

Canada Lands Company CLC Limited
30 Metcalfe Street, Suite 601
Ottawa, ON,
K1P 5L4

September 14th, 2016
DST File No.: GV-SO-027279

Attn: Jean Lachance, Director, Real Estate

RE: Environmental Impact Statement (EIS) and Wildlife Protocol Update for the Wateridge Phase 1B Lands, Former CFB Rockcliffe, Ottawa, ON

1.0 INTRODUCTION

DST Consulting Engineers Inc. (DST) was retained by Canada Lands Company CLC Limited (CLC) to complete an Environmental Impact Statement (EIS) Update for the development project on the Wateridge Phase 1B Lands of the Former CFB Rockcliffe, Ottawa, Ontario. The development project is located at 335 St. Laurent Boulevard, Ottawa, Ontario (the Site) (Figure 1, Appendix A).

The EIS Update is required as part of the approval and registration of the final plan for the development of Phase 1B. This letter report is an update to the 2015 EIS prepared by Golder Associates: "Environmental Impact Statement in Support of Draft Plan Approval of the Former CFB Rockcliffe Lands City of Ottawa, Ontario". Figure 2, Appendix A outlines the area for planned tree removal for the Phase 1B lands and encompasses the Area of Investigation (AOI) for this EIS Update. An updated Tree Conservation Report (TCR) is currently being prepared (IFS Associates Inc.) and submitted separately to CLC.

The EIS Update will accomplish the following:

- Address changes in the species at risk (SAR) list that was updated by the Province in June 2016 and any implications they might have on the original EIS;
 - Re-assessment of the AOI for the presence of Butternut trees;
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- Re-assessment of the AOI for the presence or absence of cavity trees that could provide suitable habitat for Chimney Swift (*Chaetura pelagica*), Eastern small-footed bat (*Myotis leibii*), Little brown bat (*Myotis lucifugus*), and Northern long-eared bat (*Myotis septentrionalis*); and
- Re-assessment of anticipated environmental impacts based on these potential changes to the Draft Plan Approval of the Former CFB Rockcliffe Land, City of Ottawa, Ontario (MMM 2014).

2.0 SURVEYS

Methods

As part of the EIS update, DST conducted a Butternut tree survey and a survey for the presence or absence of snag/cavity trees that could provide suitable habitat for chimney swift, small-footed myotis, little brown myotis, and northern myotis, in the AOI.

Surveys were conducted on August 17th and 18th 2016. Butternut surveys followed the Targeted Transect Survey- Standardized Methodology for the Survey of Rare Plants (SCDC 2012) whereby the AOI was surveyed in transects in the wooded areas. A snag/cavity tree assessment was also undertaken and followed the Candidate Maternity Roost methods outlined by the OMNRF (2011) *Bats and habitats: Guidelines for Wind Power Projects*. This assessment was conducted in the treed areas of the AOI. When assessing these areas, a fixed area of 12.6 m radius (equating to 0.05 Ha) would be assessed for the presence of snags/cavity trees equal to or greater than 25 cm Diameter at Breast Height (DBH). If any snags or cavity trees were found, the formula πr^2 was applied to determine the number of snags/cavities per hectare (OMNRF 2011).

Results

No additional Butternut trees were identified beyond those already assessed for the Phase 1B lands (DST 2014) and outlined in Figure 2, Appendix A.

A limited number of snag/cavity trees over 25 cm DBH were identified on the Phase 1B lands. This resulted in a potential roost density for bats that is generally too low to be considered a candidate for maternity colony roosts. As such, the Phase 1B lands do not warrant additional study as outlined by the OMNRF protocol (2011).

It was determined that the AOI is in general not suitable habitat for Chimney Swifts. Chimney Swifts most often nest/roost in human made structures, such as chimneys, and tend to be found in urban settlements and/or in close proximity to water where they forage on flying insects. The use of natural habitats such as tree cavities is rare when located in close proximity to suitable structures. Research also indicates that natural habitats tend to be in large diameter (>0.5 m), extensively hollow nest or roost trees, often between 0.6 and 1.3 m DBH (Zanchetta et al. 2014). In Ontario, the most commonly known tree species to host Chimney Swift nesting or roosting sites are white pine, sycamore, yellow birch, and cypress (Bird Studies Canada 2013). There were no suitable large cavity trees found in the AOI that would normally be associated with Chimney Swift

activity. As such, the Phase 1B lands do not warrant additional investigation for the presence of Chimney Swifts.

3.0 EIS UPDATE

The following EIS Update incorporates results of the Butternut surveys and surveys for the presence or absence of snags /cavity trees. The following sections of the “Environmental Impact Statement in Support of Draft Plan Approval of the Former CFB Rockcliffe Lands City of Ottawa, Ontario” (Golder 2015a) were reviewed and re-assessed as they pertain to the Wateridge development Phase 1B lands.

3.1 Introduction and EIS Update Purpose

The proposed Draft Plan for the Phase 1B lands (MMM 2014) of the Wateridge development has not changed since the submission of the original EIS (Golder 2015a). A large portion of the Site still consists of a network of streets within an abandoned residential area (all structures removed), interspersed with individual trees and tree groupings. Phase 1A of the Wateridge development is currently under way and this portion of the Site is an active construction zone. Proposed land uses for Phase 1B remain the same, with a mixture of properties, including residential, commercial, schools, and parklands. An updated Tree Conservation Report (TCR) is currently being prepared (IFS Associates Inc.) and submitted to CLC. The purpose of this EIS Update is to incorporate any changes or impacts of recent surveys and address changes in the species at risk (SAR) list that was updated by the Province in June 2016 and any implications they might have on the original EIS.

3.2 Review of Environmental Policies

Provincial Policy Statement

- The Provincial Policy Statement (PPS) outlined in the original EIS is currently up-to-date (MMM 2014) and no changes to the EIS are required.

Species At Risk Act

- The Species at Risk Act (SARA) outlined in the original EIS is currently up-to-date (Canada 2002) and no changes to the EIS are required. Phase 1B lands are not federally owned and thus only aquatic species and migratory birds listed under SARA are afforded protection under the act.

Endangered Species Act

- The species at risk list for Ontario (SARO) was updated by the Province in June 2016. The Endangered Species Act provides habitat protection to all species listed as Threatened or Endangered. Changes in SARO that pertain to Ottawa and the Site, as outlined by the Environmental Registry (OMNR 2016) and the OMNR District Office in Kemptville (personal communication), include the following:

- Tri-colored Bat (*Perimyotis subflavus*) now listed as Endangered;
- Yellow-banded Bumble Bee (*Bombus terricola*) now listed as Special Concern; and
- Milksnake (*Lampropeltis triangulum*) no longer listed as a species at risk.

There are no known occurrence records of the Yellow-banded Bumble Bee in the vicinity of the Site and special concern species do not receive species or habitat protection. The Tri-colored Bat was noted during previous SAR surveys near the escarpment in the northern portion of the Site (Golder 2015a). Implications of the status change are discussed in the following sections.

Fisheries Act

- The Fisheries Act outlined in the original EIS is currently up-to-date (Canada 1985) and no changes to the EIS are required. No waterbodies are located on the Phase 1B lands that would be affected by the Fisheries Act.

Conservation Authorities Act

- The Conservation Authorities Act outlined in the original EIS is currently up-to-date (Ontario 1990) and no changes to the EIS are required.

City of Ottawa

- As per the requirements of the City of Ottawa, this EIS Update is required as part of the approval and registration of the final plan for the development of Phase 1B. This letter report is an update to the 2015 EIS prepared by Golder Associates: "Environmental Impact Statement in Support of Draft Plan Approval of the Former CFB Rockcliffe Lands, City of Ottawa, Ontario".

3.3 Review of Existing Conditions

The Existing Conditions for the Phase 1B lands have remained unchanged since submission of the original EIS by Golder Associates Ltd. in 2015. No work has taken place and the development of Phase 1A lands on Site has little impact on Phase 1B lands.

Ecosystem Setting

- The Ecosystem Setting is largely open grasslands with individual trees and small intermittent groupings of mixed trees.

Geology and Hydrogeology

- The Geology and Hydrogeology is characterized by till material consisting of compact silt, sand, and minor gravel, and groundwater generally flows to the north and northwest.

Plant Community

- The Plant Community remains unchanged for the Phase 1B lands. Phase 1B lands are designated by Mixed Meadow, Open Woodland, and Disturbed Complex, as per

Ecological Land Classification (ELC) standards (Golder 2015a). No regionally or provincially rare plants, or SAR plants, have been recently added to SARO that would pertain to the Site and none have been identified on Site, with the exception of Butternut. A Butternut Survey was conducted in the AOI for this EIS Update and no additional Butternut were found outside of the three (3) previously identified and assessed (DST 2014). One Category 1 Butternut and one Category 2 Butternut are located in the south western portion of the Phase 1B lands in an area designated for parkland use (Figure 2, Appendix A). A second category 2 Butternut is located immediately north of the Phase 1B lands, in an area designated for residential use during Phase 3 development (Figure 2, Appendix A).

Wildlife

- No additional Wildlife surveys have been conducted since the submission of the original EIS by Golder Associates Ltd. in 2015, and therefore the previous list of wildlife species identified on Site remains up-to-date (Golder 2015a). There are no changes to the Significant and Sensitive Fauna Species identified for the Site and presented in Appendix C of the original EIS (Golder 2015a), with the exception that the SARO status of Tri-colored bats is now listed as Endangered and Milksnakes are no longer considered at risk under SARO.

Aquatic Habitat and Fish

- There are no updates for Aquatic Habitat and Fish present in the AOI. No surface water is present in or adjacent to the Phase 1B lands.

3.4 Review of Significant Natural Heritage Features

Significant Wetlands

- There are no Significant Wetlands on or near the Site, including the Phase 1B lands.

Endangered and Threatened Species

The potential for Endangered and Threatened Species to be present on the Phase 1B lands was re-assessed to include the SARO list updates (June 2016). The Tri-colored Bat was the only species update of note for the Ottawa district and has been listed as Endangered. In addition, previous acoustical surveys identified the presence of Tri-colored bats in the northern portions of the Site near the escarpment. As such, the Tri-colored Bat was considered during habitat assessment surveys that were conducted for bats and Chimney Swifts in the AOI for the EIS Update. In addition, Butternut surveys were also conducted for the AOI.

- No Butternut trees were discovered in the AOI besides the three (3) previously identified and assessed (DST 2014), including: one Category 1 Butternut and one Category 2 Butternut located in the south western portion of the Phase 1B lands in an area designated for parkland use, and a second Category 2 Butternut located immediately north of the

Phase 1B lands in an area designated for residential use during Phase 3 development (Figure 2, Appendix A). Potential impacts to this Category 2 Butternut are discussed in Section 3.6.

- A limited number of snag/cavity trees over 25 cm DBH were identified on the Phase 1B lands. This resulted in a potential roost density for bats that is generally too low to be considered a candidate for maternity colony roosts. As such, the Phase 1B lands do not warrant additional study as outlined by the OMNRF protocol (2011) and are not considered suitable habitat for bats.
- It was determined that the AOI is in general not suitable habitat for Chimney Swifts. Chimney Swifts most often nest/roost in human made structures, such as chimneys, and tend to be found in urban settlements and/or in close proximity to water where they forage on flying insects. The use of natural habitats such as tree cavities is especially rare when located in close proximity to suitable structures. Research also indicates that natural habitats tend to be in large diameter (>0.5 m), extensively hollow nest or roost trees, often between 0.6 and 1.3 m DBH (Zanchetta et al. 2014). In Ontario, the most commonly known tree species to host Chimney Swift nesting or roosting sites are white pine, sycamore, yellow birch, and cypress (Bird Studies Canada 2013). There were no suitable large cavity trees found in the AOI that would normally be associated with Chimney Swift activity. As such, the AOI does not warrant additional investigation for the presence of Chimney Swifts.

Fish Habitat

- There are no watercourses in or adjacent to the AOI and therefore Fish Habitat is not considered a Significant Heritage Feature for Phase 1B lands.

Significant Woodlands

- ELC standards characterizes Phase 1B lands as a mix of naturalized residential areas, parklands, habitat edges, and disturbed lands such as parking lots and building outlines (Golder 2015a). According to the local planning authority guidelines (OMNRF 2010), Phase 1B lands are not considered Significant Woodlands. An updated TCR is currently being prepared (IFS Associates Inc.) and submitted to CLC.

Significant Valleylands

- There are no significant Valleylands within the AOI or within the Site.

Significant Areas of Natural and Scientific Interest (ANSIs)

- No Provincially significant ANSIs have been identified in the AOI or within the Site.

Significant Wildlife Habitat

Significant Wildlife Habitat is categorized into four general types (OMNRF 2000) and each was analyzed for the Phase 1B lands, including Migration Corridors, Seasonal Concentration Areas, Rare or Specialized Habitats, and Species of Conservation Concern.

- *Migration Corridors*
 - Migration corridors are natural and significant links that allow animals to travel between one habitat to another. The only migration corridor identified on Site was the NRC Woods North (Golder 2015a) and does not apply to the Phase 1B lands.
- *Seasonal Concentration Areas*
 - Seasonal concentration areas allow certain species to gather in large numbers during specific periods of the year. Of the fourteen types of Seasonal Concentrations Areas identified in the Significant Wildlife Habitat Technical Guide (OMNRF 2000) and considered in the original EIS (Golder 2015a) none are applicable to Phase 1B lands.
- *Rare or Specialized Habitat*
 - There are no Rare Habitats on Site or within the Phase 1B lands as categorized by the NHIC. In addition, of the 14 Specialized Habitats (areas that provide a critical resource to a group of wildlife; OMNRF 2000) that may be considered Significant Wildlife Habitat none apply to the Phase 1B lands.
- *Species of Conservation Concern*
 - The only species of conservation concern identified on Site was the Monarch butterfly (*Danaus plexippus*). Although the Site provides potential suitable habitat for the Monarch, the Phase 1B lands are not considered to be significant habitat. As outlined in the original EIS, opportunities for maintenance of Monarch habitat on Site post development are available (Golder 2015a).

Urban Natural Features

- Two Urban Natural Features overlap the Site and one is located north of the Site, including the NRC Woods North, the Montfort Hospital Woods, and the Airbase Woods, respectively. None of these features are associated with or near the Phase 1B lands and therefore do not pertain to the EIS update.

3.5 Review of Development Proposal

The proposed Draft Plan for the Phase 1B lands (MMM 2014) of the Wateridge development has not changed since the submission of the original EIS (Golder 2015a). Proposed land uses for Phase 1B remain the same, with a mixture of properties, including residential, commercial,

schools, and parklands. An updated Tree Conservation Report (TCR) is currently being prepared (IFS Associates Inc.) and submitted to CLC.

Buffer Recommendations and Linkages

- The proposed Draft Plan for the Wateridge development (MMM 2014) incorporates setbacks to adjacent Urban Natural Features and tree groupings being retained on Site. Appropriate tree protection measures during construction activities, as outlined in the TCR (Golder 2015b; IFS Associates Inc. 2016), will be afforded to trees being retained on the Phase 1B lands.

3.6 Review of Impact Analysis

The proposed Draft Plan for the Phase 1B lands (MMM 2014) of the Wateridge development has not changed since the submission of the original EIS (Golder 2015a). Potential direct or indirect effects on the natural environment were re-assessed for the Phase 1B lands as they pertain to the proposed development and associated construction activities. The following provides an assessment to potential impacts identified in this EIS update as they pertain to the Phase 1B lands.

Endangered and Threatened Species

- No Butternut trees were discovered in the AOI besides the three (3) previously identified and assessed (DST 2014), including: one Category 1 Butternut and one Category 2 Butternut located in the south western portion of the Phase 1B lands in an area designated for parkland use, and a second Category 2 Butternut located immediately north of the Phase 1B lands in an area designated for residential use during Phase 3 development (Figure 2, Appendix A). This second Category 2 Butternut appeared to be in relatively poor condition (Photo 1 below) and might warrant future removal should this be considered for Phase 3 development. As outlined by the rules and regulations of the Ontario ESA, up to ten (10) Category 2 trees may be removed by a single undertaking by registering the activity and providing compensation. Because there are fewer than ten (10) Category 2 trees within the property itself (e.g. within provincial jurisdiction), impacts to these trees should be addressed through the rules and regulations process of the Ontario ESA, and an *Overall Benefit Permit* is not likely to be required. Refer to the updated TCR for further details on tree conservation on the Phase 1B lands (IFS Associates Inc. 2016).



Photo 1: Category 2 Butternut located immediately north of the Phase 1B lands.

Construction Impacts

- No additional construction impacts are anticipated since the submission of the original EIS (Golder 2015). As outlined in the original EIS, standard construction practices should be undertaken on the Phase 1B lands to prevent damage to natural features (Golder 2015a), including:
 - Clearly identify the development envelope;
 - Preservation of trees and tree groupings to be retained, as outlined by the updated TCR for the Phase 1B lands (IFS Associates Inc.);
 - Vegetation removal should take place outside the breeding bird season (April 15 – August 15); and,
 - Standard best management practices should be implemented during construction activities, including sediment and erosion controls, accidental spill prevention and clean-up plans, and protection of wildlife during construction. The City of Ottawa provides a guidance document of how to protect wildlife during construction and should be reviewed prior to commencing activities on Site. The “Protocol for Wildlife Protection during Construction” can be found at the following link:

http://www.google.ca/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKewj25artgbLOAhXLyoMKHaGIATEQFggbMAA&url=http%3A%2F%2Fdocuments.ottawa.ca%2Fsites%2Fdocuments.ottawa.ca%2Ffiles%2Fdocuments%2Fconstruction_en.pdf&usq=AFQjCNEJzvbNG4dlu5A7ub2O5ogILhIQgg&sig2=u3uybkQEsYtnn69l9Q3g9w

3.7 Review of Monitoring requirements

Monitoring requirements are implemented to address the effectiveness of mitigation measures for a project. Key mitigation measures involve standard best management practices during construction activities (discussed above) and should be monitored throughout the project to ensure adherence and effectiveness.

3.8 Review of Cumulative Effects

No cumulative effects to the natural environment were identified for the Site during the original EIS assessment (Golder 2015a) and none are anticipated for the planned construction activities within the AOI. The proposed development of the Phase 1B lands is being undertaken within an already urbanized and developed area, and increased development is not anticipated to have additive impacts to the natural environment.

3.9 Review of Conclusions and Recommendations

Net Impacts

- No additional Net Impacts were discovered during this EIS update for the Phase 1B lands.

Policy Compliance

- The proposed Draft Plan for the Phase 1B lands (MMM 2014) of the Wateridge development has not changed since the submission of the original EIS (Golder 2015a). Following the recommendations outlined in this EIS update and the original EIS (Golder 2015a), the proposed development and construction activities for Phase 1B lands complies with the natural heritage policies of the Provincial Policy Statement.

Recommendations

- Negative impacts on the natural environment are not anticipated for the Phase 1B lands, pending construction activity mitigations/recommendations outlined in the original EIS (Golder 2015) are followed, and summarized below:
 - Clearly identify the development envelope;

- Preservation of trees and tree groupings to be retained, as outlined by the updated TCR for the AOI (IFS Associates Inc.);
- Vegetation removal should take place outside the breeding bird season (April 15 – August 15); and
- Standard best management practices should be implemented during construction activities, including sediment and erosion controls, accidental spill prevention and clean-up plans, and protection of wildlife during construction.

4.0 CLOSURE

We trust this report satisfies your requirements at this time. If you have any questions, please do not hesitate to contact the undersigned.

Yours truly,

For **DST CONSULTING ENGINEERS INC.**

A handwritten signature in black ink, appearing to read 'David Vardy', with a long horizontal flourish extending to the right.

David Vardy, Ph.D., MSc. BSc.

Intermediate Biologist

5.0 REFERENCES

Bird Studies Canada. 2013. Ontario SwiftWatch 2012 Summary Report. 9 pp.

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Golder 2015a. Golder Associates Ltd. Environmental Impact Statement in Support of Draft Plan Approval of the Former CFB Rockcliffe Lands City of Ottawa, Ontario. Golder Associates Ltd. Report Number 1418293.

Golder 2015b. Golder Associates Ltd. Tree Conservation Report in Support of Draft Plan Approval of the Former CFB Rockcliffe Lands, dated March 2015.

MMM Group. 2014. Draft Plan of Subdivision – Former CFB Rockcliffe Lands.

OMNRF 2000. Ontario Ministry of Natural Resources and Forestry. Significant Wildlife Habitat Technical Guide (SWHTG). 151 pp.

OMNR 2016. Environmental Registry. Amendment of Ontario Regulation 242/08 (General Regulation - Endangered Species Act, 2007) in response to changes to the Species at Risk in Ontario List.

OMNRF 2010. Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 Second Edition.

OMNRF 2011. Bats and habitats: Guidelines for Wind Power Projects. 2nd edition. MNR Number 52696.

Ontario, Government of (Ontario). 1990. *Conservation Authorities Act*. R.S.O. 1990. Chapter C.27. Last amendment: 2011, C.9 Sched. 27, S. 22.

SCDC 2012. Saskatchewan Conservation Data Center (SCDC). Standardized Methodology for Surveys of Rare Plants.

Zanchetta, C., D. C. Tozer, T. M. Fitzgerald, K. Richardson, and D. Badzinski. 2014. Tree cavity use by Chimney Swifts: implications for forestry and population recovery. *Avian Conservation and Ecology* 9 (2): 1.

6.0 PROJECT STAFF

The primary DST staff member(s) who fulfilled this project included:

David Vardy, Ph.D., M.Sc., B.Sc., served as the Biologist for this project. Dr. Vardy manages and provides technical expertise on a variety of environmental projects including environmental impact studies, species at risk management, species at risk surveying, baseline studies, fisheries management and compliance, and surface water monitoring projects, among others. Dr. Vardy is an expert in biology, fisheries science, eco-toxicology, and environmental science. He has 9 years of experience in environmental consulting and biological research roles and has specialized in environmental management, risk assessment studies, environmental site evaluations, and reporting.

Autocad and GIS support was provided by DST technicians where required.

APPENDIX A

Figures



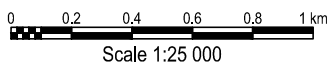
Google Earth 2016

Notes


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

Legend

- Site boundary
- Phase 1B Lands



A	02/09/16	Preliminary	A.N.
Revision	Date	Issue	Approval

Client Canada Lands Company		Site 335 St. Laurent Boulevard, Ottawa, Ontario	
	Project Title	Environmental Impact Statement (EIS) Update for the Wateridge Phase 1B Lands of the Former CFB Rockcliffe	
	Drawing Title	Site Location Map	
	Designed By	D.V.	Date September 2016
	Drawn By	R.W.	Project No. GV-SO-027279
		Approved By	A.N.
		Scale	As shown
			1

Saved: Friday, September 02, 2016 @ 13:39 by Rob Wesson
File: I:\GVS\SO\gvso27279 - wateridge phase 1b eis update\AutoCAD\DWGs\2016 Environmental Impact Statement (EIS)\2 tree removal plan.dwg

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- Notes**
1. This drawing shall be read in conjunction with the associated technical report.
 2. Do not scale drawing.

- Legend**
- Tree removal boundary
 - Butternut category 1
 - Butternut category 2
 - Cavity tree #1
 - RSC excavation area
 - Significant tree - good condition
 - Significant tree - fair condition
 - Significant tree - poor condition
 - Forest tree grouping

- Source**
1. Baseplan provided by IBI Group.
Drawing title: Tree Removal Plan 3
Drawing No.: TRP3
Project No.:38298

0 20 40 60 80 100 m
Scale 1:2 500

A	02/09/16	Preliminary	A.N.
Revision	Date	Issue	Approval
Client			
Canada Lands Company			
Site			
335 St. Laurent Boulevard, Ottawa, Ontario			
Project Title			
Environmental Impact Statement (EIS) Update for the Wateridge Phase 1B Lands of the Former CFB Rockcliffe			
Drawing Title			
Tree Removal Plan Phase 1B			
Designed By	D.V.	Scale	As shown
Drawn By	R.W.	Date	September 2016
Approved By	A.N.	Project No.	GV-SO-027279
Figure No.	2		