

Environmental Impact Statement Phoenix Homes - Old Montreal Road

Updated Report

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Submitted To:

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List of Acronyms and Abbreviations

ANSI – Areas of natural or scientific interest
cm – centimetres
CRZ – Critical root zone
DBH – Diameter at Breast Height
DFO – Department of Fisheries and Oceans (Fisheries and Oceans Canada)
ECCC – Environment and Climate Change Canada
EIS – Environmental Impact Statement
ELC – Ecological Land Classification
ESA – *Endangered Species Act*
FWCA – *Fish and Wildlife Conservation Act*
ha - hectare
KAL – Kilgour & Associates Ltd.
km – kilometre
LIO – Land Information Ontario
m – metre
MBCA – *Migratory Birds Convention Act*
MECP – Ministry of Environment, Conservation and Parks
NESS – natural environmental system strategy
NHIC – Natural Heritage Information Centre (2020a)
OBBA – Ontario Breeding Bird Atlas
OMAFRA – Ontario Ministry of Agriculture, Food, and Rural Affairs
OP – Official Plan
ORAA – Ontario Reptile and Amphibian Atlas
PPS – Provincial Policy Statement
PSW – Provincially Significant Wetland,
RNA – Rural Natural Area
ROW – Right-of-Way
RVCA – Rideau Valley Conservation Authority
SAR – Species at risk
SARA – *Species at Risk Act*
SARO – Species at Risk in Ontario
SWH – Significant Wildlife Habitat
TCR – Tree Conservation Report
UNA – Urban Natural Area



1.0 INTRODUCTION

This report is an Environmental Impact Statement (EIS) prepared by Kilgour & Associates Ltd. (KAL; Appendix A) on behalf of Phoenix Homes in support of their proposed development of the properties on Old Montreal Road, Ottawa, Ontario. The subject properties (Cumberland; CON 1 PT LOT 27, 28 OS; PIN 145260027, 145260023, 145260026, 145260024, 145260025) are located at 1154, 1180, 1172, 1176, and 1208 Old Montreal Road and cover approximately 18.5 ha. The proposed development area (herein the “Site”) will include approximately 5.3 ha on the northern half of the properties (Figure 1).

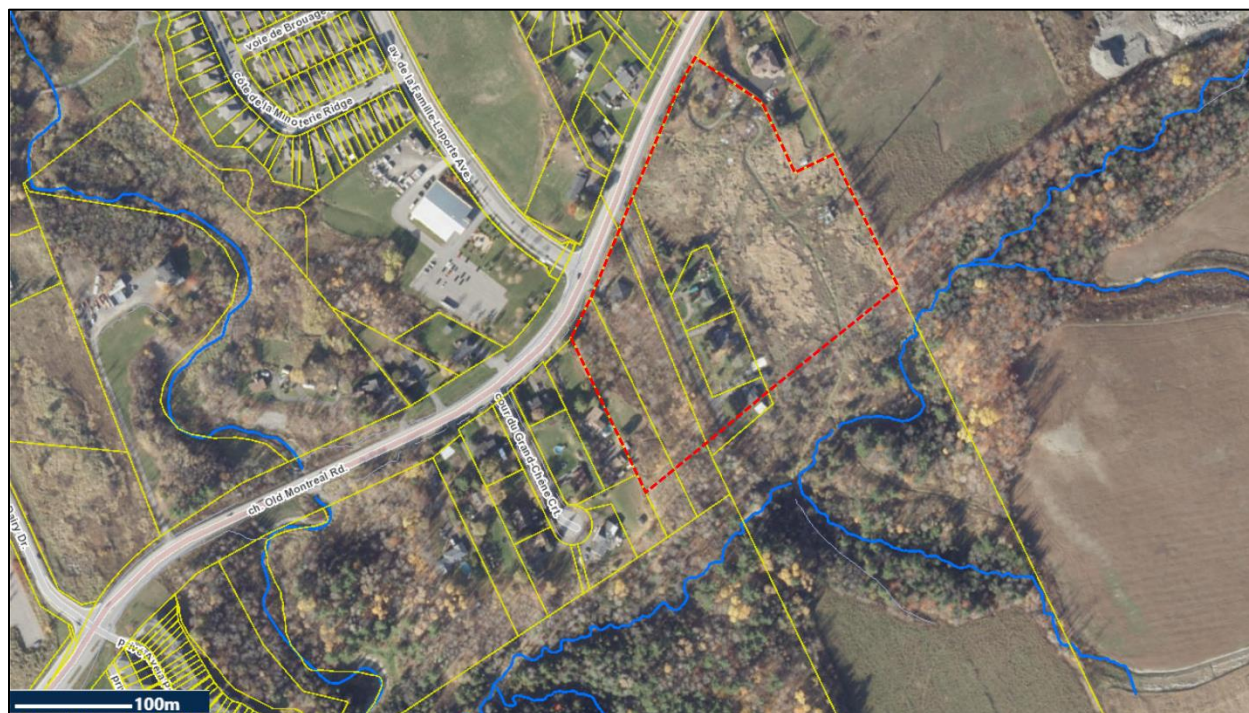


Figure 1. Site context

In the City of Ottawa, an EIS is required when development or site alteration is proposed in or adjacent to natural heritage features, as outlined in Section 4.8 of the Official Plan (City of Ottawa, 2021). The purposes of an EIS are to:

- Identify natural heritage features on or adjacent to the Site;
- Assess potential impacts of the proposed development to existing features; and
- Recommend mitigation measures to minimize or eliminate identified impacts.

There are several triggers for this EIS including: 1) proximity of the site to a Cardinal Creek tributary; and, 2) the presence of potential habitat for species at risk (SAR) including Butternut (*Juglans cinerea*) and Barn Swallow (*Hirundo rustica*).

The specific project supported by this EIS is the development of a new residential subdivision on the northern portion of the site. The southern boundary of the proposed development will be to the north of



an unnamed tributary to Cardinal Creek and its associated valley, with the appropriate buffer determined by geological surveys of the valley and in consultation with the City and Rideau Valley Conservation Authority (RVCA).

2.0 PROPERTY IDENTIFICATION

The subject properties situated at 1154, 1180, 1172, 1176 and 1208 Old Montreal Road encompass approximately 18.5 ha; however, the proposed development areas (herein referred to as the “Site”) represents approximately 5.4 ha of that total area. The Site is located immediately south of Old Montreal Road and approximately 1.3 km south of the Ottawa River. The subject properties include multiple rural zones (RR and RU), a parks and open spaces zone (O1) and an agricultural (AG) zone at the southernmost limits (Ottawa, 2017a). The Site itself spans only the RR and RU zones and abuts the O1 zone. The Site is predominately characterized by open meadows with young forested and woodland patches and scattered trees and hedgerows. A mature forested area immediately south of the Site (on the same property) is characterized by dense forested lands sloping down to a tributary of Cardinal Creek.

The Site is bordered by:

- Old Montreal Road and new residential subdivisions to the north;
- Undeveloped agricultural lands to the east;
- A tributary to Cardinal Creek and agricultural lands to the south; and
- Rural residential properties, Cardinal Creek, agricultural lands and residential subdivisions to the west.

3.0 ENVIRONMENTAL POLICY CONTEXT

Natural heritage policies and legislation relevant to this EIS are outlined below.

3.1 The Provincial Policy Statement, 2020

The Provincial Policy Statement (PPS) was issued under Section 3 of the *Planning Act* (Government of Ontario, 1990a). The current PPS came into effect on May 1, 2020 (Government of Ontario, 2020). Natural features are afforded protections under Section 2.1 of the PPS, via the official plans and environmental policies of the municipal jurisdictions in which development is proposed. Protections may include maintenance, restoration, and improved function of diversity, connectivity, ecological function, and biodiversity of natural heritage systems. These protections restrict development and site alteration in significant natural areas (e.g., significant habitat of endangered and threatened species, significant wetlands, significant coastal wetlands, significant woodlands, significant valleylands, significant wildlife habitat (SWH), Areas of Natural and Scientific Interest (ANSI), and fish habitat) unless it can be demonstrated that there will be no negative effects on the features and ecological functions of those natural areas. Technical guidance for implementing the natural heritage policies of the PPS is found within the second edition of the *Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005* (NHRM; Ministry of Natural Resources (MNR), 2010). This manual recommends the approach and technical criteria for protecting natural heritage features and areas in Ontario. This



manual further addresses the width of adjacent lands to be considered when evaluating potential negative impacts, such as areas within 120 m of protected natural heritage features.

3.2 City of Ottawa Official Plan, 2021

The City of Ottawa Official Plan (2021) provides direction for future growth in the City of Ottawa and is a policy framework to guide physical development to 2031 in accordance with the PPS. The Official Plan was first approved in 2003 and is updated every five years. The Official Plan includes a Natural Heritage Features map (Schedule C11-A), providing additional information on wetlands, watercourses, and wooded areas within the City boundaries (City of Ottawa, 2021).

3.3 Greater Cardinal Creek Subwatershed Management Plan

The Greater Cardinal Creek Subwatershed Management Plan (herein, the “GCCSMP”; AECOM, 2014) was initiated to address three land use planning and environmental issues, including: 1) environmental impacts of urban and rural development pressures within the study area; 2) documented water quality problems within Cardinal Creek; and, 3) documented erosion and slope stability concerns along Cardinal Creek. The study was planned and conducted in accordance with City of Ottawa Official Plan Policy 2.4.3, which identifies and protects the natural heritage system, recommends areas for development and preservation, and provides guidelines for development and monitoring.

The GCCSMP identified the adjacent forested area south the Site as a Significant Woodland, but not a Significant Valleyland (presumably because of its relatively small upstream catchment area). As a Significant Woodland, the forested area is considered generally within the GCCSMP as constituting part of the Natural Heritage System, though it does indicate a large portion of the feature as “Additional Development Lands”. Regardless, the GCCSMP provides for general management recommendations to for protection and improvement of Natural System Heritage Features (i.e. the Significant Woodland) where possible including:

- Preventing any further loss or intrusion into component features;
- Preventing any further fragmentation of linkages;
- Prevent, and/or minimize, road crossings through linkages, particularly where there are watercourses;
- Preserving smaller isolated woodlots where possible; and
- Where natural features abut rear yards, installing appropriate fencing to prevent incremental intrusion. Retaining mature trees or tree clusters.

The GCCSMP provides recommended minimum watercourse setbacks for Cardinal Creek (and its tributary to the south of the development area) as the greater of:

- a) Regulatory flood line
- b) Geotechnical limit of hazard lands
- c) 30 m from normal high-water mark
- d) 25 m from top of bank
- e) Setback as determined through an Environmental Impact Statement
- f) Setback as determined through a Drain Engineer’s report.



3.4 *Species at Risk Act, 2002*

The federal *Species at Risk Act* (SARA, 2002) is administered by Environment and Climate Change Canada (ECCC) and provides direction to protect and ensure the survival of wildlife species in Canada. The purpose of the SARA is to prevent populations of wildlife from becoming Extirpated, Endangered, or Threatened, provide recovery Endangered or Threatened species, and to manage other species to prevent them from becoming Endangered or Threatened.

All species listed on Schedule 1 of SARA are afforded protection on federal lands. Aquatic species and species of migratory birds protected by the *Migratory Birds Convention Act* (MBCA; 1994) and listed as Endangered, Threatened, or Extirpated under Schedule 1 of SARA are protected wherever they occur in Canada, regardless of land ownership.

3.5 *Endangered Species Act, 2007*

The provincial *Endangered Species Act* (ESA, Government of Ontario, 2007) is administered by the Ministry of Environment, Conservation, and Parks (MECP) and provides protection for species at risk (SAR) and their habitat. The ESA states that it is illegal to harm the habitat of species listed as Extirpated, Endangered, and Threatened. It is also illegal to kill, harm, harass, possess, transport, buy, or sell Extirpated, Endangered, and Threatened species, whether it is living or dead. Species listed as Endangered, Threatened, or Extirpated and their habitats (e.g., areas essential for breeding, rearing, feeding, hibernation, and migration) are automatically afforded legal protection under the ESA.

3.6 *Fisheries Act, 1985*

The federal *Fisheries Act* (Government of Canada, 1985) is administered by Fisheries and Oceans Canada (DFO) and provides protections to fish, fish habitat, and fisheries. Specifically, the *Fisheries Act* in its current version provides: 1) Protection for all fish and fish habitat; 2) Prohibition against the “harmful alteration, disruption or destruction of fish habitat”; and 3) Prohibition against causing “the death of fish by means other than fishing”.

Projects with a scope that does not fall within DFO’s defined standards and codes of practice require submission or a request for review to DFO.

3.7 *Migratory Birds Convention Act, 1994*

Nesting migratory birds are protected under the *Migratory Birds Convention Act* (MBCA; Government of Canada, 1994). No work is permitted that would result in the destruction of active nests or the wounding or killing of bird species protected under the MBCA and/or associated regulations (e.g., SARA). The “incidental take” of migratory birds and the disturbance, destruction, or taking of the nest of a migratory bird is prohibited. “Incidental take” is the killing or harming of migratory birds due to actions that are not primarily focused on taking migratory birds (e.g., economic development) and no permits exist for the incidental take of migratory birds or their nest/eggs as a result of activities that are not focused on taking migratory birds. These prohibitions apply throughout the year. The Government of Canada has compiled nesting calendars that apply across Canada that can be used to greatly reduce the risk of harming/destroying active nests by ensuring works that may impact nests are performed outside of the



3.8 Fish and Wildlife Conservation Act, 1997

The provincial *Fish and Wildlife Conservation Act* (FWCA; Government of Ontario, 1997) governs the hunting and trapping of a variety of wildlife including mammals, birds, reptiles, amphibians, and fish in Ontario, thereby facilitating the protection of wildlife and their habitat. The FWCA outlines the prohibition of hunting or trapping specially protected species and the requirement for provincially issued licenses for the hunting or trapping of “fur-bearing” or “game” animals. Examples of specifically protected animals include, for example, Southern Flying Squirrel (*Glaucomys volans*), Northern Harrier (*Circus cyaneus*), American Kestrel (*Falco sparverius*), Blue Jay (*Cyanocitta cristata*), Midland Painted Turtle (*Chrysemys picta marginata*), Northern Watersnake (*Nerodia sipedon*) and Gray Treefrog (*Hyla versicolor*). In particular, raptors that are not protected under the MBCA (including Peregrine Falcon) are protected under the FWCA.

3.9 Conservation Authorities Act, 1990

Conservation Authorities were created to address erosion, flooding, and drought concerns regionally by managing at the watershed level. Conservation Authorities were given the ability to regulate under Section 28 of the *Conservation Authorities Act*. The Act provides mechanisms to regulate works and site alterations that have a potential to affect erosion, flooding, land conservation, and alterations to waterbodies within their jurisdiction. It is the obligation of all Conservation Authorities to implement Ontario Regulations 42/06 and 146/06 to 182/06 *Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses* under Section 28 of the *Conservation Authorities Act* for relevant works.

4.0 METHODOLOGY

4.1 Desktop and Background Data Review

4.1.1 Records Review

The description of the existing natural environment is partially based on a desktop review of previously completed studies and information available on publicly accessible databases, including:

- Urban Natural Areas Environmental Evaluation Study (Muncaster Environmental Planning Inc., 2005; 2006)

On-line databases queried for SAR, provincially rare species, and natural heritage features included the following:

- DFO SAR Mapping (DFO, 2020);
- Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA) Drainage Classification Mapping (OMAFRA, 2020);
- Ontario MNRF
 - Natural Heritage Information Centre (NHIC, 2020a);



- Land Information Ontario (LIO) Provincially Tracked Species Grid Detail (MNRF, 2020b);
- Species at Risk in Ontario (SARO) List (MNRF, 2020c);
- SARA, Schedule 1 (Government of Canada, 2020);
- Ontario Breeding Bird Atlas (OBBA; Cadman et. al., 2007; Ontario Nature, 2020a));
- Ontario Reptile and Amphibian Atlas (ORAA; Ontario Nature, 2020b);
- Atlas of the Mammals of Ontario (AMO; Dobbyn, 1994);
- RVCA Mapping Geoportal (RVCA, 2021);
- City of Ottawa
 - Official Plan Schedules (City of Ottawa, 2021); and
 - geoOttawa Mapping database (City of Ottawa, 2021) .

4.1.2 Agency Consultation

In the fall of 2017, KAL Biologist Anthony Francis filed an information request with Ministry of Natural Resources and Forestry (MNRF; the ministry with oversight for SAR at the time) for records of existing SAR observations in the vicinity of the Site. The MNRF response dated December 12, 2017 (Appendix B) identified six species considered to have some potential for occurrence on or near the Site based on their review of the Natural Heritage Information Centre (NHIC) and internal records.

The Site is located within the jurisdictions of the City of Ottawa, the MECP Kemptville district, and the RVCA. No request for information was submitted to Fisheries and Oceans Canada (DFO) for this project as the Site is setback from the adjacent water feature (i.e., the Cardinal Creek Tributary) by >60 m and includes no areas of fish habitat.

4.2 Field Surveys

KAL undertook preliminary field studies in 2017 and 2018, encompassing a tree survey, breeding bird survey and preliminary Headwater Drainage Features Assessment (HDFA). Subsequently, to provide an updated examination of current site conditions, KAL undertook field studies in summer 2021 to document existing ecological conditions on the Site and to confirm the results of the background review. The following field surveys were undertaken to support this report: vegetation community survey (Ecological Land Classification), tree survey, and breeding bird surveys.

4.2.1 Surface Water Characterization

Aerial imagery and public databases were reviewed to identify watercourses on the Site (MNRF, 2022a; geoOttawa). An HDFA was initiated for the Site in 2021, providing a description of surface water features on and directly adjacent to the Site following the methods identified within *Evaluation, Classification and*



Management of Headwater Drainage Features Guidelines (Credit Valley Conservation Authority and Toronto Region Conservation Authority, 2014).

Headwater Drainage Features (HDFs) are typically non-permanently flowing drainage features that are important for maintaining healthy watersheds. HDFs may not have defined beds or banks and can include first order and zero-order intermittent and ephemeral channels, swales, and connected headwater wetlands. Conservation Authorities are concerned with land development activities that can alter and/or eliminate HDFs. Such activities could have broad implications for water quality and quantity, recharge/infiltration, and the overall health of the local HDF and downstream aquatic habitat.

Brief visual inspections of surface water features were conducted through 2018 and 2021 as part of the HDFA (Appendix C) to assess water levels, and to characterize channel morphology, storage capacity, and riparian and in-stream vegetation. HDFA inspections also determined functionality as fish habitat.

4.2.2 Ecological Land Classification

Vegetation communities on the Site were identified and mapped in the field on June 18, 2021, using standard Ecological Land Classification (ELC) methods for Ontario (Lee et al., 1998). This method provides a consistent approach to identify, describe, and map vegetation communities or physiographic features on the landscape based on dominant plant species and soil composition. This method results in a standardized description of each vegetation community to capture the natural diversity and variability of communities within a site and to provide insight into available habitat and the type of species that may be present. More specifically, the classifications from ELC provide a basis for determining whether potential habitat for a given SAR or other ecological value may be present.

Desktop review of available aerial imagery and preliminary field visits informed how the Site may be divided into vegetation communities based on variation in land cover, topography, and vegetation structure. The dominant plant species were recorded within each proposed ecosite in the field to further divide ecosites into vegetation types (the finest resolution in ELC), where possible. Representative photos of each ELC unit on the Site were taken and are included with the community descriptions in this report.

4.2.3 Tree Survey

A detailed tree survey was undertaken concurrently with the ELC exercise described above, following tree survey guidelines set forth by the City (City of Ottawa, 2020). All trees with a diameter at breast height (DBH) of ≥ 10 cm standing in open areas were identified, enumerated, mapped, their DBH measured, and their general health and condition documented. Clusters of trees on Site contained too many trees to practically list every individual over 10 cm DBH. For these areas, only significantly sized trees (i.e., generally >50 cm DBH) were individually identified and mapped. All treed areas on Site were checked for Butternut (*Juglans cinerea*; listed as Endangered under ESA and SARA) and assessed for potential bat presence based on the presence of wildlife trees (e.g., those with cavities, dead leaf cluster, and/or snags ideal for bat roosting), and to document trees that may be impacted by the proposed development.

4.2.4 Birds

An initial, exploratory field visit to the Site took place on November 13, 2017 (i.e., well outside the typical breeding bird season for Ottawa) to coarsely characterize the Site and identify potential bird habitat.



Subsequently, morning breeding bird surveys were performed using point counts following the Ontario Breeding Bird Atlas Guide for Participants (Birds Canada et al., 2001; Birds Canada et al., 2021).

Breeding bird surveys are to be completed from survey stations that, combined, provide suitable viewing of all habitats on a site on calm weather days with light wind (<3 on the Beaufort Scale¹) and no precipitation. Per the Ontario Breeding Bird Atlas, two rounds of surveys are to take place between sunrise and five hours after sunrise between May 24 and July 10.

Bird surveys in 2018 were conducted the mornings of June 14 and 19, and July 9, 2018, from two stations with a focus on the fields and open areas of the Site. Three surveys were employed as the 2017 site review suggested some (limited) potential for the Site to support at-risk grassland bird species including Bobolink and Barn Swallow (which was subsequently delisted as a species at risk). As the 2018 surveys had found no evidence to support the Site as suitable for at-risk grassland bird species; only the two surveys were considered to be required subsequently in 2021.

Breeding bird surveys in 2021, were conducted on the mornings of June 9 and June 23, 2021. A total of four breeding bird survey stations were established in representative habitats across the Site (Figure 2). All incidental observations were recorded while moving between survey points, as well as during other visits to the Site. Birds were identified by sight (i.e., direct visual observation) and/or sound (i.e., song or call).

Bird species were classed as regionally rare based on an analysis of data from the Atlas of Breeding Birds of Ontario (Cadman et al., 1987) based on Hill's Site Regions, now Ecoregions. The Ontario Wetland Evaluation System: Southern Manual (MNR, 2014) also assisted with classifying regionally significant breeding birds in the area (Region 6). The federal and provincial significance of bird species were classed based on species' listings under Schedule 1 of SARA and the ESA, and species tracked by NHIC (MNR, 2022a) for non-SAR species considered provincially significant.

4.2.5 Fieldwork Summary

Table 1. Fieldwork dates and conditions

Date	Field Study	Biologist	Field Conditions
2017 – 11 – 13 11:00-15:00	Review of General Conditions <ul style="list-style-type: none"> <i>Rough ELC, general forest description</i> <i>Potential habitat areas for SAR and birds generally</i> <i>Drainage feature locations</i> 	Terry Hams	<ul style="list-style-type: none"> 0°C Cloudy No wind
2018 – 04 – 04 13:00-16:00	HDFA 1 <ul style="list-style-type: none"> <i>Freshet flow conditions</i> <i>Channel form</i> 	Tyler Peat	<ul style="list-style-type: none"> 0°C Cloudy Light breeze
2018 – 06 – 14 09:40-10:00	Bird Survey (OBBA Protocol) <ul style="list-style-type: none"> <i>Two stations</i> 	Terry Hams	<ul style="list-style-type: none"> 16°C Cloudy, no precipitation

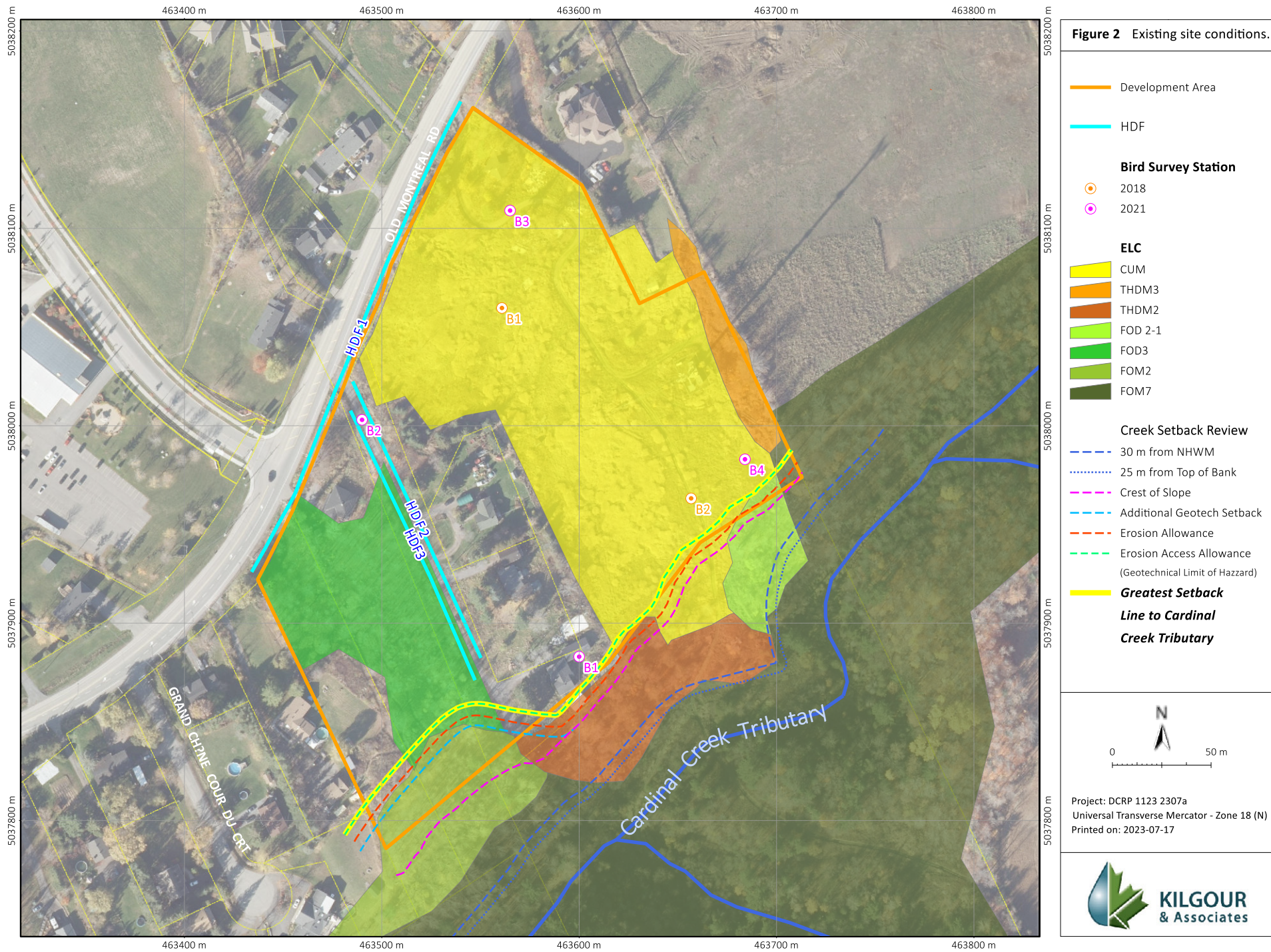
¹ The Beaufort Wind Force Scale is an empirical measure that relates wind speed to observed conditions at sea or land. The scale is as follows **0**: calm, smoke rises vertically, wind speed <1 km/hr; **1**: light air, smoke drift indicates wind direction, leaves and wind vanes are stationary, wind speed = 1.1-5.5 km/hr; **2**: light breeze, wind felt on exposed skin, leaves rustle, wind vanes begin to move, wind speed = 5.6-11 km/hr; **3**: gentle breeze, leaves and small twigs consistently moving, light flags extended, wind speed = 12-19 km/hr.



2018 – 06 – 29 08:20-08:40	Bird Survey (OBBA Protocol) • <i>Two stations</i> HDFA 2 • <i>Water levels/fish habitat potential</i>	Terry Hams	<ul style="list-style-type: none"> • Light breeze (For OBBA) <ul style="list-style-type: none"> • 21°C • Clear, no precipitation • Light breeze
2018 – 07 – 09 08:50-09:10	Bird Survey (OBBA Protocol) • <i>Two stations</i>	Terry Hams	<ul style="list-style-type: none"> • 24°C • Clear, no precipitation • Negligible breeze
2021 – 04 – 06 (morning)	HDFA 1 • Freshet flow conditions • Channel form	Rob Hallett	<ul style="list-style-type: none"> • 7°C • Clear • Light breeze
2021 – 06 – 09 05:45-06:45	Bird Survey (OBBA Protocol) • <i>Four stations</i> HDFA 2 • <i>Water levels/fish habitat potential</i>	Rob Hallett	 (For OBBA) <ul style="list-style-type: none"> • 27°C • Clear, no precipitation • Light breeze
2021 – 06 – 18 (all day)	ELC/TCR	Kesia Miyashita Nick Moore	<ul style="list-style-type: none"> • 17°C • Cloudy • Light breeze
2021 – 06 – 23 05:15-06:30	Bird Survey (OBBA Protocol) • <i>Four stations</i>	Rob Hallett	<ul style="list-style-type: none"> • 14°C • Clear, no precipitation • No breeze

Figure 2. Existing conditions





5.0 RESULTS

5.1 Landforms, Soils and Geology

The broader vicinity of the Site is generally underlain by two soil associations: Grenville and Rideau (Schut and Wilson, 1987). Topography within and near the Site varies from nearly level to highly sloping. The Site itself abuts a steep valley containing a significant tributary to Cardinal Creek.

The north slopes of the Cardinal Creek Tributary valley are heavily vegetated and the ravine generally conveys very little water, except possibly during spring run-off. The crest of the slope (i.e. the edge of the valley top) as determined by EXP is indicated in Figure 2. Setbacks to protect the valley slope stability (i.e. limit of hazardous lands) are measured from the crest of the slope, except along the eastern end of the development area, where the geotechnical set back is pulled back an additional ~24 m from the crest, encompassing a raised, forested area there (EXP, 2016).

5.2 Surface Water and Fish Habitat

The Site lies within the Cardinal Creek Catchment (RVCA, 2014). The Cardinal Creek Catchment is home to both warm and cool water fish species. The report lists 40 species of recreational and bait fish within Cardinal Creek (RVCA, 2014). No SAR fish were listed in the catchment report.

The Ottawa River occurs approximately 1.3 km to the north of the site. The Cardinal Creek joins the Ottawa River at this point as well. Cardinal Creek is situated approximately 250 m to the west of the site and is separated by multiple residential dwellings.

A tributary to Cardinal Creek crosses the property south of the Site. Setback requirements to this feature are set per the *Greater Cardinal Creek Subwatershed Management Plan* (AECOM, 2014) as the greater of:

- a) the regulatory flood line;
- b) the Geotechnical limit of hazard lands;
- c) 30 m from normal high water mark;
- d) 25 m from top of bank;
- e) Setback as determined through an Environmental Impact Statement; and/or
- f) setback as determined through a Drain Engineer's Report.

There is no regulatory flood line (condition a) on the Site. The geotechnical limit of hazard includes (condition b) corresponds with the erosion allowance (which is set back from back by 5 m from the crest of the valley slope and/or the geotechnical setback) plus an additional 5 m for the erosion allowance. The normal high water mark effectively corresponds with the top-of-bank of the creek. The 30 and 25 m setbacks respectively to those (conditions c and d) are substantially less than the geotechnical limit of hazard lands across the full width of the Site.

Further, a Drain Engineer's Report (condition f) is not available for this Site, and so does not contribute to final setback determination. The geotechnical limit of hazard lands therefore represents the greatest required setback area. As this line is outside of the area defined as significant woodland, this EIS does not identify any reason to add to the setback.



Three minor HDFs are/were located at the north end of the Site (Figure 2; KAL 2021a). HDF1, the roadside ditch along Montreal Road, conveys road runoff and spring meltwater from the Site and surrounding area to Cardinal Creek ~250 m to the west. The feature has a bankfull width of 5.4 m with a wetted width of 100 to 115 cm at the peak of the spring freshet a maximum depth of 17 cm. Flow was 0.32 m/s in the spring of 2018 but was barely detectable in the spring of 2021. No water was observed in the feature beyond the spring freshet. The substrate is muddy with significant grass growth. The left upstream bank (north) is the gravel shoulder to Montreal Road. The right upstream bank is a mix of yards and fields with some trees and shrubs along its length.

This feature received a management directive of “Mitigation” (KAL, 2021). The feature is not required to be maintained per se but if it is to be removed, its functionality must be replicated or enhanced through lot level conveyance measures as part of the site stormwater management system. Any replacement features/systems should be vegetated to mimic online wet vegetation pockets to the extent possible and must convey water to the same final receiver (i.e. Cardinal Creek). As a roadside ditch for a major arterial road, this feature is not considered by this EIS to require setbacks.

HDF2 and HDF3 were small swales in 2018 located along the east and west sides respectively of the driveway running up the center of 1180 Old Montreal Road. They conveyed spring runoff norward down the slope. In 2018, both features were both very shallow with no definable banks and both flattened out completely before they reach HDF1 (i.e., had no discernible connection to HDF1). During the spring freshet in 2018, HDF2 had a wetted width of 55 to 110cm with a depth of 1 to 3 cm as it ran south down the length of the driveway. Water from the feature spread out at the bottom end with no detectable depth before, presumably, percolating into the HDF1. The feature was fully grassed with lawn through it and extending to the east. The west edge was the gravel driveway. In 2021 the shape of the feature was still evident though it was completely dry.

During the spring freshet 2018, HDF3 had a wetted width of 40 cm with a depth of 4 to 8 cm (in pockets) as it ran south down the length of the driveway. Water from the feature again spread out at the bottom end with no detectable depth. The feature had a mud and gravel substrate with some portions grassed. Shrubby vegetation grew along the west side; the east edge was the gravel driveway. By the spring of 2021, the length of the feature was inundated with new shrub growth, the channel form along most of its length was no longer evident and no water was present.

As these reaches do not connect directly to HDF1, but may provide some opportunity for infiltration, they received management directives of “Maintain Recharge” (KAL, 2021). There is no requirement to retain the feature per se, but the stormwater management system for the development cannot redirect Site runoff to alternate receivers (i.e., Site runoff cannot be redirected towards the Cardinal Creek tributary).

5.3 Vegetation Cover

5.3.1 ELC

The Site and adjacent lands lie within the Cardinal Creek Catchment (RVCA, 2014). This catchment area is primarily composed of agriculture (54%), urban areas (17%), and forest (17%) (RVCA, 2014). The remaining components of the Cardinal Creek Catchment include rural (11%) and wetland (1%).



The majority of the site is categorized as Cultural Meadow (CUM) (Lee et al., 1998) (Figure 2). This area is an old field habitat caused by the succession of previous pasture habitat. Vegetation cover is composed primarily of grass species Reed Canary Grass (*Phalaris arundinacea*), Smooth Brome (*Bromus inermis*), Kentucky Blue Grass (*Poa pratensis*) and Timothy (*Phleum pratense*), with forbs such New England Aster (*Symphyotrichum novae-angliae*), goldenrod species (*Solidago* spp.), , Common Milkweed (*Asclepias syriaca*), Viper's Bugloss (*Echium vulgare*), Common Mullein (*Verbascum thapsus*), Crown Vetch (*Securigera varia*), Bladder Campion (*Silene vulgaris*), Purple Loosestrife (*Lythrum salicaria*), Foxtail Barley (*Hordeum jubatum*), Wild Carrot (*Daucus carota*), and species of dock (*Rumex* spp.) and aster (Asteraceae).

The northern corner of the Cultural Meadow includes three clusters of trees. Directly adjacent to Old Montreal Road is a cluster composed of a few large trees and many saplings and small trees with American Elm (*Ulmus americana*), White Pine (*Pinus strobus*), Eastern White Cedar (*Thuja occidentalis*), Bur Oak (*Quercus macrocarpa*), Black Cherry (*Prunus seritona*), White Spruce (*Picea glauca*), and Scots Pine (*Pinus sylvestris*). Directly behind this first patch and at the end of the driveway up 1180 Old Montreal Road are two clusters composed almost entirely of Manitoba Maples (*Acer negundo*).

The east side of the driveway at 1180 Old Montreal Road includes three residential yards with houses and mowed lawns.

West of the driveway at 1180 Old Montreal Road is a wooded area of Dry – Fresh Poplar – White Birch Deciduous Forest (FOD3) (Lee et al., 1998). This ecosite is primarily composed of Trembling Aspen (*Populus tremuloides*) and White Birch (*Betula papyrifera*) with subordinate species of American Elm (*americana*), Red Maple (*Acer rubrum*), Bur Oak, and White Ash (*Fraxinus americana*). Shrub species such as buckthorn species (*Rhamnus* spp.), Staghorn Sumac (*Rhus typhina*), and Red Osier Dogwood (*Cornus sericea*) are common.

The valley of the Cardinal Creek Tributary is forested with Fresh – Moist White Cedar – Hardwood Mixed Forest (FOM7) ecosite (Lee et al., 1998). This area is a bottomland forest of the creek and its floodplain. The dominate species are White Cedar (*Thuja occidentalis*), Green Ash (*Fraxinus pennsylvanica*), White Birch, and willow shrubs. Subordinate species observed are White Pine, American Elm, Black Spruce (*Picea mariana*), and Red Maple.

A small Dry – Fresh Oak – Red Maple Deciduous Forest Type (FOD2-1) (Lee et al., 1998) occurs at top of the valley slope at the north end of the Site. It is dominated Red Maple, White Ash and Northern Red Oak (*Quercus rubra*), with subordinate tree species of American Elm and Bur Oak.

Along the remainder of the upper and middle slope of the of the Valley directly behind the Site is a maturing Mixed Thicket ecosite (THDM2) (Lee et. al. 1998). This area contains mostly shrubs and sapling trees with a few scattered larger trees. The dominant species is Staghorn Sumac with apple species, Scots Pine, Trembling Aspen, Common Lilac (*Syringa vulgaris*), buckthorn and Manitoba Maple the upper and middle slope of the steep slopes along the south of the site. A similar patch of Mixed Thicket (THDM3) ecosite (Lee et. al. 1998), but with a few Bur Oaks and American Elm, occurs along the northeast boundary of the Cultural Meadow

The southernmost corner of the Site along the upper edge of the Valley is a Dry – Fresh White Pine – Hardwood Mixed Forest (FOM2) (Lee et al., 1998). The majority of trees in this habitat are White Ash



(*Fraxinus americana*), Trembling and Largetooth Aspen (*Populus tremuloides* and *P. grandidentata*), White Pine (*Pinus strobus*). Subordinate species are Sugar Maple (*Acer saccharum*), Black Cherry (*Prunus serotina*), White Birch (*Betula papyrifera*), and Red and Bur Oak (*Quercus rubra* and *Q. macrocarpa*). This habitat occurs in the middle and top of a steep slope along the south portion of the site. Trees in this area were large ranging from 20 to 60 cm diameter at breast height (DBH).

5.3.2 Site Trees

The TCR prepared for the Site includes a comprehensive tree inventory and assessment of the fate of trees on the Site (Appendix D). Tree ages were not specifically determined, however, the 1976 geoOttawa (Ottawa, 2021) air photo shows trees located along property boundaries, around homes, and along the Cardinal Creek tributary. The Site contains 77 trees with DBH >10 cm from nine species, with 87% of trees observed dominated by five species: White Spruce, White Pine, White Ash, Sugar Maple, and Manitoba Maple. Most trees on the Site were <20 cm in diameter at breast height (DBH; KAL 2021b). Only 46 trees were larger than 20 cm DBH, and of those, only 23 had a decay class below “1” suggesting utility for bat roosting, which provides fewer than ten snags per hectare across the Site. No Butternut trees were observed on the Site.

5.4 Wildlife

5.4.1 Birds

The initial exploratory Site visit on November 13, 2017 noted remnants of mud nest cups in two dilapidated farm buildings (KAL, 2017), which was considered at the time to be possible evidence of former Barn Swallow nests. By the spring of 2018, however, both structures were found to be collapsed (Figure 3). All traces of the buildings had been removed prior to the 2021 field season. As such, prior use of structures on the site by Barn Swallow cannot be confirmed. Subsequent field studies describe conditions as observed in 2021.





Figure 3. Collapsed farm building, spring 2018

A summary of the weather conditions during the two breeding bird surveys is provided in Table 1.

Table 2. Summary of dates and weather conditions of morning breeding bird surveys, 2021

Date	Start Time	Cloud Cover/ Precipitation	Air Temperature (°C)	Wind (Beaufort)
2021-06-09	05:00	clear / dry	26	0
2021-06-23	06:00	20% / dry	20	2-3

A total of 23 bird species were observed near on the Site via morning breeding bird surveys and incidental observations in 2021 (Table 2).

Table 3. Summary of observations during 2021 breeding bird surveys

Common Name	Scientific Name	Common Name	Scientific Name
American Crow *	<i>Corvus brachyrhynchos</i>	Great Crested Flycatcher *	<i>Myiarchus crinitus</i>
American Goldfinch *	<i>Carduelis tristis</i>	Mourning Dove *	<i>Zenaida macroura</i>
American Redstart	<i>Setophaga ruticilla</i>	Northern Cardinal	<i>Cardinalis cardinalis</i>
American Robin *	<i>Turdus migratorus</i>	Northern Flicker *	<i>Colaptes auratus</i>
American Tree Sparrow	<i>Spizelloides arborea</i>	Red-eyed Vireo *	<i>Vireo olivaceus</i>
Black-capped Chickadee	<i>Poecile atricapillus</i>	Savannah Sparrow *	<i>Passerculus sandwichensis</i>
Blue Jay *	<i>Cyanocitta cristata</i>	Song Sparrow *	<i>Melospiza melodia</i>
Brown Thrasher	<i>Toxostoma rufa</i>	White-breasted nuthatch	<i>Sitta carolinensis</i>
Common Grackle *	<i>Quiscalus quiscula</i>	White-eyed Vireo	<i>Vireo griseus</i>
Common Yellowthroat *	<i>Geothlypis trichas</i>	White-throated Sparrow	<i>Zonotrichia albicollis</i>
Eastern Phoebe	<i>Sayornis phoebe</i>	Yellow Warbler	<i>Setophaga petechia</i>
European Starling	<i>Sturnus vulgaris</i>		

* Birds also observed in 2018.



Bird surveys in 2018 generally observed a subset of the 2021 bird-species list, but with four additional species not observed in 2021: Eastern Kingbird (*Tyrannus tyrannus*), Redwing Blackbird (*Agelaius phoeniceus*), Chipping Sparrow (*Spizella passerina*), Ruby Throated Humming Bird (*Archilochus colubris*).

No at-risk bird species were detected on the Site. In particular, there were no signs of Barn Swallow nesting on-site. Structures that may previously have provided suitable nesting habitat for Barn Swallow had been removed prior to the 2021 field season. Based on extended walks around the broader vicinity of the site, including around culverts and other structures in the area, there was no current evidence of Barn Swallow nesting.

5.5 Species at Risk

An assessment of species listed under SARA and ESA was completed to identify species having some potential to occur on or near the Site, including Extirpated, Endangered, Threatened, and Special Concern species. Species listed as Extirpated, Endangered, and Threatened are afforded species and habitat protection under the ESA. Federal protections under SARA are always in force for listed species of fish and migratory birds. For species of other groups, SARA normally only applies on federal lands or on projects having some level of participation with or oversight by the federal government. However, SARA-based protections can be imposed by ministerial order on a case-by-case basis in situations where provincial-level protections are deemed inadequate to otherwise protect a species. Such protections are not expected to apply to the Site.

This EIS considered 71 SAR known to occur within the region of the City of Ottawa (Appendix E). That list includes the six species specially noted by the MNRF for consideration in their response to the SAR info-request (Appendix B). Considering general habitat availability on the Site based on the ELC and site review, the potential for those species to occur within the project area, and /or for them or their protected habitats to interact with future development of the Site was assessed (Appendix E). Of those 71 species reviewed, 6 were initially considered to have some potential to interact with development on the Site. These include three species of bats (Northern Long-eared Myotis, Eastern Small-footed Myotis, and Tri-coloured Bat) an insect (Monarch Butterfly), and two bird species (Barn Swallow and Bobolink).

For listed bat species in areas subject to tree removal, especially when extent of the tree removal is relatively small compared to remaining available treed areas nearby, mitigation measures to protect bat species should focus on the avoidance of harm to individuals (email communication from MECP Biologist Carolyn Hann, July 30, 2021). If a proposed activity will avoid impairing or eliminating the function of habitat for supporting bat life processes (e.g. remove, stub, etc. a small number of potential maternity or day roost trees in treed habitats) but the timing of tree removal will avoid the bat active season (April 1 – September 30 in Southern Ontario / May 1 to August 31 in Northern Ontario), then there is no need to conduct species at risk bat surveys of treed habitats.

Neither of the two potentially present SAR bird species (Barn Swallow and Bobolink) were observed to occupy the Site in 2018 or 2021. Accordingly, the Site is not currently considered to provide habitat for those species.

Monarch Butterfly is listed as species of Special Concern in Ontario. As such neither the species nor its habitat is directly protected under the ESA.



6.0 DESCRIPTION OF THE PROPOSED PROJECT

Phoenix Homes is proposing to develop the Site with a mix of medium and high-density residential development. The proposed site would combine low-rise apartment buildings, stacked and back-to-back townhouse condominiums, townhomes, and bungalows on municipal right of ways and private streets (Figure 3).

Parking for the semi-detached and freehold townhouses is provided for with standard construction single car garages, driveways and residual on-street parking. Parking for the stacked condominiums and apartments is provided by a combination of surface parking lot, on-street parking and below ground parking.

Site development will require significant regrading and terracing of the steeply sloping properties that will necessitate the removal of all trees from the Site. Land clearing and construction are anticipated to begin in late 2023.



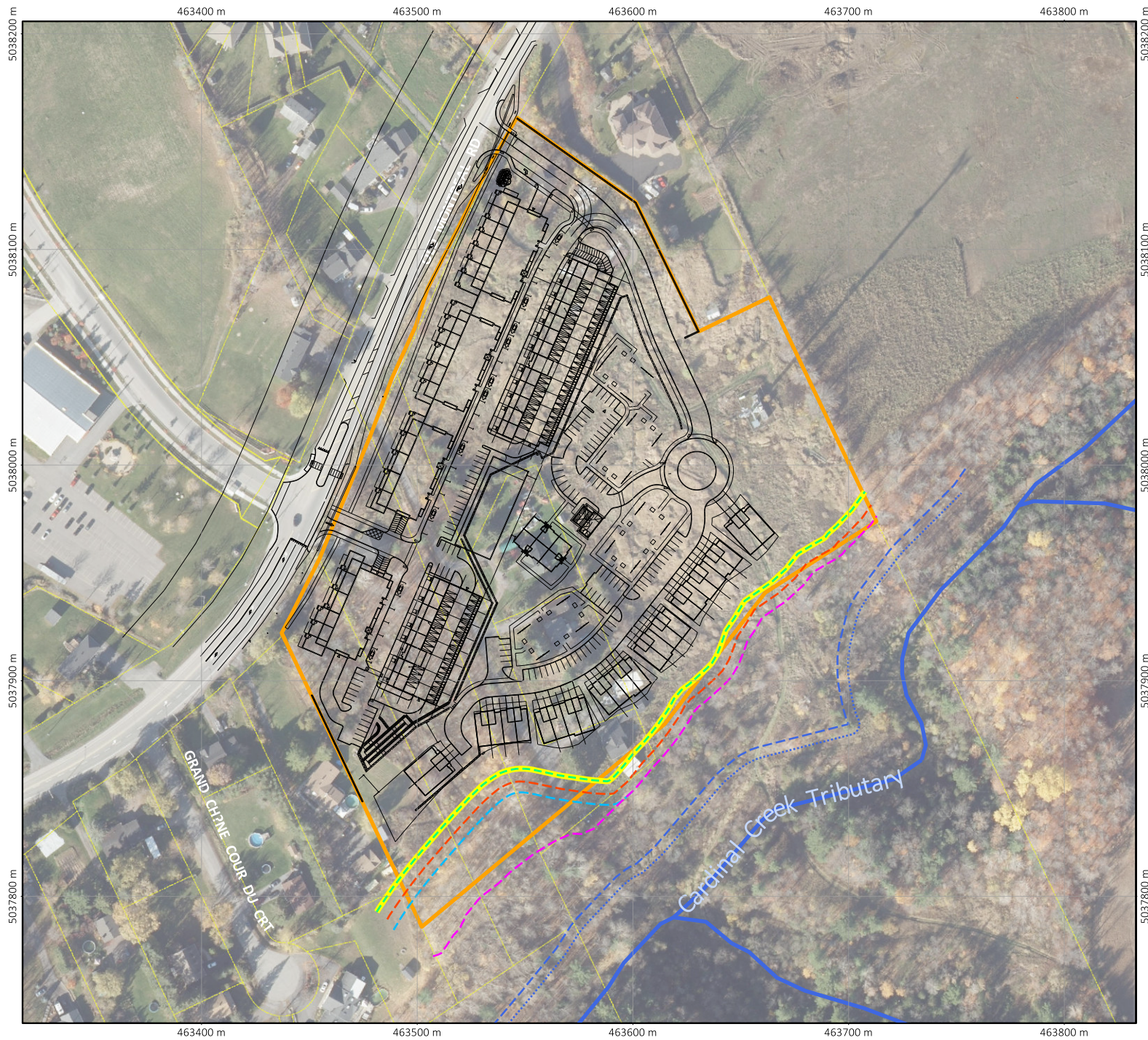
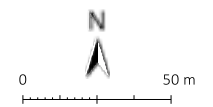


Figure4 Proposed development plan

- Development Area
- Creek Setback Review**
 - - - 30 m from NHWM
 - 25 m from Top of Bank
 - Crest of Slope
 - - - Additional Geotech Setback
 - - - Erosion Allowance
 - - - Erosion Access Allowance (Geotechnical Limit of Hazzard)
- **Greatest Setback Line to Cardinal Creek Tributary**



Project: DCRP 1123 2307a
 Universal Transverse Mercator - Zone 18 (N)
 Printed on: 2023-07-17



7.0 IMPACT ASSESSMENT

7.1 Surface Water and Fish Habitat

The proposed development respects the required setbacks for the Cardinal Creek Tributary for geotechnical limit of hazard lands, high water mark and top of bank; it is not anticipated that any property lots will encroach into the designated setbacks (Figure 3). There is no regulatory floodplain associated with the Cardinal Creek Tributary at this location. As such no negative impacts are anticipated to the Cardinal Creek Tributary.

The roadside ditch (HDF1) along Old Montreal Road will be reattained its current position relative to the roadway. The two minor swales on the Site (HDFs 2 and 3) will be removed, though site drainage will still be directed to Cardinal Creek via HDF1. We do not anticipate negative impacts to area surface water from site development.

7.2 Vegetation / Trees

The properties upon which the development will occur are privately owned; as such, all Site trees are privately owned. All trees on the Site must be removed to accommodate required regrading. Trees to the south of the Site along the valley of the Cardinal Creek Tributary will be protected and retained. Tree planting through the new community will be determined through a landscape plan for the Site.

The GCCSMP Plan identifies the natural valley immediately south of the proposed development area as comprising Significant Woodland, though, the plan also identifies much this area as “additional development land”. Regardless, the rear yards adjacent to the creek corridor will be fenced to separate them from the Significant Wood. The creek corridor will remain intact and undisturbed with no road crossing, and the proposed site plan precludes the potential for future road crossings.

7.3 Species at Risk

Based on our SAR assessment (Section 5.5), the only SAR having some potential to interact with proposed development directly as individuals and/or considering impacts to their habitat are three local bat species: Northern Long-eared Myotis, Eastern Small-footed Myotis, and Tri-coloured Bat.

For listed bat species, so long as no tree clearing occurs April 1 and September 30 within a given year, no harm is anticipated to individual bats. The removal of trees from the Site, given their generally small size and relatively limited numbers, is not considered a significant loss of habitat with the retention of the forested areas south of the Site (i.e. along the Cardinal Creek tributary). The Site itself is characterized as a relatively small area comprising predominantly young trees.

7.4 Surface Water Features

Construction works near water during the development of the residential community will, at minimum, require standard erosion and sediment control mitigation measures to protect receiving waters from sediment-laden runoff, including:

- a multi-faceted approach to provide erosion and sediment control;
- retention of existing vegetation and stabilize exposed soils with vegetation where possible;



- limiting the duration of soil exposure and phase construction;
- limiting the size of disturbed areas by minimizing nonessential clearing and grading;
- minimizing slope length and gradient of disturbed areas;
- refuelling of machinery should occur >30 m from any watercourse;
- maintaining overland sheet flow and avoid concentrated flows; and
- storing/stockpiling all soil away (e.g., greater than 30 m) from watercourses, drainage features and top of steep slopes.

The surface water features identified in the HDFA were very minor in nature. It is recommended that the roadside ditch paralleling Montreal Road will be maintained in its current state, which is consistent with the proposed project. Two minor swales were mapped beside the driveways on the Site. While these features could be removed, it is recommended that the stormwater management system for the area provide some opportunity for infiltration on the Site (i.e., no directing water to a different watershed).

The GCCSMP (AECOM, 2014) emphasizes Low Impact Development (LID) techniques in stormwater management and verification of flow targets for future development within the watershed. Goals and objectives of the Management Plan includes incorporating stormwater management practices for all new and existing development such that the quantity of runoff from urban areas is controlled to an appropriate level that does not increase the frequency, extent and duration of flooding and/or erosive conditions.

7.5 Vegetation / Trees

This report does not constitute permission to remove trees from the Site. As the Site is located within the urban boundary, any tree removal from the Site must be authorized under tree removal permit to be issued by the City. To minimize impacts to trees adjacent to the Site, the following general protection measures are recommended as necessary during construction:

- Tree removal on Site should be limited to that which is necessary to accommodate construction;
- To minimize impact to remaining trees during Site development:
 - Erect a fence beyond the critical root zone (CRZ; i.e., 10x the DBH) of trees. The fence should be highly visible (orange construction fence) and paired with erosion control fencing. Pruning of branches is recommended in areas of potential conflict with construction equipment;
 - Do not place any material or equipment within the CRZ of trees;
 - Do not attach any signs, notices, or posters to any trees;
 - Do not raise or lower the existing grade within the CRZ of trees without approval;
 - Tunnel or bore when digging within the CRZ of a tree;
 - Do not damage the root system, trunk, or branches of any remaining trees;
 - Ensure that exhaust fumes from all equipment are not directed towards any tree's canopy; and



- Attach signage to the tree protection fencing every 10 m that indicates: a) the fencing is to protect trees and their critical root zones; b) it will be maintained throughout the construction period; and c) it will not be removed until construction is complete.

Specific trees to be planted on the site will be identified in the landscape plan for the development. Trees species identified in this plan however must be non-invasive and be native to the Ottawa area. Final selection of tree species within the landscape plan must also consider the City of Ottawa's Clay Soils Policy. Recommended tree species to consider in the landscaping plan include Red Maple (*Acer rubrum*), White Spruce (*Picea glauca*), Pin Cherry (*Prunus pensylvanica*), White Birch (*Betula papyrifera*), Black Cherry (*Prunus nigra*), White Cedar (*Thuja occidentalis*) and Serviceberry (*Amelanchier* spp.) as other suitable candidate species. Burr Oak may be considered where spacing allows for future showcase trees. Common Juniper (*Juniperus communis*), Maple-leaf Viburnum (*Viburnum acerifolium*), Nannyberry (*Viburnum lentago*) and Northern Bush-honeysuckle (*Diervilla lonicera*) may be considered as appropriate shrub species.

Trees are to be planted within areas of town homes at a density equivalent to one tree per lot, with additional tree plantings to be included throughout the remainder of the development where feasible (e.g. in larger single lots, adjacent to buildings and/or in other public areas) with a target of planting the equivalent of 1 tree per unit through the broader community.

No mitigation measures are required to protect other site vegetation (i.e. other than trees).

7.6 Species at Risk

7.6.1 SAR Bats

While trees on the Site are not considered to provide habitat for SAR bats, bat occurrences or roosts could occur within any given year. No removal of trees from site can be permitted during the active bat season between April 1 and September 30.

7.6.2 SAR Birds

No SAR birds currently use the Site. If land development of the area begins prior to April 15, 2022, no further mitigation efforts specific to SAR birds are required. If the commencement of site development, however, is delayed beyond this date, additionally surveys of the Site will be required to ensure the continued absence of SAR birds. Surveys must be conducted by a qualified biologist in each year in which the site development is delayed.

If SAR birds should begin occupying the Site, the project proponent would be required to file and Notice of Activity with the MECP for work within Bobolink or Barn Swallow habitat (as appropriate) and implement a standard mitigation/compensation program as per Ontario Regulation 242/08, thereby ensuring the overall project leads to a net benefit for the species.

7.7 Wildlife Mitigation

Common wildlife species may occur on or near the Site. The following mitigation measures shall be implemented during the construction of the project to generally protect wildlife:



- Areas are not to be cleared of vegetation other than trees (e.g. meadow grasses or shrubs) during sensitive times of the year for wildlife (April 15 to August 15) unless mitigation measures are implemented and/or the habitat has been inspected by a qualified Biologist. Tree removal must be fully prohibited for the Site between April 1 and September 30 for the protection of bats.
- Do not harm, feed, or unnecessarily harass wildlife.
- Manage waste to prevent attracting wildlife to the Site. Effective mitigation measures include litter prevention and keeping all trash secured in wildlife-proof containers and promptly removing it from the Site, especially during warm weather.
- Drive slowly and avoid hitting wildlife.
- Manage stockpiles and equipment on Site to prevent wildlife from being attracted to artificial habitat. Cover and contain any piles of soil, fill, brush, rocks and other loose materials and cap ends of pipes where necessary to keep wildlife out. Ensure that trailers, bins, boxes, and vacant buildings are secured at the end of each workday to prevent access by wildlife.
- Check the entire work site for wildlife prior to beginning work each day.
- Inspect protective fencing and/or other installed wildlife exclusion measures daily and after each rain event to ensure their integrity and continued function.
- Monitor construction activities to ensure compliance with the project-specific protocol (where applicable) or any other requirements.
- If SAR are encountered on the work site, immediately stop all work and comply with the project-specific SAR protocol (where applicable; e.g., contact project Biologist to determine next steps).
- Follow the best practices for the construction and maintenance of bird-safe buildings, such as applying visual markers on windows to prevent birds from colliding with glass and reducing the intensity and direction of night lighting (turn off lights at night if possible). See <https://flap.org/workplaces-safe-for-birds/> for more resources and tips on designing and maintaining bird-friendly buildings.

8.0 SUMMARY AND RECOMMENDATIONS

It is our professional opinion that no significant negative impacts are anticipated to SAR or their habitats, or to significant natural heritage features present in the broader project vicinity under the proposed project if all mitigation recommendations provided within this report are followed.

9.0 CLOSURE

This report was prepared for exclusive use by Phoenix Homes and/or their agents and may be distributed only by or in accordance with their express instructions. Questions relating to the data and interpretation can be addressed to the undersigned.

Respectfully submitted,



KILGOUR & ASSOCIATES LTD.

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Appendix A – Report Authors



Anthony Francis, PhD

Dr. Francis is a Senior Ecologist with 20 years' consulting experience to both government agencies and private industry. He has worked on a diversity of projects relating to species at risk, invasive species, terrestrial and aquatic habitat, environmental effects monitoring and mitigation, and fate/effects of contaminants. Within each of these subject areas, Dr. Francis has completed projects addressing specific site concerns and broader policy initiatives.

In the Ottawa area Dr. Francis helps clients work their way through the land development process by producing key supporting studies such Environmental Impact Statements, Integrated Environmental Reviews, and by obtaining various permits and approvals from local regulatory agencies including the conservation authorities and Ministries of Environment and Natural Resources. Dr. Francis is our local in-house geomatics specialist, capable of carrying out detailed and complex analyses of geospatial data of plant and animal distribution. He often utilizes his skills to carry out constraint studies prior to a client purchasing or planning a development for a property.

Kesia Miyashita, MSc

Ms. Miyashita has over six years of experience in environmental consulting and more than ten seasons of field experience in ecosystems in Alberta and British Columbia. During her career in environmental consulting, Ms. Miyashita has completed environmental assessments for a variety of major infrastructure projects and urban developments. Her expertise is in vascular and non-vascular plant ecology, with experience in both terrestrial and wetland ecosystems; she has performed vegetation community inventories, rare plant surveys, and weed surveys in a variety of natural environments, including native forest, urban nature preserves, grasslands, and wetlands. Ms. Miyashita joined Kilgour & Associates Ltd. in May of 2021 and has since contributed to numerous Environmental Impact Study and tree conservation reports, delineation of natural heritage features and SAR surveys. Ms. Miyashita is a Professional Biologist with the Alberta Society of Professional Biologists and a Qualified Wetland Science Practitioner in the province of Alberta.



Appendix B – Agency Correspondence





Natural Areas and Features Information Request Form

Contact Information

Name: _____
 Address: _____
 Phone Number: _____ Owner _____ Consultant _____
 E-mail Address: _____

***All red fields are mandatory**

This includes X & Y Coordinates.

Please see _____ for assistance.

Site Information

Project Name: _____

Township: _____ Lot: _____ Concession: _____

X: _____ Y: _____ Address: _____

***If more than 1 site, please provide all individual coordinates in an attached spreadsheet*

Type of Proposal

- ☐ Severance / Zoning ☐ Drains / Roads / Culverts
☐ Hydroline clearing ☐ Small Scale Projects (less than 5 hectares)
☐ RE Projects ☐ Large Scale Projects (5 hectares or greater)
☐ Aggregate Project Other: _____

Attachments

*****Please attach a Site Map showing the area of interest**

☐ Picture ☐ Map(s) ☐ Engineered Drawings Other: _____

Request

I would like to request the following information for the property identified above:

To better respond to your request please briefly outline the purpose for which this information is required (e.g. proposed development, lot severance, etc. or attach details):

Date of works proposed: ____ / ____ / ____

Personal information contained in this form is collected in order to fulfill your request, respond to your inquiries and for other administration purposes. With regard to the personal information it collects, the ministry is bound by privacy protection rules under the Freedom of Information and Protection of Privacy Act and takes all necessary steps to safeguard personal information collected.

Please Note: This request **MUST** be made by the property owner or by someone acting on their behalf.
 Depending on the nature of the request, it may take 6-8 weeks to respond to your inquiry.
 If the request does not include the mandatory information, it may delay response time.

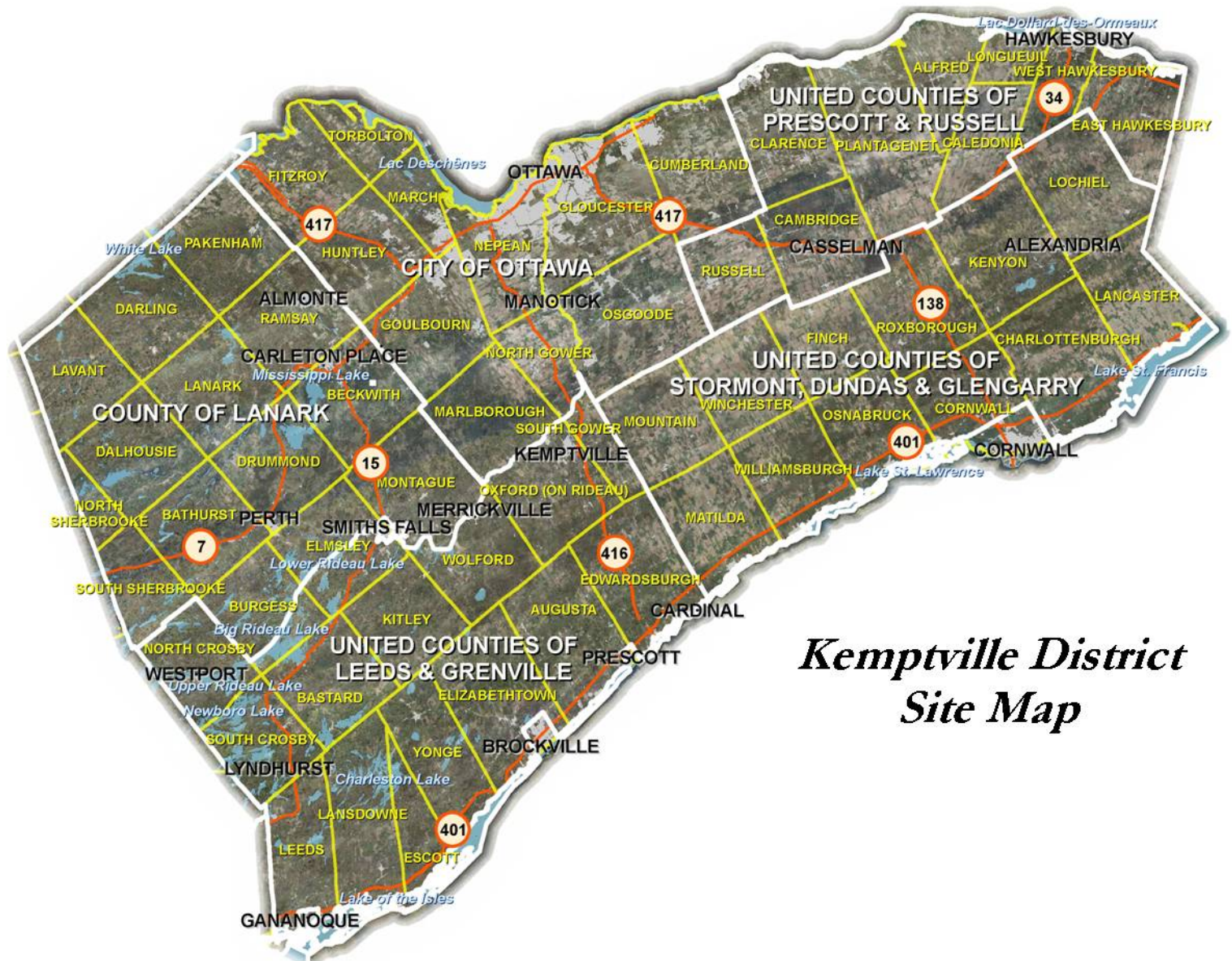
I have read the above and agree to all Terms and Conditions

Please forward the completed form to:

OR Fax: 613-258-3920

Attention: Information Requests
 10 Campus Drive, Postal Bag 2002
 Kempeville, ON K0G 1J0

MNR File Number: _____



Kemptville District Site Map

How to get X, Y coordinates from Google Maps (2 options):

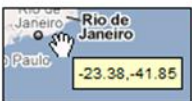
- 1.) Right-click on the map, at the point of interest, and select 'What's here?'.
-The Latitude & Longitude of the mouse click, in decimal degrees, will automatically appear in the Search box.

OR

- 2.) Click on 'Maps Labs' in Google Maps.
-The following window will appear:

[Maps Labs](#) - [Help](#)

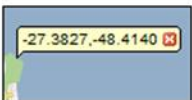
Google Maps - ©2012 Google - [Terms of Use](#)



LatLng Tooltip
Marcelo C

Displays a tooltip next to the mouse cursor showing the latlng directly underneath it. Press SHIFT to activate tooltip.

☐ Enable
☒ Disable



LatLng Marker
Marcelo C

Adds an option to the context menu that lets you drop a mini marker showing the latlng of the position that the cursor was pointing at when the context menu was evoked

☐ Enable
☒ Disable

Important: To save your enabled Labs for next time, you must [sign in](#) to your Google account.

- Enable the LatLng Tooltip and then Save Changes.
- Now every time the **SHIFT** button is pressed in Google Maps, a Tool tip will appear with the Latitude and Longitude of the mouse location in decimal degrees.

**Ministry of Natural
Resources and Forestry**

Kemptville District

10 Campus Drive
Postal Box 2002
Kemptville ON K0G 1J0
Tel.: 613 258-8204
Fax: 613 258-3920

**Ministère des Richesses
naturelles et des Forêts**

District de Kemptville

10, promenade Campus
Case postale, 2002
Kemptville ON K0G 1J0
Tél.: 613 258-8204
Télé.: 613 258-3920



Tue. Dec 12, 2017

Anthony Francis
Kilgour & Associates Ltd.
2285C St. Laurent Blvd., Unit 16
Ottawa, Ontario
K1G 4Z6
(613) 260-5555
AFrancis@KilgourAssociates.com

Attention: Anthony Francis

Subject: Information Request - Developments
Project Name: DCRP 715
Site Address: 1154 - 1208 Old Montreal Road
Our File No. 2017_CUM-4341

Natural Heritage Values

The Ministry of Natural Resources and Forestry (MNRF) Kemptville District has carried out a preliminary review of the above mentioned area in order to identify any potential natural resource and natural heritage values.

The following Natural Heritage values were identified for the general subject area:

- Unevaluated Wetland (Not evaluated per OWES)
- Wintering Area, Deer Yard (Stratum 1)
- Wintering Area, Moose Early Wintering Area

Municipal Official Plans contain information related to natural heritage features. Please see the local municipal Official Plan for more information, such as specific policies and direction pertaining to activities which may impact natural heritage features. For planning advice or Official Plan interpretation, please contact the local municipality. Many municipalities require environmental impact studies and other supporting studies be carried out as part of the development application process to allow the municipality to make planning decisions which are consistent with the Provincial Policy Statement (PPS, 2014).

The MNRF strongly encourages all proponents to contact partner agencies and appropriate municipalities early on in the planning process. This provides the proponent with early knowledge regarding agency requirements, authorizations and approval timelines; Ministry of the Environment

and Climate Change (MOECC) and the local Conservation Authority may require approvals and permitting where natural values and natural hazards (e.g., floodplains) exist.

As per the Natural Heritage Reference Manual (NHRM, 2010) the MNRF strongly recommends that an ecological site assessment be carried out to determine the presence of natural heritage features and species at risk and their habitat on site. The MNRF can provide survey methodology for particular species at risk and their habitats.

The NHRM also recommends that cumulative effects of development projects on the integrity of natural heritage features and areas be given due consideration. This includes the evaluation of the past, present and possible future impacts of development in the surrounding area that may occur as a result of demand created by the presently proposed project.

In Addition, the following Fish species were identified: bluntnose minnow, brassy minnow, brook stickleback, brown bullhead, Carps and Minnows, central mudminnow, common shiner, creek chub, fallfish, fathead minnow, golden shiner, Ictalurus sp., johnny darter/tesselated darter, logperch, longnose dace, northern pike, northern redbelly dace, pearl dace, pumpkinseed, rock bass, rosyface shiner, trout-perch, white sucker.

Wildland Fire

MNRF woodland data shows that the site contains woodlands. The lands should be assessed for the risk of wildland fire as per PPS 2014, Section 3.1.8 "*Development shall generally be directed to areas outside of lands that are unsafe for development due to the presence of hazardous forest types for wildland fire. Development may however be permitted in lands with hazardous forest types for wildland fire where the risk is mitigated in accordance with wildland fire assessment and mitigation standards*". Further discussion with the local municipality should be carried out to address how the risks associated with wildland fire will be covered for such a development proposal. Please see the Wildland Fire Risk Assessment and Mitigation Guidebook (2016) for more information.

Significant Woodlands

Section 2.1.5 b) of the PPS states: *Development and site alteration shall not be permitted in significant woodlands unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.* The 2014 PPS directs that significant woodlands must be identified following criteria established by the Ontario Ministry of Natural Resources and Forestry, i.e. the Natural Heritage Reference Manual (NHRM), 2010. Where the local or County Official Plan has not yet updated significant woodland mapping to reflect the 2014 PPS, all wooded areas should be reviewed on a site specific basis for significance. The MNRF Kemptville District modelled locations of significant woodlands in 2011 based on NHRM criteria. The

presence of significant woodland on site or within 120 metres should trigger an assessment of the impacts to the feature and its function from the proposed development.

Significant Wildlife Habitat

Section 2.1.5 d) of the PPS states: *Development and site alteration shall not be permitted in significant wildlife habitat unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.* It is the responsibility of the approval authority to identify significant wildlife habitat or require its identification. The MNRF has several guiding documents which may be useful in identification of significant wildlife habitat and characterization of impacts and mitigation options:

- Significant Wildlife Habitat Technical Guide, 2000
- The Natural Heritage Reference Manual, 2010
- Significant Wildlife Habitat Mitigation Support Tool, 2014
- Significant Wildlife Habitat Criteria Schedule for Ecoregion 5E and 6E, 2015

The habitat of special concern species (as identified by the Species at Risk in Ontario list) and Natural Heritage Information Centre tracked species with a conservation status rank of S1, S2 and S3 may be significant wildlife habitat and should be assessed accordingly.

Water

If any in-water works are to occur, there are timing windows for which work in water should not take place (see below). Appropriate measures should be taken to minimize and mitigate impact on water quality and fish habitat, including:

- installation of sediment and erosion control measures;
- avoiding the removal, alteration, or covering of substrates used for fish spawning, feeding, over-wintering or nursery areas; and
- debris control measures to manage falling debris (e.g. spalling).

Timing windows (no in-water works) in MNRF Kemptville District*:

Warmwater and cool water	→ March 15 – June 30
St. Lawrence River & Ottawa River	→ March 15 – July 15
Coldwater	→ October 1 – May 31
Big Rideau Lake & Charleston Lake	→ October 1 – June 30

* Please note: Additional timing restrictions may apply as they relate to endangered and threatened species for works in both water and wetland areas.

Timing windows when in-water work is restricted – based on species presence:

Kemptville District

District de Kemptville

10 Campus Drive
Postal Box 2002
Kemptville ON K0G 1J0
Tel.: 613 258-8204
Fax: 613 258-3920

10, promenade Campus
Case postale, 2002
Kemptville ON K0G 1J0
Tél.: 613 258-8204
Télé.: 613 258-3920

	FISH SPECIES	TIMING WINDOW (No in-water works)
Spring:	Walleye	March 15 to May 31
	Northern Pike	March 15 to May 31
	Lake Sturgeon	May 1 to June 30
	Muskellunge	March 15 to May 31
	Largemouth/Smallmouth Bass	May 1 to July 15
	Rainbow Trout	March 15 to June 15
	Other /Unknown Spring Spawning Species	March 15 to July 15
	FISH SPECIES	TIMING WINDOW (No in-water works)
Fall:	Lake Trout	October 1 to May 31
	Brook Trout	October 1 to May 31
	Pacific Salmon	September 15 to May 31
	Lake Whitefish	October 15 to May 31
	Lake Herring	October 15 to May 31
	Other /Unknown Fall Spawning Species	October 1 to May 31

Additional approvals and permits may be required under the Fisheries Act. Please contact Fisheries and Oceans Canada to determine requirements and next steps. There may also be approvals required by the local Conservation Authority or Transport Canada. As the MNRF is responsible for the management of provincial fish populations, we request ongoing involvement in such discussions in order to ensure population conservation.

Species at Risk

A review of the Natural Heritage Information Centre (NHIC) and internal records indicate that there is a potential for the following threatened (THR) and/or endangered (END) species on the site or in proximity to it:

- Barn Swallow (THR)
- Whip poor will (THR)
- Butternut (END)
- Little Brown Bat (END)
- Northern Long-eared Bat (END)
- Tri-Colored Bat (END)

All endangered and threatened species receive individual protection under section 9 of the ESA and receive general habitat protection under Section 10 of the ESA, 2007. Thus any potential works should consider disturbance to the individuals as well as their habitat (e.g. nesting sites). General habitat protection applies to all threatened and endangered species. Note some species

in Kemptville District receive regulated habitat protection. The habitat of these listed species is protected from damage and destruction and certain activities may require authorization(s) under the ESA. For more on how species at risk and their habitat is protected, please see: <https://www.ontario.ca/page/how-species-risk-are-protected>.

If the proposed activity is known to have an impact on any endangered or threatened species at risk (SAR), or their habitat, an authorization under the ESA may be required. It is recommended that MNRF Kemptville be contacted prior to any activities being carried out to discuss potential survey protocols to follow during the early planning stages of a project, as well as mitigation measures to avoid contravention of the ESA. Where there is potential for species at risk or their habitat on the property, an Information Gathering Form should be submitted to Kemptville MNRF at sar.kemptville@ontario.ca.

The Information Gathering Form may be found here:

<http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/FormDetail?OpenForm&ACT=RDR&TAB=PROFILE&ENV=WWE&NO=018-0180E>

For more information on the ESA authorization process, please see:

<https://www.ontario.ca/page/how-get-endangered-species-act-permit-or-authorization>

One or more special concern species has been documented to occur either on the site or nearby. Species listed as special concern are not protected under the ESA, 2007. However, please note that some of these species may be protected under the Fish and Wildlife Conservation Act and/or Migratory Birds Convention Act. Again, the habitat of special concern species may be significant wildlife habitat and should be assessed accordingly. Species of special concern for consideration:

- Northern Map Turtle (SC)
- Snapping Turtle (SC)

If any of these or any other species at risk are discovered throughout the course of the work, and/or should any species at risk or their habitat be potentially impacted by on site activities, MNRF should be contacted and operations be modified to avoid any negative impacts to species at risk or their habitat until further direction is provided by MNRF.

Please note that information regarding species at risk is based largely on documented occurrences and does not necessarily include an interpretation of potential habitat within or in proximity to the site in question. Although this data represents the MNRF's best current available information, it is important to note that a lack of information for a site does not mean that additional features and values are not present. It is the responsibility of the proponent to ensure that species at risk are not

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Kemptville ON K0G 1J0
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Télé.: 613 258-3920

killed, harmed, or harassed, and that their habitat is not damaged or destroyed through the activities carried out on the site.

The MNRF continues to strongly encourage ecological site assessments to determine the potential for SAR habitat and occurrences. When a SAR or potential habitat for a SAR does occur on a site, it is recommended that the proponent contact the MNRF for technical advice and to discuss what activities can occur without contravention of the Act. For specific questions regarding the Endangered Species Act (2007) or SAR, please contact MNRF Kemptville District at sar.kemptville@ontario.ca.

The approvals processes for a number of activities that have the potential to impact SAR or their habitat have recently changed. For information regarding regulatory exemptions and associated online registration of certain activities, please refer to the following website: <https://www.ontario.ca/page/how-get-endangered-species-act-permit-or-authorization>.

Please note: The advice in this letter may become invalid if:

- The Committee on the Status of Species at Risk in Ontario (COSSARO) re-assesses the status of the above-named species OR adds a species to the SARO List such that the section 9 and/or 10 protection provisions apply to those species; or
- Additional occurrences of species are discovered on or in proximity to the site.

This letter is valid until: Wed. Dec 12, 2018

The MNRF would like to request that we continue to be circulated on information with regards to this project. If you have any questions or require clarification please do not hesitate to contact me.

Sincerely,

Dom Ferland
Management Biologist
dominique.ferland@ontario.ca

Encl.\

-ESA Infosheet
-NHIC/LIO Infosheet

Appendix C HDFA



**Headwater Drainage Feature Assessment
Phoenix Homes -
Old Montreal Road**

July 31, 2021



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Appendix A: Reach Photos



1.0 INTRODUCTION

This report is a Headwater Drainage Feature Assessment written by Kilgour & Associates Ltd. (KAL) on behalf of Phoenix Homes in support of their proposed development of a cluster of properties (herein the “Site” on the south side of Old Montreal Road, west of Cardinal Creek, in the east end of Ottawa, Ontario.

The Site is situated on properties located at 1154, 1172, 1176, 1180, and 1208 Old Montreal Road (Cumberland; CON 1 PT LOT 27, 28 OS; PIN 145260027, 145260023, 145260026, 145260024, 145260025; Figure 1). The parcel at 1208 Old Montreal Road is significantly deeper than the other parcels, extending ~900m south of Old Montreal Road to include a natural ravine and active agricultural lands. The Site, as it is defined for this project, however, excludes the ravine and any areas south of it. The proposed development area covers ~5.3 ha.



Figure 1. Site context

This report provides a detailed description of the headwater drainage features (HDFs) crossing and/or near to the Mattamy property following the field methodologies identified with the *Evaluation, Classification and Management of Headwater Drainage Features Guidelines* (CVC & TCRA, 2014), herein the HDF Guidelines.

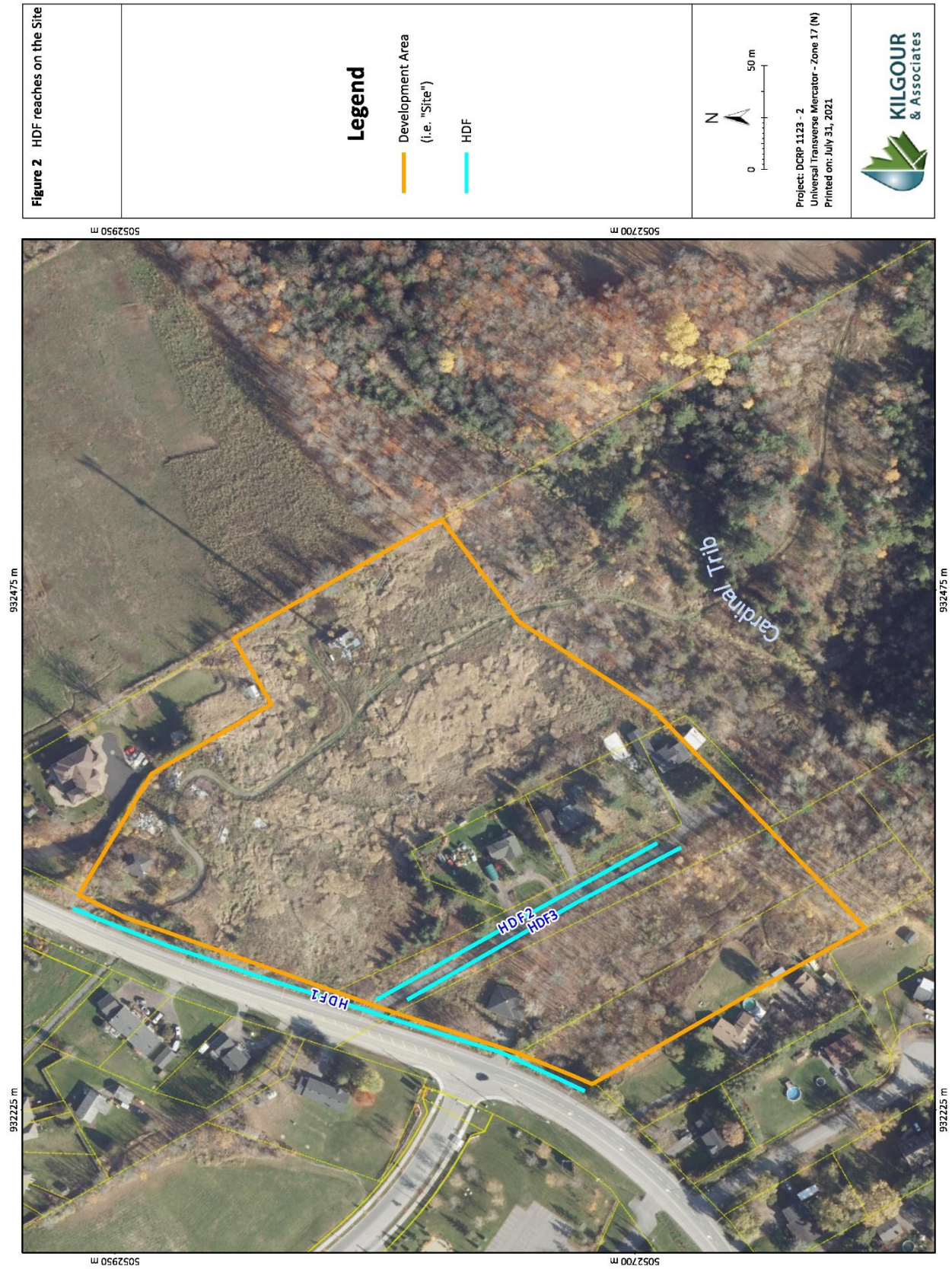


2.0 HEADWATER DRAINAGE FEATURES

2.1 Overview

HDFs were reviewed on the Site initially in 2018, then again in 2021. A total of three HDFs were identified and are described in this report (Figure 2). All three features are/were located at the north end of the Site. The southern edge of the Site corresponds with the top of a ravine crossing the Site properties that conveys a tributary to Cardinal creek to the west. The tributary, as a permanent stream, does not meet the definition of an HDF under the HDFA Guidelines. Moreover, it is located outside of the Site area and no HDFs conveyed flows from the rear of the Site flows to that stream. Proposed future development on the Site will adhere to setback requirements as required based on floodplain limits, buffer distances from top-of-bank and/or normal high water mark, and hazard limits. The Cardinal Creek tributary is therefore not addressed further within this report.





2.2 Assessment Methodology

The Standard level of assessment follows Ontario Stream Assessment Protocol (OSAP) methodologies for descriptions of flow conditions, riparian vegetation and site features that are important components of habitat (headwater sampling protocol OSAP S4.M10), and includes an electrofishing survey to describe fish and fish habitat (OSAP S4.M10). Additionally, an ecological land classification (ELC) was applied to the riparian zone.

The initial OSAP investigation of the HDFs was conducted on April 4, 2018, by KAL biologist Tyler Peat and was repeated on April 6, 2021, by KAL biologist Rob Hallett. Follow-up surveys on June 14, 2018, and June 9, 2021, by Terry Hams and Rob Hallett respectively found the entire Site to be dry with no fish surveys either required or possible.

Given the lack of aquatic habitat on site, neither turtle nor frog surveys were warranted there.

2.3 General Reach Descriptions

Images of Site HDFs are available in Appendix A.

HDF1

HDF1, the roadside ditch along Montreal Road, conveys road runoff and spring meltwater from the Site and surrounding area to Cardinal Creek ~250 m to the west. The feature has bankfull width of 5.4 m with a wetted width of 100 to 115 cm at the peak of the spring freshet a maximum depth of 17 cm. Flow was 0.32 m/s in the spring of 2018 but was barely detectable in the spring of 2021. No water was observed in the feature beyond the spring freshet. The substrate is muddy with significant grass growth. The left upstream bank (north) is the gravel shoulder to Montreal Road. The right upstream bank is a mix of yards and fields with some trees and shrubs along its length.

HDF2 and HDF3

HDF2 and HDF 3 were small swales in 2018 located along the east and west sides respectively of the driveway running up the center of 1180 Old Montreal Road. They conveyed spring runoff norward down the slope. In 2018, both features were both very shallow with no definable banks and both flattened out completely before they reach HDF1 (i.e., had no discernible connection to HDF1). During the spring freshet in 2018, HDF2 had a wetted width of 55 to 110cm with a depth of 1 to 3 cm as it ran south down the length of the driveway. Water from the feature spread out at the bottom end with no detectable depth before, presumably, percolating into the HDF1. The feature was fully grassed with lawn through it and extending to the east. The west edge was the gravel driveway. In 2021 the shape of the feature was still evident though it was completely dry.

During the spring freshet 2018, HDF3 had a wetted width of 40 cm with a depth of 4 to 8 cm (in pockets) as it ran south down the length of the driveway. Water from the feature again spread out at the bottom end with no detectable depth. The feature had a mud and gravel substrate with some portions grassed. Shrubby vegetation grew along the west side; the east edge was the gravel driveway. By the spring of



2021, the length of the feature was inundated with new shrub growth, the channel form along most of its length was no longer evident and no water was present.

2.4 Component Classifications

The following tables summarize the functions provided by the 15 reaches.

Table 1. Hydrology Classification

Drainage Feature	Hydrology Classification					
	Assessment Period	Flow Conditions		Flow Classification	Modifiers	Hydrological Function
		Description	(OSAP Code)			
HDF1	April 4, 2018 April 6, 2021 June 14, 2018 June 9, 2021	Surface flow Surface flow Dry Dry	2	Ephemeral	Roadside ditch	Contributing Functions
HDF2	April 4, 2018 April 6, 2021 June 14, 2018 June 9, 2021	Surface flow Dry Dry Dry	3	Ephemeral	Disconnected feature	Limited Functions
HDF3	April 4, 2018 April 6, 2021 June 14, 2018 June 9, 2021	Surface flow Dry Dry Dry	4	Ephemeral	Disconnected feature	Limited Functions

The initial OSAP investigation of the HDFs was conducted on April 4, 2018, by KAL biologist Tyler Peat and was repeated on April 6, 2021, by KAL biologist Rob Hallett. Follow-up surveys on June 14, 2018, and June 9, 2021, by Terry Hams and Rob Hallett respectively found the entire Site to be dry with no fish surveys either required or possible.



Table 2. Riparian Classification

Drainage Feature	Riparian Classification			
	OSAP Descriptions	OSAP Riparian Codes	ELC Codes	Riparian Conditions
HDF1	RUB – Lawn LUB – Road	RUB – 6 LUB – 2	- -	Contributing Functions
HDF2	RUB – Road LUB – Lawn	RUB – 1 LUB – 2	- CUM	Contributing Functions
HDF3	RUB – Scrubland LUB – Road	RUB – 6 LUB – 1	CUT -	Important Functions

RUB – right upstream bank

LUB – left upstream bank

Table 3. Fish and Fish Habitat Classification

Drainage Feature	Riparian Classification		
	Fish Observation • Fishing effort	Fish & Fish Habitat Designation*	Modifiers/Notes
HDF1	Dry following spring freshet • no fishing possible • no fish or SAR presence expected	Contributing Functions	None
HDF2	Dry following spring freshet • no fishing possible • disconnected feature • no fish or SAR presence	Contributing Functions	None
HDF3	Dry following spring freshet • no fishing possible • disconnected feature • no fish or SAR presence	Contributing Functions	None

*Fish and Fish Habitat Designation is constrained by the HDF Guidelines definitions. “Modifiers” provides significant caveats to those designations.

Table 4. Terrestrial habitat classification

Drainage Feature	Description	Amphibians	Terrestrial Classification
HDF1	No adjacent wetland areas. Roadside ditch with no corridor functionality.	No frogs were noted or anticipated in the area	Limited Functions
HDF2	No adjacent wetland areas. Roadside ditch with no corridor functionality.	No frogs were noted or anticipated in the area	Limited Functions
HDF3	No adjacent wetland areas. Roadside ditch with no corridor functionality.	No frogs were noted or anticipated in the area	Limited Functions



2.5 Reach Summary

Dimensions of the HDF reaches are summarized in Table 5.

Table 5. Reach dimensions

Drainage Feature	Length (m)	Mean Bankfull Width (m)	Mean Wetted Width (m)	Mean Depth (m)
HDF1	261	5.4	1.15	0.10
HDF2	154	No defined banks	0.80	0.02
HDF3	150	No defined banks	0.40	0.06

3.0 MANAGEMENT RECOMMENDATIONS

The classification categories identified in Section 2 provide the basis of the management recommendations provided here. The following flow chart (Figure 2) combines and translates the classification results to management recommendations.

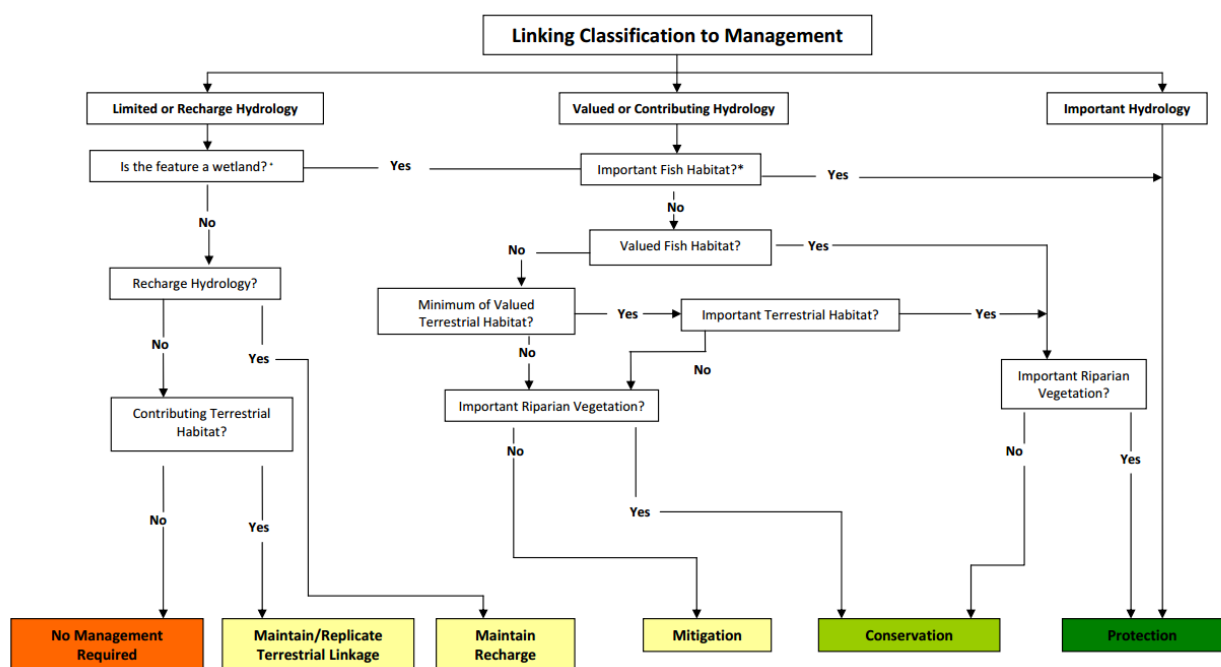


Figure 3. Headwater Drainage Feature Assessment (HDFa) flow chart providing direction on management options



3.1 Management Recommendations for Reaches

HDF1

This feature is a simple roadside ditch with ephemeral hydrology. Its primary function is to collect and convey road runoff. The feature has negligible biological functionality. This feature is likely to remain in place in its current location. Following the HDFA Guide flow chart linking component classification to management directives (Figure 2), this reach:

1. Provides Contributing Hydrology;
2. Does not provide Important or Valued Fish Habitat;
3. Does not provide Valued Terrestrial Habitat; and
4. Does not provide Important Riparian Vegetation.

This chain of classification descriptors leads to a management directive of **Mitigation**. The feature is not required to be maintained per se but if it is to be removed, its functionality must be replicated or enhanced through lot level conveyance measures as part of the site stormwater management system. Any replacement features/systems should be vegetated to mimic online wet vegetation pockets to the extent possible and must convey water to the same final receiver (i.e. Cardinal Creek). As a roadside ditch for a major arterial road, neither this feature nor a future replacement feature/system requires setbacks or a natural channel design.

HDF2 and HDF3

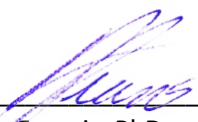
These reaches do not connect directly to HDF1 may but may direct some spring runoff generally towards that feature and/or provide some opportunity for infiltration Following the HDFA Guide flow chart linking component classification to management directives (Figure 3), these reaches:

1. Provide Limited Hydrology;
2. Are not wetlands; but
3. May provide recharge hydrology.

This chain of classification descriptors leads to a management directive of **Maintain Recharge**. There is no requirement to retain the feature per se, but the overall water balance for the area must be maintained by providing mitigation measures to infiltrate clean stormwater.

4.0 CLOSURE

This report provides detailed descriptions of the HDFs on and/or near to the Site, as well as management recommendations to direct future development near those features. Points of clarification can be addressed to the undersigned.



Anthony Francis, PhD
KILGOUR & ASSOCIATES LTD.



Appendix A: Site Photos

HDF1 - Roadside ditch along Old Montreal Road



HDF2 (right side) and HDF3 (left side)



Appendix D TCR



**Tree Conservation Report
Phoenix Homes -
Old Montreal Road**

July 17, 2023

KILGOUR & ASSOCIATES LTD.
www.kilgourassociates.com



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Appendix A Tree inventory table for the Site

List of Acronyms and Abbreviations

CRZ – critical root zone
DBH – diameter at breast height
ESA – *Endangered Species Act*
KAL – Kilgour & Associates Ltd.
SAR – species at risk
SARA – *Species at Risk Act*
TCR – Tree Conservation Report



1.0 INTRODUCTION

This TCR has been prepared following guidelines set forth by the City of Ottawa (“the City”, 2020) on behalf of Phoenix Homes in support of their proposed development of the properties on Old Montreal Road, Ottawa, Ontario. The proposed development area (herein the “Site”) will include approximately 5.3 ha on the northern half of the properties (Figure 1).



Figure 1 Map showing location context for the Site

A TCR is required for all Plans of Subdivision, Site Plan Control Applications, Common Elements Condominium Applications, and Vacant Land Condominium Applications where there is a tree of 10 cm in diameter at breast height (DBH) or greater on a site and/or if there is a tree on an adjacent site that has a critical root zone (CRZ) extending onto a development site. A “tree” is defined as any species of woody perennial plant, including its root system, which has reached or can reach a minimum height of at least 450 cm at physiological maturity. The CRZ is calculated as DBH x 10 cm.

The removal of trees on the Site cannot occur until written approval has been granted through a tree permit as per the City's Tree Protection By-law (2020), the application for which will be supported by this TCR. The tree permit will come in the form of a letter from the General Manager¹ with conditions specific to the Site, tree retention (if applicable), and associated tree protection and tree removal. The approved TCR itself is a requirement for the approval of the development applications listed above. A copy of the report must be

¹ General Manager of the Public Works & Environmental Services Department or the General Manager of the Planning, Infrastructure and Economic Development Department of the City of Ottawa, or their designate.

available on the Site during tree removal, grading, construction, or any other site alteration activities, and for the duration of construction on the Site.

2.0 PROPERTY INFORMATION

The subject properties (Cumberland; CON 1 PT LOT 27, 28 OS; PIN 145260027, 145260023, 145260026, 145260024, 145260025) are located at 1154, 1180, 1172, 1176, and 1208 Old Montreal Road and cover approximately 18.5 ha.

2.1 Property Owner and Applicant Contact Information

Table 1 Organization, role, contact person, phone number, and email address for property owner and applicant

Organization	Role	Contact Person	Phone Number	Email Address
Phoenix Homes	Property Owner / Applicant	????	(613) 851-6819	
FOTENN	Planner	Paul Black	(613) 614-4075	tchadder@jlrichards.ca

2.2 Arborist Contact Information and Qualifications

Table 2 Organization, role, contact person, phone number, and email address for arborists

Organization	Role	Contact Person	Phone Number	Email Address
KAL	Biologist	Kesia Miyashita	(613) 260-5555	kmiyashita@kilgourassociates.com
KAL	Biologist	Anthony Francis	(613) 260-5555	afrancis@kilgourassociates.com

Kesia Miyashita (MSc) Ms. Miyashita has over six years of experience in environmental consulting and more than ten seasons of field experience in ecosystems in Alberta and British Columbia. During her career in environmental consulting, Ms. Miyashita has completed environmental assessments for a variety of major infrastructure projects and urban developments. Her expertise is in vascular and non-vascular plant ecology, with experience in both terrestrial and wetland ecosystems; she has performed vegetation community inventories, rare plant surveys, and weed surveys in a variety of natural environments, including native forest, urban nature preserves, grasslands, and wetlands.

Anthony Francis (PhD) is a Senior Ecologist with 20 years' consulting experience to both government agencies and private industry. He has worked on a diversity of projects relating to species at risk (SAR), invasive species, terrestrial and aquatic habitat, environmental effects monitoring and mitigation, and fate/effects of



contaminants. Within each of these subject areas, Dr. Francis has completed projects addressing specific site concerns and broader policy initiatives. Dr. Francis' academic background is in spatial ecology with a focus on tree species diversity. As a Senior Ecologist at KAL, he regularly completes TCRs, Environmental Impact Statements, and Integrated Environmental Reviews for land development projects throughout Ottawa and eastern Ontario. He is also a certified Butternut Health Assessor (BHA #104).

2.3 Additional Applications

Not applicable.

3.0 EXSITING CONDITIONS

3.1 Tree Inventory

A detailed tree survey for the Site was performed on June 18, 2021, following TCR guidelines set forth by the City (2020). All trees with a diameter at breast height (DBH) ≥ 10 cm having potential to be removed under the proposed development were identified, enumerated, mapped, their DBH measured, and their general health and condition documented (Appendix A, Figure 2).

In general, the Site contains 77 trees with DBH ≥ 10 cm from 9 species, with approximately 45% of trees observed dominated by White Spruce (*Picea glauca*; Table 3). Based on aerial imagery from geoOttawa (City of Ottawa, 2021), only ~5 trees existed within the development area prior to 1976 and therefore most trees here are greater than 45 years old.

Table 3 Tree species count and percent composition for the Site

Common name	Scientific name	Count	Percent composition
American Elm	<i>Ulmus americana</i>	2	3%
Large-tooth aspen	<i>Populus grandidentata</i>	3	4%
Manitoba Maple	<i>Acer negundo</i>	8	10%
Red Maple	<i>Acer rubrum</i>	3	4%
Sugar Maple	<i>Acer saccharum</i>	8	10%
White Ash	<i>Fraxinus americana</i>	8	10%
White Pine	<i>Pinus strobus L</i>	9	12%
White Spruce	<i>Picea glauca</i>	35	45%
White Willow	<i>Salix Alba</i>	3	1%
TOTAL		77	100.0%



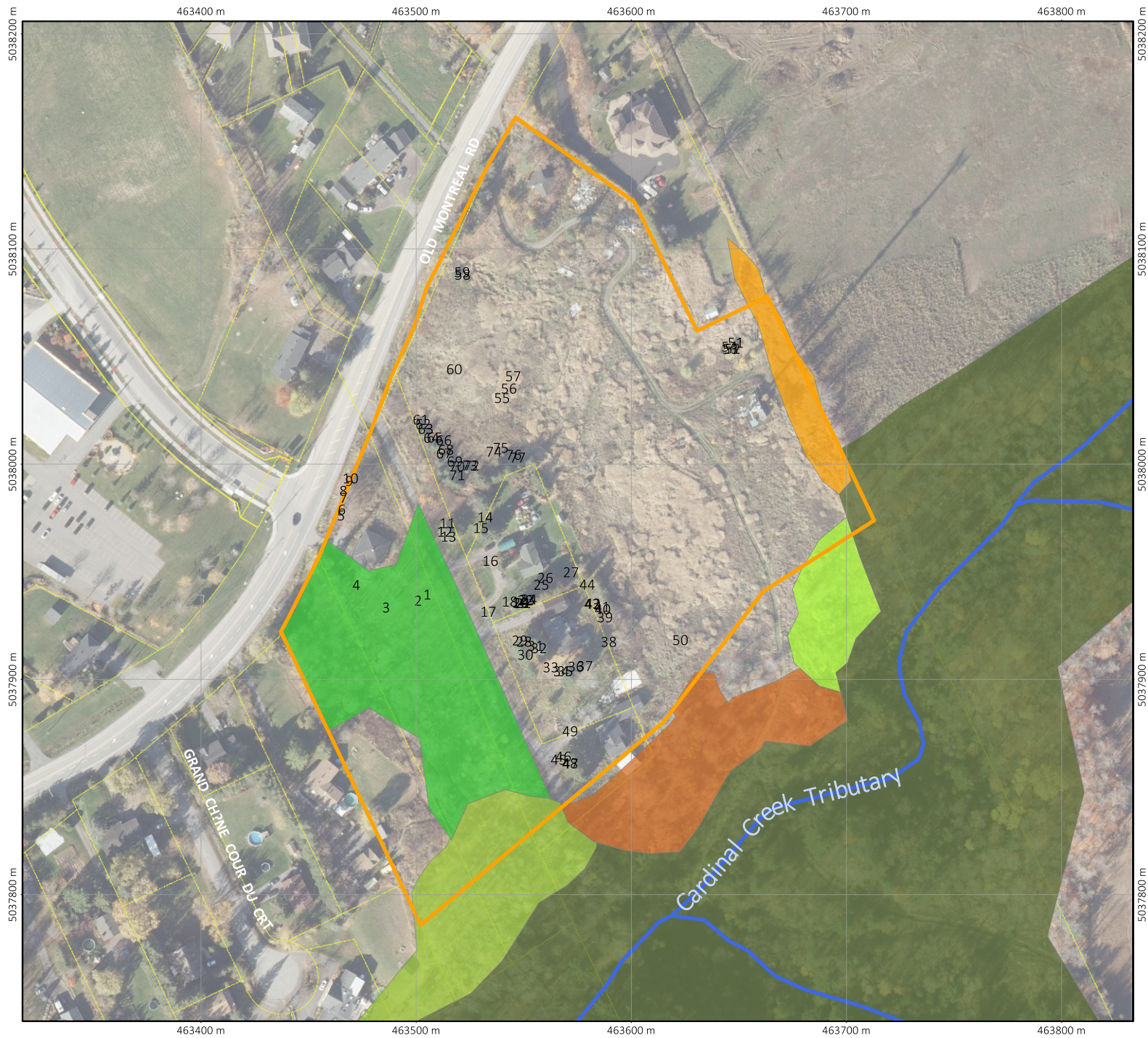
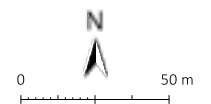


Figure 2 Existing site conditions.

- Development Area
- # Site Trees
- Forested Communities**
 - FOD 2-1
 - FOD3
 - FOM2
 - FOM7
 - THDM2
 - THDM3



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 Universal Transverse Mercator - Zone 18 (N)
 Printed on: 2023-07-17



3.1.1 Ecological Significance of Trees on Site

The Site does not contain any federally or provincially significant tree species (i.e., those listed under the *Species at Risk Act* (SARA), the ESA, or those tracked on the Natural Heritage Information Centre (MNRF, 2021)). The Site also does not contain tree species considered regionally significant (rare) in the Ottawa area per Muncaster Environmental Planning Inc. and Brunton Consulting Services (2005).

Forested areas the south of the development area are associated with creek ravine. These areas likely provide forest habitat for common bird and small mammal species in the Ottawa area and Eastern Wood-pewee (Special Concern under the ESA). Forest habitat on the Site is also suitable for Wood Thrush (Special Concern under the ESA) and several Endangered bat species (i.e., Eastern Small-footed Myotis, Little Brown Myotis, Northern Myotis, and Tri-coloured Bat) which are known to occur within approximately 10 km of the Site. These areas will be preserved.

3.2 Other Natural Environment Elements

3.2.1 Surface Water Features

The Site does not contain surface water features or potential fish habitat areas other than minor roadside ditches.

3.2.2 Steep Slopes

The development area does not contain any steep slopes. It is situated outside of the required geotechnical setbacks for the valley lands to the south.

3.2.3 Valued Woodlots

The development area itself does not contain any woodlots designated as Urban Natural Features or Natural Environment Areas, areas evaluated in the *City of Ottawa Urban Natural Areas Environmental Evaluation Study* (UNAEES; Muncaster Environmental Planning Inc. and Brunton Consulting Services, 2005), or other areas that meet the criteria used in the UNAEES.

3.2.4 Significant Woodlands

Forest adjacent to the development area meet the Significant Woodland criteria or size thresholds for rural areas in Ottawa per *Significant Woodlands: Guidelines for Identification, Evaluation, and Impact Assessment* (City of Ottawa, 2018), but forested areas within the development area itself do not.

3.2.5 Greenspace Linkages

The development area does not contain any greenspace linkages as identified in the Greenspace Master Plan (City of Ottawa, 2016) or as may occur in the larger landscape.

3.2.6 Distinctive Trees

The Site contains 14 distinctive trees (i.e., with DBH > 50 cm; Appendix A).



3.2.7 Unique Ecological Features

The development area does not contain any riparian woodlots, rare communities, or other unique ecological features.

3.2.8 Species at Risk

Based on our review of existing information (KAL 2021), ELC delineations (habitat categorization), and field surveys, there is potential for six SAR to both occur on or near the proposed project area and to have some potential to interact with the project. These include three species of bats (Northern Long-eared Myotis, Eastern Small-footed Myotis, and Tri-coloured Bat) and insect (Monarch Butterfly), and two bird species (Barn Swallow and Bobolink).

For listed bat species in areas subject to tree removal, especially when extent of the tree removal is relatively small compared to remaining available treed areas nearby, mitigation measures to protect bat species should focus on the avoidance of harm to individuals (email communication from MECP Biologist Carolyn Hann, July 30, 2021; Appendix B). If a proposed activity will avoid impairing or eliminating the function of habitat for supporting bat life processes (e.g. remove, stub, etc. a small number of potential maternity or day roost trees in treed habitats) but the timing of tree removal will avoid the bat active season (April 1 – September 30 in Southern Ontario / May 1 to August 31 in Northern Ontario), then there is no need to conduct species at risk bat surveys of treed habitats.

Neither of the two potentially present SAR bird species (Barn Swallow and Bobolink) were observed to occupy the Site in 2021. Accordingly, the Site is not currently considered to provide habitat for those species, though either species could begin using the Site as habitat in the future.

Monarch Butterfly is listed as species of Special Concern in Ontario. As such neither the species nor its habitat is directly protected under the ESA.

4.0 PROPOSED DEVELOPMENT

Phoenix Homes is proposing to develop the site with a mix of medium and high-density development. The proposed site would combine low-rise apartment buildings, stacked and back-to-back townhouse condominiums, townhomes, and bungalows on municipal right of ways and private streets (Figure 3).

Parking for the semi-detached and freehold townhouses is provided for with standard construction single car garages, driveways and residual on-street parking. Parking for the stacked condominiums and apartments is provided by a combination of surface parking lot, on-street parking and below ground parking.

Site development will require significant regrading and terracing of the steeply sloping properties that will necessitate the removal of all trees from the Site. Land clearing and construction are anticipated to begin in late 2023.





Figure 3 Proposed development plan

Development Area

Tree Removed

Area of Tree Removal

Construction Fencing for Tree Protection

Forested Communities

FOD 2-1

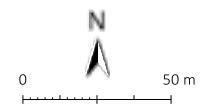
FOD3

FOM2

FOM7

THDM2

THDM3



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5.0 MITIGATION MEASURES

5.1 Site Preparation and Construction

The following mitigation measures should be applied during Site preparation and construction:

- Tree and vegetation clearing should not take place during sensitive times of the year for wildlife (breeding season; early spring throughout summer) unless mitigation measures are implemented and/or the habitat has been inspected by a qualified biologist.
 - The *Migratory Birds Convention Act* protects the nests and young of migratory breeding birds in Canada. No clearing of vegetation shall occur during the breeding bird window (between April 15 and August 15; City of Ottawa, 2015) to prevent impacts to birds. Combining the breeding bird window with the bat roosting season (May to September; MNRF, 2015a), no clearing of vegetation shall occur between April 15 and September 30 inclusive to prevent impacts to both birds and bats.

It is expected that all trees on the Site would need to be cleared for the project. Vegetation removal on the Site should be limited to that which is necessary to accommodate construction. If it is possible to retain trees on the Site, the following general protection measures are recommended for retained trees during site preparation and construction (City of Ottawa, 2015):

- Erect a fence beyond the CRZ of retained trees. The fence should be highly visible (orange construction fence) and paired with erosion and sediment control fencing. Pruning of branches is recommended in areas of potential conflict with construction equipment.
- Do not place any material or equipment within the CRZ of trees unless otherwise approved by the General Manager.
- Do not attach any signs, notices, or posters to any trees unless otherwise approved by the General Manager.
- Do not raise or lower the existing grade within the CRZ of trees unless otherwise approved by the General Manager.
- Do not extend any hard surface or significantly change landscaping within the CRZ of trees unless otherwise approved by the General Manager.
- Do not damage the root system, trunk, or branches of any remaining trees unless otherwise approved by the General Manager.
- Use tunneling or boring when digging within the CRZ of a tree.
- Ensure that exhaust fumes from equipment are not directed towards any tree's canopy.



5.2 Tree Planting Recommendations

Trees are to be planted within areas of town homes at a density equivalent to one tree per lot, with additional tree plantings to be included throughout the remainder of the development where feasible (e.g. in larger single lots, adjacent to buildings and/or in other public areas) with a target of planting the equivalent of 1 tree per unit through the broader community.

Specific trees to be planted on the site will be identified in the landscape plan for the development. Trees species identified in this plan however must be non-invasive and be native to the Ottawa. Final selection of tree species within the landscape plan must also consider the City of Ottawa's Clay Soils Policy. Recommended tree species to consider in the landscaping plan include Red Maple (*Acer rubrum*), White Spruce (*Picea glauca*), Pin Cherry (*Prunus pensylvanica*), White Birch (*Betula papyrifera*), Black Cherry (*Prunus nigra*), White Cedar (*Thuja occidentalis*) and Serviceberry (*Amelanchier* spp.) as other suitable candidate species. Burr Oak may be considered where spacing allows for future showcase trees. Common Juniper (*Juniperus communis*), Maple-leaf Viburnum (*Viburnum acerifolium*), Nannyberry (*Viburnum lentago*) and Northern Bush-honeysuckle (*Diervilla lonicera*) may be considered as appropriate shrub species.

6.0 CLOSURE

This report was prepared for exclusive use by Mevex Corporation and may be distributed only by Mevex Corporation. Questions relating to the data and interpretation can be addressed to the undersigned.

Respectfully submitted,

KILGOUR & ASSOCIATES LTD.

Kesia Miyashita Black, MSc
Project Biologist

Anthony Francis, PhD
Senior Review



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Appendix A Tree inventory table for the Site



Tree Conservation Report:
DCRP1123 – Old Montreal Road
July 17, 2023

Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
1	Trembling Aspen	<i>Populus tremuloides</i>	1	29	Fair: tree displays 15-40% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	1: Healthy, live tree	Y		Removed
2	Trembling Aspen	<i>Populus tremuloides</i>	1	15	Fair: tree displays 15-40% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	1: Healthy, live tree	N		Removed
3	Trembling Aspen	<i>Populus tremuloides</i>	2	20	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
4	Trembling Aspen	<i>Populus tremuloides</i>	1	13	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
5	Trembling Aspen	<i>Populus tremuloides</i>	1	22	Fair: tree displays 15-40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed
6	Trembling Aspen	<i>Populus tremuloides</i>	2	18	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
7	Sugar Maple	<i>Acer saccharum</i>	5	16	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
8	Trembling Aspen	<i>Populus tremuloides</i>	1	16	Fair: tree displays 15-40% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	N	European Gypsy Moth caterpillars	Removed
9	Trembling Aspen	<i>Populus tremuloides</i>	1	26	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
10	Trembling Aspen	<i>Populus tremuloides</i>	1	27	Fair: tree displays 15-40% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	Y	European Gypsy Moth caterpillars	Removed
11	White Ash	<i>Fraxinus americana</i>	1	28	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	Y		Removed
12	White Ash	<i>Fraxinus americana</i>	1	18	Poor: tree displays greater	Poor: tree displays greater than 40% deficiency/defect	5: Older dead tree, 90% bark lost, few	N		Removed



Tree Conservation Report:
DCRP1123 – Old Montreal Road
July 17, 2023

Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
					than 40% deficiency/defect		branch stubs, broken top			
13	White Cedar	<i>Thuja occidentalis</i>	1	13	Fair: tree displays 15-40% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	N		Removed
14	White Cedar	<i>Thuja occidentalis</i>	1	24	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
15	White Cedar	<i>Thuja occidentalis</i>	1	20	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
16	White Cedar	<i>Thuja occidentalis</i>	1	12	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
17	White Cedar	<i>Thuja occidentalis</i>	1	24	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
18	Sugar Maple	<i>Acer saccharum</i>	1	13	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
19	Trembling Aspen	<i>Populus tremuloides</i>	1	29	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
20	Trembling Aspen	<i>Populus tremuloides</i>	1	20	Fair: tree displays 15-40% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	1: Healthy, live tree	N		Removed
21	Trembling Aspen	<i>Populus tremuloides</i>	1	22	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
22	Trembling Aspen	<i>Populus tremuloides</i>	1	25	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
23	White Ash	<i>Fraxinus americana</i>	4	18	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N	European Gypsy Moth caterpillars	Removed



Tree Conservation Report:
DCRP1123 – Old Montreal Road
July 17, 2023

Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
24	Trembling Aspen	<i>Populus tremuloides</i>	1	25	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
25	Sugar Maple	<i>Acer saccharum</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
26	Sugar Maple	<i>Acer saccharum</i>	1	12	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
27	Trembling Aspen	<i>Populus tremuloides</i>	1	17	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N	European Gypsy Moth caterpillars	Removed
28	Trembling Aspen	<i>Populus tremuloides</i>	1	21	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
29	Trembling Aspen	<i>Populus tremuloides</i>	1	24	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N	European Gypsy Moth caterpillars	Removed
30	Trembling Aspen	<i>Populus tremuloides</i>	1	23	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N	European Gypsy Moth caterpillars	Removed
31	Sugar Maple	<i>Acer saccharum</i>	2	20	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
32	Sugar Maple	<i>Acer saccharum</i>	3	20	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
33	Sugar Maple	<i>Acer saccharum</i>	1	16	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
34	Trembling Aspen	<i>Populus tremuloides</i>	1	37	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed



Tree Conservation Report:
DCRP1123 – Old Montreal Road
July 17, 2023

Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
35	White Pine	<i>Pinus strobus</i>	1	79	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
36	White Pine	<i>Pinus strobus</i>	1	51	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
37	White Birch	<i>Betula papyrifera</i>	2	40	Fair: tree displays 15-40% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
38	White Pine	<i>Pinus strobus</i>	1	24	Fair: tree displays 15-40% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
39	White Pine	<i>Pinus strobus</i>	1	55	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y	Base covered by fill	Removed
40	White Pine	<i>Pinus strobus</i>	1	45	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
41	Manitoba Maple	<i>Acer negundo</i>	3	26	Fair: tree displays 15-40% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y	Base covered by fill	Removed
42	Manitoba Maple	<i>Acer negundo</i>	1	18	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N	Base covered by fill	Removed
43	White Cedar	<i>Thuja occidentalis</i>	3	24	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
44	White Ash	<i>Fraxinus americana</i>	2	20	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
45	White Cedar	<i>Thuja occidentalis</i>	3	27	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
46	White Cedar	<i>Thuja occidentalis</i>	4	25	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
47	White Pine	<i>Pinus strobus</i>	1	40	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
48	White Cedar	<i>Thuja occidentalis</i>	3	17	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
49	White Cedar	<i>Thuja occidentalis</i>	1	19	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
50	White Cedar	<i>Thuja occidentalis</i>	2	23	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N	1 stem dead	Removed
51	White Cedar	<i>Thuja occidentalis</i>	2	26	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
52	White Cedar	<i>Thuja occidentalis</i>	1	37	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
53	White Cedar	<i>Thuja occidentalis</i>	1	24	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
54	White Pine	<i>Pinus strobus</i>	1	45	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
55	White Cedar	<i>Thuja occidentalis</i>	2	41	Fair: tree displays 15-40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	Y	Low cavities	Removed
56	White Cedar	<i>Thuja occidentalis</i>	1	38	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
57	White Cedar	<i>Thuja occidentalis</i>	1	40	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
58	White Pine	<i>Pinus strobus</i>	1	44	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
59	White Cedar	<i>Thuja occidentalis</i>	2	29	Fair: tree displays 15-40% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	Y	Low cavities	Removed
60	Sugar Maple	<i>Acer saccharum</i>	1	34	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
61	White Pine	<i>Pinus strobus</i>	1	44	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
62	Sugar Maple	<i>Acer saccharum</i>	1	42	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
63	White Cedar	<i>Thuja occidentalis</i>	1	46	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
64	White Pine	<i>Pinus strobus</i>	1	53	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
65	Manitoba Maple	<i>Acer negundo</i>	1	16	Fair: tree displays 15-40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed
66	Manitoba Maple	<i>Acer negundo</i>	2	22	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N	Covered in Wild Grape	Removed
67	Red Oak	<i>Quercus rubra</i>	1	26	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
68	Sugar Maple	<i>Acer saccharum</i>	1	32	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
69	Sugar Maple	<i>Acer saccharum</i>	1	37	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
70	Sugar Maple	<i>Acer saccharum</i>	1	12	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
71	White Birch	<i>Betula papyrifera</i>	1	31	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	4: Recently dead, bark peeling, only large branches intact	N	Cavities	Removed
72	White Pine	<i>Pinus strobus</i>	1	69	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
73	Ironwood	<i>Ostrya virginiana</i>	2	11	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
74	White Spruce	<i>Picea glauca</i>	1	15	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
75	White Ash	<i>Fraxinus americana</i>	1	11	Fair: tree displays 15-40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed
76	Red Oak	<i>Quercus rubra</i>	1	13	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
77	Trembling Aspen	<i>Populus tremuloides</i>	1	12	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
78	Trembling Aspen	<i>Populus tremuloides</i>	1	12	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
79	Trembling Aspen	<i>Populus tremuloides</i>	1	12	Fair: tree displays 15-40% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
80	Trembling Aspen	<i>Populus tremuloides</i>	1	14	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
81	Sugar Maple	<i>Acer saccharum</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
82	Trembling Aspen	<i>Populus tremuloides</i>	1	20	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
83	Trembling Aspen	<i>Populus tremuloides</i>	1	13	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
84	Trembling Aspen	<i>Populus tremuloides</i>	1	13	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	4: Recently dead, bark peeling, only large branches intact	N		Removed
85	White Spruce	<i>Picea glauca</i>	1	16	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	2: Declining live tree, part of canopy lost	N	Brown needles	Removed
86	Trembling Aspen	<i>Populus tremuloides</i>	1	18	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
87	Sugar Maple	<i>Acer saccharum</i>	1	17	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
88	White Birch	<i>Betula papyrifera</i>	2	11	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	2: Declining live tree, part of canopy lost	N		Removed
89	Trembling Aspen	<i>Populus tremuloides</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
90	Trembling Aspen	<i>Populus tremuloides</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
91	White Spruce	<i>Picea glauca</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
92	White Pine	<i>Pinus strobus</i>	1	25	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	1: Healthy, live tree	N		Removed
93	White Ash	<i>Fraxinus americana</i>	1	22	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	6: Very old dead tree, advanced decay, no branches, part of the stem has rotted away	N		Removed
94	White Pine	<i>Pinus strobus</i>	1	57	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
95	White Birch	<i>Betula papyrifera</i>	1	23	Fair: tree displays 15-40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	4: Recently dead, bark peeling, only large branches intact	N		Removed
96	White Birch	<i>Betula papyrifera</i>	2	24	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	N		Removed
97	White Spruce	<i>Pinus strobus</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
98	Sugar Maple	<i>Acer saccharum</i>	1	27	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
99	White Cedar	<i>Thuja occidentalis</i>	1	15	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
100	White Birch	<i>Betula papyrifera</i>	1	22	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	6: Very old dead tree, advanced decay, no branches, part of the stem has rotted away	N		Removed
101	White Cedar	<i>Thuja occidentalis</i>	1	36	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
102	Apple	<i>Malus sp.</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
103	Sugar Maple	<i>Acer saccharum</i>	2	28	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
104	White Birch	<i>Betula papyrifera</i>	3	14	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N	2 stems dead	Removed
105	Sugar Maple	<i>Acer saccharum</i>	1	12	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
106	White Birch	<i>Betula papyrifera</i>	1	11	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
107	White Cedar	<i>Thuja occidentalis</i>	3	14	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
108	Sugar Maple	<i>Acer saccharum</i>	1	11	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
109	Sugar Maple	<i>Acer saccharum</i>	1	17	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
110	White Ash	<i>Fraxinus americana</i>	1	10	Fair: tree displays 15-40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed
111	White Birch	<i>Betula papyrifera</i>	1	21	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	6: Very old dead tree, advanced decay, no branches, part of the stem has rotted away	N		Removed
112	Sugar Maple	<i>Acer saccharum</i>	1	18	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
113	Black Cherry	<i>Prunus serotina</i>	1	32	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
114	White Spruce	<i>Picea glauca</i>	1	31	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	1: Healthy, live tree	Y		Removed
115	White Birch	<i>Betula papyrifera</i>	1	26	Fair: tree displays 15-40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	4: Recently dead, bark peeling, only large branches intact	N		Removed
116	White Birch	<i>Betula papyrifera</i>	1	24	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
117	Ironwood	<i>Ostrya virginiana</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
118	White Cedar	<i>Thuja occidentalis</i>	4	24	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
119	Sugar Maple	<i>Acer saccharum</i>	1	37	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
120	Sugar Maple	<i>Acer saccharum</i>	1	12	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
121	White Cedar	<i>Thuja occidentalis</i>	1	31	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
122	White Cedar	<i>Thuja occidentalis</i>	3	36	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y	2 stems topped	Removed
123	White Ash	<i>Fraxinus americana</i>	1	22	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed
124	Sugar Maple	<i>Acer saccharum</i>	1	29	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
125	Sugar Maple	<i>Acer saccharum</i>	3	34	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
126	Ironwood	<i>Ostrya virginiana</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
127	Sugar Maple	<i>Acer saccharum</i>	1	45	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y	Base covered by felled trees	Removed
128	White Cedar	<i>Thuja occidentalis</i>	1	17	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
129	White Birch	<i>Betula papyrifera</i>	1	25	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	6: Very old dead tree, advanced decay, no branches, part of the stem has rotted away	N		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
130	White Cedar	<i>Thuja occidentalis</i>	1	27	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
131	White Birch	<i>Betula papyrifera</i>	1	34	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
132	Sugar Maple	<i>Acer saccharum</i>	1	20	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
133	White Cedar	<i>Thuja occidentalis</i>	2	30	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
134	White Cedar	<i>Thuja occidentalis</i>	1	32	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
135	Ironwood	<i>Ostrya virginiana</i>	1	13	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
136	Ironwood	<i>Ostrya virginiana</i>	1	15	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
137	White Cedar	<i>Thuja occidentalis</i>	2	18	Fair: tree displays 15-40% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	1: Healthy, live tree	N	Base covered by felled trees	Removed
138	Ironwood	<i>Ostrya virginiana</i>	1	27	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y	Base covered by felled trees	Removed
139	White Cedar	<i>Thuja occidentalis</i>	2	62	Fair: tree displays 15-40% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	Y	Base covered by felled trees; adjacent to fill pile	Removed
140	White Cedar	<i>Thuja occidentalis</i>	1	21	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N	Adjacent to fill	Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
141	White Cedar	<i>Thuja occidentalis</i>	1	12	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	2: Declining live tree, part of canopy lost	N		Removed
142	White Cedar	<i>Thuja occidentalis</i>	1	10	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed
143	Sugar Maple	<i>Acer saccharum</i>	1	24	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
144	Sugar Maple	<i>Acer saccharum</i>	1	26	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
145	Ironwood	<i>Ostrya virginiana</i>	1	13	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
146	White Pine	<i>Pinus strobus</i>	1	22	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N	Base covered in fill	Removed
147	White Birch	<i>Betula papyrifera</i>	1	22	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
148	White Cedar	<i>Thuja occidentalis</i>	2	25	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
149	White Cedar	<i>Thuja occidentalis</i>	2	27	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
150	White Ash	<i>Fraxinus americana</i>	1	16	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed
151	White Cedar	<i>Thuja occidentalis</i>	5	6	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
152	Sugar Maple	<i>Acer saccharum</i>	1	15	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
153	White Cedar	<i>Thuja occidentalis</i>	2	14	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	1: Healthy, live tree	N		Removed
154	Sugar Maple	<i>Acer saccharum</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
155	Sugar Maple	<i>Acer saccharum</i>	1	11	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
156	Sugar Maple	<i>Acer saccharum</i>	1	13	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
157	Sugar Maple	<i>Acer saccharum</i>	1	31	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
158	White Cedar	<i>Thuja occidentalis</i>	1	25	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
159	White Cedar	<i>Thuja occidentalis</i>	1	18	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
160	White Ash	<i>Fraxinus americana</i>	1	14	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	4: Recently dead, bark peeling, only large branches intact	N		Removed
161	Sugar Maple	<i>Acer saccharum</i>	1	88	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y	Large cavities	Removed
162	White Ash	<i>Fraxinus americana</i>	1	11	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
163	White Ash	<i>Fraxinus americana</i>	1	12	Fair: tree displays 15-40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed
164	White Birch	<i>Betula papyrifera</i>	1	13	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
165	White Birch	<i>Betula papyrifera</i>	1	18	Fair: tree displays 15-40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed
166	Sugar Maple	<i>Acer saccharum</i>	1	29	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
167	Sugar Maple	<i>Acer saccharum</i>	1	23	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
168	Sugar Maple	<i>Acer saccharum</i>	1	14	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
169	Sugar Maple	<i>Acer saccharum</i>	1	21	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N	Base covered in fill	Removed
170	Sugar Maple	<i>Acer saccharum</i>	1	32	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y	Adjacent to fill	Removed
171	White Cedar	<i>Thuja occidentalis</i>	3	11	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	4: Recently dead, bark peeling, only large branches intact	N		Removed
172	Sugar Maple	<i>Acer saccharum</i>	1	30	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y	Adjacent to fill	Removed
173	White Cedar	<i>Thuja occidentalis</i>	1	47	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	1: Healthy, live tree	Y	Cavities	Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
					15% deficiency/defect					
174	Sugar Maple	<i>Acer saccharum</i>	1	36	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
175	Sugar Maple	<i>Acer saccharum</i>	1	21	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
176	Sugar Maple	<i>Acer saccharum</i>	1	16	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
177	White Birch	<i>Betula papyrifera</i>	2	22	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	5: Older dead tree, 90% bark lost, few branch stubs, broken top	N		Removed
178	Sugar Maple	<i>Acer saccharum</i>	1	11	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
179	Sugar Maple	<i>Acer saccharum</i>	1	35	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
180	White Cedar	<i>Thuja occidentalis</i>	1	37	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	Y		Removed
181	Sugar Maple	<i>Acer saccharum</i>	1	18	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
182	White Birch	<i>Betula papyrifera</i>	1	33	Fair: tree displays 15-40% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
183	Sugar Maple	<i>Acer saccharum</i>	1	11	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
184	Sugar Maple	<i>Acer saccharum</i>	1	12	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
185	Sugar Maple	<i>Acer saccharum</i>	1	20	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
186	Sugar Maple	<i>Acer saccharum</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
187	Sugar Maple	<i>Acer saccharum</i>	1	13	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
188	Sugar Maple	<i>Acer saccharum</i>	1	14	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
189	Sugar Maple	<i>Acer saccharum</i>	1	15	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
190	Sugar Maple	<i>Acer saccharum</i>	2	12	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
191	Ironwood	<i>Ostrya virginiana</i>	1	13	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
192	Sugar Maple	<i>Acer saccharum</i>	1	17	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
193	Sugar Maple	<i>Acer saccharum</i>	1	21	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
194	Sugar Maple	<i>Acer saccharum</i>	1	24	Fair: tree displays 15-40% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
195	Sugar Maple	<i>Acer saccharum</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
196	Sugar Maple	<i>Acer saccharum</i>	1	23	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
197	Sugar Maple	<i>Acer saccharum</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
198	Sugar Maple	<i>Acer saccharum</i>	1	14	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
199	Sugar Maple	<i>Acer saccharum</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
200	Sugar Maple	<i>Acer saccharum</i>	5	52	Fair: tree displays 15-40% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y	1 stem dead	Removed
201	Sugar Maple	<i>Acer saccharum</i>	1	15	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
202	Sugar Maple	<i>Acer saccharum</i>	1	13	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
203	Sugar Maple	<i>Acer saccharum</i>	1	15	Fair: tree displays 15-40% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
204	White Ash	<i>Fraxinus americana</i>	1	18	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	4: Recently dead, bark peeling, only large branches intact	N		Removed
205	Sugar Maple	<i>Acer saccharum</i>	1	31	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
206	Ironwood	<i>Ostrya virginiana</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
207	Sugar Maple	<i>Acer saccharum</i>	1	25	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
208	Ironwood	<i>Ostrya virginiana</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
209	Ironwood	<i>Ostrya virginiana</i>	1	35	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	1: Healthy, live tree	Y		Removed
210	Sugar Maple	<i>Acer saccharum</i>	2	50	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y	1 stem dead	Removed
211	Sugar Maple	<i>Acer saccharum</i>	1	20	Fair: tree displays 15-40% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
212	Sugar Maple	<i>Acer saccharum</i>	1	26	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
213	Sugar Maple	<i>Acer saccharum</i>	2	16	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
214	Sugar Maple	<i>Acer saccharum</i>	1	11	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
215	Sugar Maple	<i>Acer saccharum</i>	1	17	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
216	Sugar Maple	<i>Acer saccharum</i>	5	29	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y	1 stem dead	Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
217	Sugar Maple	<i>Acer saccharum</i>	2	17	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	1: Healthy, live tree	N		Removed
218	Sugar Maple	<i>Acer saccharum</i>	1	44	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
219	Sugar Maple	<i>Acer saccharum</i>	1	21	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
220	Sugar Maple	<i>Acer saccharum</i>	1	20	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
221	Sugar Maple	<i>Acer saccharum</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
222	Sugar Maple	<i>Acer saccharum</i>	1	53	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
223	Sugar Maple	<i>Acer saccharum</i>	1	22	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
224	White Cedar	<i>Thuja occidentalis</i>	5	26	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	4: Recently dead, bark peeling, only large branches intact	N		Removed
225	Sugar Maple	<i>Acer saccharum</i>	1	30	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
226	Sugar Maple	<i>Acer saccharum</i>	1	21	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
227	Sugar Maple	<i>Acer saccharum</i>	2	39	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
228	Sugar Maple	<i>Acer saccharum</i>	1	29	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
229	Sugar Maple	<i>Acer saccharum</i>	2	22	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
230	Sugar Maple	<i>Acer saccharum</i>	1	19	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
231	Sugar Maple	<i>Acer saccharum</i>	1	20	Fair: tree displays 15-40% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
232	Ironwood	<i>Ostrya virginiana</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
233	Sugar Maple	<i>Acer saccharum</i>	1	21	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
234	Sugar Maple	<i>Acer saccharum</i>	1	13	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
235	Ironwood	<i>Ostrya virginiana</i>	1	11	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed
236	Sugar Maple	<i>Acer saccharum</i>	1	17	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
237	White Birch	<i>Betula papyrifera</i>	1	26	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
238	White Spruce	<i>Picea glauca</i>	1	40	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
239	Sugar Maple	<i>Acer saccharum</i>	1	22	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
240	Sugar Maple	<i>Acer saccharum</i>	1	15	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
241	White Birch	<i>Betula papyrifera</i>	2	22	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	5: Older dead tree, 90% bark lost, few branch stubs, broken top	N		Removed
242	White Spruce	<i>Picea glauca</i>	1	33	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	4: Recently dead, bark peeling, only large branches intact	N		Removed
243	White Cedar	<i>Thuja occidentalis</i>	1	14	Fair: tree displays 15-40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed
244	White Ash	<i>Fraxinus americana</i>	1	12	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
245	White Ash	<i>Fraxinus americana</i>	1	13	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	2: Declining live tree, part of canopy lost	N		Removed
246	White Pine	<i>Pinus strobus</i>	1	64	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y	Base covered in fill	Removed
247	White Pine	<i>Pinus strobus</i>	1	48	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
248	White Cedar	<i>Thuja occidentalis</i>	1	14	Fair: tree displays 15-40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
249	White Cedar	<i>Thuja occidentalis</i>	2	15	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N	1 stem dead	Removed
250	Sugar Maple	<i>Acer saccharum</i>	1	40	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
251	Sugar Maple	<i>Acer saccharum</i>	1	14	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
252	White Pine	<i>Pinus strobus</i>	1	41	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
253	Sugar Maple	<i>Acer saccharum</i>	1	72	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	5: Older dead tree, 90% bark lost, few branch stubs, broken top	N		Removed
254	Basswood	<i>Tilia americana</i>	1	24	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
255	Ironwood	<i>Ostrya virginiana</i>	2	23	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
256	Basswood	<i>Tilia americana</i>	1	11	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
257	Ironwood	<i>Ostrya virginiana</i>	3	26	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
258	Ironwood	<i>Ostrya virginiana</i>	1	15	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed
259	Sugar Maple	<i>Acer saccharum</i>	1	23	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy,	N		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
							bark and branches intact			
260	Sugar Maple	<i>Acer saccharum</i>	1	12	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
261	Sugar Maple	<i>Acer saccharum</i>	1	15	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
262	White Cedar	<i>Thuja occidentalis</i>	1	16	Fair: tree displays 15-40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed
263	Sugar Maple	<i>Acer saccharum</i>	1	17	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
264	Sugar Maple	<i>Acer saccharum</i>	1	14	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
265	Sugar Maple	<i>Acer saccharum</i>	1	13	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
266	Sugar Maple	<i>Acer saccharum</i>	1	16	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
267	Sugar Maple	<i>Acer saccharum</i>	1	21	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
268	White Ash	<i>Fraxinus americana</i>	1	19	Fair: tree displays 15-40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed
269	Sugar Maple	<i>Acer saccharum</i>	1	14	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
270	Sugar Maple	<i>Acer saccharum</i>	1	12	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
271	Sugar Maple	<i>Acer saccharum</i>	1	22	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
272	Sugar Maple	<i>Acer saccharum</i>	1	21	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
273	Sugar Maple	<i>Acer saccharum</i>	1	18	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
274	White Cedar	<i>Thuja occidentalis</i>	1	42	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
275	White Birch	<i>Betula papyrifera</i>	1	35	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
276	Sugar Maple	<i>Acer saccharum</i>	1	11	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
277	White Pine	<i>Pinus strobus</i>	1	43	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
278	White Spruce	<i>Picea glauca</i>	1	39	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	4: Recently dead, bark peeling, only large branches intact	N		Removed
279	White Pine	<i>Pinus strobus</i>	1	84	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	Y		Removed
280	Sugar Maple	<i>Acer saccharum</i>	1	16	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
281	Ironwood	<i>Ostrya virginiana</i>	1	12	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
282	White Ash	<i>Fraxinus americana</i>	1	27	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	Y		Removed
283	Basswood	<i>Tilia americana</i>	8	18	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
284	Basswood	<i>Tilia americana</i>	2	18	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	N		Removed
285	Sugar Maple	<i>Acer saccharum</i>	1	20	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
286	White Spruce	<i>Picea glauca</i>	1	18	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed
287	Sugar Maple	<i>Acer saccharum</i>	1	17	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
288	White Pine	<i>Pinus strobus</i>	2	39	Fair: tree displays 15-40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	Y		Removed
289	Ironwood	<i>Ostrya virginiana</i>	1	11	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
290	White Cedar	<i>Thuja occidentalis</i>	2	31	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
291	White Ash	<i>Fraxinus americana</i>	1	13	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N	Topped	Removed
292	Sugar Maple	<i>Acer saccharum</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
293	Sugar Maple	<i>Acer saccharum</i>	1	17	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
294	White Birch	<i>Betula papyrifera</i>	1	33	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	Y	Topped	Removed
295	White Cedar	<i>Thuja occidentalis</i>	1	37	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y	Cavities	Removed
296	White Cedar	<i>Thuja occidentalis</i>	2	14	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N	1 (main) stem dead	Removed
297	White Birch	<i>Betula papyrifera</i>	1	22	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	6: Very old dead tree, advanced decay, no branches, part of the stem has rotted away	N		Removed
298	White Cedar	<i>Thuja occidentalis</i>	1	44	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
299	Sugar Maple	<i>Acer saccharum</i>	1	14	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
300	Sugar Maple	<i>Acer saccharum</i>	1	15	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N	Base covered in fill	Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
301	White Cedar	<i>Thuja occidentalis</i>	1	26	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
302	White Ash	<i>Fraxinus americana</i>	1	13	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
303	White Cedar	<i>Thuja occidentalis</i>	1	19	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
304	White Spruce	<i>Picea glauca</i>	1	22	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
305	White Ash	<i>Fraxinus americana</i>	1	37	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	Y		Removed
306	White Birch	<i>Betula papyrifera</i>	1	12	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	6: Very old dead tree, advanced decay, no branches, part of the stem has rotted away	N		Removed
307	White Spruce	<i>Picea glauca</i>	1	31	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	Y		Removed
308	White Cedar	<i>Thuja occidentalis</i>	1	28	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
309	White Spruce	<i>Picea glauca</i>	1	29	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
310	White Cedar	<i>Thuja occidentalis</i>	1	18	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
311	White Cedar	<i>Thuja occidentalis</i>	1	37	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
312	White Cedar	<i>Thuja occidentalis</i>	1	28	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
313	White Cedar	<i>Thuja occidentalis</i>	1	24	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
314	Sugar Maple	<i>Acer saccharum</i>	1	11	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
315	Sugar Maple	<i>Acer saccharum</i>	1	10	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	2: Declining live tree, part of canopy lost	N		Removed
316	White Birch	<i>Betula papyrifera</i>	1	30	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	Y	Topped	Removed
317	Sugar Maple	<i>Acer saccharum</i>	1	17	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed
318	Sugar Maple	<i>Acer saccharum</i>	1	12	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
319	Sugar Maple	<i>Acer saccharum</i>	1	17	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
320	White Spruce	<i>Picea glauca</i>	1	16	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
321	White Ash	<i>Fraxinus americana</i>	1	13	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N	Topped	Removed
322	Sugar Maple	<i>Acer saccharum</i>	1	14	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
323	Apple	<i>Malus sp.</i>	1	13	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	N		Removed
324	White Cedar	<i>Thuja occidentalis</i>	2	19	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
325	White Cedar	<i>Thuja occidentalis</i>	2	15	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
326	White Cedar	<i>Thuja occidentalis</i>	1	19	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	N		Removed
327	Sugar Maple	<i>Acer saccharum</i>	1	11	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	N		Removed
328	Sugar Maple	<i>Acer saccharum</i>	1	15	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
329	Sugar Maple	<i>Acer saccharum</i>	1	31	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
330	White Birch	<i>Betula papyrifera</i>	1	18	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N	Topped	Removed
331	White Cedar	<i>Thuja occidentalis</i>	1	16	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
332	Sugar Maple	<i>Acer saccharum</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
333	Sugar Maple	<i>Acer saccharum</i>	1	33	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	Y	Topped	Removed
334	White Cedar	<i>Thuja occidentalis</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
335	White Cedar	<i>Thuja occidentalis</i>	1	16	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
336	White Cedar	<i>Thuja occidentalis</i>	2	16	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
337	White Cedar	<i>Thuja occidentalis</i>	1	19	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
338	White Cedar	<i>Thuja occidentalis</i>	1	19	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
339	White Cedar	<i>Thuja occidentalis</i>	1	18	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
340	Trembling Aspen	<i>Populus tremuloides</i>	1	26	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
341	American Elm	<i>Ulmus americana</i>	1	14	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
342	White Cedar	<i>Thuja occidentalis</i>	1	18	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
343	White Cedar	<i>Thuja occidentalis</i>	1	24	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
344	White Cedar	<i>Thuja occidentalis</i>	1	17	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
345	White Spruce	<i>Picea glauca</i>	1	27	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
346	White Spruce	<i>Picea glauca</i>	1	27	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	Y		Removed
347	White Cedar	<i>Thuja occidentalis</i>	1	15	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
348	White Spruce	<i>Picea glauca</i>	1	20	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	4: Recently dead, bark peeling, only large branches intact	N		Removed
349	White Spruce	<i>Picea glauca</i>	1	21	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	6: Very old dead tree, advanced decay, no branches, part of the stem has rotted away	N		Removed
350	White Spruce	<i>Picea glauca</i>	1	12	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
351	White Cedar	<i>Thuja occidentalis</i>	1	13	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	N		Removed
352	White Birch	<i>Betula papyrifera</i>	1	14	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	6: Very old dead tree, advanced decay, no branches, part	N		Removed



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							of the stem has rotted away			
353	White Spruce	<i>Picea glauca</i>	1	21	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
354	Green Ash	<i>Fraxinus pennsylvanica</i>	1	11	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed
355	American Elm	<i>Ulmus americana</i>	1	10	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	N		Removed
356	Apple	<i>Malus sp.</i>	1	10	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	N		Removed
357	White Spruce	<i>Picea glauca</i>	1	34	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
358	White Spruce	<i>Picea glauca</i>	1	11	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	2: Declining live tree, part of canopy lost	N		Removed
359	White Cedar	<i>Thuja occidentalis</i>	1	14	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
360	White Birch	<i>Betula papyrifera</i>	1	35	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	6: Very old dead tree, advanced decay, no branches, part of the stem has rotted away	N		Removed
361	White Spruce	<i>Picea glauca</i>	1	40	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
362	White Pine	<i>Pinus strobus</i>	1	49	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	Y		Removed
363	American Elm	<i>Ulmus americana</i>	1	12	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	N		Removed
364	Basswood	<i>Tilia americana</i>	1	21	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
365	Red Oak	<i>Quercus rubra</i>	1	18	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	2: Declining live tree, part of canopy lost	N		Removed
366	Trembling Aspen	<i>Populus tremuloides</i>	1	16	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
367	American Elm	<i>Ulmus americana</i>	1	10	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed
368	Apple	<i>Malus sp.</i>	1	14	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	2: Declining live tree, part of canopy lost	N		Removed
369	White Cedar	<i>Thuja occidentalis</i>	1	20	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
370	White Cedar	<i>Thuja occidentalis</i>	1	22	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
371	White Cedar	<i>Thuja occidentalis</i>	2	37	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y		Removed
372	Trembling Aspen	<i>Populus tremuloides</i>	1	39	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy,	Y		Removed



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Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
							bark and branches intact			
373	White Cedar	<i>Thuja occidentalis</i>	1	11	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
374	White Spruce	<i>Picea glauca</i>	1	26	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	5: Older dead tree, 90% bark lost, few branch stubs, broken top	N		Removed
375	White Cedar	<i>Thuja occidentalis</i>	1	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
376	Ironwood	<i>Ostrya virginiana</i>	1	14	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	N		Removed
377	White Spruce	<i>Picea glauca</i>	1	20	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
378	American Elm	<i>Ulmus americana</i>	1	21	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	N		Removed
379	Butternut	<i>Juglans cinerea</i>	1	45	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	Y	Off-Site; assessed as Category 1	Retained
380	White Spruce	<i>Picea glauca</i>	1	30	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y	Base covered in fill	Removed
381	White Spruce	<i>Picea glauca</i>	1	25	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	4: Recently dead, bark peeling, only large branches intact	N		Removed
382	Trembling Aspen	<i>Populus tremuloides</i>	1	16	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed



Tree Conservation Report:
DCRP1123 – Old Montreal Road
July 17, 2023

Tree Number	Common Name	Scientific Name	Number of Stems	Diameter at Breast Height (cm)	Trunk Health	Canopy Health	Decay Class	"Wildlife" tree? (Y/N)	Comments	Fate (Retained or Removed)
383	Trembling Aspen	<i>Populus tremuloides</i>	1	17	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N		Removed
384	Green Ash	<i>Fraxinus pennsylvanica</i>	1	10	Fair: tree displays 15-40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	3: Very recently dead, no live canopy, bark and branches intact	N		Removed
385	Black Cherry	<i>Prunus serotina</i>	1	10	Good: tree displays less than 15% deficiency/defect	Fair: tree displays 15-40% deficiency/defect	2: Declining live tree, part of canopy lost	N	European Gypsy Moth caterpillars	Removed
386	American Elm	<i>Ulmus americana</i>	1	11	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	5: Older dead tree, 90% bark lost, few branch stubs, broken top	N		Removed
387	White Spruce	<i>Picea glauca</i>	1	26	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	Y	Base covered in fill	Removed
388	American Elm	<i>Ulmus americana</i>	1	38	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	2: Declining live tree, part of canopy lost	Y	Topped	Removed
389	White Cedar	<i>Thuja occidentalis</i>	2	10	Good: tree displays less than 15% deficiency/defect	Good: tree displays less than 15% deficiency/defect	1: Healthy, live tree	N	1 stem dead	Removed
390	White Spruce	<i>Picea glauca</i>	1	25	Poor: tree displays greater than 40% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	5: Older dead tree, 90% bark lost, few branch stubs, broken top	N		Removed
391	Trembling Aspen	<i>Populus tremuloides</i>	1	38	Good: tree displays less than 15% deficiency/defect	Poor: tree displays greater than 40% deficiency/defect	2: Declining live tree, part of canopy lost	Y	Adjacent to fill	Removed



Appendix E – SAR Screening



Species Name (Taxonomic Name)	Status under Ontario Endangered Species Act (ESA)	Status under federal Species at Risk Act (SARA) - Schedule 1	Habitat Description	Potential to Occur in the Project Vicinity (Yes / No)	If Potentially Present - Probability of Interaction with the Project (None, Low, Moderate, High)
Avian					
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	Special Concern	No Status	Nest in mature forests near open water. In large trees such as Pine and Poplar.	Yes	Low. Habitat does not occur in the Project Area. Was not observed in the Project Area
Bank Swallow (<i>Riparia riparia</i>)	Threatened	Threatened	Colonial nester; burrows in eroding silt or sand banks, sand pit walls, and human-made settings, which are often found on banks of rivers and lakes.	Yes	Low. Habitat suitability is limited. Was not observed in the Project Area
Barn Swallow (<i>Hirundo rustica</i>)	Special Concern	Special Concern	Nests on barns and other structures; forages in open areas for flying insects. Live in close association with humans and prefer to nest in structures such as open barns, under bridges, and in culverts.	Yes	Moderate. Site habitat is suitable but the species was not observed in the Project Area
Black Tern (<i>Chlidonias niger</i>)	Special Concern	No Status	Build floating nests in loose colonies in shallow marshes, especially cattails.	Yes	None. Habitat does not occur in the Project Area
Bobolink (<i>Dolichonyx oryzivorus</i>)	Threatened	Threatened	Live in tall grass prairie and other open meadows. With major clearing of prairies, Bobolink are moving to hayfields. Build nests on the ground in dense grasses.	Yes	Moderate. Site habitat is suitable but the species was not observed in the Project Area
Canada Warbler (<i>Cardellina canadensis</i>)	Special Concern	Threatened	Prefers wet forests with dense shrub layers. Nests located on or near the ground on mossy logs or roots, along stream banks or on hummocks.	Yes	Low. Habitat does not occur in the Project Area. The adjacent creek valley has some suitability but the species was not observed.
Cerulean Warbler (<i>Setophaga cerulea</i>)	Threatened	Endangered	Prefers mature deciduous forests with an open under storey.	No	None. Not present in the vicinity.



Chimney Swift (<i>Chaetura pelagica</i>)	Threatened	Threatened	Nests in traditional-style open brick chimneys (and rarely in hollow trees). Tend to stay close to water	Yes	Low, habitat does not occur in the Project Area
Common Nighthawk (<i>Chordeiles minor</i>)	Special Concern	Threatened	Nests in wide variety of open sites, including beaches, fields and gravel rooftops with little to no ground vegetation. They also nest in cultivated fields, orchards, urban parks, mine tailings and along gravel roads/railways but tend to occupy more natural sites.	Yes	Low. Habitat areas have been subject active agriculture and other disturbance.
Eastern Meadowlark (<i>Sturnella magna</i>)	Threatened	Threatened	Typically nest in tall grasslands (pastures/hayfields) but also found in alfalfa fields, weedy borders of croplands, roadsides, orchards, airports, shrubby overgrown fields, or other open areas. Often use trees, shrubs, or fence posts to elevate song perches.	Yes	Low. Presence is possible but the small size of the meadow with scattered tree clusters provides low habitat suitability.
Eastern Whip-poor-will (<i>Antrastomus vociferus</i>)	Threatened	Threatened	Nests on the ground in open deciduous or mixed woodlands with little underbrush.	Yes	Low. Presence is possible but very unlikely on the Site. Forested patches are too small and are densely scrubby.
Eastern Wood-pewee (<i>Contopus virens</i>)	Special Concern	Special Concern	Woodland species, often found in the mid-canopy layer near clearings and edges of deciduous and mixed forests.	Yes	Low. Habitat is on the Site is suitable and the adjacent creek valley is more so, but the species was not observed.
Golden Eagle (<i>Aquila chrysaetos</i>)	Endangered	No Status	Nest in remote, undisturbed areas, usually building their nests on ledges on a steep cliff/riverbank or large trees if needed. Most hunting is done near open areas such as large bogs or tundra.	No	None. Not present in the vicinity.
Golden-winged Warbler (<i>Vermivora chrysoptera</i>)	Special Concern	Threatened	Ground nesting in areas of young shrubs surrounded by mature forest. Often areas that have recently been disturbed such as field edges, hydro or utility right-of-ways, or logged areas.	Yes	Low. Habitat is on the Site is suitable, but the species was not observed.



Grasshopper Sparrow (<i>Ammodramus savannarum</i>)	Special Concern	Special Concern	Lives in open grassland areas with well-drained sandy soil. Will also nest in hayfields and pastures, as well as alvars, prairies and occasionally grain crops such as barley. It prefers areas that are sparsely vegetated and its nests are well hidden in the field, woven from grasses in a small cup-like shape.	Yes	Low. Habitat is on the Site is marginally suitable, but the species was not observed.
Evening Grosbeak (<i>Coccothraustes vespertinus</i>)	Special Concern	Special Concern	Nest in trees or large shrubs; prefer mature coniferous forests but will also use deciduous forests, parklands and orchards.	No	None. Not present in the vicinity.
Henslow's Sparrow (<i>Ammodramus henslowii</i>)	Endangered	Endangered	Tends to avoid fields that have been grazed or are crowded with trees and shrubs. Prefers extensive, dense, tall grasslands where it can more easily conceal its small ground nest.	No	None. Not present in the vicinity.
Horned Grebe (<i>Podiceps auritus</i>)	Special Concern	No Status	Nest in small ponds, marshes and shallow bays that contain areas of open water and emergent vegetation.	No	None. Not present in the vicinity.
Least Bittern (<i>Ixobrychus exilis</i>)	Threatened	Threatened	Found in a variety of wetland habitats, but strongly prefers cattail marshes with a mix of open pools and channels.	Yes	Low. Habitat does not occur in the Project Area.
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	Endangered	Endangered	The Loggerhead prefers pasture or other grasslands with scattered low trees and shrubs. Lives in fields or alvars (areas of exposed bedrock) with short grass, which makes it easier to spot prey.	No	None. Not present in the vicinity.
Olive-sided Flycatcher (<i>Contopus cooperi</i>)	Special Concern	Threatened	Found along natural forest edges and openings. Will use forests that have been logged or burned, if there are ample tall snags and trees to use for foraging perches.	Yes	Low. Habitat is on the Site is marginally suitable, but the species was not observed.
Peregrine Falcon (<i>Falco peregrinus</i>)	Special Concern (as of January 2013)	Special Concern	Nest on tall, steep cliff ledges close to large bodies of water. Urban peregrines raise their young on ledges of tall buildings, even in busy downtown areas.	Yes	None. Habitat does not occur in the Project Area
Red Knot (<i>Calidris canutus rufa</i>)	Endangered	Endangered	Prefer open beaches, mudflats, and coastal lagoons, where they feast on molluscs, crustaceans, and other invertebrates.	No	None. Not present in the vicinity.



Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>)	Special Concern	Threatened	Lives in open woodland and woodland edges, and is often found in parks, golf courses, and cemeteries. These areas typically have many dead trees, which the birds use for nesting and perching.	No	None. Not present in the vicinity.
Rusty Blackbird (<i>Euphagus carolinus</i>)	Special Concern	Special Concern	Prefers wet wooded or shrubby areas (nests at edges of boreal wetlands and coniferous forests). These areas include bogs, marshes and beaver ponds.	Yes	Low. Habitat is on the Site is marginally suitable, but the species was not observed.
Short-eared Owl (<i>Asio flammeus</i>)	Special Concern	Special Concern	Lives in open areas such as grasslands, marshes and tundra where it nests on the ground and hunts for small mammals.	Yes	Low. Habitat is on the Site is suitable, but the species was not observed.
Wood Thrush (<i>Hylocichla mustelina</i>)	Special Concern	Threatened	Lives in mature deciduous and mixed (conifer-deciduous) forests. They seek moist stands of trees with well-developed undergrowth and tall trees for singing and perches. Usually build nests in sugar maple or American beech.	Yes	Low. Habitat is on the Site is suitable, but the species was not observed.
Fish					
American Eel (<i>Anguilla rostrata</i>)	Endangered	No Status	Primarily nocturnal, hiding in soft substrate or submerged vegetation during the day.	Yes	None. Habitat does not occur in the Project Area
Bridle Shiner (<i>Notropis bifrenatus</i>)	Special Concern	Special Concern	Prefers clear water with abundant vegetation over silty or sandy substrate.	No	None. Habitat does not occur in the Project Area
Channel Darter (<i>Percina copelandi</i>)	Special Concern	Threatened	Prefers clean streams and lakes with moderate current over sandy or rocky substrate.	Yes	None. Habitat does not occur in the Project Area
Lake Sturgeon (<i>Acipenser fulvescens</i>)	Endangered	No Status	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.	Yes	None. Habitat does not occur in the Project Area
Northern Brook Lamprey (<i>Ichthyomyzon fossor</i>)	Special Concern	Special Concern	Non-parasitic species; prefers shallow areas with warm water. Larvae live in burrows in soft substrate for up to 7 years.	Yes	None. Habitat does not occur in the Project Area
Northern Sunfish (<i>Lepomis peltastes</i>)	Special Concern	No Status	Lives in shallow vegetated areas of quiet, slow flowing rivers and streams, as well as warm lakes and ponds, with sandy banks or rocky bottoms.	No	None. Habitat does not occur in the Project Area



River Redhorse (<i>Moxostoma carinatum</i>)	Special Concern	Special Concern	Prefers fast-flowing, clear rivers over rocky substrate.	No	None. Habitat does not occur in the Project Area
Silver Lamprey (<i>Ichthyomyzon unicuspis</i>)	Special Concern	Special Concern	Require clear water for they can find fish hosts, relatively clean stream beds of sand and organic debris for larvae to live in, and unrestricted migration routes for spawning. Larvae live 4-7 years in burrows (prefer soft substrates); filter-feed on plankton.	Yes	None. Habitat does not occur in the Project Area
Molluscs					
Hickorynut (<i>Obovaria olivaria</i>)	Endangered	Endangered	Live on sandy beds in large, wide, deep rivers. Usually more than two or three metres deep. Larval host believed to be Lake Sturgeon.	No	None. Habitat does not occur in the Project Area
Mammals					
Algonquin Wolf (<i>Canis sp.</i>)	Threatened	Special Concern	Not restricted to any specific habitat type but typically occurs in deciduous and mixed forest landscapes.	No	None. Not present in the vicinity.
Eastern Cougar (<i>Puma concolor</i>)	Endangered	No Status	Live in large, undisturbed forests or other natural areas where there is little human activity	No	None. Not present in the vicinity.
Eastern Small-footed Myotis (<i>Myotis leibii</i>)	Endangered	No Status	In the spring and summer, eastern small-footed bats will roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines, or hollow trees. Overwinters in caves and abandoned mines.	Yes	Moderate. Site habitat provides some habitat potential but is sub-optimal given low snag density. More suitable habitat will be retained in the adjacent creek valley. Timing restrictions on tree clearing will protect transiently-present individuals.
Gray Fox (<i>Urocyon cinereoargenteus</i>)	Threatened	Threatened	Live in deciduous forests and marshes. Their dens are usually found in dense shrubs close to a water source but they will also use rocky areas, hollow trees, and underground burrows dug by other animals.	Yes	Low. Low habitat suitability on the Site though the adjacent creek valley is better. Limited presence in the Ottawa area.
Little Brown Myotis (<i>Myotis lucifugus</i>)	Endangered	Endangered	During the day they roost in trees and buildings. They often select attics, abandoned buildings and barns for summer colonies where they can raise their young. They can squeeze through very tiny spaces (as small as six millimetres across) allowing them access to many different roosting areas.	Yes	Moderate. Site habitat provides some habitat potential but is sub-optimal given low snag density. More suitable habitat will be retained in the adjacent creek valley. Timing restrictions on tree clearing will protect transiently-present individuals.



Northern Myotis / Northern Long-eared Bat (<i>Myotis septentrionalis</i>)	Endangered	Endangered	Associated with boreal forests, choosing to roost under loose bark and in the cavities of trees.	Yes	Moderate. Site habitat provides some habitat potential but is sub-optimal given low snag density. More suitable habitat will be retained in the adjacent creek valley. Timing restrictions on tree clearing will protect transiently-present individuals.
Tri-coloured Bat / Eastern Pipistrelle (<i>Perimyotis subflavus</i>)	Endangered	Endangered	Roosts mainly in trees during summer; overwinters in caves and mines along with other species, but often uses deeper parts of the hibernaculum.	Yes	Moderate. Site habitat provides some habitat potential but is sub-optimal given low snag density. More suitable habitat will be retained in the adjacent creek valley. Timing restrictions on tree clearing will protect transiently-present individuals.
Amphibians					
Western Chorus Frog (<i>Pseudacris triseriata</i>)	No Status	Threatened	Inhabits forest openings around woodland ponds but can also be found in or near damp meadows, marshes, bottomland swamps and temporary ponds in open country, or even urban areas.	Yes	None. Negligable habitat potential on site.
Reptiles					
Blanding's Turtle (<i>Emydoidea blandingii</i>)	Threatened	Threatened	Quiet lakes, streams and wetlands with abundant emergent vegetation; also frequently occurs in adjacent upland forests.	Yes	Low. Suitable habitat does not occur in the Project Area. Adjacent creek (60 m away) has limited suitability.
Eastern Musk Turtle / Stinkpot (<i>Sternotherus odoratus</i>)	Special Concern	Special Concern	Found in ponds, lakes, marshes, and rivers that are generally slow-moving have abundant emergent vegetation and muddy bottoms that they burrow into for winter hibernation.	Yes	Low. Suitable habitat does not occur in the Project Area. Adjacent creek (60 m away) has limited suitability.
Eastern Ribbonsnake (<i>Thamnophis sauritus</i>)	Special Concern	Special Concern	Found in marshy edges of wetlands and watercourses. Livebearer (does not lay eggs).	No	None. Not present in the vicinity.
Milksnake (<i>Lampropeltis triangulum</i>)	No Status	Special Concern	Found in variety of open, scrubby or edge habitats, including pastures.	No longer listed	Not applicable as this species is not protected on private lands



Northern Map Turtle (<i>Graptemys geographica</i>)	Special Concern	Special Concern	Lives in rivers and lakeshores where it basks on emergent rocks and fallen trees throughout the spring and summer. In winter, they hibernate on the bottom of deep, slow-moving sections of river.	Yes	Low. Suitable habitat does not occur in the Project Area. Adjacent creek (60 m away) has limited suitability.
Snapping Turtle (<i>Chelydra serpentina</i>)	Special Concern	Special Concern	Spend most of their lives in the water. Prefer shallow waters so they can hide under the soft mud and leaf litter with only their noses exposed to the surface to breathe.	Yes	Low. Suitable habitat does not occur in the Project Area. Adjacent creek (60 m away) has limited suitability.
Spiny Softshell (<i>Apalone spinifera</i>)	Endangered	Threatened	Found primarily in rivers and lakes but also in creeks, ditches and ponds near rivers. Habitat requirements are open sand or gravel nesting areas, shallow muddy or sandy areas to bury in, deep pools for hibernation, areas for basking, and suitable habitat for crayfish and other food species.	Yes	Low. Suitable habitat does not occur in the Project Area. Adjacent creek (60 m away) has limited suitability.
Spotted Turtle (<i>Clemmys guttata</i>)	Endangered	Endangered	Semi-aquatic and prefers ponds, marshes, bogs, and even ditches with slow-moving, unpolluted water and an abundant supply of aquatic vegetation.	Yes	Low. Suitable habitat does not occur in the Project Area. Adjacent creek (60 m away) has limited suitability.
Wood Turtle (<i>Glyptemys insculpta</i>)	Endangered	Threatened	The wood turtle prefers clear rivers, streams, or creeks with a slight current and sandy or gravelly bottom. Wooded areas are essential habitat for the Wood Turtle, but they are found in other habitats, such as wet meadows, swamps, and fields.	Yes	Low. Low habitat suitability on the Site though the adjacent creek valley is better. Limited presence in the Ottawa area.
Plants					
American Chestnut (<i>Castanea dentata</i>)	Endangered	Endangered	Typical habitat is upland deciduous forests on sandy acidic soils, occurring with red oak, black cherry, sugar maple and beech.	No	None. Not present in the vicinity.
American Ginseng (<i>Panax quinquefolius</i>)	Endangered	Endangered	Grows in rich, moist, but well-drained, and relatively mature, deciduous woods dominated by Sugar Maple, White Ash, and American Basswood.	Yes	Low. Habitat is on and/or adjacent to the Site is unsuitable.
Butternut (<i>Juglans cinerea</i>)	Endangered	Endangered	Commonly found in riparian habitats, but is also found on rich, moist, well-drained loams, and well-drained gravels, especially those of limestone origin.	Yes	Low. Habitat is on and/or adjacent to the Site is suitable, but no individuals were observed.



Eastern Prairie Fringed-orchid (<i>Platanthera leucophaea</i>)	Endangered	Endangered	Populations are found in three main habitat types: fens (peat-forming wetlands fed by groundwater), tallgrass prairie, and moist old fields	No	None. Not present in the vicinity.
Lichens					
Flooded Jellyskin (<i>Leptogium rivulare</i>)	No Status	Threatened	It grows in seasonally flooded habitats, typically on the bark of deciduous trees and rocks along the margins of seasonal ponds and on rocks along shorelines and stream/riverbeds.	No	Not applicable as this species is not protected on private lands
Pale-bellied Frost Lichen (<i>Physconia subpallida</i>)	Endangered	Endangered	Typically grows on the bark of hardwood trees such as White ash, Black walnut, and American elm. Could also be found growing on fence posts and boulders.	Yes	Low. Habitat is on and/or adjacent to the Site is suitable, but no individuals were observed.
Insects					
Bogbean Buckmoth (<i>Hemileuca</i> sp. 1)	Endangered	Endangered	Restricted to open, chalky, low shrub fens containing large amounts of bogbean, an emergent wetland flowering plant.	No	None. Not present in the vicinity.
Gypsy Cuckoo Bumble Bee (<i>Bombus bohemicus</i>)	Endangered	Endangered	Live in diverse habitats including open meadows, mixed farmlands, urban areas, boreal forest and montane meadows. Host nests occur in abandoned underground rodent burrows and rotten logs.	Yes	Low. As habitat generalist, any area potentially suitable but the species has limited presence in the Ottawa area.
Monarch butterfly (<i>Danaus plexippus</i>)	Special Concern	Special Concern	Milkweeds are the sole food plant for Monarch caterpillars. These plants predominantly grow in open and periodically disturbed habitats such as roadsides, fields, wetlands, prairies, and open forests.	Yes	Moderate, though the species is not protected under the ESA.
Mottled Duskywing (<i>Erynnis martialis</i>)	Endangered	No Status	Requires host plants such as the New Jersey Tea and the Prairie Redroot. These plants grow in dry, well-drained soils or alvar habitat within oak woodland, pine woodland, roadsides, riverbanks, shady hillsides and tall grass prairies.	No	None. Not present in the vicinity.
Nine-spotted Lady Beetle (<i>Coccinella novemnotata</i>)	Endangered	No Status	Occur within agricultural areas, suburban gardens, parks, coniferous forests, deciduous forests, prairie grasslands, meadows, riparian areas and isolated natural areas.	No	None. Not present in the vicinity.



Rapids Clubtail (<i>Gomphus quadricolor</i>)	Endangered	Endangered	Inhabit a wide variety of riverine habitats ranging in size from the St. Lawrence River to small creeks Larvae are typically found in microhabitats with slow to moderate flow and fine sand or silt substrates where they burrow into the stream bed. Adults disperse from the river after emerging and feed in the forest canopy and other riparian vegetation.	No	None. Not present in the vicinity.
Rusty-patched Bumble Bee (<i>Bombus affinis</i>)	Endangered	Endangered	Can be found in open habitat such as mixed farmland, urban settings, savannah, open woods, and sand dunes.	Yes	Low. As habitat generalist, any area potentially suitable but the species has limited presence in the Ottawa area.
Transverse Lady Beetle (<i>Coccinella transversoguttata</i>)	Endangered	Special Concern	Able to live in a wide range of habitats, including agricultural areas, suburban gardens, parks, coniferous forests, deciduous forests, prairie grasslands, meadows and riparian areas.	No	None. Not present in the vicinity.
West Virginia White butterfly (<i>Pieris virginiensis</i>)	Special Concern	No Status	Lives in moist, deciduous woodlots. Requires a supply of toothwort, a small, spring-blooming plant that is a member of the mustard family, since it is the only food source for larvae.	No	None. Not present in the vicinity.
Yellow-banded Bumble Bee (<i>Bombus terricola</i>)	Special Concern	Special Concern	Forage and habitat generalist, able to use a variety of nectaring plants and environmental conditions.	No	None. Not present in the vicinity.

