heritage trees as an alternative or an option for discussion. A private tree bylaw can, however, complement or build on any Ontario Heritage Act tree-related regulations.



As part of the bylaw update process, once a preferred option for updating Guelph's private tree bylaw is selected, the consulting team will work with City staff to ensure that the protections for trees in designated heritage districts and on heritage properties continue to be supported, and that any changes to the bylaw so not conflict with the Ontario Heritage Act.

5.2 Development and descriptions of evaluation criteria

The following evaluation criteria for screening private tree bylaw update alternatives were developed in consultation with the City project team and considered

- the scope and area of application of the current Private Tree Protection By-law;
- the local planning context (as outlined in [Section 2](#));
- relevant best practices and precedents among the comparator municipalities (as outlined in [Section 2](#));
- relevant existing conditions in Guelph (e.g., known tree sizes, lot sizes, estimated tree canopy cover captured by different lot sizes) (as outlined in [Section 3](#))¹⁹;
- feedback from the community (as outlined in [Section 4](#)); and
- key operational and financial aspects of bylaw implementation.

Recognizing that Guelph is a growing and urbanizing city that is seeking to accommodate growth while still meeting its environmental objectives and building resilience to climate change, a balanced approach was integrated into the criteria selection process. As such the first two screening criteria capture environmental considerations, the second two criteria capture planning and social considerations, and the last two criteria capture economic and operational considerations related to a private tree bylaw.

The criteria have been tailored to the local context and have approaches, measures and scoring based on local and current information and data analyses, with consideration for applicable best practices where appropriate.

The evaluation criteria are as follows, with descriptions of the measures used for each one in the following text.

1. **Proportion of trees regulated**
2. **Proportion of tree canopy cover regulated**
3. **Level of protection compared to the current private tree bylaw**
4. **Alignment with community perspectives**
5. **Level of complexity**
6. **Impact on City resources (anticipated)**

1. Proportion of trees regulated

As the alternatives include different tree sizes and different lots sizes, it was considered important to have a criterion that considers roughly how many trees would be regulated based on the available data. The application of this criterion is based on the data analyses related to tree sizes in Guelph ([Table 3-1](#) in [Section 3.1](#)) and the area covered by lots in the respective lot size classes on private lands ([Table 3-2](#) in [Section 3.4](#)).

¹⁹ Note that the analyses provide in [Section 3](#) used to apply some of the criteria are recognized as approximations based on the data collected as part of the Guelph Urban Forest Study (2019) but are considered accurate and current enough to inform this process.



The specific approach was to consider (a) the approximate per cent of trees captured by the given tree size class and (b) the proportion of private lands captured by the alternative being considered equally. This approach is an approximation as it assumed a relatively even spread of differently sized trees across the city. The results of this analysis found that alternatives were estimated to capture up to 50 per cent of the trees the city. The three-point scoring system was then applied to this range whereby a greater proportion of trees that could be regulated was scored higher.

The alternative is estimated to regulate

- less than a third of the trees on private lands that could be regulated (1 point);
- between one and two thirds of the trees on private lands that could be regulated (2 points); or
- more than two thirds of the trees on private lands that could be regulated (3 points).

2. Proportion of tree canopy cover regulated

Given the main purpose of the tree bylaw is to help support the Strategic Plan by protecting and enhancing tree canopy on private lands through regulation, it was considered important to have a criterion that considers approximately how much tree canopy would be regulated by the different alternatives.

The application of this criterion is based on the data analyses related to proportion of private tree canopy cover captured by different ranges of private lot sizes in Guelph and the area covered by each of the respective lot classes on private lands based on the data in [Table 3-4](#) and [Table 3-2](#) in [Section 3.4](#).

The specific approach was to consider the per cent of (a) canopy cover on private lands and (b) private lands captured by each alternative being considered equally. The three-point scoring system was then applied whereby a higher proportion of canopy cover regulated was scored higher, as follows.

The alternative is estimated to capture

- less than a third of the tree canopy cover on private lands (1 point);
- between one and two thirds of the tree canopy cover on private lands (2 points); or
- more than two thirds of the tree canopy cover on private lands (3 points).

3. Level of protection compared to current private tree bylaw

The City of Guelph already has a private tree bylaw in place and so an important consideration in evaluating the alternatives was whether or not more or less protection would be afforded to trees on private lands in the city as compared to the current Private Tree Protection By-law (which regulates trees of at least 10 cm diameter on private lots greater than 0.2 ha).

Given the context of climate change and intensification in Guelph, as well as Council direction to increase canopy cover (i.e., the Strategic Plan and Official Plan see [Section 2.2](#)) it was considered appropriate to assign fewer points to alternatives providing less regulatory protection than the current private tree bylaw and more points for alternatives where more trees would be expected to be regulated.

The specific approach was to consider both the approximate proportion of trees regulated and the approximate canopy cover regulated for each alternative to come up with an overall "level of protection" score which then used the current private tree bylaw as a benchmark.



The alternative provides, as compared to the current private tree bylaw

- less protection (1 point);
- the same or a similar level of protection (2 points); or
- more protection (3 points).

4. Alignment with community perspectives

Considering the community's perspectives is recognized as a critical part of this process, particularly because the private tree bylaw can directly affect landowners. In addition, it is understood that having some support for the private tree bylaw in the community will facilitate its implementation and enforcement.

As noted in [Section 4](#), during the first phase of engagement various opinions and ideas were expressed about how the private tree bylaw could be updated ranging from no change to the current scope, to expanding it to apply to all private lands. While no one clear preference emerged, more than half of the participants were supportive of expanding the private tree bylaw scope in some capacity. A total of 296 people completed surveys and perspectives were gathered from dozens more through the focus groups held in phase 1.

This criterion was assessed based on consideration of the phase 1 survey responses (with particular consideration for the responses to the question on private tree bylaw scope) and the feedback documented at the focus groups as summarized in the phase 1 [What We Heard Report](#) to get an overall "level of support". Notably, although not all of the nine alternatives were specifically presented through the first phase of engagement, it was assumed that, for example, the level of support for protection of mature trees (i.e., of at least 50 cm diameter) could be applied across all lot sizes being contemplated. For the scoring, more points were assigned to higher levels of support documented during the first phase of engagement.

The alternative aligns with perspectives shared by

- about a third of participants (1 point);
- about half of participants (2 points); or
- about two thirds of participants (3 points).

5. Level of complexity

One of the overarching best practices related to private tree bylaws is that it can be enforced (see [Section 2.8](#)). The "enforceability" of a private tree bylaw relates to various aspects of its implementation including how easy or complicated it is to screen calls and requests, receive and review permit applications, process permits, and follow-up with site visits before, during or after permit issuance, when needed and to verify compliance.

This criterion considers the relative complexity/difficulty of administration and enforcement based on the number of inquiries, permit requests and permits that might be expected annually, with a greater number of these items being considered more complex. Notably, the resourcing by law implementation, which is also considered a critical consideration, is addressed separately through screening criterion number six (6).

For example, processing a tree permit on one lot (for one or more trees) is generally expected to be less complex than for multiple lots (e.g., more documentation, more site visits). In addition, expanding the private tree bylaw to include all private lots may be easier for residents to understand than, say, an 0.1 ha lot size threshold however it is also expected to add substantial complexity (e.g., many more inquiries, more site visits to confirm tree ownership and check on active permit applications). We also know from the data ([Section 3](#)) that most trees in the



city (about 80 per cent) are less than 20 centimeters diameter, and so a private tree bylaw that excludes trees under this size threshold will be simpler to administer and implement.

The specific approach was to consider both numbers of lots captured and size of tree regulated to estimate the number of inquiries and permit requests that might be required under the different alternatives. Greater complexity in the context of this criterion is not desirable and so alternatives expected to be less complex were scored higher. The scoring approach is outlined below.

The alternative is considered

- very complex (1 point);
- somewhat complex (2 points); or
- less complex (3 points).

6. Impact on City resources

Another overarching best practice related to private tree bylaws is that it should be accompanied by resourcing to adequately support effective administration, enforcement and – when needed – prosecution.

It has been determined that effectively implementing Guelph's Private Tree Protection By-law without any scope changes will require some minor additional resourcing (see [Section 2.8](#)). Using the current private tree bylaw as a benchmark, it has also been assumed that alternatives with a smaller scope will not require additional resourcing while alternatives with an expanded scope will require more substantial additional resourcing. Furthermore, for the purposes of resourcing, alternatives applying to lots greater than 0.2 ha as well as the alternative applying to trees greater than and equal to 50 cm diameter were assumed to be comparable to the current private tree bylaw.

Detailed financial cost estimates have not been done to support screening the list of alternatives. Instead, scenarios whereby additional resource requirements are anticipated to be low, moderate or high as compared to the current resourcing have been identified based on the research done to date. More detailed cost estimates based on operational costs gathered from City staff related to current expenditures and gaps, as well as information gleaned from other municipalities with comparable private tree bylaws will be developed and included with the options being put forward as part of the phase 2 engagement.

For this criterion, a private tree bylaw that applies to a greater number of private lots (see [Table 3-2](#) in [Section 3.4](#)) is generally expected to be more resource-intensive to administer, implement and enforce. The size of trees regulated is another factor that influences resource needs, especially since it is known from the data that most trees in the city are relatively small and so regulation of trees of at least 20 cm diameter will significantly reduce the scope of application and the associated resource requirements (see [Table 3-1](#) in [Section 3.1](#)).

It is understood that resources are limited and that it is generally preferable to spend less, and so alternatives with higher anticipated resource requirements were scored lower than alternatives with lower anticipated resource requirements. Building on this information and perspective, scoring for this criterion was applied as follows.

The alternative is expected to require

- a high level of additional resourcing compared to the current private tree bylaw (1 point);
- a moderate level of additional resourcing compared to the current private tree bylaw (2 points); or
- little or no additional resourcing as compared to the current private tree bylaw (3 points).



5.2.1 Criteria considered but not selected

Equity

Another important consideration in updating Guelph's private tree bylaw is how it may impact property owners from more vulnerable sectors of the community (e.g., elderly, disabled, low income) particularly from a financial perspective. Developing a criterion for this measure as part of the screening process was considered but was ultimately rejected because this issue is expected to be more appropriately addressed through private tree bylaw process and/or implementation recommendations to be identified later in the update process.

Examples of how economic equity considerations may be integrated into a private tree bylaw irrespective of its scope include

- reducing or eliminating permit fees for some types of applications;
- scaling permit fees in relation to the number of trees proposed for removal; and
- offering free or subsidized tree replacements for some types of tree permits or applicants.

Recommendation: Ideas for options to ensure an equitable approach to implementing the updated private tree bylaw should be sought through the second phase of engagement and considered as part of the updated private tree bylaw development process and implementation recommendations (i.e., Task 5 and Task 6) once the direction for updating the bylaw has been confirmed.

Ease of understanding

Having clear and ongoing communications related to a private tree bylaw is a recognized best practice. In the context of the alternatives being considered, it is acknowledged that a bylaw applying to all private lots (rather than specified lots sizes) may be easier to understand. However, it has also been assumed that (irrespective of its scope) the private tree bylaw will be a somewhat technical regulation requiring clear and ongoing outreach and messaging from the municipality regarding its intent, and how and where it applies. Therefore "ease of understanding" was considered but ultimately not included as a criterion. This concept is also captured in part by criterion 5, level of complexity.

5.3 Application of the evaluation criteria

Nine possible alternatives (as outlined in [Section 5.1](#)) were considered against the six screening criteria. The six evaluation criteria were each weighted equally in relation to each other, and a three-point system developed was applied for each criterion (as described in [Section 5.2](#)).

Based on the screening process, four possible alternatives were ranked as "high", one was ranked as "moderate", and four were ranked as "low" relative to each other. The specific outcomes of the screening process are shown in [Appendix B](#).

The four following alternatives ranked as "high"

- 1C. Trees of at least 50 cm diameter on all private lots
- 2C. Trees of at least 20 cm diameter on all private lots
- 3B. Trees of at least 10 cm diameter on private lots greater than 0.1 ha
- 3C. Trees of at least 10 cm diameter on all private lots



The following alternative was ranked as “moderate”

- 3A. Trees of at least 10 cm diameter on private lots greater than 0.2 ha (i.e., the scope of the current Private Tree Protection By-law)

The following four alternatives were ranked as “low”

- 1A. Trees of at least 50 cm diameter on private lots greater than 0.2 ha
- 1B. Trees of at least 50 cm diameter on private lots greater than 0.1 ha
- 2A. Trees of at least 20 cm diameter on private lots greater than 0.2 ha
- 2B. Trees of at least 20 cm diameter on private lots greater than 0.1 ha

Alternatives ranked as “moderate” and “high” were considered preferred alternatives and subject to further assessment, including consideration of the estimated resourcing associated with each alternative, as described in [Section 5.4](#).

5.4 Assessment of preferred alternatives

The five alternatives that ranked “moderate” or “high” were considered preferred alternatives for further consideration, as follows, including consideration of estimated resourcing requirements associated with each option developed by City staff. Preliminary opportunities and challenges associated with each preferred alternative were identified (see [Table 5-3](#) in the report). The alternatives ranked as “low” were not considered further.

Table 5-3. Overview and assessment of the preferred alternatives for updating Guelph’s private tree bylaw

Alternatives	“Pros”	“Cons”
1C. Trees of at least 50 cm diameter on all private lots**	<ul style="list-style-type: none"> • This would expand regulation to trees on all lots (over 35,000 more lots, see Table 3-2), and would focus on trees of at least 50 cm diameter • Engagement feedback – many participants expressed support for exploring expanded regulation of trees on smaller or on all lots • Engagement feedback – the majority of participants expressed support for additional protection for larger trees • Some precedents in urban areas focusing on mature trees: London, Ottawa 	<p>Compared to the current private tree bylaw, this alternative would:</p> <ul style="list-style-type: none"> • result in a loss of regulation for trees between 10 cm and 49 cm diameter on lots greater than 0.2 ha **; • require a moderate level of additional resourcing for effective implementation; and • be somewhat more complex to administer and enforce.
2C. Trees of at least 20 cm diameter on all private lots***	<ul style="list-style-type: none"> • This would expand regulation to trees on all lots (over 35,000 more lots, see Table 3-2), and focus on trees of at least 20 cm diameter • Engagement feedback – many participants expressed support for expanded regulation of trees on smaller or on all lots • Many precedents for this tree size being regulated on all lots among comparators: Cambridge, Burlington, Markham, Richmond Hill, Vaughan 	<p>Compared to the current private tree bylaw, this alternative would:</p> <ul style="list-style-type: none"> • result in a loss of regulation for trees between 10 cm and 19 cm diameter on lots greater than 0.2 ha • require a high level of additional resourcing for effective implementation; and • be more complex to administer and enforce.



Table 5-3. Overview and assessment of the preferred alternatives for updating Guelph's private tree bylaw*(cont'd)

Alternatives	"Pros"	"Cons"
<p>3A. Trees of at least 10 cm diameter on private lots greater than 0.2 ha</p> <p>Note: This is the scope of the current Private Tree Protection By-law</p>	<ul style="list-style-type: none"> This would result in the same level of tree regulation as currently exists on private lots greater than 0.2 ha (about 2000 lots, see Table 3-2), capturing about 72 per cent of the private tree canopy cover, see Table 3-4) This would only require a low level of additional resourcing for effective implementation Engagement feedback – about half of participants expressed support for keeping the bylaw scope as is This aligns with some existing precedents in Guelph – regulating trees of at least 10 cm diameter aligns with the current private tree bylaw and current tree inventory requirements 	<ul style="list-style-type: none"> This alternative would not provide any additional regulation beyond the current private tree bylaw, and could be implemented with no additional resourcing Precedents among comparators for lot-size based approaches are limited and likely changing (e.g., the only two precedents in Kitchener and Brantford are currently under review)
<p>3B. Trees of at least 10 cm diameter on private lots greater than 0.1 ha</p>	<ul style="list-style-type: none"> This would result in expanded regulation for trees on lots between 0.1 and 0.2 ha (about 4000 lots in total, see Table 3-2), capturing about 77 per cent of the private tree canopy cover, see Table 3.4) Engagement feedback – many participants expressed support for exploring expanded regulation of trees on smaller or on all lots This aligns with some existing precedents in Guelph – regulating trees of at least 10 cm diameter aligns with the current private tree bylaw and current tree inventory requirements 	<ul style="list-style-type: none"> Precedents among comparators for lot-size based approaches are limited and likely changing (i.e., Kitchener and Brantford with both bylaws currently under review) This alternative would require a moderate level of additional resourcing for effective implementation
<p>3C. Trees of at least 10 cm diameter on all private lots</p>	<ul style="list-style-type: none"> This would result in expanded regulation for trees on lots between 0.1 and 0.2 ha (about 2000 more lots, see Table 3-2), capturing about 72 per cent of the private tree canopy cover, see Table 3.4) Engagement feedback – many participants expressed support for exploring expanded regulation of trees on smaller or all lots This aligns with some existing precedents in Guelph – regulating trees of at least 10 cm diameter aligns with the current private tree bylaw and current tree inventory requirements 	<ul style="list-style-type: none"> Precedents among comparators for lot-size based approaches are limited and likely changing: Kitchener and Brantford with both bylaws currently under review This alternative would require a very high level of additional resourcing for effective implementation

* The outcomes of the screening process are provided in [Appendix B](#).

** This alternative would not provide a comparable level or the same level of regulation as the current and in-force Private Tree Protection By-law, and therefore is not considered feasible for Guelph. However, it can be carried forward as an option in combination with the current private tree by law (i.e., alternative 3A).

*** Alternative 2C would not provide the same level of regulation as the current private tree bylaw (i.e., trees between 10 and 19 cm diameter would no longer be regulated on lots greater than 0.2 ha), however this loss of regulation would expected to be offset by the bylaw being applied to all private properties, and not just lots of at least 0.2 ha.



Overarching best practices for tree bylaws, as outlined in [Section 2.6](#), indicate that tree bylaws are most effective when implemented with (a) a well-designed and executed outreach and education program, and (b) adequate resources to administer and implement the bylaw. In addition, the Terms of Reference for this project determined that once a suite of at least three options for updating the private tree bylaw had been identified, that the decision of which option to pick should be informed by the anticipated resourcing associated with each option.

Based on the feedback received, irrespective of the option selected, the updated private tree bylaw is to be implemented with an outreach and communications plan intended to raise and maintain awareness about Guelph's private tree bylaw.

Estimating resource requirements for administering and implementing different tree bylaw scopes is, however, challenging. It is difficult to obtain private tree bylaw resourcing data and specifics from other municipalities (e.g., due to confidentiality). When it is shared, resourcing data from other municipalities is difficult to compare because of the variability in inter-municipal contexts, tree bylaw scopes and approaches to administration, outreach, implementation and/or enforcement. The City's Urban Forest Management Plan 2012-2032 stated: "Although a growing number of municipalities have private tree by-laws ...no comprehensive analyses of resource requirements across jurisdictions have been done to date to assess the costs or effectiveness of these by-laws". This remains the case in 2023.

Therefore, the City project team worked to develop resourcing estimates based on

- an understanding of "who will do what" at the City of Guelph related to the private tree bylaw (i.e., all private tree bylaw administration and implementation being transitioned to Forestry and Sustainable Landscapes (in Parks);
- knowledge of the resources required to implement the current private tree bylaw (and associated costs), including the recently approved resources required to fill previously identified gaps (e.g., related to proactive outreach, site visits and inspections, and post-permit tree replacement success);
- the factoring in of resources to develop and implement an outreach and communications plan intended to raise and maintain awareness about Guelph's private tree bylaw in all options; and
- scaling the resourcing considerations²⁰ for each option based on the
 - anticipated numbers of inquiries to be addressed;
 - applications to be reviewed; and
 - permits to be issued (derived from the numbers of lots captured and the estimated proportion of trees on private properties being regulated under each option).

The assessment above resulted in the identification of five options for which anticipated resourcing was estimated:

- Option 1 (Alternative 3A): Trees of at least 10 cm diameter on private lots greater than 0.2 ha (i.e., current private tree bylaw scope)
- Option 2 (Alternative 3B): Trees of at least 10 cm diameter on private lots greater than 0.1 ha
- Option 3 (Alternative 2C): Trees of at least 20 cm diameter on all private lots
- Option 4 (Alternative 1C plus Alternative 3A):
 - trees of at least 10 cm diameter on private lots greater than 0.2 ha (i.e., current scope), plus
 - trees of at least 50 cm diameter on all private lots

²⁰ Key resource components considered were adding vehicle costs and staff salaries (in Planning and Parks), then subtracting costs recovered through permit fees (based on the current permit fee of \$122 per permit). All anticipated costs are operational and mainly related to staff time.



- Option 5 (Alternative 3C): Trees of at least 10 cm diameter on all private lots

Through this process, City staff identified \$105,000 (about 0.8 of a full-time equivalent) of staff resourcing currently available within Parks to administer and implement the PTPBL starting in 2024, including development and implementation of an outreach and communications plan related to the private tree bylaw.

Notably, these resourcing estimates do not include the costs associated with collecting evidence and laying charges when deemed necessary, or the periodic advice required from City legal and/or other staff, as these are already covered under the City's budgets for those departments and not expected to change substantially irrespective of the option being considered. A summary of the outcomes of these resourcing estimates is provided in [Table 5-4](#).

Table 5-4. Minimum cost estimates associated with each of the five options identified for further consideration

Options for further consideration	Minimum total annual costs	Minimum new costs (annually)*	Estimated new full-time staff required
Option 1 (Alternative 3A): Trees of at least 10 cm diameter on private lots greater than 0.2 ha (i.e., current private tree bylaw scope, fully resourced)	\$29,000	\$0**	None**
Option 2 (Alternative 3B): Trees of at least 10 cm diameter on private lots greater than 0.1 ha	\$58,000	\$0**	None**
Option 3 (Alternative 2C): Trees of at least 20 cm diameter on all private lots	\$340,000	\$235,000	2.1
Option 4 (Alternative 1C plus Alternative 3A): Trees of at least 10 cm diameter on private properties greater than 0.2 ha (i.e., current scope) plus trees of at least 50 cm diameter on all private lots	\$218,000	\$113,000	1.2
Option 5 (Alternative 3C): Trees of at least 10 cm diameter on all private lots	\$552,000	\$447,000	3.7

* New costs are the total annual costs subtracting \$105,000 (which is the current capacity available for implementing Guelph's private tree bylaw) from the total.

** Expected this option can be implemented within current capacity.

The "feasibility" of each option was assessed based on its ability to (a) provide, as a minimum, a comparable level of tree regulation as the current and in-force Private Tree Protection By-law, and (b) be supportable by Council from a resourcing perspective. While City staff recognize that Council has identified updating the private tree bylaw as a key action to help mitigate the impacts of climate change (by protecting and enhancing tree canopy coverage)²¹, they also know about the budgetary challenges being faced by Council²². **Given this context, it was considered appropriate to recommend Options 1 through 4 listed in [Table 5-5](#) as feasible options for consideration by Council and the community through the second phase of engagement, but not Option 5 (Alternative 3C) as it was not considered feasible based on the very high level of new resourcing expected to be required.**

²¹ [City of Guelph Strategic Plan 2024-2027](#)

²² CBC article, Nov. 4, 2023: ['Extremely difficult' budget in Guelph as city faces 10% increase in 2024, mayor says](#)



Table 5-5. Feasibility assessment of the preferred alternatives for updating Guelph's private tree bylaw

Option (preferred alternative)	Level of regulation	Minimum new costs (annually)*	Feasibility assessment	Recommended option?
Option 1 (Alternative 3A): Trees of at least 10 cm diameter on private lots greater than 0.2 ha	Same as the current private tree bylaw	\$0**	<ul style="list-style-type: none"> Level of regulation considered feasible as it is the same as the current private tree bylaw Can be implemented within the available capacity identified, so considered feasible 	Yes
Option 2 (Alternative 3B): Trees of at least 10 cm diameter on private lots greater than 0.1 ha	Somewhat more than the current private tree bylaw	\$0**	<ul style="list-style-type: none"> Level of regulation considered feasible as it is the slightly more than the current private tree bylaw Can be implemented within the available capacity identified, so considered feasible 	Yes
Option 3 (Alternative 2C): Trees of at least 20 cm diameter on all private lots	Comparable to or more than the current by private tree bylaw (i.e., trees between 10 and 19 cm diameter would no longer be regulated on lots greater than 0.2 ha, but trees of at least 20 cm diameter would be captured on all private lots)	\$235,000	<ul style="list-style-type: none"> Level of regulation considered feasible as the loss of regulation of trees between 10 and 19 cm diameter would be expected to be offset by the bylaw being applied to all private properties (not just lots of at least 0.2 ha) New resourcing costs considered high but still feasible 	Yes
Option 4 (Alternative 1C plus Alternative 3A): Trees of at least 50 cm diameter on all private lots	Alternative 1C alone - less than the current private tree bylaw (i.e., trees between 10 and 49 cm diameter would no longer be regulated on lots greater than 0.2 ha)	\$113,000	<ul style="list-style-type: none"> Level of regulation feasible if Alternative 1C is combined with Alternative 3A as this would provide the same level of regulation as the current private tree bylaw plus regulation of larger trees on lots smaller than 0.2 ha New resourcing costs considered moderate and feasible 	Yes - if combined with Alternative 3A
Option 5 (Alternative 3C): Trees of at least 10 cm diameter on all private lots	Much more than the current private tree bylaw	\$447,000	<ul style="list-style-type: none"> Level of regulation considered feasible as it is the much more than the current private tree bylaw New resourcing costs considered too high to be considered feasible 	No – new resourcing costs too high

* A total of \$105,000 of existing capacity to support implementation of the private tree bylaw has been identified by City staff.

** Estimated that this option can be implemented within the current capacity identified.



5.5 Recommended options for phase 2 engagement

Based on the assessment above, the following four options (summarized in **Table 5-6**) are recommended for consideration by Council and the community through the second phase of engagement.

- Option 1: Trees of at least 10 cm diameter on private lots greater than 0.2 ha (i.e., Alternative 3A, current private tree bylaw scope)
- Option 2: Trees of at least 10 cm diameter on private lots greater than 0.1 ha (i.e., Alternative 3B)
- Option 3: Trees of at least 20 cm diameter on all private lots (i.e., Alternative 2C)
- Option 4: Trees of at least 10 cm diameter on private lots greater than 0.2 ha plus trees of at least 50 cm diameter on all private lots (i.e., Alternative 3A – current private tree by-law scope, plus Alternative 1C)

Table 5-6. Overview of the recommended options for updating Guelph's private tree bylaw

Option	Number lots regulated	Area of land captured (hectares)	Approximate total tree canopy cover* regulated (per cent)	Approximate private tree canopy cover** regulated (per cent)	Minimum new costs (annually) ***	Comments
Option 1: Trees of at least 10 cm diameter on private lots greater than 0.2 ha	1,929	4036	~50	~72	\$0 **	This scope is the same as the current private tree bylaw and can be implemented within the current capacity identified.
Option 2: Trees of at least 10 cm diameter on private lots greater than 0.1 ha	3,882	4287	~55	~77	\$0 **	This is a moderate expansion in scope from the current private tree bylaw and can be implemented within the current capacity identified.
Option 3: Trees of at least 20 cm diameter on all private lots	37,187	5914	~69	~100	\$235,000	This option applies to all the tree canopy cover on private lands, excluding trees up to 19 cm diameter.
Option 4: Option 1 plus trees of at least 50 cm diameter on all private lots	37,187	5914	~50 to 69	~72 to 100	\$113,000	This option applies to all the tree canopy cover on private lands, excluding trees up to 49 cm diameter on lots 0.2 ha and smaller.

* "Total tree canopy cover" is based on all the tree canopy cover in the City of Guelph, on private and public lands.

** "Private tree canopy cover" is based on all the tree canopy cover on private lands in the City of Guelph.

*** Estimated that this option can be implemented within current capacity identified. See **Table 5-4**.



Note that all options, including Option 1 (i.e., the current private tree bylaw scope), will require various updates to bring the bylaw into alignment with other related policies, regulations and technical guidelines, as well as housekeeping edits to support implementation.



Credit: City of Guelph

Figure 5-1. Trees being removed to accommodate development as per an approved plan in the City of Guelph



Credit: Rotary Club of Guelph

Figure 5-2. A tree being planted in a field in Guelph



6 Other key issues for the phase 2 engagement

Although the focus of this report is on the options for updating the scope of the private tree bylaw, there are also additional topics which emerged through the background review, data analysis and engagement to date which were considered worth raising at this stage in the process related to potential regulation of replacement trees (Section 6.1) and approaches to tree compensation (Section 6.2). These are each discussed in the sub-sections below.

6.1 Potential regulation of replacement trees

Guelph's current bylaw does not explicitly regulate "replacement trees" established as part of approved compensation, like some comparators (e.g., Burlington, Kingston, Mississauga, Whitby) and most planted trees (except perhaps if they are transplanted) will not reach the regulated size threshold of 10 cm diameter for several years after they are established.

The City and landowners expend time and resources to ensure tree canopy cover lost is compensated for with tree replacements expected to become established and mature over time. However, if the tree replacements either die after a few years or are damaged or removed, then this will result in a net loss to the tree canopy cover over time.

Regulating the tree replacements is one way to try and ensure that tree replacement commitments are implemented as approved. However, it would also add an additional and a potentially substantial resource requirement to the updated private tree bylaw.

It is understood that an appropriate balance for Guelph needs to be implemented and that not every tree nor every tree planting should or can be regulated. However, given we heard some interest in this aspect of regulation from some as part of the first phase of engagement, we are seeking specific input on this topic through the second phase to gain an understanding of the level of support (or lack thereof) among Councillors and the community.

Recommendation: Seek perspectives on the possible regulation of replacement trees through the private tree bylaw through the second phase of engagement.

6.2 Options for private tree bylaw compensation

In the context of Guelph's Private Tree Protection By-law, tree compensation means:

- planting (and maintaining) replacement trees on site to compensate for approved tree damage and/or removals, or
- where trees cannot be accommodated on site, paying the City to plant (and maintain) trees elsewhere in the municipality to compensate for approved tree damage and/or removals.

Although the City has various policies to support the preservation of existing trees, Guelph's private tree bylaw is the primary legislative tool used by the City to require tree replacements and/or financial compensation both



within and outside of the planning and development process. The current private tree bylaw specifically provides the legal basis for:

- seeking tree replacements and/or financial compensation when regulated trees are approved for removal;
- seeking tree replacements and/or compensation when unauthorized removals have been made; and
- ensuring measures to protect regulated trees on site or in the immediately adjacent lands while the approved removals are taking place.

The City recently completed a comprehensive research and engagement process to inform the approach and types of tree compensation considered appropriate for Guelph, culminating in the Tree Technical Manual which was approved in 2019. Policy direction and guidance for tree replacement and compensation in the City's Official Plan and Tree Technical Manual includes: (a) required replacement of all healthy non-invasive trees measuring at least 10 cm diameter approved to be removed as part of development (or site alteration) and, (b) where replanting is not feasible on the subject lands that plantings may be directed off-site, and/or compensated with cash-in-lieu.

The City's Tree Technical Manual provides guidance related to the different options for tree replacement and/or compensation. This facilitates a transparent approach within and outside of the planning process, while still providing some flexibility in terms of the type of replacement and/or compensation being required, depending on the site and the works being proposed.

However, Guelph's private tree bylaw was developed prior to the updated Official Plan policies noted above and prior to the Tree Technical Manual, and therefore is not entirely aligned with these policies and guidance. Most notably it allows for tree replacement and/or cash-in-lieu to be a condition of a permit and specifies:

- "that each tree Destroyed or Injured be replaced with one or more replacement trees to be planted and maintained to the satisfaction of the Inspector" (clause 7(b)), and
- "that if replacement planting is not achievable on the subject land, it be substituted by a payment of cash in lieu in the amount of \$500.00 per tree Destroyed or Injured" (clause 7I).

Currently, in most cases, tree replacement is calculated using a method described in the Tree Technical Manual which adds up the total diameter of stems removed and replaces them with the equivalent diameter (known as the aggregate caliper method). For example, if a 60 cm diameter tree is removed, then ten (10) trees (with a minimum diameter of six (6) cm each) would be required. However, in cases where the replacement trees cannot be compensated on site the private tree bylaw only requires \$500 in financial compensation for the tree removed, irrespective of its diameter.

Based on the best practice directions and review of comparators, it is common for private tree bylaws to exclude the specifics of how tree replacement and/or compensation is to be calculated from the bylaw itself and include these details in a separate municipal guidance document and / or online.

Tree replacement ratios and financial compensation where trees cannot be replaced on site were also topics raised repeatedly during the phase 1 engagement. Many participants shared concerns that the current tree replacement requirements and/or compensation amount are inadequate. Some others expressed concerns that tree compensation can become very expensive and may discourage residents from seeking a tree permit. Others expressed concerns if paying \$500 is less expensive than the cost establishing one or more replacement tree(s)



that private landowners may be more inclined to simply pay the City the funds than establish a new tree even if they have the space to do so. Based on the engagement completed to date, it is understood that

- the current \$500 is much less than the actual cost for establishment²³ of a single six (6) cm caliper tree; and
- in general, replacing one established or mature tree with one sapling is not considered adequate for sustaining or enhancing tree canopy cover (i.e., even if the sapling stays healthy and grows to maturity it is a long time lag until the lost canopy is replaced).

Tree replacement and compensation is a somewhat complex topic, but one that appears to be of interest to the community, and so it is suggested that some additional information on perspectives related to this topic be gathered through the phase 2 engagement.

Recommendation: Seek input on options for updating the approach to tree compensation (in accordance with the guidance approved in the 2019 Tree Technical Manual).



Credit: City of Guelph

Figure 6-1. A tree being planted in a woodland

²³ Note that tree "establishment" includes much more than just the purchase and planting of the tree. It includes the selection, purchase and delivery of the tree; basic site preparation (e.g., digging the hole); and maintenance to the end of the warranty period (e.g., periodic mulching and watering) for at least two years post-planting.



7 Concluding remarks and next steps

“Private tree by-laws are best implemented as one of several tools to support tree protection, and most effective when they find a balance between private property rights and community values and are developed with consideration for the local context and resource availability”.

City of Guelph Urban Forest Management Plan 2013-2032

The City of Guelph is committed to accommodating the provincially mandated growth within its established boundaries in ways that are aligned with building complete and healthy communities, including making the preservation and planting of trees a priority. As part of this commitment, the City has developed and implements a range of planning tools, updating them as needed. A private tree bylaw has been, and continues to be, recognized as an important part of this toolkit.

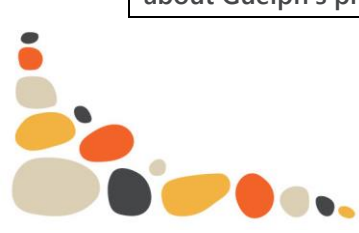
When the City last updated its Private Tree Protection By-law in 2010, Council decided to continue to focus on the regulation of trees on larger lots (i.e., greater than 0.2 ha). This has kept the focus on pre-empting tree removals in advance of development applications. The current private tree by law also ensures that (a) opportunities for tree preservation are fully explored through the planning process, and (b) where trees approved for removal cannot be replaced, financial compensation is provided to replace this lost canopy elsewhere in the city.

Today, there is more pressure on lots of all size for development and re-development, at a time when mature trees are increasingly recognized for the valuable services they provide, including helping the community mitigate and adapt to climate change by cooling and shading public and private spaces. The need to align Guelph's private tree bylaw with the City's current context and updated policies and guidance, as recommended in the Council-approved Urban Forest Management Plan 2013-2032 and in the City's strategic Plan 2024-2027, also made undertaking this update a priority.

Based on the screening and assessment process outlined in this report, the following four options are being recommended for consideration through the second phase of engagement

- **Option 1: Current private tree bylaw scope** - Regulation of trees at least 10 cm diameter on private lots greater than 0.2 ha.
- **Option 2: Current private tree bylaw tree size on smaller private lots** - Regulation of trees at least 10 cm diameter on private lots greater than 0.1 ha (rather than 0.2 ha).
- **Option 3: Trees at least 20 cm diameter on all private lots** - Regulation of trees slightly larger than what is currently regulated (20 cm rather than 10 cm diameter and greater) but with the scope expanded to all private lots across the city.
- **Option 4: Current private tree bylaw scope (Option 1) plus larger trees on all private lots** - Regulation of (a) trees at least 10 cm diameter on lots greater than 0.2 ha (i.e., current bylaw scope), plus (b) trees at least 50 cm diameter on all private lots.

Note that based on the feedback received, irrespective of the option selected, the updated private tree bylaw is to be implemented with an outreach and communications plan intended to raise and maintain awareness about Guelph's private tree bylaw.



In addition, other opportunities to update Guelph's current private tree bylaw, beyond potentially updating the scope, have been identified as part of the assessment work completed. This report also includes recommendations to seek feedback on those opportunities, as outlined below.

Based on the findings of research completed, input from the first phase of engagement, and discussions with City staff, this report recommends that in addition to the four options above that the following be considered through the phase 2 engagement process

- a. **Equity considerations - options for offsetting potential tree compensation costs for residents (if the private tree bylaw scope is expanded to more private lots);**
- b. **Further expanding regulation - possible regulation of replacement trees through the private tree bylaw; and**
- c. **Ensuring appropriate tree compensation - options for updating the approach to tree compensation (in accordance with the guidance approved in the 2019 Tree Technical Manual).**

The options and recommendations above have been identified with careful consideration for information gathered through an extensive background review, analyses completed for this process, feedback gathered through the first phase of engagement, and input from City staff.

This report is to be shared with Council and the community, and will provide the basis and background for the second phase of engagement in the spring of 2024 (i.e., Task 4b, as shown in [Figure 1-1](#)). Feedback from this engagement will inform the key directions for updating Guelph's private tree bylaw which is expected to be presented to Council in early 2025.

Ultimately, Guelph's updated private tree bylaw is expected to maintain and improve the protection and enhancement measures being implemented through the current private tree bylaw to help the City meet its tree canopy cover targets of 40 per cent by 2070 and to support a healthy and climate resilient community. Confirming a scope for the updated private tree bylaw that is appropriate for Guelph in the current context of intensification and climate change, and developing that bylaw, will be the next steps.



Credit: City of Guelph

Figure 7-1. A tree-lined street in Guelph



8 Glossary of key terms

Term	Definition	Source
boundary trees	In Ontario, the term "boundary tree" is defined in the Forestry Act (1998) as "every tree whose trunk is growing on the boundary between adjoining lands" and under this act such trees are the common property of the owners of the adjoining lands.	Forestry Act, R.S.O. 1990, Ch. F. 26
caliper	Means the measurement of trunk diameter of transplantable deciduous trees. Measured in millimetres (mm). In accordance with the Canadian Nursery Landscape Association (CNLA) standards, caliper must be the determining measurement when the caliper exceeds 40 mm. It must be measured no less than 15 cm above the ground level for trees with a caliper up to 100 mm. Trees 100 mm and larger caliper are to be measured 30 cm above the ground level.	Tree Technical Manual (City of Guelph 2019)
Private Tree Protection By-law	Means the private tree bylaw currently in effect in the City of Guelph (No. 19058 - 2010)	-
diameter at breast height (DBH)	Means a measurement, in centimeters, of the diameter of a tree's trunk at 1.4 m above grade. "DBH" is a standard arboriculture acronym which literally stands for "diameter [of a tree] at breast height". Note: The current Private Tree Protection By-law includes an extensive definition of DBH that accounts for trunks that are angled as well as multi-stemmed.	Tree Technical Manual (City of Guelph 2019)
high risk tree	This term is recommended to replace "imminent hazard tree" or "hazard tree" in accordance with current ISA best practices and ANSI A300 (Part 9) standards. In general, it means a tree that poses a high risk of failure with the potential to cause injury to people or damage to property. It should be determined by a qualified Arborist using the appropriate and established techniques.	ANSI A300
invasive species	Introduced species are plants, animals and micro-organisms that have been accidentally or deliberately introduced into areas beyond their native range. Invasive species are introduced species whose introduction or spread negatively impacts the environment, economy, and/or society including human health.	Canadian Council on Invasive Species
lot	Means a parcel of land held or owned under distinct and separate ownership from the ownership of the parcel in the abutting land. This term is fully defined in the current Private Tree Protection By-law 2010-19058. For the purposes of this project and for simplicity, the term lot is used interchangeably with "parcel" and "property".	Adapted from Guelph's By-law 2010-19058
private lands	Means any property not owned by the City, regional, provincial or federal government or a crown corporation. Notably, in the City of Guelph this includes lands that may not intuitively be thought of as "private" including institutional lands (e.g., school board and academic institution lands, railway lands, cemetery lands, lands owned by utilities).	As defined for this process
private tree canopy cover	Means all the tree canopy cover on private lands in the City of Guelph. (See the definition for "private lands").	
public lands	Means any property owned by the City, regional, provincial or federal government, a crown corporation. For the purposes of this update it also includes pits and quarries which may be privately owned but which have a statutory exemption under the Municipal Act in relation to tree bylaws.	As defined for this process



Term	Definition	Source
restoration	Means active management of an area that results in accelerated regeneration and recovery of a desired vegetation community or habitat, typically one that once occurred naturally in the area. This may include the creation or re-creation of wetlands, woodlands or meadows/grasslands.	Official Plan (City of Guelph 2022c)
total tree canopy cover	Means all the tree canopy cover on private and public lands in the City of Guelph.	
tree	Means any species of woody perennial plant including its root system, which has reached or can reach, a height of at least 4.5 metres at physiological maturity. The term "tree" refers to all parts of the tree; roots, branches, leaves and stem.	Tree Technical Manual (City of Guelph 2019)
tree canopy cover	Means "the amount of land covered by trees and shrubs when viewed from above. Often expressed as a proportion of a city's [municipality's] total land area" (Guelph Urban Forest Study, Lallemand and KBM 2019). For the analyses completed for Guelph's Urban Forest Study, tree canopy cover included woody vegetation at least 2.0 m in height as detected using LiDAR (light detection and ranging) technology and aerial imagery. It includes all the trees in the jurisdiction on public and private lands, including trees in natural areas and manicured or built settings (e.g., parks, yards, along streets).	
tree compensation	Means the planting and establishment of tree(s) and /or shrub(s) to recompense for the injury or removal of one or more tree(s) and / or financial contributions made to support the planting and establishment of tree(s) and /or shrub(s) to recompense for the injury or removal of one or more tree(s).	Adapted from Tree Technical Manual (City of Guelph 2019)
urban forest	The term "urban forest" is typically used to capture all trees in an urban or urbanizing jurisdiction, irrespective of land ownership. However, in the City of Guelph's Official Plan the "urban forest" is defined more narrowly to mean "plantations, woodlands, hedgerows, treed areas and individual trees outside the City's Natural Heritage System" (NHS). (For the purpose of this project, the term "tree canopy cover" is used to refer to all trees in the City).	Official Plan (City of Guelph 2022)
woodland	Means, in the context of this report, land with at least (a) 1,000 trees, of any size, per hectare (ha), (b) 750 trees, measuring over five centimetres (cm) in diameter, per ha, (c) 500 trees, measuring over 12 cm in diameter, per ha, or (d) 250 trees, measuring over 20 cm in diameter, per ha, but does not include a cultivated fruit or nut orchard or a plantation established for the purpose of producing Christmas trees. Trees are measured at 1.37 metres (m) from the ground. Note: There are various ways to define "woodlands" and "forests" in Ontario. The City's Official Plan incorporates the definition above but sets the threshold at ≥ 0.2 ha and adds some additional qualifying text.	Forestry Act, R.S.O. 1990, Ch. F. 26



9 Sources

Note: All sources below were accessed between in July 2023 and January 2024.

AMO (Association of Ontario Municipalities). 2022. [Ontario Municipalities](#). Website page accessed 2022-11-30.

Beauregard, A. 2012. [Toronto's Private Tree By-Law: Performance Measurement Design and Cost-Benefit Analysis](#). Western University, MPA Major Research Papers, Local Government Program, 82 pp.

City of Guelph. 2000. [The Corporation of the City of Guelph By-law Number \(2000\) – 16454](#). Known as the "Property Standards By-law", 11 pp.

City of Guelph. 2010. [The Corporation of the City of Guelph By-law Number \(2010\) – 19058](#). Known as the "Tree By-law", 9 pp.

City of Guelph. 2017. [Urban Design Manual, Volume 2, Urban Design Action Plan](#). November 2017, 50 pp.

City of Guelph. 2018. [Natural Heritage Action Plan](#). September 2018, 68 pp.

City of Guelph. 2019a. [Guelph. Future ready. City's Strategic Plan 2019-2023](#). 24 pp.

City of Guelph. 2019b. [Tree Technical Manual](#). December 2019, 59 pp.

City of Guelph. 2020a. Private Tree By-law Standard Operating Procedure. April 2021, 20 pp.

City of Guelph. 2020b. [Survey report: City of Guelph Urban Forest management plan survey](#). Parks Operations and Forestry, January 2020, 18 pp.

City of Guelph. 2020c. [Urban Forest Management Plan Implementation Update and Second Phase Plan Report](#). August 2020, 90 pp.

City of Guelph. 2020d. [Shaping Guelph: Official Plan Amendment 80](#). By-law (2022)-20731. As adopted by City Council July 11, 2022.

City of Guelph. 2020e. [Shaping Guelph: Official Plan Amendment 80 – Decision Report](#). Staff Report to City Council, Monday, July 11, 2022, 678 pp.

City of Guelph. 2021. Tree Health Assessment Criteria. 3 pp.

City of Guelph. 2022a. [Engagement summary: One Canopy planting strategy](#). 18 pp.

City of Guelph. 2022b. [Envision Guelph: The City of Guelph Official Plan](#). February 2022 Consolidation, 395 pp.

City of Guelph. 2022c. [Request for Proposals for Consulting Services for the Review and Update of Guelph's Private Tree Bylaw Terms of Reference](#). August 2022.

City of Guelph. 2023a. [Future Guelph: Strategic Plan 2024-2027](#). 17 pp.



Guelph's Private Tree Protection By-law Update: Key Issues and Options Report (January 2024)

City of Guelph. 2023b. [One Canopy Tree Planting Strategy](#). 75 pp.

City of London. 2022. [The London Plan](#). Council adapted June 23, 2016. Minister approved Dec. 23, 2016. Consolidated May 28, 2021.

City of Markham. 2022. [Report to General Committee: Tree Preservation By-law Review and Update](#). May 24, 2022.

City of Mississauga. 2014a. [Natural Heritage & Urban Forest Strategy](#).

City of Mississauga. 2014b. [Urban Forest Management Plan](#).

City of Vancouver and Vancouver Park Board. 2018. [Urban Forest Strategy: 2018 Update](#). 60 pp.

Fitzgibbon, J. and Summers, S. 2002. [Report on Tree Conservation By-Laws in Southern Ontario](#). Prepared by the School of Rural Planning and Development University of Guelph. 77pp.

Glasgow, H. and FitzSimmons, J. 2018. [Examining Current Woodlands Conservation By-laws in Municipalities Located within the Carolinian Region of Southwestern Ontario](#). Major Research Paper for the Rural Planning and Development Master of Science Program, University of Guelph, 72 p.

Government of Canada. 1994. [Migratory Birds Convention Act](#).

Government of Canada. 2002. [Species at Risk Act](#).

Government of Ontario. 1990. [Heritage Act](#).

Government of Ontario. 1990. [Planning Act](#).

Government of Ontario. 2000. [Professional Forester's Act](#).

Government of Ontario. 2001. [Municipal Act](#).

Government of Ontario. 2007. [Endangered Species Act](#).

Government of Ontario. 2015. [Invasive Species Act](#).

Government of Ontario. 2017. [Ontario Regulation 588/17 - Asset Management Planning for Municipal Infrastructure](#).

Government of Ontario. 2019. [Ontario Regulation 299/19 - Additional Residential Units](#).

Lallemand (Lallemand Inc./BioForest) and KBM (KBM Resources Group). 2019. [City of Guelph Urban Forest Study Report](#). 325 pp.

LRC (Landowner Resource Centre). 2005. [Forest Conservation By-laws in Ontario](#). Extension Notes, Queen's Printer for Ontario, 4 pp.

Matrix Solutions Inc. 2023. [City of Guelph Climate Adaptation Plan, Final Report](#). July 2023, 362 pp.



MHBC. 2015. [Brooklyn and College Hill Heritage Conservation District: Plan and Guidelines](#). Council approved Sept. 8, 2014. OMB Decision Issued Nov. 30, 2015. 102 pp.

Ministry of Health and Long-Term Care. 2018. [Healthy Environments and Climate Change Guideline, 2018](#). Population and Public Health Division, Ministry of Health and Long-Term Care, Effective: January 1, 2018 or upon date of release.

MMAH. 2020. [Provincial Policy Statement, 2020](#). Under the Planning Act. Approved by the Lieutenant Governor in Council, Order in Council No. 229/2020. This Provincial Policy Statement was issued under section 3 of the Planning Act and came into effect May 1, 2020.

MNRF (Ministry of Natural Resources and Forestry). 2019. [Managed Forest Tax Incentive Program](#).

LAO (Legislative Assembly of Ontario). 2022. [Bill 23: An Act to amend various statutes, to revoke various regulations and to enact the Supporting Growth and Housing in York and Durham Regions Act, 2022](#). Royal Assent Nov. 28, 2022, 77 pp.

OUGC (Ontario Urban Forest Council). 2012. An Ontario survey of lower tier municipal tree bylaws 2012. Prepared for the Ontario Urban Forest Council.

OWA (Ontario Woodlot Association). 2013a. [Tree Conservation By-law Template](#). Jan. 14, 2013. 23 pp.

OWA (Ontario Woodlot Association). 2013b. [Tree By-law Information Package](#). Jan. 14, 2013. 34 pp.

PCCP (Peel Climate Change Partnership). 2021. Peel Region Urban Forest Best Practice Guide 1: Best Practices Guide for Urban Forest Planning in Peel. October 2021. (Available from the Region of Peel on request).

Richards, N.A. 1983. [Diversity and stability in a street tree population](#). Urban Ecology 7(2): 159-171.

UFI (Urban Forest Innovations Inc.) and Beacon (Beacon Environmental Ltd.). 2012. [City of Guelph Urban Forest Management Plan: 2013 – 2032](#). September 2012. 131 pp.

Webber, K., M Le Geyt, T. O'Neill and V. Murugesan. 2020. [Guiding Urban Forestry Policy into the Next Decade: A Private Tree Protection & Management Practice Guide](#). University of Waterloo Faculty of Environment, School of Planning, July 2020, 39 pp.

Yung, Y. 2018. [State of Urban Forest Policy and Bylaws across Ontario Municipalities](#). Master's Research Paper, Faculty of Forestry, University of Toronto.



Appendix A. Overview of private tree bylaws among comparator municipalities

Municipal Bylaw	Scope	Replacement and/or Compensation Requirements	Procedure for Boundary Trees	Fees	Other Applicable Bylaws Regulating Trees***
<p>Ajax, Town of</p> <p>Tree Protection By-law 137-2006 (2006)</p>	<ul style="list-style-type: none"> All trees (irrespective of DBH) in specified areas, public and private Specified areas based on zoning as per Schedule A (i.e., rural area, Environmental Protection Areas, Open Space and Town Parks, Private Open Space) <p>Note: Provides protection for trees on public and private lands in single tree bylaw</p>	<p>The bylaw specifies:</p> <ul style="list-style-type: none"> Tree replacement as a requirement where healthy trees are permitted to be removed The option to require trees be planted elsewhere or accept cash-in-lieu where replacement trees cannot be accommodated on the subject lands The option to require written confirmation of replanting(s) and/or a letter of credit of 120 per cent the replanting and maintenance costs for two years but replacement requirements not specified in the bylaw 	<p>Not specified in the bylaw</p>	<ul style="list-style-type: none"> Tree Cutting Permit \$932.80 (2023) Tree Cutting Permit Appeal \$783.60 (2023) <p>Note: Fees listed in User Fees By-law</p>	<ul style="list-style-type: none"> Boulevard Tree Protection By-law 65-2021 Parks By-law 23-2022 Region of Durham Woodland Conservation and Management By-law 030-2020 (woodlands \geq 1.0 ha in urban and rural areas) <p>Note: This woodland bylaw includes several definitions related to "Normal Farm Practices" including a definition of a "Bona Fide Farmer" to pre-empt abuse of the related exemption. Also defines "Qualified OPFA Member" and "Qualified Arborist".</p>
<p>Barrie, City of</p> <p>Private Tree By-law 2014-115 (2014)</p>	<ul style="list-style-type: none"> All trees (irrespective of DBH) in private woodlands \geq0.2 ha (called "woodlots" in the bylaw) <p>Note: Under review in 2023</p>	<p>Not specified in bylaw but <i>Tree Protection Manual</i> (v4, 2019) specifies:</p> <ul style="list-style-type: none"> Replacement requirements and / or compensation costs. Letters of Credit may be requested for the total estimated cost of tree(s) removal, tree(s) replacement and appraised tree(s) value. 	<p>Not specified in the bylaw but <i>Tree Protection Manual</i> specifies written consent of the adjacent property</p>	<ul style="list-style-type: none"> Tree Preservation and Removal Permit Fee \$202.04 (2022) Tree Removal Fee \$1,010.23 (2022) <p>Note: Fees listed in the Engineering Fees By-law</p>	<ul style="list-style-type: none"> Parks Use By-law 2019-059



Municipal Bylaw	Scope	Replacement and/or Compensation Requirements	Procedure for Boundary Trees	Fees	Other Applicable Bylaws Regulating Trees***
		<ul style="list-style-type: none"> Appraised value is based on CLTA <i>Guide for Plant Appraisal</i> and ISA <i>Tree Evaluation Guide</i> 			
<p>Brampton, City of</p> <p>Tree Preservation By-law 317-2012 (2012)</p>	<ul style="list-style-type: none"> Trees ≥ 30 cm DBH on private lands <p>Note: City has transitioned to a digital submission and review process that replaces the paper-based system</p>	<p>The bylaw specifies:</p> <ul style="list-style-type: none"> Tree replacement as a requirement where healthy trees are permitted to be removed <p>Methods specified in <i>Tableland Tree Assessment Guidelines</i> (2018) including:</p> <ul style="list-style-type: none"> Increasing ratio-based compensation for trees ≥ 15 cm DBH (up to 5:1) Planting spacing and densities Cash-in-lieu protocols, rate (\$500 per tree) and processes 	<p>Specified in the bylaw: Written consent of the adjacent property owner(s) required with permit application</p>	<ul style="list-style-type: none"> Permit Fee \$50 (2022) <p>Note: Fees listed in User Fees By-law</p>	<ul style="list-style-type: none"> Boulevard Maintenance and Highway Obstruction By-law 163-2013 Parklands By-law 161-83
<p>Brantford, City of</p> <p>Private Tree By-law 171-2002 amended 95-2004 and 119-2017 (2017)</p>	<ul style="list-style-type: none"> Woodlands ≥ 0.2 ha (called "woodlots" in the bylaw), as per Schedule B map on private lands All trees ≥ 10 cm DBH on private lands in specified areas: (a) lands with pending applications for development approvals (b) Natural Heritage System / Area, as per Schedule B 	<p>Nothing posted for private tree compensation but approved public tree removals for driveway applications:</p> <ul style="list-style-type: none"> Cost includes a permit fee of \$1,500 based upon a 3:1 replacement ratio and administrative costs, plus the actual cost of removal including stumping (from fees bylaw) 	<p>Not specified in bylaw</p>	<p>Permit Fee not posted</p>	<ul style="list-style-type: none"> City Trees By-law 1997 Ch. 322 Parks By-law 2014 Ch. 420 Property Standards By-law Ch. 465
<p>Burlington, City of</p> <p>Private Tree By-law 04-2022 (2022)</p> <p>Permit application</p>	<ul style="list-style-type: none"> Trees ≥ 20 cm DBH on private lands in urban area Heritage trees of any size (as designated under the <i>Heritage Act</i>) Threatened or endangered trees of any size (listed under the <i>Endangered Species Act</i> or <i>Species at Risk Act</i>) 	<p>The bylaw specifies:</p> <ul style="list-style-type: none"> Tree replacement as a requirement where healthy trees are permitted to be removed Replacement tree fee (defined as cash-in-lieu) where replanting on the subject lands is not feasible Replacement tree security (defined) Minimum two-year maintenance "in good condition" for replacement trees and 	<p>Defined in bylaw which also specifies written consent of the adjacent property owner(s) required with permit application</p>	<p>Fee exemptions in bylaw specified for: confirmed dead, terminal and high-risk trees; not-for-profit housing; confirmed building structural or infrastructure conflicts</p> <p>In City's fees bylaw and online (2022):</p>	<ul style="list-style-type: none"> Public Tree By-law 68-2013 Halton Region Tree By-law 121-05 (2006) (woodlots / woodlands ≥ 0.5 ha) but excludes: active cultivated fruit or nut orchards; plantations for producing



Municipal Bylaw	Scope	Replacement and/or Compensation Requirements	Procedure for Boundary Trees	Fees	Other Applicable Bylaws Regulating Trees***
<p>process can be completed and submitted online</p>	<ul style="list-style-type: none"> Replacement trees (as defined in the bylaw) <p>In cases of unauthorized injury/destruction: "If the tree stump measurement is 20cm at grade then the provisions of this Bylaw apply"</p>	<p>prohibitions for removals of replacement trees</p> <p>Posted online (2022):</p> <ul style="list-style-type: none"> Ratio-based compensation requirements (from 2:1 to 5:1) Suggested replacement species Private Tree Replacement (Cash-in-Lieu): \$250 per replacement tree Security Deposit: \$250 per replacement tree Tree Permit Extension/Transfer Fee: \$50 per request Compliance Inspection Fee: \$500 per contravention Public Tree Permit Injury Fee: \$250 per tree Public Tree Removal or Replacement (Cash-in-lieu): \$500 per tree Public Tree Security Deposit: determined by staff 		<ul style="list-style-type: none"> Permit Application Processing Fee: \$50 (per application) 1-3 Tree Removals: \$325 4th Tree Removal: \$225 5th or more Tree Removal: \$125 per tree Permit Injury Fee: \$75 per tree <p>Note: Fees listed in User Fees By-law</p>	<p>Christmas Trees; plantations specifically planted and maintained for the purpose of harvesting; tree nurseries; narrow linear strips of trees that define a laneway or a boundary between fields; and specifies feature contiguous with gaps <20 m</p>
<p>Cambridge, City of</p> <p>Private Preservation Tree By-law 124-18 (2018)</p> <p>Permit application can be completed online, in part</p>	<ul style="list-style-type: none"> Trees ≥20 cm DBH on private lands in urban area <p>Updates to this process are in progress.</p>	<p>In the bylaw (clause 9), options to:</p> <ul style="list-style-type: none"> Require replanting plans with tree canopy targets of: 40 per cent for lots zoned Open Space and Residential, 20 per cent for lots zoned Industrial, Commercial and Institutional Calculate tree replacement value based on "market value" of tree (Note: City of Cambridge reviewing this practice; not recommended for Guelph) Require letter of credit to cover costs and replacement trees and two years maintenance <p>In the bylaw (clause 20) calculations of Replacement Tree Planting to consider the ISA Trunk Formula Method Tree Appraisal but then</p>	<p>Not specified in bylaw but consent of the adjacent property owner(s) required with permit application noted online</p>	<p>Online (2022):</p> <ul style="list-style-type: none"> Permit Application Fee: \$47.84 (per application) 	<ul style="list-style-type: none"> Municipal trees By-law 71-06 Region of Waterloo Conservation of Trees in Woodlands By-law 08-026 (woodlands ≥1.0 ha and woodlots ≥0.5 ha where delegated)



Municipal Bylaw	Scope	Replacement and/or Compensation Requirements	Procedure for Boundary Trees	Fees	Other Applicable Bylaws Regulating Trees***
		<p>may reduce the appraised value of up to 95 per cent (Note: This approach is very complex and not recommended for Guelph)</p>			
<p>Guelph, City of</p> <p>Private Tree Protection By-law 19058 (2010)</p>	<ul style="list-style-type: none"> All trees ≥ 10 cm DBH on private lots (defined) >0.2 ha <p>In cases of unauthorized injury/destruction: "the relevant DBH shall be extrapolated from the remaining trunk or trunks"</p>	<p>In the bylaw:</p> <ul style="list-style-type: none"> Landscaping, Replanting and Replacement Plans defined and required as part of a permit application Possible permit conditions include: <ul style="list-style-type: none"> 7(b) "one or more replacement trees" 7(c) cash-in-lieu 7(d) maintenance (length of time unspecified) Replanting also a possible condition of conviction <p><i>City's Tree Technical Manual (2019) provides more detailed guidance for tree replacement and compensation but is not aligned with a ratio-based approach as implied in clause 7(b).</i></p>	<p>In bylaw mentioned once "<i>a boundary tree may have multiple Owners</i>" but term and process are not defined in or out of the bylaw.</p>	<p>In the bylaw:</p> <ul style="list-style-type: none"> Cash-in-lieu specified at \$500 per tree (Note: Not within City's User Fees By-law) <p>Online (2022):</p> <ul style="list-style-type: none"> Permit Application Fee: \$122 (per application) 	<ul style="list-style-type: none"> Additional Residential Dwelling Units By-law 20909 (2021) Brooklyn and College Hill Heritage Conservation District Bylaw 19812 (2014) City Lands Encroachment Bylaw 18799 (2009) Property Standards By-law 16454 (2000) Site Alteration By-law 20097 (2016) Yard Maintenance By-law 18552 (2008)
<p>Halton, Region of</p> <p>Tree By-law 121-05 (2006)</p>	<ul style="list-style-type: none"> Woodlands ≥ 1.0 ha, all lands Woodlots ≥ 0.5 to and 1.0 ha upon delegation by local area municipality all Greenlands outside Woodlots ≥ 0.5 upon delegation by local area municipality 	<p>Not specified in the bylaw</p>	<p>Not specified in the bylaw</p>	<p>Schedule A to bylaw:</p> <ul style="list-style-type: none"> No permit fees OR Special Council Permit: \$500 	<p>None</p>
<p>Hamilton, City of</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<ul style="list-style-type: none"> Public Tree By-law 15-125



Municipal Bylaw	Scope	Replacement and/or Compensation Requirements	Procedure for Boundary Trees	Fees	Other Applicable Bylaws Regulating Trees***
No City-wide private tree bylaw	Note: A Draft Woodland Conservation By-law for the Urban Area was developed in 2003 but did not pass		Note: Known to take ownership for boundary trees shared between municipal and private lands		<ul style="list-style-type: none"> • City of Stoney Creek Tree By-law 4401-96 (1996, pre-amalgamation) • Town of Dundas Tree By-law 4513-99 (1999, pre-amalgamation) • Town of Ancaster Tree Protection By-law 2000-118 (2000, pre-amalgamation) (Note: applies to specified public and private lands)
<p>Kingston, City of</p> <p>Tree By-law 2018-15, amended by 2021-11 (2017)</p>	<ul style="list-style-type: none"> • Trees ≥ 15 cm DBH AND All trees (irrespective of DBH): • on Municipal Property • in designated Environmental Protection Areas (EPA) or Open Space • in Significant Woodlands • identified for protection in a Tree Preservation and Protection Plan • subject to commercial harvesting on lands greater than one (1) hectare in area • listed as endangered, threatened, or at risk in the provincial <i>Endangered Species Act</i> or federal <i>Species at Risk Act</i> • "distinctive trees" (as defined) 	<p>In the bylaw:</p> <ul style="list-style-type: none"> • Requirement for financial compensation (cash-in-lieu or letter of credit) where replacement trees cannot be accommodated <ul style="list-style-type: none"> ○ "a per-Tree flat rate compensation value as indicated in the City's <i>Subdivision Development Guidelines and Technical Standards</i>" • Requirement for replacement trees "equivalent in value to the value of the Tree(s) Injured or Destroyed" and financial securities • For trees outside the planning process, ISA Trunk Formula Method or alternate approved by Director <p>City of Kingston tree bylaw web page:</p>	<p>Not specified in the bylaw</p> <p>Online: "<i>Trees that cross property lines, and the pruning of branches that overhang onto neighbouring properties, are civil issues between neighbours and are not addressed by the Tree Bylaw.</i>"</p>	<p>2022 Tree Permit Fees (incl. admin. fee and three hours of staff review / inspection):</p> <ul style="list-style-type: none"> • 1 to 5 trees - \$106.50 • 6 to 15 trees - \$213.10 • >15 trees \$425.90 <p>2022 Tree Permit Renewal Fees (Note: Must be 30 days before original expiry date):</p> <ul style="list-style-type: none"> • 1 to 5 trees - \$35.25 • 6 to 15 trees - \$71 • >15 trees \$141.80 <p>Note: Listed in Planning Application Fees By-law</p>	<p>None, but note the removal of a Municipal Tree is a chargeable offense under the same tree bylaw</p>



Municipal Bylaw	Scope	Replacement and/or Compensation Requirements	Procedure for Boundary Trees	Fees	Other Applicable Bylaws Regulating Trees***
	<ul style="list-style-type: none"> To be removed for a renewable energy project under the <i>Green Energy Act</i> <p>AND</p> <p>Trees within a Woodland >1.0 ha or Significant Woodland where the area is >0.2 ha</p> <p>Note: Provides protection for trees on public and private lands in single tree bylaw</p>	<ul style="list-style-type: none"> 1:1 for simple proposals, although "<i>the City does encourage replacement ratios greater than one to one</i>" "<i>In the event that the tree to be removed is located on Municipal Property, or is removed without a Tree Permit, the value of the tree, and the number of replacement trees required, will be calculated using the Trunk Formula Method of the International Society of Arboriculture (ISA), as illustrated in Schedule 'C' to the Tree Bylaw.</i>" "<i>Any monies received in lieu of replacement trees shall be used for the purpose of reforestation.</i>" 			
<p>Kitchener, City of</p> <p>Tree Conservation By-law 2010-042, Chapter 692 (2010)</p>	<ul style="list-style-type: none"> All trees ≥ 10 cm DBH on private lots ≥ 0.405 ha (1.0 ac) <p>Note: Under review in 2023</p>	<p>In the bylaw:</p> <ul style="list-style-type: none"> Ability to require tree replacement, associated plans Where the planting of replacement trees is not possible on the subject lands, may require (a) replacement trees on other suitable land; or (b) an amount be paid equalling 120 per cent of the cost for planting replacement trees and maintaining the trees for a period of two years (to be applied to tree establishment) 	<p>Not specified in the bylaw or online</p>	<ul style="list-style-type: none"> 2022 Tree Permit Fee: \$131 2022 Tree Permit Renewal Fee: \$67 <p>Note: Listed in User Fees Document</p>	<ul style="list-style-type: none"> Municipal Trees By-law 71-06 Region of Waterloo Conservation of Trees in Woodlands By-law 08-026 (woodlands ≥ 1.0 ha and woodlots ≥ 0.5 ha where delegated)
<p>London, City of</p> <p>Tree Protection By-law C.P.-1515-228 (passed 2016. Consolidated Dec. 21, 2021)</p>	<ul style="list-style-type: none"> All trees (irrespective of DBH) in Tree Protection Areas (TPA) (as mapped in bylaw schedules) Distinctive Trees (≥ 50 cm DBH in urban area) <p>Tree Protection Areas are generally outside smaller</p>	<p>In the bylaw:</p> <ul style="list-style-type: none"> Tree replacement required or compensation fee Methodology outlined in Schedule A for "distinctive trees" – sliding scale ratio-based from 1:1 for 50 cm DBH and adding one tree per 10 cm DBH up to 11:1 (>141 cm DBH) or \$350 per tree 	<p>Defined in the bylaw and process outlined:</p> <p>7.5: On private lands: "<i>all owners of the Boundary Tree or their authorized agents</i>"</p>	<p>2020</p> <ul style="list-style-type: none"> No fee for removal of dead or hazard tree One Distinctive Tree - 100\$ trees in a TPA - < 50 cm dbh \$75/tree and >50 cm dbh \$100/tree up to a maximum of \$1000 	<ul style="list-style-type: none"> Boulevard Tree Protection By-law P.-69 (2005)



Municipal Bylaw	Scope	Replacement and/or Compensation Requirements	Procedure for Boundary Trees	Fees	Other Applicable Bylaws Regulating Trees***
	residential lots and within larger lots Note: Applies to private lands only	<ul style="list-style-type: none"> Dead "distinctive trees" - no replacement or compensation required Methodology for Tree Protection Areas determined in consultation with City staff <p>12.5: The City may recover the costs of remedial actions "by adding the costs to the tax roll for the subject land and collecting them in the same manner as property taxes"</p>	<p>would need to apply for a Permit, otherwise a Permit will not be issued".</p> <p>7.6: If shared with municipal lands, Boulevard By-law applies</p>	Note: Listed in User Fees By-law	
<p>Markham, Town of</p> <p>Tree Preservation By-law 2008-96 (amended 2017-30, 2018-115, 2022-18 (2008))</p> <p>Permit application can be completed and submitted online</p>	<ul style="list-style-type: none"> All trees ≥ 20 cm DBH excluding woodlands, woodlots and municipal lands <p>Note: Under review in 2023 (including considering adding protection for municipal trees)</p>	<p>In bylaw:</p> <ul style="list-style-type: none"> Replacement trees required "where the lot size and conditions would accommodate" Where not possible on the subject lands, may be required elsewhere <p>Compensation requirements are not formalized in the bylaw or elsewhere yet but reported as (City of Markham 2022) the "Markham Ratio Method" as follows:</p> <ul style="list-style-type: none"> 0 – 19 cm DBH, 0:1 replacement ratio 20 – 40 cm DBH, 2:1 replacement ratio 41 – 60 cm DBH, 3:1 replacement ratio 61 – 80 cm DBH, 4:1 replacement ratio >80 cm DBH, 5:1 replacement ratio Tree removed without a permit 6:1 <ul style="list-style-type: none"> \$300 per tree for cash-in-lieu for tree permits outside the Subdivision/Site Plan process 300 - \$600 per tree for cash-in-lieu for in the Subdivision/Site Plan process 	Not specified in the bylaw or online	<p>2022 Tree By-law Permit Fees (outside the Subdivision/Site Plan process) – \$0</p> <p>2022 Tree By-law Inspections fees:</p> <ul style="list-style-type: none"> First Inspection Fee - \$72.00 Second Inspection Fee - \$148.00 Subsequent Inspection Fee - \$305.50 Municipal Remedy Fee – 7 per cent of invoice <p>Note: Listed in User Fees By-law</p>	<ul style="list-style-type: none"> York Region Forest Conservation By-law 2013-68 (2013) (woodlands ≥ 1.0 ha and woodlots ≥ 0.2 ha to 1.0 ha where delegated)
<p>Mississauga, City of</p>	<ul style="list-style-type: none"> All trees ≥ 15 cm DBH on private property Replacement trees, no matter the size 	<p>In bylaw:</p> <ul style="list-style-type: none"> Permit conditions may include tree replacement requirements 	Defined in the bylaw and process outlined: 14.5 written	2022 tree removal permit: \$304 for one tree and \$109.86 for each additional tree	<ul style="list-style-type: none"> Public Tree Protection By-law 0020-2022 (Note: Recently updated to



Municipal Bylaw	Scope	Replacement and/or Compensation Requirements	Procedure for Boundary Trees	Fees	Other Applicable Bylaws Regulating Trees***
Private Tree Protection By-law 0021-2022 (2022)	<ul style="list-style-type: none"> "No Person shall interfere with Hoarding that is erected in accordance with this By-law." 	<ul style="list-style-type: none"> 24.2 "more than one Replacement Tree be required based on the Diameter of the Tree that was removed in accordance with the applicable City policy" 24.4 "a security deposit in accordance with the City's Fees and Charges By-law in a form satisfactory to the Commissioner be delivered to the Commissioner to cover the costs of the Replacement Tree, and for any potential maintenance related to the Replacement Tree for a period of up to two (2) years" 25 "The Permit Holder shall notify the Commissioner: (1) when the Replacement Tree has been planted; and (2) when at least one year has passed following the date when the Replacement Tree was planted in order for an Officer to complete a final inspection." <p>From City tree bylaw web page:</p> <ul style="list-style-type: none"> "A tree replacement is required for every 15 cm (6 inches) of diameter of the tree removed. For example, if you remove a tree with a diameter of 45 cm (18 inches), three replacement trees are required". 	<p>consent of the impacted property owner is required as part of the permit application</p> <p>If shared with municipal lands, Public Tree By-law applies</p>	<p>Note: Listed in User Fees and Charges By-law</p>	<p>require a permit to injure a tree located on public property)</p> <ul style="list-style-type: none"> Encroachment By-law 5704 (for public natural areas)
<p>Oakville, Town of</p> <p>Private Tree Protection By-law 2017-038 (2017)</p> <p>Permit application can be completed</p>	<ul style="list-style-type: none"> All trees ≥15 cm DBH on private property, including those removed as part of a development application Any hedge with stems that measure 15 cm or more in diameter <p>Note trees in woodlands and Greenlands governed by the Region</p>	<p>In bylaw, permit conditions may include:</p> <ul style="list-style-type: none"> Tree replacement requirements Where not possible on the subject lands, may be required elsewhere Monies or letter of credit to cover the costs of the replacement trees and maintenance for a period of up to two (2) years Payment for each replacement tree not replanted <p>Town of Oakville Tree Protection web page:</p>	<p>Defined in the bylaw and process outlined: 14.5 written consent of the impacted property owner is required as part of the permit application</p>	<p>Town of Oakville Tree Protection web page:</p> <p>"Permit fees include consultation and administration and are non-refundable:</p> <ul style="list-style-type: none"> \$50 - Non-refundable fee for the first tree removed (15 to 24 cm 	<ul style="list-style-type: none"> Oakville Site Alteration By-law 2008-124 Halton Region Tree By-law 121-05 (2006) (woodlots / woodlands ≥0.5 ha) <p>The Town also has a Tree Protection Policy and Tree Protection During</p>



Municipal Bylaw	Scope	Replacement and/or Compensation Requirements	Procedure for Boundary Trees	Fees	Other Applicable Bylaws Regulating Trees***
and submitted online		<ul style="list-style-type: none"> • "As a condition of the permit, one tree must be planted for every 10 cm DBH of healthy tree removed. • A \$300 security deposit is required for each tree to be planted. The security deposit will be refunded once a final inspection of the replacement plantings is complete. • Replacement trees must be planted on the same property as those removed. Where it is not possible to properly grow replacement trees on the site, the security deposit may be donated to the town to plant on nearby town property". 	Have a sample "Tree Declaration of Adjacent Property Owner" form online	<p>DBH) in a 12-month period.</p> <ul style="list-style-type: none"> • \$350 - Non-refundable fee for each additional tree, and trees that are larger than 24 cm DBH. • \$740 - NEW. If tree removal is a result of a development application... • No fee - Dead and high-risk trees, ash trees, and buckthorn". <p>Security deposit - Tree replacement and security deposit may be a condition of removal. The security deposit will be refunded once a final inspection of the replacement plantings is complete."</p>	Construction Procedure and various related permit requirements including Tree Protection Zone Encroachment Application
Ottawa, City of Tree Protection By-law 2020-340 (2020) Permit application can be completed and submitted online	Municipal trees <ul style="list-style-type: none"> • Part II: All individual trees on municipal lands • Part III: All plants in municipal natural areas Private trees <ul style="list-style-type: none"> • Part IV: Trees on all private lands >1.0 ha (and ≤1.0 ha subject to <i>Planning Act</i>) • Part V: Distinctive trees (≥ 30 cm DBH in inner urban area, ≥ 50 cm DBH in suburban area) on all private lands ≤1.0 ha in urban area AND >1.0 ha 	In bylaw, note TWO PROCESSES: <ul style="list-style-type: none"> • 51.6 and 67: possible permit conditions include replacement requirements • 52 and 68: replacement requirements including security deposit for replacement trees and their maintenance OR cash-in-lieu Specified in Schedule B of bylaw, private trees: <ul style="list-style-type: none"> • Non-development scenarios - 1:1 ratio • For infill development: <ul style="list-style-type: none"> ○ 2:1 ratio for distinctive trees 30 - 49 cm DBH in inner urban area" ○ 3:1 ratio for trees ≥50 cm DBH 	Defined in the bylaw and process outlined 47 and 63: "For a boundary tree... the applicant shall provide to the General Manager the written consent of the other property owner	Permit fees (2022) for private trees in the urban area: <ul style="list-style-type: none"> • Not associated with development or infill - \$150 per tree to a maximum of \$750 • Infill - \$500 per tree, to a maximum of \$2500 • Site Plan, Plan of Subdivision, Plan of Condominium – fees included in 	None – all contained within single Tree Protection By-law 2020-340 (2020)



Municipal Bylaw	Scope	Replacement and/or Compensation Requirements	Procedure for Boundary Trees	Fees	Other Applicable Bylaws Regulating Trees***
	<p>with existing condominiums or multi-residential developments (outside <i>Planning Act</i>)</p> <ul style="list-style-type: none"> Part VI: Tree protection <p>Note: Provides protection for trees on public and private lands in single tree bylaw</p>	<ul style="list-style-type: none"> For private trees in urban area of any size where the tree removed is dead, hazardous, or an ash tree: 1:1 ratio Financial compensation may be accepted if some of the required compensation trees cannot be accommodated on the subject lands. Developments under the <i>Planning Act</i> - replacement trees through Landscape Plans "If the tree cannot be planted on the same private property, it can then be planted on another private property in reasonably close proximity to the removed tree, subject to the property owner's approval and to the satisfaction of the General Manager" Cash-in-lieu value of \$400 per replacement tree (Note: Not per tree removed) 	<p>or owners to the application."</p>	<p>development application</p>	
<p>Peterborough, City of</p> <p>Tree Removal By-law 21-074</p> <p>Permit application can be completed and submitted online (for up to five trees)</p>	<ul style="list-style-type: none"> All trees ≥ 7.5 cm DBH on public and private property <p>Note: Provides protection for trees on public and private lands in single tree bylaw</p>	<p>Outlined online:</p> <ul style="list-style-type: none"> 1:1 replacement required for healthy trees > 15 cm DBH No replant requirements for dead trees, high-risk trees, Ash trees or Buckthorn Incentive / lead by example: "City will plant two new trees for every healthy tree removed from private property and the private property owner will plant one new tree as required through the tree removal bylaw permit process" (online) Replacement notification: The owner/ applicant must inform the City when the tree(s) has been replanted. Cash-in-lieu: Pay "City's current contracted rate based on the annual cost to plant trees on City-owned lands", \$550 in 2022 (online) 	<p>Defined in the bylaw and process outlined</p> <p>Online: "Permits will not be issued for the removal of City trees or where all the Owners have not consented to the tree removal."</p>	<p>Not specified in bylaw</p> <p>Online:</p> <ul style="list-style-type: none"> Permit application - \$0 Permit Fee - for healthy tree(s) > 15 cm DBH, up to five (5) trees <ul style="list-style-type: none"> \$50.00 with licensed tree service provider \$150.00 without licensed tree service provider 	<ul style="list-style-type: none"> Woodland Conservation By-law 17-121



Municipal Bylaw	Scope	Replacement and/or Compensation Requirements	Procedure for Boundary Trees	Fees	Other Applicable Bylaws Regulating Trees***
		<p>Note: Permit fees and replanting required only for trees > 15 cm DBH, although this is not stipulated in the bylaw</p>		<p>Reduced fees for Licensed Tree Service Providers (incentive), also shorter review time (online)</p> <p>Note: Permit fees and replanting required only for trees > 15 cm DBH, although this is not stipulated in the bylaw</p>	
<p>Pickering, City of</p> <p>Tree By-law 6108/03 (2003)</p>	<ul style="list-style-type: none"> All trees (>2.5 cm DBH) in designated Tree Protection Areas on public and private lands <p>Note: Provides protection for trees on public and private lands in single tree bylaw</p>	<p>No explicit mention of tree replacement / replanting requirements in bylaw or online.</p> <p>In bylaw, permit conditions may include:</p> <ul style="list-style-type: none"> Security – amount to be determined 	<p>Not specified in the bylaw or online</p>	<p>In bylaw:</p> <ul style="list-style-type: none"> Permit to remove healthy trees - \$100 <p>Online:</p> <ul style="list-style-type: none"> Permit to remove dead, dangerous, diseased or severely injured trees - \$0 if Arborist certification provided; \$25 if City Arborist inspection required 	<ul style="list-style-type: none"> Region of Durham Woodland By-law 030-2020 (woodlands ≥ 1.0 ha, but permit required for clear cutting woodlands ≥ 0.1 ha)
<p>Richmond Hill, Town of</p> <p>Tree Preservation By-law 41-07 (2007)</p> <p>Permit application can be completed and submitted online</p>	<ul style="list-style-type: none"> All trees ≥20 cm DBH on private lands 	<p>In bylaw:</p> <ul style="list-style-type: none"> Conditions may include landscaping / restoration plans Replacement plantings “at another location” Cash-in-lieu of 120 per cent cost of replanting and maintaining for two years <p>Online:</p> <ul style="list-style-type: none"> Online form to notify the City when the tree replacement replanting condition associated with your tree permit has been fulfilled, and/or for cash-in-lieu payment 	<p>Addressed in the bylaw under “Owner” definition but no process outlined</p>	<p>In Tariff of Fees By-law 2022 (plus HST):</p> <ul style="list-style-type: none"> \$160 for first tree plus \$55 for each additional tree maximum of \$440 <p>EQUITY – Bylaw 6.3: Fee may be waived if applicant living below the low-income cut-off (as per Stats Canada)</p>	<ul style="list-style-type: none"> Highway – Street Tree By-law 40-07 Ch. 821.1 (2007) York Region Forest Conservation By-law 2013-68 (2013) (woodlands ≥1.0 ha and woodlots ≥0.2 ha to 1.0 ha where delegated)



Municipal Bylaw	Scope	Replacement and/or Compensation Requirements	Procedure for Boundary Trees	Fees	Other Applicable Bylaws Regulating Trees***
<p>Vaughan, City of</p> <p>Tree Protection By-law 052-2018 (2018, Consolidated Nov. 17, 2020)</p>	<p>Area of application: 2.1. All properties and public lands in the City</p> <p>Prohibited Activities (S.4)</p> <ul style="list-style-type: none"> 4.1 Damage, injury etc. to all trees of any size on Public Property 4.2 Injure or destroy trees ≥20 cm DBH (or base diameter) on Private Property PROTECTION: 4.5 "No Person shall undertake any unauthorized activities, including but not limited to the placing of materials, vehicles, equipment or other things, within a Tree Protection Zone of a Tree" <p>Note: This consolidated bylaw regulates the planting, maintenance and removal of trees on public and private property</p>	<ul style="list-style-type: none"> Tree Replacement Fee outlined in the Tariff of Fees By-law <p>Replacement /compensation outlined in forms (available as PDF online)</p> <p>Residential Tree Removal Application (2022)</p> <ul style="list-style-type: none"> DBH and ratio-based compensation: 20-30 cm 1:1, 30-40 cm 2:1, 41-50 cm 3:1, over 50 cm 4:1, fruit trees 1:1 Tree replacement cost - \$550 Cash-in-lieu only if required replacement trees cannot be planted the subject lands <p>Infill/Construction Tree Removal Application (2022)</p> <ul style="list-style-type: none"> Same as above plus Tree Protection Plan with min. protection zones and hoarding required 	<p>Defined in the bylaw and process outlined</p> <p>6.1.e where any portion of the base of the Tree falls within six (6) metres of the property line, the written consent from the adjacent Owner is required</p> <p>All permit forms: "Provide written consent from an adjacent property owner where the base of a tree straddles a property line"</p>	<p>Fees in Fees and Charges By-law and online forms</p> <ul style="list-style-type: none"> Hazard / Dead Tree Declaration - \$0 <p>Residential Tree Removal (2022 fees)</p> <ul style="list-style-type: none"> \$68 processing fee \$135 per tree <p>Infill/Construction Tree Removal (2022 fees)</p> <ul style="list-style-type: none"> \$115 processing fee \$146 per tree 	<ul style="list-style-type: none"> York Region Forest Conservation By-law 2013-68 (2013) (woodlands ≥1.0 ha and woodlots ≥0.2 ha to 1.0 ha where delegated)
<p>Whitby, Town of</p> <p>Tree Protection By-Law 4640-00 (2000)</p>	<p>All trees:</p> <ul style="list-style-type: none"> In Woodlots >0.2 ha (to 1.0 ha) on private property (on one or more lots/properties) In Environmental Protection / Conservation Land, Major Open Space or Hazard Lands, Mature Woodlands and Environmentally Sensitive 	<p>In bylaw:</p> <ul style="list-style-type: none"> 6.5 Conditions may include replacement trees and their maintenance/care, and "tree relocation or compensation costs for replacement to be applied to the reforestation on the property or ... elsewhere in the Municipality" <p>Further guidance related to tree replacement / compensation provided in Tree Protection</p>	<p>Not addressed in the bylaw</p> <p>Mentioned in Tree Protection Requirements For New Development (2020) but no requirement for</p>	<p>Not in bylaw or Consolidated Fees & Charges By-law</p>	<ul style="list-style-type: none"> Property Standards By-law 6874-14 Heritage Conservation Districts (Werden's Plan Neighbourhood, Brooklin) Region of Durham Woodland By-law 030-2020 (woodlands



Municipal Bylaw	Scope	Replacement and/or Compensation Requirements	Procedure for Boundary Trees	Fees	Other Applicable Bylaws Regulating Trees***
	<p>Areas, as per Schedules A, C and P in Whitby Official Plan</p> <ul style="list-style-type: none"> • Identified for preservation on an approved Tree Preservation Plan • On Residential lots ≥ 2.02 ha • In Designated Heritage Districts <p>Note: This bylaw regulates maintenance and removal of trees on public and private property</p>	<p>Requirements For New Development (2020). Options include, in order of priority (Section 4.2):</p> <ul style="list-style-type: none"> • on-site replacement plantings including maintenance and one-year warranty period • transplanting trees to an alternate location • replanting on nearby private lands, with written authorization of the landowner • replanting on nearby municipal lands, with approval from the Town • a one-time cash contribution equal to the appraised value of the removed existing tree(s), plus 15 per cent contingency and possibly 10 per cent administration fee <p>May also require financial securities for tree protection (Section 5.4)</p>	<p>written consent outlined</p>		<p>≥ 1.0 ha, but permit required for clear cutting woodlands ≥ 0.1 ha)</p>

Acronyms: CLTA = Council of Tree and Landscape Appraisers, DBH = Diameter at Breast Height as measured 1.4 m above the ground, EAB = Emerald Ash Borer, EPA = Environmental Protection Area, GRCA = Grand River Conservation Authority, ISA = International Society for Arboriculture, MFTIP = Managed Forest Tax Incentive Program, MTCU = Ministry of Training, Colleges, and Universities, TCR = Tree Conservation Report (Ottawa), TIR = Tree Information Report (Ottawa), TPA = Tree Preservation Areas (London)

* All 30 approved comparators for Guelph were included in this review.

** Exemptions listed are all in addition to the statutory exemptions listed in the *Municipal Act* and focus on exemptions that may be relevant for Guelph.

*** The review of other applicable bylaws regulating trees focused on public tree bylaws (e.g., boulevard or street tree bylaws, parks bylaws) and upper tier woodland bylaws where applicable. Some municipal bylaws potentially regulating or addressing trees may have been overlooked. A comprehensive review was only completed for the City of Guelph.



Appendix B. Application of evaluation criteria* to the nine private tree bylaw update alternatives considered

List of alternatives in centimetres (cm) and hectares (ha)	1. Proportion of trees regulated	2. Proportion of tree canopy cover regulated	3. Level of protection compared to current private tree bylaw	4. Alignment with community perspectives	5. Level of complexity	6. Impact to City resources	Ranks**
Trees of at least 50 cm diameter alternatives							
1A. Trees of at least 50 cm diameter on private lots greater than 0.2 ha	1	1	1	2	3	3	L
1B. Trees of at least 50 cm diameter on private lots greater than 0.1 ha	1	1	1	2	3	3	L
1C. Trees of at least 50 cm diameter on all private lots	1	3	2	2	3	2	H
Trees of at least 20 cm diameter alternatives							
2A. Trees of at least 20 cm diameter on private lots greater than 0.2 ha	1	1	1	1	3	3	L
2B. Trees of at least 20 cm diameter on private lots greater than 0.1 ha	2	1	1	2	3	2	L
2C. Trees of at least 20 cm diameter on all private lots	2	3	2	3	2	1	H
Trees of at least 10 cm diameter alternatives (i.e., like the current private tree bylaw)							
3A. Trees of at least 10 cm diameter on private lots greater than 0.2 ha	2	1	2	1	3	3	M
3B. Trees of at least 10 cm diameter on private lots greater than 0.1 ha	3	1	2	2	3	2	H
3C. Trees of at least 10 cm diameter on all private lots	3	3	3	3	1	1	H

* See Section 5.2 of the report for descriptions of how each of the criteria have been identified and scored.

** Ranking relative to all nine alternatives: "L" = low ranking alternative, "M" = moderately ranked alternative, "H" = high ranking alternative



