



REPORT

Council

Meeting Date: March 25, 2024

FROM: Parks and Open Space Department

DATE: March 12, 2024

SUBJECT: Updated Private Tree Protection By-law 2017-038

LOCATION: Town-wide

WARD: Town-wide

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RECOMMENDATION:

That the report, from the Parks and Open Space department dated March 12, 2024, entitled Updated Private Tree Protection By-law 2017-038, be received.

KEY FACTS:

The following are key points for consideration with respect to this report:

- The town is committed to building resiliency to the changing climate and extreme weather patterns;
- At the June 24, 2019, Council meeting, Oakville Town Council passed a motion declaring a climate emergency in Oakville;
- The urban forest is being impacted by climate change including effects of extreme weather events and increased spread of invasive species and pests.
- While climate change poses a serious threat to the natural environment, a healthy and sustainable urban forest plays a major role in adaptability to changing circumstances through the ecosystem services that it provides.
- Council approved the enhanced Private Tree Protection By-law on May 1, 2017. The first private tree by-law update report was received by Council on November 20, 2017. The report provided Council an update on the efficacy of private tree protection by-law and new collaborative consultation process with residents included in the application process to preserve and enhance the Town's urban forest canopy.
- Detailed analysis showed that the enforcement of the enhanced private tree by-law significantly reduced the removal of healthy private trees and increased tree replacement.

- A team of consultants from University of Toronto and Ontario Woodlot Association were engaged to assess and quantify the potential of the private tree protection by-law as an effective tool to mitigate the impacts of the Bill 23 in achieving 40% tree canopy cover target by 2057.
- The consultant team implemented Light Detection and Ranging (Lidar) remote sensing, extensive Geographic Information System (GIS) analysis and modelling exercise for different scenarios of tree removal and tree replacement to minimize and/or mitigate the impact of Bill 23 on tree canopy in residential lands, using the private tree protection by-law. (Please see appendix A.)
- The study revealed that the Town 40% canopy cover target by 2057 can only be met when the following conditions are in place:
 - increased reduction in the removal of healthy trees
 - significantly increased tree replacement
 - The tree canopy cover target for residential landuse south of Dundas is 35% for residential RA. and 25% for residential RB.
 - no clearcutting of private properties is allowed, cash in lieu is not accepted for tree replacement as the condition of private tree removal; and
 - cedar is not approved to be planted in lieu of removing any other coniferous or deciduous trees.

RA – Residential Land-uses zoned RL1, RL2, RL1-0 and RL2-0 in Zoning By-law 2014-014.

RB – Residential Land-uses zoned RL3 to RL 11 and RL3-0 to RL8-0 in Zoning By-law 2014-014. (Please see Appendix B.)

BACKGROUND:

Urban Forest and climate change are closely interconnected. The impacts of climate change on urban forest can include effects from extreme weather events (e.g., ice storm, prolonged drought) and increased activity of invasive insects and other pests.

While climate change seriously threatens urban forests, a healthy and sustainable urban forest plays a major role in adaptability to a changing climate through the ecosystem services the urban forest provides. Consequently, a healthy, well structured and sustainable urban forest is an important part of addressing climate change.

Air pollution is recognized to have a significant role contributing to climate change. Particulate matter (specifically PM10 and PM2.5) combines with ozone to cause smog – is a deadly human health risk. Our urban forest plays a significant role in improving the health of Oakville residents by reducing the amount of smog formed from the local emissions of criteria pollutants.

Trees remove gaseous air pollution primarily by uptake via leaf stomata, though some gases are removed by the plant surface. Trees also remove pollution by intercepting airborne particles. Some particles can be absorbed into the tree, though most particles that are intercepted are retained on the plant surface.

According to the data collected in Urban Forest Effect Model 2005, the amount of air pollution filtered by Oakville's urban forest is equivalent to: all (102%) of the local industrial and commercial emissions of particulate matter (PM10) and 15% PM2.5 and over two times (243%) the amount of sulphur dioxide plus other criteria pollutants.

As trees grow, they absorb and store the carbon dioxide emissions that are driving global warming. Trees also improve soil and water conservation, store carbon, moderate local climate by providing shade, regulate temperature extremes, increase wildlife habitat and improve the land's capacity to adapt to climate change. Protecting existing trees and tree planting are the biggest and most inexpensive ways of removing CO2 out of the atmosphere to tackle the climate crisis.

The enactment and enforcement of the strengthened private tree protection by-law has proven to be an effective tool to increase Town's tree canopy hence to maintain and grow Oakville's urban forest and tackle climate change.

This report will update Council on the enhanced private tree by-law as well as note to Council, there are challenges to achieving 40% canopy target by 2057, however there are mitigation tactics that are recommended to achieve the 40% canopy target.

COMMENT/OPTIONS:

This report provides;

- Metrics regarding the number of issued removal permits and preserved trees as well as tree replacements under current private tree protection by-law.
- Comparative analysis of the number of trees removed, replaced, and preserved six years prior to and six years after the enactment of the enhanced (current) private tree by-law.
- Impacts of Bill 23 (More Homes Built Faster Act) on protecting the Town's urban forest and potential mitigation tactics.
- Major findings and recommendations of a comprehensive project completed by a team of consultants from University of Toronto and Ontario Woodlot Association to assess and quantify the potential of the

private tree protection by-law in achieving town's 40% tree canopy cover target by 2057.

- The development of a Private Tree Protection Procedure, under current the private tree protection by-law that will assist in enabling the town to achieve the Town's 40% tree canopy cover target by 2057.

The Private Tree Protection By-law regulates and prohibits the injury or destruction of trees on private property within the Town of Oakville. The enhanced Private Tree Protection By-law, enacted on May 2, 2017, regulates the removal of private trees 15 cm in diameter and larger. The provisions of this By-law do not apply to the removal of trees for satisfying a condition to the approval of a site plan, a plan of subdivision, a plan of condominium, or trees required to permit the construction of a building or structure, where the removal, injury or destruction is required under a building permit. Site plan and scoped site plan applications are regulated under Planning Act and tree by-laws are not applicable law for the issuance of a building permit.

Property owners must apply for a private tree removal permit before removing any private tree that has a trunk measuring 15 cm or larger in diameter. The first step once the application is received is a free of charge consultation site visit to assess the health and structural integrity of the tree/s and educate residents how to minimize the number of trees requested for removal.

The consultation site visit in the private tree removal application process, approved by Council in November 2017, has proved to be an efficient tool to preserve tree canopy. The site consultation provides a few objectives; confirm a reported dead or hazardous trees are dead and/or hazardous, provides an opportunity to discuss with homeowners the value and contribution the tree provides to their property and the community, explore other options than removal, explain the approval process and the requirement for tree replacement or cash compensation to the tree replacement fund.

Following approval of the enhanced private tree protection by-law, arborists must now be licensed with the Town. There was a feeling at the time that with no legislation regulating arborists whatsoever, private trees were at greater risk for removal. With arborists now licensed by the Town, there might be the opportunity to eliminate some of the site consultations and only require a photograph be provided for the removal of ash trees and invasive European buckthorn.

While staff remain supportive of the consultation site visit with residents prior to issuing a permit for the reason stated above, as all Forestry serves are reviewed through the lens of LEAN, staff will closely monitor the site visits related to dead ash trees and buckthorn to quantify the efficiencies of granting permission for the removal of dead ash and buckthorn on the basis of a photograph. Additionally, there

is no permit fee or tree replacement with removal of dead ash or buckthorn, so these instances may lend themselves to more efficient permit process such as supplying a photograph. Staff will report back on this issue in future private tree protection by-law updates to Council.

Metrics of the enhanced Private Tree Protection By-law:

Since the enactment of the strengthened private tree protection by-law in November 2017, more than 345 trees having 11,914 square metres (3 acres) of tree canopy have been preserved through consultation site visits.

The analysis comparing 12 years data, six years prior to and six years after the enactment of strengthened private tree protection by-law, demonstrates the strengths of the existing private tree protection by-law and the established business process in private tree protection, canopy preservation and enhancement.

	2011-2016	2018-2023
Number of trees removed	7,789	4,718
Number of tree replacement condition	232	10,566
Number of trees planted		5,127
Cash in lieu for tree replacement	232	5,439
Number of trees preserved in consultation site visits	2	345

Out of the 10,566 trees replacement condition, the applicants planted 5,127 trees from 2018 to 2023 and paid cash for planting the remaining 5,439 trees on town properties.

Although the enhanced private tree protection by-law significantly reduced the unnecessary removal of healthy private trees and increased the number of replaced trees, the town will only be able to meet the 40% tree canopy cover if the replacement trees are planted on the same property that tree/s are removed.

Challenges to the 40% Canopy Target by 2057 & Mitigation Tactics:

Bill 23:

On October 25, 2022, the Province introduced a housing initiative, the *More Homes Built Faster: Ontario's Housing Supply Action Plan 2022-2023*. The Action Plan supports the Province's commitment to build 1.5 million new homes over the next 10 years to address Ontario's housing crisis. As part of this initiative, the Province introduced the *More Homes Built Faster Act, 2022*, which received royal assent on November 28, 2022, which is intended to support the Ontario government's plan to build 1.5 million new homes by 2031.

Through Bill 23, Site Plan no longer applies to residential developments of ten units or less. Even though a private tree protection by-law is not an applicable law for the purposes of building permit issuance, the only municipal legislation that can regulate tree removal, tree preservation and replacement outside of building footprints in residential lots is the Private Tree Protection By-law.

Following key feedback from municipalities that there would be significant challenges to addressing certain matters under Bill 23, the Province initiated Bill 97 on April 06, 2023. Bill 97 received royal assent on June 08, 2023, authorizes the Municipalities to impose restrictions under site plan control on residential lands, where any part of the property located within 300 m. from the railroads and 120 metres from the lake, any active or inactive creek, channels and waterways, regardless of whether the development contains 10 residential units or less.

To protect the town tree canopy cover, on sites that are not subject to site plan approval, staff from several departments created an internal business process to include the terms and conditions of private tree protection by-law. These changes have the effect of regulating, through the private tree by-law, all trees that are located outside of the permitted building footprint, thereby improving the town ability to minimize the destruction of trees on private property.

Mitigating the impacts of Bill 23 through implementing Canopy targets south of Dundas Street:

A team of consultants from University of Toronto and Ontario Woodlot Association were engaged to assess and quantify the potential of private tree protection by-law on mitigating the impacts of the Bill 23 in achieving 40% tree canopy cover target by 2057. The consultant team implemented Light Detection and Ranging (Lidar) remote sensing, extensive Geographic Information System (GIS) analysis and modelling exercise for different scenarios of tree removal and tree replacement to minimize and/or mitigate the impact of Bill 23 on tree canopy in residential lands, using private tree protection by-law. The consultant team modeled the impacts of development related tree removal on the future distribution and extent of canopy cover within land-use zones most likely to be affected by Bill 23: Residential A and B south Dundas.

This study illustrates the Town will not be able to achieve townwide tree canopy cover of 40% by 2057, if the town allows: clearcutting private properties, setting 20% tree canopy target for residential land use south Dundas, accepting cash in lieu for the tree replacement as the condition of private tree removal, and allowing cedar to be planted in lieu of removing other coniferous or any deciduous trees.

To meet the town 40% tree canopy cover objective, Residential and Woodland land-uses, south of Dundas and Woodlands – Natural Heritage System land-use, north of

Dundas are the three most critical land-uses enabling the Town to achieve its tree canopy cover target. South of Dundas, Residential land-use, covers 44.3% of the total area of south Dundas, providing 37% of total tree canopy and woodlands covers 13% of the total area, providing 30% of the total tree canopy. North of Dundas, Woodlands- Natural Heritage system covers 30% of the total area providing 68% of total tree canopy.

Land Use contribution	South of Dundas	North of Dundas
Percentage of the area of residential land use from the total area	44.3%	16.5%
Contribution of residential canopy cover to the total canopy cover	37.0%	8.3%
Percentage of the area of woodlands/NHS from the total area	13.1%	29.9%
Contribution of woodlands/NHS canopy cover to the total canopy cover	29.5%	67.8%

Prohibiting Cedar as a Replacement Species

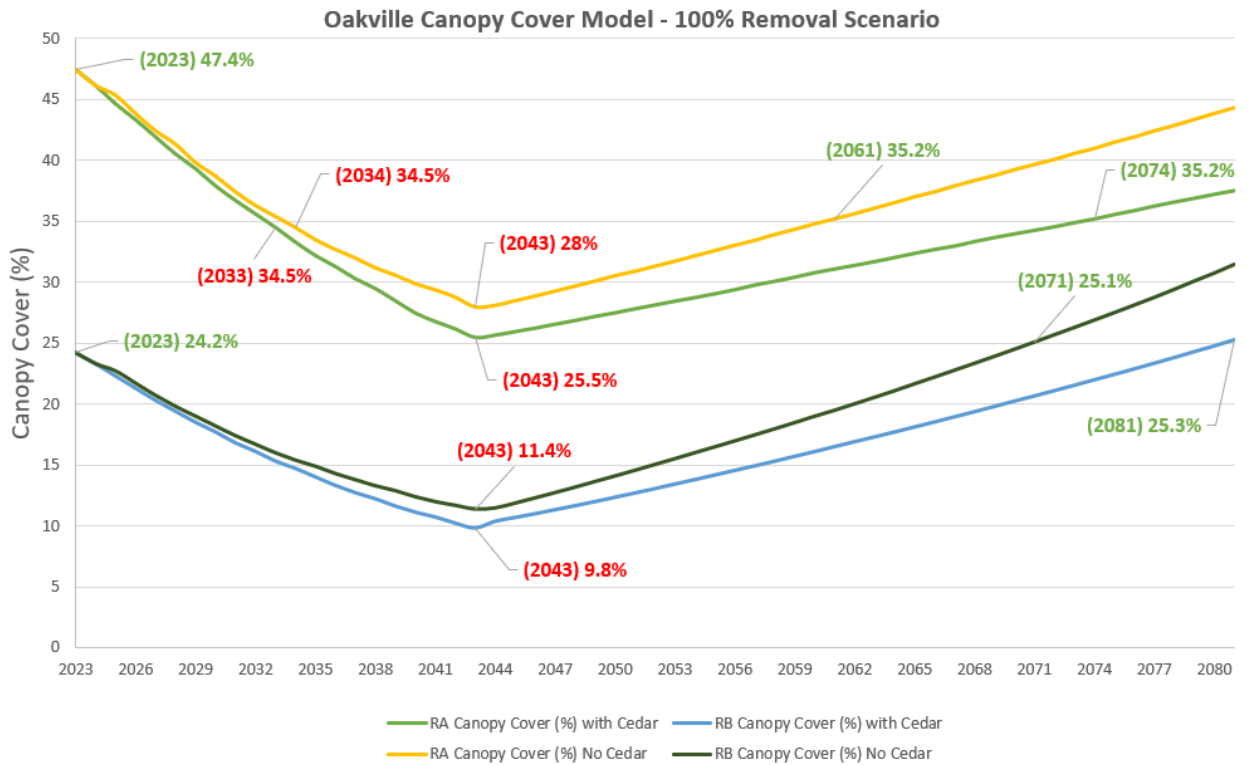
In implementing the enhanced tree by-law for the past six (6) years staff have noticed a large trend towards residents planting cedar species as a replacement tree for the removal of large stature coniferous and deciduous trees. Staff requested the consultants also explore the impact on the 40% tree canopy target by retaining or removing cedar as a permitted replacement species.

The graphs below show the potential of private tree protection by-law to achieve tree canopy cover targets in residential land uses, south of Dundas Street, with and without cedar plantation as a condition of tree removal on private properties.

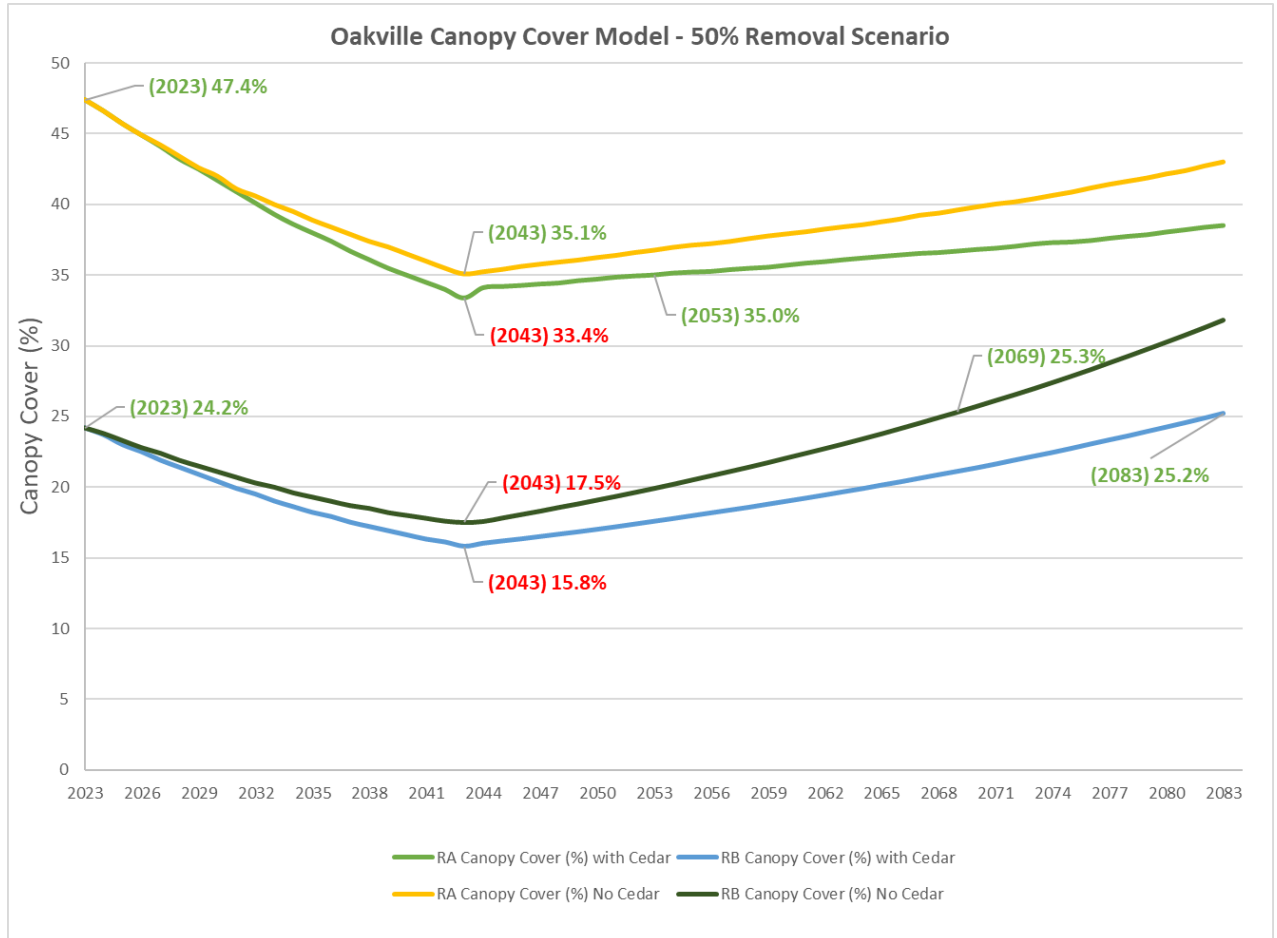
The assumptions in the conceptual modeling exercise included:

- Development of all residential properties within 20 years
- Removal of all trees within the maximum building footprints, allowed under zoning by-law, without replacement.
- Removal of all private trees over 15 cm. DBH, outside of building footprints, with tree replacement rate defined in the current private tree protection by-law (1 tree for every 10 cm)

- Removal of 50% of private trees outside of building footprints, with tree replacement rate, defined in the current private tree protection by-law.
- Replacing the removed trees with cedar
- Replacing the removed trees with other species rather than cedars.



Graph 1: Tree canopy cover model with 100% removal and replacement with and without cedar in RA and RB



Graph 2: Tree canopy cover model with 50% removal and replacement with and without cedar in RA and RB

The main findings of this study include:

1. The 2057, 40 % canopy cover target will not be met if the town continues to consider cedar a suitable replacement tree for the removal of private trees in Residential Class A and B.
2. The 2057, 40 % canopy cover target will not be met if the town continues to accept cash compensation in-lieu of replanting within these residential zones to replace By-law protected trees when permits are issued for their removal.
3. The adverse impacts of removing 100% of By-law protected trees from parcels slated for development/redevelopment are far greater than when 50% of those trees are retained.

Given these findings, the consultant team recommended:

1. Cedar be excluded from the list of suitable replacement trees when permits are issued to remove By-law protected trees.
2. Cash compensation in-lieu of tree replacement as a condition of tree removal permits should not be accepted. The replacement trees should be planted within the same residential class zones from which By-law protected trees are to be removed.
3. The Town avoids issuing permits for the removal of all By-law protected trees from private properties if reasonable opportunities exist to retain some proportion of By-law protected trees when those properties are slated for development/redevelopment.

Development of a Private Tree Protection Procedure

Considering the 6 years private tree removal and replacement data analysis as well as findings and recommendations provided in comprehensive study completed by a team of consultants from University of Toronto and Ontario Woodlot Association, staff have drafted the first “Private Tree Protection Procedure”. (Please see Appendix C)

The purpose of this procedure is to clearly outline the steps taken to review the private tree removal applications, assess the health and structural integrity of trees, preserve private trees by minimizing the removal of healthy trees, planting tree replacements on private properties where the tree/s are removed and excluding cedar species as an acceptable tree replacement for the removal of any deciduous or coniferous trees rather than cedars.

Conclusion

Staff believe the Town’s tree canopy is under greater pressure than ever at this time. Legislated changes have reduced the opportunity for tree protection and replacement, climate change is impacting our tree canopy as are new insects and diseases such as Asian long horned beetle, Oak wilt, spotted lanternfly, spongy moth, and invasive buckthorn threatens the health and sustainability of our urban forests.

The enforcement of the enhanced private tree protection by-law in 2017 resulted in an enhancement of tree preservation, a decrease in the number of private tree removals and an increase in the number of preserved trees. Analyzing 12 years data, six years prior to and six years after the enactment of private tree protection by-law, indicates; the number of trees removed (excluding high risk, ash and dead trees) reduced from 7,789 trees having 379,758 m² canopy to 4,718 trees having 166,678 m² (53 acres) canopy. The number of trees preserved during consultation site visits increased from two trees to 345 trees, resulted in preservation of 11,914, square metres (3 acres) tree canopy. The number of trees planted increased from 232 to 5,127 trees.

CONSIDERATIONS:

(A) PUBLIC

Public will continue to benefit from the improved customer service and continue to receive all environmental benefits and ecological services from the preserved tree canopy.

(B) FINANCIAL

100% of all services provided under private tree removal applications are financed under private tree by-law permit applications.

(C) IMPACT ON OTHER DEPARTMENTS & USERS

This report has been prepared in conjunction with the Engineering & Transportation, Clerks and Legal departments.

(D) COUNCIL STRATEGIC PRIORITIES

- Enhance our natural environment and urban forest
- Have environmentally sustainable programs and services
- Be accountable
- To be the most livable town in Canada

(E) CLIMATE CHANGE/ACTION

Urban Forest and climate change are closely interconnected. The urban forest is under ongoing pressure from climate change. The impacts of climate change on urban forest can include effects from extreme weather events (e.g., ice storm, prolonged drought) and increased activity of invasive insect and other

pests. While climate change seriously threatens urban forests, a healthy and sustainable urban forest plays a major role in adaptability to a changing climate through the ecosystem services the urban forest provides. Consequently, a healthy, well structured and sustainable urban forest is an important part of addressing climate change.

Air pollution is recognized to have a significant role contributing to climate change. Particulate matter (specifically PM10 and PM2.5) combines with ozone to cause smog – a deadly human health risk. Our urban forest plays a significant role in reducing the risks to the health of Oakville residents by reducing the amount of smog formed from the local emissions of criteria pollutants.

Trees also improve soil and water conservation, store carbon, moderate local climate by providing shade, regulate temperature extremes, increase wildlife habitat and improve the land's capacity to adapt to climate change. Protecting existing trees and tree planting are the biggest and cheapest ways of taking CO2 out of the atmosphere to tackle the climate crisis. As trees grow, they absorb and store the carbon dioxide emissions that are driving global warming. Increased urban density and limited town owned lands for tree planting require different solutions to grow canopy cover. Study shows tree protection and planting on private properties is essential to achieve 40% tree canopy cover goal in Oakville. The enactment and enforcement of the strengthened Private tree protection by-law proved to be one of the most efficient tools to increase Town's tree canopy hence to maintain and grow Oakville's urban forest and tackle climate change.

APPENDICES:

Appendix A – The potential of private tree protection by-law on mitigating the impact of bill 23 to achieve 40% tree canopy cover target.

Appendix B – Residential A. and B. map (Zoning by-law 2014-014)

Appendix C – Private Tree Protection Procedure

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