

TREE CONSERVATION REPORT



**401 March Road - Starbank Development
Ottawa, ON**

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Report No. R-2014-038

PREPARED BY:

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TREE CONSERVATION REPORT

401 MARCH ROAD - STARBANK DEVELOPMENT Commercial Development

1.1 INTRODUCTION

The applicants are proposing to develop this property as commercial use. The site is located at the south west corner of the intersection of March Road and Station Road (Kanata) in the west end of Ottawa.

The following Tree Conservation Report has been prepared to examine the impact of the commercial development on the existing natural features of the site. The report provides:

- a) an inventory and assessment of the existing vegetation
- b) description of the impact of the proposed development on the existing natural features
- c) identification of trees to be retained
- d) recommendations to promote tree conservation

The report was prepared based on field work conducted in March, 2014. A site survey and City of Ottawa topographic mapping showing the location of existing vegetation were used for the base.

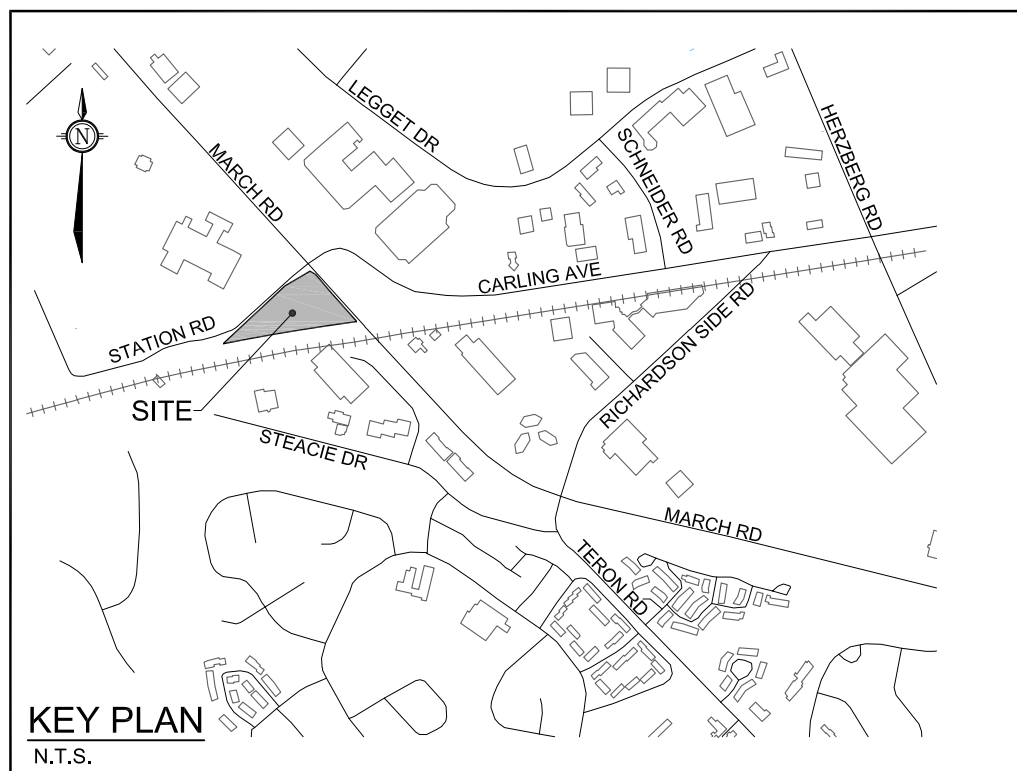


Figure 1: Location

1.2 METHODOLOGY

Novatech Engineering Consultant, was hired to prepare a Tree Conservation Report. Janis Fedorowick, Novatech's Senior Urban Designer, conducted the analysis and managed the production of this report. She is a registered landscape architect and full member of the Ontario Association of Landscape Architects since 1997.

An inventory and analysis of the existing site and natural features using airphotos was conducted, followed by an on-site assessment of vegetation. The location of each tree as it appears on the survey was noted and verified. An identification of the tree species, size, health and condition was then conducted. Trees were assessed according to their location and function in the overall landscape according to the site plans prepared for the applicant. An analysis of the impact of the proposed development on the health of the trees was then made based on a consideration of the location of the proposed development as noted in the plans provided.

The assessment of the impact of the proposed development on the health of the existing trees was based on the following criteria:

- the location of the tree with relation to the proposed buildings, parking lots and internal roadways
- the impact of proposed grade changes on the health of the tree
- the degree of disruption to the root system by the proposed development

We next evaluated the location of the trees and the proposed development and made recommendations on how the conservation of the trees could be maximized during design and construction.



Figure 2: Extent of Development Site

2.0 GENERAL CONDITIONS

Vegetation

The site is located within the urban area of the City of Ottawa and consists of part of a former farm field, a triangular remnant left after the construction of CNR tracks and Station Road. Scattered, early successional trees and shrubs populate the site, including *Populus* sp., *Ulmus* sp. and *Fraxinus* sp. Some invasive tree species have also moved in including *Elaeagnus angustifolia* and *Acer negundo*. There are areas of regenerative shrub growth throughout the site, species include *Lonicera* sp., *Rhus typhina*, *Salix* sp. and *Rhamnus* sp. There are no woodlots designated as Natural Environmental Areas or Urban Natural Features.

Surface Water Features

No surface water features are located on site.

Steep Slopes

No steep slopes are present on site. The maximum slope is approximately 5% .

Greenspace Master Plan

No part of the subject site is located in a designated green space.

Wildlife

The only wildlife observed during site visits were birds. It is expected that field-related wildlife such as mice, moles and gophers would be present.

Uniqueness

Existing vegetation and habitat consist of species common to an early regenerative open field environment and do not include any rare, threatened or sensitive species. This survey was conducted in late winter conditions, no mature Butternut trees were observed at the time.

3.0 INVENTORY AND ASSESSMENT

The site was assessed and 37 individual trees and or groupings were identified that could potentially be impacted by the proposed development, see Figure 3 and Table 1.

Some of the trees are located just outside of the site within the City of Ottawa road right of way:

- Tree number 1 (*Fraxinus pennsylvanica* Marsh.) is located approximately 7.8m outside the property line on Station Road and will not be impacted by onsite construction. Tree protection fencing is recommended during construction to ensure it's safety if the tree is included within the construction limit on the approved contract documents.
- Tree number 2 (*Fraxinus pennsylvanica* Marsh.) is located approximately 3.4m outside the property line within the Station Road r.o.w. It is an over-mature ash tree estimated to be approximately ± 100 years old. At the time of winter inspection it showed no signs of Emerald Ash Borer and growth increments on branches indicate general good health. However, this tree is recommended for removal based on it's close proximity to the proposed construction. We do not have confidence in the survival of this tree because proposed grading would encroach into the Critical Root Zone, and removing it would align with city efforts to remove ash trees due to the prevalence of the emerald ash borer.
- Tree numbers 30, 31, 32 and 33 (*Acer platanoides*) are located within the March Road r.o.w. Tree numbers 30 and 31 were found to be in good condition with no disease or significant structural damage, however they will be severely impacted by the proposed construction of the entrance from March Road. Tree numbers 32 and 33 are infected with *Eutypella* Canker. It is recommended that all 4 of these trees be removed and replaced.

The impact of the proposed development on the remaining trees was then analyzed, and the results are shown in Figure 3 and Table 1. From the analysis, the following conclusions can be made:

- All the remaining trees should be removed as the proposed development will severely impact their chance of survival in the new landscape. There is a cluster of existing elm trees infected with Dutch Elm Disease that threaten the survival of remaining elm population on site. The balance of the species of trees on site are considered to be of low quality and invasive.
- All natural regeneration areas should be removed as they are considered to be overgrown and add little value to the landscape appearance. They should be replaced by new shrubs, groundcovers and perennials.
- Trees recommended for removal should be done so at the outset of construction.

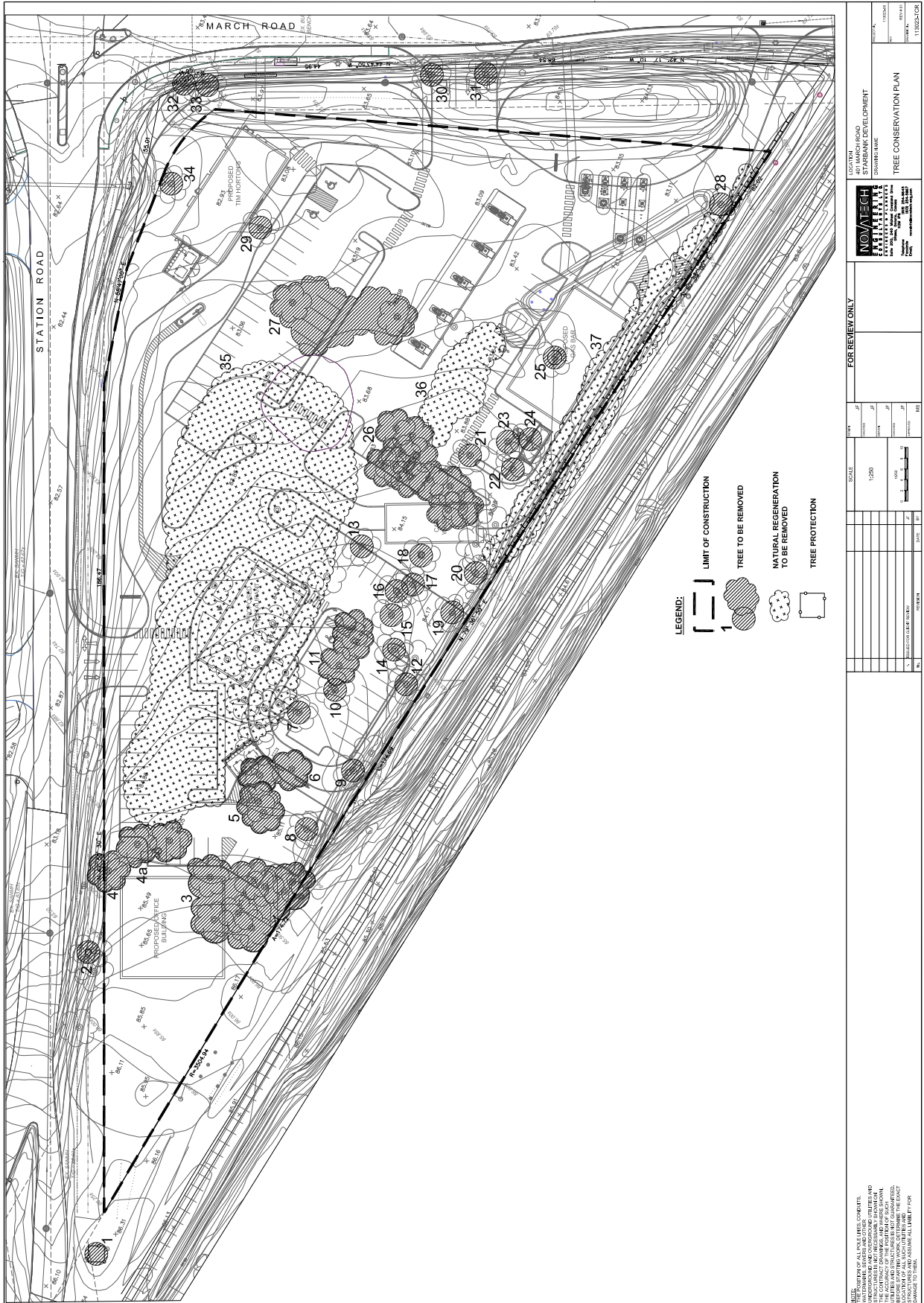


Figure 3: Tree Conservation Plan

Table 1: Tree Preservation Assessment

Number	Name	Ht. (m)	DBH (cm)	Condition	Recommendation
1	Fraxinus pennsylvanica Marsh (Red Ash) - 2 stem	8	15	G	PRESERVE
2	Fraxinus pennsylvanica Marsh (Red Ash)	21	130	F-G	Remove
3	Ulmus americana (White Elm) - group of 10	10	14	P (Dutch Elm Disease)	Remove
4	Ulmus americana (White Elm)	10	17	P (Dutch Elm Disease)	Remove
4a	Elaeagnus angustifolia (Russian Olive)	7	25	G	Remove
5	Elaeagnus angustifolia (Russian Olive)	7	42	G	Remove
6	Ulmus americana (White Elm) - group of 2	10	14, 16	G	Remove
7	Ulmus americana (White Elm)	11	22	G	Remove
8	Ulmus americana (White Elm)	10	12	G	Remove
9	Populus sp. (Poplar)	17	56	G	Remove
10	Elaeagnus angustifolia (Russian Olive)	7	44	G	Remove
11	Ulmus americana (White Elm) - group of 3	10	12, 17, 13	G	Remove
12	Ulmus americana (White Elm)	10	17	G	Remove
13	Acer negundo (Manitoba Maple)	3.5	4	G	Remove
14	Ulmus americana (White Elm)	10	18	G	Remove
15	Ulmus americana (White Elm)	10	18	G	Remove
16	Ulmus americana (White Elm)	10	17	G	Remove
17	Ulmus americana (White Elm)	10	18	G	Remove
18	Ulmus americana (White Elm) - 3 stem	10	15	G	Remove
19	Ulmus americana (White Elm)	13	26	G	Remove
20	Ulmus americana (White Elm)	12	23	G	Remove
21	Malus sp. (Apple)	4	12	G	Remove
22	Ulmus americana (White Elm)	10	19	G	Remove
23	Ulmus americana (White Elm)	10	20	G	Remove
24	Ulmus americana (White Elm)	10	20	G	Remove
25	Ulmus americana (White Elm)	10	22	G	Remove
26	Ulmus americana (White Elm) - group of 12	10	20	F-G	Remove
27	Populus balsamifera (Balsam Poplar) - group of 20	13	22	F-G	Remove
28	Ulmus americana (White Elm)	12	24	G	Remove
29	Acer negundo (Manitoba Maple) - 10 stems	4.5	12	F-G	Remove
30	Acer platanoides (Norway Maple)	9.5	18	F-G	Remove
31	Acer platanoides (Norway Maple)	9.5	16	F-G	Remove
32	Acer platanoides (Norway Maple)	9.5	18	P (Eutypella Canker)	Remove
33	Acer platanoides (Norway Maple)	9.5	20	P (Eutypella Canker)	Remove
34	Fraxinus pennsylvanica Marsh (Red Ash) - 3 stem	10	10	G	Remove
35	Natural Regeneration (Lonicera sp.)	±2		G	Remove
36	Natural Regeneration (Rhus typhina)	±2		G	Remove
37	Early Natural Regeneration (Rhamnus sp., Lonicera sp., Salix sp.)	±2		G	Remove

4.0 RECOMMENDATIONS

To ensure that trees recommended for preservation are fully protected, stringent tree preservation techniques should be implemented during construction. In particular, the following mitigative measures designed to protect trees during construction should be implemented:

- Protective fencing should be installed at the CRZ (Critical Root Zone) prior to construction as per the requirements of the City of Ottawa Urban Forestry and as illustrated in the attached diagram.
- The location of the tree protection fencing should be shown in the Landscape Plan.
- No alterations to the land, slope, vegetation or character should be permitted within the protected zone.
- Trees should be watered a minimum of once per week during construction and fertilized as deemed necessary by the landscape architect / contract administrator.
- Pruning should be kept to a minimum and should generally not be done within the tree protection zone. No pruning of the leader will be permitted.
- Signs or anything else should not be attached to the tree
- Exhaust fumes from construction equipment should not be directed toward the tree canopy.

An example of a construction detail illustrating the above principles is shown on the following page. This type of detail should be included in the landscape plans for the new parking lot construction.

Along with the above recommendations, contractors should become familiar with the Municipal Trees and Natural Areas Protection By-Law NO. 2006-279 which is available on the City of Ottawa website at:

<http://ottawa.ca/en/residents/water-and-environment/trees-and-community-forests/protecting-trees>

Furthermore, contractors should be given a copy of this report as part of the construction document package.

