



11 Berkwood Place
Fonthill, Ontario, L0S 1E2

Website: www.8trees.ca

July 18, 2022

City of Welland
Development and Building Services
Corporation of the City of Welland
60 East Main Street, Welland, Ontario L3B 3X4
Attention Ms. Rachelle Larocque Manager of Planning

Dear Rachelle

Re: Proposed development at 368 Aqueduct Rd. City of Welland

I have reviewed the revised site plan changes with respect to the development application at 368 Aqueduct Rd. (attached). We fully support the changes Lucchetta Builders have proposed for this development. The development revisions make good use of non-sensitive lands for housing and helps meet the City's goals for urban intensification while still maintaining natural amenities into the future.

In our original EIS and in our EIS amendment report we identified the need for positive land stewardship actions to sustain the woodland functions into the future. Although a few edge trees will be removed, our estimate is 10-22 (all sizes), the impact of their loss to the woodland is minimal and can be mitigated by enhancing the quality of the remaining woodland feature and planting younger native tree species within the woodland edge habitat and around the development perimeter.

In broader context enhancement actions are recommended around and within the entire remaining woodland feature on both private and public lands. Therefore, we summarized the enhancement opportunities for the woodland in our Woodland Management Report (attached).

Let me know if you have any further questions or concerns.

Sincerely,

Anne Yagi MSc., EP, CERP
President 8Trees Inc.

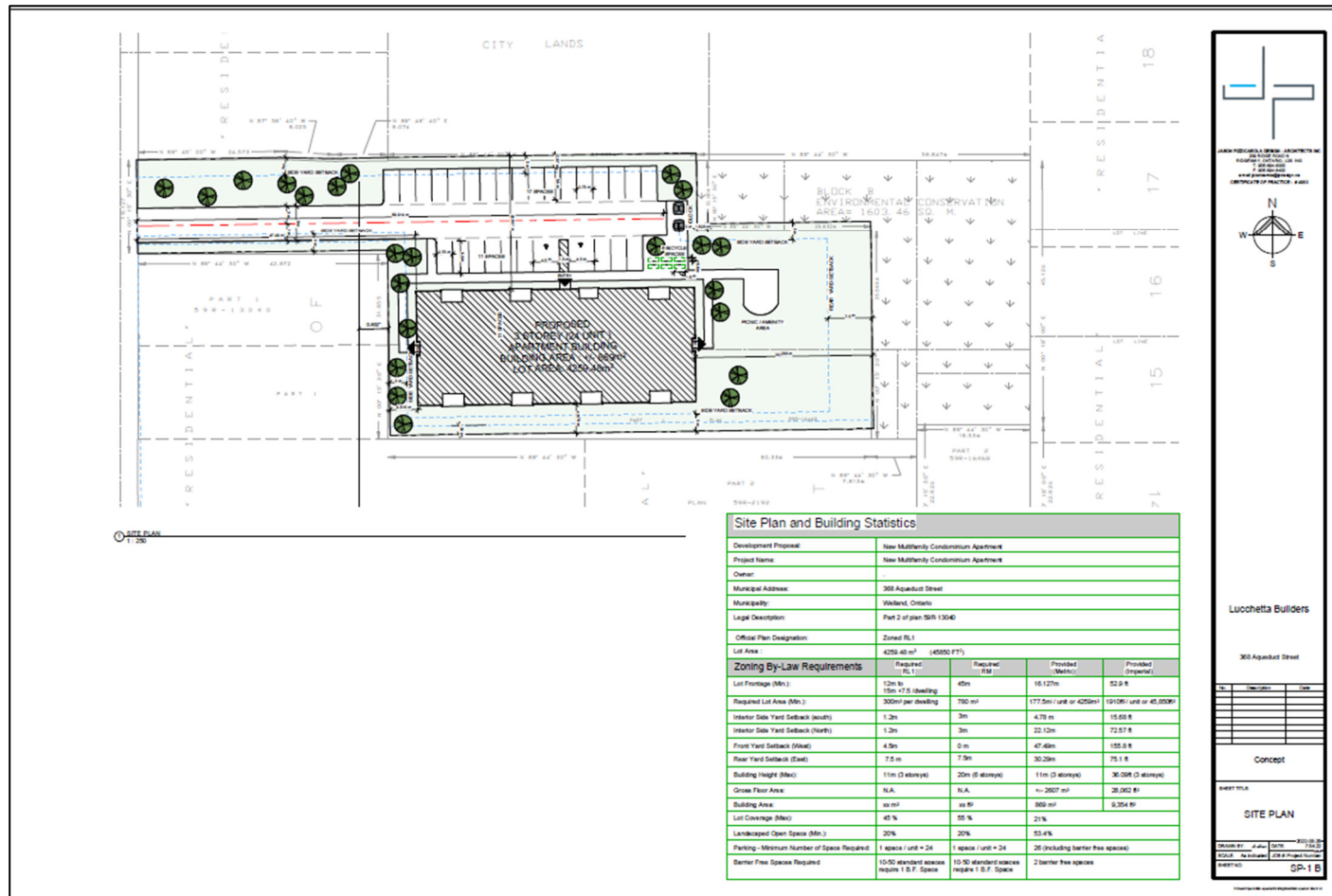
cc Lucas Lucchetta (Lucchetta Home Builders)

Att.



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Site Plan Proposal for 368 Aqueduct Rd. City of Welland. See concept plan for woodland which includes a footpath trail and several enhancements to improve woodland quality.



Overlay of the Development Plan Area and Woodland Management Area. A footpath (arrow) is planned to meander through the woods with benches added for passive use. See Woodland Management Plan for more details. The approximate extent is shown.

Woodland Management Plan
for the Condominium development project at
368 Aqueduct St, City of Welland

Prepared by Anne Yagi MSc., EP, CERP
President 8Trees Inc.

July 16, 2022

Management Plan Summary

A mature woodland feature is to be enhanced for the local community as part of a condo development project located at 368 Aqueduct St., City of Welland. The woodland feature is contiguous with the City of Welland's Aqueduct Park Woodland. Several ecological and social enhancements are proposed to help sustain the woodland feature over time.

A woodland management plan is proposed that generally follows the recommendations outlined in the Environmental Impact Study Reports (8Trees, 2021 and 2022).

The primary objectives are to improve the overall quality of the woodland feature as follows.

- Remove garbage and take to recycling or landfill
- Remove extraneous organic matter, soil dumping and take to local compost facility,
- Remove hazardous and invasive trees and shrubs,
- Control the occurrence and spread of poison ivy to improve biodiversity of the native woodland ground flora,
- Control woodland area lost from adjacent land encroachment
- Replace mowed lawn under former woodland trees with forest ground flora and trees
- Plant native trees, shrubs, and groundcover to improve biodiversity and reduce climate change effects on biodiversity,
- Add wildlife habitat features such as cover objects, logs, bird nesting and bat roosting boxes,
- Correct extraneous stormwater additions into the vernal pool at Gadsby Rd., to ensure vernal pool functions are sustained.
- Add a woodland pathway with benches to control public access and reduce impacts to ground flora caused by trampling,
- Woodland Stewardship Pamphlet provided to the local community, outlining the amenities of the woodland and how they can help protect, monitor and manage the feature over time (To Be Developed).

Existing Conditions of Woodland

The woodland that lies between Hilda St and Gadsby Rd. in the City of Welland is presently 0.468 ha. The remaining northern portion is owned by the City of Welland (Aqueduct Park), and the remaining southern portion is privately owned. During our biological surveys we confirmed the presence of species at risk bats roosting within the tall oak trees of Aqueduct Park and we verified the presence of Schreiber's Aster (S2) within the ground flora of the park. White Wood Aster (threatened)

was identified in 2018 near the northern portion of the woodland, however it was not found during any recent surveys. Changes to the woodland may have affected the continual presence of this species. The woodland has recently been reduced in half by area, following housing developments along Hilda Street and the conversion of the understory into mowed lawn. Within the subject lands, a Little Brown Myotis (endangered) was identified flying over the vernal pool feature. Therefore, the vernal pool was characterized and protected within the woodland. The current state of the mature woodland is impacted (8Trees, 2021 and 2022).

Suggested Opportunities

The proposed development plan offers an opportunity to enhance the woodland feature, ameliorate issues of indiscriminate dumping of inorganic and organic waste, trampling of sensitive ground flora, the removal of hazardous trees, inhibit land encroachment, and to cease mowing of the woodland ground to improve passive public use and overall biodiversity.

Proposed Woodland Concept

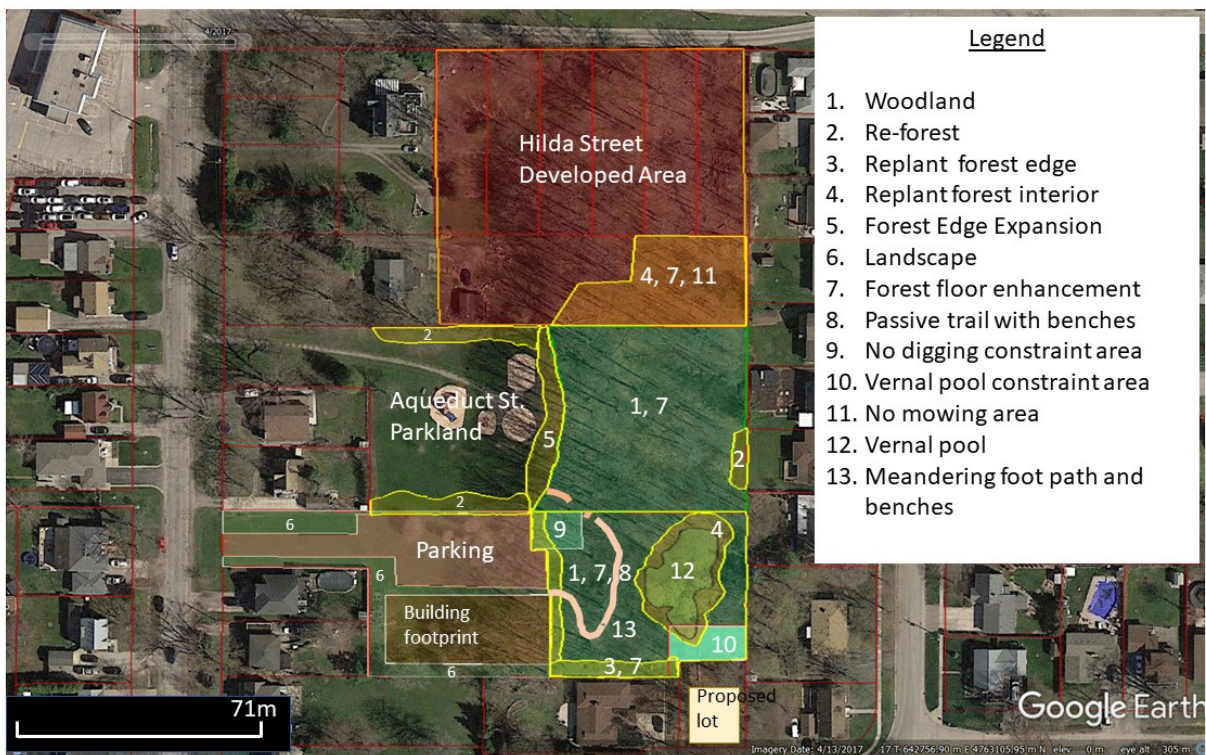


Figure 1. Suggested Stewardship Actions needed to ameliorate impacts to the woodland feature and functions

Suggested Methods

There are several ways to accomplish the suggested improvements to the woodland feature. However, the respective landowners must be a willing partner. Most people may not understand that their actions have caused an impact to a natural feature or the ecological functions of that feature.

Often the action is corrected passively once the cause-effect linkage is better understood. A good example of this is the action of clearing of trees and shrubs along a waterway to improve the aesthetics or the view of the waterway which in turn causes excessive erosion of the banks and a deterioration of water quality and habitat for fish within the waterway. Understanding that actions have consequences is the first step toward being a good land steward.

A community woodland group can be formed to assist with organizing waste clean up, edge plantings, construction and placement of bird nest boxes, bat boxes, and other habitat features. Another approach is to form a volunteer working group or to enlist interns and students from various environmental programs at Brock University, Niagara College that are required to complete environmental work terms. The cost of materials can be donated by the City of Welland, Conservation Authority, Local developers, and businesses.

A suitable reference site to biologically monitor the relative enhancement successes is Woodlawn Park, on Woodlawn Rd. City of Welland.

The following chart addresses how we can correct the impact and help a natural area become more resilient to change. This list includes some suggestions to improve the woodland and can be expanded over time.

Impact	Why a concern	How to Fix	Who
Dumping of extraneous organic and inorganic waste	Covers up natural seed bank, suppresses ground flora growth, increases nutrients, herbicides, pesticides, exotic, and invasive species, and increases risk of disease	Clean up by hand and take to local recycling and landfill facility	All landowners and Community Action or Student Volunteer work force
Discharging excessive urban stormwater into woodland	Causes unnatural high-water levels over upland tree roots causing root rot and formation of hazardous trees	Match ground level grades across finished and unfinished lots (i.e., Gadsby Rd.). Re-grade vernal pool edge Use rain barrels, and remove drainage pipe flow from direct discharge to woodland and allow overflow to disperse across the lawn	All landowners
Removal of ground flora and replacement with mowed lawns	Once forest floor is gone, feature is no longer a natural woodland, loss biodiversity, soil biome, habitat and decline in the natural resiliency to change	Remove grass sod and allow forest floor to re-naturalize as seed bank is likely present or replant with suitable native species	Adjacent landowners
Trampling of sensitive ground flora	Decline in biodiversity	Build foot path through wood to define a path for people to use. Add benches	Subject Lands and City of Welland

Impact	Why a concern	How to Fix	Who
Replanting woodland edge community	The woodland tree age is older younger trees are more adaptable to change than older trees.	Replant with native trees and shrubs	All landowners
Forest Edge Expansion	Allows for naturalization of all forest species from within the woods using natural seed bank.	Remove sod edge, lightly apply mulch to improve carbon content and reduce nutrients to limit invasive species, can also apply native seeds or replant	City of Welland
Re-forest	To expand the forest feature quickly and increase aesthetics and habitat	Replant with mixture of native trees and ground flora	City of Welland, Subject lands and Adjacent landowners
Landscape	To increase aesthetics around new development feature and connectivity	Use native trees and shrubs and mulch.	Subject Lands
Forest Floor Enhancement	To increase biodiversity of the ground flora	Control Poison Ivy and invasive plant species, replant with native species or allow to naturalize	Subject Lands
Remove hazardous trees	Trees falling on adjacent homes causing damage	Check with arborist or forester first, cut down, re-use logs within feature for benches and habitat, replant younger more resilient trees, add habitat features for birds and bats to replace cavities lost.	Subject Lands

Glossary of Terms

Woodland

A woodland is a forested ecological feature. A woodland includes the interrelationships between flora, fauna, forest floor, soil micro biome, seed bank and the subterranean environment.

The Forestry Act (R.S.O. 1990) defines woodlands by the number of trees per hectare and their size as measured by their diameter at breast height (dbh).

“woodlands” means land with at least,

(a) 1,000 trees, of any size, per hectare,

(b) 750 trees, measuring over five centimetres in diameter, per hectare,

(c) 500 trees, measuring over 12 centimetres in diameter, per hectare, or

(d) 250 trees, measuring over 20 centimetres in diameter, per hectare,

but does not include a cultivated fruit or nut orchard or a plantation established for the purpose of producing Christmas trees.

The Ecological Land Classification System defines a woodland as “ any treed area with tree cover > 10%.”

Woodland Stewardship

Woodland or land stewardship means to care for and conserve the land. The land is connected to the health and well being of all people and all animals. As stewards of the land, we acknowledge a shared responsibility for the land’s future and to use the land sustainably. Stewardship is also about community and about working together to improve and heal the land.

Ecological Restoration

Ecological restoration is a scientific term that relates the quality of similar lands together within the context of today’s environmental stressors such as climate, physical, biological, and chemical factors. Ecological restoration is not about going backward to a historic time frame because the environment of today is not the same as a historic period. Ecological restoration and Woodland Stewardship often have similar objectives. However, ecological restoration uses local areas as a point of reference to help define realistic ecological goals.

Landscape Plan

