
TO: GENERAL COMMITTEE

SUBJECT: PRIVATE TREE BY-LAW REVIEW

WARD: ALL

PREPARED BY AND KEY CONTACT: K. RANKIN, MANAGER OF PARKS AND FORESTRY OPERATIONS, EXT. 4754

SUBMITTED BY: D. FRIARY, DIRECTOR OF OPERATIONS

GENERAL MANAGER APPROVAL: M. BANFIELD, RPP, DIRECTOR OF DEVELOPMENT SERVICES / ACTING GENERAL MANAGER OF INFRASTRUCTURE AND GROWTH MANAGEMENT

CHIEF ADMINISTRATIVE OFFICER APPROVAL: M. PROWSE, CHIEF ADMINISTRATIVE OFFICER

RECOMMENDED MOTION

1. That staff in the Operations Department prepare an Intake Form for the 2022 Business Plan in the amount of \$50,000 to conduct a comprehensive investigation of the City's Private Tree By-law 2002-012 as directed by Council motions 21-G-210 and 21-G-229.

PURPOSE & BACKGROUND

2. The Provincial direction to densify existing neighbourhoods and create more affordable housing (e.g. second suites) within existing properties has raised the question of protection of individual trees on residential lots, not just trees that are part of woodlots. As a result, on August 9, 2021, City Council adopted motion 21-G-210 Individual (Single) Tree By-law regarding an update of Private Tree By-law 2002-012:

"That staff in the Operations Department conduct a cost benefit analysis associated with individual (single) tree by-laws to mitigate future damage of privately owned trees due to private construction and excavation projects and report back to General Committee. (Item for Discussion 8.9, August 9, 2021)."
3. On October 4, 2021, City Council adopted motion 21-G-229:

"That further to motion 21-G-210, the Single Tree By-law investigation include: individual heritage trees, an evaluation of best practices from other municipalities, the potential for a more comprehensive approach to mature tree protection beyond excavation and construction, and a public and stakeholder consultation process."
4. Section 10 of the *Municipal Act, 2001, S.O. 2001*, provides that a single-tier municipality may pass by-laws respecting matters set out therein including, inter alia, the economic, social and environmental well-being of the municipality. Section 135 of the *Municipal Act, 2001*, provides that a municipality may prohibit or regulate the destruction or injuring of trees.

5. Since 1990, all trees on private property that are within an ecological woodlot of 0.2 ha (1/2 acre) or greater have been protected under the provisions of a Private Tree By-law (by-law to prohibit or regulate the injuring or destruction of trees on private property in the City of Barrie). The private tree by-law was revised in 2002, 2005 and 2014. Annually, staff issue approximately 3 to 5 Tree Removal Permits for subdivision or site plan developments, 2 to 3 Permits for single lot construction works (e.g. pool installation, additions), and 1 Permit for woodlot management (thinning, harvesting). Staff also receive and deny 1 – 2 permit application requests annually for clearing forest without having an approved site plan, subdivision or other approved development plan in place.
6. While occurring infrequently, the City of Barrie has investigated and charged landowners for violating the Private Tree By-law with resulting fines and restoration orders issued. Most incidents result in voluntary restoration and replanting by the landowner however some cases must be resolved in courts. Court cases have resulted in a range from negotiated settlements to fines up to \$70,000, and restoration orders as high as \$64,000.
7. The City of Barrie is approximately 10,067 hectares in total area which is covered in approximately 3,066 hectares of tree canopy on private (71%) and public (29%) lands. In 2018, the total canopy cover was measured (via satellite photography) at 28% of the land base (see Appendix A for detailed breakdown). Tree canopy on Residential Single Detached Dwelling properties account for approximately 549 hectares (18%) of the total tree canopy within the city. Staff and volunteer organizations work to increase canopy cover through naturalization and reforestation projects on public lands using City planting programs, community partnerships and Conservation Authority partnerships.

ANALYSIS

8. Staff have completed a review of municipal tree by-laws and tree protection studies completed over the past decade attached as Appendix 'B' to Staff Report OPR002-21. In similar sized municipalities, tree protection by-laws range from non-existent to regulating all trees that are 30cm in diameter and larger. Woodlot protection by-laws, such as ours, are also common in upper and single-tier municipalities. Across Ontario, there are many variations of individual tree by-laws. The Town of Oakville and City of Toronto have individual tree-by-laws that regulate the removal of trees over 30cm in diameter at breast height and require replanting (or payment in lieu) for trees removed on private land. The City of London regulates all trees 75cm in diameter at breast height and larger. That staff in the City of London recently completed a public consultation process to increase protection to all trees 50cm and larger in diameter at breast height, which was not supported by Council or the general public.
9. Costs to administer individual tree by-laws are several hundred thousand dollars per year and require significant staff resources, municipal law enforcement support, legal (prosecutor) support and court time. Permit fees that are set too high result in large numbers of non-compliance, enforcement and associated court expenses. Permit fees that are set low result in higher compliance but only cover a fraction of the administrative costs to implement.
10. The most successful individual tree by-laws (based on experiences of other municipalities) combine education, incentives and enforcement. Educating the public of the by-law and its value to protect the environment, incentives for replanting (and increasing tree canopy), and enforcement of the by-law requirements including compliance, restoration planting and the political support to charge landowners who do not comply with the by-law. Community partnerships and incentive programs (e.g. grants) to plant more trees on private lands are successful ways to increase tree canopy in combination with education programs. One example would be directing of funds collected for tree compensation payments towards a grant program for local non-profit organizations to apply for funding to support education and planting programs on private lands (e.g. LEAF).

11. Municipalities who identified that their by-law was not as successful as it was intended noted that a lack of resources to implement the by-law combined with a lack of political support to enforce the by-law resulted in a regulation that was ineffectual. By-laws that require replanting of trees as a condition of tree permits were ineffective when they did not include securities and follow up inspections by city staff to ensure the trees were healthy and growing a year or two after planting. In some cases, only a small percentage of tree applications are denied (e.g. London, 12% permit denial) so replanting after removal is the primary method of replacing lost tree canopy.
12. That staff anticipate based on the experiences of other municipalities (e.g. St. Catherines, London, Bracebridge) that public consultation may result in greater numbers of residents opposed to a single tree by-law than in favour of it. However, a public consultation process is valuable in getting feedback on various alternatives to protect trees, increase tree canopy in the city and ensure that we have a healthy city into the future. Staff recommend presenting successful tree protection models (e.g. Oakville, Toronto) that combine various methods to regulate tree removal and increase tree canopy.
13. Without a dedicated urban forestry professional on staff and existing project workloads in the Forestry Operations Section, staff recommend the use of an urban forestry consultant to complete a comprehensive review of the tree by-law. This should include a review of the Tree Protection Manual and associated Tree Protection Specifications, Heritage Tree Designation process and Tree Valuation procedure, and the recommended best practices for regulating and protecting trees on private lands.

ENVIRONMENTAL AND CLIMATE CHANGE IMPACT MATTERS

14. Trees and forests provide many valued environmental benefits and services to the community including:
 - a) Reduction in heat island effect resulting in lower energy consumption in the summer.
 - b) Reduction in winter winds resulting in lower energy consumption in the winter.
 - c) Sequestering of greenhouse gases in trees.
 - d) Stabilization of slopes and natural areas.
 - e) Provision of wildlife habitat.
 - f) Interception and absorption of rainfall and surface water flows, improving the water cycle.

ALTERNATIVES

15. There are several alternatives available for consideration by General Committee, including but not limited to:

Alternative #1:

General Committee could maintain the existing By-law and associated policies with respect to protection of trees within the City of Barrie (*i.e.* Status Quo).

This alternative would not result in any increased regulatory controls on private tree removals and may result in negative feedback from local environmental organizations and residents who are frustrated by tree removal in established residential areas. However, Council could allocate funds to Grant programs to increase tree planting on private lands and create incentive for landowners to plant more trees. An approach using education and financial incentives for landowners to increase tree canopy on private property could meet long term greening strategies of the Urban Forest Strategy and Climate Change Adaption Strategy.

Financial Implication: Staff to administer grant program, complete grant applications to outside agencies, deliver the education programs, and work with local non-profit organizations and landowners. Annual operating cost \$125,000 plus Grant funding (to be determined).

Alternative #2:

General Committee could alter the proposed recommendation by directing staff to implement a restrictive by-law that regulates the removal of all trees above a minimum diameter (e.g. 30cm diameter at breast height and larger). A by-law that regulates the removal of all mature trees from private property would be the most restrictive and provide the most potential protection of tree canopy. This alternative would focus on regulatory control of the tree canopy and result in the highest non-compliance and negative public interaction.

This alternative is not recommended as it would create a significant administrative burden to regulate the removal of all mature trees on private lands. Residents would have to apply for permits to remove landscape trees as well as mature trees from their properties.

Financial Implication: The direct cost to the taxpayer would be estimated to be over \$600,000 per year and would include an administrative forestry section staff and resources dedicated to education, permit application reviews, permit issuance and compliance with the by-law. Additional municipal law enforcement officer(s) and associated municipal courts and prosecutor time to address by-law infractions would also be required at an additional cost.

Alternative #3:

General Committee could alter the proposed recommendation by directing staff to implement an individual tree by-law that regulates the removal of large, mature trees (e.g. 75cm diameter at breast height and larger) on private properties could be proposed as a less restrictive protection measure for mature, significant and/or heritage trees.

This alternative is not recommended as it would only provide protection for a small percentage of trees on private lands. It may have the opposite effect intended, whereas residents remove trees that are approaching that size ahead of the requirement of applying for a permit. This could result in reducing, not increasing, the tree canopy on private lands in Barrie.

Financial Implication: This alternative would have less administrative cost than alternative #2, however would still require staff to educate the public, review permit applications, issue permits and enforce compliance with the by-law. It would also create need for additional municipal law enforcement officer(s) and associated municipal courts and prosecutor time to address by-law infractions at an additional cost. Based on other municipal programs of similar nature, it is estimated that this alternative would be a direct cost to the taxpayer of over \$400,000 annually.

FINANCIAL

16. It is recommended that \$50,000 be included within the 2022 Business Planning process to be allocated towards a comprehensive review and public consultation for various alternatives for implementation. Should Council wish to direct staff to implement one of the possible alternatives, Operating and Capital funding will be required based on the level of regulation proposed. Estimated costs for Alternatives presented range from \$125,000 to \$600,000 annually.

LINKAGE TO COUNCIL STRATEGIC PRIORITIES

17. The recommendation included in this Staff Report support the following goals identified in the 2018-2022 Strategic Plan:

- Fostering a Safe and Healthy City

Regulation or prohibition of the injury or destruction (removal) of woodlots in the City of Barrie provides a measure of protection, control and monitoring of essential environmental, social and economic services that forests provide to residents.

APPENDIX "A" – TREE CANOPY

Tree Canopy Area:

| | Area (ha) | Canopy Area (ha) | Canopy % | % of Total Canopy Area |
|-------------------|--------------|------------------------|-------------|---------------------------------|
| City Owned | 1,491.0 | 714.0 | 47.9% | 23% |
| Road Right of Way | 1,467.0 | 170.1 | 11.6% | 6% |
| Private | | | | |
| Land | 7,109.0 | 2,181.9 | 30.7% | 71% |
| Total | 10,067.0 | 3,066.0 | 30.5% | 100% |

| City Ownership by Land Type | Area (ha) | Canopy Area (ha) | Canopy % |
|--------------------------------|--------------|------------------------|-------------|
| FACILITY | 56.2 | 9.3 | 16.6% |
| FRONTAGE | 13.1 | 4.8 | 36.5% |
| GORE | 2.6 | 0.5 | 20.3% |
| MUNICIPAL LOT | 2.9 | 0.2 | 7.4% |
| NATURAL | | | |
| AREA | 1,010.7 | 585.3 | 57.9% |
| PARK | 331.0 | 93.3 | 28.2% |
| SWMF | 70.9 | 19.6 | 27.6% |
| OTHER | 3.6 | 0.9 | 26.0% |
| | 1,491 | 714.0 | 47.9% |

| | | |
|--------------------------|--------|------|
| Canopy Area on All ROWs: | 170.1 | ha |
| ROW Est. Area: | 1467.0 | ha |
| % Canopy on ROWs: | 11.6% | |
| 2018 Average ROW Canopy | 36 | sq m |

| Ward # | Ward Area (ha) | Canopy Area (ha) | Canopy % |
|--------|----------------------|------------------------|-------------|
| 1 | 570 | 151 | 26.4% |
| 2 | 739 | 168 | 22.7% |
| 3 | 498 | 114 | 22.8% |
| 4 | 512 | 156 | 30.4% |
| 5 | 724 | 238 | 32.8% |
| 6 | 1,109 | 539 | 48.6% |
| 7 | 1,978 | 585 | 29.6% |
| 8 | 2,014 | 600 | 29.8% |
| 9 | 805 | 202 | 25.1% |
| 10 | 1,119 | 316 | 28.2% |
| | 10,067 | 3,066 | 30.5% |

2018 Tree Canopy Area by Land Use Types:

| CA | Area (ha) | Canopy Area (ha) | Canopy % |
|----------------|-----------|------------------|----------|
| NVCA | 2,970 | 1,006 | 33.9% |
| Regulated Area | 1,019 | 640 | 62.8% |
| LSRCA | 7,098 | 2,059 | 29.0% |
| Regulated Area | 1,499 | 754 | 50.3% |

| Natural Heritage System | | Area (ha) | Canopy Area (ha) | Canopy % |
|---|--|-----------|------------------|----------|
| Classification | | | | |
| Level 1 | | 1,418.3 | 819.5 | 57.8% |
| Level 1 with Existing Development Designation | | 575.0 | 239.8 | 41.7% |
| Level 2 | | 88.7 | 55.6 | 62.7% |
| Level 3 | | 343.8 | 138.6 | 40.3% |
| Level 3 (removed) | | 0.4 | 0.0 | 1.0% |
| Natural Heritage System Salem and Hewitt's Secondary Plan Areas | | 698.9 | 513.4 | 73.5% |
| | | 3,125.1 | 1,767.1 | 56.5% |

| Zoning | Area (ha) | Canopy Area (ha) | Canopy % |
|---|-----------|------------------|----------|
| Agriculture | 26.7 | 15.7 | 58.7% |
| Commercial | 689.6 | 84.0 | 12.2% |
| Environmental Protection Area | 1129.5 | 900.9 | 79.8% |
| Open Space | 427.6 | 149.1 | 34.9% |
| Municipal Services and Utilities | 51.0 | 4.0 | 7.9% |
| Industrial | 1193.5 | 213.2 | 17.9% |
| Institutional | 320.4 | 45.9 | 14.3% |
| Mixed Use | 39.7 | 2.8 | 7.1% |
| Residential | 2972.8 | 784.0 | 26.4% |
| Annexed Lands: Refer to Zoning By-law 054-04 Innisfil | 1786.8 | 716.5 | 40.1% |

APPENDIX “B” – MUNICIPAL TREE BY-LAWS

| Municipality | Tree By-law | Type | Regulated Size of Tree | Cost of Permit | Replant Required | Other Details |
|----------------|-------------|--------------------|---|--|--|---|
| Ajax | Yes | Forest Protection | Greenbelt / Environ. Prot. | \$875 | No unless development | |
| Barrie | Yes | Ecological Woodlot | All trees in 0.5 acre and larger woodlots | \$990.42 (development) \$125 (good forestry practices) | No unless development | Landscape planting plans required for subdivisions and site plans. |
| Cambridge | Yes | Single | ≥ 20cm DBH | \$46.45 + Landscape Appraised Value per tree removed | Yes | Cost-incentive for replanting or paying into a planting fund. |
| Guelph | Yes | Woodlot | ≥ 15cm DBH & on ≥ 0.5 acre lot | \$122 | Yes \$500/tree | |
| Toronto | Yes | Single | ≥ 30cm DBH | \$123.55/tree \$369.61/tree (construction) | Yes or \$583/tree | |
| London | Yes | Single | ≥ 50cm DBH | \$100/tree | Yes | 88% of tree permits approved. ≥ 50cm DBH represents only 6% of London's urban forest |
| Mississauga | Yes | Multiple | 3 or more trees at ≥ 15cm DBH | \$434.40 + \$98.09/tree | Yes with Security Deposit | Increasing scale of replacements of up to 2 trees per 50cm tree removed |
| Niagara Falls | Yes | Woodlot | ≥ 0.5 acre | \$0.00 | No | Good forestry practices only |
| Oakville | Yes | Single | ≥ 15cm DBH | \$68 + \$135/tree | Yes or \$550/tree | Increasing scale of replacements of up to 4 trees per 50cm tree removed |
| Ottawa | Yes | Single | ≥ 50cm DBH | \$150/tree to a max \$750 \$500/tree to max \$2,500 for infill development removals | 1:1 ratio Development is 2:1 or 3:1 | \$400 per tree replacement value if unable to plant on property. |
| Oshawa | No | | | | | |
| St. Catharines | No | | | | | Council not in support of by-law or cost of admin and support |
| Thunder Bay | No | | | | | Have Urban Forest Management Plan |
| Waterloo | No | | | | | Do not think by-laws save trees |
| Windsor | No | | | | | No political support for by-law |