



Ecological Offsetting Policy

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Department:	Development Services
Section:	Parks Planning
Sub-Section:	Policy
Subject:	Ecological Offsetting Policy
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VALUES STATEMENT

The City values the role that terrestrial natural heritage systems play in supporting quality of life, ecological integrity to stabilize natural functions through biodiversity, and economic prosperity. The City recognizes that natural heritage systems within the City of Barrie are at risk of being replaced by urban growth and development. Loss of natural heritage features resulting from development may be mitigated through ecological offsetting.

DEFINITION

Ecological offsetting is a strategy where an established fee may be collected by the municipality to compensate for the removal of trees or woodland area for development purposes and applied to the planting of an equivalent number of trees or woodland area in an alternate municipally owned location within City boundaries to achieve “no net loss” of the natural heritage feature.

PURPOSE

The purpose of the Ecological Offsetting Policy is to provide a consistent approach to maintaining a minimum of No Net Loss (NNL) of terrestrial natural heritage within the boundaries and lands of the Corporation of the City of Barrie during urban development for the benefit of current and future generations.

SCOPE

This policy applies to the City of Barrie’s land use planning process for private and public lands, including City infrastructure projects, under the Province of Ontario’s *Planning Act*, *Condominium Act*, and the *Environmental Assessment Act*.

Private Land Development proposals subject to *Planning Act*, *Municipal Act* or *Environmental Assessment Act* approvals for infrastructure projects that will result in the loss of natural heritage features, despite having followed the **Mitigation Hierarchy**, as outlined below under **Procedure**, will be required to compensate for the loss of these features through the payment of an Ecological Offsetting Fee. Planning instruments under the *Planning Act*



or *Environmental Assessment Act* that may be used to ensure the collection of the approved Ecological Offsetting Fee include:

- Subdivision Agreements
- Condominium Agreements
- Development Agreements
- Site Plan Agreements
- Committee of Adjustment Severances
- Rezoning Approvals
- Private Tree By-law Municipal Infrastructure Projects

Exclusions

- a) Recognizing that there are limits, and certain natural heritage features may be irreplaceable, offsetting will not be considered for features that contain rare vegetation communities as defined by the Natural Heritage Reference Manual (MNR, 2010), and forested wetlands.
- b) Generally, offsetting will also not be considered for watercourses or for the minimum vegetation protection zone abutting the Lake Simcoe shoreline, as defined by the Conservation Authorities Act.

Exceptions

- a) Woodlots with an area greater than .5 hectares in the Nottawasaga Valley Conservation Authority watershed where the current owner purchased the land prior to April 5, 2023, as per motion 23-G-082.
- b) Injury or destruction of a Heritage Tree is prohibited by the provisions of the Private Tree By-law.
- c) Ecological offsetting will not be required for woodlands that are plantations managed to produce fruits, nuts, Christmas trees, and nursery stock where it can be demonstrated to the satisfaction of the City of Barrie that it does not provide any of the following features or functions:
 - Any woodlands wholly or partially within 30 m of a key natural heritage / key hydrological or protected feature
 - Any woodland containing a provincially rare, treed vegetation community with an S1, S2 or S3 in its ranking by the Ministry of Natural Resources and Forestry Natural Heritage Information Centre (NHIC).
- d) Additional exclusions may be considered for communities that are dominated by invasive non-native tree species that threaten good forestry practices and environmental management. Such exceptions may be considered where native species cover less than 10% of the ground and are represented by less than 100 stems of any size per hectare. These species include but are not limited to:
 - *Acer platanoides* (Norway Maple)
 - *Acer ginnala* (Amur Maple)
 - *Acer negundo* (Box Elder or Manitoba Maple)
 - *Frangula alnus* (Alder Buckthorn)
 - *Morus alba* (Mulberry)
 - *Rhamnus* spp. (Buckthorn species)

PROCEDURE



1.0 Prerequisites for Ecological Offsetting

1.1 Mitigation Hierarchy

A hierarchical approach is a common theme across ecological offsetting programs, which follows a series of steps that support the principle of “no net loss”. This Mitigation Hierarchy calls for the avoidance of impacts first, then minimization, followed by mitigation, with compensation as a final option. The mitigation hierarchy is as follows:

- I. **Avoid:** Prevent impacts from occurring by changing project location, scope, nature of timing of activities.
- II. **Minimize:** Reduce the duration, intensity and/or extent of impacts that cannot be avoided.
- III. **Mitigate:** Rehabilitate or restore features or functions that have been exposed to impacts that could not be avoided or minimized.
- IV. **Compensate:** Create or restore new habitat to compensate for loss that could not be avoided, minimized, or mitigated.

1.2 Natural Heritage Analysis

Prior to the approval of any development application proposing compensation for the loss of natural heritage, the following conditions must first be satisfied through an approved natural heritage analysis, such as an **Environmental Impact Study (EIS)**, a **Natural Heritage Evaluation (NHE)** or a **Tree Preservation Plan (TPP)**:

- a) Demonstrate that the Mitigation Hierarchy steps of Avoiding, Minimizing and Mitigating have been followed and that compensation is the only viable option.
- b) Demonstrate conformity with applicable in-effect provincial, regional, and local policy, including *A Place to Grow: Growth Plan for the Greater Golden Horseshoe*, *Lake Simcoe Protection Plan*, the City of Barrie Official Plan and City of Barrie Private Tree By-law.
- c) Satisfy the “no negative impact test” for the loss of natural heritage feature to ensure consistency with Section 2.1 of the in-effect Provincial Policy Statement (PPS).
- d) Assess the impacts to natural heritage features such as individual trees and woodlands, and watercourses, as well as their associated vegetation protection zones where applicable.
- e) Refer to the City of Barrie [Tree Protection Manual](#) for compliance with technical procedures and standards.

1.3 Natural Heritage Types

a) Woodlands

Ecological offsetting may be considered for the loss of woodlands where they have first been reviewed and demonstrated through the Mitigation Hierarchy that removal and compensation is the only viable option and cannot not meet any of the exception criteria, provided that the woodland is not a rare vegetation community as defined by the Natural Heritage Reference Manual (MNRF, 2010).

b) Individual Trees

All existing vegetation within a development proposal must be reviewed according to the Mitigation Hierarchy prior to being recommended for removal. Existing single trees are eligible for ecological



offsetting compensation where they have first been reviewed and demonstrated through the Mitigation Hierarchy that removal and compensation is the only viable option and do not meet any of the exception criteria.

2.0 Ecological Offsetting Fees

2.1 Replacement Ratio

Offsetting for feature loss will be accomplished solely through cash-in-lieu fees collected and administered by the City of Barrie for the loss of natural heritage features. The loss of woodland will be offset at a 1:1 replacement ratio for the areal extent of the natural heritage feature. This ratio considers the replacement values from the perspective of form and function across spatial and time scales to ensure that the value of loss is supported with an appropriate net gain. Fees include costs for staff resourcing to plan, design, implement and monitor ecological reestablishment.

All funds collected through the cash-in-lieu compensation option will be directed towards the creation, protection and/or restoration of natural heritage features on municipally owned lands to ensure that a net ecological gain is achieved.

Where a Tree Removal Permit has not been obtained in advance of natural heritage removals, increased fees shall apply as per the Fees By-law.

2.2 Calculation

The Cash-in-lieu (CIL) amount will be determined by the Council-approved replacement rate cost multiplied by the required woodlot area or number of individual tree replacements, as determined by the appropriate study. This is represented in the formulas below:

a) Woodlot Replacement Rate x Area = Cash-In-Lieu Total

b) Tree Replacement Rate x Quantity = Cash-In-Lieu Total

The developer or proponent shall submit an **Ecological Offsetting Fee Table** which shows the fee calculation using the above formulas. The Table shall include totals for both woodlot replacement and individual tree replacements, where applicable, to achieve the final total Offsetting Fees Payment. An example of how to calculate the total amount of offsetting compensation is found below:



Ecological Offsetting Fee Table Example Calculation with Tree Removal Permit			
Item	Replacement Rate*	Total Area or Quantity**	Total (\$)
Woodlot Tree Removal Compensation Fee	\$57,500 / ha	2.7 ha	\$155,250
Individual Tree Compensation Fee	\$500 / tree	3	\$1,500.00
Total Offsetting Fee Payment			\$156,750
Ecological Offsetting Fee Table Example Calculation Without a Tree Removal Permit			
Item	Replacement Rate*	Total Area or Quantity**	Total (\$)
Woodlot Tree Removal Compensation Fee – No Permit	\$140,500 / ha	2.7 ha	\$379,350
Individual Tree Compensation Fee – No Permit	\$1,220 / tree	3	\$3,660.00
Total Offsetting Fee Payment			\$383,010
* Rate from the Fees By-law at the time of policy approval, to be amended annually.			
** Example of development removal of 2.7 ha of woodland plus 3 individual trees			

3.0 Role of the City

The City of Barrie will be responsible for collecting Ecological Offsetting Fees and implementing all Ecological Offsetting Projects. Ecological offsetting compensation projects should be both feasible and completed within a reasonable timeframe.

The City will determine an appropriate opportunity and location for ecological offsetting compensation projects. In general, compensation projects should:

- a) be located on sites that are currently owned by the City of Barrie.
- b) expand or enhance the natural heritage system as defined by the City of Barrie Official Plan, the Nottawasaga Valley Conservation Authority or as identified in the Lake Simcoe Region Conservation Authority’s Natural Heritage System and Restoration Strategy for the Lake Simcoe Watershed (2018).
- c) strive to recreate similar features close to the location where the feature was lost and/or sub-watershed and/or natural heritage feature. However, in some situations, it may be more appropriate for ecological offsetting to include alternative compensation projects that result in an equivalent ecological gain.
- d) include a monitoring component to ensure the successful installation of compensation projects. The components of an Ecological Offsetting Project are further described below.

4.0 Components of an Ecological Offsetting Project



4.1 Ecological Offsetting Project Elements

An Ecological Offsetting Project (EOP) should include the following information:

- Description, location, and area of feature being lost.
- Description, location, and area for where feature replacement is proposed.
- Description, location, and area for any proposed feature enhancements (e.g., invasive species management, habitat creation, etc.).
- Cash-in-lieu calculation
- Detailed design drawings for feature replacement and any enhancements.
- Timing for implementation and project completion.
- Monitoring plan and schedule to demonstrate that features are functioning as anticipated.

4.2 Project Prioritization Schedule

Ecological funding will apply to the restoration or implementation of natural heritage within the City of Barrie on a prioritization basis oriented to achieve no net loss of the project first, as shown in the Project Priority Schedule below:

Project Prioritization Schedule		
Priority Level	Description	Typical Zoning
Priority One	In accordance with the Waterfront Strategic Plan, 1000 trees planted along the waterfront, with a minimum of 50% (of the trees planted city-wide in a given year) being planted until 1000 is achieved.	Environmental Protection or Open Space
Priority Two	Projects involving planting or seeding of native vegetation species in locations abutting or in proximity to existing natural heritage features, to intensify the existing ecological function of the feature and extend its reach towards other existing natural features	Environmental Protection
Priority Three	Projects planted in greenspace areas, to enhance the existing environmental function of the greenspace by adding native plant species.	Open Space
Priority Four	Projects planted in urban areas with minimal landscaping or lack vegetation entirely, to enhance the urban forest canopy and/or add non-turfgrass plant species. Projects that are intended for ornamental horticultural displays will not be eligible.	Any

END of policy.



Policy References and Resources

- i. [A Place To Grow: Growth Plan for the Greater Golden Horseshoe](#)
- ii. City of Barrie [Climate Change Adaptation Strategy](#)
- iii. City of Barrie [Official Plan](#) 2051
- iv. City of Barrie [Private Tree By-law](#)
- v. City of Barrie [Public Tree By-law](#)
- vi. [Key Issues in Biodiversity Offset Law and Policy, June 2015](#) by Ontario Nature
- vii. [Lake Simcoe Region Conservation Authority](#)
- viii. [Nottawasaga Valley Conservation Authority](#)
- ix. [Ontario Regulation 179/06 via the Conservation Authorities Act](#)
- x. [Section 28.0.1 of the Conservation Authorities Act](#)
- xi. [Tree Protection Manual](#)
- xii. Urban Forest Strategy
- xiii. [Valuing Natural Capital in the Lake Simcoe Watershed \(2017\)](#) report from Green Analytics