



REPORT

Tree Conservation Report

50 Leikin Drive, Ottawa, Ontario

Submitted to:

Canada Post

Emily Payton, EP
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Submitted by:

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1.0 INTRODUCTION

WSP E & I Canada Limited (previously Wood Environment & Infrastructure Solutions) part of WSP Canada Inc. (WSP) was retained by Canada Post Corporation (CPC) to complete a Tree Conservation Report (TCR) for the proposed development located at 50 Leikin Drive, City of Ottawa, Ontario (the Site). A TCR is required for development sites where there is a tree 10 cm in diameter or greater within the Site limits, and / or where there is a tree situated on adjacent lands with a Critical Root Zone (CRZ) extending onto the property (Ottawa 2020). The CRZ is established as being 10 centimeters from the trunk of a tree for every centimeter of trunk DBH measured in a radius around the tree. The CRZ is calculated as DBH x 10 cm.

CPC is planning to build a new parcel processing plant, called the Ottawa Processing Centre (OPC) on approximately 22.4 acres of land in the Ottawa-Gatineau region, Ontario. The OPC is required to meet growth in Canada Post Corporation's parcel segment.

This TCR has been prepared in accordance with the City of Ottawa's TCR Guidelines (Ottawa 2022) and the City of Ottawa's Tree Protection By-law (By-law No. 2020-340).

2.0 QUALIFICATIONS

This report was prepared by Fergus Nicoll, Terrestrial and Wetlands Specialist at WSP.

Fergus Nicoll specializes in ecology with an emphasis on wetland and terrestrial ecosystems. Fergus has over 20 years of technical experience in collecting botanical and forest inventory data, conducting ecological land classification (ELC) assessing tree health and completing tree inventories. He has authored several Tree Conservation Reports, many of which are within the City of Ottawa. He is also provincially certified in Ecological Land Classification for Ontario, Ontario Wetland Evaluation System, and Butternut Health Assessments, and has been involved in several related workshops.

3.0 GENERAL SITE INFORMATION

The detailed location of the Site is outlined below in Table 1.

Table 1: Site Information

Municipal Address	50 Leikin Drive, Ottawa, Ontario
Legal Description	Part of Lot 18, Concession 1
Current Zoning	IL9 – Light Industrial Zone, Subzone – South Merivale Business Park
Current Site Owner	Canada Post Corporation (CPC)
Contact Information of Site Owner Representative	Emily Payton, EP Specialist, Real Estate, Environment & Sustainability Canada Post 2701 Riverside Drive, Suite N0122 Ottawa ON, K1A 0B1 (343) 550-9041 Emily.Payton@canadapost.postescanada.ca

4.0 DEFINITIONS

Table 2: Definitions

Acronym/ Definition	Description
Adjacent Tree	A tree that has a trunk growing on a property with a shared boundary with the Site (Ottawa 2020).
Boundary Tree	A tree, which has a trunk growing on one or more property lines (Ottawa 2020).
Critical Root Zone	The area of land within a radius from the trunk of a tree calculated as 10 cm for every 1 cm of trunk diameter (Ottawa 2020).
DBH	Diameter (in cm) at breast height and is measured at 1.4 m above the ground for each tree.
Imminently Hazardous Tree	A destabilized or structurally compromised tree that is in imminent danger of causing damage or injury to life or property.
Injure and Injury	Any act that may harm a tree's health, including failure to protect in accordance with standards set by the City (Ottawa 2020).
Municipal Tree	A tree, which is located on or partially on municipal property and includes boundary trees (Ottawa 2020).
Protected Tree	Includes trees to be retained / protected and requires an approval / permit for injury or destruction (Ottawa 2020).
Retained Tree	A tree that is proposed to be retained / protected and for which an approval / permit is not required (Ottawa 2020).
Root Zone	The subterranean area around the tree measured from the trunk up to 2 – 3 m beyond the dripline.
Tree Number	The number on the tree tag or alpha-numeric, alphabetical or tree grouping label listed in the Tree Conservation Plan (e.g., 1).

Table 3: Tree Assessment Criteria

Definition	Description
Trunk Integrity (T.I.)	Assessment of the trunk for any defects or weaknesses. It is measured on a scale of poor, fair, or good.
Canopy Structure (C.S.)	Assessment of the scaffold branches, unions and the canopy of the tree. This is measured on a scale of poor, fair, or good.
Canopy Vigour (C.V.)	Assessment of the health of the tree and considers the amount of deadwood and live growth in the crown as compared to a 100% healthy tree. The size, colour and amount of foliage are also considered in this category. This is measured on a scale of poor, fair, or good.
Good	Tree displays less than 15% deficiency / defect within the given tree assessment criteria (TI, CS, CV).
Fair	Tree displays 15% to 40% deficiency / defect within the given tree assessment criteria (TI, CS, CV).
Poor	Tree displays greater than 40% deficiency / defect within the given tree assessment criteria (TI, CS, CV).

5.0 METHODS

During two site visits (November 15 and 17, 2022), an inventory of all trees greater than 10 cm diameter at breast height (DBH) on the Site and immediately adjacent to the Site was undertaken, including a description of the species, sizes and health condition of the trees. Additional information on the environmental value of the trees, including presence of any significant trees, was documented and marked in the field, if present.

6.0 PROPOSED WORKS AND SCHEDULE

The proposed development consists of a new parcel processing plant for CPC on approximately 22.4 acres of land. The Facility will consist of a parcel processing plant of approximately ~218,000 square feet (20,252 m²), of which approximately 30,000 square feet (2,787 m²) will be dedicated to support and administration, with the remainder to house the parcel sortation equipment that will be installed during construction. The site development of approximately 22.4 acres will include all civil works related to extensive paved truck circulation, docking and heavy vehicle parking areas within a secure vehicle compound. Employee and visitor parking will also be provided within the site boundaries.

It is expected that the new OPC will be in operation by December 2026.

7.0 EXISTING PLANT COMMUNITIES AND TREE COVER ON THE SITE

Most of the Site has well established vegetation, but there is evidence that the current vegetation cover has regenerated since historic disturbance (e.g., Site stripping, fill piles). However, the ecosystem is relatively young and unlikely to contain a high diversity of species. The soil on the Site is disturbed. The Site is currently a mosaic of upland meadow, and small features that exhibit conditions of meadow marsh have established where the disturbed soils collect rainwater. Woody vegetation on the Site includes many scattered shrubs and small trees (under 10 cm dbh), some groupings of trees, and several individual trees, many of which have been planted.

7.1 Existing Tree Cover

The following tables (Table 4 and Table 5), provide an inventory of trees on the Site. The location of trees and their critical root zone (CRZ) are show on Figure 1 and Figure 2.

Table 4: Individual Trees and Recommendations

Tree #	Species	dbh (cm)	Condition/Notes	Recommendation
Tree 1	Willow species (<i>Salix</i> sp.)	5 to 22	Good /14 stems, possible hybrid, inside the CPC development area.	Remove
Tree 2	Willow species	4 to 18	Good/10 stems, possible hybrid, inside the CPC development area.	Remove
Tree 3	Manitoba maple (<i>Acer negundo</i>)	11, 13	Fair/two stems, inside the CPC development area.	Remove
Tree 4	Hybrid poplar (<i>Populus</i> sp.)	53	Good/Inside the CPC development area.	Remove
Tree 5	Hybrid poplar	54	Good/inside the CPC development Area.	Remove
Tree 6*	Honey locust (<i>Gleditsia triacanthos</i>)	13	Poor-fair/thornless variety, planted. Possible boundary tree.	Remove (see note)
Tree 7	Blue spruce (<i>Picea pungens</i>)	27	Good/planted	Retain
Tree 8	Blue spruce	28	Good/planted	Retain
Tree 9	Blue spruce	27	Good/planted	Retain

Tree #	Species	dbh (cm)	Condition/Notes	Recommendation
Tree 10	Honey locust	13	Fair/thornless variety, planted, some trunk damage.	Retain
Tree 11	Manitoba maple	12	Fair/branch dieback	Retain
Tree 12	White spruce (<i>Picea glauca</i>)	25	Good/planted	Retain
Tree 13	White spruce	27	Good/planted	Retain
Tree 14	Blue spruce	32	Good/planted	Retain
Tree 15	Sugar Maple (<i>Acer saccharum</i>)	24	Good/planted	Retain
Tree 16	White pine (<i>Pinus strobus</i>)	27	Good/planted	Retain
Tree 17	White pine	29	Good/planted	Retain
Tree 18	White pine	25	Good/planted	Retain

Notes: *Trees 6-18 are potential boundary trees with the City of Ottawa right of way, with tree 6 recommended for removal. If it is confirmed that these trees do occur partly on City of Ottawa property, permission must be obtained from the City prior to removal or any maintenance activities.

Table 5: Tree Groupings

Tree Group #	Species	dbh (cm)	Condition/Notes	Recommendations
Tree group 1	Trembling aspen 100% (<i>Populus tremuloides</i>)		Good/>80 stems	Remove
Tree group 2	Hybrid poplar 100%	4 to 16	Good/ 17 stems	Remove
Tree group 3	Trembling aspen 90% Hybrid poplar 10%		Good/ >50 stems	Remove

7.2 Species at Risk and Significant Natural Features

During the 2022 site visits, the Site and immediately adjacent lands were searched for butternut (*Juglans cinerea*), and none were found. No other SAR or significant natural features were identified on the Site, although no other targeted surveys have been completed. However, in consultation with Environment and Climate Change Canada (ECCC), CPC was advised that further surveys were not required.

8.0 PROPOSED ALTERATIONS TO TREE COVER AND POTENTIAL TREE RETENTION

Of the 18 individually assessed trees, 6 trees (Trees 1 to 6) must be removed as they are within the proposed development area, and/or they are in poor condition. Tree 6 is a potential boundary tree, with the City of Ottawa ROW, so permission must be retained, if this tree is to be removed. Details for trees proposed for removal and injury are shown on Figure 2. All three of the tree groups must be removed, as they are in the proposed development Area.

When the proposed development will encroach within CRZs of trees being retained, these trees will be considered injured. On the current development plan, critical root zones appear to occur in areas that are to be lawn/landscaped and it's unlikely that any trees will be injured. To be safe, specific preservation measures are proposed to protect the CRZs from the construction activities. These specific measures are listed in Section 9.0. If these critical root zones cannot be protected, the trees will be considered injured, and

preservations measures in Table 6 and Section 9.0 should be followed, or the trees should be replaced in the landscape plan if feasible.

Twelve (12) trees located outside of the proposed development envelope will be retained (Trees 6 -18) (Figure 2). Impacts to these trees will be minimal to none if mitigation measures outlined in Section 9.0 are followed.

A landscape plan will be prepared for the Site that will address restoration requirements and include specific tree species, number of trees, and locations within the development.

This TCR report must be approved, and a tree permit must be obtained from the City [as per the Tree Protection By-law (2020)] must be approved prior to the removal or injuring of any trees over 10cm dbh.

9.0 RECOMMENDATIONS AND MITIGATION MEASURES

There are several mitigation measures that can be considered through development of the Site restoration plans, including:

- To comply with the Migratory Birds Convention Act (MBCA) (Canada 1995), there will be no removal of vegetation during the active season for breeding birds (April 8 to August 15), without input from a qualified biologist (i.e., nesting surveys). Note that even with completion of nesting surveys, scheduled clearing during the active season may lead to construction delays if nests are located.
- Planting trees as per the landscape plan (to be developed) will help to offset the minimal tree loss associated with the proposed development. Replacement planting species and densities will be addressed through a site-specific landscape plan that takes into consideration and prioritizes the planting of native trees.
- Wherever tree planting is to take place on the Site, first consideration should be given to the use of native species that occur in the local landscape, such as: Sugar Maple (*Acer saccharum*), White Spruce (*Picea glauca*), Eastern White Cedar (*Thuja occidentalis*), White Pine (*Pinus strobus*) and Red Oak (*Quercus rubra*). Cultivars of native species designed for urban conditions can be used as deemed suitable by the City. Alien non-invasive species and cultivars should only be used where it is not reasonable to use native species or native cultivars. Alien invasive species such as Norway Maple should not be used in any circumstance.
- For any trees that will be retained during development, the following measures, as recommended by the City of Ottawa (2020), should be employed to ensure their protection and survival:
 - a) Under the guidance of a landscape architect, erect tree protection fencing at the CRZ of off-Site trees to be retained. The fence must remain in place until the work is complete. The CRZ is calculated as the DBH (in cm) multiplied by 10 cm. Fencing must be at least 1.2 m high and installed such that it cannot be altered.
 - b) Do not place any material or equipment within the CRZ of the trees.
 - c) Do not raise or lower the existing grade within the CRZ without approval.
 - d) Do not extend hard surfaces, or significantly change landscaping within the CRZ.
 - e) Do not attach any signs, notices or posters to the trees.
 - f) Tunnel or bore when digging within the CRZ of the trees.
 - g) Do not damage the root system, trunk or branches of the trees.

- h) Ensure that exhaust fumes from all equipment are not directed towards any tree’s canopy.
- i) When trees proposed for removal overlap with the CRZs of trees proposed to be preserved: cut roots at the CRZ edge and do not pull out the stumps, but grind stumps down after removal. There must not be root pulling, or disturbance within the CRZs of the trees to be preserved.
- j) If root cutting is necessary, those with a diameter of 20 mm or greater shall be cut at right angles with clean, bypass secateurs. There should not be any tearing, crushing, or pulling of the roots. Refer to City of Ottawa’s specifications for Tree Protection (Ottawa 2021).
- k) If the fenced CPZ must be reduced for construction activities, mitigation measures must be proposed by a Certified Arborist and approved by City Forestry staff. Mitigation measures may include placement of plywood, wood chips, or steel plating over roots or proper pruning methods and care of roots, if encountered (Ottawa 2021).
- l) Approval from the City of Ottawa General Manager must be provided prior to reductions to the fenced CRZ area, if reductions are required to facilitate construction, or any of the mitigation measures listed above must be deviated from.

The mitigation measures in the following table refer specifically for those trees proposed to be injured.

Table 6: Species Preservation Methods Recommended for Trees Proposed to be Injured

Method	Details
1	Install tree protection fencing as indicated on the City of Ottawa’s specifications for Tree Protection (Ottawa 2021).
2	Prune low branches near the trunk if they will be injured by machinery. Branches should be pruned before access or construction begins. Pruning should be limited to less than 20% of the tree’s crown and be completed by a qualified arborist or tree care professional in accordance with good arboricultural standards.
3	A qualified arborist should prune existing broken branches to promote overall tree health.
4	In the presence of a qualified arborist, use a low-pressure water hydro vac method to expose the upper 10 to 15 cm of soil, and if roots are found, the arborist should make clean cuts if excavation goes into the root system(s). Subsequently, put mulch over exposed root and water soil if needed to maintain moisture.
5	Ensure the tree receives adequate water during summer dry periods. Remove mulch only when restoration occurs.

10.0 CLOSURE

This report has been prepared by WSP Canada Inc. The assessment represents the conditions at the Site only at the time of the assessment and is based on the information referenced and contained in this report. WSP Canada Inc. attests that to the best of our knowledge, the information presented in this report is accurate. The use of this report for other projects without written permission of the Client and WSP Canada Inc. is solely at the user’s own risk. This report must be reviewed and approved by the relevant regulating agencies prior to being relied upon for planning and/or construction purposes.

Thank you for the opportunity to complete this report. We trust that this information is satisfactory for your current requirements. Please contact us if we can be of further assistance.

Signature Page

WSP Canada Inc.



Fergus Nicoll Dip.T.
Terrestrial and Wetlands Specialist



Kris Marentette, M.Sc., P.Geo.
Senior Hydrogeologist

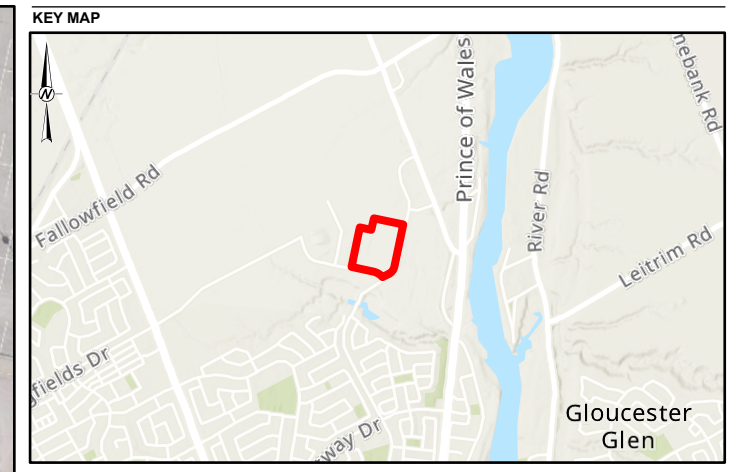
Technical Review by:

Gwendolyn Weeks, H.B.Sc.Env.
Senior Ecologist

FN/GW/KAM/sg

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Figures



SCALE: 1:50,000

- LEGEND**
- TREE
 - TREE CLUMP
 - SITE



NOTE(S)
1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)
1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. BASE MAP: CITY OF OTTAWA, PROVINCE OF ONTARIO, ESRI CANADA, ESRI, HERE, GARMIN, SAFEGRAPH, GEOTECHNOLOGIES, INC, METI/NASA, USGS, EPA, NPS, USDA, NRCAN, PARKS CANADA, ESRI, NASA, NGA, USGS, FEMA

CLIENT
CANADA POST CORPORATION

PROJECT
TREE CONSERVATION REPORT - CANADA POST CORPORATION
PROCESSING CENTRE, 88 LEIKIN DR., OTTAWA, ON

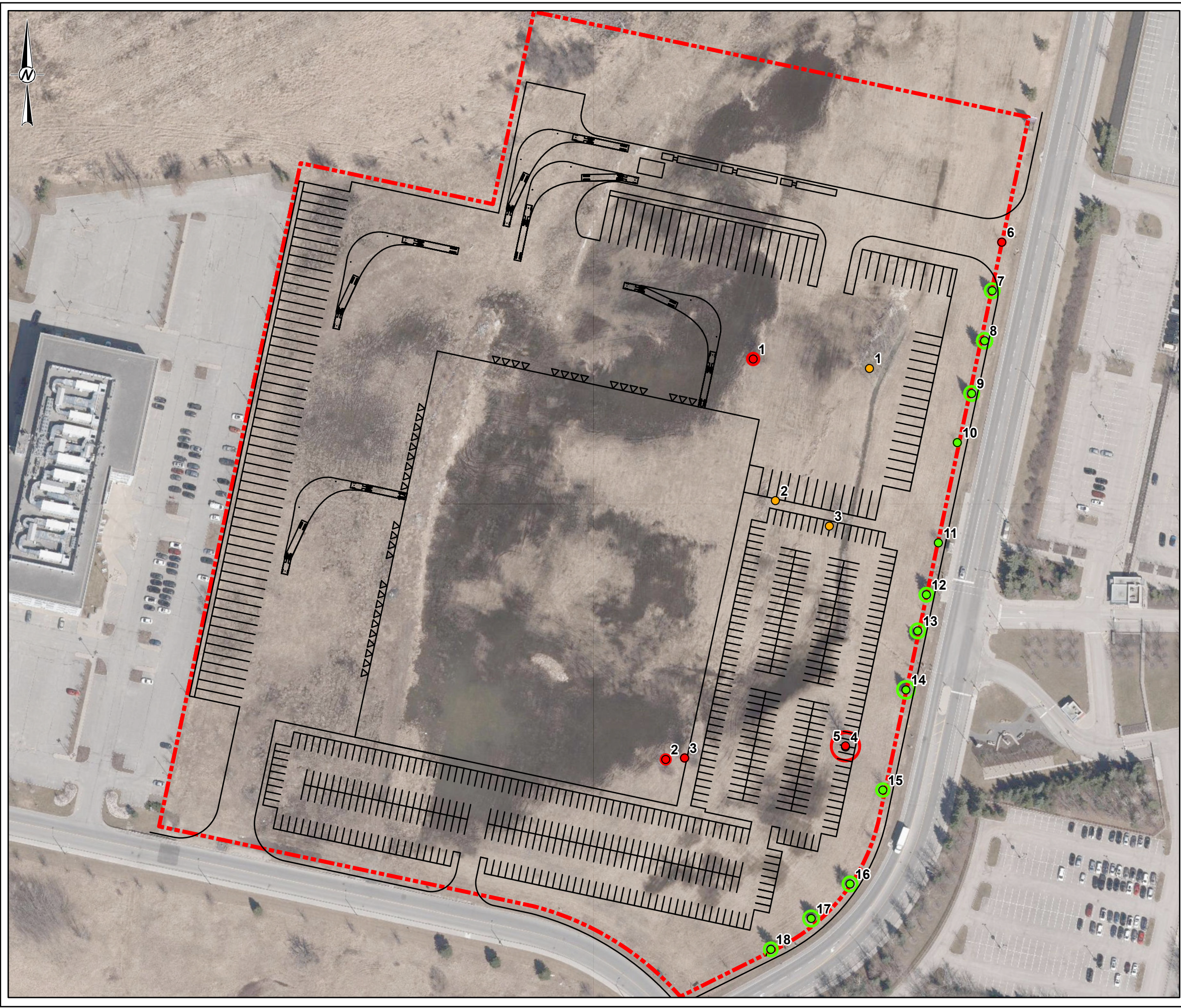
TITLE
CURRENT VEGETATION

CONSULTANT	YYYY-MM-DD	2023-01-31
DESIGNED	---	
PREPARED	JEM	
REVIEWED	FN	
APPROVED	KAM	

PROJECT No. 22569557 CONTROL 0001 REV. 0 FIGURE 1

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- LEGEND**
- TREE TO BE REMOVED
 - TREE CLUMP TO BE REMOVED
 - TREE TO BE RETAINED
 - CRITICAL ROOT ZONE OF TREE TO BE REMOVED
 - CRITICAL ROOT ZONE OF TREE TO BE RETAINED
 - SITE



NOTE(S)
1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)
1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. BASE MAP:
3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 18N

CLIENT
CANADA POST CORPORATION

PROJECT
**TREE CONSERVATION REPORT - CANADA POST CORPORATION
PROCESSING CENTRE, 88 LEIKIN DR., OTTAWA, ON**

TITLE
PROPOSED DEVELOPMENT AND CONSERVED VEGETATION

CONSULTANT	YYYY-MM-DD	2023-01-31
DESIGNED	---	
PREPARED	JEM	
REVIEWED	FN	
APPROVED	KAM	



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