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Town of Aurora

General Committee Report

No. OPS20-013

Subject: Review of Urban Forest Study & Associated Forestry Policies

Prepared by: Gary Greidanus, Senior Landscape Architect

Department: Operational Services

Date: September 8, 2020

Recommendation

1. That Report No. OPS20-013 be received; and
2. That Planning & Development Services present a Town initiated amendment to the Comprehensive Zoning By-Law to confirm and define the requirement for a landscape strip for all zones as required for the purposes of tree planting and supporting soil volume; and
3. That the definition of a Landscape Strip be changed to require a minimum 3.0m un-obstructed width solely for the purpose of tree planting and supporting soil volume; and
4. That the Landscape Design Guidelines be amended to:
 - a. Clarify the soil depth required within Landscape Strips be a minimum 0.6m continuous topsoil depth; and
 - b. Increase the Boulevard topsoil depth from 300mm to 450mm continuous depth; and
5. That the Town of Aurora's Engineering standards be reviewed and revised to support an increase in topsoil depth within Town boulevards; and
6. That the Tree Removal/Pruning and Compensation Policy be amended as described in Report No. OPS20-013; and
7. That a by-law to amend the Tree Permit By-law (Number 5850-16) be enacted at a future Council meeting to:
 - a. Confirm the minimum tree size for compensation be 5cm trunk diameter or greater; and

- b. Refer compensation requirements for minor variance, consent to severe, stable neighbourhoods, site plan and subdivision applications to the Tree Removal/Pruning and Compensation Policy; and**
- c. Forbid tree removal permits from being issued from April 1st to August 31st in respect of the Migratory Birds Convention Act.**

8. That the Tree Protection/Preservation Policy and the Tree Planting and Approved Plant List Policy be amended as described in Report OPS20-013

Executive Summary

This Report provides Council with information regarding the review of the Urban Forest Study (UFORE Study), associated Policies, and provides policy update recommendations:

- Town's Zoning By-law should fully support Landscape Design Guidelines for new development areas.
- Improvement to soil conditions in new residential subdivision boulevards can maximize the potential for sustainable street tree growth.
- Ambiguity between Tree Removal/Pruning and Compensation Policy and Tree Permit By-law requires clarification of minimum diameter compensation requirements.
- Updates required in Tree Removal/Pruning and Compensation Policy to address a number of factors.
- Tree Protection/Preservation Policy requires "housekeeping" updates only.
- Tree Planting and Approved Plant List Policy requires minor updates.
- References to the Migratory Birds Convention Act require clarification of Town's position regarding tree removals.
- Unauthorized tree removals clarified in the Vegetation Management Agreement.
- Aurora's Tree Permit application Fees compared to local municipalities.

Background

Council adopted the UFORE Study in 2015 and directed staff in February 2020 to review the Study and bring back a report to a future General Committee meeting. The UFORE Study was initially prepared. The Study was prepared in partnership with York Region, Toronto and Region Conservation Authority and Lake Simcoe Region Conservation Authority. The purpose of the UFORE Study was to assess the distribution, structure and function of Aurora's urban forest, and to provide management recommendations for enhancing the sustainability of both the urban forest resources, as well as the community as a whole. A summary of these management recommendations

are provided (Attachment #1) with the accompanying 2015 action plan items as well as a 2019 update.

York Region is currently in the process of developing a timeframe for the for the urban forest update in partnership with local municipalities and conservation authorities. The update will be a two (2) year process with fieldwork completed in the first year of the update, with analysis and reporting completed in year two (2) of the update. At this time, there is no established schedule to complete the update for the Town of Aurora. In consultation with York Region regarding the costs of this future update, staff has included a placeholder within the Capital Budget for 2022/2023 for the amount of \$15,000. As the current UFORE Study serves as a baseline for future research, management and monitoring, accordingly, several policies were developed and/or refined to assist in the implementation of a number of the UFORE Study recommendations. These policies include:

- Landscape Design Guidelines – June 2015
- Tree Removal/Pruning and Compensation Policy – June 2015
- Tree Protection/Preservation Policy – June 2015
- Tree Planting and Approved Plant List Policy – June 2015
- Vegetation Management Agreements

As well, the Town of Aurora Tree Permit (By-law Number 5850-16) has ramifications on the recommendations of the UFORE Study. Since the York Region update schedule for Aurora has not yet been determined, this Council report will therefore review the policies and Tree Permit By-law to determine where changes are required to best address the intent of the UFORE recommendations in the short term.

Analysis

Town's Zoning By-law should fully support Landscape Design Guidelines for new development areas

The Landscape Design Guidelines address landscape standards for new development areas and include the requirement for side lot and rear lot tree plantings. In support of the UFORE Study recommendation #2, tree planting in new development areas improve the distribution of ecosystem services including urban heat island mitigation and storm water management. Currently the Town's Zoning By-law does not adequately address the requirement for side and rear lot line plantings that depend on adequate building setbacks and suitable landscape strips. The definition of "Landscaping / Landscape Strips" within the Zoning By-law permits decorative stonework, paving, curbs and retaining walls to be located within landscape zones. This directly conflicts with the

ability to plant trees and provide adequate soil volume to support the healthy growth and long term viability of trees. Furthermore, the various zone requirements in the By-law do not all indicate that a landscape strip is required; a landscape strip is only required adjacent to any Residential Zone.

Recommendation:

That staff coordinate with Planning & Development Services to bring forth a future Zoning By-law Amendment to require landscape strips for commercial, industrial and employment zones. In addition, the definition of landscape strips clarify the requirement of a minimum of 3.0m un-obstructed width solely for the purpose of tree planting and supporting soil volume (i.e., unobstructed by curbs, sidewalks, retaining walls and associated geotextiles and engineered fill that precludes tree plantings). Accordingly, the Landscape Design Guidelines should define the soil depth required within landscape strips as a minimum of 0.6m continuous topsoil depth.

Improvement to soil conditions in new residential subdivision boulevards can maximize the potential for sustainable street tree growth

Recommendation #8 of the study addresses sustainable streetscape and subdivision design to ensure adequate soil quantity for street tree establishment. With the development of the 2B residential areas, staff revised Town guidelines to increase the amount of boulevard topsoil to a 300mm depth, (as is currently reflected in the Landscape Design Guidelines). However, staff feel that this is still insufficient for proper growth and development of a mature streetscape canopy considering the harsh environment and increased ecological factors e.g. drought.

Various municipalities have developed standards for soil quantity to support street tree growth. The Toronto Green Development Standards (2007) recommends minimum of 30 m³ of high quality soil volume per tree. Based on the Town's current standards assuming a 3.0m width, unobstructed boulevard the volume of soil provided per tree in Aurora subdivisions is approximately 11 m³. Staff understand the restrictions in boulevards associated with the various road widths, sidewalks, and utility and services requirements however, improvements can be achieved.

Recommendation:

Increase boulevard topsoil depth from 300mm to 450mm, which will result in an average of 16 m³ of soil per tree, and that engineering standards be reviewed and revised to support an increase in topsoil within Town boulevards.

Ambiguity between Tree Removal/Pruning and Compensation Policy and Tree Permit By-law requires clarification of minimum diameter compensation requirements

The Tree Removal/Pruning and Compensation Policy currently requires compensation, in the form of a fee payment or replacement plantings, for trees with a 5cm trunk diameter or greater, removed from a development site, whereas the Tree Permit By-law is relevant to removal of trees greater than 20cm trunk diameter. This has led to confusion from applicants in determining the necessary size for inventory and compensation, where trees between 5cm and 20cm are not accounted in compensation.

Recommendation:

That the Compensation Policy be applicable to all development-type applications including minor variances, severances, stable neighbourhood applications, site plans and subdivision applications. Accordingly, the Tree Permit By-law should refer to the Compensation policy as the guiding mechanism for development-related tree compensation matters.

Updates required in Tree Removal/Pruning and Compensation Policy to address a number of factors

The administration of the Tree Removal/Pruning and Compensation Policy has led to a number of questions from applicants and issues requiring clarification.

1.0 The Compensation Policy bases compensation on a monetary value for both assessing existing trees and determining replacement trees. Concerns have been expressed that trees offer more than just a monetary value to any given property including cultural value, ecological value (habitat, etc.) as well as value associated with carbon sequestering, and that these values should be considered in terms of compensation as well. Staff have concerns that assessing trees by standards other than monetary value is subjective and difficult to standardize, or uphold under legal scrutiny.

Recommendation:

That the Compensation Policy not be expanded to adopt other than monetary evaluations and the Town continue to utilize the well-established Aggregate Inch Method evaluation tool to determine compensation.

2.0 The “Pruning” component of the policy is more of a technical specification geared towards in-house standards for pruning techniques with the balance of the Policy relating toward development applications.

Recommendation:

That the “Pruning” component be removed from this policy and be adopted as a separate Policy.

- 3.0 The Tree Removal/Pruning and Compensation Policy does not currently address non-native species which applicant’s expect will be exempted from the Policy. Since the UFORE Study is concerned with enhancing the overall canopy cover, non-native species should remain, as they add to the green landscape and general objectives.

Recommendation:

That non-native species be included in compensation requirements, and that the Species Rating List, currently appended to the Compensation Policy, be revised to address a lower species rating (utilized to calculate compensation) for non-native vegetation.

- 4.0 The value of tree compensation on development sites is based on replanting with available sizes of nursery stock, with the largest size noted in our Compensation Policy being, a 60mm trunk diameter deciduous tree and a 200cm height coniferous tree. In order to address the loss of more mature trees, in some situations the site conditions may allow larger caliper trees be planted.

Recommendation:

Addition of language in the Compensation Policy to indicate, at the discretion of the Town and based on site conditions and opportunities, that larger caliper trees be provided including tree-spading of larger trees. Additionally revisions need to occur to the replacement schedule addressing compensation sizes for meadows and woodlot areas:

Tree Size (cm) (Unchanged)	Existing Replacement	Proposed Replacement	Quantity of Replacement Nursery Stock (Unchanged)
5 - 10	5 gal pots (1.0 – 3.0m tall)	150cm ht. conifer tree 45mm deciduous tree	1
11-20	150cm ht. conifer tree 45mm deciduous tree	175cm ht. conifer tree 60mm deciduous tree	2
>20	175-200cm ht. conifer 60mm deciduous tree	200cm ht. conifer tree 70mm deciduous tree	3

- 5.0 Clarification is required for compensation plantings related to the Town’s minimum planting standards for development sites.

Recommendation:

That street trees, as a long-standing minimum requirement are not be eligible for compensation; however, open space plantings, buffer plantings and storm water management facility plantings, be eligible for compensation plantings.

- 6.0 The current Compensation Policy includes compensation for shrub plantings. Since shrubs can be difficult to categorize in terms of size and are not typically included in vegetation surveys.

Recommendation:

To delete shrubs from the Compensation Policy.

- 7.0 Additional changes need to occur within the policy. Trees suffering from invasive species attack and that are threatened are not captured. In addition, a multi-stem tree requires further definition.

Recommendation:

Exempt Ash Tree species from the Compensation Policy due to emerald ash borer; and multi-stem trees be defined as the total diameter of the three (3) largest stems.

Tree Protection/Preservation Policy requires “housekeeping” updates only

The intent of the Tree Protection / Preservation Policy is to prevent or minimize damage to trees during land development, construction work, and maintenance activities. This Policy focuses on both development impacts as well as the maintenance and responsibilities for municipal staff for municipal projects. The components regarding the management of development and construction impacts on trees refers to the Compensation Policy and Landscape Design Guidelines. Therefore, no major changes or updates are required, with the exception of housekeeping updates to keep it current.

Tree Planting and Approved Plant List Policy requires minor updates

The purpose of the Tree Planting and Approved Plant List Policy is to make available in one reference all the various aspects of tree planting on both municipal and private lands. The Policy refers to the Landscape Design Guidelines and updates are required where information conflicts between the two documents. It also addresses species diversity, an important component in the long-term health of the urban forest. The ‘Tree Species and Site Suitability’ table within this document requires updating, specifying the most suitable trees for urban conditions, primarily streetscape conditions, based on the lessons learned of utilizing a number of species in the past and changing climate.

References to the Migratory Birds Convention Act require clarification on Town's position regarding tree removals

The Vegetation Management Agreement is a development agreement utilized to implement the vegetation management initiatives of the various Policies addressed herein. In the past, this Agreement has been referred to as a Tree Preservation / Tree Removal Agreement. The Vegetation Management Agreement to date has been silent on the implications of the Migratory Birds Convention Act.

The Tree Permit By-law indicates that a Permit will not be approved or issued where approval would be in contravention of the Migratory Birds Convention Act, however, regulation of this condition is difficult to manage.

The Migratory Birds Convention Act prohibits the harming of migratory birds, or the disturbance or destruction of nests or eggs. The nesting season of migratory birds varies by species and habitat preferences but is generally identified between April 1st and August 31st with the core nesting season in our region identified as mid-April to the end of July. The period of time between the general and core nesting season is considered the 'shoulder' season and it is typically regarded as 'due diligence' within the environmental professions to allow removals, as long as an avian expert does a nest sweep of the trees to be removed and confirms that no nests are present.

In order to avoid the responsibilities of managing the implications of the Migratory Birds Convention Act by Town staff, who are not avian specialists, and to reduce the liabilities of the Town in administering the requirements of the Migratory Birds Convention Act, an amendment to wording is required.

Recommendation:

That both, the Tree Removal Permit application and the Vegetation Management Agreement template confirm that tree removals will not be permitted between April 1st and August 31st unless the trees are considered hazardous.

Unauthorized tree removal activity, clarified in the Vegetation Management Agreement

In the administration of a recent Vegetation Management Agreement, portions of trees were removed during tree clearing operations, not identified for removal on the plans or in the field, nor were they identified to Town staff prior to removal. Compensation in this situation is addressed by the Town's standard specifications, a requirement on the tree preservation and removal plans, which refers to the Town's Compensation Policy whereby the trees are evaluated monetarily with additional compensation provided through fees or compensation planting.

Language should be included in the Vegetation Management Agreement template to prohibit additional tree removals without prior notification to the Town and unauthorized tree removals will be subject to the Tree Protection Bylaw fines

Aurora's Tree Permit application fees compared to local municipalities

Council inquired if the current application fees to remove trees under the Tree Removal Permit are adequate. Staff have completed comparison to fees charged by neighbouring municipalities. Attachment #2 identifies compares tree removal permit fees in York Region.

Advisory Committee Review

Not applicable.

Legal Considerations

To amend the Zoning By-law, the Town will be required to have at least one public meeting to give the public an opportunity make representations on the proposed amendments. There will also be appeal rights as set out in the Planning Act.

The policies will be amended upon Council approving the staff recommendations set out in this report.

Financial Implications

There will be financial implications associated with the proposed changes to the Tree Removal/Pruning and Compensation Policy in the form of replacement tree planting requirements and/or fees payable to the Town by applicants.

Communications Considerations

The Town of Aurora will use 'Inform' as the level of engagement for this project. There are five different levels of community engagement to consider, with each level providing the community more involvement in the decision making process. These levels are: Inform, Consult, Involve, Collaborate and Empower. Examples of each can be found in the Community Engagement Policy. These options are based on the International Association of Public Participation (IAP2) Spectrum and assist in establishing guidelines for clearly communicating with our public and managing community engagement. In order to inform, this report will be posted to the Town's website.

Link to Strategic Plan

The UFORE Study supports the Strategic Plan Goal of Investing in sustainable infrastructure by maintaining infrastructure to support forecasted population growth through technology, waste management, roads, emergency services and accessibility.

Alternative(s) to the Recommendation

1. Council could receive Report OPS20-013 and adopt any or all of the recommendations outlined within the Report.
2. Council could defer Report OPS20-013 back to staff for additional information or revisions.

Conclusions

That the review of the Urban Forest Study and associated Policies be received by Council and that the amendments to the various Policies be adopted as recommended.

Attachments

Attachment #1 – UFORE Recommendations Update

Attachment #2 – Tree Removal Permit Fee Comparisons

Previous Reports

PR14-035 Urban Forest Study (UFORE) – July 29, 2014

PR15-026 Urban Forest Management Plan & Policies – November 17, 2015

Pre-submission Review

Agenda Management Team review on August 20, 2020

Approvals

Approved by Sara Tienkamp for Al Downey, Director, Operational Services

Approved by Doug Nadorozny, Chief Administrative Officer