



Environmental Impact Study Update

1934 Stagecoach Rd.

Ottawa, Ontario

August 2020

DST FILE NO.: P1940612.000

Prepared For:

7773226 Canada Inc

Prepared By:

DST Consulting Engineers Inc.

2150 – 203 Thurston Drive, Ottawa, Ontario, K1G 5T9

Phone: (877) 300-4800 Fax: (888) 979-6772

INTRODUCTION

DST Consulting Engineers Inc. (DST) was retained by 7773226 Canada Inc. to complete an Environmental Impact Statement (EIS) update for the proposed subdivision development at 1934 Stagecoach Rd., Ottawa, Ontario (herein referred to as the “Site”; Figure 1 Appendix A). An EIS update is required by the City of Ottawa for an extension request for the above noted project. The City of Ottawa extension letter (Appendix B) states that prior to granting the three-year extension request, the City will require an update to the 2013 EIS (Muncaster 2013; Appendix C), with a focus on the Species at Risk component. Follow up communications with the Planning, Infrastructure and Economic Development Department, City of Ottawa, confirmed the following requirements (see Appendix B for email correspondences):

- A field visit to the site will be necessary to confirm that no new species at risk are present on the site, this will include any newly listed species or species that were not identified previously on-site.
- For Butternut it will be necessary to update the survey as new butternuts may be present. You may build on work that was completed before however you should check with MECP as it may be necessary to complete new Butternut Health Assessment(s).
- Further, any changes in the proposed layout, stormwater servicing and cut and fill will need to be reflected in the EIS.

In 2013, an Endangered Species Act (ESA) Overall Benefit Permit was granted for the project that authorized impacts to kill 41 Butternuts, harm 109 Butternuts and damage/destroy 5.6 ha of Butternut habitat that were discovered on Site, with Archiving, Seed Collection, and Planting requirements (see Appendix C). In order to clarify and update the Butternut Tree impact requirements for the EIS update, DST contacted the Ministry of Environment, Conservation, and Parks (MECP) and received the following clarifications (see Appendix B for email correspondences):

- The trees that have already been authorized for (by the ESA Permit) would not require a re-assessment; however, any new seedlings that may have grown in since the time that the permit was issued, and may be impacted by the activity, would need to be assessed.

In addition, it was noted that the archiving, seed collection, and planting for the Butternut compensation plan has not yet occurred and therefore will take place following the updated 2020 Butternut Assessment and include any newly discovered seedlings.

PROJECT IDENTIFICATION

Table 1. Contact Information for the 1934 Stagecoach Rd. Project

Project Title:	Environmental Impact Statement Update, 1934 Stagecoach Rd.
Project Location:	1934 Stagecoach Rd., Ottawa, Ontario
Lead Authority:	7773226 Canada Inc.
Contact Name:	Simon Nehme, Director
Contact Address:	1890 Broadmoor Ave. Ottawa, On, K1H 5B4
Contact Phone:	613.799.5565
Contact Email:	simon@nehmes.com
Prepared by:	DST Consulting Engineers Inc.
Address:	2150 Thurston Dr., Suite 203, Ottawa, Ontario, K1G 5T9
Email:	ottawa@dstgroup.com

ENVIRONMENTAL AND SPECIES AT RISK UPDATES

Project Description:

The Site is located on Lot 12, Concession 3, south of the Village of Greely, on the east side of Stage Coach Road, about 2.5 kilometres south of Apple Orchard Road. The project involves a proposed subdivision development with 64 individual lots and a dedicated storm water management pond. Details are provided in an updated site plan in Appendix A.

Description of Environment:

A DST biologist surveyed the Site mid-July, 2020, to conduct SAR surveys, and to assess the natural heritage conditions of the property. Results of the surveys indicated that there has been little change in the Site's environment since the 2013 EIS (Muncaster 2013; Appendix C). The Site was farmed until the 1970s and now consists of cultural meadows, thickets and woodlands, and remnant representations of deciduous and coniferous forests (see photographs 1 and 2 below). The Grey's Creek Municipal Drain flows from north to south in the west portion of the Site. Both fresh-moist and dry-fresh deciduous forests are present.



Photograph 1. Lot 12, Condescension 3, 1934 Stagecoach Rd. Cultural meadows, thickets and woodlands present.



Photograph 2. Lot 12, Condensation 3, 1934 Stagecoach Rd. Remnant representation of fresh-moist deciduous forest present.

Species at Risk Desktop Assessment:

DST performed a desktop review of Species at Risk (SAR) potentially occurring on or near the Site to update results of the 2013 EIS (Muncaster 2013; Appendix C). The review examined the distribution of SAR under provincial and federal jurisdiction, using data from the Ontario Breeding Bird Survey and the Natural Heritage Information Center, and included the following information sources:

- The Species at Risk Ontario (SARO) Public Registry (MECP 2020)
- Species at Risk Act (SARA 2002) Registry
- Ontario Natural History Information Centre (NHIC) Database (2020)
- Species at Risk Ottawa, Natural Systems Planning, City of Ottawa
- Ontario Reptile and Amphibian Atlas (Ontario Nature 2020)
- Ontario Breeding Bird Atlas (OBBA; Cadman et al. 2007)
- iNaturalist (2019)
- eBird (Sullivan, B.L., C.L. Wood, M.J. Iliff, R.E. Bonney, D. Fink, and S. Kelling, 2009)
- Aquatic Species at Risk Map (Fisheries and Oceans Canada, 2020)

The only SAR occurrence records within 1 km² of the Site on the NHIC database were Eastern Meadowlark (*Sturnella magna*) and Wood Thrush (*Hylocichla mustelina*), and surveys for these species were included in DST's breeding bird point count surveys in July, 2020, but neither species was observed.

The table in Appendix D provides results of the desktop study for SAR species with potential to occur in the Ottawa region, including updates since the 2013 EIS (Muncaster 2013; Appendix C), and the likelihood of SAR being present on Site, including 2020 survey observations. Of the species that have been listed at risk since the 2013 EIS (Muncaster 2013; Appendix C), none had suitable habitat present on Site that would suggest a probability of encounters besides the Wood Thrush. Eight of the SAR identified in the 2013 EIS (Muncaster 2013; Appendix C) still have the potential to utilize the site and adjacent lands, and include Snapping Turtle (*Chelydra serpentina*), Eastern Ribbonsnake (*Thamnophis sauritus*), Milksnake, Bobolink (*Dolichonyx oryzivorus*), Eastern Meadowlark, Barn Swallow (*Hirundo rustica*), Monarch Butterfly (*Danaus plexippus*) and Butternut (*Juglans cinerea*).

Species at Risk Surveys:

DST surveyed the Site on July 13th, 15th, and 17th, 2020, for SAR birds, mammals, reptiles, amphibians, plants, and insects, following MNRF methodology for Breeding Bird Point Count surveys, transect surveys for mammals, reptiles, plants, and insects, and general inspections of points of interest (structures, creek habitat, rock outcroppings etc.) for nests and basking sites. Surveys were conducted in the early mornings when temperatures were approximately 20°C, skies were sunny, with low winds. SAR observations are included in the table in Appendix D. Only one SAR species was observed during the 2020 surveys and included Butternut trees, as discussed below.

Butternuts

Butternut trees were previously identified on Site during the 2013 EIS (Muncaster 2013; Appendix C), and therefore an updated survey was merited to identify any new saplings and assess their health status and retainability by a certified Butternut Health Assessor (BHA), as required by the Ontario Ministry of Environment, Conservation and Parks (MECP) guidelines. The BHA discovered and assessed forty (40) new trees on Site and determined that seven (7) trees were Category 1 (non-retainable), and thirty-three (33) trees were Category 2 (retainable).

Butternut Retention

Of the 40 newly discovered Butternuts, eight (8) of the Category 2 trees will remain unharmed, fourteen (14) will be harmed, and eleven (11) will be killed as part of the proposed project. In addition, six (6) Category 1 trees will be harmed and one (1) will be killed.

Of the twenty-five (25) Category 2 trees that are to be harmed or killed, eighteen (18) were immature at 1-2 cm diameter at breast height (DBH), six (6) trees were between 3-14 cm DBH, and one was greater than 15cm at 17 cm DBH. The full BHA assessment report and locations of Butternut Trees from the 2013 and 2020 assessments are presented in Appendix E.

Butternut Compensation

The Endangered Species Act (ESA) Overall Benefit Permit that was granted for the project authorized impacts to kill 41 Butternuts, harm 109 Butternuts and damage/destroy 5.6 ha of Butternut habitat that were discovered on Site in 2013, with Archiving, Seed Collection, and Planting requirements (see Appendix C). As part of the original Butternut Compensation plan that is to be implemented, it is suggested that additional plantings be included to offset the 25 newly identified Category 2 retainable Butternuts that are to be killed or harmed. Using ratios of Butternut seedling plantings for every healthy butternut removed or harmed based on the size of the healthy butternut removed or harmed, a total of 86 new plantings would be required for compensation of the newly discovered Butternuts. However, the overall benefit proposal submitted to the Ministry of Natural Resources in 2013 was modified to provide a more diverse range of benefits that included the above-mentioned Archiving and Seed Collection, in addition to Planting (see Appendix C). Considering these additional activities and benefits which are to be undertaken, it is proposed that the same 2013 kill/harm to planting ratio be implemented for the 25 new Butternuts and the proposed number of additional plantings be reduced to 30, for a total of 250 seedlings planted overall as part of the Benefit Permit. It is proposed that the 2013 Overall Benefit Permit be modified to include these additional requirements.

Bobolink

During the 2013 SAR surveys one cultural meadow located in the north eastern portion of the Site was identified as potential Bobolink habitat and a pair of Bobolink birds were observed displaying breeding behaviour (Muncaster 2013; Appendix C). DST conducted three follow up point count surveys in the same location in July 2020 but no Bobolink were observed.



Photograph 3 and 4. Lot 12, Condensation 3, 1934 Stagecoach Rd. Cultural meadow located in the north eastern portion of the Site that was identified as potential Bobolink habitat in 2013 EIS (Muncaster 2013; Appendix C).

CONCLUSION

Butternuts commonly occur on Site and the proposed subdivision project will kill 52 Category 2 Butternut and potentially harm 123 Butternut through adjacent site development. Amendments to the Endangered Species Act (ESA) Overall Benefit Permit that was granted for the project are proposed and include additional planting of seedlings to compensate for the additional 25 Category 2 Butternuts that were discovered during the 2020 SAR surveys and that will be impacted by project activities.

A pair of Bobolinks was observed in the northeast meadow field habitat in June, 2011. Based on the observations it is probable that this pair was breeding on Site. To avoid potential impacts on breeding Bobolinks no site alterations should occur in this area between May 15th and July 31st. In addition, no tree clearing should take place on Site between April 15th and August 31st to avoid impacts to migratory breeding birds, which are protected under the Migratory Bird Convention Act (1994).

CLOSURE

We trust that the above information is sufficient, should you have any questions or require further information, please do not hesitate to contact the undersigned at your convenience.

Sincerely,

For **DST Consulting Engineers Inc.**



David Vardy, *Ph.D, P.Bio.*,
Senior Biologist and Project Manager

LIMITATIONS OF NATURAL SCIENCE INVESTIGATIONS

The information, conclusions and recommendations given herein are specifically for this project and this Client only, and for the scope of work described herein. It may not be sufficient for other uses. DST does not accept responsibility for use by third parties.

The data, conclusions and recommendations which are presented in this report, and the quality thereof, are based on a scope of work authorized by the Client. Note, however, that no scope of work, no matter how exhaustive, can identify all ecological and/or environmental conditions. This report, therefore, cannot warranty that all conditions on or off the site are represented by those identified at specific locations.

Any recommendations and conclusions provided that are based on conditions or assumptions reported herein will inherently include any uncertainty associated with those conditions or assumptions. In fact many aspects involving professional judgment contain a degree of uncertainty which cannot be eliminated. This uncertainty should be managed by periodic review and refinement as additional information becomes available.

Note also that standards, guidelines, methodologies and practices related to environmental investigations may change with time. Those which were applied at the time of this investigation may be obsolete or unacceptable at a later date.

Any topographic benchmarks and elevations documented in this report are primarily to establish relative elevation differences between study locations and should not be used for other purposes such as grading, excavation, planning, development, etc.

Any comments given in this report on potential environmental conditions/site ecology are intended only for the guidance of the Client. The scope of work may not be sufficient to determine all of the environmental factors at each site. Contractors bidding on projects based on the information in this report should, therefore, make their own interpretation of the factual information presented and draw their own conclusions as to how the conditions may affect their work.

Any results from federal or provincial government agencies, other subcontractors, or any other third party, reported herein have been carried out by others, and DST Consulting Engineers Inc. cannot warranty their accuracy. Similarly, DST cannot warranty or endorse the accuracy of information supplied by the Client.

REFERENCES

Bird Studies Canada, Environment Canada's Canadian Wildlife Service, Ontario Nature, Ontario Field Ornithologists and Ontario Ministry of Natural Resources. 2006. Ontario Breeding Bird Atlas Website. <http://www.birdsontario.org/atlas/index.jsp>

Farrar, J.L. 1995. Trees in Canada. Canadian Forest Service, Ottawa and Fitzhenry and Whiteside Ltd., Markham. On. 502 p.

Fisheries and Ocean Canada. Distribution (Range) Maps. Available at https://open.canada.ca/data/en/fgpv_vpgf/e0fabad5-9379-4077-87b9-5705f28c490b

Government of Canada. "Species at Risk Act (SARA)" 2002. Amended May 2015.

Government of Ontario. "Endangered Species Act (ESA)" 2007. Updated in 2008.

Ministry of Natural Resources and Forestry. Make a Map: Natural Heritage Areas application. https://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR_NHLUPS_NaturalHeritage&viewer=NaturalHeritage&locale=en-US

Muncaster Environmental Planning Inc. 2013. 1934 Stagecoach Road – Environmental Impact Statement, Species at Risk Assessments.

Ontario Ministry of Natural Resources. 2000. Significant Wildlife Habitat: Technical Guide.

Ontario Ministry of Natural Resources and Forestry (OMNRF) (2015) General Habitat Description of Barn Swallow (*Hirundo rustica*).

Ontario Ministry of Natural Resources and Forestry (OMNRF) (2016) Natural Heritage Information Center <<http://nhic.mnr.gov.on.ca/>>

APPENDIX A

FIGURES

Note

1. This drawing shall be read in conjunction with the associated technical report.

Legend

● Newly Identified Butternut Trees (2020)

□ Site Boundary

A	Revision	Date	Preliminary Issue	Approval

Client: 7773226 Canada Inc.

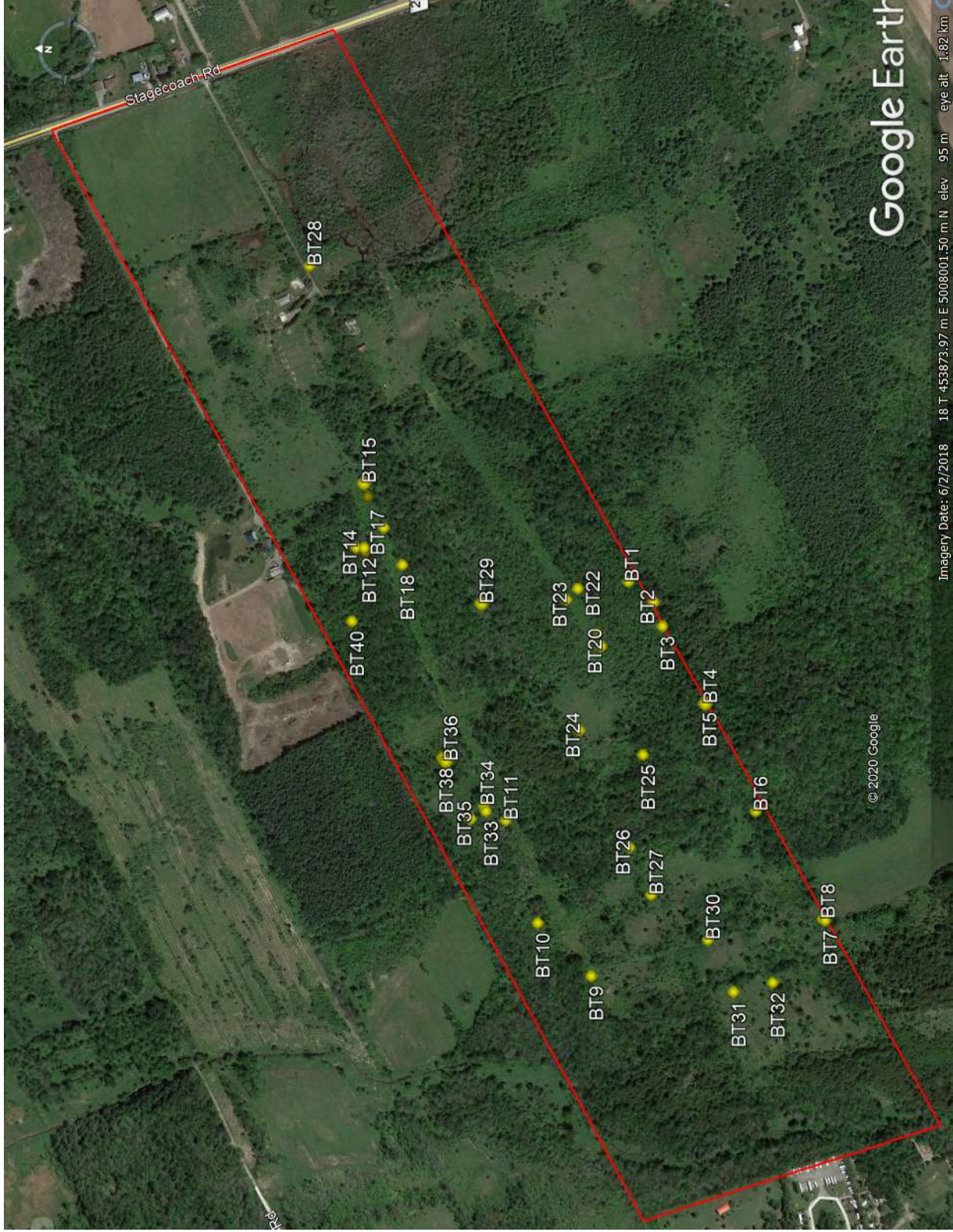
Site: 1934 Stagecoach Rd. Ottawa, ON

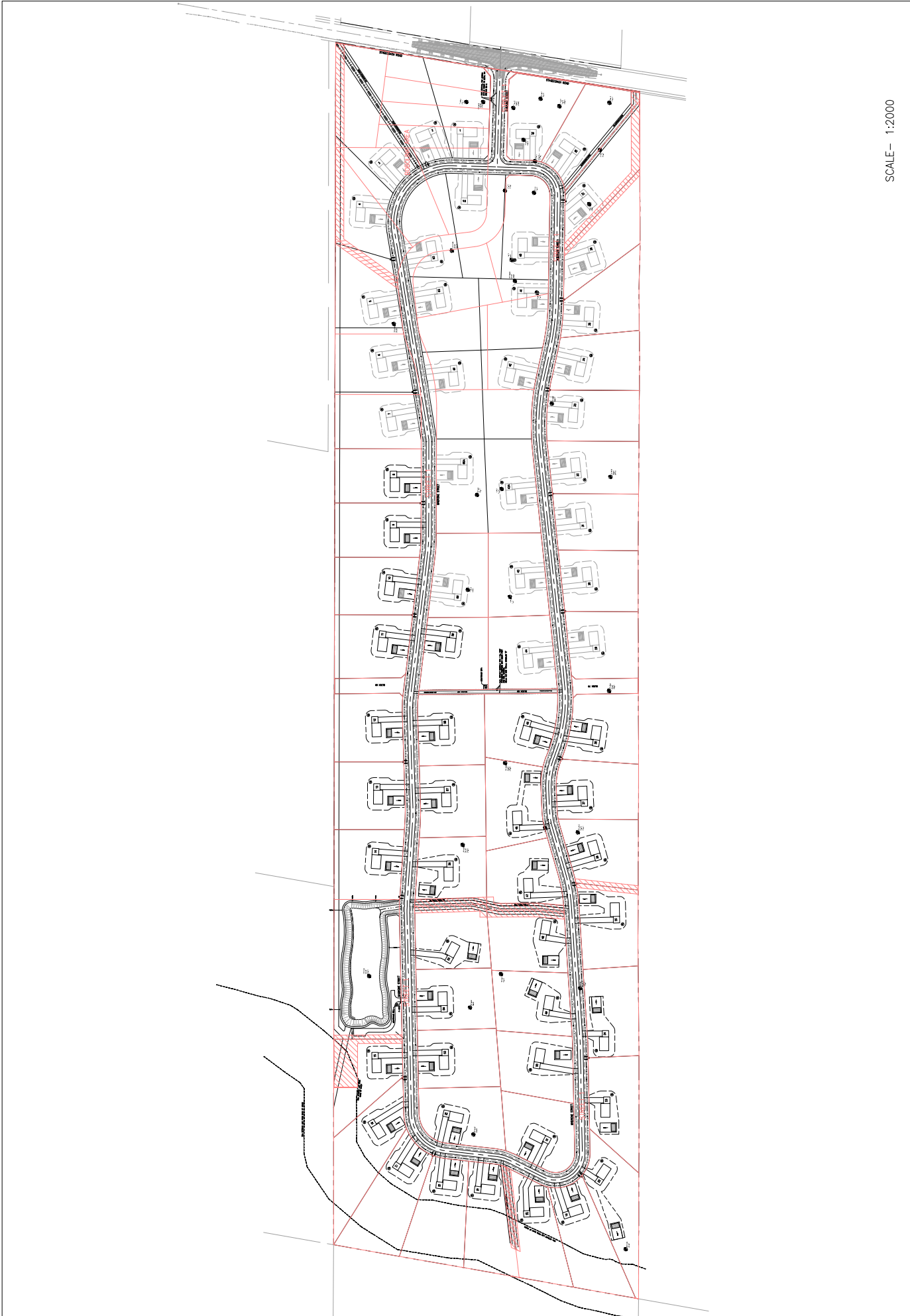
Report Title: Environmental Impact Statement Update

Drawing Title: Site Plan

Designed By	Scale
Drawn By	Date: August 29th 2020
Approved By: DV	Project: P190612.000

Figure No. 1





SCALE— 1:2000

APPENDIX B
CORRESPONDENCES



File No.: D07-16-19-0017

August 21, 2019

Jeff Nadeau
223 McLeod St,
Ottawa, ON
K2P 0Z8

Mr. Nadeau,

RE: 1934A Stagecoach Draft Plan of Subdivision (Original File No. D07-16-07-0008 and Extension D07-16-16-0013)

Please be advised that the City's draft approval for Subdivision Plan (File No. **D07-16-07-0008 & D07-16-16-0013**), which would have lapsed on September 03, 2019, has been extended to September 03, 2020 to allow time to complete and review the required submission requirements before the full three year extension to September 03, 2022.

Prior to granting the three-year extension request, the City will require the following:

- The previously draft approved Environmental Impact Statement, prepared by Muncaster Environmental Planning Inc., dated April 17, 2013 is required to be updated, particularly, the Species at Risk component.
- The cut and fill permit under the Conservation Authority should be advanced to an adequate stage, and any requirement related to the permit should be addressed prior/as part of the extension process.
- Update to the draft approval conditions are likely required to reflect City's current standard.

Please note the extension application D07-16-19-0017 **will be placed on hold** until the requirements listed above are provided. It is your responsibility to advise the Planning, Infrastructure and Economic Development Department of your interest and satisfy all of the submission requirements before the temporary extension date. **Please note that the City cannot extend draft approval if the draft approval period has lapsed.**

Lastly, your application has been transferred to Anissa McAlpine. Please direct any further inquiry and discussion relating to the application to Anissa at 613-580-2424 x26282 or anissa.mcalpine@ottawa.ca

Regards,

Anne Wang, Planner
Planning, Infrastructure and Economic Development Department

c.c.

Adam Brown, Manager, Development Review Rural Services, PIED
Anissa McAlpine, Planner I, Development Review Rural Services, PIED
Matthew Hayley, Environmental Planner, Development Review Rural Services, PIED
Brad Wright, Watershed Planner, South Nation Conservation Authority

David Vardy

From: Species at Risk (MECP) <SAROntario@ontario.ca>
Sent: October 25, 2019 11:23 AM
To: David Vardy
Subject: RE: Butternut Health Assessment inquiry for Subdivision extension requirements

Hi David,

Thank you for contacting the MECP with respect to the Butternuts on this property.

The ESA Overall Benefit Permit authorized impacts to kill 41 Butternuts, harm 109 Butternuts and damage/destroy 5.6 ha of Butternut impact.

I understand that you are receiving an extension on your work that requires an updated species at risk survey on the site.

The trees that have already been authorized for (by the ESA Permit) would not require a re-assessment; however, any new seedlings that may have grown in since the time that the permit was issued, and may be impacted by the activity, would need to be assessed.

On a separate note, the ESA Permit has conditions of activities that should be completed by now (re: archiving, seed collection, seedling planting). I just want to check that these conditions have been fulfilled, even though there is an extension on this project?

Let me know if you have any questions,

Mallory Nadon,
for Permissions and Compliance Section
Species at Risk Branch
Ministry of the Environment, Conservation and Parks

From: David Vardy <dvardy@dstgroup.com>
Sent: October 2, 2019 10:47 AM
To: Species at Risk (MECP) <SAROntario@ontario.ca>
Subject: Butternut Health Assessment inquiry for Subdivision extension requirements

Hello,

We have a client that is required by the City of Ottawa to update an Environmental Impact Statement (EIS) as a requirement for an extension request for a proposed subdivision project. In the attached extension letter it states that prior to granting the three-year extension request, the City will require an update to the 2013 EIS, particularly the Species at Risk (SAR) component. We have reached out to the City of Ottawa for clarification as to what exactly they require for the SAR updates and was provided the response below, which states we should reach out to MECP in regards to the Butternut Health Assessments that were previously conducted. I have attached the EIS and the ESA permit that was granted to our client to remove and compensate for Butternuts for your reference.

As outlined in the email below, our plan is to re-visit the site and assess if any new Butternuts are present. We are requesting MECP's input into the previous Butternut Health Assessment and ESA permit and would like to confirm that they are still valid and we are able to build upon the work that was previously conducted, as opposed to re-doing the Butternut Health Assessments?

Please feel free to reach out to me if you have any questions.

Thank you,

David Vardy, Ph.D., P.Bio.
Senior Biologist / Project Manager

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From: McAlpine, Anissa <anissa.mcalpine@ottawa.ca>
Sent: Thursday, September 12, 2019 2:55 PM
To: David Vardy <dvardy@dstgroup.com>
Subject: RE: 1934A Stagecoach Draft Plan of Subdivision extension requirements

Good afternoon Mr. Vardy,

I received your voicemail as well. In order to get you some further detail as to the City's expectation for an updated EIS, I reached out to the City's environmental planner. Simply updating the EIS with newly listed species will not be sufficient. Requirements are as follows:

- A field visit to the site will be necessary to confirm that no new species at risk are present on the site, this will include any newly listed species or species that were not identified previously on-site.
- For Butternut it will be necessary to update the survey as new butternuts may be present. You may build on work that was completed before however you should check with MECP as it may be necessary to complete new Butternut Health Assessment(s).
- Further, any changes in the proposed layout, stormwater servicing and cut and fill will need to be reflected in the EIS.

I trust this will be of use. Please feel free to call again should you need clarification.

Anissa McAlpine

Planner
Development Review, Rural Services
Planning, Infrastructure and Economic Development Department

City of Ottawa
110 Laurier Avenue West
Ottawa, ON, K1P 1J1
613.580.2424 ext. 26282

**** I will be out of the office and not able to respond to emails September 23rd and October 4th.**

From: David Vardy <dvardy@dstgroup.com>
Sent: September 12, 2019 12:30 PM
To: McAlpine, Anissa <anissa.mcalpine@ottawa.ca>
Subject: 1934A Stagecoach Draft Plan of Subdivision extension requirements

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Hi Annisa,

As a follow up to my voicemail, we have a client that is required by the City to update an Environmental Impact Statement as a requirement for an extension request for the above noted project. In the attached extension letter it states that prior to granting the three-year extension request, the City will require an update to the 2013 EIS, particularly the Species at Risk component, and I was hoping to get some clarification as to what exactly the City would like updated? I.e. updates of species that have been added to the species at risk list since 2013 when the original EIS was conducted and that could potentially be present on Site to supplement the work in 2013, as opposed to redoing work that was previously conducted such as the Butternut Assessment and Compensation Plan?

If you could please give me a call at your earliest convenience to discuss this that would be much appreciated.

Best Regards,

David Vardy, Ph.D., P.Bio.
Senior Biologist / Project Manager

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APPENDIX C
REPORTS AND PERMITS

**PERMIT UNDER clause 17(2)(c) of
THE ENDANGERED SPECIES ACT, 2007**

Permit Number: KV-C-008-13

Issued to: Velika Realty Inc. (the "Corporation"), 275 Slater St., Ottawa, Ontario, K1P 5H9

Location: Part of Lot 12, Concession 3, in the Geographic Township of Osgoode, shown as the Site of Development in Appendix A ("the Site").

Term: This permit comes in to force on the date it is issued and expires when condition 13 is satisfied.

1. **Authority.** This permit is issued to the Corporation under clause 17(2) (c) of the Endangered Species Act, 2007.
2. **Application to Species.** This permit applies to Butternut (*Juglans cinerea*), a species listed as endangered on the Species at Risk in Ontario List.
3. **Authorization.** This permit authorizes the Corporation to engage in the activities specified herein that would otherwise be prohibited by section 9 or 10 of the Endangered Species Act, 2007 in relation to Butternut (*Juglans cinerea*).
4. **Application of Authorization.** This permit authorizes the Corporation to carry out the following activities to the extent necessary for the construction of a rural residential subdivision on the Site
 - (a) kill up to 41 Butternut on the Site,
 - (b) harm up to 109 Butternut on the Site, and
 - (c) damage and destroy up to 5.6 ha of Butternut habitat on the Site.
5. **Conditions.** The activities authorized by this permit are subject to all the conditions specified herein.
6. **Definitions.** In the permit, the following words shall have the following meanings:

“**Archive**” is a protected and managed plantation of Butternut seed, seedlings or grafts intended to conserve genetic material from selected trees of particular species for the purposes of conservation, research or seed production;

|

“Butternut Scion” means a small portion of a Butternut tree containing buds removed from the Butternut without causing harm to the tree, that is used for grafting;

“FGCA” means the Forest Gene Conservation Association;

“MNR” means the Kemptville District Office of the Ontario Ministry of Natural Resources;

“Overall Benefit Area” means the area where Butternut and companion seedlings are to be planted under condition 10 of this permit;

“Qualified Professional” means a person with particular expertise who is trained, knowledgeable and capable in specific areas of seed collection, grafting or tree planting, tending, monitoring and reporting to meet the conditions of this permit;

“Retainable” means a Butternut tree that has been assessed by a Butternut Health Assessor and is not affected by Butternut canker to such a degree that retaining the Butternut in its current location would support the protection and recovery of Butternut; and

“RVCA” means the Rideau Valley Conservation Authority.

7. Appendices. The following appendices form part of this permit:

- Appendix A: Map of Site with Retainable Butternut Trees
- Appendix B: List of Retainable trees to be removed or harmed

8. Butternut Archiving.

- a) The Corporation shall collect a minimum of 50 Butternut Scions from tree number 182 from the Site which demonstrates potential resistance to Butternut canker disease. Butternut Scions will be collected during late February or March of 2014 or 2015 by a Qualified Professional.
- b) Alternatively, if the MNR confirms that tree number 182 is not a priority tree for archiving, the Corporation shall collect a minimum of 50 Butternut Scions from a tree that demonstrates potential resistance to Butternut canker disease, as approved by MNR. Butternut Scions will be collected during late February or March of 2014 or 2015 by a Qualified Professional.
- c) At least 30 of the Butternut Scions collected under conditions 8 (a) and (b) shall be grafted to become part of a Butternut archiving program approved by the MNR. This will include tending the grafts in protected greenhouse and cold storage areas for the first 2 years and then planting and tending them in a protected Archive for the following 3 years until they are well-established.

- d) The Corporation shall undertake best efforts to ensure that the grafting, planting and tending is done by the FGCA. If the FGCA is unable to carry out the grafting, tending and planting, the Corporation shall retain an appropriate Qualified Professional or organization approved by the MNR to fulfill condition (c).
- e) The Corporation shall donate the remaining Butternut Scions collected under condition 8 (a) or (b) that were not grafted and planted under condition 8 (c) to the Ontario Forest Research Institute.

9. Butternut Seed Collection.

- a) The Corporation shall, using a Qualified Professional, collect or acquire 2000 seeds from Retainable Butternut and donate those seeds to the RVCA or FGCA. If available, seeds shall be collected from Retainable Butternut located on the Site. However, if there are not sufficient seeds from Retainable Butternut on the Site to meet this condition, seeds may be collected from Retainable Butternut located in Ministry of Natural Resources' Tree Seed Zones 35 or 36 as indicated in the Ministry of Natural Resources' 2011 Southern Ontario Tree Seed Zone Atlas.
- b) The Corporation shall ensure that all seeds are maintained by a Qualified Professional for the first year of their growth.
- c) Collection of seeds under condition 9 (a) shall be complete by September 30th 2016.

10. Planting. The Corporation shall plant 220 pure Butternut seedlings and 220 companion tree seedlings native to the Overall Benefit Area for the purpose of emulating natural Butternut habitat conditions and avoid a monoculture of species. Planting shall take place as follows:

- (a) The Butternut and companion tree seedlings shall be planted in suitable locations within planting areas approved by MNR.
- (b) The total planting area suitable for planting Butternut and companion trees shall be no less than 5.6 hectares.
- (c) The Corporation shall prepare and submit to MNR for approval by the MNR Species at Risk Biologist a Butternut planting plan prior to planting any Butternut seedlings under condition 10 (a). At a minimum, the planting plan shall include:
 - a detailed map of the locations where the Butternut planting shall take place;
 - a description of the location and type of fencing to be constructed around the Butternut planting areas; and
 - a description of the best management practices that are to be followed in the handling, planting and tending of the Butternut.
- (d) Butternut for planting shall be obtained from a stock source from Ministry of Natural Resources' Tree Seed Zones 35 or 36.

- (e) Butternut shall be planted in deep, moist, well-drained loamy soil with recognizable darker organic proportion in the upper level that would support good tree growth.
- (f) All areas where the Butternut and companion tree seedlings will be planted shall be prepared by removal of excessive competing vegetation. All seedlings shall be planted in open areas where they will have full sunlight conditions.
- (g) As much of the planting as possible shall occur between April 1, 2014 and May 15, 2014.
- (h) If enough Butternut seedlings are not available from the above referenced seed zones during this time, or if additional time is needed for site preparation, the planting shall occur during the following periods:
- from September 20, 2014 until October 30, 2014;
 - from April 1, 2015 until May 15, 2015;
 - from September 20, 2015 until October 30, 2015
 - from April 1, 2016 until May 15, 2016; or
 - from September 20, 2016 until October 30, 2016
- (i) The minimum spacing for planting of the Butternut shall be at least:
- 4 metres between each planted Butternut and companion tree seedling;
 - 3 metres between each planted Butternut and existing smaller trees of another species;
 - 4 meters between Butternut and another planted potentially large tree species;
 - 5 metres from the canopy line of existing larger trees; and
 - 15 metres from any known locations of possible future construction disturbances.
- (j) All Butternut planted shall be tracked and recorded, and included in the monitoring reports required under condition 12.

11. The Corporation shall tend all Butternut and companion tree seedlings planted under condition 10. Tending of the seedlings shall take place as follows:

- (a) Tending shall take place for a period of 5 years after the date the seedling was planted.
- (b) Vegetation shall be controlled in an area of 60 centimetres around each tree by using a combination of the following methods depending on site conditions as determined by the Qualified Professional: manual pulling, mechanical, chemical or alternatives such as mulch.
- (c) Appropriate fencing shall be constructed to mark and protect the Butternut planting areas in accordance with the planting plan approved under condition 10(c).

- (d) The trees shall be protected. If animals start to harm the trees, tree guards shall be used for the first three growing seasons, then if necessary replaced by wire mesh.
- (e) The planted trees shall be watered during periods of drought, i.e. a 30-day period during May to September with less than 25 millimetres of precipitation.

12. The Corporation shall retain a Qualified Professional to monitor and report on the growing progress of all the Butternut required to be tended under condition 11 for five (5) years after each Butternut was planted as follows:

- (a) In the first and second years after Butternut are planted, the trees shall be monitored and corrected (e.g., straightened) as needed each month from the middle of May until the middle of September.
- (b) In their third, fourth and fifth growing years, the planted Butternuts shall be monitored and corrected as needed at least three times a year between the middle of May and the middle of September..
- (c) The Corporation shall provide detailed monitoring reports in respect of the planted Butternut to the MNR Species at Risk Biologist annually by December 31 of each year starting on the first year after the date this permit comes into force and ending five (5) years after the planting of all Butternut planted in accordance with condition 10 is complete (the "Monitoring Period"). The following information shall be included in each monitoring report for each Butternut monitored under this condition:
 - Date of planting;
 - Date and type of tending;
 - Health status: good, poor, or dead;
 - Main stem height;
 - Number of stems;
 - Diameter of live trees at root collar and at breast height (1.37 metres);
 - Evidence of Butternut canker (amount of open cankers and sooty patches);
 - Damage by wildlife, people or events;
 - Universal Transverse Mercator (UTM) location of each tree; and
 - Other comments and recommendations that may be pertinent towards achieving the intended benefit to the species.
- (d) In addition, the following information shall also be provided in the monitoring reports required under clause 12(c):
 - An assessment of the regeneration (natural and artificial) by other tree species either enhancing the vegetation community or competing with the Butternut; and
 - Photographic record of each area once trees have been planted and any trees that have been damaged or are showing signs of canker.

- |
- (e) If any monitoring report shows that Butternut, including Butternut planted under this condition 12 (e), have died, the Corporation shall plant additional Butternut seedlings (“Replacement Butternut”) by the end of the following year to replace them, subject to the availability of seedlings from tree seed zones 35 or 36. If seedlings from those seed zones are unavailable in the following year, Butternut seedlings shall be planted in the appropriate time period as detailed in condition 10(g), as soon as possible after seedlings become available.
 - (f) Replacement Butternut planted under condition 12 (e) shall be monitored and tended in accordance with conditions 11 and 12 until the end of the Monitoring Period.

13. At the end of the Monitoring Period:

- (a) The Corporation shall have a minimum of 110 planted Butternut growing to the satisfaction of the MNR Species at Risk Biologist.
- (b) Despite (a), if there are fewer than the required minimum number of Butternut trees alive and growing to the satisfaction of the MNR Species at Risk Biologist at the end of the Monitoring Period, the Corporation shall plant additional trees in the spring of the following year as necessary to reach the required number (50) of live trees growing to the satisfaction of the MNR subject to the availability of seedlings from tree seed zones 35 or 36. If seedlings from those seed zones are unavailable in the following year, Butternut seedlings shall be planted in the appropriate time period as soon as possible after seedlings become available.

14. On reasonable notice, the Corporation shall allow access to the Butternut planting locations to staff of the Ministry of Natural Resources and others accompanying them for the purposes of observing the planted trees. If the Corporation does not own the property or the ownership of the property has been transferred, the Corporation shall undertake reasonable steps to obtain permission for the Ministry of Natural Resources and others accompanying them to continue to enter that property for the purposes of observing the planted trees.

Pursuant to the authority of clause 17(2) (c) of the Endangered Species Act, 2007, I hereby issue this permit authorizing the activities described above, subject to the conditions set out herein.

David Oraziotti
Minister of Natural Resources

Date of Issuance:

Appendix A: Map of Proposed Stagecoach Road Subdivision with Retainable Butternut Trees

Legend

- Green Circles – Butternuts to be Retained
- Yellow Circles – Butternuts to be Retained but Anticipated to be Harmed
- Red Circles – Butternuts to be Removed
- Purple Circle – Butternut proposed for Archiving (Tree No. 182)
- Blue Circles – Potential Butternut Seed Trees to be Retained

Notes: Only Butternuts assessed as retainable are shown



Appendix B: List of Retainable trees to be removed or harmed
 Tree identification numbers are taken directly from Butternut Health Assessment Report submitted to MNR on July 3, 2011.

Tree #	dbh (cm)	Fate	Tree #	dbh (cm)	Fate	Tree #	dbh (cm)	Fate
3	26	Harm	32	1	Harm	69	2	Harm
5	1	Harm	33	1	Harm	75	1	Harm
8	1	Killed	34	1	Killed	76	1	Harm
9	1	Harm	35	15	Killed	77	1	Harm
10	1	Harm	36	36	Harm	78	1	Harm
11	1	Harm	37	24	Killed	79	1	Harm
12	1	Harm	38	9	Harm	81	2	Harm
13	1	Harm	40	34	Harm	82	1	Harm
14	1	Harm	41	38	Harm	83	2	Harm
15	1	Killed	42	16	Harm	84	2	Harm
16	1	Killed	46	19	Harm	85	2	Harm
17	1	Killed	48	28	Harm	87	1	Killed
18	1	Harm	49	23	Harm	88	1	Harm
19	1	Harm	50	25	Killed	89	1	Harm
20	1	Harm	51	1	Killed	90	1	Harm
21	1	Harm	52	1	Killed	91	1	Killed
22	1	Killed	53	1	Harm	92	1	Killed
23	1	Harm	54	1	Harm	93	1	Killed
24	1	Harm	55	1	Harm	94	1	Killed
25	1	Harm	56	1	Harm	96	1	Harm
26	1	Harm	57	1	Harm	97	45	Killed
27	1	Harm	58	24	Harm	98	1	Harm
28	1	Harm	59	18	Harm	100	32	Harm
29	1	Harm	62	1	Harm	101	29	Harm
30	1	Harm	63	1	Harm	102	59	Harm
31	1	Harm	65	3	Harm	104	34	Killed

Tree #	dbh (cm)	Fate	Tree #	dbh (cm)	Fate	Tree #	dbh (cm)	Fate	Tree #	dbh (cm)	Fate
106	1	Harm	153	1	Harm	267	2	Harm			
107	1	Killed	154	2	Harm	293	27	Harm			
108	1	Killed	156	28	Killed	298	3	Harm			
109	1	Killed	162	1	Harm	299	1	Killed			
110	1	Killed	164	52	Harm	302	46	Harm			
111	2	Killed	170	29	Harm	305	36	Harm			
112	1	Harm	175	29	Harm						
114	1	Harm	193	27	Harm						
115	1	Killed	202	38	Killed						
116	1	Killed	203	50	Killed						
117	1	Killed	205	25	Killed						
118	1	Killed	209	8	Harm						
119	1	Harm	210	1	Harm						
120	1	Harm	211	1	Harm						
121	1	Harm	214	1	Harm						
122	1	Harm	215	1	Harm						
123	1	Harm	217	1	Harm						
125	2	Harm	225	30	Killed						
127	1	Harm	228	36	Harm						
128	1	Harm	230	41	Killed						
129	1	Harm	237	34	Harm						
130	1	Harm	240	29	Killed						
131	1	Harm	245	65	Harm						
132	1	Harm	248	31	Harm						
133	1	Harm	253	1	Killed						
134	1	Killed	254	1	Killed						
135	1	Killed	256	1	Harm						
136	3	Killed	257	2	Harm						
137	38	Killed	258	1	Harm						
138	32	Harm	259	1	Harm						
149	1	Harm	260	1	Harm						
151	1	Harm	261	1	Harm						
152	1	Harm	266	1	Harm						



Muncaster
Environmental
Planning Inc.

July 26, 2013

Mr. Ahmed Gabal
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**RE: 1934 Stagecoach Road – Environmental Impact Statement
Species at Risk Assessments
Butternut and Bobolink Survey - Revised**

This letter has been revised to address requests for additional information in Ministry of Natural Resources' correspondence dated August 31st, 2011 and to assess and utilize the revised Plan of Subdivision for the site, dated April 1st, 2013. A Species at Risk assessment was completed for the above site through a review of the Preliminary Tree Planting and Conservation Plan prepared by Golder Associates, an analysis of the Species at Risk databases and Species at Risk known to occur in the City of Ottawa, including additional species listed since the initial assessment, and field reviews. The site is located south of the Village of Greely, on the east side of Stage Coach Road, about 2.5 kilometres south of Apple Orchard Road. For the purposes of this report Stage Coach Road is considered to run in a north-south orientation.

Existing Conditions

The site was farmed until the 1970s and now consists of cultural meadows, thickets and woodlands, and remnant representations of deciduous and coniferous forests. The Grey's Creek Municipal Drain flows from north to south in the west portion of the site. Both fresh-moist and dry-fresh deciduous forests are present.

Species at Risk

Butternut, an endangered Species at Risk, was identified in several on-site communities in the existing reports. The Ontario Ministry of Natural Resources' biodiversity explorer website was reviewed for other potential Species at Risk (<http://www.biodiversityexplorer.mnr.gov.on.ca/nhicWEB/main.jsp>). This site allows for a search of Threatened and Endangered species covered by the 2008 *Endangered Species Act*, as well as other species of interest. For the 10 km square (18VR50), two Species at Risk were reported; Henslow's sparrow (Endangered) and azure bluet (Provincially rare (S3)). The

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BUTTERNUT AND BOBOLINK SURVEYS**

Henslow’s sparrow utilizes large open areas of long grass. This species is rarely reported in eastern Ontario, with no occurrence in the City of Ottawa in the most recent Ontario Breeding Bird Atlas. The azure bluet is a damselfly which would be found in association with standing or flowing water, which is limited to the Grey’s Creek corridor.

The potential Species at Risk reported for the overall City of Ottawa historically and their habitat requirements were also reviewed, as summarized in the Table below.

Probability of Species at Risk Presence on 1934 Stage Coach Road Lands

Species Name	Provincial (ESA) Status	Federal (SARA) Status	Habitat Suitability
Birds			
Bald Eagle	Special Concern	None	The huge stick nests of this species are very conspicuous and none are present or have been reported in the area. No recorded historical occurrences.
Canada Warbler	Special Concern	Threatened (Schedule 1)	One confirmed nest, two probable and six possible reported in recent OBBA. This species’ preferred habitat is wet forest with dense shrubs, habitat not present on or adjacent to the site. There have been no records from the vicinity, including in the OBBA 10km atlas square (18VR50).
Chimney Swift	Threatened	Threatened (Schedule 1)	Nests in open chimneys and sometimes in tree hollows. Possible breeding observation during OBBA 10km atlas square, but no breeding habitat potential observed on site
Common Nighthawk	Special Concern	Threatened (Schedule 1)	Ground nester of open sites, no suitable habitat observed. No observations reported in OBBA Atlas square.
Golden Eagle	Endangered	None	No nests reported in Ottawa during OBBA. No recorded historical occurrences.
Red Knot	Endangered	None – listed as Endangered by COSEWIC	Ottawa River shores, area lagoons during migration only.
Black Tern	Special Concern	None (not at risk nationally)	Four confirmed nests in recent OBBA but not for atlas square including site
Cerulean Warbler	Threatened (June 2011)	Special Concern (Schedule 1)	No nests reported during recent OBBA.
Henslow’s Sparrow	Endangered	Endangered (Schedule 1)	Requires large open areas of long grass. Extremely rare species; no nests reported in Ottawa during OBBA. No recorded historical occurrences.
Golden-winged Warbler	Special Concern	Threatened (Schedule 1)	One confirmed nest, one probable nest reported during recent OBBA but not for atlas square including site
Least Bittern	Threatened	Threatened (Schedule 1)	No extensive cattail marsh present. No observations reported in OBBA Atlas square. No recorded historical occurrences.

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Species Name	Provincial (ESA) Status	Federal (SARA) Status	Habitat Suitability
Rusty Blackbird	Not at Risk	Special Concern (Schedule 1)	No nests reported during recent OBBA. Primarily occurs during migration.
Bobolink	Threatened	None – listed as threatened by COSEWIC in April 2010	Widespread; confirmed or probable nests found in 39 out of 40 local atlas squares during recent OBBA, including atlas square with site. Observed on-site in June, 2011.
Eastern Meadowlark	Threatened	None – listed as threatened by COSEWIC in May 2011	22 confirmed, 11 probable and 3 possible nests during recent OBBA. Potential habitat but not observed on-site.
Barn Swallow	Threatened (Jan. 2012)	None – listed as threatened by COSEWIC in May 2011	33 confirmed, 2 probable and 3 possible nests during recent OBBA. Nests on barns and other structures; forages in open areas for flying insects. Not observed on-site.
Loggerhead Shrike	Endangered	Endangered (Schedule 1)	Requires short grass pastures and alvar with scattered shrubs. No confirmed nests in Ottawa since 2002. No suitable habitat; none observed.
Barn Swallow	Threatened (Jan. 2012)	None – listed as threatened by COSEWIC in May 2011	33 confirmed, 2 probable and 3 possible nests during recent OBBA in overall City, including the 10km square with the site. Nests on barns and other structures; forages in open areas for flying insects. No potential structures observed on the site
Eastern Meadowlark	Threatened (Jan. 2012)	None – listed as threatened by COSEWIC in May 2011	22 confirmed, 11 probable and 3 possible nests during recent OBBA in overall City, including the 10km square with the site. Declining grassland species in North America. Not observed during the field surveys of the site.
Olive-sided Flycatcher	Special Concern (Sept. 2009)	Threatened (Schedule 1)	No preferred habitat observed for this predominantly boreal species. No records in OBBA Atlas square. No recorded historical occurrences.
Peregrine Falcon	Special Concern (as of January 2013)	Special Concern	Requires high perches with food source (pigeons) such as cliffs and office towers. No suitable habitat. No recorded historical occurrences. No observations reported in OBBA Atlas square.
Red-headed Woodpecker	Special Concern	Threatened (Schedule 1)	Species of open deciduous woodlands. No suitable habitat. No recorded historical occurrences. No observations reported in OBBA Atlas square.
Short-eared Owl	Special Concern	Special Concern (Schedule 3)	Requires open habitats such as pastures and marshes; no suitable on-site habitat. None reported in OBBA Atlas square. No recorded historical occurrences.
Whip-poor-will	Threatened	Threatened	Requires large wooded areas with open patches, and/or open woodlands or alvar. No suitable habitat on site. Possible breeding observation during OBBA for overall 10km square.

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Species Name	Provincial (ESA) Status	Federal (SARA) Status	Habitat Suitability
Yellow Rail	Special Concern	Special Concern 2009	Extensive sedge meadows and marshes not present on site. No observations reported in OBBA Atlas square. No recorded historical occurrences.
Fish			
American Eel (<i>Anguilla rostrata</i>)	Endangered	Special Concern	Ottawa, Mississippi and Rideau Rivers only. None reported in the vicinity of the site.
Bridle Shiner	Special Concern	Special Concern (Schedule 1)	Rideau River. None reported in the vicinity of the site.
Lake Sturgeon	Threatened	Threatened	Fish of large rivers. No suitable habitat.
Northern Brook Lamprey	Special Concern	Special Concern (Schedule 1)	Ottawa River only. No suitable habitat.
Channel Darter	Threatened*	Threatened (Schedule 1)	Ottawa River. Prefers areas with moderate current over sandy or rocky substrate. No suitable habitat.
River Redhorse	Special Concern	Special Concern (Schedule 1)	Ottawa and Mississippi Rivers only. No suitable habitat.
Mammals			
Eastern Cougar	Endangered	None – data deficient	Southern Ontario cougar sightings are typically misidentified animals or escaped captives; habitat suitability low. Not observed, no local records.
Eastern Wolf	Special Concern	Special Concern (Schedule 1)	Not known to occur in City of Ottawa, although range includes much of Renfrew County. Local reports likely involve large coyotes or hybrids.
Grey Fox	Threatened	Threatened (Schedule 1)	Very rare species mainly observed in far southwestern and northwestern Ontario. None observed, with no records on site or nearby.
Reptiles and Amphibians			
Blanding's Turtle	Threatened	Threatened (Schedule 1)	No suitable habitat, including no basking sites. No records in vicinity.
Eastern Musk Turtle	Threatened	Threatened (Schedule 1)	Species prefers shallow, still water with muddy bottom. No basking sites or other habitat characteristics available. No records in vicinity.
Eastern Ribbonsnake	Special Concern	Special Concern (Schedule 1)	No meadow marsh habitat with basking sites available. None reported on site or in vicinity.
Milksnake	Special Concern	Special Concern (Schedule 1)	Secretive species with a wide range of habitat. Records are scattered across the City. No previous records in vicinity.
Snapping Turtle	Special Concern	No Status	Species is found in small lakes, ponds, and slow streams and rivers. Nesting occurs in sandy soils along rivers and lakes. May be along Grey's Creek corridor
Spiny Softshell	Threatened	Threatened (Schedule 1)	Highly aquatic species of Ottawa River; no suitable habitat; none observed.

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BUTTERNUT AND BOBOLINK SURVEYS**

Species Name	Provincial (ESA) Status	Federal (SARA) Status	Habitat Suitability
Wood Turtle	Endangered. Habitat regulation issued.	Threatened (Schedule 1) as of March 17, 2010	Few historical records in NHIC, NESS (may have been extirpated locally). No regulated habitat identified in Ottawa. Primarily terrestrial forest species associated with clear, gravelly streams.
Northern Map Turtle	Special Concern	Special Concern (Schedule 1)	Few locations; all along Ottawa River. Highly aquatic species, found only in lakes and large rivers.
Spotted Turtle	Endangered	Endangered (Schedule 1)	Requires mats within bogs and fens. No suitable habitat.
Western Chorus Frog	Not at Risk	Threatened (Schedule 1)	No habitat, including non-permanent breeding pools observed.
Plants			
Eastern Prairie Fringed-orchid (<i>Platanthera leucophaea</i>)	Endangered. Habitat regulations issued.	Endangered (Schedule 1)	Highly specific habitat requirements; no suitable habitat; none observed.
American Ginseng (<i>Panax quinquefolius</i>)	Endangered	Endangered (Schedule 1)	No suitable habitat. Coniferous component high for typical ginseng habitat. None observed.
American Chestnut	Endangered*	Endangered (Schedule 1)	One population reported along Dolman Ridge Road (federal property)
Butternut (<i>Juglans cinerea</i>)	Endangered	Endangered (Schedule 1)	Variable but typically on well-drained soils. Very common on site.
Lichens			
Flooded Jellyskin (<i>Leptogium rivulare</i>)	Threatened	Threatened (Schedule 1)	Found below high-water mark on deciduous trees within swamps. No suitable habitat.
Insects			
Monarch butterfly Monarque (<i>Danaus plexippus</i>)	Special Concern	Special Concern (Schedule 1)	Widespread in meadows, especially with abundant milkweed. Milkweed present in cultural meadow. None observed.
West Virginia White butterfly	Special Concern	None	Unknown; no records in NESS or NHIC. SARO range mapping includes Ottawa. Requires mature moist deciduous woods with larval host plant toothwort (<i>Dentaria</i> sp.).
Bogbean Buckmoth	Endangered (Sept. 2010)	Endangered (Schedule 1)	Richmond Fen (2 locations) and NatureServe notes two fens "along the Ottawa River." Brunton (2005) indicates preferred food plant bog-bean is also present elsewhere in Ottawa (Mer Bleue, Albion Wetland and Long Swamp).
Rapids Clubtail (<i>Gomphus quadricolor</i>)	Endangered	None – listed as Endangered by COSEWIC in 2008	Occurs along Mississippi River in Blakeney / Pakenham area upstream of City. Requires medium to large clear, cool rivers with alternating pools and riffles. No suitable habitat present

Eight of the potential species at risk and species of special concern assessed above have the potential to utilize the site and adjacent lands, snapping turtle, eastern ribbonsnake, milksnake, bobolink, eastern meadowlark, barn swallow, monarch butterfly and butternut. Other than bobolink and butternut, as described below, none of these species were observed on the site.

Whip-poor-will

As whip-poor-will is reported in the overall 10 km² breeding bird atlas square and its preferred habitats include semi-open forest with exposed rock outcrops, grasslands, pastures, and habitats with exposed mineral soils, potential for whip-poor-will habitat on the site was explored in more detail. Whip-poor-wills avoid forests with thick understory and high tree densities. Glossy buckthorn is extensive in the understory throughout the forested areas of the site (see Photos 1 - 4 for examples. This dense understory is not suitable for whip-poor-will to utilize the forests. In addition the density of the regenerating trees is too high for the whip-poor-will to utilize the on-site habitat.

Whip-poor-will typically avoid areas of human settlements. The large amount of traffic on Stage Coach Road and adjacent development immediately to the west of the site reduce the suitability of the site for whip-poor-will. 'Open' cover types such as wetland shrubs and cultural meadows are present on and adjacent to the site, however this open habitat is less than the minimum patch size of 12 hectares identified by Brown et al. (Brown, B.,M. Koenen and D.W. Mehlman. 1999. Species Management Abstract: Whip-poor-will (*Caprimulgus vociferus*). The Nature Conservancy, 4245 North Fairfax Drive, Suite 100, Arlington, VA 2220; downloaded from <http://www.conserveonline.org>).



Photos 1 and 2 – Thick understory in regenerating on-site forests





Photos 3 and 4 – More examples of thick understory in regenerating on-site forests



Butternut Trees

Butternut trees were assessed by Ms. Rose Fleguel on June 4th, 7th, 16th, 21st and 30th, 2011. A total of 200 butternut trees were assessed on the site as retainable. The butternuts are concentrated in the southwest portion of the site, with no butternuts observed in 48 of the proposed 65 rural residential lots and none in the east half of the site. More than two-thirds (139 or approximately 69 percent) of the retainable butternut trees are between 0 and 2cm diameter at breast height (dbh). Eight (about 4 percent) of the retainable butternut trees are between 3 and 14cm dbh, with 53 retainable butternut trees between 15 and 81cm dbh. In addition to the retainable butternut trees, 105 butternut trees were assessed as non-retainable.

Butternut Retention

The 0.8 hectare rural residential lots proposed for the site will permit significant tree retention. The lot layout has been modified to increase the retention of healthy butternuts. As shown on Figure 2 the revised Plan of Subdivision was reviewed in detail and it was determined that 159 butternuts assessed as retainable could be kept through careful implementation of the building and septic footprint. The woody vegetation clearing on each lot and for the subdivision roads will result in the removal of 41 butternut trees assessed as retainable, with another 109 healthy butternut trees to be kept in their current location but are anticipated to be harmed due to the proximity of road building or lot construction (Figure 2).

Butternut Compensation

Using ratios of butternut seedling plantings for every healthy butternut removed or harmed based on the size of the healthy butternut removed or harmed, a total of 641 plantings are required for compensation of the removed butternuts. The overall benefit proposal submitted to the Ministry of Natural Resources has been modified to provide a more diverse range of benefits. The number of butternut plantings is proposed to be reduced to 220. Pure butternut seedlings are proposed to be planted off-site at a site administered by the Rideau Valley Conservation Foundation. Where required companion tree species will be planted with the pure butternut seedlings.

To achieve additional overall benefit for butternut, it is also proposed to participate and assist in the local Butternut Recovery Program run by the Rideau Valley Conservation Foundation and the Forest Gene Conservation Association. Participation will be for two components of the program, cloning one archivable tree, and seed collection.

Ms. Fleguel has identified a butternut tree, tree Number 182 near the boundary between Lots 54 and 55 that show signs of putative resistance to the canker disease. It is anticipated that this tree can be retained in its existing location and thus the material can be collected pre or post building of the residences on Lots 54 and 55. The overall benefit proposal will include scion collection from this tree, grafting, materials and supplies, greenhouse space, overwinter storage, monitoring and care. Fifty scions would be taken from the tree. The work would be completed by the Rideau Valley Conservation Authority. It is anticipated that fifteen – twenty good grafts will be

grown from the collection of fifty scions from the tree. As they see fit, the Rideau Valley Conservation Authority could select another tree for the cloning.

Assistance will also be provided to collect 2,000 seeds from selected healthy butternut trees. Rideau Valley Conservation Authority estimate this would take between one and two days of seed collection by a certified tree climber and butternut recovery technician. The assistance would also include helpers, and travel and field expenses. Four healthy butternut trees on the site have been identified by Ms. Fleguel for seed collection. Three of these trees, tree Numbers 68, 222 and 270 are anticipated to be retained at the rear of Lots 20, 21 and 54, respectively. Thus if these trees do not produce a seed crop in a given year, seeds can be collected in later years when seed crops are available. The fourth tree (tree number 279) identified for seed collection is on the east side of Lot 54. It is anticipated that this tree will remain but may be harmed by adjacent activity. This tree should be available for seed collection for the foreseeable future. It must be understood that seed production is naturally cyclical as are the natural threats to the seeds including disease, insects and foragers. The seeds will be provided to the Rideau Valley Conservation Foundation and the Forest Gene Conservation Association for the Eastern Ontario Butternut Recovery Program.

The overall benefit to the butternut species is expected to be achieved within 8 – 12 years of planting and other components taking place.

Bobolink

Due to the presence of woody vegetation in the forests and the regenerating habitats, the majority of the site was not considered potential bobolink habitat (Figure 1). Figure 1 has been revised to show the vegetation communities throughout the site. Vegetation communities 3, 4, 5, 6, 7 and 8 are heavily covered in woody vegetation and due to not represent potential bobolink habitat. Vegetation communities 1 and 2 are on former agricultural land and unlike the meadow hay field in the northeast corner discussed below are not being cut for hay or other agricultural activity. Where the woody vegetation is greater, the community is a cultural thicket and this is not considered potential bobolink habitat due to the extent of shrubs and regenerating trees. See photos 5 - 9 for examples. Some areas of the former agricultural land remain cultural meadows (vegetation community 1 on Figure 1, see photos 10, 11 and 10 for examples). However these areas are too small (the largest area is about 0.3 hectares) to be considered potential bobolink habitat or is part of a manicured lawn to the west of the residence. As such, the only cultural meadow considered to be potential bobolink habitat is present in the northeast corner of the site, as shown on Figure 1 and discussed below. Bobolink were observed in the northeast corner.



Photo 5 – Typical cultural thicket habitat 400 metres west of Stage Coach Road



Photo 6 – Typical cultural thicket habitat 500 metres west of Stage Coach Road



Photo 7 – Typical cultural thicket habitat 1,200 metres west of Stage Coach Road



Photo 8 – Regenerating woody vegetation 1,400 metres west of Stage Coach Road



Photo 9 – Regenerating woody vegetation 1,170 metres west of Stage Coach Road



*Photo 10 – Cultural meadow remnant habitat 930 metres west of Stage Coach Road.
Remnant habitat is about 0.3 hectares in size*



*Photo 11 – Cultural meadow remnant habitat 1170 metres west of Stage Coach Road.
Remnant habitat is about 0.15 hectares in size*



*Photo 12 – Cultural meadow habitat west of residence is combination of mowed lawn and un-
maintained area in rear. Total area is about 0.3 hectares although much is lawn*

A 3.5 hectare meadow hay field in the northeast corner of the site, west of Stage Coach Road, did appear to be suitable habitat for bobolink, although a smaller size than the preferred habitat (Photos 13, 14 and 15). This field was surveyed for bobolink on June 2nd, June 15th and June 27th following Ministry of Natural Resources' methodology. The ten minute point counts were completed at 07:46, 07:45 and 07:48 for the above three dates under good conditions for bird observations, with calm to gentle winds, good visibility and air temperatures between 11 and 18° C. As the field is approximately square, about 190 metres in width, and could easily be seen and heard from a central point, all point counts were completed at the same point, in the middle of the field.

The percentage of grass in the meadow habitat was about 30 percent, with grass height between 50 and 90cm. The predominant broad leaved vegetation is Canada goldenrod, wild carrot, white bedstraw and common milkweed. The thatch layer was considered moderate. No bobolinks were observed on June 2nd, however a male and female were observed on June 15th. The male was singing, flying between three small shrubs (Photo 14 and marked by orange '1' on Figure 1). The female was observed carrying nesting material. These observations, including a pair observed in suitable nesting habitat in nesting season, and another observation of a male singing on June 27th are all probable observations of breeding activity. The location of the male on June 27th is marked by orange '2' on Figure 1.

The field where the bobolinks were observed is proposed for five residential lots (Lots 59 – 63), with Street 1 just to the south of the bobolink habitat (Figure 2).

Northern flicker, common yellowthroat, American goldfinch, red-winged blackbird (several agitated in the meadow habitat), American robin, mourning dove and song sparrow were also observed on or adjacent to the cultural meadow habitat.



Photo 13 – West portion of cultural meadow in northeast corner of the site where a pair of bobolinks were observed. View looking west from point count location in centre of field



Photo 14 – North portion of cultural meadow in northeast portion of site. Note bobolink on small shrub in centre of photo. View looking north from point count location



Photo 15 –South portion of cultural meadow in northeast portion of site. View looking south from point count location

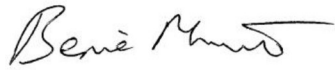
Conclusions

Butternut is very common in the southwest portion of the site. A review of the Plan of Subdivision indicates that only 41 of the butternut trees assessed as healthy need to be removed with another 109 likely to be harmed by adjacent site development. The butternut removal is proposed to be compensated for with a combination of pure seedling plantings, seed collection and scion collection.

A pair of bobolinks was observed in the northeast meadow field habitat in June, 2011. Based on the observations it is probable that this pair was breeding on the site. To avoid potential impacts on breeding bobolinks no site alterations should occur in this area between May 15th and July 31st. Additional compensation for loss of bobolink habitat will include securing through a land trust 1.75 hectares of grassland habitat.

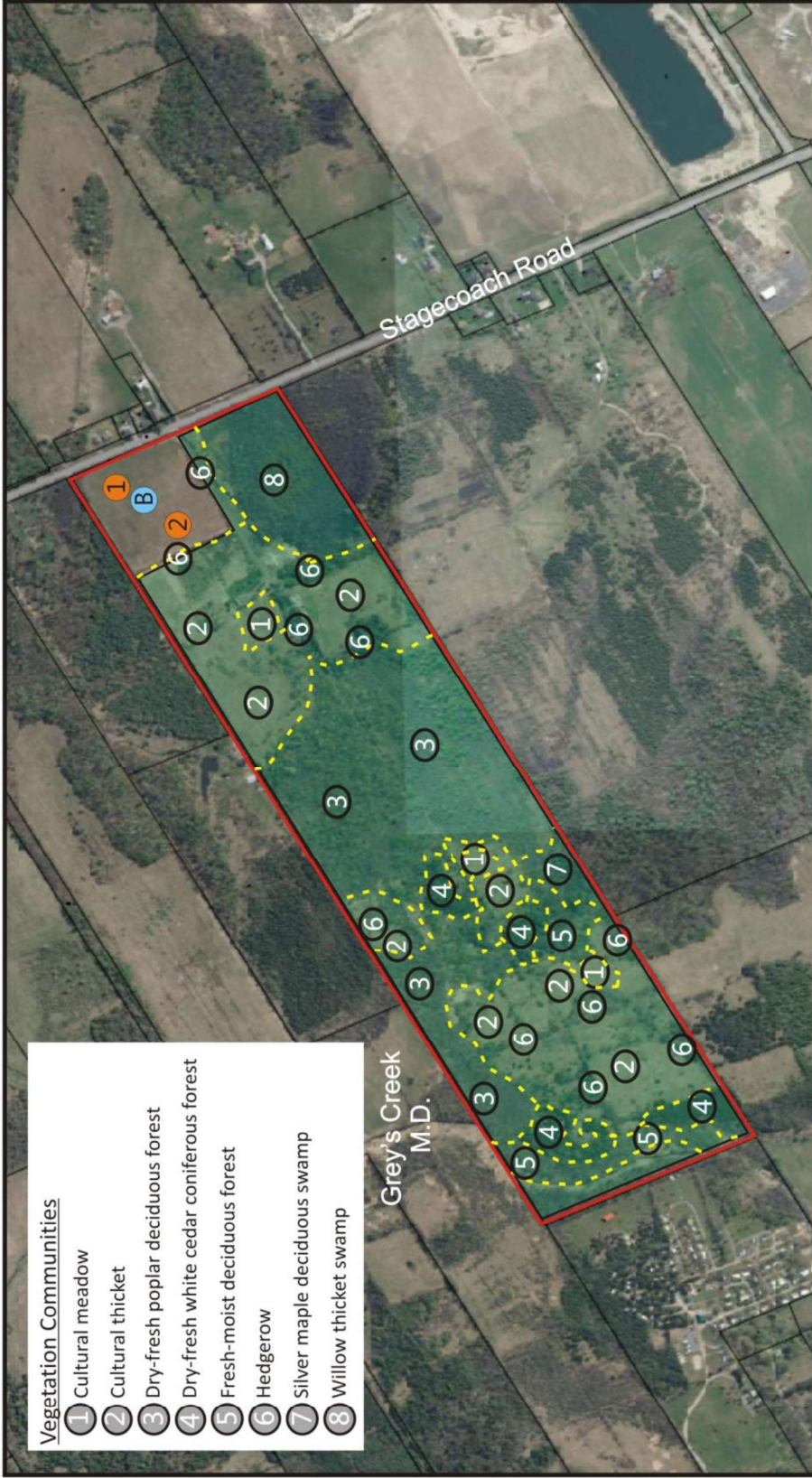
Please call if you have any questions on this revised Species at Risk assessment.

Yours Sincerely,
MUNCASTER ENVIRONMENTAL PLANNING INC.



Bernie Muncaster, MSc.
Principal

\\1934stagecoachsum



- Vegetation Communities
- 1 Cultural meadow
 - 2 Cultural thicket
 - 3 Dry-fresh poplar deciduous forest
 - 4 Dry-fresh white cedar coniferous forest
 - 5 Fresh-moist deciduous forest
 - 6 Hedgerow
 - 7 Silver maple deciduous swamp
 - 8 Willow thicket swamp

2008 air photo from City of Ottawa E-map



Approx. Scale 1:10,000

Legend

- Site
- B Bobolink Point Count
- 1 Bobolink Observations (see text for details)
- Lands Without Potential Bobolink Use

Figure1

FILE: 10-68

September 9, 2011

**BOBOLINK SURVEY and
VEGETATION COMMUNITIES**
1934 Stagecoach Road
Osgoode Ward, City of Ottawa

Prepared for:
Velika Realty



Prepared by:

Figure 2 – Plan of Subdivision with Butternut Locations and Bobolink Area

Legend

Green Circles – Butternuts to be Retained

Blue Circles – Potential Butternut Seed Trees to be Retained

Yellow Circles – Butternuts to be Retained but Anticipated to be Harmed

Red Circles – Butternuts to be Removed

Notes:

Only Butternuts assessed as retainable are shown

Circles represent a 25 metre radius from Butternut stem



APPENDIX D
SPECIES AT RISK TABLE

Species Name	Status under Ontario <i>Endangered Species Act, 2007</i> ¹	Status under federal <i>Species at Risk Act (SARA)</i> ²	Distribution in Ottawa	Habitat Comments	Potential to be Present on Site
Birds (28 species; 12 E/Ts plus 6 federal E/Ts only)					
Bald Eagle Pygargue à tête blanche (<i>Haliaeetus leucocephalus</i>)	Special Concern (Sept. 2009) Government response issued June 2015	None (not at risk nationally)	Confirmed nest at Shirley's Bay since 2012.	Bald eagles are most often reported during spring and fall migration. Nest in mature forests near open water. Individuals and nests protected in Ontario under <i>Fish and Wildlife Conservation Act</i> .	The huge stick nests of this species are very conspicuous and none are present or have been reported in the area. No recorded historical occurrences. None observed during 2020 survey.
Bank Swallow Hirondelle de rivage (<i>Riparia riparia</i>)	Threatened (June 2014)* Government response issued April 2017; habitat regulations deferred as of June 2017	Threatened (Schedule 1) as of Nov. 2, 2017.	12 confirmed, 2 probable and 8 possible nests in recent OBBA ⁴ .	Colonial nester; burrows in eroding silt or sand banks, sand pit walls, etc. Individuals and nests also protected under federal <i>Migratory Birds Convention Act</i> .	No potential habitat present on Site. None observed during 2020 survey or have been reported in the area. No recorded historical occurrences. None observed during 2020 survey.
Barn Swallow Hirondelle rustique (<i>Hirundo rustica</i>)	Threatened (Jan. 2012) Recovery strategy issued Aug. 2014; government response May 2015.	Threatened (Schedule 1) as of Nov. 2, 2017.	33 confirmed, 2 probable and 3 possible nests during recent OBBA.	Nests on barns and other structures; forages in open areas for flying insects. Individuals and nests also protected under <i>Migratory Birds Convention Act</i> .	Nests on barns and other structures; forages in open areas for flying insects. None observed during 2020 survey.
Black Tern Guifette noire (<i>Chlidonias niger</i>)	Special Concern	None (not at risk nationally)	Four confirmed nests in recent OBBA.	Breeds in loose colonies in marshes. Individuals and nests protected under federal <i>Migratory Birds Convention Act</i> .	Breed in habitat not present on Site. None observed during 2020 survey.
Bobolink Goglu des prés (<i>Dolichonyx oryzivorus</i>)	Threatened (Sept. 2010) Recovery strategy issued June 2013; draft government response Sept. 2015.	Threatened (Schedule 1) as of Nov. 2, 2017.	Widespread; confirmed or probable nests found in 39 out of 40 local atlas squares during recent OBBA.	Declining grassland species in North America (McCracken, 2005). COSSAROs identifies mortality due to early haying and loss of habitat as major threats. Individuals and nests protected under federal <i>Migratory Birds Convention Act</i> .	Observed on-site in June, 2011 but not observed during July 2020 surveys.
Canada Warbler Paruline du Canada (<i>Cardellina canadensis</i>)	Special Concern (Sept. 2009)	Threatened (Schedule 1) as of March 17, 2010 Final recovery strategy Mar. 2016	One confirmed nest, two probable and six possible reported in recent OBBA. No critical habitat identified.	Prefers wet forests with dense shrub layers. Individuals and nests protected under federal SARA and <i>Migratory Birds Convention Act</i> .	This species' preferred habitat is wet forest with dense shrubs, habitat not present on or adjacent to the site. There have been no records from the vicinity, including in the OBBA 10km atlas square (18VR50). None observed during 2020 survey.
Cerulean Warbler Paruline azurée (<i>Setophaga cerulea</i>)	Threatened (June 2011) Recovery strategy and habitat regulations deferred.	Endangered (Schedule 1) as of Nov. 2, 2017 (previously special concern).	No nests reported during recent OBBA.	SARO and SARA range maps both include parts of Ottawa. Prefers mature deciduous forests. Individuals and nests protected under federal <i>Migratory Birds Convention Act</i> .	Site habitat not ideal for this species. None observed during 2020 survey.
Chimney Swift Martinet ramoneur (<i>Chaetura pelagica</i>)	Threatened (Sept. 2009). Habitat regulation deferred until 1 year after adoption of federal recovery strategy.	Threatened (Schedule 1) Draft recovery strategy Mar. 2015	Confirmed nests in 3 squares, 2 probable and 11 possible reported in recent OBBA. No critical habitat identified.	Nests in traditional-style open brick chimneys (and rarely in hollow trees). Individuals and nests also protected under federal SARA and <i>Migratory Birds Convention Act</i> .	Nests in open chimneys and sometimes in tree hollows. Possible breeding observation during OBBA 10km atlas square, but no breeding habitat potential observed on site. None observed during 2020 survey.
Common Nighthawk Engoulevant d'Amérique (<i>Chordeiles minor</i>)	Special Concern (Sept. 2009)	Threatened (Schedule 1) as of March 17, 2010. In consultation for downlisting to Special Concern based on COSEWIC (Apr. 2018).	Six probable and five possible nests reported in recent OBBA. No critical habitat identified.	Nests in wide variety of open sites, including beaches, fields and gravel rooftops. Individuals and nests protected under federal SARA and <i>Migratory Birds Convention Act</i> .	Ground nester of open sites, no suitable habitat observed. No observations reported in OBBA Atlas square. None observed during 2020 survey.
Eastern Meadowlark Sturnelle des prés (<i>Sturnella magna</i>)	Threatened (Jan. 2012) Recovery strategy issued June 2013; draft government response Sept. 2015. Habitat regulations deferred.	Threatened (Schedule 1) as of Nov. 2, 2017.	22 confirmed, 11 probable and 3 possible nests during recent OBBA.	Declining grassland species in North America (McCracken, 2005). Individuals and nests protected under federal <i>Migratory Birds Convention Act</i> .	Potential habitat present but none observed during 2020 survey.
Eastern Whip-poor-will	Threatened	Threatened	Seven squares with probable	Nests on the ground in open deciduous	Requires large wooded areas with

Species Name	Status under Ontario <i>Endangered Species Act, 2007</i> ¹	Status under federal <i>Species at Risk Act (SARA)</i> ²	Distribution in Ottawa	Habitat Comments	Potential to be Present on Site
Engoulevant bois-pourri (<i>Antrastomus vociferus</i>)	(Sept. 2009). Habitat regulation deferred until 1 year after adoption of federal recovery strategy.	(Schedule 1) as of February 2011. Draft recovery strategy issued Mar. 2015.	nests and 10 with possible nests reported in recent OBBA. Critical habitat tentatively identified in 4 squares in western Ottawa.	or mixed woodlands with little underbrush. Individuals and nests also protected under federal SARA and <i>Migratory Birds Convention Act</i> .	open patches, and/or open woodlands or alvar. No suitable habitat on site. Possible breeding observation during OBBA for overall 10km square.
Eastern Wood-pewee Ploui de l'Est (<i>Contopus virens</i>)	Special Concern (June 2014)	Special Concern (Schedule 1) as of Nov. 2, 2017.	4 possible, 15 probable and 19 confirmed nests in recent OBBA.	Woodland species, often found near clearings and edges. Individuals and nests protected under federal <i>Migratory Birds Convention Act</i> .	Potential habitat present but none observed during 2020 survey.
Evening Grosbeak Gros-bec errant (<i>Coccothraustes vespertinus</i>)	Special Concern (as of August 2018)	Special Concern (Schedule 1) as of May 2019.	Five confirmed nests, six probable and eight possible during recent OBBA (mostly in west).	Nest in trees or large shrubs; prefer mature coniferous forests but will also use deciduous forests, parklands and orchards. Overwinter in Ottawa. Individuals and nests protected under <i>Migratory Birds Convention Act</i> .	Habitat not ideal for this species on Site. None observed during 2020 survey.
Golden Eagle Aigle royal (<i>Aquila chrysaetos</i>)	Endangered – previously regulated under old ESA. Recovery strategy issued Mar. 2015; Government response Mar. 2016.	None (not at risk nationally)	Migrant only; no reported nests.	Golden eagles are rarely reported even during migration, but are most often seen in the fall. Individuals and nests also protected in Ontario under <i>Fish and Wildlife Conservation Act</i> .	No recorded historical occurrences near the Site. None observed during 2020 survey.
Golden-winged Warbler Paruline à ailes dorées (<i>Vermivora chrysoptera</i>)	Special Concern	Threatened (Schedule 1) Recovery strategy issued Aug. 2016	One confirmed nest, one probable nest reported during recent OBBA. Critical habitat identified in Québec (adjacent to northwestern Ottawa).	Ground-nesting edge species. Individuals and nests protected under federal SARA and <i>Migratory Birds Convention Act</i> .	No recorded historical occurrences near the Site. None observed during 2020 survey.
Grasshopper Sparrow Bruant sauterelle (<i>Ammodramus savannarum</i>)	Special Concern (March 2015)	Special Concern (Schedule 1) as of Nov. 2, 2017.	4 confirmed, 5 probable and 2 possible nests in recent OBBA.	Area-sensitive grassland species; nests on ground. Individuals and nests protected under federal <i>Migratory Birds Convention Act</i> .	No recorded historical occurrences near the Site. None observed during 2020 survey.
Henslow's Sparrow Bruant de Henslow (<i>Ammodramus henslowii</i>)	Endangered – previously regulated under old ESA Status reconfirmed by COSSARO in June 2011. Recovery strategy issued Mar. 2015; government response Mar. 2016.	Endangered (Schedule 1); reconfirmed in May 2011. Recovery strategy issued in 2010.	No nests reported during recent OBBA.	Rarely reported from this area. Prefers open, moist tallgrass fields. Individuals and nests also protected under federal SARA and <i>Migratory Birds Convention Act</i> .	Requires large open areas of long grass. Extremely rare species; no nests reported in Ottawa during OBBA. No recorded historical occurrences near the Site. None observed during 2020 survey.
Horned Grebe Grèbe esclavon (<i>Podiceps auritus</i>)	Special Concern (Sept. 2009)	None – listed as special concern by COSEWIC in 2009	Migrant only; no reported nests.	Found during spring and fall migration on rivers, marshes, etc. Protected under federal <i>Migratory Birds Convention Act</i> .	No suitable habitat present on Site. No recorded historical occurrences near the Site. None observed during 2020 survey.
Least Bittern Petit blongios (<i>Ixobrychus exilis</i>)	Threatened* (reconfirmed Sept. 2009) Recovery strategy issued Dec. 2016; government response Sept. 2017.	Threatened (Schedule 1) Recovery strategy issued in 2014.	Confirmed nesting in 1 square, 3 probable and 4 possible reported during recent OBBA. Mississippi Snye identified as critical habitat in federal recovery strategy.	Found in marshes and shrub swamps, usually near cattails. Individuals and nests also protected under federal SARA and <i>Migratory Birds Convention Act</i> .	No suitable habitat present on Site. No recorded historical occurrences near the Site. None observed during 2020 survey.
Loggerhead Shrike Pie-grièche migratrice (<i>Lanius ludovicianus</i>)	Endangered – previously regulated under old ESA (reconfirmed March 2015) Government response issued April 2017.	Endangered (Schedule 1); reconfirmed April 2014 Final recovery strategy issued in Mar. 2015.	Possible nests reported in Burnt Lands Provincial Park (2018) and in Richmond area (2019). Critical habitat identified in Montague Township.	No confirmed nests have been reported in Ottawa since 2002. It prefers grazed pastures with short grass and scattered shrubs, especially hawthorn. Individuals, nests also protected under federal SARA and <i>Migratory Birds Convention Act</i> .	Requires short grass pastures and alvar with scattered shrubs. No recorded historical occurrences near the Site. None observed during 2020 survey.
Olive-sided Flycatcher Moucherolle à côtés olive (<i>Contopus cooperi</i>)	Special Concern (Sept. 2009)	Threatened (Schedule 1) as of March 17, 2010. In consultation for downlisting to Special Concern based on COSEWIC (Apr. 2018).	One probable and one possible nest reported in recent OBBA. No critical habitat identified.	Forest edge species; forages in open areas from high vantage points in trees. Individuals and nests protected under federal SARA and <i>Migratory Birds Convention Act</i> .	Ideal habitat not present on Site. No recorded historical occurrences near the Site. None observed during 2020 survey.

Species Name	Status under Ontario <i>Endangered Species Act, 2007</i> ¹	Status under federal <i>Species at Risk Act (SARA)</i> ²	Distribution in Ottawa	Habitat Comments	Potential to be Present on Site
Peregrine Falcon Faucon pèlerin (<i>Falco peregrinus</i>)	Special Concern (as of January 2013)	Special Concern (Schedule 1) as of 2012. Management plan issued Oct. 2017. In consultation for delisting.	One confirmed nest (101 Lyon) in recent OBBA. Second nest (875 Heron) established in 2011.	Nesting site at 101 Lyon has apparently been abandoned as of 2018. Active nesting sites are considered significant wildlife habitat. Individuals and nests also protected in Ontario under <i>Fish and Wildlife Conservation Act</i> .	Requires high perches with food source (pigeons) such as cliffs and office towers. No suitable habitat on Site. No recorded historical occurrences near the Site. None observed during 2020 survey.
Red Knot Bécasseau maubèche (<i>Calidris canutus rufa</i>)	Endangered Recovery strategy adopted Dec. 2018. Habitat regulations pending.	Endangered (Schedule 1) as of July 2012 Draft recovery strategy issued Nov. 2017	Migrant only; Ottawa River shores, area lagoons, etc.	Nests in far north. Also protected under federal <i>Migratory Birds Convention Act</i> .	No suitable habitat on Site. No recorded historical occurrences near the Site. None observed during 2020 survey.
Red-headed Woodpecker Pic à tête rouge (<i>Melanerpes erythrocephalus</i>)	Special Concern	Threatened (Schedule 1) In consultation for uplisting to Endangered.	One confirmed nest, one probable and two possible during recent OBBA. Critical habitat identified in parts of western Ottawa.	Nesting pair reported from Village of Constance Bay in recent years. Prefers open deciduous woodlands. Individuals and nests protected under federal SARA and <i>Migratory Birds Convention Act</i> .	Species of open deciduous woodlands. Ideal habitat not present on Site. No recorded historical occurrences near the Site. None observed during 2020 survey.
Rusty Blackbird Quiscale rouilleux (<i>Euphagus carolinus</i>)	Special Concern (as of August 2018)	Special Concern (Schedule 1). Management plan issued July 2015.	No nests reported during recent OBBA. Primarily occurs during migration.	Prefers wet wooded or shrubby areas (nests at edges of boreal wetlands). As a blackbird, not protected under federal <i>Migratory Birds Convention Act</i> ; however, individuals and nests are protected in Ontario under Fish and Wildlife Conservation Act.	Ideal habitat not present on Site. No recorded historical occurrences near the Site. None observed during 2020 survey.
Short-eared Owl Hibou des marais (<i>Asio flammeus</i>)	Special Concern (reconfirmed Sept. 2009)	Special Concern (Schedule 1)	One confirmed nest, two probable and two possible nests reported during recent OBBA.	Ground-nester; prefers open habitats such as fields and marshes. Individuals and nests protected in Ontario under <i>Fish and Wildlife Conservation Act</i> .	Requires open habitats such as pastures and marshes; no suitable on-site habitat. No recorded historical occurrences near the Site. None observed during 2020 survey.
Wood Thrush Grive des bois (<i>Hylocichla mustelina</i>)	Special Concern (June 2014)	Threatened (Schedule 1) as of Nov. 2, 2017.	5 possible, 15 probable and 16 confirmed nests in recent OBBA.	Deciduous or mixed woodlands; susceptible to habitat fragmentation and nest parasitism by cowbirds. Individuals and nests also protected under federal <i>Migratory Birds Convention Act</i> .	Historical occurrences within 1 km the Site, however none observed during 2020 surveys.
Yellow Rail Râle jaune (<i>Coturnicops noveboracensis</i>)	Special Concern (reconfirmed March 2010)	Special Concern (Schedule 1) – status confirmed by COSEWIC in November 2009	Reported nesting in Richmond Fen (2019).	Rarely reported; most often seen in spring migration. Nests in sedge meadows and marshes. Individuals and nests protected under federal <i>Migratory Birds Convention Act</i> .	Extensive sedge meadows and marshes not present on site. No recorded historical occurrences near the Site. None observed during 2020 survey.
Fish (8 species; 2 E/Ts)					
American Eel Anguille d'Amérique (<i>Anguilla rostrata</i>)	Endangered* Status reconfirmed by COSSARO in January 2013. Final recovery strategy issued in Nov. 2013. Government response delayed.	Under consideration for addition to Schedule 1; listed as threatened by 2012	Ottawa, Mississippi, Carp (including Poole Creek), South Nation and Rideau Rivers (including Rideau Canal)	Primarily nocturnal, hiding in soft substrate or submerged vegetation during the day. Also protected under <i>Fisheries Act</i> .	Ottawa, Mississippi and Rideau Rivers only. None reported in the vicinity of the site.
Bridle Shiner Méné d'herbe (<i>Notropis bifrenatus</i>)	Special Concern Status reconfirmed by COSSARO in June 2013.	Special Concern (Schedule 1) – status confirmed by COSEWIC in April 2013	Rideau River	Prefers clear water with abundant vegetation over silty or sandy substrate. Also protected under <i>Fisheries Act</i> . Captured by City staff between Hwy 416 and Stevens Creek, Sept. 2009.	Rideau River. None reported in the vicinity of the site.
Channel Darter Fouille-roche gris (<i>Percina copelandi</i>)	Threatened* Special Concern (as of August 2018)	Special Concern (Schedule 1) as of August 2019.	Ottawa River	Prefers areas with moderate current over sandy or rocky substrate. Also protected under <i>Fisheries Act</i> . Captured by DFO staff in several locations downstream of Gatineau River in 2011.	Ottawa River. Prefers areas with moderate current over sandy or rocky substrate. No suitable habitat on Site.
Lake Sturgeon Esturgeon jaune (<i>Acipenser fulvescens</i>)	Threatened Endangered (Aug. 2018); final recovery strategy issued in 2011. Habitat regulation deferred.	None – listed as threatened by COSEWIC in November 2006	Ottawa River	Only found in large lakes and rivers. Forages in cool water, 4-9 m deep over soft substrate; spawns in shallower, fast-flowing areas over rocks or gravel. Also protected under <i>Fisheries Act</i> .	Fish of large rivers. No suitable habitat on Site.
Northern Brook Lamprey Lamproie du Nord	Special Concern	Special Concern (Schedule 1) for	Ottawa River	Non-parasitic species; prefers shallow areas with warm water.	Ottawa River only. No suitable habitat on Site.

Species Name	Status under Ontario <i>Endangered Species Act, 2007</i> ¹	Status under federal <i>Species at Risk Act (SARA)</i> ²	Distribution in Ottawa	Habitat Comments	Potential to be Present on Site
<i>(Ichthyomyzon fossor)</i>		Great Lakes-Upper St. Lawrence population. Management plan issued in July 2018.		Larvae live in burrows in soft substrate for up to 7 years. Also protected under <i>Fisheries Act</i> .	
Northern Sunfish Crapet du Nord (<i>Lepomis peltastes</i>)	Special Concern (as of June 2017)	Special Concern (Schedule 1) as of August 2019.	Ottawa River	Records from Québec side of river, downstream of Gatineau River, prior to 1994. No recent records.	Ottawa River only. No suitable habitat on Site.
River Redhorse Chevalier de rivière (<i>Moxostoma carinatum</i>)	Special Concern (reconfirmed June 2017)	Special Concern (Schedule 1) Management plan issued in July 2018.	Ottawa and Mississippi Rivers; unconfirmed reports from Rideau River	Prefers fast-flowing, clear rivers over rocky substrate. Also protected under <i>Fisheries Act</i> .	Ottawa and Mississippi Rivers only, possibly Rideau. No suitable habitat on Site.
Silver Lamprey Lamproie argentée (<i>Ichthyomyzon unicuspis</i>)	Special Concern as of January 2013	Special Concern (Schedule 1) as of August 2019.	Ottawa River and mouths of tributaries from Rideau Canal east (downstream)	Larvae live 4-7 years in burrows (prefer soft substrates); filter-feed on plankton. Adults live less than two years; parasitic on (large) fish. Also protected under <i>Fisheries Act</i> .	Ottawa River and mouths of tributaries from Rideau Canal east (downstream). No suitable habitat on Site.
Molluscs (1 species; E)					
Hickorynut Obovarie olivâtre (<i>Obovaria olivaria</i>)	Endangered (Jan. 2012). Awaiting federal recovery strategy.	Endangered (Schedule 1) as of August 2019.	Ottawa River	Also protected under federal SARA and <i>Fisheries Act</i> . Lives in sandy bottomed large rivers, in deep (>2 m) flowing water. Larval host believed to be Lake Sturgeon.	Ottawa River only. No suitable habitat on Site.
Mammals (7 species; 7 E/Ts)					
Algonquin Wolf Loup de la région Algonquin (<i>Canis sp.</i>)	Threatened (June 2016)* Draft recovery strategy issued Jan. 2018; final strategy expected by 2020.	Special Concern (Schedule 1); under consideration for Threatened status based on May 2015 COSEWIC assessment.	Occasional reports	Formerly known as Eastern Wolf, <i>Canis lupis lycan</i> . Not known to occur here, although range includes much of Renfrew County. Local reports likely involve large coyotes or hybrids. Listed as a furbearer under <i>Fish and Wildlife Conservation Act</i> .	Not known to occur in City of Ottawa, although range includes much of Renfrew County. Local reports likely involve large coyotes or hybrids. No evidence during 2020 surveys.
Eastern Cougar Cougar de l'Est (<i>Puma concolor</i>)	Endangered – previously regulated under old ESA	None – data deficient	Occasional reports	Southern Ontario cougar sightings are typically attributed to misidentified animals or escaped captives, however, Ministry staff have recently (2012) acknowledged the presence of a breeding population in the province.	Southern Ontario cougar sightings are typically misidentified animals or escaped captives; habitat suitability low on Site. No evidence observed during 2020 surveys, no local records.
Eastern Small-footed Myotis (bat) Chauve-souris pygmée de l'Est (<i>Myotis leibii</i>)	Endangered (June 2014)* Recovery strategy issued June 2017; draft government response Nov. 2017.	None	Historical record in downtown Ottawa.	Smallest bat in eastern North America. Rare throughout its range. Roosts in rock crevices, barns and sheds. Overwinters in caves and abandoned mines. Individuals also protected in Ontario under <i>Fish and Wildlife Conservation Act</i> .	Ideal habitat not present on Site. No recorded historical occurrences near the Site. No evidence of species observed during 2020 survey.
Gray Fox Renard gris (<i>Urocyon cinereoargenteus</i>)	Threatened* (reconfirmed June 2017) Recovery strategy delayed, pending completion of federal strategy.	Threatened (Schedule 1) Recovery strategy posted June 2018.	Recent report in Kanata North (NHIC) as well as to south and west of Ottawa (2016 COSEWIC status report).	Eastern Ontario sightings believed to be of single animals immigrating from adjacent United States; no known local breeding population. Listed as a furbearer under <i>Fish and Wildlife Conservation Act</i> .	Rare species mainly observed in far southwestern and northwestern Ontario. No recorded historical occurrences near the Site. No evidence of species observed during 2020 survey.
Little Brown Myotis (bat) Petite chauve-souris brune (<i>Myotis lucifugus</i>)	Endangered as of January 2013* Draft recovery strategy issued July 2019.	Endangered (Schedule 1) as of Dec. 2014. Recovery strategy issued Dec. 2018.	Various sites in central and western parts of City. Critical habitat (hibernacula) identified to northwest of Ottawa.	Maternal colonies known to use buildings; may also roost in trees during summer. Colonies overwinter in caves and abandoned mines. Individuals also protected in Ontario under <i>Fish and Wildlife Conservation Act</i> .	Ideal habitat not present on Site (no abundances of snag trees or large cavity trees, mature forests etc.). No recorded historical occurrences near the Site. No evidence of species observed during 2020 survey.
Northern Myotis / Northern Long-eared Bat Chauve-souris nordique (<i>Myotis septentrionalis</i>)	Endangered as of January 2013* Draft recovery strategy issued July 2019.	Endangered (Schedule 1) as of Dec. 2014. Recovery strategy issued Dec. 2018	Historical record in downtown Ottawa, more recent sites to east (Orléans, Clarence-Rockland). Critical habitat (hibernacula) identified to northwest of Ottawa.	Difficult to distinguish from Little Brown Myotis. Roosts mainly in trees during summer; overwinters in caves and abandoned mines. Individuals also protected in Ontario under <i>Fish and Wildlife Conservation Act</i> .	Ideal habitat not present on Site (no abundances of snag trees or large cavity trees, mature forests etc.). No recorded historical occurrences near the Site. No evidence of species observed during 2020 survey.
Tri-coloured Bat / Eastern Pipistrelle Pipistrelle de l'Est (<i>Perimyotis subflavus</i>)	Endangered (June 2016)* Draft recovery strategy issued July 2019.	Endangered (Schedule 1) as of Dec. 2014. Recovery strategy issued Dec. 2018	Unknown; historical records from sites in urban Ottawa, Lanark County. Critical habitat (hibernacula) identified to northwest of Ottawa.	Roosts mainly in trees during summer; overwinters in caves and mines along with other species, but often uses deeper parts of the hibernaculum.	Ideal habitat not present on Site (no abundances of snag trees or large cavity trees, mature forests etc.). No recorded historical occurrences near the Site. No evidence of species observed during 2020 survey.
Amphibians (1 species; federal T)					
Western Chorus Frog	Not at Risk (2009)	Threatened	Scattered throughout,	Requires vernal (non-permanent)	No habitat present on Site, including

Species Name	Status under Ontario <i>Endangered Species Act, 2007</i> ¹	Status under federal <i>Species at Risk Act (SARA)</i> ²	Distribution in Ottawa	Habitat Comments	Potential to be Present on Site
Rainette faux-grillon de l'ouest (<i>Pseudacris triseriata</i>)		(Schedule 1) as of March 17, 2010 Recovery strategy issued Dec. 2015. Protected on federal lands only at this time.	with numerous sites in western half of City. Critical habitat identified in several atlas squares in western Ottawa.	pools for breeding. Short-lived and highly sensitive to habitat loss. DNA data indicate that local populations are actually Boreal species (<i>Pseudacris maculata</i>) but federal protection is still being applied at this time. NOTE: under SARA, Government of Canada may extend protection to private lands if provincial protection is deemed insufficient. This has not been ordered in Ontario to date.	no non-permanent breeding pools observed.
Reptiles (9 species; 4 E/Ts)					
Blanding's Turtle Tortue mouchetée (<i>Emydoidea blandingii</i>)	Threatened* (Reconfirmed August 2018) Draft recovery strategy issued July 2019.	Threatened (Schedule 1); uplisted to Endangered by Recovery strategy issued Dec. 2018.	Scattered throughout, with numerous sites in western half of City. Critical habitat present in Ottawa.	Quiet lakes, streams and wetlands with abundant emergent vegetation; also frequently occurs in adjacent upland forests. Individuals (including eggs) also protected in Ontario under <i>Fish and Wildlife Conservation Act</i> .	No suitable habitat, present on Site, including no basking sites. No records in vicinity. Non observed during 2020 surveys.
Eastern Musk Turtle / Stinkpot Tortue musquée (<i>Stemotherus odoratus</i>)	Special Concern (June 2014)	Special Concern (Schedule 1) – as of Feb. 2018	Scattered	Secretive wetland species; highly aquatic. Individuals (including eggs) protected in Ontario under <i>Fish and Wildlife Conservation Act</i> .	Species prefers shallow, still water with muddy bottom. No basking sites or other habitat characteristics available on Site. No records in vicinity and no observations during 2020 surveys.
Eastern Ribbonsnake Couleuvre mince (<i>Thamnophis sauritus</i>)	Special Concern Status reconfirmed by COSSARO in January 2013.	Special Concern (Schedule 1) – status reconfirmed in Nov. 2012. Management plan issued July 2015.	Few reported; mostly from northwestern Ottawa	Found in marshy edges of wetlands and watercourses. Livebearer (does not lay eggs).	No meadow marsh habitat with basking sites available on Site. None reported on site or in vicinity and no observations during 2020 surveys.
Milksnake Couleuvre tachetée (<i>Lampropeltis triangulum</i>)	Special Concern Not at Risk (June 2016)	Special Concern (Schedule 1) Management plan issued July 2015.	Scattered throughout the northern half of the City	Found in variety of open, scrubby or edge habitats, including pastures. Individuals (including eggs) protected in Ontario under <i>Fish and Wildlife Conservation Act</i> .	Secretive species with a wide range of habitat. Records are scattered across the City. No previous records in vicinity on Site and no observations during 2020 surveys. No longer provincially listed.
Northern Map Turtle Tortue géographique (<i>Graptemys geographica</i>)	Special Concern Status reconfirmed by COSSARO in January 2013.	Special Concern (Schedule 1) – status confirmed by COSEWIC in November 2012. Draft management plan issued Mar. 2016.	Ottawa River, Rideau River (Burritt's Rapids area), South Nation River	Highly aquatic species, found only in lakes and large rivers. Individuals (including eggs) protected in Ontario under <i>Fish and Wildlife Conservation Act</i> .	Few locations for sightings; all along Ottawa River. Highly aquatic species, found only in lakes and large rivers. No suitable habitat on Site and no observations during 2020 surveys.
Snapping Turtle Tortue serpentine (<i>Chelydra serpentina</i>)	Special Concern (Sept. 2009)	Special Concern (Schedule 1) as of February 2011. Draft management plan issued Mar. 2016.	Widespread and abundant	Highly aquatic species found in a wide variety of wetlands, water bodies and watercourses. Listed as a game reptile under <i>Fish and Wildlife Conservation Act</i> .	Species is found in small lakes, ponds, and slow streams and rivers. Nesting occurs in sandy soils along rivers and lakes. May be along Grey's Creek corridor. No observations during 2020 surveys.
Spiny Softshell Tortue-molle à épines (<i>Apalone spinifera</i>)	Endangered (as of June 2017) Draft recovery strategy issued July 2019.	Threatened (Schedule 1) Recovery strategy issued Dec. 2018.	Few historical records along Ottawa River, outside of Ottawa. No critical habitat identified in Ottawa.	Ottawa River records are dated and species is now believed extirpated from eastern Ontario. Highly aquatic species found in shallow, slow-moving areas over sandy substrate. Individuals (including eggs) also protected in Ontario under <i>Fish and Wildlife Conservation Act</i> .	Highly aquatic species of Ottawa River; no suitable habitat on Site; none observed during 2020 surveys.
Spotted Turtle Tortue ponctuée (<i>Clemmys guttata</i>)	Endangered*; reconfirmed June 2016 Draft recovery strategy issued July 2019.	Endangered (Schedule 1); reconfirmed Nov. 2014. Recovery strategy issued Dec. 2018	Few reported (locations confidential) Critical habitat present in Ottawa.	Secretive wetland species. Contact MECPs for information (data sensitivity due to illegal collection risks). Individuals (including eggs) also protected in Ontario under <i>Fish and Wildlife Conservation Act</i> .	Requires mats within bogs and fens. No suitable habitat on Site. None observed during 2020 surveys.
Wood Turtle Tortue des bois (<i>Glypemys insculpta</i>)	Endangered. Habitat regulation issued.	Threatened (Schedule 1) as of March 17, 2010.	Few historical records in NHIC, NESS; (may have been extirpated locally).	Primarily terrestrial forest species associated with clear, gravelly streams. Contact MECP for information (data sensitivity due to illegal	Primarily terrestrial forest species associated with clear, gravelly streams. No suitable habitat on Site; none observed during 2020

Species Name	Status under Ontario <i>Endangered Species Act, 2007</i> ¹	Status under federal <i>Species at Risk Act (SARA)</i> ²	Distribution in Ottawa	Habitat Comments	Potential to be Present on Site
		COSEWIC in Nov. 2018.	No regulated habitat identified in Ottawa. Critical habitat may be present to northwest.	collection risks). Individuals (including eggs) also protected in Ontario under <i>Fish and Wildlife Conservation Act</i> .	surveys.
Plants (4 species; 4E)					
American Chestnut Châtaignier d'Amérique (<i>Castanea dentata</i>)	Endangered* Final recovery strategy issued in 2012.	Endangered (Schedule 1)	One population reported along Dolman Ridge Road (federal property); may have been extirpated.	Endangered due to fungal disease introduced nearly 100 years ago. Local population was introduced (outside normal edge of range in southwestern Ontario).	None observed during 2020 surveys.
American Ginseng Ginseng à cinq folioles (<i>Panax quinquefolius</i>)	Endangered* Recovery strategy delayed, pending completion of federal strategy.	Endangered (Schedule 1) Recovery strategy issued June 2018.	Various (locations confidential) Critical habitat broadly identified in Ottawa area.	Several sites reported previously but some have disappeared (likely due to illegal harvesting). Contact MECP for information.	No suitable habitat on Site. Coniferous component high for typical ginseng habitat. None observed during 2020 surveys.
Butternut Noyer cendré (<i>Juglans cinerea</i>)	Endangered (Reconfirmed August 2018)	Endangered (Schedule 1); final recovery strategy issued in 2010.	Widespread	Endangered in long term due to fungal disease. Habitat not a limiting factor. Gene harvesting programs in place.	Variable but typically on well-drained soils. Common on site. 40 new seedlings identified during 2020 surveys.
Eastern Prairie Fringed-orchid Platanthère blanchâtre de l'Est (<i>Platanthera leucophaea</i>)	Endangered. Habitat regulations issued.	Endangered (Schedule 1)	Richmond Fen (2 locations)	Richmond Fen sites protected by ESA habitat regulations. One of approximately 20 colonies in Ontario. 200 specimens seen at this site in 2000.	Highly specific habitat requirements; no suitable habitat on Site; none observed during 2020 surveys.
Lichens (3 species; 1 E, 1 federal T)					
Black-foam Lichen Anzie mousse-noire (<i>Anzia colpodes</i>)	Data deficient – Dec. 2015	Threatened (Schedule 1) Protected on federal lands only at this time.	Historic occurrences only; no known recent occurrences.	Believed extirpated from historic locations in eastern Ontario and adjacent Quebec. Extant populations in Nova Scotia, possibly New Brunswick.	Rare. No known occurrences near Site; none observed during 2020 surveys.
Flooded Jellyskin Leptogé des terrains inondés (<i>Leptogium rivulare</i>)	Not at Risk (March 2015)	Special Concern (Schedule 1)	Stony Swamp, Marlborough Forest	Seasonally flooded woodland areas, deciduous swamps.	Found below high-water mark on deciduous trees within swamps. No suitable habitat on Site. No longer provincially listed.
Pale-bellied Frost Lichen Physconie pâle (<i>Physconia subpallida</i>)	Endangered (as of November 2009). Habitat regulations issued.	Endangered (Schedule 1) as of June 20, 2012 Final recovery strategy (adapted provincial strategy) issued Jan. 2016	Historical records in downtown area (extirpated locally). No critical or regulated habitat identified in Ottawa.	Most recent occurrence in 1900. Sensitive to changes in air quality associated with urban environments. Believed to have been extirpated from historic location(s) in downtown Ottawa.	Rare. No known occurrences near Site; none observed during 2020 surveys.
Insects (10 species; 7 E/Ts)					
Bogbean Buckmoth Hémileucin du ményanthe (<i>Hemileuca</i> sp. 1)	Endangered (Sept. 2010); final recovery strategy issued in 2011. Habitat regulation issued in Dec. 2013.	Endangered (Schedule 1) Final recovery strategy (adapted provincial strategy) issued Dec. 2015	Richmond Fen (2 locations)	Brunton (2005) indicates preferred food plant bog-bean is also present elsewhere in Ottawa (Mer Bleue, Albion Wetland and Long Swamp).	No suitable habitat on Site. No recorded historical occurrences near the Site. None observed during 2020 survey.
Gypsy Cuckoo Bumble Bee Psithyre bohémien (<i>Bombus bohemicus</i>)	Endangered (March 2015) Recovery strategy issued Dec. 2017.	Endangered (Schedule 1) – as of May 30, 2018	Historic occurrences only; no known recent occurrences.	Range in Ontario uncertain; most recent record from Pinery Provincial Park near Sarnia (2008). Social parasite on rusty-patched and yellow-banded bumble bees.	No recorded historical occurrences near the Site. None observed during 2020 survey.
Monarch butterfly Monarque (<i>Danaus plexippus</i>)	Special Concern (reconfirmed March 2010)	Special Concern (Schedule 1); uplisted to Endangered by COSEWIC Nov. 2016. In consultation for uplisting on Schedule 1.	Widespread	Risk factors include threats to colonial wintering sites in Mexico, pest control (insecticides and weed control of host milkweed) and threats to migration staging areas. Individuals protected in Ontario under <i>Fish and Wildlife Conservation Act</i> .	Widespread in meadows, especially with abundant milkweed. Milkweed present in cultural meadow on Site. No recorded historical occurrences near the Site. None observed during 2020 survey.
Mottled Duskywing Hespérie tachetée (<i>Erynnis martialis</i>)	Endangered (June 2014) Recovery strategy issued June 2015; government response Mar. 2016. Habitat regulations delayed.	Under consideration for addition to Schedule 1; listed as endangered by COSEWIC in November 2012	Constance Bay area, Burnt Lands Alvar	Larval food plant (New Jersey Tea) found in sandy areas, alvars. COSEWIC assessment report notes that last record for Constance Bay was in 1997 (may be extirpated) and last record for Burnt Lands Alvar was in 2008. Individuals also protected in Ontario under <i>Fish and Wildlife Conservation Act</i> .	No suitable habitat on Site. No recorded historical occurrences near the Site. None observed during 2020 survey.
Nine-spotted Lady Beetle Coccinelle à neuf points	Endangered (as of June 2017)	None – listed as endangered by COSEWIC in 2011	Unknown – historically present, but COSSARO	Historically common throughout southern Canada but has declined severely in	No recorded historical occurrences near the Site. None observed during

Species Name	Status under Ontario <i>Endangered Species Act, 2007</i> ¹	Status under federal <i>Species at Risk Act (SARA)</i> ²	Distribution in Ottawa	Habitat Comments	Potential to be Present on Site
(<i>Coccinella novemnotata</i>)		COSEWIC in April 2016	reports no Ontario records since mid-1990s.	recent decades and is now rarely found.	2020 survey.
Rapids Clubtail – a dragonfly Gompe des rapides (<i>Gomphus quadricolor</i>)	Endangered (Sept. 2009). Habitat regulations issued.	Endangered (Schedule 1) – as of March 17, 2010. Reconfirmed Nov. 2018.	None known No regulated habitat identified in Ottawa.	Occurs along Mississippi River in Blakeney/Pakenham area upstream of City. One of two extant populations in Ontario (and Canada).	Requires medium to large clear, cool rivers with alternating pools and riffles. No suitable habitat present on Site. None observed during 2020 survey.
Rusty-patched Bumble Bee Bourdon à tache rousse (<i>Bombus affinis</i>)	Endangered (Sept. 2010); final recovery strategy issued in 2011.	Endangered (Schedule 1)	Historic records only from scattered sites in Ottawa and Gatineau.	Habitat generalist; usually nests underground. Only known extant location in Canada is Pinery Provincial Park near Samia.	No recorded historical occurrences near the Site. None observed during 2020 survey.
Transverse Lady Beetle Coccinelle à bandes transverses (<i>Coccinella transversoguttata</i>)	Endangered (as of August 2018)	Special Concern (as of Nov. 2016). In consultation for addition to Schedule 1.	Unknown – historically present, but COSSARO reports no southern Ontario records since 1985.	Historically common throughout most of Canada but has declined severely in parts of its former range.	No recorded historical occurrences near the Site. None observed during 2020 survey.
West Virginia White butterfly Piéride de Virginie (<i>Pieris virginiensis</i>)	Special Concern	None	Unknown; no records in NESS or NHIC	SARO range mapping includes Ottawa. Requires mature moist deciduous woods with larval host plant toothwort (<i>Cardamine</i> sp.). Individuals protected in Ontario under <i>Fish and Wildlife Conservation Act</i> .	No recorded historical occurrences near the Site. None observed during 2020 survey.
Yellow-banded Bumble Bee Bourdon à bandes jaunes (<i>Bombus terricola</i>)	Special Concern (June 2016)	Special Concern (Schedule 1) – as of May 30, 2018	Unknown	2015 COSEWIC assessment report shows many historic occurrences and a few recent (2004-2013) specimens from eastern Ontario/western Quebec region.	No recorded historical occurrences near the Site. None observed during 2020 survey.

**** Indicates a species that is subject to the transition regulations under the Endangered Species Act, 2007 (i.e., species which were listed for the first time when the Act was adopted in 2007, but which did not receive habitat protection until June 30, 2013; or more recently listed species as identified in section 23.13 of O. Reg. 242/08).

Notes:

1 Under the provincial Endangered Species Act, 2007, endangered and threatened species and their habitat are protected. Species of special concern and their habitat are not protected under the ESA but may be protected under other laws as identified in the "Comments" column; habitat for species of special concern may also be considered significant wildlife habitat under the Provincial Policy Statement. Recovery strategies must be developed by the MECP for all endangered and threatened species. The Ministry must also develop management plans for species of special concern (unless a federal recovery strategy or management plan has already been developed for the species under SARA). The Act also addresses extirpated species (i.e., formerly native species which no longer occur in the wild in Ontario) by protecting individuals and, if reintroduction is deemed feasible by the Minister, their habitat.

2 The federal Species at Risk Act applies only to species listed on Schedule 1 (Schedules 2 and 3 list species awaiting reassessment by COSEWIC, which will then be promoted to Schedule 1 if they are determined to still be at risk). Endangered and threatened species on Schedule 1, and their residences, are protected. This protection only extends to federal lands, except in the case of migratory birds or aquatic species, which are protected throughout Canada. Protection for other listed species may be extended to non-federal lands by the government if the species is not deemed to be adequately protected by the laws of the province or territory. The government must prepare recovery strategies for endangered and threatened species, which identify areas of critical habitat for protection under the Act. Management plans must be developed for species of special concern. The Act also requires the preparation of recovery strategies for extirpated species (i.e., formerly native species which no longer occur in the wild in Canada) and protects them and their critical habitat if they are reintroduced.

3 COSEWIC = Committee on the Status of Endangered Wildlife in Canada.

OBBA = Ontario Breeding Bird Atlas. The Atlas is a multi-year survey undertaken by trained volunteers across Ontario to determine the distribution of breeding birds in the province. The most recent Atlas survey was undertaken in 2001-2005.

5 COSSARO = Committee on the Status of Species at Risk in Ontario.

6 MECP = Ministry of Environment, Conservation and Parks.

7 NESS = Natural Environment System Strategy; study undertaken for Regional Municipality of Ottawa-Carleton by Brownell et al. (1997).

APPENDIX E
BUTTERNUT HEALTH ASSESSMENT

Simon Nehme
7773226 Canada Inc
1890 Broadmoor Ave.
Ottawa, ON,
K1H 5B4
simon@nehmes.com
613.799.5565

August 14, 2020

RE: 1934 Stagecoach Road, Part of Lot 12, Concession 3, Geographic Township of Osgoode, BHA
Report Number: 281020

Dear Mr. Nehme,

As a designated Butternut Health Assessor (BHA), I am providing the following Butternut Health Assessor's Report for the trees located at the above noted property, for which I completed an inventory and assessment during the site visit on July 27, and July 31, 2020. Of note this was just an inventory, and assessment for butternut seedling, any trees that were previously identified are not included in this report. If there are other Butternut trees at the site that may be affected by the activity and they are not identified in this report, they too must be assessed by a BHA. BCH Environmental Consulting Inc. and affiliates are not responsible for delays or losses incurred from Butternuts whether they have been identified in this report or not. A valid BHA report must include all items within the below list of enclosures.

Note that municipal by-laws and legislation other than the ESA may also be applicable to the removal or harming of trees.

Please retain this letter and a copy of the BHA Report for your records, along with any other documentation you may receive from the MNR should an examination of the trees occur. If you have any questions, please do not hesitate to contact me or your local MNR district office.

Sincerely,

Shaun St.Pierre, B.Sc. Biology (BHA#281)

Enclosures:

1. Information from the Ministry of Natural Resources and Forestry about Butternut and the *Endangered Species Act, 2007*
2. Butternut Health Assessor's Report
3. Original data forms
4. Electronic and printed copies of the Excel data spreadsheet (BHA Tree Analysis)

Ministry of Natural
Resources and Forestry

Species At Risk
P.O. Box 7000, 300 Water Street
Peterborough ON K9J 8M5

Ministère des Richesses
naturelles et des Forêts

Espèces en péril
C.P. 7000, 300, rue Water
Peterborough ON K9J 8M5



The enclosed Butternut Health Assessor's Report documents the results of the Butternut health assessment that was conducted by the designated Butternut Health Assessor (BHA) identified in the top section of the report. If there are other Butternut trees (of any size or age) at the site that may be affected by the activity and they are not identified in the enclosed BHA Report, they too must be assessed by a designated BHA.

Butternut is listed as an endangered species on the Species at Risk in Ontario List, and as such, it is protected under the *Endangered Species Act, 2007* (ESA) from being killed, harmed, or removed. If you are planning to undertake an activity that may affect Butternut, you may be eligible to follow the requirements set out in section 23.7 of Ontario Regulation 242/08 under the ESA, or you may need to seek an authorization under the ESA (e.g., a permit).

Please visit e-laws at the link provided below for the legal requirements of eligible activities under section 23.7 of Ontario Regulation 242/08 and conditions that must be fulfilled. Information about Butternut is also available at: <http://www.ontario.ca/environment-and-energy/butternut-trees-your-property>.

If you are eligible to kill, harm or take Butternut under section 23.7 of the regulation, your first step is to submit the BHA Report and the original data forms enclosed in this package to the local Ministry of Natural Resources and Forestry (MNRF) District Manager. Note that MNRF cannot accept photocopies or scanned electronic copies of the data forms.

Note regarding changes:

If the enclosed BHA Report does not identify which Butternut tree(s) are proposed to be killed, harmed, or taken in Table 1 (i.e., if "unknown" is indicated in the second last column of Table 1), or, if the information in the last two columns of Table 1 has changed since the date this BHA Report was produced, **do not make any edits to the BHA Report**. Instead, please attach a cover letter that identifies which Butternut tree(s) are proposed to be killed, harmed, or taken (by referencing the tree identification numbers) when you submit the enclosed BHA Report to the local MNRF District Manager.

The BHA Report must be submitted at least 30 days prior to registering an eligible activity to kill, harm, or remove a Butternut tree. During this 30 day period, no Butternut trees (of any category) may be killed, harmed, or removed, and MNRF may contact you for an opportunity to examine the trees. If MNRF chooses to examine the trees, a representative of MNRF will contact you using the information you supplied when you submitted the BHA Report.

If you are eligible to follow the rules in regulation under section 23.7, you may register your activity using the “Notice of Butternut Impact” form on the [MNRF Registry](#) **after the 30 day period has elapsed.**

If you are **not** eligible to follow the rules in regulation under section 23.7, please contact the local MNRF district office to determine whether you will need to seek an authorization (e.g., a permit). A link to the directory of MNRF offices is provided below.

Note that municipal by-laws and legislation other than the ESA may also be applicable to the removal or harming of trees.

Please retain this information and a copy of the BHA Report (including copies of all data forms) for your records, along with any other documentation you may receive from MNRF should an examination of the trees occur. If you have any questions, please contact your local MNRF district office.

Links:

Endangered Species Act, 2007:

http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_07e06_e.htm

Ontario Regulation 242/08 (refer to section 23.7):

http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_080242_e.htm

MNRF Office Locations:

<https://www.ontario.ca/government/ministry-natural-resources-and-forestry-regional-and-district-offices>

Butternut Health Assessor's Report Number: 281020

Simon Nehme
 7773226 Canada Inc
 1890 Broadmoor Ave.
 Ottawa, ON,
 K1H 5B4
 simon@nehmes.com
 613.799.5565

Site location: 1934 Stagecoach Road, Part of Lot 12, Concession 3, Geographic Township of Osgoode

Date(s) of Butternut health assessment: July 27, 2020, and July 31, 2020

Date BHA Report prepared: August 14, 2020

Map datum used: X NAD83 WGS84

Total number of trees assessed in this BHA Report: 40

The assessed trees were numbered on site using (white flagging tape). The numbers at the site correspond to the tree numbers referenced in this report.

This BHA Report includes the following tables:

- Table 1: Butternut Trees Assessed
- Table 2: Trees Determined by BHA to be Butternut Hybrids
- Table 3: Summary of Assessment Results

Table 1: Butternut Trees Assessed

Tree #	UTM coordinates	Category ¹ (1, 2, or 3 ²)	dbh ³ (cm)	Cultivated? (Y/N)	Proposed to be: (enter one: unknown ⁴ , killed, harmed or taken)	If tree is proposed to be killed, harmed, or taken, indicate reason tree is proposed to be killed, harmed or taken:
1	18 T 454110 5007819	2	3	N	unharm	
2	18 T 454086 5007785	2	1	N	unharm	
3	18 T 454056 5007772	2	1	N	unharm	
4	18 T 453960 5007713	2	1	N	unharm	

¹ The extent to which the tree is affected by Butternut Canker is presented in the Excel document titled, "BHA Tree Analysis" that accompanies this BHA Report.

² Category 3 trees are not eligible to be killed, harmed or taken under section 23.7 of Ontario Regulation 242/08.

³ dbh: diameter at breast height, rounded to nearest cm (if tree is shorter than breast height, enter zero)

⁴ In this column, "unknown" indicates that at the time of assessment, there are no proposals to kill, harm or take this tree that are known to the BHA.

Tree #	UTM coordinates	Category ¹ (1, 2, or 3)	dbh ³ (cm)	Cultivated? (Y/N)	Proposed to be: (enter one: unknown ⁴ , killed, harmed or taken)	If tree is proposed to be killed, harmed, or taken, indicate reason tree is proposed to be killed, harmed or taken:
5	18 T 453961 5007714	2	1	N	unharm	
6	18 T 453826 5007641	2	1	N	unharm	
7	18 T 453692 5007545	2	1	N	unharm	
8	18 T 453694 5007548	2	1	N	unharm	
9	18 T 453604 5007839	2	1	N	kill	proposed subdivision
10	18 T 453668 5007911	2	1	N	kill	proposed subdivision
11	18 T 453797 5007959	2	11	N	kill	proposed subdivision
12	18 T 454135 5008159	1	10	N	kill	proposed subdivision
13	18 T 454130 5008157	2	3	N	harm	proposed subdivision
14	18 T 454135 5008169	2	17	N	kill	proposed subdivision
15	18 T 454218 5008164	2	3	N	harm	proposed subdivision
16	18 T 454201 5008158	2	2	N	harm	proposed subdivision
17	18 T 454162 5008135	2	3	N	harm	proposed subdivision
18	18 T 454116 5008109	2	1	N	kill	proposed subdivision
19	18 T 453747 5007648	2	1	N	harm	proposed subdivision
20	18 T 454026 5007849	2	1	N	kill	proposed subdivision
21	18 T 454044 5007854	2	1	N	kill	proposed subdivision
22	18 T 454098 5007883	2	1	N	harm	proposed subdivision
23	18 T 454083 5007897	2	1	N	harm	proposed subdivision
24	18 T 453917 5007871	2	1	N	kill	proposed subdivision
25	18 T 453890 5007788	2	1	N	kill	proposed subdivision
26	18 T 453771 5007799	2	1	N	harm	proposed subdivision
27	18 T 453712 5007768	2	1	N	harm	proposed subdivision
28	18 T 454493 5008249	2	1	N	harm	proposed subdivision

Tree #	UTM coordinates	Category ¹ (1, 2, or 3)	dbh ³ (cm)	Cultivated? (Y/N)	Proposed to be: (enter one: unknown ⁴ , killed, harmed or taken)	If tree is proposed to be killed, harmed, or taken, indicate reason tree is proposed to be killed, harmed or taken:
29	18 T 454072 5008005	2	1	N	harm	proposed subdivision
30	18 T 453659 5007693	2	1	N	kill	proposed subdivision
31	18 T 453594 5007656	2	1	N	harm	proposed subdivision
32	18 T 453609 5007607	2	1	N	kill	proposed subdivision
33	18 T 453807 5007985	1	11	N	harm	proposed subdivision
34	18 T 453814 5007988	1	7	N	harm	proposed subdivision
35	18 T 453796 5008004	2	12	N	harm	proposed subdivision
36	18 T 453868 5008040	1	8	N	harm	proposed subdivision
37	18 T 453866 5008041	1	9	N	harm	proposed subdivision
38	18 T 453872 5008044	1	8	N	harm	proposed subdivision
39	18 T 453874 5008046	1	6	N	harm	proposed subdivision
40	18 T 454041 5008170	2	13	N	harm	proposed subdivision

Table 2: Trees Determined by BHA to be Butternut Hybrids

Tree #	UTM coordinates	Method used (genetic testing or field identification):

Table 3: Summary of Assessment Results

Result:	Total #:	Important information for persons planning activities that may affect Butternut:
Category 1	7	<ul style="list-style-type: none"> A Category 1 tree is one that is affected by butternut canker to such an advanced degree that retaining the tree would not support the protection or recovery of butternut in the area in which the tree is located; and is considered “non-retainable”. During the 30 day period that follows your submission of this BHA Report to the MNRF District Manager, no Butternut trees (of Category 1, 2, or 3) may be killed, harmed, or taken, and MNRF may contact you for an opportunity to examine the trees. Category 1 trees may be killed, harmed or taken after the 30 day period that follows submission of this BHA Report to the MNRF District Manager, unless the results of an MNRF examination indicate that the assessment has not been conducted in accordance with the

Result:	Total #:	Important information for persons planning activities that may affect Butternut:
		document entitled "Butternut Assessment Guidelines: Assessment of Butternut Tree Health for the Purposes of the <i>Endangered Species Act, 2007</i> ".
Category 2	33	<ul style="list-style-type: none"> A Category 2 tree is one that is not affected by Butternut Canker, or is affected by Butternut Canker but the degree to which it is affected is not too advanced and retaining the tree could support the protection or recovery of butternut in the area in which the tree is located, and is considered "retainable". During the 30 day period that follows your submission of this BHA Report to the MNRF District Manager, no Butternut trees (of Category 1, 2, or 3) may be killed, harmed, or taken, and MNRF may contact you for an opportunity to examine the trees. Activities that may kill, harm or take up to a maximum of ten (10) Category 2 trees may be eligible to follow the rules in section 23.7 of Ontario Regulation 242/08, in accordance with the conditions and requirements set out in the regulation. Refer to e-Laws for the legal requirements of eligible activities under section 23.7 of Ontario Regulation 242/08 and conditions that must be fulfilled: http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_080242_e.htm Activities that may kill, harm or take more than ten (10) Category 2 trees are not eligible to follow the rules in section 23.7 of Ontario Regulation 242/08. Contact the local MNRF district office for information on how to seek an ESA authorization (e.g., a permit) or consider an alternative that would be eligible for the regulation.
Category 3	0	<ul style="list-style-type: none"> A Category 3 tree is one that may be useful in determining sources of resistance to Butternut Canker, and is considered "archivable". Category 3 trees are not eligible to be killed, harmed or taken under section 23.7 of Ontario Regulation 242/08. Contact the local MNRF district office for information on how to seek an ESA authorization, or consider an alternative that will avoid killing, harming or taking any Category 3 trees.
Cultivated	0	<ul style="list-style-type: none"> An activity that involves killing, harming, or taking a cultivated Butternut tree that was not required to be planted to fulfill a condition of an ESA permit or a condition of a regulation, may be eligible for the exemption provided by subsection 23.7 (11) of O. Reg. 242/08. Prior to undertaking the activity, the owner or occupier of the land on which the Butternut is located (or person acting on their behalf) will need to determine whether the exemption for cultivated trees is applicable by determining whether or not the tree was cultivated as a result of the requirements for an exemption under O. Reg. 242/08 or a condition of a permit issued under the ESA. This information can be accessed by contacting the local MNRF district office. The owner or occupier of the land on which the Butternut is located (or person acting on their behalf) is encouraged to append the details regarding whether the tree was planted to satisfy a requirement (e.g., the permit number or registration number) to this BHA Report for their records.
Hybrid	0	<ul style="list-style-type: none"> Hybrid Butternut trees are not protected under the ESA, but their removal may be subject to municipal by-laws and other legislation.

Butternut Health Assessor's Comments:

This concludes the summary of the BHA Report. A complete BHA Report must also include:

1. All original (hard copy) data forms (i.e., all completed sets of Form 1 and Form 2), and
2. Electronic and printed copies of the Excel data analysis spreadsheet.

Note

1. This drawing shall be read in conjunction with the associated technical report.

Legend

● Newly Identified Butternut Trees (2020)

□ Site Boundary

A	Revision	Date	Preliminary Issue	Approval

Client: 7773226 Canada Inc.

Site: 1934 Stagecoach Rd. Ottawa, ON

Report Title: Environmental Impact Statement Update

Drawing Title: Site Plan

Designed By	Scale
Drawn By	Date: August 29th 2020
Approved By: DV	Project: P190612.000
Figure No.	1

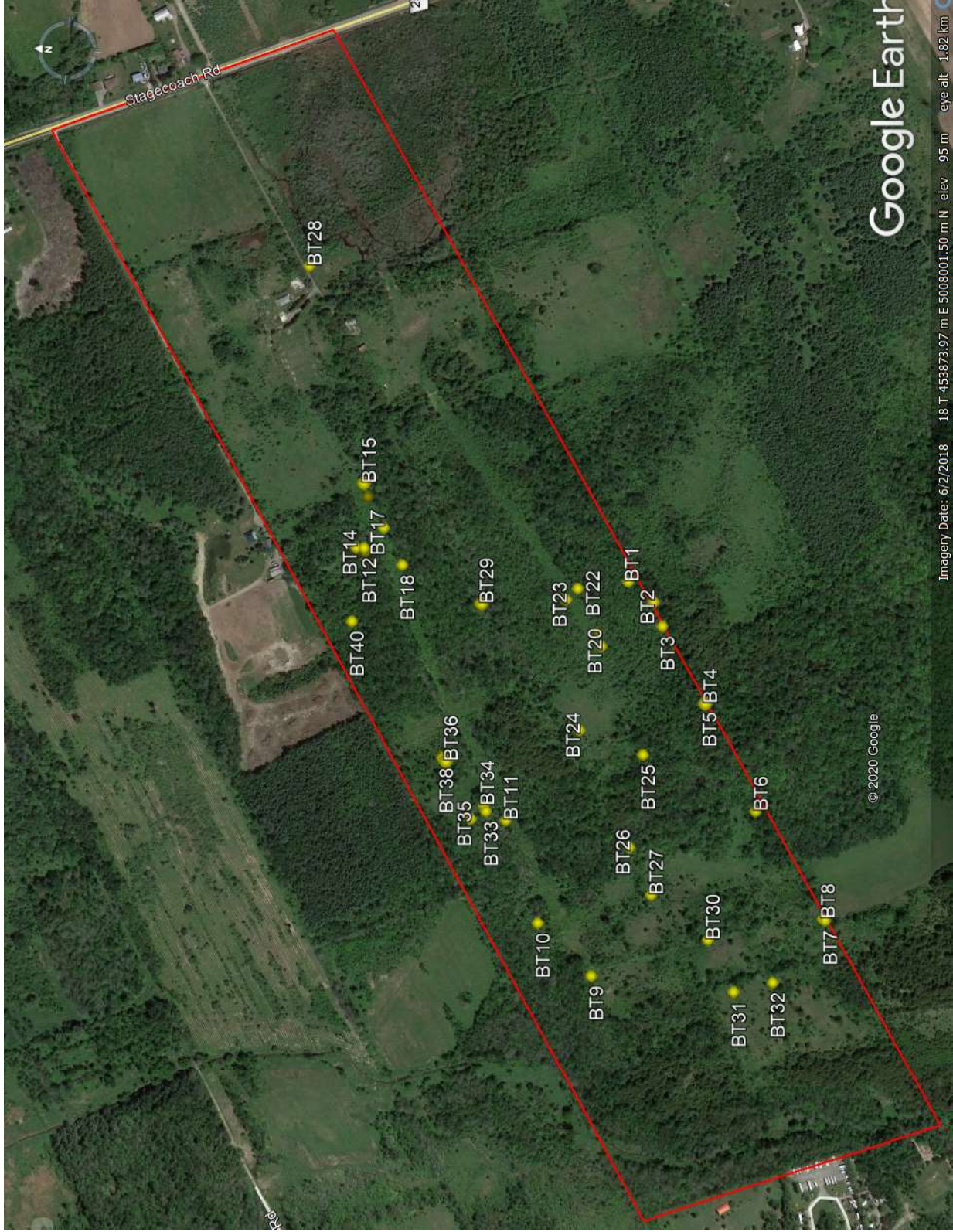


Figure 2 – Plan of Subdivision with Butternut Locations and Bobolink Area

Legend

Green Circles – Butternuts to be Retained

Blue Circles – Potential Butternut Seed Trees to be Retained

Yellow Circles – Butternuts to be Retained but Anticipated to be Harmed

Red Circles – Butternuts to be Removed

Notes:

Only Butternuts assessed as retainable are shown

Circles represent a 25 metre radius from Butternut stem

