McKINLEY
ENVIRONMENTAL
SOLUTIONS

Tree Conservation Report
Wateridge Village Phase 2B, Block 1

April 2020

Prepared for Uniform Developments

McKINLEY ENVIRONMENTAL SOLUTIONS
613-620-2255 | mckinleyenvironmental@gmail.com
www.mckinleyenvironmental.com

Uniform Developments
117 Centrepointe Drive, Suite 300
Ottawa, Ontario, K2G 5X3

April 16th, 2020

Attn: Annibale Ferro, Vice President of Operations

RE: Tree Conservation Report – Wateridge Village Phase 2B, Block 1

1.0 SITE OVERVIEW

McKinley Environmental Solutions (MES) was retained by Uniform Developments to complete a Tree Conservation Report (TCR) to support the proposed development of Block 1 of Wateridge Village Phase 2B. Wateridge Village is a multi-phase development located within the former Canadian Forces Base (CFB) Rockcliffe lands. The redevelopment of the former CFB Rockcliffe lands are subject to a Community Design Plan (CDP) that was approved by the City of Ottawa in 2015.

Block 1 of Wateridge Village Phase 2B is approximately 1.1 ha in size (the Site) (Refer to Figure 1). Block 1 is located north of Hemlock Road. The Site elevation is approximately 93 m Above Sea Level (ASL) and the Site is predominantly flat and well drained. The areas immediately south and west of the Site were recently cleared of natural vegetation cover and graded. At the current time, the areas south and west of the Site consist primarily of compacted gravel and crushed concrete. The areas east and north of the Site were historically developed as part of the former CFB Rockcliffe. The areas east and north of the Site have been extensively disturbed by demolition and remediation activities, and currently include limited areas of natural vegetation. As described below, Block 1 itself has been cleared of all tree coverage and currently consists primarily of compacted gravel and crushed concrete.

McKINLEY ENVIRONMENTAL SOLUTIONS

FIGURE 1: SITE OVERVIEW

Tree Conservation Report
Wateridge Village Phase 2B, Block 1

- Block 1 Outline

Please Note: This is not a legal land survey. All dimensions and locations are shown as approximate.

2.0 TREE INVENTORY METHODS

There are currently no trees within the Site (Block 1). Trees that occur within the area surrounding the Site were inventoried on April 4th, 2020. Weather conditions during the tree inventory included sunny skies and temperatures of 12 ºC. Early spring conditions were observed within the Site, with the majority of healthy trees budding and lacking leaf coverage.

The individual trees and tree stands found adjacent to the Site are too small for tree measurement plots to be utilized. Instead, individual stems were measured. Tree size measurements were taken with a D-tape, which is a calibrated diameter at breast height tape. Due to the lack of contiguous natural vegetation communities within and/or adjacent to the Site, trees were not classified according to the Ecological Land Classification system. Instead, individual trees and tree stands were identified and are described below.

2.1 Definitions

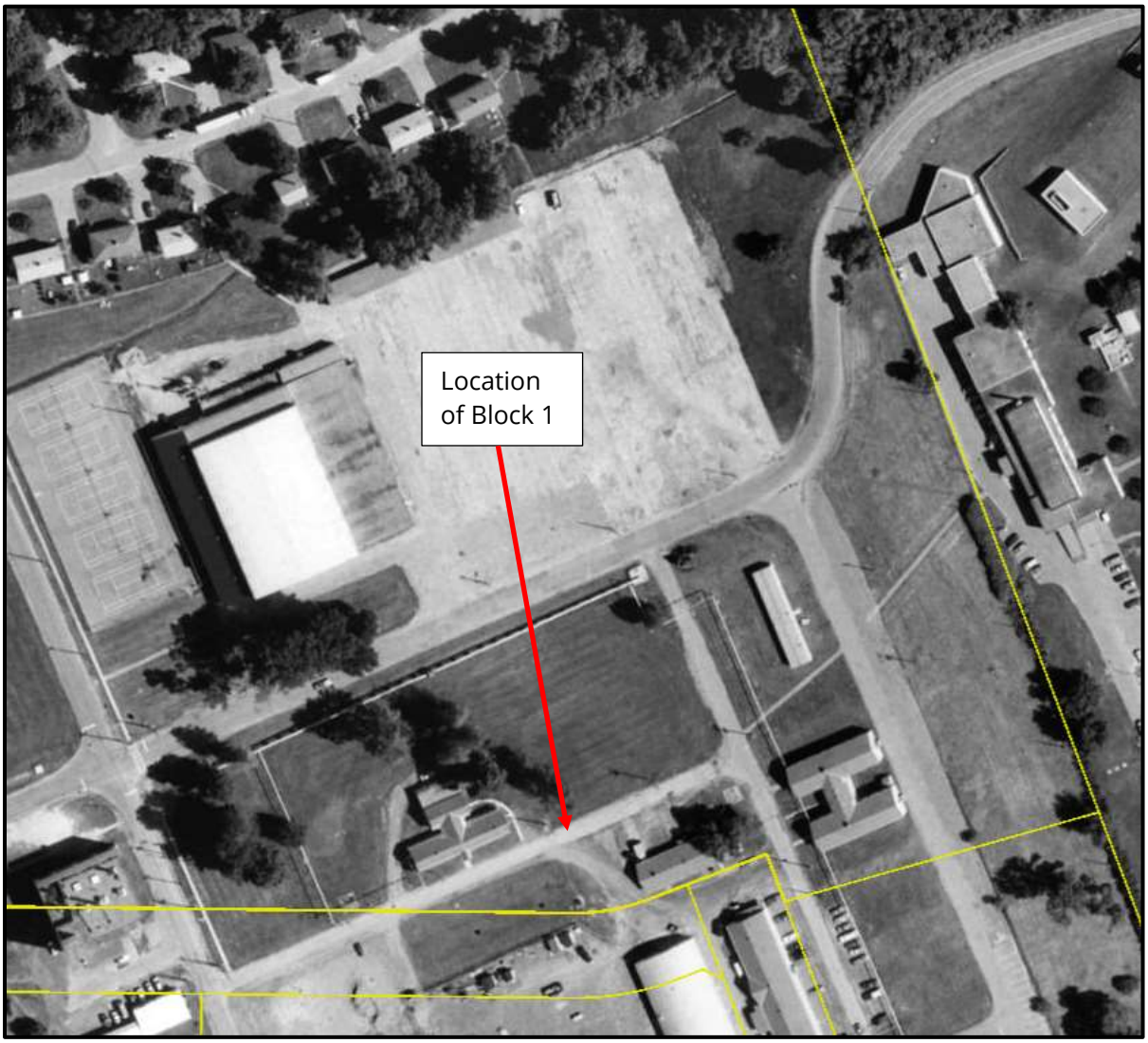
The following terms are used throughout this report:

- Diameter at Breast Height (dbh) means the measurement of the trunk of a tree at a height of 120 cm above grade for trees 15 cm diameter or greater, and at a height of 30 cm above grade for trees less than 15 cm diameter.
- The Critical Root Zone (CRZ) is 10 centimeters from the trunk of the tree for every centimeter of trunk dbh. The CRZ is calculated as dbh x 10 cm.

3.0 TREE INVENTORY

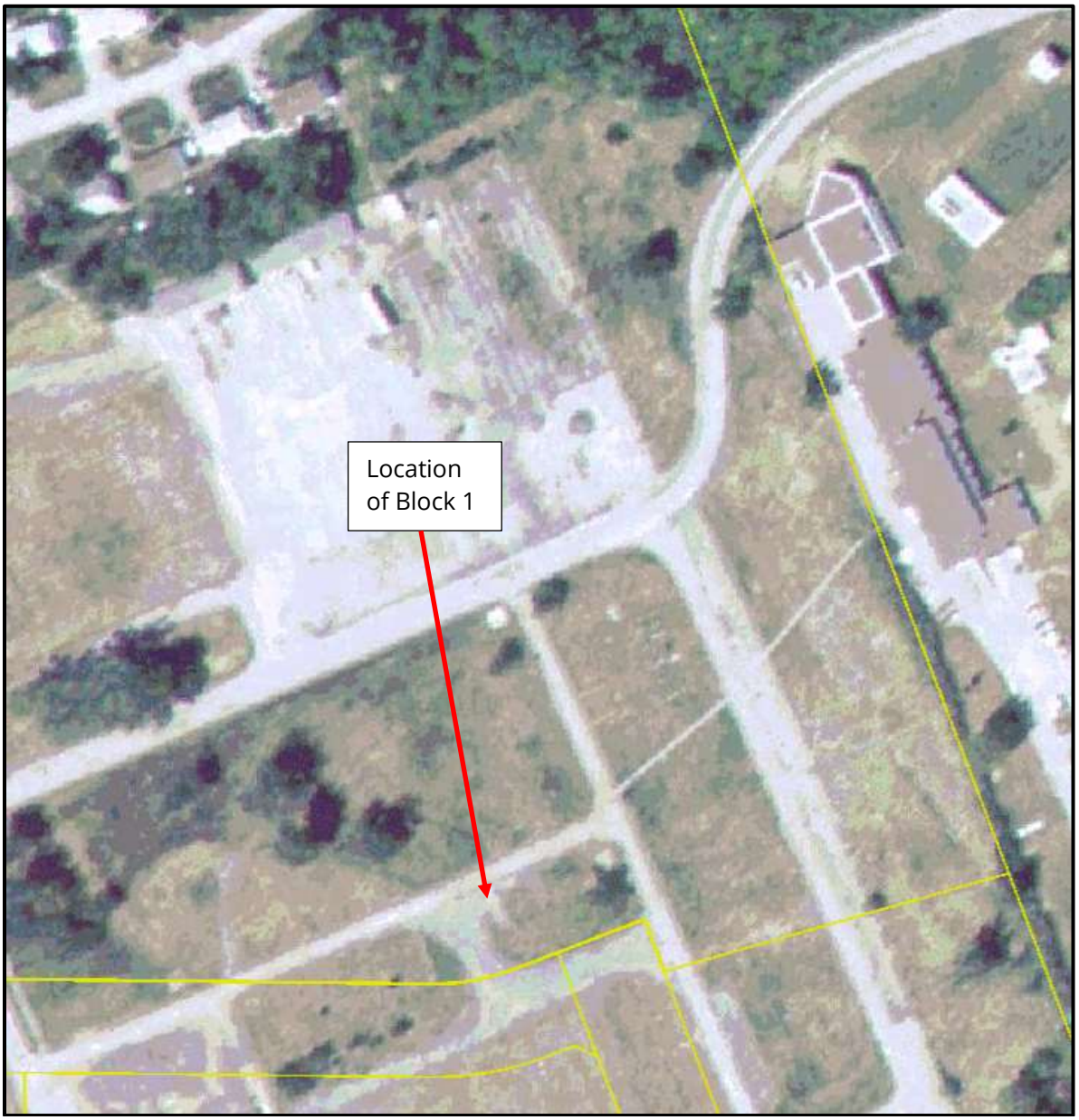
3.1 Site History

Air photos from 1991, 1999, and 2008 are included below (Photos from City of Ottawa 2020). The 1991 air photo shows that Block 1 was previously developed as part of the former CFB Rockcliffe, with several buildings present in 1991. Between 1991 and 1999, the buildings within Block 1 were demolished. In 1999, negligible tree cover is present adjacent to Block 1. By 2008, evidence of young recent regrowth trees and shrubs is visible in the locations currently occupied by Tree Stand 1, Tree Stand 2, and Tree Stand 3. This suggests that the oldest trees within Tree Stand 1, Tree Stand 2, and Tree Stand 3 are approximately fifteen (15) years of age.



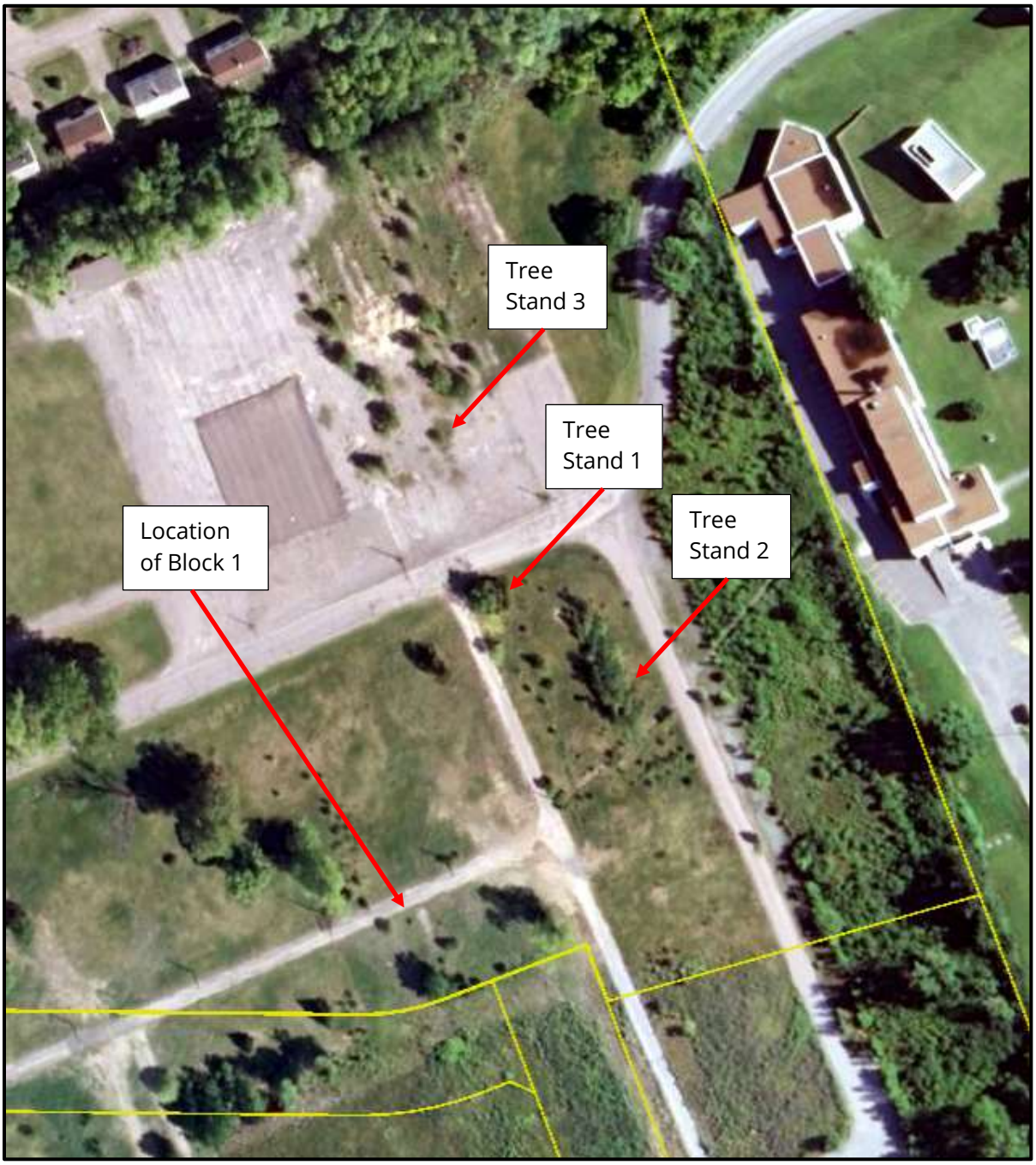
Historic Air Photograph 1: Historic Air Photo from 1991. In 1991, Block 1 was developed as part of the former CFB Rockcliffe, with several buildings present (Photo from City of Ottawa 2020).

McKINLEY ENVIRONMENTAL SOLUTIONS
613-620-2255
mckinleyenvironmental@gmail.com
www.mckinleyenvironmental.com



Historic Air Photograph 2: Historic Air Photo from 1999. Between 1991 and 1999, the buildings within Block 1 were demolished. Negligible tree cover is present adjacent to Block 1 in 1999 (Photo from City of Ottawa 2020).

McKINLEY ENVIRONMENTAL SOLUTIONS
613-620-2255
mckinleyenvironmental@gmail.com
www.mckinleyenvironmental.com



Historic Air Photograph 3: Historic Air Photo from 2008. In 2008, young recent regrowth trees and shrubs are present in the locations currently occupied by Tree Stand 1, Tree Stand 2, and Tree Stand 3 (Photo from City of Ottawa 2020).

McKINLEY ENVIRONMENTAL SOLUTIONS
613-620-2255
mckinleyenvironmental@gmail.com
www.mckinleyenvironmental.com

3.2 Trees and Tree Stands

Photographs of the Site are included below. As shown below in Figure 2, until recently several trees and tree stands were present within Block 1 and within the area immediately to the west. During the April 2020 site visit, the areas immediately south and west of the Site were observed to have been recently cleared of natural vegetation cover and graded. At the current time, the areas south and west of the Site consist primarily of compacted gravel and crushed concrete. Block 1 itself was also recently cleared of all trees and shrubs, and currently consists primarily of compacted gravel and crushed concrete.

Several tree stands are present in the vicinity of the Site to the east and north of Block 1. The areas east and north of the Site were historically developed as part of the former CFB Rockcliffe. Although several tree stands are present, the areas east and north of the Site have been extensively disturbed by demolition and remediation activities. As described above, the oldest trees found east and north of the Site are approximately fifteen (15) years of age. None of the tree stands are large enough to qualify as forest or woodlot habitats, and therefore a Significant Woodlot assessment was not required. The tree stands found east and north of the Site include the following:

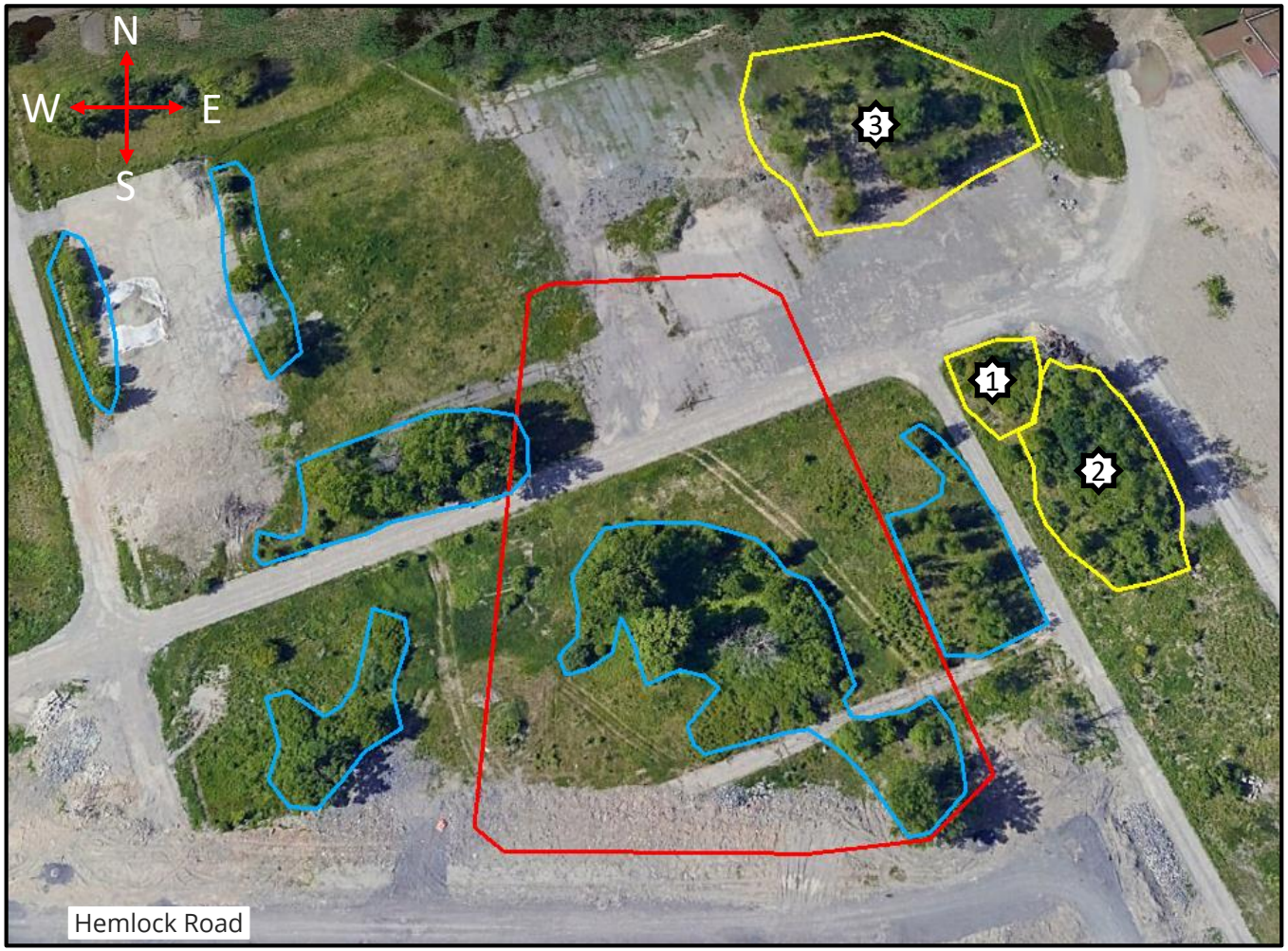
- **Tree Stand 1:** Tree Stand 1 is present east of Block 1. Tree Stand 1 includes seven (7) White Cedar *(Thuja occidentalis*) stems that vary in size between 10 cm and 25 cm diameter at breast height (dbh). There are also four (4) Basswood (*Tilia americana*) stems measuring 17 cm, 23 cm, 27 cm, and 35 cm dbh in size. Shrub cover within Tree Stand 1 and the adjacent Tree Stand 2 includes Staghorn Sumac (*Rhus typhina*), Red Osier Dogwood (*Cornus sericea*), young American Elm (*Ulmus americana*) stems (<10 cm dbh), and young White Ash (*Fraxinus americana*) stems (<10 cm dbh).
- **Tree Stand 2:** Tree Stand 2 is dominated by Trembling Aspen (*Populus tremuloides*), with some White Birch (*Betula papyrifera*) and American Elm present. The trees within Tree Stand 2 vary in size between 10 cm and 30 cm dbh.
- **Tree Stand 3:** Tree Stand 3 consists of several small groups of trees that predominantly include Trembling Aspen, although several White Ash and American Elm are also present. The trees within Tree Stand 3 vary in size between 10 cm and 30 cm dbh.

McKINLEY ENVIRONMENTAL SOLUTIONS
613-620-2255
mckinleyenvironmental@gmail.com
www.mckinleyenvironmental.com

McKINLEY ENVIRONMENTAL SOLUTIONS

FIGURE 2: VEGETATION FEATURES

Tree Conservation Report
Wateridge Village Phase 2B, Block 1



- Block 1 Outline
- Previously Cleared Stands
- Current Tree Stands
1 - Vegetation Feature Number

Please Note: This is not a legal land survey. All dimensions and locations are shown as approximate.

Photograph 1: Looking north across Block 1 (April 4th, 2020).

Photograph 2: Looking northeast across Block 1. Tree Stand 1 is visible in the background (April 4th, 2020).

Photograph 3: Looking west across Block 2, which is located immediately west of Block 1. The area shown previously included a Butternut Tree (discussed below) (April 4th, 2020).

Photograph 4: Looking east at Tree Stand 1 (April 4th, 2020).

McKINLEY ENVIRONMENTAL SOLUTIONS
613-620-2255
mckinleyenvironmental@gmail.com
www.mckinleyenvironmental.com

Photograph 5: Looking east at Tree Stand 2 (April 4th, 2020).

Photograph 6: Looking northwest at Tree Stand 2 (April 4th, 2020).

Photograph 7: Looking west at Tree Stand 3 (April 4th, 2020).

3.3 Butternut Trees

In 2019, Dillon Consulting completed an Environmental Impact Statement (EIS) to support the Draft Plan of Subdivision application for Wateridge Village Phase 2A and 2B (Dillon Consulting 2019). As part of the 2019 study, Dillon Consulting completed a Butternut Health Assessment (BHA) throughout the Wateridge Village Phase 2A and 2B lands. Butternut Trees (*Juglans cinerea)* are listed as an endangered species under the Ontario Endangered Species Act (ESA) (SARO 2020). The rules and regulations of the Ontario ESA identify the area within 50 m of a Butternut Tree as habitat for the species (SARO 2020). One (1) Butternut Tree was identified within 50 m of Block 1 (labelled as Butternut #5) (Dillon 2019). Butternut #5 was previously present west of Block 1 within the adjacent Block 2. As described above, Block 2 has since been cleared of tree cover. During the April 2020 site visit, McKinley Environmental Solutions verified that Butternut #5 is no longer present west of Block 1. During the surveying of Tree Stand 1, Tree Stand 2, and Tree Stand 3, no additional Butternut Trees were noted. There are therefore no Butternut Trees currently found within the vicinity of Block 1. No regulatory requirements with respect to the potential presence of Butternut Trees and the Ontario ESA have been identified for the development of Block 1.

4.0 TREE RETENTION AND MITIGATION MEASURES

There are no areas of tree retention identified within Block 1. The largest tree identified within Tree Stand 1, Tree Stand 2, and Tree Stand 3 measured 35 cm diameter at breast height (dbh) in size (discussed above). The Critical Root Zone (CRZ) of trees is generally recognized as being 10 cm from the trunk of a tree for every centimeter of trunk dbh. As such, the largest tree within Tree Stand 1, Tree Stand 2, and Tree Stand 3 has a CRZ of approximately 3.5 m. The nearest tree to Block 1 is approximately 26 m to the northeast. As such, there is sufficient separation distance between Block 1 and the tree stands to protect the CRZ of the adjacent trees. The development of Block 1 is therefore unlikely to significantly negatively impact the adjacent trees found to the north and east of the Site.

In order to protect the adjacent tree stands during the development, the following tree protection measures should be implemented:

- Soil compaction, vegetation damage, intrusion of construction equipment and other potential impacts on the core of the root systems of retained trees found adjacent to the Site should be avoided by restricting grading and other site alteration activities to the designated construction area. This can be achieved by providing construction fencing or suitable boundary definition to clearly mark the boundaries between the edge of the construction area and areas of tree retention/adjacent properties (where required), during each phase of construction; and
- If damage to trees that are identified for retention occurs, an arborist should review any damage to determine the best course of action to restore the original vegetation functions. Alternatively, damaged trees can be replaced with new plantings.

Tree mitigation measures have been proposed to help protect and preserve retained trees. Trees to be retained should be protected by the following tree preservation measures:

- Mark the edge of the construction/tree clearing area to ensure only designated trees are removed. Protect the critical root zone (CRZ) of retained trees, where the CRZ is established as being 10 cm from the trunk of a tree for every centimeter of trunk dbh. The CRZ is calculated as dbh x 10 cm;
- When trees to be removed overlap with the CRZ of trees to be retained, cut roots at the edge of the CRZ and grind down stumps after tree removal. Do not pull out stumps. Ensure there is not root pulling or disturbance of the ground within the CRZ;
- If roots must be cut, roots 20 mm or larger should be cut at right angles with clean, sharp horticultural tools without tearing, crushing, or pulling;

- Do not place any material or equipment within the CRZ of any tree;
- Do not attach any signs, notices, or posters to any tree;
- Do not damage the root system, trunk, or branches of any tree; and
- Ensure that exhaust fumes from all equipment are directed away from any tree canopy.

5.0 REPLANTING

In order to mitigate the loss of woody vegetation from Site clearing, consideration should be given to replanting trees and shrubs within the development area. Plantings should emphasize the use of native trees and shrubs, which may include those that are currently found in the area, as identified above. Planting of Ash trees should be avoided due to the high likelihood that any planted Ash trees will become infested with Emerald Ash Borer.

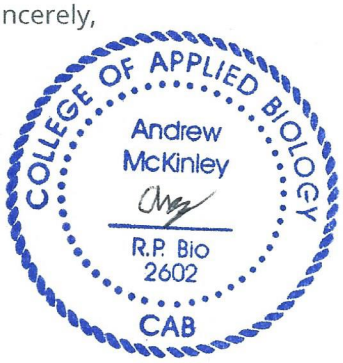
McKINLEY ENVIRONMENTAL SOLUTIONS
613-620-2255
mckinleyenvironmental@gmail.com
www.mckinleyenvironmental.com

6.0 CLOSURE

Pending that the regulatory, mitigation, and avoidance measures outlined in this report are implemented appropriately, the development of Block 1 of Wateridge Village Phase 2B is not anticipated to have a significant negative effect on the natural features and functions.

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,



Dr. Andrew McKinley, EP, RP Bio.
Senior Biologist, McKinley Environmental Solutions

McKINLEY ENVIRONMENTAL SOLUTIONS
613-620-2255
mckinleyenvironmental@gmail.com
www.mckinleyenvironmental.com

7.0 REFERENCES

City of Ottawa (2020) Geo-Ottawa Municipal Mapping Site. <http://maps.ottawa.ca/geoottawa/> (Accessed April 5th, 2020).

Dillon Consulting (2019) Wateridge Village Phase 2A & 2B Environmental Impact Statement. Report # 18-8960.

Ontario Ministry of Natural Resources and Forestry (OMNRF) (2010) OMNRF Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005, Second Edition.

Ontario Ministry of Natural Resources and Forestry (OMNRF) (2020) Natural Heritage Information Center <http://nhic.mnr.gov.on.ca/> (Accessed April 5th, 2020).

Species at Risk Ontario (SARO) (2020) Species at Risk Ontario. <http://www.ontario.ca/environment-and-energy/species-risk-ontario-list> (Accessed April 5th, 2020).