Environmental Impact Study
Trailsedge Phase 5 Development
Ottawa, Ontario

Draft Plan of Subdivision

2025-06-26

Final Report

KILGOUR & ASSOCIATES LTD.
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Project Number: RICH 1684.2

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List of Acronyms and Abbreviations

BBS – breeding bird survey
CDP – Community Design Plan
COSSARO – Committee on the Status of Species at Risk in Ontario
CRZ – critical root zone
DBH – diameter at breast height
DFO – Fisheries and Oceans Canada (Department of Fisheries and Oceans)
ECCC – Environment and Climate Change Canada
EIS – Environmental Impact Study
ELC – Ecological Land Classification
ESC – erosion and sediment control
ESA – *Endangered Species Act*
FWCA – *Fish and Wildlife Conservation Act*
HDF – *headwater drainage feature*
HDFA – *Headwater Drainage Features Assessment*
KAL – Kilgour & Associates Ltd.
MBCA – *Migratory Birds Convention Act*
MECP – Ministry of Environment, Conservation, and Parks

MMAH – Ministry of Municipal Affairs and Housing
MNR – Ministry of Natural Resources
MNRF – Ministry of Natural Resources and Forestry
NHF – natural heritage feature
NHRM – Natural Heritage Reference Manual
NHIC – Natural Heritage Information Centre
OMAFRA – Ontario Ministry of Agriculture, Food and Rural Affairs
OSAP – Ontario Stream Assessment Protocol
PPS – Provincial Policy/Planning Statement
RVCA – Rideau Valley Conservation Authority
SAR – species at risk
SARA – *Species at Risk Act*
SARO – Species at Risk Ontario
SNC – South Nation Conservation Authority
SWH – Significant Wildlife Habitat
TCR – Tree Conservation Report
UNA – Urban Natural Area

1.0 INTRODUCTION

This report is an Environmental Impact Study (EIS) prepared by Kilgour & Associates Ltd. (KAL; Appendix A) on behalf of Richcraft Homes in support of a plan of subdivision application for the Trailsedge Phase 5 development in Ottawa, Ontario (the "Site"; Figure 1). The Site comprises a large parcel (approximately 79 ha) in the community of Orleans and is currently zoned as Light Industrial (IL) and Heavy Industrial (IH) and characterized as a mixture of forests, thickets, and open meadows, with some treed swamp and thicket swamp wetlands, a pond, and headwater drainage features. The proposed future development would comprise a residential subdivision of primarily low-density units, with some medium- to high-density components, employment lands, as well as supporting infrastructure and associated components (e.g., roadways, parks).

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.

This EIS includes the results from the required field studies and other supporting studies and provides recommendations and mitigation measures to minimize impacts of the proposed development considering the Draft Plan of Subdivision on the natural heritage features located on and adjacent to the Site.

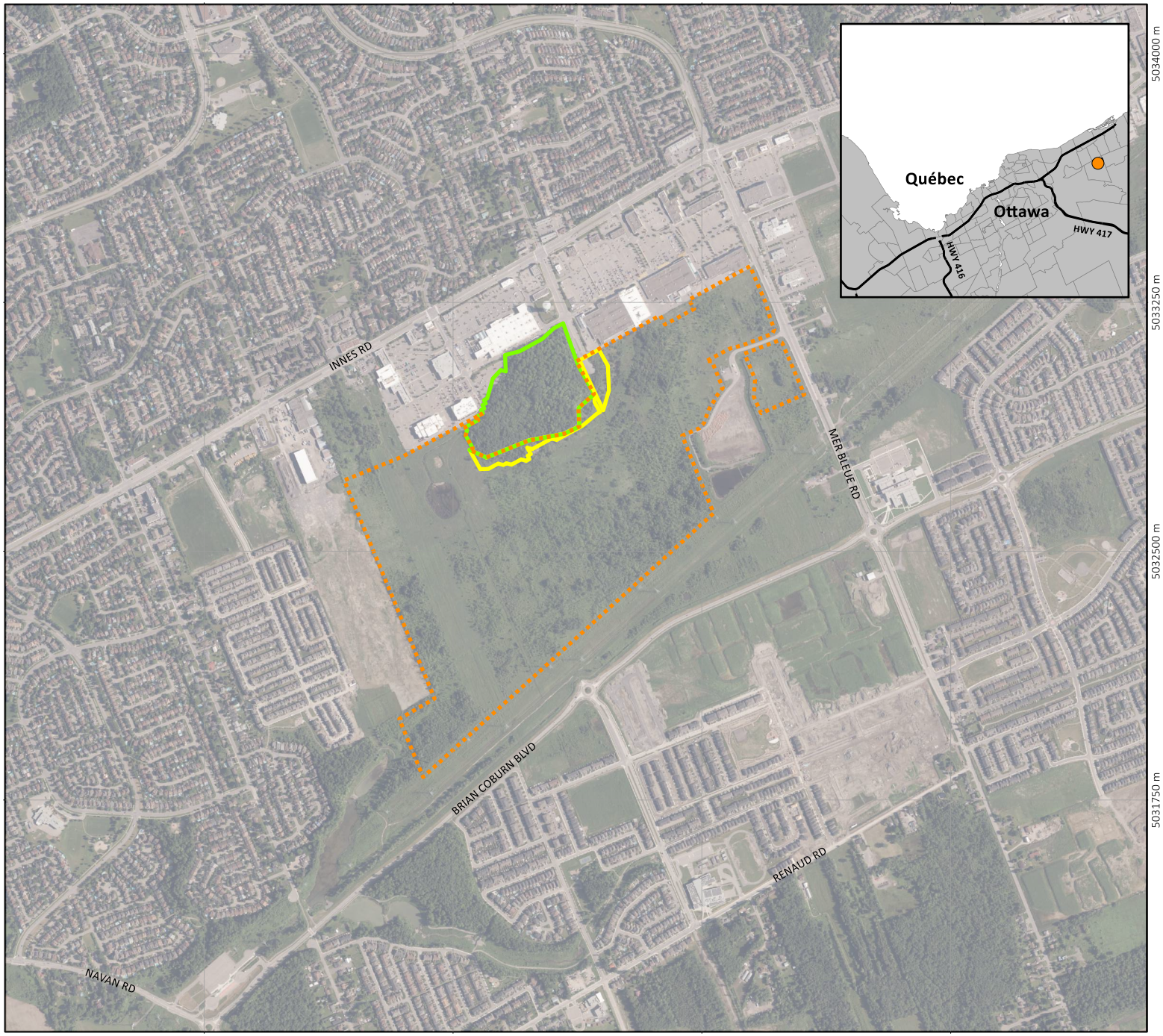

Figure 1 Site Context

Legend

Site Boundary

UNA 87

Category 1- Protected

Category 3- Development Approved

N

0 >200 m

Project: RICH 1684

Map File: RICH 1684 Maps 202501 nm.map

Universal Transverse Mercator - Zone 18 (N)

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2.0 ENVIRONMENTAL POLICY CONTEXT

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

2.1 The Provincial Policy / Planning Statements, 2020/2024

The Provincial *Policy* Statement ("PPS") was issued under Section 3 of the *Planning Act* (Government of Ontario, 1990b). The PPS in effect when this project began came into effect on May 1, 2020 (Ministry of Municipal Affairs and Housing, 2020). Under that version of the PPS, natural features were afforded protections under Section 2.1. The protections included address the 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., woodlands, wetlands, wildlife habitat) except where 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.

While the 2020 PPS was in effect at the start of this project, the province approved the Provincial *Planning* Statement 2024 (herein also the "PPS") as an update on August 20, 2024. It came into effect on October 20, 2024 (MMAH, 2024). The revised PPS is intended to simplify and integrate existing policies to achieve housing objectives while providing tools for municipalities to deliver on housing objectives. While the 2024 PPS will formally be the planning document in effect going forward, other than renumbering the relevant policies, there have been no meaningful changes related to Natural Heritage considerations between the two versions. Thus, for the analysis and recommendations of this EIS, the "PPS" documents from 2020 and 2024 are effectively equivalent.

2.2 City of Ottawa Official Plan

The City of Ottawa Official Plan (2021) provides direction for future growth in the City and is a policy framework to guide physical development to 2031 in accordance with the PPS. The Official Plan is typically updated every five years. The Official Plan includes a Natural Heritage Features map (Schedule C12), providing additional information on wetlands, watercourses, and wooded areas within the City boundaries (2021). The Site is designated "Greenspace" and "Neighbourhood" in Schedule B3 of the Official Plan.

2.3 East Urban Community Phase 3 Community Design Plan

The East Urban Community Phase 3 Community Design Plan (Richcraft Group of Companies, 2020) is a Council-approved guiding policy document that provides direction for the zoning, Site Plan Control and decision-making on land use planning matters for the development within this area. Several studies, including a Municipal Class Environmental Assessment (Class EA) and baseline SAR field studies, are used to inform the decisions presented in the CDP.

2.4 *Species at Risk Act*, 2002

The federal *Species at Risk Act* (SARA; Government of Canada, 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; (Government of Canada, 1994)) and listed as Endangered, Threatened, or Extirpated under Schedule 1 of SARA are protected wherever they occur in Canada, regardless of land ownership. SARA protections do not typically apply for other species groups on non-federal properties. However, the Federal Minister of ECCC can impose SARA protections on private projects where habitat is deemed "…necessary for the survival or recovery of the species…" in the area of concern.

2.5 *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.

2.6 *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 of a request for review to DFO.

2.7 *Migratory Birds Convention Act*, 1994

Nesting migratory birds are protected under the 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 nesting period.

2.8 *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 "furbearing" 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.

2.9 *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* (Government of Ontario, 1990a). The Act obliges Conservation Authorities to implement Ontario Regulation (O.Reg.) 41/24, *Prohibited Activities, Exemptions and Permits* (formerly O.Reg. 174/06, *Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses*) under Section 28.1 of the *Conservation Authorities Act* for relevant works. This project falls under the jurisdiction of the Rideau Valley Conservation Authority and South Nation Conservation Authority.

Bill 23, which was passed on November 28, 2022 and received Royal Assent the same day, introduced a series of legislative and proposed regulatory changes affecting conservation authorities. Among the changes under Bill 23, the definition of "watercourse" was updated from an identifiable depression to a defined channel, having a bed, and banks or sides.

3.0 PROPERTY IDENTIFICATION

The Site is approximately 79 ha in size and spans multiple municipal addresses, including 3672 Innes Road and 3738 Innes Road (Lat: 45.447189°N and Long: -75.509356°W; Figure 1). It is located directly north of Brian Coburn Boulevard and the adjacent hydro corridor, and south of Innes Road and the SmartCentres Orleans shopping complex. The Site is characterized as a mosaic of meadows, thickets, woodlands and forests, with surface water features including thicket and treed swamps, a pond, and headwater drainage features. Historical imagery suggests a history of agricultural use, with the much of the Site cleared for agricultural use as recently as the early 2000's. Site topography is generally level to gently undulating, with relatively steeper slopes along the north edge. Soils were characterized as silty clays, overlying limestone bedrock. The Site is currently zoned IL (Light Industrial) and IH (Heavy Industrial) under the City's Zoning Bylaw (City of Ottawa, 2023).

The Site is bordered by:

- Commercial developments, Innes Road, and Urban Natural Area (UNA) #87 (Innes Park Woods) to the north;
- Mer Bleue Road, commercial developments, agricultural/undeveloped lands, and the Innes Snow Disposal Facility to the east;
- A hydro corridor, Brian Coburn Boulevard, and residential developments to the south; and
- Glenview's residential developments (including areas currently under construction) to the west.

4.0 METHODOLOGY

4.1 Desktop and Background Data Review

4.1.1 Agency Oversight and Consultation

The Site is located within the jurisdictions of the City of Ottawa, the Rideau Valley Conservation (RVCA), and South Nation Conservation (SNC). A meeting was held on April 24, 2024, to determine the scope of the EIS (Appendix B). Pre-consultation comments identified that the need for this EIS was triggered by the potential for proposed development to impact species at risk and/or SAR habitat, and surface water features.

4.1.2 Site Overview

Aerial imagery from Google Earth (*Google Earth*, n.d.) and the City of Ottawa's geoOttawa system (City of Ottawa, 2025) was used to develop preliminary mapping of existing site features and landcover and to inform how the Site may be divided into vegetation communities.

Existing data on soils in the vicinity of the Site were obtained from the Ontario Ministry of Agriculture, Food and Rural Affairs' AgMaps (OMAFRA, 2023) and the Ontario Geotechnical Boreholes Data collected in 2001 (Ontario Ministry of Mines, 2012). These data were supplemented by soil cores taken in the field using a 120 cm soil auger at select locations within the Site.

Additional background data was obtained from the following sources:

- Headwater Drainage Feature Assessment Summary (Niblett Environmental Associates Inc., 2018)
- East Urban Community Phase 3: Master Servicing Study (Richcraft Homes, 2019)
- East Urban Community Phase 3 Community Design Plan (Richcraft Group of Companies, 2020a)
- Environmental Impact Study: Trails Edge Development North/Phase 5 (GHD, 2020)
- Integrated Environmental Review Statement: Trailsedge East Development (GHD, 2021)
- Tree Conservation Report: Trailsedge Phase 5 (GHD, 2022)

4.1.3 Preliminary SAR Review

The review of existing information included a preliminary SAR screening for species listed under the federal SARA and provincial ESA. The screening functions to identify SAR having some potential to be in the broader

vicinity of the Site. The screening was completed following the *Draft Client's Guide to Preliminary Screening for Species at Risk* (MECP, 2019)(Appendix C). The Preliminary Screening considered data sources including:

- Species at Risk in Ontario (SARO; Ministry of Environment, Conservation, and Parks (MECP, 2024b);
- Species at Risk Public Registry (Government of Canada, 2024);
- Natural Heritage Information Centre (NHIC; Ministry of Natural Resources, and Forestry (MNRF, 2025b);
- Land Information Ontario (MNRF, 2025a);
- Aquatic Species at Risk Map (DFO, 2023);
- Ontario Reptile and Amphibian Atlas (Ontario Nature, 2019);
- Ontario Breeding Birds Atlas (Birds Canada, Canadian Wildlife Service (Environment and Climate Change Canada), et al., 2009);
- Ontario Butterfly Atlas (Toronto Entomologists' Association, 2024);
- eBird (The Cornell Lab of Ornithology, 2025);
- iNaturalist (California Academy of Sciences and National Geographic Society, 2025);
- Bumble Bee Watch (Wildlife Preservation Canada et al., 2024);
- Recovery Strategy for the Little Brown Myotis (*Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*), and Tri-colored Bat (*Perimyotis subflavus*) in Ontario (Humphrey & Fotherby, 2019);
- Recovery Strategy for the Eastern Small-footed Myotis (*Myotis leibii*) in Ontario (Humphrey, 2017);
- Fish ON-Line (MNRF, 2024).

4.2 Field Surveys

Field surveys conducted in spring and early summer of 2024 included Breeding Bird Surveys (BBS), amphibian surveys, bat acoustic monitoring, a surface water characterization, and vegetation studies including a general tree survey to support a Tree Conservation Report (TCR), a SAR vegetation survey, and an Ecological Land Classification (ELC). The 2024 field surveys are detailed in the sections below.

Table 1 Summary of field studies

Date	Purpose	Conditions	Personnel
April 16, 2024	• Amphibian survey #1	• 7°C • Wind 1-3 on Beaufort Scale • 10% cloud cover • No precipitation	• Maren Nielsen, Kurtis Westbury
June 4, 2024	• Ecological land classification (ELC), tree survey, SAR vegetation survey	• 28°C • Wind 1-2 on Beaufort Scale • 5-20% cloud cover • No precipitation	• Kesia Miyashita, Nicholas Schulz
June 4, 2024	• Amphibian survey #2	• 19-24°C • Wind 0 to 1 on Beaufort Scale • 5-20% cloud cover • No precipitation	• Nicholas Schulz, Derek Irwin

Date	Purpose	Conditions	Personnel
June 5, 2024	• Ecological land classification (ELC), tree survey, SAR vegetation survey	• 29°C • Wind 2-3 on Beaufort Scale • 0-10% cloud clover • No precipitation	• Kesia Miyashita, Nicholas Schulz
June 7, 2024	• Ecological land classification (ELC), tree survey, SAR vegetation survey	• 18°C • Wind 2 on Beaufort Scale • 100% cloud cover • Scattered thunderstorms	• Kesia Miyashita, Jenni Velichka
June 12, 2024	• Ecological land classification (ELC), tree survey, SAR vegetation survey • Breeding bird survey #1	• 17°C • Wind 2 on Beaufort Scale • 75-100% cloud cover • No precipitation	• Kesia Miyashita, Nicholas Schulz • Maren Nielsen
June 19, 2024	• Breeding bird survey #2 • Install acoustic bat monitors	• 20-30°C • Wind 0-1 on Beaufort Scale • 0-25% cloud cover • No precipitation	• Nick Moore
June 20, 2024	• Ecological land classification (ELC), tree survey, SAR vegetation survey • Surface water characterization exercise	• 28°C • Wind 2-3 on Beaufort Scale • 75-100% cloud cover • Drizzle	• Kesia Miyashita, Matt Whall • Nick Moore, Rob Hallett
June 25, 2024	• Amphibian survey #3	• 19-20°C • Wind 2 on Beaufort Scale • 70-100% cloud cover • Light drizzle	• Jenni Velichka, Véronique Landriault
July 2, 2024	• Breeding bird survey #3 • Remove acoustic bat monitors	• 16-20°C • Wind 0 on Beaufort Scale • 0-25% cloud cover • No precipitation	• Nicholas Schulz, Véronique Landriault

4.2.1 Surface Water, Groundwater, and Fish Habitat

Aerial imagery and public databases were reviewed to identify watercourses and waterbodies on Site (MNRF, 2025b; Rideau Valley Conservation Authority, 2023). GHD (2020) completed a Headwater Drainage Feature Assessment (HDFA) in 2014 following the "Rapid" survey type within the *Evaluation, Classification and Management of Headwater Drainage Features Guidelines* (Toronto and Region Conservation Authority & Credit Valley Conservation, 2013). Subsequently, KAL Biologists completed a Surface Water Feature Characterization on June 20, 2024 to provide an update to the HDFA to document Headwater Drainage Features (HDF's) on Site, where present. Watercourses, drainage ditches, and municipal drains as mapped in geoOttawa (City of Ottawa, 2025) were visited as part of that characterization exercise to document the condition of the features, and if there were any indications of water flow at any time of the year. Where an indication of a HDF was present, surveys were completed to assess average channel dimensions, flow, connectivity, and fish community following the Ontario Stream Assessment Protocol (OSAP; Stanfield, 2010), and document existing aquatic habitat form and function, dominant substrate, riparian habitat, in-stream cover, sediment transportation, and unique features of watercourses on Site.

4.2.2 Vegetation

4.2.2.1 Ecological Land Classification

Vegetation communities on the Site were based on standard ELC methods for Ontario (Lee et al., 1998). The ELC methodology 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.

The desktop review of available aerial imagery and preliminary field visits informed how the Site was divided into vegetation communities based on variation in land cover, topography, and vegetation structure. During the ELC surveys conducted on June 4, 5, 7, 12, and 20, 2024, the dominant plant species within each proposed ecosite were recorded 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.

4.2.2.2 Tree Studies

A tree survey was performed for the Site concurrently with the ELC on June 4, 5, 7, 12 and 20, 2024, following TCR guidelines set forth by the City of Ottawa Forestry Staff (City of Ottawa, 2020). As part of the survey process, Butternut (*Juglans cinerea*) and Black Ash (*Fraxinus nigra*) trees (both Endangered under the ESA) were identified and assessed as required. While general tree surveys can be completed at any time of year, Butternut Health Assessments (BHAs) must be completed between May 15 and August 31, and Black Ash Assessments must be completed between June 1 and October 1 (MECP, 2021b, 2024a). The assessments evaluate Butternut and Black Ash health for the purpose of compliance with the ESA.

For the general tree survey, due to the size of the Site and extent of forested communities and of scattered tree cover within non-forested units, trees were characterized as groupings within ELC units. Dominant species within each ELC unit were documented and the average size (average diameter at breast height (DBH)) of trees of each species were recorded. Notable trees (e.g., species uncommon to the Site or considerably larger than the average) were documented individually.

4.2.2.3 i-Tree Canopy Assessment

An i-Tree Canopy Assessment (USDA Forest Service, 2023) was used to examine the canopy services provided by existing tree cover across the Site for the purposes of facilitating a comparison with anticipated post-development canopy conditions. Assessments were based on distributions of 100 random sampling points across the Site. The existing canopy cover assessment evaluated whether each point represented tree cover or another form of non-tree cover (e.g., grass, paved surfaces, exposed rock, water). The post-development assessment evaluated the Site based on anticipated canopy cover for the community.

4.2.3 Breeding Bird Surveys

Morning breeding bird surveys were performed via point count surveys following the *Ontario Breeding Bird Atlas Guide for Participants* (Ontario Breeding Bird Atlas, 2001). 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 scale[1]) and no precipitation. Per Birds Canada et al. (2001), two rounds of surveys must take place between sunrise and five hours after sunrise between May 24 and July 10. An

[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 constantly moving, light flags extended, wind speed = 12 – 19 km/hr.

additional (third) bird survey is required under MNRF protocols for at-risk bird species that nest in field habitats (MNRF, 2011). Since the open meadows on-site have potential to provide habitat for at-risk grassland bird species (e.g., Bobolink (*Dolichonyx oryzivorus*) and Eastern Meadowlark (*Sturnella magna*)), three rounds of breeding bird surveys were conducted. KAL staff conducted breeding bird surveys on June 12 and 19 and July 2, 2024. Seven survey stations were established across the Site (Figure 2). Birds were identified by vocalization and/or direct visual observation at each station. All incidental observations were recorded while moving between survey points as well as during other field visits.

The presence of regionally rare bird species was based on an analysis of data from the *Atlas of Breeding Birds of Ontario* (Birds Canada, Canadian Wildlife Service (Environment and Climate Change Canada), et al., 2009) based on Hill's Site Regions, now Ecoregions. The *Ontario Wetland Evaluation System: Southern Manual* (MNRF, 2022) also assisted with classifying regionally significant breeding birds in the area (Region 6). The presence of provincially and federally significant species was based on species listed under the ESA and SARA, respectively, and any other non-SAR species that are tracked by the Natural Heritage Information Centre (these species are considered provincially significant (MNRF, 2025b)).

4.2.4 Anurans

Anuran (frog and toad) surveys were performed following the Marsh Monitoring Program (Birds Canada, Environment Canada, et al., 2009). This protocol calls for multiple surveys stations at a site to capture spatial and habitat variability. Accordingly, anuran surveys were performed at five stations throughout the Site (Figure 2). The Marsh Monitoring Program advises that each station be visited a minimum of three times at night, no less than 5 days apart, during the spring and early summer.

Following this protocol, the timing of the three anuran surveys is based on nighttime air temperature:

- Early breeders (Western Chorus Frog, Wood Frog and Spring Peeper): above 5°C;
- Mid-season breeders (Northern Leopard Frog, Pickerel Frog, Mink Frog, American Toad, and Gray Treefrog): above 10°C; and
- Late breeders (Green Frog and Bullfrog): above 17°C.

Anuran surveys took place on April 16, June 4, and June 25, 2024, beginning one half hour after sunset and ended before 12:00 am on evenings with appropriate temperatures and light wind ($\leq$3 on the Beaufort Scale). Additional observations of amphibians were made throughout the spring and summer during other field visits.

4.2.5 Acoustic Bat Monitoring

Bat monitoring was completed following acoustic surveys under the MNRF's *Survey Protocol for Species at Risk Bats within Treed Habitats* (2017). This is currently the recommended protocol for confirming the presence/absence of at-risk bat species where it is determined that potentially suitable habitat for the establishment of maternity roosts is present. Acoustic surveys took place by placing three song meter SM4 acoustic recorders on site between June 19 and July 2, 2024 (Figure 2), scheduled to record after dusk and continuing for five hours.

The Site comprises a mosaic of open areas, densely vegetated thickets, and forest stands with closed canopies. While there were relatively few large-diameter trees, many trees are potentially suitable for bat

roosting, having diameters at breast height (DBH) >10 cm, crevices, and loose bark, and being in the early stages of decay (MNRF, 2017). Snags on-site were documented though a combination of ELC and tree survey. Kaleidoscope Pro analysis software was used to automatically detect and identify bat calls from acoustic data. This software typically has an identification accuracy rate of ~70-80%; approximately 10% of the acoustic data were manually verified.

Figure 2 Survey stations for birds, anurans, and bats

Legend

- Bird Survey Station
- Bat Survey Station
- Frog Survey Station
- Site Boundary

UNA 87

- Category 1- Protected
- Category 3- Development Approved

N

0 200 m

Project: RICH 1684
Map File: RICH 1684 Maps 202501 nm.map
Universal Transverse Mercator - Zone 18 (N)
Printed on: 6/13/2025

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5.0 RESULTS

5.1 Landforms, Soils and Geology

The Site is located within the Ottawa Urban Fringe, in the Ottawa Valley Clay Plains physiographic region (Chapman & Putnam, 1984). Soils in the vicinity of the Site are mapped in Report No. 58 of the Ontario Institute of Pedology, *The Soils of The Regional Municipality of Ottawa-Carleton* (Schut & Wilson, 1987) as belonging to the Bearbrook, North Gower and Manotick soil series, comprising moderately fine to moderately coarse soils and level to gently sloping topography. A portion of the north edge of the Site falls within an area mapped as a rock outcrop (Schut & Wilson, 1987). Boreholes taken in the vicinity of the Site indicate clay and sand overlying limestone bedrock; two boreholes taken near the north edge of the Site indicate limestone bedrock at the surface (Ontario Ministry of Mines, 2012).

Soils on the Site were characterized as part of the ELC exercise and were determined to be consistent with adjacent mapped soils. Soils across the Site were characterized as stiff, silty clays, ranging from moist to fairly dry. Over much of the Site, mineral soils extended to depths greater than 60 cm; the exception was the area immediately surrounding UNA #87 and corresponding to the area mapped as a rock outcrop (Schut & Wilson, 1987), where bedrock was at or very near the surface. Soil cores taken within wetland communities (e.g., thicket swamps) generally indicated mineral soils (silty clay) with mottles and gley at depths of approximately 10 cm.

5.2 Surface Water, Groundwater, and Fish Habitat

The Site is located within the Ottawa River East watershed, specifically in the Mud Creek subwatershed. The infiltration potential of the Site was determined to be low to moderate, due to silty clays and shallow bedrock across the Site (Richcraft Homes, 2019). The Site contains two drainage channels that convey surface flows to the drainage system along the hydro corridor south of the site, which ultimately discharges into a stormwater pond located to the southwest.

The surface water feature characterization field survey identified two HDF's, and one constructed pond on Site (Figure 3). One HDF conveys surface flows from a storm sewer under the SmartCentres shopping centre on Innes Road into the constructed pond in the northwest portion of the site. The pond regulates the quantity of water flowing into the second HDF located south of the pond, which subsequently discharges into the SWM pond to the southwest.

HDF 1 originates at the storm sewer on the northern property boundary, which captures stormwater runoff, particularly following heavy rainfall events, from the SmartCentres shopping centre on Innes Road. Water flows into the constructed pond (Pond 1) on Site (Figure 3). This portion of the tributary is an approximately 220 m long constructed drainage channel, with riprap used to stabilize the banks. The watercourse is densely vegetated with Broadleaf Cattail (*Typha latifolia*). No fish were captured during sampling effort within this watercourse. Designed primarily to capture and convey road runoff and impacted stormwater, as evidenced by the high conductivity (~4,000 µS/cm), this feature does not provide suitable fish habitat.

HDF 2 is an approximately 620 m long linearized drainage channel that conveys surface water runoff from the on-site pond following heavy rainfall events (Figure 3). The watercourse is densely vegetated with Broadleaf Cattail. No fish were captured during fishing effort within this watercourse. Similar to HDF 1, the

high conductivity (1691 µS/cm) and high-water temperatures (32.4°C) recorded during the field survey indicate that this feature does not provide suitable fish habitat.

Pond 1 is an approximately 0.85 ha constructed pond that connects HDF 1 and 2 (Figure 3). It functions to control surface runoff directed to HDF 2 after heavy rainfall events via the raised outlet structure. The pond appears to have a concrete slab substrate and is primarily dominated by Broadleaf Cattail emergent vegetation. Water quality in the pond was poor and similar to that of HDF 1 and 2, with high conductivity (1691µS/cm), and elevated water temperatures (32.4°C). During fish sampling, one fish (Northern Redbelly Dace; *Chrosomus eos*) was captured, although numerous dead fish were observed throughout the pond. Given the impacted nature of the system, and its intended function to capture runoff from the SmartCentres shopping centre north of the site, it is not suitable as fish habitat.

The HDFA report initially prepared for the Site by Niblett (2018) provided a management recommendation of “No Management Required” for all headwater features on the Site. Given their limited ecological value and impacted water quality, HDFA assessments completed through this current report support this management recommendation for the features still observed to occur on site (i.e. present during 2024 surveys as described above).

Figure 3 Exisiting conditions on Site

Legend

Vegetation Community

- Forest
- Woodland
- Thicket
- Alvar
- Wetland

Note: Yellow text with an * indicates SAR occurance within that corresponding polygone

- Black Ash
- Black Ash 30 m Buffer
- Site Boundary

UNA 87

- Category 1- Protected
- Category 3- Development Approved

N

0 200 m

Project: RICH 1684
Map File: RICH 1684 Maps 202501 nm.map
Universal Transverse Mercator - Zone 18 (N)
Printed on: 6/13/2025

KILGOUR & Associates

5.3 Vegetation

5.3.1 Ecological Land Classification

Fifteen distinct landcovers or ELC units, comprising three wetland and 12 terrestrial units, were delineated on the Site (Figure 3). Much of the Site is characterized as a mosaic of open, graminoid-dominated meadow and shrub thicket interspersed with deciduous woodland and forest areas. Wetland communities tended to be concentrated in the south and southwest portions of the Site, while the remainder of the Site comprised predominantly upland communities.

Dominant species in each community are included in the descriptions below; additional species detected are provided in Appendix D.

5.3.1.1 Terrestrial Communities

Kentucky Bluegrass Graminoid Meadow Type (MEGM3-4)

A Kentucky Bluegrass Graminoid Meadow (MEGM3-4) is situated near the southwest corner of the Site (Figure 3; Figure 4). Dominant species include Kentucky Bluegrass (*Poa pratensis*) with Graceful Sedge (*Carex gracillima*) and Poison Ivy (*Toxicodendron radicans*). Saplings of Green Ash (*Fraxinus pennsylvanica*) and Alder Buckthorn (*Frangula alnus*) are widespread within this community, especially within transitional areas to adjacent deciduous woodlands and thickets. Soils within this unit comprise moist, stiff, silty clay. Some mottling and gley were noted at depths of approximately 20 cm, suggesting hydric influences; however, vegetation indicates a terrestrial meadow community.

Figure 4 Kentucky Bluegrass Graminoid Meadow (MEGM3-4), photo taken June 5, 2024

Smooth Brome Graminoid Meadow Type (MEGM3-5)

A Smooth Brome Graminoid Meadow (MEGM3-5) is situated in the northeast corner of the Site, adjacent to Mer Bleue Road to the east and the north property boundary (Figure 3; Figure 5). Dominant species in the meadow include Smooth Brome (*Bromus inermis*) and Canada Goldenrod (*Solidago canadensis*), with Hedge Bedstraw (*Galium mollugo*) and Common Milkweed (*Asclepias syriaca*). Soils within this unit comprise moist, stiff clay.

Figure 5 Smooth Brome Graminoid Meadow (MEGM3-5), photo taken June 4, 2024

Reed Canary Grass Graminoid Meadow Type (MEGM3-8)

A Reed Canary Grass Graminoid Meadow (MEGM3-8) forms the most widespread meadow community on the Site, comprising much of the west side of the Site, as well as discrete patches along the south edge and in the northeast corner (Figure 3; Figure 6). Dominant species include Reed Canary Grass (*Phalaris arundinacea*), Kentucky Bluegrass and Fowl Bluegrass (*Poa palustris*), with Hedge Bedstraw, Canada Goldenrod, and Common Milkweed. Scattered shrub cover includes White Meadowsweet (*Spiraea alba*) and species of Willow (*Salix* spp.). Soils within this unit comprise moist, stiff silty clay.

Figure 6 Reed Canary Grass Graminoid Meadow (MEGM3-8), photo taken June 12, 2024

Buckthorn Deciduous Shrub Thicket Type (THDM2-6)

A Buckthorn Deciduous Shrub Thicket (THDM2-6) represents the most widespread unit on the Site, comprising a large portion of the central part of the Site, as well as isolated pockets in the northwest and southeast corners (Figure 3; Figure 7). Dominant species include Common Buckthorn (*Rhamnus cathartica*) and Alder Buckthorn, with occasional American Elm (*Ulmus americana*) and Green Ash trees and saplings. Groundcover comprises Smooth Brome, Kentucky Bluegrass and Canada Goldenrod. Soils within this unit are characterized predominantly as moist, stiff, silty clays, with occasional dry silty clay and moist sand. One portion of this unit, situated in the central portion of the Site, immediately north of the hydro corridor, is characterized by wet silty clay, with groundwater encountered at 20 cm. Despite the indications of hydric influences on the soil, this area supported terrestrial vegetation consistent with other, drier parts of this unit.

Figure 7 Buckthorn Deciduous Shrub Thicket (THDM2-6), photo taken June 4, 2024

Fresh – Moist Poplar Deciduous Woodland Type (WODM5-1)

A Fresh – Moist Poplar Deciduous Woodland (WODM5-1) is situated in multiple locations across the Site, including through the centre of the Site and along the eastern and western edges of the Site (Figure 3; Figure 8). Dominant canopy species include Trembling Aspen (*Populus tremuloides*) and American Elm, with a subcanopy of Trembling Aspen, Green Ash, and Alder Buckthorn. The shrub layer comprises Alder Buckthorn, Common Buckthorn, Chokecherry (*Prunus virginiana*) and species of Willow. Dominant groundcover includes Canada Goldenrod, Graceful Sedge, Wild Strawberry (*Fragaria virginiana*) and Virginia Creeper (*Parthenocissus quinquefolia*). Soils within the majority of the unit comprise moist, stiff, silty clay; however, one portion of the unit in the south-central part of the Site is characterized by wet, sandy clay, with indications of mottles and gley at 20 cm and groundwater encountered at 10 cm. Despite the shallow groundwater and indications of hydric influences, vegetation is consistent with other parts of the unit and signifies a terrestrial community.

Figure 8 Fresh – Moist Poplar Deciduous Woodland (WODM5-1), photo taken June 6, 2024

Fresh – Moist American Elm Deciduous Woodland Type (WODM5-2)

A Fresh – American Elm Deciduous Woodland (WODM5-2) is situated in multiple locations throughout the Site, concentrating near the centre of the Site, with an additional occurrence along the east edge of the Site (Figure 3; Figure 9). Dominant canopy species include American Elm, Trembling Aspen and Green Ash, with a shrub layer of Alder Buckthorn, Common Buckthorn, Red-osier Dogwood (*Cornus sericea*), and White Meadowsweet. Dominant groundcover comprises Reed Canary Grass, Canada Goldenrod, Virginia Creeper and Poison Ivy. Soils within the majority of this unit comprise moist, stiff, silty clays; however, one portion of this unit, in the west-central part of the Site shows mottles and gley at 30 cm. Despite an indication of hydric influence on local soils, the vegetation was consistent with the relatively drier portions of the unit.

Figure 9 Fresh – Moist American Elm Deciduous Woodland (WODM5-2), photo taken June 12, 2024

Fresh – Moist Sugar Maple - Hardwood Deciduous Forest Type (FODM6-5)

A Fresh – Moist Sugar Maple – Hardwood Deciduous Forest (FODM6-5) is situated in a single location on the north edge of the Site (Figure 3; Figure 10), adjacent to UNA #87 off-site and the rock barren community (RBOB1-1)). Dominant canopy species include Sugar Maple and Bitternut Hickory (*Carya cordiformis*). The subcanopy and shrub layers are predominantly open and comprise Sugar Maple saplings. Dominant groundcover species include Poison Ivy and Sugar Maple seedlings. Bedrock was observed at the surface within this unit; as a result, soil cores were not taken.

Figure 10 Fresh – Moist Sugar Maple – Hardwood Deciduous Forest (FODM6-5), photo taken June 20, 2024

Dry – Fresh Sugar Maple – Basswood Deciduous Forest Type (FODM5-6)

A Dry – Fresh Sugar Maple – Basswood Deciduous Forest (FODM5-6) is situated in a single location on the north edge of the Site (Figure 3; Figure 11). Dominant canopy species include Sugar Maple and Basswood (*Tilia americana*) with occasional American Elm, while the subcanopy and shrub layers comprise Common Buckthorn and Alder Buckthorn. Dominant groundcover species include Poison Ivy and Virginia Creeper. Bedrock was observed at the surface within this unit; as a result, soil cores were not taken.

Figure 11 Dry – Fresh Sugar Maple – Basswood Deciduous Forest (FODM5-6), photo taken June 4, 2024

Fresh – Moist White Elm Lowland Deciduous Forest Type (FODM7-1)

A Fresh – Moist White Elm Lowland Deciduous Forest (FODM7-1) is documented in three locations on the site, including two patches in the northeast corner of the Site and a larger patch in the southwest (Figure 3; Figure 12). Dominant canopy species comprise American Elm and Green Ash. The shrub layer comprises Common Buckthorn, Alder Buckthorn and White Meadowsweet. Dominant groundcover species include Poison Ivy, Canada Goldenrod, Virginia Creeper, Woodland Horsetail (*Equisetum sylvaticum*) and Common Bedstraw (*Galium boreale*). Soils in this unit are characterized as dry to moist, stiff, silty clays.

Figure 12 Fresh – Moist White Elm Lowland Deciduous Forest (FODM7-1), photo taken June 4, 2024

Fresh – Moist Green Ash – Hardwood Lowland Deciduous Forest Type (FODM7-2)

A Fresh – Moist Green Ash – Hardwood Lowland Deciduous Forest (FODM7-2) occurs as a relatively small patch near the south edge of the Site (Figure 3; Figure 13). Dominant canopy species include relatively small Green Ash (average DBH 15 cm). The shrub layer is characterized by Alder Buckthorn and White Meadowsweet. Groundcover vegetation comprises Canda Goldenrod, Graceful Sedge and species of Bluegrass (*Poa* sp.). Soils in this unit are characterized as moist, stiff silty clay.

Figure 13 Fresh – Moist Green Ash – Hardwood Lowland Deciduous Forest (FODM7-2), photo taken June 4, 2024

Fresh – Moist Poplar Deciduous Forest Type (FODM8-1)

A Fresh – Moist Poplar Deciduous Forest (FODM8-1) is situated in four locations on the Site, two near the southwest corner, one along the north edge, and the fourth situated centrally, immediately south of UNA #87 (Figure 3; Figure 14). Dominant canopy species include Trembling Aspen and American Elm, with Green Ash. The shrub layer is characterized by Common Buckthorn, Alder Buckthorn, Wild Red Raspberry (*Rubus idaeus*) and White Meadowsweet. Dominant groundcover includes Canada Goldenrod, Woodland Horsetail, Wild Strawberry, and Virginia Creeper. Soils in this unit are characterized as dry, stiff clays.

Figure 14 Fresh – Moist Poplar Deciduous Forest Type (FODM8-1), photo taken June 5, 2024

Calcareous Open Rock Barren Outcrop Type (RBOB1-1)

A Calcareous Open Rock Barren Outcrop (RBOB1-1) is situated on the north edge of the Site, forming a narrow perimeter around the east and south edges of UNA #87 (Figure 3; Figure 15). The canopy within this unit was generally open; however, Sugar Maple and Bitternut Hickory occur along the boundary with UNA #87 and adjacent deciduous forest (FODM6-5). Scattered shrubs throughout the unit include Red-osier Dogwood, Common Buckthorn and Staghorn Sumac (*Rhus typhina*). Dominant groundcover species include Goldmoss Stonecrop (*Sedum acre*), Poison Ivy, and White Cockle (*Silene latifolia*). Bedrock occurs at the surface in this unit, characterized as exposed rock, with vertical cracks and small fissures. Groundcover vegetation tends to concentrate within the cracks. Soil cores were not taken within this unit.

Figure 15 Calcareous Open Rock Barren (RBOB1-1); photo taken June 20, 2024

5.3.1.2 Wetland Communities

Poplar Mineral Deciduous Swamp Type (SWDM4-5)

A Poplar Mineral Deciduous Swamp (SWMD4-5) is located in the southwest corner of the Site, adjacent to the Site boundaries (Figure 3; Figure 16). The canopy is dominated by Trembling Aspen, with abundant Green Ash in the subcanopy. Dominant species in the shrub layer include Red-osier Dogwood, White Meadowsweet, and Green Ash saplings. Groundcover comprised Valerian (*Valeriana officinalis*), Canada Goldenrod, and Sweet-scented Bedstraw (*Galium triflorum*). Soils in this unit are characterized as wet, silty clay, with mottles and gley apparent within the first 10 cm. Groundwater was encountered at 10 cm. This unit supported a mixture of wetland and upland-associated species; the moisture regime in the southwest corner of the Site may be influenced by construction on adjacent lands, including the construction of a stormwater management pond off-site, situated approximately 400 m to the west.

Figure 16 Poplar Mineral Deciduous Swamp Type (SWDM4-5), photo taken June 12, 2024

Mixed Willow Mineral Deciduous Thicket Swamp Type (SWTM3-6)

A Mixed Willow Mineral Deciduous Thicket Swamp (SWTM3-6) is documented in two locations on the Site: a linear community extending along the south edge of the Site, adjacent to the hydro corridor that parallels Brian Coburn Boulevard, and a discrete patch near the southwest corner of the Site (Figure 3; Figure 17). The dense shrub layer is dominated by Alder Buckthorn, Red-osier Dogwood, White Meadowsweet and species of Willow, with small Green Ash and Paper Birch (*Betula papyrifera*) trees. Groundcover species comprise Reed Canary Grass, Graceful Sedge, and Purple Loosestrife. Soils in this unit are characterized as moist, stiff, silty clays. Mottles and gley are apparent within 0-30 cm of the surface, and groundwater was encountered at approximately 5 cm.

Figure 17 Mixed Willow Mineral Deciduous Thicket Swamp (SWTM3-6), photo taken June 20, 2024

5.3.2 Tree Studies

A tree survey was performed for the Site following TCR guidelines set forth by the City of Ottawa Forestry Staff (City of Ottawa, 2020). The tree survey took place concurrently with the ELC on June 4, 5, 7, 12, and 20, 2024. Due to the considerable tree coverage on the Site, trees were assessed in groupings, corresponding to ELC units. Within each ELC unit, tree species were noted and average DBH measurements were taken. Overall, 10 species of trees with average DBH measurements greater than 10 cm were noted on the Site, with DBHs ranging from 10 cm to 52 cm (Table 2). A TCR is provided in Appendix E.

Table 2 Summary tree data for ELC units

Community Type	ELC Unit*	Dominant Tree Species	Average DBH (cm)
Deciduous Forest	FODM5-6	Basswood (*Tilia americana*) Sugar Maple (*Acer saccharum*) American Elm (*Ulmus americana*)	24 6 10
	FODM6-5	Sugar Maple (*Acer saccharum*) Bitternut Hickory (*Carya cordiformis*)	16 27
	FODM7-1A	American Elm (*Ulmus americana*) Green Ash (*Fraxinus pennsylvanica*)	16 10
	FODM7-1B	American Elm (*Ulmus americana*) Green Ash (*Fraxinus pennsylvanica*)	15 12
	FODM7-1C	American Elm (*Ulmus americana*) Eastern White Pine (*Pinus strobus*) Green Ash (*Fraxinus pennsylvanica*)	15 10 10
	FODM7-2	Green Ash (*Fraxinus pennsylvanica*)	15
	FODM8-1A	Trembling Aspen (*Populus tremuloides*) Green Ash (*Fraxinus pennsylvanica*)	30 20
	FODM8-1B	Trembling Aspen (*Populus tremuloides*) American Elm (*Ulmus americana*)	15 13
	FODM8-1C	Trembling Aspen (*Populus tremuloides*) American Elm (*Ulmus americana*) Green Ash (*Fraxinus pennsylvanica*)	19 11 5
	FODM8-1D	Trembling Aspen (*Populus tremuloides*) American Elm (*Ulmus americana*) Green Ash (*Fraxinus pennsylvanica*)	23 10 10
Deciduous Woodland	WODM5-1A	Trembling Aspen (*Populus tremuloides*) American Elm (*Ulmus americana*)	15 13
	WODM5-1B	Trembling Aspen (*Populus tremuloides*) American Elm (*Ulmus americana*)	15 17
	WODM5-1C	American Elm (*Ulmus americana*)	7
	WODM5-2A	American Elm (*Ulmus americana*)	16
	WODM5-2B	American Elm (*Ulmus americana*)	14
	WODM5-2C	American Elm *(Ulmus americana)* Trembling Aspen *(Populus tremuloides)* Green Ash *(Fraxinus pennsylvanica)*	16 19 10
	WODM5-1D	Trembling Aspen *(Populus tremuloides)* Ironwood *(Ostrya virginiana)* Basswood *(Tilia americana)*	18 12 24
	WODM5-1E	Trembling Aspen (*Populus tremuloides*) American Elm (*Ulmus americana*)	11 17
Deciduous Thicket	THDM2-6B	American Elm *(Ulmus americana)*	26
	THDM2-6D	American Elm (*Ulmus americana*)	11
	THDM2-6E	Green Ash *(Fraxinus pennsylvanica)*	10
	THDM2-6H	Basswood *(Tilia americana)* Sugar Maple *(Acer saccharum)* American Elm *(Ulmus americana)*	24 6 10
	THDM2-6I	American Elm (*Ulmus americana*) Green Ash (*Fraxinus pennsylvanica*)	21 10
	THDM2-6I	American Elm (*Ulmus americana*)	10
Graminoid Meadow	MEGM3-4	American Elm (*Ulmus americana*) Green Ash (*Fraxinus pennsylvanica*)	19 2
	MEGM3-8A	Green Ash (*Fraxinus pennsylvanica*)	8
Deciduous Swamp	SWDM4-5	Trembling Aspen (*Populus tremuloides*)	13
Thicket Swamp	SWTM3-6B	American Elm (*Ulmus americana*) Green Ash (*Fraxinus pennsylvanica*)	14 10
	SWTM3-6C	Paper Birch (*Betula papyrifera*) Green Ash (*Fraxinus pennsylvanica*)	10 7

* Only ELC units supporting trees are included in this table

One Black Ash was observed during the tree survey; however, the tree was situated within the Sugar Maple dominated forest of UNA #87 (Figure 3). The Black Ash tree was situated approximately 15 m from the Site boundary. Its DBH was 8.5 cm and appeared healthy at the time of survey; therefore, species and habitat protections apply per O.Reg.6.24 and 7.24. The Black Ash habitat associated with this tree extends onto the Site into the adjacent RBOB1-1 rock barren community, which will likely be impacted by the future extension of Frank Bender St. and will require consultation with the MECP. During the tree inventory, and SAR vegetation survey, no Butternuts were observed on Site or within close proximity (30 m) of the site boundary.

5.4 i-Tree Canopy Assessment

The i-Tree Canopy Assessment examines the current canopy conditions and associated services across the Site (Table 3). In its current state, the Site comprises 59% canopy cover overall, with areas of near 100% canopy cover, particularly in the forested and treed swamp portions of the site, with sparser canopy cover in woodland and thicket communities. Areas of near 0% canopy include open meadow communities.

Table 3 Assessment of canopy benefits of the trees across the Site based on iTree Canopy Assessment

Land Cover Distribution			
Land Cover Type	Area (ha) ± SE		Area (%) ± SE
Tree	46.77 ± 3.90		59.00 ± 4.92
Non-Tree	32.50 ± 3.90		41.00 ± 4.92
Tree Benefit Estimates: Carbon			
	Carbon (t) ± SE	CO_2 Equiv. (t) ± SE	Value (CAD) ± SE
Sequestered annually in trees	143.11 ± 11.93	524.73 ± 43.74	$94,307 ± 7,862
Total stored in trees	3594.00 ± 299.60	13,178.01 ± 1,098.54	$2,368,407 ± 197,434
Tree Benefit Estimates: Air Pollution			
Pollutant Removed Annually	Amount (kg) ± SE		Value (CAD) ± SE
CO – Carbon Monoxide	50.01 ± 4.17		$108 ± 9
NO_2 – Nitrogen Dioxide	197.67 ± 16.48		$47 ± 4
O_3 - Ozone	2,382 ± 198.61		$2,116 ± 176
SO_2 – Sulfur Dioxide	426.49 ± 35.55		$7 ± 1
PM2.5 – Particulate Matter <2.5 µm	124.39 ± 10.37		$4,455 ± 371
PM 10 – Particulate matter 2.5 – 10 µm	955.35 ± 79.64		$9,835 ± 820
Tree Benefit Estimates: Hydrological			
Benefit	Amount (ML) ± SE		Value (CAD) ± SE
Avoided Runoff	1.55 ± 0.13		$5,050 ± 421
Evaporation	27.28 ± 2.27		N/A
Interception	27.46 ± 2.29		N/A
Transpiration	32.31 ± 2.69		N/A
Potential Evaporation	168.45 ± 14.04		N/A
Potential Evapotranspiration	168.45 ± 14.04		N/A

5.5 Wildlife Surveys

5.5.1 Breeding Birds

Three rounds of breeding bird surveys were conducted on June 12 and 19 and July 2, 2024. A total of seven breeding bird survey stations were established in representative habitats on the Site (Figure 2). A summary of the weather conditions during the breeding bird surveys are provided in Table 4.

Table 4 Dates and weather conditions of breeding bird surveys

Date	Wind (Beaufort Scale)	Air Temperature (°C)	Cloud Cover (%)	Precipitation
June 12, 2024	2	17	75-100	none
June 19, 2024	0 to 1	20-30	0-25	none
July 2, 2024	0	16-20	0-25	none

A total of 33 bird species were detected through vocalization and/or direct visual observations during morning breeding bird surveys and incidental observations (Appendix F). The following bird species were commonly observed on the Site, detected at multiple survey stations during all surveys: Song Sparrow (*Melospiza melodia*), American Goldfinch (*Spinus tristis*), Swamp Sparrow (*Melospiza georgiana*), American Robin (*Turdus migratorius*), Yellow Warbler (*Setophaga petechia*), and Common Yellowthroat (*Geothlypis trichas*). One Species at Risk (SAR) bird (Eastern Wood-pewee; *Contopus virens*) was observed at BBS Station 6, within the rock barren (RBOB-1) and adjacent to deciduous forest (FODM6-5) units on Site and within UNA #87.

5.5.2 Anurans

A summary of the weather conditions during the 2024 anuran surveys is provided in Table 5. A total of five anuran species were observed during evening aural surveys (Table 6). Spring Peeper (*Pseudacris crucifer*) was the only species detected at Call Code Level 3 (i.e., a full chorus). The full chorus of Spring Peeper occurred during the first survey (April 16, 2024) at two stations (MMP2 and MMP 5), where the Spring Peepers wee detected calling in the direction of the hydro corridor south of the site. No SAR anurans were observed during nighttime aural surveys.

Table 5 Dates and weather conditions of anuran surveys

Date	Wind (Beaufort Scale)	Air Temperature (°C)	Cloud Cover (%)	Precipitation
April 16, 2024	1 to 3	7	10	None
June 4, 2024	0 to 1	19 -24	5 to 20	None
June 25, 2024	2	19 – 20	70-100	Light drizzle

Table 6 Summary of anurans detected during anuran surveys

Survey Station	Common Name	Scientific Name	Highest Calling Code[1]	Direction to Large Groups
MMP 1	American Toad	*Anaxyrus americanus*	1	
	Gray Tree Frog	*Hyla versicolor*	2	
	Spring Peeper	*Pseudacris crucifer*	1	
MMP 2	American Toad	*Anaxyrus americanus*	2	
	Gray Tree Frog	*Hyla versicolor*	2	
	Spring Peeper	*Pseudacris crucifer*	3	Southeast (i.e. with hydro corridor)
MMP 3	Gray Tree Frog	*Hyla versicolor*	2	
	Spring Peeper	*Pseudacris crucifer*	2	
MMP 4	Gray Tree Frog	*Hyla versicolor*	1	
	Green Frog	*Lithobates clamitans*	2	
	Northern Leopard Frog	*Lithobates clamitans*	1	
	Spring Peeper	*Pseudacris crucifer*	1	
MMP 5	American Toad	*Anaxyrus americanus*	1	
	Gray Tree Frog	*Hyla versicolor*	1	
	Green Frog	*Lithobates clamitans*	1	
	Northern Leopard Frog	*Lithobates clamitans*	1	
	Spring Peeper	*Pseudacris crucifer*	3	Southeast (i.e. with hydro corridor)

[1] Calling codes are defined as follows (Birds Canada, Environmental Canada, et al., 2009): 1 = Calls not simultaneous, individuals can be accurately counted; 2 = Some calling simultaneous, individuals reliably estimated; 3 = Full chorus, continuous and overlapping, individuals not reliably estimated.

5.5.3 Bats

Three acoustic bat monitors were installed for a minimum of 13 nights and placed along the edges of dense vegetation (e.g., deciduous forest, thicket, thicket swamp), to capture the greatest potential for bat activity on the Site (Figure 2). Conditions were ideal throughout the monitoring period with mainly clear or cloudy nights and warm temperatures (≥15°C). Bat species identified within the Site were Big Brown Bat (*Eptesicus fuscus*), Eastern Red Bat (*Lasiurus borealis*), Hoary Bat (*Lasiurus cinereus*) and Silver-Haired Bat (*Lasionycteris noctivagans*) (Table 7).

Table 7 Number of bat recordings from acoustic monitoring

Survey Station	Survey Dates	Habitat Description	Big Brown Bat	Eastern Red Bat	Hoary Bat	Silver-haired Bat
KB01	June 19 – July 1, 2024	Edge of deciduous forest (UNA #87) and adjacent deciduous thicket (THDM2-6)	180	2	185	767
KB05	June 19 – July 2	Edge of deciduous thicket (THDM2-6) and adjacent thicket swamp (SWTM3-6)	85	1	113	309
KB08	June 19 – June 30	Edge of deciduous thicket swamp (SWTM3-6) and adjacent graminoid meadow (MEGM3-8)	26		2	33

5.6 Incidental Wildlife Observations

Incidental wildlife observations made during field surveys in 2024 are summarized in Table 8.

Table 8 Summary of incidental wildlife observations

Species Name	Scientific Name	Location Detected	Date Detected
Birds			
Eastern Wood-pewee	*Contopus virens*	Observed at BBS Station 6, within the rock barren (RBOB-1) and adjacent to deciduous forest (FODM6-5) units on Site and within UNA #87	June 5, 2024
Wilson's Snipe	*Gallinago delicata*	Detected incidentally within the deciduous woodland units (WODM5-1 and WODM5-2)	June 7, 2024, June 12, 2024
Arthropods			
Monarch	*Danaus plexippus*	Observed within the thicket swamp (SWDM3-6) community on the south edge of the Site	June 7, 2024

5.7 Species at Risk

The Preliminary SAR Screening identified a total of 38 SAR with some potential to occur within the broader vicinity of the Site based on a desktop review of observation records and publicly available databases (Appendix C). The 38 SAR initially screened for consideration were assessed based on general habitat availability on the Site, the potential for those species to occur within the project area, and/or their likelihood for interactions generally with future development. Of those species, 27 were considered to have some potential to occur on the Site and/or to interact with the project (Appendix C; Table 9).

Table 9 Species at risk screened for consideration in the proposed project

Common Name	Taxonomic Name	ESA Status	SARA Status	Observed On Site	Potential to Interact with Project
Birds					
Bobolink	*Dolychonyx oryzivorus*	Threatened	Threatened	No observations on Site with targeted BBS surveys	Low
Canada Warbler	*Cardellina canadensis*	Special Concern	Threatened	No observations on Site with targeted BBS surveys	Low
Common Nighthawk	*Chordeiles minor*	Special Concern	Threatened	No observations on site; targeted nightjar surveys were not conducted	Low
Eastern Meadowlark	*Sturnella magna*	Threatened	Threatened	No observations on Site with targeted BBS surveys	Low
Eastern Whip-poor-will	*Antrostomus vociferus*	Special Concern	Threatened	No observations on Site (targeted surveys not undertaken; however, no individuals were incidentally observed during anuran surveys that were conducted in generally suitable Eastern Whip-poor-will survey timing window.)	Low
Eastern Wood-Pewee	*Contopus virens*	Special Concern	Special Concern	Yes, detected during BBS	High
Evening Grosbeak	*Coccothraustes vespertinus*	Special Concern	Special Concern	No observations on Site with targeted BBS surveys	Low
Golden-winged Warbler	*Vermivora chrysoptera*	Special Concern	Threatened	No observations on Site with targeted BBS surveys	Low
Grasshopper Sparrow	*Ammodramus savannarum*	Special Concern	Special Concern	No observations on Site with targeted BBS surveys	Low

Common Name	Taxonomic Name	ESA Status	SARA Status	Observed On Site	Potential to Interact with Project
Olive-sided Flycatcher	*Contopus cooperi*	Special Concern	Threatened	No observations on Site with targeted BBS surveys	Low
Rusty Blackbird	*Euphaus carolinus*	Special Concern	Special Concern	No observations on Site with targeted BBS surveys	Low
Wood Thrush	*Hylocichla mustelina*	Special Concern	Threatened	No observations on Site with targeted BBS surveys	Low
Mammals					
Eastern Red Bat	*Lasiurus borealis*	Endangered	Not Listed	Detected on Site through acoustic monitoring	High
Eastern Small-footed Myotis	*Myotis leibii*	Endangered	Not Listed	No detections on Site with targeted acoustic monitoring	Low
Hoary Bat	*Lasiurus cinereus*	Endangered	Not Listed	Detected on Site through acoustic monitoring	High
Little Brown Myotis	*Myotis lucifuus*	Endangered	Endangered	No detections on Site with targeted acoustic monitoring	Low
Northern Myotis	*Myotis septentrionalis*	Endangered	Endangered	No detections on Site with targeted acoustic monitoring	Low
Silver-haired Bat	*Lasionycteris noctivagans*	Endangered	Not Listed	Detected on Site through acoustic monitoring	High
Tri-colored Bat	*Perimyotis subflavus*	Endangered	Endangered	No detections on Site with targeted acoustic monitoring	Low
Reptiles					
Eastern Milksnake	*Lampropeltis triangulum*	Not Listed	Special Concern	No observations on Site (targeted surveys not undertaken)	Moderate
Midland Painted Turtle	*Chrysemys picta marginata*	Not Listed	Special Concern	No observations on Site (targeted surveys not undertaken)	Moderate
Snapping Turtle	*Chelydra serpentina*	Special Concern	Special Concern	No observations on Site (targeted surveys not undertaken)	Moderate
Arthropods					
American Bumble Bee	*Bombus pensylvanicums*	Special Concern	No Status	No observations on Site (targeted surveys not undertaken)	Moderate
Monarch	*Danaus plexippus*	Special Concern	Special Concern	Detected incidentally during ELC	High
Yellow-banded Bumble Bee	*Bombus terricola*	Special Concern	Special Concern	No observations on Site (targeted surveys not undertaken	Moderate
Vascular Plants					
Black Ash	*Fraxinus nigra*	Endangered	No Status	No observations on Site with targeted tree survey (but observed in UNA #87)	High
Butternut	*Juglans cinerea*	Endangered	Endangered	No observations on Site with targeted tree survey	Low

[1] Rows highlighted in yellow indicate species ranked as Threatened or Endangered under the ESA that have a moderate to high likelihood of interacting with the proposed project.

SAR presented in Table 1 that are not listed or are listed as Special Concern under the ESA are not considered further as SAR in this report because they do not receive individual or habitat protection under the ESA (whereas Threatened and Endangered species do). However, individuals of these species are protected under other regulations addressing wildlife conservation generally, such as the FWCA, MBCA, and the PPS. In addition, species listed as Special Concern under the ESA may receive habitat protection if they are observed in habitats that meet the criteria for designation as Significant Wildlife Habitat (SWH) for Special Concern Species (MNRF, 2015a). Species of Special Concern will be discussed with SWH in Section 5.7.

Of the protected SAR reviewed, four were observed on the Site (Eastern Red Bat, Hoary Bat, and Silver-haired Bat) or have the potential to interact with the project (Black Ash). These species are discussed further below.

5.7.1 SAR Bats

The Committee on the Status of Species at Risk in Ontario (COSSARO) has updated the provincial status for the Hoary Bat (*Lasiurus cinereus*), Silver-haired Bat (*Lasionycteris noctivagans*), and Eastern Red Bat (*Lasiurus borealis*) to Endangered. These species received general habitat protection as of January 31, 2025. Although these species were not officially listed at the time of initiating this EIS, protections will apply throughout a future development timeline.

Eastern Red Bat, Hoary Bat and Silver-haired Bat were detected through acoustic monitoring on the Site. Eastern Red Bat was detected at two of the three monitoring stations, with a single detection at one station and two detections at the other. Hoary Bat and Silver-haired Bat were detected at all three monitoring stations; both species were detected with over 100 recordings at two of the stations, with considerably fewer recordings at the third station. As such, all three species likely forage and/or roost in proximity to the Site. The low numbers of detections for Eastern Red Bat suggest only a limited transient presence over most of the Site, with little evidence of maternal roosting activity or habitat. Hoary Bat and Silver-haired Bat were observed with a higher number of recordings, suggesting greater overall presence and potential use of the Site. As Endangered species, Hoary Bat, Silver-haired Bat, and Eastern Red Bat receive “general habitat protection” under the ESA.

Roosting habitat for SAR bats includes buildings, rock crevices, exfoliating tree bark, within foliage, and cavities and crevices in trees (Humphrey & Fotherby, 2019). These species generally forage over clearings adjacent to forests and over water. The forests and woodlands on Site may provide roosting habitat, while the forest edges may provide suitable foraging habitat. Maternity roosting habitat for SAR bats includes tree cavities, particularly in large diameter (>25 cm DBH) wildlife trees in early stages of decay; maternity roosts are typically found in deciduous or mixed forest stands, with a density of suitable wildlife trees of >10/ha (MNRF, 2015a). Maternity colonies are protected as Significant Wildlife Habitat; however, the Site does not meet the density criteria of wildlife trees to be considered SWH (MNRF, 2015a).

Bat hibernacula generally include subterranean openings, including caves, abandoned mines, wells, and tunnels (Environment Canada, 2015; MNRF, 2017). Potential underground structures for bat hibernation were not observed on the Site.

5.7.2 Black Ash

Black Ash (*Fraxinus nigra*), Endangered under the ESA and with no status under the SARA, are a medium-sized shade-intolerant hardwood tree primarily found in wetland environments like swamps, floodplains and fens. Black Ash can also occur in moist upland forests (COSEWIC, 2018). Black Ash received protection under the ESA on January 24, 2024. O.Reg 6/24 and O.Reg 7/24 set out individual and habitat protection. Black Ash habitat is defined as a radial distance of 30 m from the stem of every Black Ash that is over 8 cm at 1.37 m.

One Black Ash that meets the size requirement for protection and appeared to be healthy was observed within the UNA #87, adjacent to (but not on) the site. However, the tree is within 15 m of the project boundary, and as such will require consultation with the MECP during the extension of Frank Bender St.

To satisfy regulatory requirements, a Black Ash Assessment (BAA) Report must be submitted to the MECP and form part of the *Information Gathering Form* (IGF) to support a Net Benefit Permit under the ESA. An IGF

will need to be submitted to facilitate the completion of the Net Benefit Permit, which would permit the removal of trees as required to proceed with site development.

5.8 Significant Wildlife Habitat

The Significant Wildlife Habitat Criteria Schedule for Ecoregion 6E (MNRF, 2015a) identifies four main types of SWH: seasonal concentration areas, rare vegetation communities, specialized habitat for wildlife, and habitats of Species of Conservation Concern.

5.8.1 Seasonal Concentration Areas

Seasonal concentration areas include stopover and staging areas for waterfowl, shorebirds, landbirds and butterflies, wintering areas for raptors, bat hibernacula, bat maternity colonies, wintering areas for turtles, reptile hibernacula, breeding habitats for colonially-nesting birds, and deer yarding and congregation areas.

5.8.1.1 Snake Hibernacula

The surficial exposed limestone of the rock barren (RBOB1-1) directly south and east of UNA #87 forest meets the criteria for candidate Reptile Hibernacula SWH. Moreover, at the time the East Urban Community Phase 3 CDP was prepared (Richcraft Group of Companies, 2020a), at least three snake species were identified using this habitat (Eastern Gartersnake, Milksnake, and Northern Redbelly Snake). Accordingly, the rock barren and the adjacent 30 m were designated a Reptile Hibernacula SWH due to their considered likelihood to support overwintering snakes within the fractured limestone.

5.8.2 Rare Vegetation Communities or Specialized Habitat for Wildlife

Rare Vegetation Communities

Rare vegetation communities typically include those that have developed on cliff and talus slopes, sand barrens, shallow soils over limestone bedrock (alvar), old-growth forests, savannahs, and tallgrass prairies. The rock barren RBOB1-1 on the north edge of the Site, adjacent to UNA #87, provides unfractured calcareous bedrock with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil. The features provide candidate conditions for the identification of an Alvar SWH. The feature also measures approximately 1.96 ha, meeting the threshold criteria for candidacy of 0.5 ha. To confirm as an Alvar SWH, however, four of the five alvar indicator plant species must be detected. None of these species were detected during the ELC surveys. As such, the Site does not meet the criteria to constitute an Alvar SWH.

Specialized Wildlife Habitat

Specialized wildlife habitat includes waterfowl nesting areas, Bald Eagle and Osprey nesting, foraging and perching habitat, woodland raptor nesting habitat, turtle nesting areas, seeps and springs, woodland amphibian breeding habitat, wetland breeding habitat, and woodland area-sensitive bird breeding habitat.

Considering the variety of ecosites observed through the ELC study, various areas around the Site meet the basic requirements for candidacy as Wetland and Woodland Amphibian Breeding Habitat SWHs. To be confirmed as SWH, however, two or more of the listed indicator species must be detected with Call Level Codes of 3 (full chorus) within the candidate feature areas. Anuran surveys, however, only detected one

species (Spring Peeper) at a full chorus, and only within the hydro corridor south of the Site. As such, the Site does not include any areas that meet the criteria for confirmed Wetland or Woodland Amphibian Breeding Habitat SWH.

Habitats of Species of Conservation Concern

Habitats of species of conservation concern include marsh breeding bird habitat, open country bird habitat, shrub/early successional bird breeding habitat, terrestrial crayfish, and special concern and rare wildlife species. Habitats of Species of Conservation Concern do not include habitats of Endangered or Threatened species as identified by the ESA. The background review did not identify the presence of marsh bird breeding habitat, open country bird habitat, shrub/early successional bird breeding habitat or terrestrial crayfish.

MNRF (2015) defines candidate SWH for special concern and rare wildlife species as when an element occurrence is identified within a 1 or 10 km grid and suitable candidate habitat is found on-site based on ELC. As such, the Site meets the definition of candidate SWH for special concern and rare wildlife species for nine species of birds, two species of turtles, and three species of arthropods (Table 9). Confirmation of this SWH type, however, requires site habitat areas directly supporting the indicated species. Only two special concern species were observed on or adjacent to the Site: Eastern Wood-pewee and Monarch.

Eastern Wood-pewee was detected during the Breeding Bird Survey from BBS Station 6 within the deciduous forest community (FODM6-5) of UNA #87. A such, the UNA #87 forest is considered to be confirmed as an SWH, though only the easternmost tip of forested area extends onto the site.

A single Monarch was observed within the thicket swamp (SWDM3-6) community located on the southern edge of the Site. However, no Milkweed was observed within the thicket swamp. As such, this incidental observation is indicative of a transient occurrence. The thicket swamp does not provide suitable habitat to support Monarchs and, therefore, does not qualify as SWH.

5.9 Urban Natural Area: Innes Park Woods (UNA #87)

UNA #87 Innes Park Woods, which is located along the north side of the Site (Figure 2), is characterized as a dry, upland deciduous forest on bedrock, measuring approximately 10.9 ha. It is rated as Moderate and is identified as an isolated feature with limited interior habitat (Muncaster Environmental Planning Inc. & Brunton Consulting Services, 2005). Per the City's Urban Natural Features Strategy mapping, UNA #87 includes both Category 1 and 3 areas. The Category 1 portion, designating a Protected Urban Natural Feature, is located just off the Site, directly adjacent to its northern boundary. The eastern and southern UNA fringes extending onto the Site, however, are designated as Category 3 - Development Approved. As such, the portion of UNA # 87 extending onto the Site is not directly protected *as a* UNA, though the rock barrens within the Category 3 portion (and a 30 m buffer beyond them) are nevertheless protected as SWH per Section 5.8 above.

5.10 Other Natural Heritage Features

The Site does not contain significant wetlands, significant coastal wetlands, ANSIs (life/earth science), significant valleylands or greenspace linkages. The eastern half of UNA #87 includes >0.8 ha of forest cover that has been continuously tree for >60 years. As such this area qualifies as a significant woodland, though it

is not on directly on the Site. The Site itself does not contain significant woodlands. No other significant natural heritage features are located within 120 m of the Site.

6.0 DESCRIPTION OF THE PROPOSED PROJECT

The proposed subdivision plan for Richcraft's Trailsedge Phase 5 would permit the development of a residential community with mixed-density housing. The proposed housing within the community will include single-detached homes, low-density multi-block units, medium-density units, various types of townhomes (front-loaded, dual frontage, and back-to-back townhomes), and high-density units. The future design includes two parks distributed across the Site to enhance accessibility to the surrounding neighbourhood. The East Urban Community Phase 3 CDP (Richcraft Group of Companies, 2020a) outlines a target of 30% canopy cover in urban parks, consistent with the City of Ottawa Park Development Manual (City of Ottawa, 2017). The park areas on Site will incorporate tree plantings to increase cover wherever operational requirements do not preclude tree planting. A parkette, linear park, and open space will be located adjacent to the preserved natural heritage feature (rock barren ecosite), while the community park will be on the southeastern extent of the property. Commercial/employment lands will be concentrated on the eastern portion of the Site. Access to the new community will be provided via extensions of Frank Bender Street (north), Fern Casey Street (south), Jargeau Road (west), and Vanguard Drive (east).

Consistent with the East Urban Community Phase 3 CDP (Richcraft Group of Companies, 2020a), wetlands on the Site are not designated natural heritage features and, as such, their removal does not pose a constraint to development. The proposed development will require the removal of wetland areas (i.e., treed and thicket swamps), HDFs, and the existing constructed pond to accommodate future construction. Permit approvals from the relevant regulatory agencies will be required for the future removal of HDFs, wetland areas, and constructed ponds on site. Stormwater will be collected on Site and directed to an offsite SWM pond located to the southwest (Figure 18). That pond was recently (2024) expanded to accommodate Trailsedge Phase 5 as well as other residential developments in the vicinity. As part of the development of low- and medium-density residential uses, shallow rear yard swales with perforated pipes in rear yards will be employed, as outlined in City standards.

UNA #87 will remain unaffected by the proposed development, with adjacent lands designated as a Natural Heritage Feature (NHF). Pre-development infiltration rates will be preserved for the rock barren; the protection of the Innes Park Woods (UNA#87) and its associated buffer will help ensure that infiltration rates remain unchanged.

The rock barren ecosite and snake hibernacula within it, located adjacent to the UNA, will be preserved as a NHF with an associated 30 m buffer and an additional 5 m setback (Richcraft Group of Companies, 2020b). Frank Bender Street is proposed to be extended through the NHF on the eastern side of the UNA. The extension includes the future construction of eco passages under Frank Bender Street, as well as protective reptile fencing alongside the roadway. Timing windows for construction and reptile exclusion fencing during construction must be implemented during the extension of Frank Bender Street. As an additional mitigation, discussed in the East Urban Community Phase 3 CDP, the western portion of the snake hibernacula will directly abut Parkland, a compatible adjacent land use that will provide an additional buffer. The extension

of Frank Bender through the rock barren will be permitted, subject to detailed design approval by the City, in consultation with the MNR and RVCA/SNC.

Tree cover on the Site currently comprises 59%. It is anticipated tree cover will be reduced to accommodate development of the new community. The Site is currently covered by primarily young, regenerative forest communities less than 25 years old. To mitigate the loss of tree canopy on Site, the future development incorporates the retention of trees within the NHF and the associated 35 m setback, as well as increased tree plantings along the Fern Casey right-of-way of 28 m rather than the standard 24 m. Tree retention and planting on site will be maximized, where possible to work towards the City of Ottawa's overall canopy cover goal of 40%.

It is anticipated that construction will begin in the southwest portion of the Site.

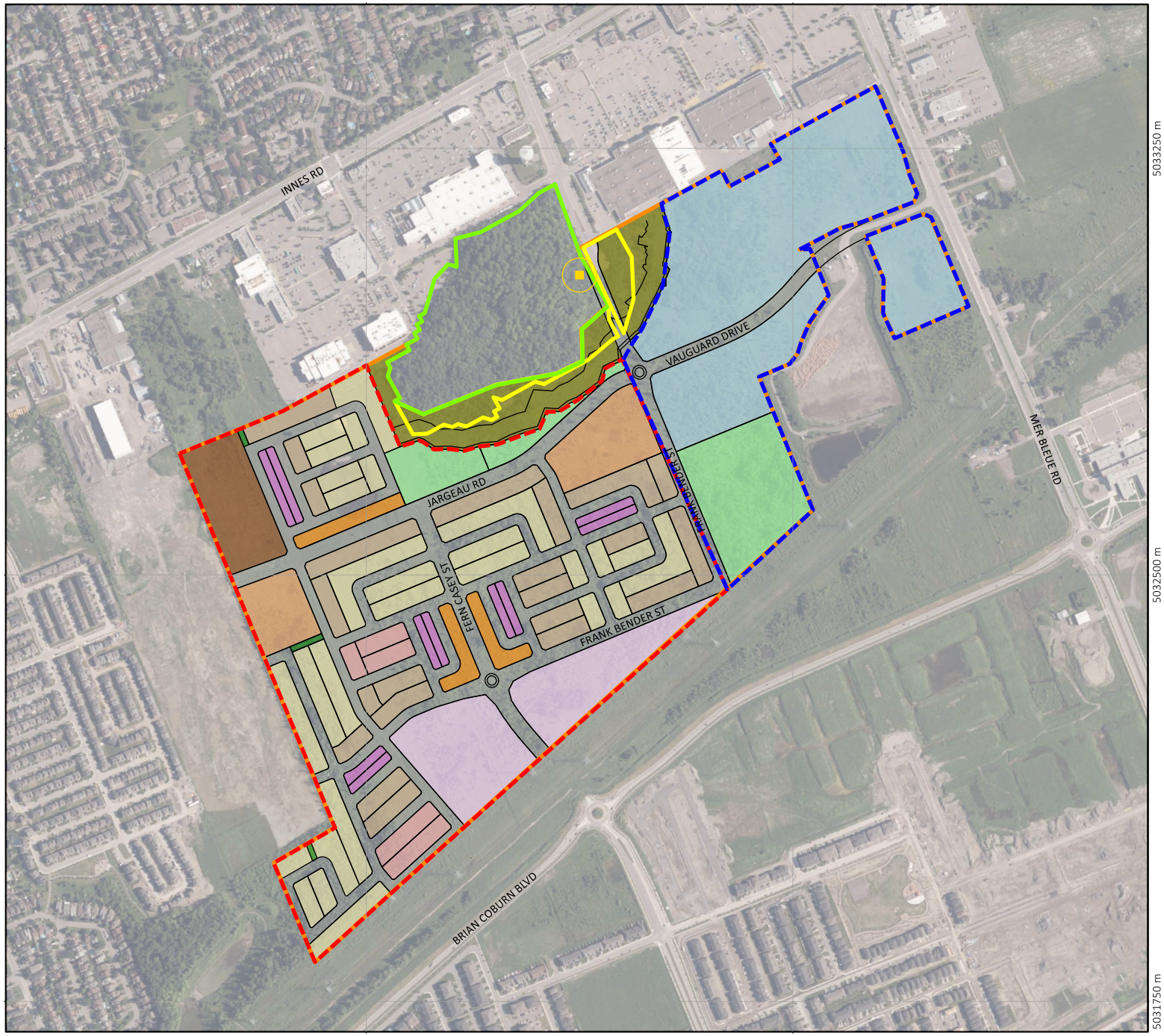

Figure 18 Proposed Development

Legend

- Single Detached
- Bungalow Towns
- Front Loaded Towns
- Dual Frontage Towns
- Back-to-Back Towns
- Low Density Multi-Block
- Medium Density
- High Density
- Parkland
- Open Space
- Natural Heritage Feature
- Employment Lands
- Black Ash
- Black Ash 30 m Buffer
- Site Boundary

Phasing

- Fall Site Prep (Sept/Oct 2025)
- Future Site (2027+)

UNA 87

- Category 1- Protected
- Category 3- Development Approved

N

0 200 m

Project: RICH 1684
Map File: RICH 1684 Maps 202501 nm.map
Universal Transverse Mercator - Zone 18 (N)
Printed on: 6/13/2025

KILGOUR & Associates

7.0 IMPACT ASSESSMENT AND MITIGATION

The potential area of impact associated with the proposed development includes the removal of the forested and naturalized lands and surface water features on Site, with the exception of the northwestern finger of the property, which will remain undeveloped. The assessment of impacts is based on the proposed development compared to existing Site conditions as observed in 2024.

7.1 Surface Water

Tributaries, and the pond on Site are primarily fed by the stormwater runoff conveyed from the SmartCentre shopping centre north of the Site. The proposed development requires the removal of HDF 1, HDF 2, and the pond on Site per the directive of the East Ottawa Community CDP , which states that HDFs on Site are to be managed in accordance with the mitigation measures outlined in the Niblett (2018) Headwater Drainage Feature Summary report. According to that report, HDF 1, HDF 2, and the pond on Site are assigned a management direction of 'No Management Required'. The review provided within this EIS supports that management recommendation.

Regardless, the future removal of these features will still require permission under Section 28.1 ("Section 28 Permit") of the *Conservation Authorities Act* (Government of Ontario, 1990a) from both SNC and RVCA, as the site falls within the jurisdiction of both regulatory agencies. In addition, the removal of these features must be supported by a *Request for Review* (RFR) to Fisheries and Oceans Canada (DFO).

Following their removal, surface water on Site will be graded appropriately to capture and convey water to the stormwater pond to the southwest of the Site, as per the Master Servicing Study (Richcraft Homes, 2019). That SWM pond was recently expanded (2024) to accommodate conveyance of water from the Site as well as other residential developments in the vicinity. Given the "No Management Required" finding, other than maintenance of hydration to downstream receivers via community SWM systems, no specific offsetting measures are proposed for the removal of these features. The removal process itself, however, will be done in accordance with all mitigation directives provided under CA permits and/or letters of advice from DFO.

The proposed community layout includes the removal of wetland communities occurring along the southern boundary of the site. With the proposed development, there is no opportunity to maintain hydration to these wetland ecosites. The East Urban Community CDP identifies the Site for residential development and states that wetlands on the Site do not provide critical aquatic habitat, species at risk, or sensitive spawning areas (Richcraft Group of Companies, 2020a), and field surveys undertaken in 2024 did not identify Significant Wildlife Habitat associated with amphibians at any of the wetlands on-site, and as such, their removal is not a constraint to development. However, permit approvals and consultation will be required with the RVCA and SNC prior to the removal of wetlands on Site.

Future grading of the site should be such that it does not alter the overall drainage and hydrology of the surrounding area, especially UNA #87. Stormwater management system should ensure that hydrology neither increases nor decreases within UNA #87.

To protect waters within the broader catchment area during future development of the Site, an erosion and sediment control (ESC) plan will be required and must be developed to the satisfaction of RVCA and SNC. The ESC plan should include:

- A multi-faceted approach to provide ESC;
- Silt fencing paired with sturdy construction fence along the project perimeter to protect adjacent habitats and UNA #87. This fencing can also act as a wildlife exclusion measure for smaller and less mobile animals that may occupy or traverse through the Site, such as turtles, snakes, and amphibians;
- Regularly inspecting and maintaining the ESC measures during all phases of the project;
- Retention of existing vegetation and stabilization of exposed soils with native vegetation where possible;
- Keeping the ESC measures in place until all disturbed ground has been permanently stabilized;
- Using biodegradable ESC materials where possible and removing all exposed non-biodegradable ESC materials once the Site is stabilized;
- Limiting the duration of soil exposure and phasing project works;
- Limiting the size of disturbed areas by minimizing nonessential clearing and grading;
- Minimizing the total slope length and the gradient of disturbed areas;
- Refueling of machinery should occur >30 m from surface water features and all machinery will remain on the project-side of silt and construction fence;
- Maintaining overland sheet flow and avoiding concentrated flows;
- Storing/stockpiling materials >30 m away from the wetland and other surface water features;
- Fencing or tarping all stockpiled material (<150 millimeter gravel) during the turtle nesting period (late May to early July) (MECP, 2021a) to prevent turtles from nesting in stockpiles. If the stockpile is within a properly fenced area (i.e., the project footprint) additional fencing is not necessary for turtle management, but is recommended for ESC if piles will be left unused for extended periods;
- Regularly inspecting the Site for signs of sedimentation during all phases of work and taking corrective action if required;
- Developing a response plan to be implemented immediately in the event of a spill of a deleterious substance;
- Keeping an emergency spill kit on the Site;
- Stopping work and containing deleterious substances to prevent dispersal;
- Reporting any spills of sewage, oil, fuel, or other deleterious material whether near or directly into a surface water feature;

7.2 Vegetation

Extensive vegetation clearing on the Site will be required to accommodate the proposed development of Trailsedge Phase 5. Future site development will almost certainly result in the replacement of existing forested areas (currently >95% canopy) with other land uses having lower canopy coverage (e.g., streetscapes). Losses in canopy, however, should be equivalently offset with targeted tree planting where development will occur in currently open areas (i.e., meadow communities), where feasible. Residential areas should target a minimum of 20% canopy cover at maturity and streetscapes should target at least 30% canopy cover at maturity. Park spaces that are not otherwise specifically programmed as sports fields should target 30% canopy cover at maturity to generate (semi-) wooded features that would be distributed across the future community.

The assessment of existing conditions (Section 5.4) considered tree functions across the entire Site. For comparison, the i-Tree canopy assessment of the Site post-development employs the same 100 sample points used for the initial assessment; however, future tree presence for each point considers the future landcover class at that location weighted by the anticipated canopy cover for the class at maturity (Table 10). The initial estimate of likely overall mature canopy coverage for the future Site based on the i-Tree canopy assessment is 22% (Table 11).

Table 10 Estimated canopy cover targets for future landcover classifications

Landcover Classification	Percent Canopy (%)
Condo Block (High-Density)	15
Medium Density	15
Low-Density multi-block	20
Townhomes	20
Single Detached	25
Employment Lands	15
Arterial Road	0
Park Block / Open Space	30
Natural Heritage Feature	100

Table 11 Post-development assessment of canopy benefits, based on iTree Canopy Assessment

Land Cover Distribution			
Land Cover Type	Area (ha) ± SE		Area (%) ± SE
Tree	17.44 ± 3.28		22.00 ± 4.14
Non-Tree	61.83 ± 3.28		78.00 ± 4.14
Tree Benefit Estimates: Carbon			
	Carbon (t) ± SE	CO_2 Equiv. (t) ± SE	Value (CAD) ± SE
Sequestered annually in trees	53.36 ± 10.05	195.66 ± 36.84	$35,165 ± 6,621
Total stored in trees	1,340.14 ± 252.34	4,913.83 ± 925.24	$883,135 ± 166,289
Tree Benefit Estimates: Air Pollution			
Pollutant Removed Annually	Amount (kg) ± SE		Value (CAD) ± SE
CO – Carbon Monoxide	18.65 ± 3.51		$40 ± 8
NO_2 – Nitrogen Dioxide	73.71 ± 13.88		$18 ± 3
O_3 - Ozone	888.40 ± 167.28		$789 ± 149
SO_2 – Sulfur Dioxide	159.03 ± 29.94		$3 ± 0
PM2.5 – Particulate Matter <2.5 µm	46.38 ± 8.73		$1,661 ± 313
PM 10 – Particulate matter 2.5 – 10 µm	356.23 ± 67.08		$3,667 ± 691
Tree Benefit Estimates: Hydrological			
Benefit	Amount (kL) ± SE		Value (CAD) ± SE
Avoided Runoff	577.36 ± 108.71		$1,883 ± 355
Evaporation	10,172.46 ± 1,915.41		N/A
Interception	10,240.34 ± 1,928.19		N/A
Transpiration	12,048.31 ± 2,268.62		N/A
Potential Evaporation	62,813.73 ± 11,827.43		N/A
Potential Evapotranspiration	62,813.73 ± 11,827.43		N/A

Removal of any trees on-site will require a Permit to cut trees and must be supported by a Tree Conservation Report (Appendix E). A Planting Plan or Forest Management Plan may be required to show that the proposed development will work towards the City of Ottawa's overall canopy cover goal of 40% (i.e., for the City as a whole, not specifically for individual sites), per Section 4.8.2.2 of the City of Ottawa's Official Plan.

The following general protection measures are recommended during Site preparation and construction to limit impacts to vegetation:

- Limit tree removal on-site to the highest extent possible and only remove trees necessary to accommodate construction and development; and
- Ensure equipment is clean prior to vegetation removal to avoid introducing invasive species to the Site, and clean equipment prior to leaving Site to avoid spreading the aforementioned invasive species elsewhere.

The following mitigation measures are recommended to minimize impacts on trees and forested areas being retained (e.g., adjacent to UNA #87) on the Site:

- Erect a fence beyond the critical root zone (CRZ; i.e., 10 x the trunk diameter) of trees being retained. The fence is recommended to be highly visible (e.g., orange construction fence) and paired with erosion control fencing. Pruning of branches is recommended in areas of potential conflict with construction equipment;
- Signage attached to the CRZ fence every 6.0 m indicating:

  - the fencing is to protect the tree's CRZ; and
  - that the fence must not be moved.

- Do not place any material or equipment within the CRZ of the tree;
- Do not attach any signs, notices, or posters to any tree;
- Do not raise or lower the existing grade within the CRZ without approval;
- Do not tunnel or bore when digging within the CRZ of a tree;
- Do not damage the root system, trunk, or branches of any tree; and
- Ensure that exhaust fumes from all equipment are NOT directed toward any tree's canopy.

Tree planting plans will be created as part of the landscape plan for the proposed development. The tree planting plan for the natural feature lands and residential areas of the Site are to include directives that will lead to 40% canopy cover at maturity. Trees and other plants identified in the landscape plans are recommended to be non-invasive and locally appropriate native species. The following tree and shrub species are recommended for planting and should be used to direct the development of the landscape plan for the Site: Alternate-leaf Dogwood (*Cornus alternifolia*), American Beech (*Fagus grandifolia*), Balsam Fir (*Abies balsamea*), Balsam Poplar (*Populus balsamifera*), Basswood (*Tilia americana*), Bitternut Hickory (*Carya cordiformis*), Black Cherry (*Prunus serotina*), Black Walnut (*Juglans nigra*), Bur Oak (*Quercus macrocarpa*), Chokecherry (*Prunus virginiana*), Eastern Cottonwood (*Populus deltoides*), Eastern Hemlock (*Tsuga canadensis*), Hawthorns (*Crataegus* spp.), Honey Locust (*Gleditsia triacanthos*), Horse-chestnut (*Aesculus hippocastanum*), Ironwood (*Ostrya virginiana*), Largetooth Aspen (*Populus grandidentata*), Maple-leaf Viburnum (*Viburnum acerifolium*), Nannyberry (*Viburnum lentago*), Northern Bush-honeysuckle (*Diervilla lonicera*), Peachleaf Willow (*Salix amygdaloides*), Pin Cherry (*Prunus pensylvanica*), Red Maple (*Acer rubrum*), Red Oak (*Quercus rubra*), Red Pine (*Pinus resinosa*), Serviceberries (*Amelanchier* spp.), Silver Maple (*Acer saccharinum*), Sugar Maple (*Acer saccharum*), Tamarack (*Larix laricina*), Trembling Aspen (*Populus tremuloides*), White Birch (*Betula papyrifera*), White Cedar (*Thuja occidentalis*), Yellow Birch (*Betula alleghaniensis*), White Oak (*Quercus alba*), White Pine (*Pinus strobus*), and White Spruce (*Picea glauca*).

7.3 Species at Risk

Three SAR ranked as Threatened or Endangered under the ESA were observed on the Site and assessed as having a high potential to interact with future development on the Site. The observed SAR are Eastern Red Bat, Hoary Bat, and Silver-haired Bat. Eastern Red Bat had relatively few records, while the other two bats were more widespread on the Site.

The general wildlife mitigation measures provided in Section 7.5, while not species-specific, are anticipated to protect the SAR that may potentially occur on the Site. Additional species-specific mitigation measures, however, are provided below.

7.3.1 SAR Bats

Potential impacts to individual at-risk bats directly can be mitigated by clearing trees outside of the roosting season (April 1 to September 30, inclusive; MECP, 2024a). Following this tree-clearing window would also avoid potential interactions with birds and bird nests protected under the *Migratory Birds Convention Act* (Government of Canada, 1994). As such, the Eastern Red Bat, Hoary Bat, and Silver-haired Bat are generally considered unlikely to be directly impacted by future site development.

Additional general mitigation measures are included in Section 7.5 below.

7.3.2 Black Ash

Black Ash over 8cm at 1.37 m and their habitat are regulated under the ESA (Government of Ontario, 2007). The Black Ash observed within UNA #87 is protected; however, the future extension of Frank Bender St. will interact with its protected 35 m buffer and setback and as such will require consultation with the MECP to ensure that no harm to the tree occurs during this work. As such, a Black Ash Health Assessment (BAA) must be completed, alongside an *Information Gathering Form* (IGF). Completion of the Net Benefit Permit would permit the interaction of and work within the protected buffer for the species. Please note, however, that recent changes to the definition of "habitat" under Bill 5 are still being reviewed for implementation by the MECP. A protected habitat buffer smaller than the current standard of 30 m may ultimately be prescribed through the MECP permitting process.

7.4 Significant Natural Heritage Features

The Site does not contain significant wetlands, significant coastal wetlands, or ANSIs (life/earth science). The Site itself does not contain significant woodlands, significant valleylands or greenspace linkages. UNA #87 is located immediately adjacent to the north Site boundary. Lands abutting the UNA will be retained as Natural Feature lands and park space. The critical root zone of edge trees will be fenced appropriately to prevent impacts during construction.

7.4.1 Snake Hibernacula

The East Urban Community Phase 3 CDP (Richcraft Group of Companies, 2020a) designated the snake hibernacula as SWH. As such, the area will be preserved with the required 30 m natural buffer, in accordance with SWH policies. This feature will also be further protected from direct development by the inclusion of adjacent parkland, which provides an additional compatible buffer.

To minimize impacts, mitigation measures will include the future construction of eco-passages beneath the proposed extension of Frank Bender Street, along with the installation of reptile exclusion fencing to guide snakes and small wildlife toward the passages to prevent road crossings.

Construction activities must respect appropriate timing windows, particularly during the overwintering period from October 1st to May 15th (inclusive), during which the hibernacula cannot be directly disturbed. In addition, prior to construction, temporary snake exclusion fencing must be installed around the hibernacula to prevent individuals from migrating to the work area. Fencing should be installed prior to emerging from hibernation.

Following construction, permanent exclusion fencing should be installed adjacent to the hibernacula in accordance with the MECP Guidelines for Reptile and Amphibian exclusion fencing (2021c). This fencing must be geotextile material, at least 100 cm in height and buried 10-20 cm to ensure long-term protection.

7.4.2 Species of Special Concern

Portions of the Site meet the criteria for **confirmed** SWH for Eastern Wood-pewee (listed as Special Concern). Potential impacts to these species can generally be mitigated by clearing trees within the limited portion of the FODM6-5 forest occurring beyond the edge of the protected UNA zone outside the bird nesting period (April 1 to August 31). The majority of the SWH (i.e. the 8.5 ha of UNA occurring off the Site) will be fully retained, with the treed buffer of the adjacent parkland on the Site.

7.5 General Wildlife Mitigation

The following mitigation measures shall be implemented during future construction to generally protect wildlife and potential SWH areas:

- Areas shall not be altered or cleared during sensitive times of year for wildlife unless mitigation measures are implemented and/or the habitat has been inspected by a qualified Biologist;
    - Clearing of trees and/or vegetation should not take place April 1 to September 30 inclusive unless a qualified Biologist has determined that no birds are nesting or suitable bat roosting trees are present. The bird nest sweep would be valid for five days:
        - The MBCA protects the nests and young of migratory breeding birds in Canada. The timing of nesting for birds in the area spans April 1 to August 31 (Government of Canada, 1994);
        - Three SAR bat species were detected during acoustic bat surveys. The Site contains suitable foraging and roosting habitat. To mitigate any possibility of impacts to at-risk bats directly, tree clearing is recommended to take place outside of the roosting season (April 1 to September 30 inclusive;(MNRF, 2017)). The breeding and roosting period for bats is recognized as April 1 to September 30 (MNRF, 2015b);
- Temporary exclusion fence should be installed prior to the turtle active season (April through October) and prior to snake emergence from hibernation (May 15th; MECP, 2021a) and should follow recommendations in Reptile and Amphibian Exclusion Fencing: Best Practices (MECP, 2021d). Temporary exclusion fence (e.g., silt fence) may be paired with ESC measures and should be installed along the perimeter of the project area. Temporary exclusion measures should be inspected and repaired weekly by a qualified biologist during the turtle active season;
- Develop an ESC plan. Install sediment control fence and inspect/maintain it periodically and after each rain event to ensure its integrity and continued function;

- Ensure that a qualified biologist develops a wildlife management plan for the construction process and delivers environmental compliance and biodiversity training to all site workers to implement the plan. The plan should include (but not be limited to) requirements to:

    - Utilize silt fence paired with sturdy construction fence along the project perimeter and around soil stockpiles to serve as a wildlife exclusion measure to prevent smaller animals from accessing/utilizing temporary habitats on the Site (e.g., prevent turtles from nesting in stockpiles on the Site);

    - Check the entire work site for wildlife prior to beginning work each day;

    - Do not harm, feed, or unnecessarily harass wildlife;

    - Manage waste to prevent attracting wildlife to the work site. Effective mitigation measures include litter prevention and keeping all trash secured in wildlife-proof containers and promptly removing it from the work site, especially during warm weather;

    - Enforce a speed limit of 20 km/h during the active season (April 1 to September 30) to reduce wildlife mortality; and

    - Manage stockpiles and equipment at the work 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.

Once construction is complete and the residences are occupied, KAL recommends that new residents are encouraged through signage and public education to keep pets on leash during the bird breeding season (April 1 to August 31) and reptile active season (April 1 to October 31). It is recommended that landowners be provided with educational resources about keeping cats on a leash or indoors, as cats are one of the largest threats to bird populations (Blancher, 2013).

8.0 CONCLUSION

This report provides a set of mitigation measures for employment in the design and construction of the proposed development. The assessment of the potential for impacts to the natural heritage system is based on the implementation of these mitigation measures. It is our professional opinion that the potential for significant negative impacts to existing natural features or ecological functions under the proposed development would be suitably addressed if the recommended mitigation measures provided in this report are implemented.

9.0 CLOSURE

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

Respectfully submitted,

KILGOUR & ASSOCIATES LTD.

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Appendix A Qualifications of Report Authors

Kesia Miyashita, MSc (Senior Biologist)

Ms. Miyashita has over ten years of experience in environmental consulting and more than thirteen seasons of field experience in ecosystems in Ontario, 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 invasive 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 authored Environmental Impact Studies and Tree Conservation Reports and undertaken field surveys for flora and fauna, 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.

Nick Moore, BSc (Project Manager, Biologist)

Mr. Moore is a Field Ecologist with a background in Aquatic Biology. He graduated from Sir Sandford Fleming in 2018 with two Technical Diplomas for Environmental Technician and Environmental Technologist, as well as completing his Bachelor of Science with Honors in Biology and Environmental and Resource Studies at Trent University. He has worked with Kilgour & Associates Ltd. for four years. With KAL, he has been involved land-development projects where he has written Environmental Impact Studies and has used his academic training to characterize the flora and fauna of natural environments. Nick is a certified wetland evaluator under Ontario's Wetland Evaluation System (OWES) process.

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 (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).

Appendix B Notes from City of Ottawa Pre-Consultation Meeting

File Number: D07-16-21-0015
D02-02-21-0046

16 December 2022

Mr. Scott Alain, RPP, MCIP
Fotenn
396 Cooper Street, Suite 300
Ottawa, ON
K2P 2H7

[sent via email to alain@fotenn.com]

Dear Mr. Alain:

Subject: Applications for Draft Plan of Subdivision Approval & Zoning By-law Amendment – 2nd Submission
3672, 3730 & 3828 Innes Road

City staff have completed the review of the 2nd submission of the above-referenced applications for draft plan of subdivision approval and a zoning by-law amendment, and prior to preparing the Delegated Authority Report and conditions of draft plan of subdivision approval, it is once again requested that you address the following comments.

City Staff Comments

1. *Draft Plan of Subdivision*. Please address the following minor comments and resubmit a revised draft plan accordingly.

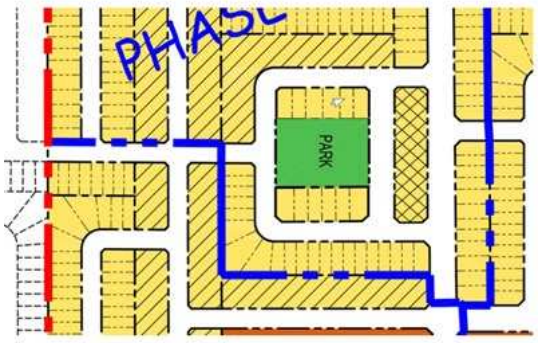
   a) In the Proposed Use column of the Land Use Table, change the reference to "Single Family" to "Single Detached". Also, revise "Other" to read "Other (Servicing)".
   b) Walkway/Servicing Blocks 344 and 355 are required to be 9.0m given that they, too, also are intended to function as servicing blocks. It is noted that Walkway/Servicing Blocks 346 and 361 are already 9.0m wide.
   c) A change in the manager's position has occurred since the last submission review was undertaken. Please revise the manager's name in the approval block to read "Geraldine Wildman, RPP, MCIP, A/Manager,…"

2. *Parkland Dedication*. Please refer to the attached memorandum dated 21 November 2022 from Phil Castro as it pertains to parkland dedication and other park related matters in response to the revised submission. With respect to the previous comment about extending the community park block to also front along Jargeau Road, your response comment is noted. However, if it is indeed desired that Community Park Block 386 front

along two streets, as is now the case, then the draft plan should reflect it. City staff acknowledge that the parkland dedication will need to be adjusted as the application progresses. This can be discussed further with the parks planning staff.

It should also be noted that, now with Bill 23 enacted, Parks Planning staff are reviewing whether the provisions of Bill 23 may impact the current park plan within the CDP. More on this will have to follow.

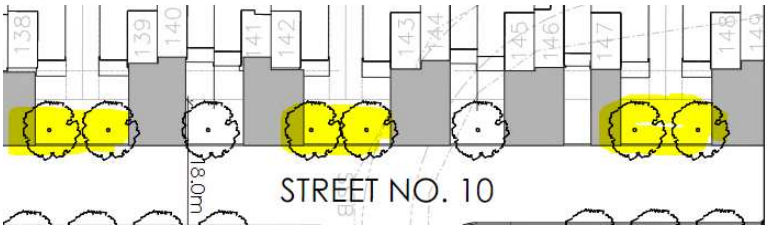
3. *Sidewalk to Park Block 374*. It is noted on the Preliminary Streetscape Plan (ST1) that the sidewalks in Street 4 to Street 7 to Park Block 374 do not align, as they should to provide direct access to the park. Therefore, it is suggested that Block 373 and the block containing Lots 160 to 171 and Park Block 374 all be rotated clockwise by 90 degrees so as to create direct sidewalk access to the park from Street 4 and to make for a better street view to the park from Street 4. See the image below. Alternatively, the plan could remain as is, but a short sidewalk segment should extend from Street 4 along the west side of Street 6 and terminate at a point in line with the sidewalk in Street 7, which then leads directly to the park. The first suggestion is the preferred approach from the perspective of the streetscape. Please consider it.



4. *Road Rights-of-Way and Street Trees*. The following comments are provided in review of the revised proposed road allowance cross-sections contained in the revised preliminary streetscape plans, dated September 2022, prepared by NAK.

   a) While the 1.0m setback of the street tree from the sidewalk is not ideal (Dwg. D-01), City Forestry staff have previously accepted it in other subdivisions. The standard setback is 1.5m and is still encouraged.
   b) The species, caliper, location, quantities of trees and planting details will be required to be shown and provided on the streetscape/landscape plan submitted for subdivision final review and approval.
   c) For the trees placed within the street boulevards adjacent to the vacant medium and high-density blocks (Blocks 356, 366, 379), it is often the case that such trees when planted in fulfilment of the subdivision agreement prior to development of the vacant blocks are removed once construction on the blocks commences following approval of development. Little or no consideration apparently is given to the trees within the public street boulevard. Therefore, the streetscape plan should simply note that these trees will not be installed until the time of development of the adjacent blocks, or other similar wording. However, these trees will count toward the minimum required subdivision trees.

d) The proximity of the trees to the edge of the driveways remains concerning. At least 1.5m from the tree to the edge of the driveway and the water shut off valve is required. If such setbacks are not achieved, then it is often that only one tree is planted in between the driveways. Either provide greater separation of driveways to realistically accommodate two street trees, or, if such separation is not achievable, then the preference would be to plant one medium/large tree in lieu of two small trees if the soils permit.



e) The 24.0m cross sections do not show the locations of the water shut off valves. This information should be shown on the next resubmission of preliminary streetscape plans.
f) The street trees bordering the park blocks should be planted on the park side of the sidewalk and not between the sidewalk and the curb. The trees will have a much higher chance of survival. Please revise the plans accordingly.

5. *Parking Plan*. In accordance with the EUC Phase 3 Area Secondary Plan, a street parking plan is to be submitted at the time of draft plan of subdivision approval to demonstrate how on-street parking has been maximized, including how lots of varying widths and dwellings of varying types have been organized to maximize on-street parking opportunities. Such plan may result in changes to the current proposed draft plan lot and block layout. Therefore, once again, please prepare and submit such a plan for review. The CDP provides further direction in this regard.

6. *Storm Pond 1 Capacity*. As you are aware, Glenview Homes is currently front ending the expansion works of Pond 1 as an obligation of Phase 1 of its subdivision in the EUC Phase 3 Area lands. Until the pond expansion works are completed and accepted by the City, draft plan of subdivision approval will not be granted for this subdivision application nor those current applications in process by Caivan Homes and CRDS Inc. (Lépine) that are tributary to the expanded EUC Pond 1.

7. *Front-ending of Mud Creek Improvements*. The matter of the Mud Creek improvements has arisen. Richcraft Homes will be required to front-end the growth component of the cost of the Mud Creek improvements downstream of the outlet of the EUC Pond 1 that is currently being expanded by Glenview Homes.

   The intent was for the front-ending to be dealt with as part of the Area Specific DC Bylaw update, which unfortunately has been delayed for several reasons. A report to Planning & Housing Committee is scheduled for the first quarter of 2023. The City agreed to take the lead on the design and construction of the project because much of the improvement works will be required on lands owned by the NCC. However, there remains a need to secure the front-ending of the funding of the growth component of the project. It has been confirmed that, unfortunately, there is no opportunity for the City to help finance the developers' contribution of the project works.

The only practical opportunity to secure the funding of the growth component of the Mud Creek improvements, therefore, is to impose on Richcraft a condition(s) of draft plan approval requiring the front-ending of the growth component and the entering into of a front-ending agreement prior to registration. Through the MSS, the City agreed to remove the need for LIDs to mitigate the impacts of increased runoff volume on erosion conditions in Mud Creek. This action likely resulted in substantial savings for developers active in the area. As a result, implementation of the improvements to Mud Creek and erosion protection measures for Mud Creek is fundamental to establishing a stable outlet for stormwater discharges from this subdivision, and the NCC expects to proceed as development advances in the EUC Phase 3 Area.

8. *Proposed Zoning*. With respect to the proposed zoning and the responses provided in the table of responses (Fotenn), the following comments are provided.

Residential Third Density, Subzone Z (R3Z[XXXX]:

a) While the proposed 3.0m corner side yard setbacks may meet the required 7.5m offset from foundations to trees, it appears the same cannot be stated for the proposed front yard setback of 4.5m. Confirmation was requested. In instances where there is a sidewalk within an 18.0 m local street, a 4.5m front yard setback does not allow for a 7.5m tree to foundation setback. Therefore, either the road cross section design needs to be revisited, or the minimum front yard setback is to be increased where such instances exist.
b) Policy 4 of Sec. 6.3.1 of the CDP encourages small scale service and retail commercial uses on corner lots on collector streets. Therefore, to permit these uses in strategic locations, the use of the "-c" suffix may be considered through this zoning by-law amendment application. The CDP further states that no additional on-site parking would be required for such uses.

Residential Fifth Density (R5Z) – Block 356:

c) A Proposed Zoning table similar to the one provided for the R3Z zone in the Planning Rationale outlining the requested zone provisions and performance standards for the R5Z zone was not submitted for City staff's further review. Please submit one.
d) A minimum front yard setback of 4.5m should apply along the block's Jargeau Road frontage.
e) The response to City staff's previous comment is noted. However, it is still City staff's opinion that the proposed building height of 35 metres is not consistent with the EUC Phase 3 Area CDP for the Medium Density Residential policies and, again, is not supported. The proposed building height exceeds the maximum allowable height of 9 storeys (28.5m). I accept that Block 356 can remain as one block and will be subject to site plan control and the relevant transition policies of good site design. However, it is reiterated that an Official Plan Amendment would be required to consider an increase in building height beyond 9 storeys for Block 356.
f) It remains City staff's opinion that it is indeed good planning to entrench appropriate graduated building transition setbacks/stepbacks in the proposed zoning where a mid-rise apartment use abuts low rise residential uses. This should be expressed in the table requested in c) above. Perhaps a Holding provision should be considered for both high rise parcels to address transition, given the lack of a concept plan in support of the proposed re-zoning.

Residential Fifth Density (R5Z) – Blocks 366 & 379:

g) A Proposed Zoning table similar to the one provided for the R3Z zone in the Planning Rationale outlining the requested zone provisions and performance standards for the R5Z zone is to be submitted for City staff's further review.
h) The response to City staff's previous comment is noted. However, it remains City staff's opinion that the proposed building height of 60m (+/-20 storeys) is not consistent with the intent and spirit of the Highest Density Residential policies in the CDP and, again, is not supported. It is understood that additional height may be considered by Policy 2 of Sec. 5.2.1.3, but the proposed increase in building height to allow for high-rise residential land uses greater than 12 storeys in height to 20 storeys requires further and convincing justification. In this regard, please provide a rationale and concept plan in support of the requested increase in building height.
i) Similar to the above comment regarding the medium density residential block, it remains City staff's opinion that it is good planning to include appropriate graduated building transition setbacks/stepbacks in the proposed zoning where a high-rise apartment use abuts low rise residential uses. This should be expressed in the table requested in g) above.

Parks and Open Space Zone (O1):

j) No further comment.

Light Industrial, Subzone 2 (IL2 H(36)):

k) It is acknowledged and accepted that, as permitted by Policy 2 of Sec. 5.2.4 of the CDP, a maximum building height of 12 storeys, or 36 metres, is now proposed. Also, to reiterate, the day care use should be prohibited from the light industrial zone by way of an exception, as this and any other similar listed permitted uses would be considered a sensitive use in proximity of the snow disposal facility.

Environmental Protection Zone (EP):

l) No further comment.

Review of Submitted Reports

9. *Functional Servicing Report.* Please refer to Comments 6 and 7 above. Accordingly, please contact Rubina Rasool for comments respecting the revised Functional Servicing Report, dated August 2022.

10. *Geotechnical Investigation*. A copy of the revised geotechnical investigation, dated 21 March 2022, referenced in the submission response comments was not submitted. Please submit it for review. City staff's comments respecting the revised geotechnical investigation will then follow.

11. *Stage 2 Archaeological Assessment*. Please provide confirmation that the comments sent by the Ontario Ministry of Heritage, Sport, Tourism, and Culture Industries, dated 21 September 2022, concerning the Stage 2 archaeological assessment have been adequately addressed.

12. *Phase 2 Environmental Site Assessment (ESA) – Remedial Action Plan*. The Remedial Action Plan report subsequently submitted on 12 October 2022 in follow up to the Phase 2 ESA, dated 27 October 2020, is still under review by the City's Environmental Remediation Unit staff. Comments will be forthcoming soon.

13. *Environmental Impact Statement (EIS) & Integrated Environmental Review Statement (IER)*. The responses to City staff's previous comments provided in the submitted table of responses (Fotenn) were reviewed, yet a revised EIS nor an updated IER were provided. Therefore, the following comments are provided and are to be appropriately addressed.

    a) With respect to the response provided in Item 23 of the response table, the EIS and IER should be updated to include the most relevant information in the respective reports' mapping regarding the bobolink comment. It would be helpful to include the map (or data from the map in the CDP) within the EIS document, instead of simply referring to the CDP's figures. Please outline the areas disturbed by plowing in Community 1 and the location of the species observations. The EIS should be a stand-alone document and not assumed that readers will have access to previous reports. Please elaborate and revise the reports accordingly.
    b) Regarding SAR survey protocols, it was anticipated that new and more recent surveys would be conducted. The previous field work was conducted six years ago. Either demonstrate that the MECP is satisfied with your field surveys or provide more recent survey results (using MECP approved methodologies). Please update and revise the reports accordingly.
    c) The City's previous Official Plan (OPA 180, Section 4.7.4) policies prescribe that the provincial ministry administering the Endangered Species Act will review EIS reports addressing significant habitat for threatened or endangered species. Given that SAR were observed during the CDP field work, it would be appropriate to ensure the MECP reviews and accepts the survey protocols, findings and recommendations to confirm the application is in compliance with the Endangered Species Act. If GHD has contacted the MECP, as is suggested they will in the response table, then please provide relevant documents or correspondence that the application satisfies the relevant regulations.
    d) GHD's response states that part of the potential significant habitat for threatened or endangered species has been disrupted for agricultural practices. Given that agricultural activities are not permitted uses within the Light Industrial (IL2) zone, it is recommended that all agricultural activities that are compromising SAR habitat and potential specimens be stopped.
    e) It is expected that the EIS and IER are to be updated to reflect the above comments, as well as the findings and recommendations from the approved TCR. A final IER will be required for registration to ensure all environmental constraints are identified and any resolutions to conflicting recommendations from the various disciplines are clearly documented.

14. *Tree Conservation Report (TCR)*. Please address the following comments in review of the submitted GHD report, dated 28 July 2022. For clarification or additional information, contacting Mark Richardson, Planning Forester (mark.richardson@ottawa.ca).

    (a) The report suggests tree compensation is not included in the overall plan, however, a concept plan for native tree and shrub plantings along the Innes Park Woods buffer zone has not been provided. When is that concept plan anticipated to be submitted and what are the goals, objectives or conservation targets for that plan? Please elaborate and revise.

(b) With over 8 hectares of proposed tree loss in the subdivision, the report offers little compensation for the loss to the City's urban canopy. Please elaborate and revise the report accordingly.
(c) As part of the mitigation measures for trees to be retained, the installation of tree protective fencing at the critical root zones is recommended to clearly delineate the area before construction activities commence. Furthermore, signs should be placed on the fencing every 5 metres identifying the fencing is a) to protect trees and their critical root zones; b) not to be moved; and c) to be maintained in place until construction is completed.
(d) A tree permit is required prior to ***any*** tree removal on site.
(e) Are site works necessary at this stage for 2-FOD7-1 identified on Figure 1.1? It is listed as future employment lands. More rationalization for including this vegetation community in the forthcoming tree permit is required.
(f) Provide confirmation from the City's Parks Planning & Facilities Planning staff that all trees within the park blocks should be removed at this point in the application process.

15. *Preliminary Streetscape Plan & Cross-sections*. Please review the above City staff comments for requested further revisions to the revised preliminary streetscape plans prepared by NAK.

16. *Transportation Impact Assessment (TIA)*. The responses provided to City staff's comments respecting the initial TIA prepared by Castleglenn Consultants are accepted.

17. *Environmental Noise Feasibility Assessment*. As noted in my separate follow-up email correspondence of 2 February 2022, the initially submitted noise assessment prepared by Gradient Wind is acceptable as submitted for the purpose of draft plan of subdivision approval. Of course, there will be a need for a detailed noise assessment post-approval and prior to registration of the first and perhaps subsequent phases.

Technical Agency Comments

18. *Conseil des écoles catholique du centre-est (CECCE)*. As noted in my separate follow-up email correspondence of 5 February 2022, CECCE expressed no comments, objections or conditions of draft plan approval.

It is requested that you and your consultants review and address the comments and design issues accordingly and revise the reports and plans as necessary. Once the revisions have been completed, please contact me to discuss the quantity of revised reports and plans that are to be resubmitted to City staff for further review.

Should you have any questions or concerns with any of the comments, please contact me by telephone, at 613-580-2424, extension 27588.

Sincerely,

Michael J. Boughton, MCIP, RPP
Senior Planner
Development Review – East
Planning, Real Estate and Economic Development Department

Attach. 1

cc: Geraldine Wildman, Manager, Development Review – East
Rubina Rasool, Project Manager, Infrastructure Approvals
Mike Giampa, Senior Engineer, Infrastructure Applications (Transportation)
Sami Rehman, Environmental Planner
Mark Richardson, Forester – Planning
Mark Young, Planner – Urban Design
Phil Castro, Parks Planner
Jessica Button, Parks Planner

Appendix C Initial Species at Risk Screening and Assessment

Species Name (*Taxonomic Name*)	Status under *Endangered Species Act* (ESA)	Status under Schedule 1 of the *Species at Risk Act* (SARA)	Closest Species Occurrence Record to the Site	General Habitat Requirements	Site Suitability	Potential for Protected Elements[1]		Potential for Negative Interactions with Protected Elements[2]
						Habitat	Individuals	
Birds								
Bank Swallow (*Riparia riparia*)	**Threatened**	**Threatened**	Cornell Lab of Ornithology (2024): 1.8 km from Site	Colonial nester; burrows in eroding silt or sand banks, sand pit walls, and human-made sand piles. Often found on banks of rivers and lakes.	The Site does not appear to contain suitable habitat.	Negligible	Negligible	Negligible
Barn Swallow (*Hirundo rustica*)	**Special Concern**	**Threatened**	Cornell Lab of Ornithology (2024): 1.7 km from Site	Nests on barns and other structures. Forages in open areas for flying insects. Lives in close association with humans and prefers to nest on structures such as open barns, under bridges, and in culverts.	The Site does not appear to contain suitable nesting habitat. Open areas on-site may provide foraging habitat.	Low	Low	Low
Black Tern (*Chlidonias niger*)	**Special Concern**	**Not at Risk**	Cornell Lab of Ornithology (2024): 2.7 km from Site	Build floating nests in loose colonies in shallow marshes with abundant emergent vegetation, especially in cattails.	The Site does not appear to contain suitable habitat.	Negligible	Negligible	Negligible
Bobolink (*Dolichonyx oryzivorus*)	**Threatened**	Threatened	Cornell Lab of Ornithology (2024): 290 m from Site	Breeds in hayfields, pastures, agricultural fields, and abandoned fields with tall grass that are ≥5 ha, and preferably >30 ha.	Open meadows on-site may provide suitable habitat.	Moderate	Moderate	Moderate
Canada Warbler (*Cardellina canadensis*)	**Special Concern**	**Threatened**	Cornell Lab of Ornithology (2024): 360 m from Site	Prefers moist forests with dense shrub layers. Nests located on or near the ground on mossy logs or roots, along stream banks or on hummocks. Area-sensitive species that usually require a minimum of 30 ha of continuous forest for breeding habitat (OMNR, 2000).	Moist forested areas on-site may provide suitable habitat.	Moderate	Moderate	Moderate
Chimney Swift (*Chaetura pelagica*)	**Threatened**	**Threatened**	Cornell Lab of Ornithology (2024): 3.2 km from Site	Nests in traditional-style open brick chimneys (and rarely in hollow trees). Tends to stay close to water.	The Site does not appear to contain suitable habitat.	Negligible	Negligible	Negligible
Common Nighthawk (*Chordeiles minor*)	**Special Concern**	**Threatened**	Cornell Lab of Ornithology (2024): 680 m from Site	Nests in a 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.	Open meadows on-site may provide suitable habitat.	Moderate	Moderate	Moderate

Species Name (*Taxonomic Name*)	Status under *Endangered Species Act* (ESA)	Status under Schedule 1 of the *Species at Risk Act* (SARA)	Closest Species Occurrence Record to the Site	General Habitat Requirements	Site Suitability	Potential for Protected Elements[1]		Potential for Negative Interactions with Protected Elements[2]
						Habitat	Individuals	
Eastern Meadowlark (*Sturnella magna*)	**Threatened**	**Threatened**	Cornell Lab of Ornithology (2024): 360 m from Site	Breeds in hayfields, pastures, agricultural fields, and abandoned fields with tall grass that are ≥5 ha, and preferably >30 ha.	Open meadows on-site may provide suitable habitat.	Moderate	Moderate	Moderate
Eastern Whip-poor-will (*Antrostomus vociferus*)	**Special Concern**	**Threatened**	Cornell Lab of Ornithology (2024): 2.2 km from Site	Suitable breeding habitats generally include open and half treed areas and often exhibit a scattered distribution of treed and open space. Lays eggs directly on the forest floor. Roosts are typically located in forest habitat on a low branch or directly on the ground. Home range size varies from 20 to 500 ha (mean 136 ha) (ECCC, 2018a).	The Site does not appear to contain suitable habitat.	Moderate	Moderate	Moderate
Eastern Wood-Pewee (*Contopus virens*)	**Special Concern**	**Special Concern**	KAL (2024): observed on-site	Woodland species often found in the mid-canopy layer near clearings and edges of intermediate age and mature deciduous and mixed forests with little understory.	Mosaic of forested areas and clearings may provide suitable habitat.	High	High	High
Evening Grosbeak (*Coccothraustes vespertinus*)	**Special Concern**	**Special Concern**	Cornell Lab of Ornithology (2024): 790 m from Site	Nests in trees or large shrubs. Prefers mature coniferous forests (fir and/or spruce dominated), but will also use deciduous forests, parklands, and orchards. Its abundance is strongly linked to the cycle of Spruce Budworm.	Deciduous forests on-site may provide suitable habitat.	Moderate	Moderate	Moderate
Golden Eagle (*Aquila chrysaetos*)	**Endangered**	**Not at Risk**	Cornell Lab of Ornithology (2024): 1.7 km from Site	Nests 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. Migration only; no reported nests in Ottawa.	The Site does not appear to contain suitable habitat.	Negligible	Negligible	Negligible
Golden-winged Warbler (*Vermivora chrysoptera*)	**Special Concern**	**Threatened**	Cornell Lab of Ornithology (2024): 4.3 km from Site	Ground-nests in areas of young shrubs surrounded by mature forest. Often found in areas that have recently been disturbed such as field edges, hydro or	Mosaic of shrub thickets and mature forests on-site may provide suitable habitat.	Moderate	Moderate	Moderate

Species Name (*Taxonomic Name*)	Status under *Endangered Species Act* (ESA)	Status under Schedule 1 of the *Species at Risk Act* (SARA)	Closest Species Occurrence Record to the Site	General Habitat Requirements	Site Suitability	Potential for Protected Elements[1]		Potential for Negative Interactions with Protected Elements[2]
						Habitat	Individuals	
				utility right-of-ways, or logged areas. Requires >10 ha of habitat (OMNR, 2000).				
Grasshopper Sparrow (*Ammodramus savannarum*)	**Special Concern**	**Special Concern**	Cornell Lab of Ornithology (2024): 2.6 km from Site	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.	Open meadows on-site may provide suitable habitat.	Moderate	Moderate	Moderate
Least Bittern (*Ixobrychus exilis*)	**Threatened**	**Threatened**	Cornell Lab of Ornithology (2024): 2 km from Site	Found in a variety of wetland habitats, but strongly prefers cattail marshes with a mix of open pools and channels. They prefer larger marshes >5 ha in size and are intolerant of loss of habitat and human disturbance (OMNR, 2000).	A transient occurrence of Least Bittern was documented during GHD's 2014 field studies. However, no individuals were observed incidentally during the 2025 field studies or during detailed Breeding Bird Surveys. Given the impacted nature of the pond and absence of observations during targeted surveys, it is likely that the habitat on site does not support Least Bittern.	Negligible	Negligible	Negligible
Lesser Yellowlegs (*Tringa flavipes*)	**Threatened**	**No Status**	Cornell Lab of Ornithology (2024): 2 km from Site	Breeds in boreal wetlands. Nests on dry ground or forest openings near peatlands, marshes, and ponds in the boreal forest and taiga (Government of Canada, 2021). Migrant only; nests in far north.	The Site does not appear to contain suitable habitat.	Negligible	Negligible	Negligible
Northern Bobwhite (*Colinus virginianus*)	**Endangered**	**Endangered**	Cornell Lab of Ornithology (2024): 2.3 km from Site	Inhabits areas that comprise a mosaic of small patches of tallgrass prairie-savanna, early to mid-successional forest and open areas Range includes only the southwest corner of Ontario (Walpole Island). Isolated sightings elsewhere are usually a result of introductions or escapes from captivity.	The Site is outside the current known range for this species.	Negligible	Negligible	Negligible
Olive-sided Flycatcher (*Contopus cooperi*)	**Special Concern**	**Threatened**	Cornell Lab of Ornithology (2024): 4.8 km from Site	Found along coniferous or mixed 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.	Forest edges and clearings on-site may provide suitable habitat.	Moderate	Moderate	Moderate

Species Name (*Taxonomic Name*)	Status under *Endangered Species Act* (ESA)	Status under Schedule 1 of the *Species at Risk Act* (SARA)	Closest Species Occurrence Record to the Site	General Habitat Requirements	Site Suitability	Potential for Protected Elements[1]		Potential for Negative Interactions with Protected Elements[2]
						Habitat	Individuals	
Peregrine Falcon (*Falco peregrinus*)	**Special Concern**	**Special Concern**	Cornell Lab of Ornithology (2024): 1.6 km from Site	Nests 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.	The Site does not appear to contain suitable habitat.	Negligible	Negligible	Negligible
Rusty Blackbird (*Euphagus carolinus*)	**Special Concern**	**Special Concern**	Cornell Lab of Ornithology (2024): 1.5 km from Site	Prefers wet wooded or shrubby areas. Nests at edges of boreal wetlands and coniferous forests. These areas include bogs, marshes, and beaver ponds.	The wet shrub thickets and moist woodlands on Site may provide suitable habitat	Moderate	Moderate	Moderate
Short-eared Owl (*Asio flammeus*)	**Threatened**	**Special Concern**	Cornell Lab of Ornithology (2024): 1 km from Site	Prefer a mosaic of grasslands and wetlands. Lives in open areas such as grasslands, marshes, and tundra where it nests on the ground and hunts for small mammals (Environment Canada, 2016c).	The Site does not appear to contain suitable habitat	Low	Low	Low
Wood Thrush (*Hylocichla mustelina*)	**Special Concern**	**Threatened**	Cornell Lab of Ornithology (2024): 1.3 km from Site	Lives in mature deciduous and mixed forests. They seek moist stands of trees with well-developed undergrowth and tall trees for singing and perching. Prefers nesting in large forest mosaics, but will also use fragmented forests. Usually build nests in Sugar Maple or American Beech.	The moist deciduous forests on Site may provide suitable habitat	Moderate	Moderate	Moderate
Mammals								
Eastern Red Bat (*Lasiurus borealis*)	**Endangered (January 2025)**	**Not Listed**	COSEWIC (2023) – in region	Typically roost among foliage, selecting areas that have overhead foliage for cover and open flight space below. Use both deciduous and coniferous forests of any age class. Maternity roosts tend to be in large diameter, tall trees	The forested area on the north side of the Site may provide roosting habitat, while the open meadow may provide foraging habitat.	Moderate	Moderate	Moderate
Eastern Small-footed Myotis (*Myotis leibii*)	**Endangered**	**Not Listed**	Humphrey (2017) – in region	In the spring and summer, Eastern Small-footed Myotis 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.	The forest and woodlands on Site may provide roosting habitat	Moderate	Moderate	Moderate
Hoary Bat (*Lasiurus cinereus*)	**Endangered (January 2025)**	**Not Listed**	COSEWIC (2023) – in region	Typically roost among foliage, selecting areas that have overhead foliage for cover and open flight space below. Use both deciduous and coniferous forests of any age class.	The forested area on the north side of the Site may provide roosting habitat, while the open meadow may provide foraging habitat.	Moderate	Moderate	Moderate

Species Name (*Taxonomic Name*)	Status under *Endangered Species Act* (ESA)	Status under Schedule 1 of the *Species at Risk Act* (SARA)	Closest Species Occurrence Record to the Site	General Habitat Requirements	Site Suitability	Potential for Protected Elements[1]		Potential for Negative Interactions with Protected Elements[2]
						Habitat	Individuals	
				Maternity roosts tend to be in large diameter, tall trees				
Little Brown Myotis (*Myotis lucifugus*)	**Endangered**	**Endangered**	Humphrey and Fotherby (2019) – in region	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.	The forest and woodlands on Site may provide roosting habitat	Moderate	Moderate	Moderate
Northern Myotis / Northern Long-eared Bat (*Myotis septentrionalis*)	**Endangered**	**Endangered**	Humphrey and Fotherby (2019) – in region	Associated with deciduous and mixed forests, choosing to roost under loose bark and in the cavities of trees. They forage along and within forests as well as in hayfields and pastures adjacent to mixed forests.	The forest and woodlands on Site may provide roosting habitat	Moderate	Moderate	Moderate
Silver-haired Bat (*Lasionycteris noctivagans*)	**Endangered (January 2025)**	**Not Listed**	COSEWIC (2023) – in region	Typically roost under bark and in tree cavities, typically in large, decaying coniferous and deciduous trees. May roost in or on buildings.	The forested area on the north side of the Site may provide roosting habitat, while the open meadow may provide foraging habitat.	Moderate	Moderate	Moderate
Tri-colored Bat / Eastern Pipistrelle (*Perimyotis subflavus*)	**Endangered**	**Endangered**	Humphrey and Fotherby (2019) – in region	Roosts mainly in trees during summer; overwinters in caves and mines along with other species, but often uses deeper parts of the hibernaculum. Foraging occurs in forested riparian areas, over water, and within gaps in forest canopies.	The forest and woodlands on Site may provide roosting habitat	Moderate	Moderate	Moderate
Reptiles								
Blanding's Turtle (*Emydoidea blandingii*)	**Threatened**	**Endangered**	Ontario Nature (2019): within 10 km of Site	Quiet lakes, streams, and wetlands with abundant emergent vegetation. Also frequently occurs in adjacent upland forests.	The forest and woodlands on Site may provide roosting habitat	Low	Low	Low
Eastern Milksnake (*Lampropeltis triangulum*)	**Not Listed**	**Special Concern**	MNRF (2024a): within 5 km of Site	Found in a variety of open and edge habitats, including meadows, rocky outcrops, and forest edges. They can also	Open meadows and areas of exposed rock may provide suitable habitat	Moderate	Moderate	Moderate

Species Name (*Taxonomic Name*)	Status under *Endangered Species Act* (ESA)	Status under Schedule 1 of the *Species at Risk Act* (SARA)	Closest Species Occurrence Record to the Site	General Habitat Requirements	Site Suitability	Potential for Protected Elements[1]		Potential for Negative Interactions with Protected Elements[2]
						Habitat	Individuals	
				inhabit forests. Further, they are often associated with human-made structures such as barns (Environment Canada, 2015b).				
Eastern Musk Turtle / Stinkpot (*Sternotherus odoratus*)	**Special Concern**	**Special Concern**	Ontario Nature (2019): within 10 km of Site	Found in lakes, ponds, marshes, and rivers that are generally slow-moving, have abundant emergent vegetation, and muddy bottoms that they burrow into for winter hibernation.	The Site does not appear to contain suitable habitat.	Low	Low	Low
Midland Painted Turtle (*Chrysemys picta marginata*)	**Not Listed**	**Special Concern**	California Academy of Sciences and National Geographic Society (2024): within 2 km of Site	Inhabits waterbodies, such as ponds, marshes, lakes, and slow-moving creeks that have a soft bottom and provide abundant basking sites and aquatic vegetation. Often bask on shorelines or on logs and rocks that protrude from the water.	Aquatic and wetland communities on Site may provide suitable habitat.	Moderate	Moderate	Moderate
Northern Map Turtle (*Graptemys geographica*)	**Special Concern**	**Special Concern**	California Academy of Sciences and National Geographic Society (2024): within 2 km of Site	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.	The Site does not appear to contain suitable habitat.	Low	Low	Low
Snapping Turtle (*Chelydra serpentina*)	**Special Concern**	**Special Concern**	California Academy of Sciences and National Geographic Society (2024): within 2 km of Site	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.	Aquatic and wetland communities on Site may provide suitable habitat.	Moderate	Moderate	Moderate
Arthropods								
American Bumble Bee (*Bombus pensylvanicus*)	**Special Concern**	**No Status**	COSEWIC (2018) – in region	Habitat generalist. Requires a variety of habitat throughout it's life stages. Often found in or adjacent to open fields and meadows, grasslands, farmlands, and other undisturbed open habitats (Government of Canada, 2019).	Open meadows on Site may provide suitable habitat	Moderate	Moderate	Moderate
Monarch (*Danaus plexippus*)	**Special Concern**	**Special Concern**	California Academy of Sciences and National Geographic Society (2024): within 2 km of Site KAL observed on Site 2024-06-7	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.	Open meadows and disturbed areas with Common Milkweed may provide suitable habitat.	High	High	High

Species Name (*Taxonomic Name*)	Status under *Endangered Species Act* (ESA)	Status under Schedule 1 of the *Species at Risk Act* (SARA)	Closest Species Occurrence Record to the Site	General Habitat Requirements	Site Suitability	Potential for Protected Elements[1]		Potential for Negative Interactions with Protected Elements[2]
						Habitat	Individuals	
Yellow-banded Bumble Bee (*Bombus terricola*)	**Special Concern**	**Special Concern**	California Academy of Sciences and National Geographic Society (2024): within 2 km of Site	This species is a forage and habitat generalist, able to use a variety of nectaring plants and environmental conditions. Can be found in mixed woodlands, particularly for nesting and overwintering, as well as a variety of open habitat such as native grasslands, farmlands, and urban areas.	Open meadows on Site may provide suitable habitat	Moderate	Moderate	Moderate
Fish								
River Redhorse (*Moxostoma carinatum*)	**Special Concern**	**Special Concern**	DFO (2023): within 5 km of Site	Prefers fast-flowing, clear rivers over rocky substrate.	The Site does not appear to contain suitable habitat	Negligible	Negligible	Negligible
Vascular Plants								
Black Ash (*Fraxinus nigra*)	**Endangered**	**No Status**	California Academy of Sciences and National Geographic Society (2024): within 2 km of Site	Predominantly a wetland species found in swamps, floodplains, and fens.	Swamps on Site may provide suitable habitat.	Moderate	Moderate	Moderate
Butternut (*Juglans cinerea*)	**Endangered**	**Endangered**	California Academy of Sciences and National Geographic Society (2024): within 2 km of Site	Commonly found in riparian habitats but is also found on rich, moist, well-drained loams and well-drained gravels, especially those of limestone origin.	Riparian forest and woodland areas on Site may provide suitable habitat.	Moderate	Moderate	Moderate

Appendix D Vascular Plant Species List

Common Name	Scientific Name	ELC Unit	Notes
Trees			
American Elm	*Ulmus americana*	WODM5-1, WODM5-2, FODM5-6, FODM7-1, FODM8-1, THDM2-6, SWTM3-6	
Amur Maple	*Acer ginnala*	WODM5-1, WODM5-2	
Apple	*Malus* sp.	THDM2-6	
Basswood	*Tilia americana*	WODM5-1, FODM5-6	
Bitternut Hickory	*Carya cordiformis*	FODM6-5	
Black Cherry	*Prunus sericea*	THDM2-6	
Eastern White Pine	*Pinus strobus*	FODM7-1	
Green Ash	*Fraxinus pennsylvanica*	WODM5-1, WODM5-2, FODM7-1, FODM7-2, FODM8-1, MEGM3-4, MEGM3-8, THDM2-6, SWDM4-5, SWTM3-6	
Ironwood	*Ostrya virginiana*	WODM5-1	
Paper Birch	*Betula papyrifera*	SWTM3-6	
Sugar Maple	*Acer saccharum*	FODM5-6, FODM6-5, RBOB1-1	
Trembling Aspen	*Populus tremuloides*	WODM5-1, WODM5-2, FODM8-1, SWDM4-5	
White Pine	*Pinus strobus*	FODM8-1	
White Willow	*Salix alba*	FODM7-1	
Shrubs			
Alder Buckthorn	*Frangula alnus*	WODM5-1, WODM5-2, FODM5-6, FODM7-1, FODM7-2, FODM8-1, MEGM3-4, MEGM3-8, THDM2-6, SWTM3-6	
Bush Honeysuckle	*Diervilla lonicera*	WODM5-1	
Chokecherry	*Prunus virginiana*	WODM5-1, THDM2-6	
Common Buckthorn	*Rhamnus cathartica*	WODM5-1, WODM5-2, FODM5-6, FODM7-1, FODM8-1, THDM2-6, RBOB1-1	Noxious under the *Weed Control Act*; listed Invasive by the *Ontario Invasive Plant Council*
Hawthorn	*Crataegus* sp.	FODM8-1, THDM2-6	
Nannyberry	*Viburnum lentago*	FODM8-1	
Purple-flowering Raspberry	*Rubus odoratus*	WODM5-1	

Common Name	Scientific Name	ELC Unit	Notes
Pussy Willow	*Salix discolor*	MEGM3-8	
Red-osier Dogwood	*Cornus sericea*	WODM5-1, WODM5-2, FODM7-1, MEGM3-8, THDM2-6, SWDM4-5, SWTM3-6, RBOB1-1	
Sandbar Willow	*Salix exigua*	WODM5-1, WODM5-2, MEGM3-8, THDM2-6, SWTM3-6	
Silky Dogwood	*Cornus amomum*	THDM2-6	
Staghorn Sumac	*Rhus typhina*	THDM2-6, RBOB1-1	
White Meadowsweet	*Spiraea alba*	WODM5-1, WODM5-2, FODM7-1, FODM7-2, MEGM3-8, THDM2-6, SWDM4-5, SWTM3-6	
Wild Red Raspberry	*Rubus idaeus*	FODM8-1	
Willow	*Salix* sp.	SWTM3-6	
Groundcover			
Bedstraw	*Galium* sp.	MEGM3-8	
Bulrush	*Scirpus* sp.	MEGM3-8	
Canada Goldenrod	*Solidago canadensis*	WODM5-1, WODM5-2, FODM7-1, FODM7-2, FODM8-1, MEGM3-5, MEGM3-8, THDM2-6, SWDM4-5, SWTM3-6	
Common Bedstraw	*Galium boreale*	FODM7-1	
Common Milkweed	*Asclepias syriaca*	WODM5-1	
Common Reed	*Phragmites australis*	MEGM3-8	Restricted under the *Invasive Species Act*, listed Invasive by the Ontario Invasive Plant Council
Cow Vetch	*Vicia cracca*	WODM5-1, WODM5-2	
Flat-topped White Aster	*Doellingeria umbellata*	WODM5-2	
Fowl Bluegrass	*Poa palustris*	FODM7-2, MEGM3-8	
Fringed Sedge	*Carex crinita*	FODM7-1	
Goldmoss Stonecrop	*Sedum acre*	RBOB1-1	
Graceful Sedge	*Carex gracillima*	WODM5-1, WODM5-2, FODM7-2, MEGM3-4, THDM2-6, SWTM3-6	
Grass-leaved Goldenrod	*Euthamia graminifolia*	WODM5-2	
Hedge Bedstraw	*Galium mollugo*	FODM8-1, MEGM3-5, MEGM3-8, THDM2-6	

Common Name	Scientific Name	ELC Unit	Notes
Horsetail	*Equisetum* sp.	MEGM3-8	
Kentucky Bluegrass	*Poa pratensis*	WODM5-1, MEGM3-4, MEGM3-8, THDM2-6	
Meadow Bedstraw	*Galium mollugo*	WODM5-1, MEGM3-8	
Meadow Buttercup	*Ranunculus acris*	WODM5-1, FODM7-1, MEGM3-8, THDM2-6	
Meadow Foxtail	*Alopecurus pratensis*	THDM2-6	
Meadow Horsetail	*Equisetum pratense*	WODM5-1	
Milkweed	*Asclepias syriaca*	MEGM3-5, MEGM3-8	
Ox-eye Daisy	*Leucanthemum vulgare*	WODM5-1	
Poison Ivy	*Toxicodendron radicans*	WODM5-1, FODM5-6, FODM6-5, FODM7-1, MEGM3-4, THDM2-6, RBOB1-1	Noxious under the *Weed Control Act*
Purple Loosestrife	*Lythrum salicaria*	WODM5-1, MEGM3-8, SWTM3-6	listed Invasive by the Ontario invasive Plant Council
Reed Canary Grass	*Phalaris arundinacea*	WODM5-2, MEGM3-8, THDM2-6, SWTM3-6	listed Invasive by the Ontario Invasive Plant Council
Rough Bedstraw	*Galium trifidum*	WODM5-1	
Rough Cinquefoil	*Potentilla norvegica*	WODM5-1	
Sensitive Fern	*Onoclea sensibilis*	FODM7-1	
Smooth Brome	*Bromus inermis*	MEGM3-5, THDM2-6	
Sweet-scented Bedstraw	*Galium trifolium*	SWDM4-5	
Valerian	*Valeriana officinalis*	WODM5-1, WODM5-2, FODM7-1, THDM2-6, SWDM4-5	
Virginia Creeper	*Parthenocissus quinquefolia*	WODM5-1, WODM5-2, FODM5-6, FODM7-1, FODM8-1	
Virgin's Bower	*Clematis virginana*	WODM5-1, MEGM3-8	
Water horehound	*Lycopus americanus*	SWTM3-6	
White Cockle	*Silene alba*	RBOB1-1	
White Wintergreen	*Pyrola elliptica*	WODM5-1	
Wild Parsnip	*Pastinaca sativa*	THDM2-6	Noxious under the *Weed Control Act*, listed Invasive by the Ontario Invasive Plant Council
Wild Strawberry	*Fragaria virginiana*	WODM5-1, WODM5-2, FODM8-1, THDM2-6	

Common Name	Scientific Name	ELC Unit	Notes
Woodland Horsetail	*Equisetum sylvaticum*	WODM5-1, FODM7-1, FODM8-1, MEGM3-8	

Appendix E Tree Conservation Report

Tree Conservation Report for Richcraft's Trailsedge Community, Phase 5, Ottawa, Ontario

2025-06-26

Final Report

KILGOUR & ASSOCIATES LTD.
www.kilgourassociates.com

Project Number: RICH 1684.2

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List of Acronyms and Abbreviations

CRZ – Critical Root Zone
DBH – Diameter at Breast Height
EPZ – Environmental Protection Zone
ESA – Endangered Species Act
KAL – Kilgour & Associates Ltd.
SARA – Species at Risk Act
TCR - Tree Conservation Report

1.0 INTRODUCTION

This Tree Conservation Report (TCR) was prepared by Kilgour & Associates Ltd. (KAL) on behalf of Richcraft Homes in support of a plan of subdivision application to address Phase 1 and Phase 2 lands for the Trailsedge Phase 5 development in Ottawa, Ontario (the "Site"; Figure 1). In this TCR, and consistent with City of Ottawa guidance documents, 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 critical root zone (CRZ) is the extent of a tree's root system and is calculated as diameter at breast height (DBH) x 10 cm.

The removal of trees on the Site cannot occur until written approval of the TCR has been granted through a tree permit as per the City of Ottawa's Tree Protection By-law. The approval of the TCR will come in the form of a letter (the tree permit) from the General Manager[1] with conditions specific to the Site, tree retention, and associated tree protection and tree removal. The approved TCR is a requirement for the approval of the development application above. A copy of the report must be 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 Site is approximately 79 ha and spans multiple municipal addresses, including 3672 Innes Road and 3738 Innes Road (Lat: 45.447189°N and Long: -75.509356°W; Figure 1). The Site is currently characterized as a mixture of forests, thickets, and open meadows, with some treed swamp and thicket swamp wetlands, a pond, and headwater drainage features. The proposed future development would comprise a residential subdivision of primarily low-density units, with some medium- to high-density components, some employment lands, as well as supporting infrastructure (e.g., roadways, parks). The Urban Natural Area #87 (Innes Park Woods) is situated adjacent to the north Site boundary. The Site is currently zoned IL (Light Industrial) and IH (Heavy Industrial) under the City's Zoning Bylaw (City of Ottawa, 2023).

The Site is bordered by:

- UNA #87 (Innes Park Woods), commercial developments, and Innes Road to the north;
- Mer-Bleue Road, commercial developments, agricultural/undeveloped lands, and the Innes Snow Disposal Facility to the east;
- A hydro corridor, Brian Coburn Boulevard, and residential developments to the south; and
- Glenview's residential developments (including areas currently under construction) to the west.

[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.

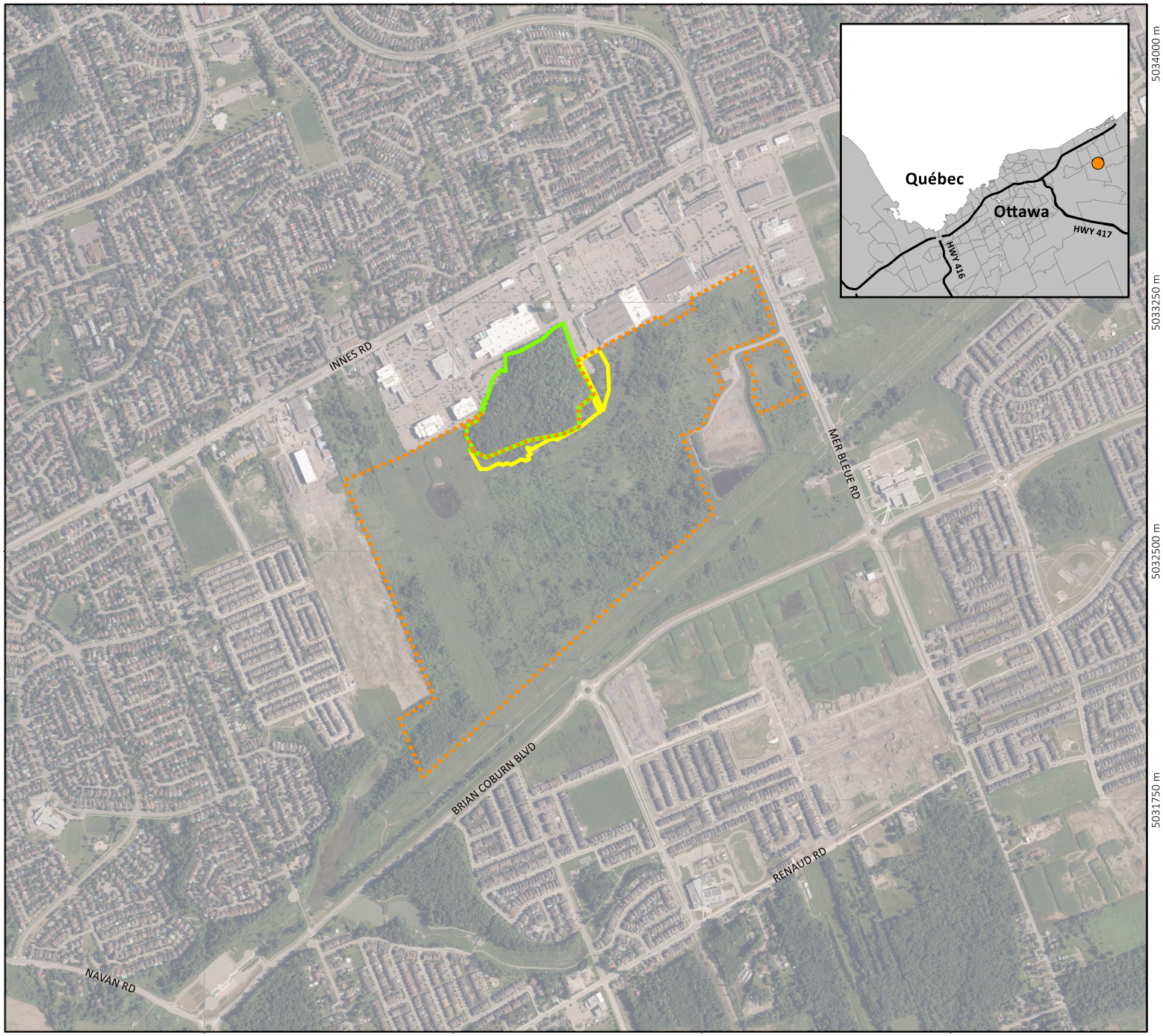

Figure 1 Site Context

Legend

Site Boundary

UNA 87

Category 1- Protected

Category 3- Development Approved

N

0 >200 m

Project: RICH 1684

Map File: RICH 1684 Maps 202501 nm.map

Universal Transverse Mercator - Zone 18 (N)

Printed on: 6/13/2025

KILGOUR & Associates

2.1 Property Owner/ Applicant and Arborist Contact Information

Table 1 Contact information for the property owner/ applicant and arborist

Organization	Role	Contact Person	Phone Number	Email Address
Richcraft Homes 2280 St. Laurent Blvd, Suite 201	Proponent	May Pham	613-739-7111 ext. 113	mpham@richcraft.com
Kilgour & Associates Ltd. 2285-C St. Laurent Blvd., Unit 16, Ottawa, ON, K1G 4Z6	Arborist	Kesia Miyashita	613-367-5546	kmiyashita@kilgourassociates.com
Kilgour & Associates Ltd. 2285-C St. Laurent Blvd., Unit 16, Ottawa, ON, K1G 4Z6	Arborist	Anthony Francis	613-367-5556	afrancis@kilgourassociates.com

2.2 Qualifications of Arborists

Kesia Miyashita (MSc., P.Biol.) has ten years of experience in environmental consulting, with field experience in ecosystems in Ontario, Alberta and British Columbia. During her career in environmental consulting, Kesia 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 invasive plant surveys in a variety of natural environments, including native forest, urban nature preserves, grasslands, and wetlands. Prior to joining Kilgour & Associates Ltd. in May 2021, Kesia worked with the Canadian Wildlife Service, where she contributed to policies and guidance documents related to the interface between the *Species at Risk Act* and the *Impact Assessment Act* and developed a strong working understanding of those key pieces of federal legislation. Kesia is a Professional Biologist with the Alberta Society of Professional Biologists and a Qualified Wetland Science Practitioner in the province of Alberta.

Anthony Francis (Ph.D.) is a Senior Ecologist with over 20 years of 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).

3.0 EXISTING CONDITIONS

3.1 Tree Inventory

A tree survey was performed for the Site following TCR guidelines set forth by the City of Ottawa Forestry Staff (City of Ottawa, 2020). The tree survey took place concurrently with the Ecological Land Classification

(ELC) on June 4, 5, 7, 12, and 20, 2024. Due to the size of the Site and the considerable tree coverage, trees were assessed in groupings, corresponding to survey polygons within ELC units. Within each grouping, tree species were noted, and average DBH measurements were taken. Overall, ten species of trees with DBH measurements greater than 10 cm were noted on the Site, with DBH measurements ranging from 10 cm to 52 cm (Table 2).

Notable trees (e.g., species uncommon to the Site, considerably larger than the average, or SAR trees) were assessed and recorded individually. The locations of site trees, notable trees, and tree clusters are documented in Figure 2 below.

Table 2 Summary tree data for ELC units*

Community Type	ELC Unit	Dominant Tree Species	Average DBH (cm)
Deciduous Forest	FODM5-6	Basswood (*Tilia americana*) Sugar Maple (*Acer saccharum*) American Elm (*Ulmus americana*)	24 6 10
	FODM6-5	Sugar Maple (*Acer saccharum*) Bitternut Hickory (*Carya cordiformis*)	16 27
	FODM7-1A	American Elm (*Ulmus americana*) Green Ash (*Fraxinus pennsylvanica*)	16 10
	FODM7-1B	American Elm (*Ulmus americana*) Green Ash (*Fraxinus pennsylvanica*)	15 12
	FODM7-1C	American Elm (*Ulmus americana*) Eastern White Pine (*Pinus strobus*) Green Ash (*Fraxinus pennsylvanica*)	15 10 10
	FODM7-2	Green Ash (*Fraxinus pennsylvanica*)	15
	FODM8-1A	Trembling Aspen (*Populus tremuloides*) Green Ash (*Fraxinus pennsylvanica*)	30 20
	FODM8-1B	Trembling Aspen (*Populus tremuloides*) American Elm (*Ulmus americana*)	15 13
	FODM8-1C	Trembling Aspen (*Populus tremuloides*) American Elm (*Ulmus americana*) Green Ash (*Fraxinus pennsylvanica*)	19 11 5
	FODM8-1D	Trembling Aspen (*Populus tremuloides*) American Elm (*Ulmus americana*) Green Ash (*Fraxinus pennsylvanica*)	23 10 10
Deciduous Woodland	WODM5-1A	Trembling Aspen (*Populus tremuloides*) American Elm (*Ulmus americana*)	15 13
	WODM5-1B	Trembling Aspen (*Populus tremuloides*) American Elm (*Ulmus americana*)	15 17
	WODM5-1C	American Elm (*Ulmus americana*)	7
	WODM5-2A	American Elm (*Ulmus americana*)	16
	WODM5-2B	American Elm (*Ulmus americana*)	14
	WODM5-2C	American Elm *(Ulmus americana)* Trembling Aspen *(Populus tremuloides)* Green Ash *(Fraxinus pennsylvanica)*	16 19 10

Community Type	ELC Unit	Dominant Tree Species	Average DBH (cm)
	WODM5-1D	Trembling Aspen *(Populus tremuloides)* Ironwood *(Ostrya virginiana)* Basswood *(Tilia americana)*	18 12 24
	WODM5-1E	Trembling Aspen (*Populus tremuloides*) American Elm (*Ulmus americana*)	11 17
Deciduous Thicket	THDM2-6B	American Elm *(Ulmus americana)*	24
	THDM2-6D	American Elm (*Ulmus americana*)	11
	THDM2-6E	Green Ash *(Fraxinus pennsylvanica)*	10
	THDM2-6H	Basswood *(Tilia americana)* Sugar Maple *(Acer saccharum)* American Elm *(Ulmus americana)*	24 6 10
	THDM2-6I	American Elm (*Ulmus americana*) Green Ash (*Fraxinus pennsylvanica*)	21 10
Meadow	MEGM3-4	American Elm (*Ulmus americana*) Green Ash (*Fraxinus pennsylvanica*)	19 2
	MEGM3-8A	Green Ash (*Fraxinus pennsylvanica*)	8
	SWDM4-5	Trembling Aspen (*Populus tremuloides*)	13
	SWTM3-6B	American Elm (*Ulmus americana*) Green Ash (*Fraxinus pennsylvanica*)	14 10
	SWTM3-6C	Paper Birch (*Betula papyrifera*) Green Ash (*Fraxinus pennsylvanica*)	10 7

* Only ELC units supporting trees are included in this table

Green Ash and American Elm were documented as widespread across the Site, occurring in deciduous forest, woodland, thicket and meadow areas. DBH measurements of these species ranged from 10 cm to 21 cm.

Notable trees were characterized with a DBH over the site average (i.e., >15 DBH) or representing species uncommon to the Site. Bitternut Hickory was observed in a single survey polygon, within the FODM6-5 unit, and measured 27 cm DBH. Ironwood was detected at one survey polygon (WODM5-1) and averaged 39 cm DBH.

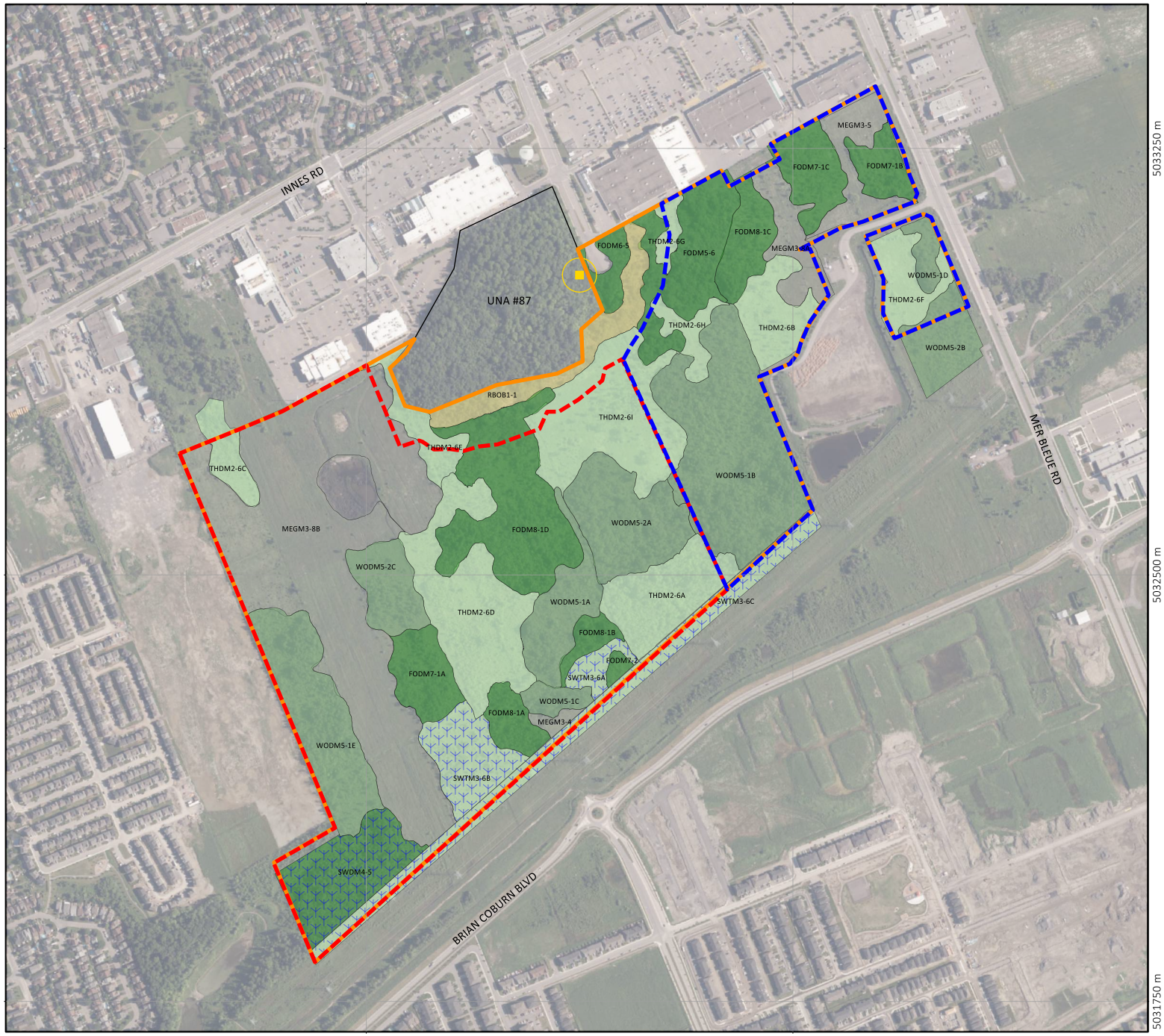

Figure 2 Tree Groupings

Legend

Vegetation Community

- Forest
- Woodland
- Thicket
- Alvar
- Wetland

- Black Ash
- Black Ash 30 m Buffer

- Site Boundary

Phasing

- Fall Site Prep (Sept/Oct 2025)
- Future Site (2027+)

N

0 200 m

Project: RICH 1684
Map File: RICH 1684 Maps 202501 nm.map
Universal Transverse Mercator - Zone 18 (N)
Printed on: 6/10/2025

KILGOUR & Associates

3.2 Ecological Significance of Trees on Site

One Black Ash (*Fraxinus nigra*; Endangered under the ESA, no status under SARA) was observed within UNA #87, situated off-site but near the north Site boundary. No other federally or provincially significant or at-risk tree species (i.e., those listed under the *Species at Risk Act* (SARA), the *Endangered Species Act* (ESA), or those tracked on the Natural Heritage Information Centre (NHIC; MNRF, 2024) are present on or adjacent to the Site. Tree clearing works within 30 m of the Black Ash m can only be completed under a Net Benefit permit issued by the MECP. Given their urban context, the trees on the Site likely play a role in the regulation of relative humidity, sequestration of carbon and removal of pollutants, wind-shielding, shading and reduction of urban heat island effects, and filtration of dust, noise, and light pollution. They also provide some habitat structure in the surrounding urban landscape. However, the trees on the Site likely only provide habitat for common bird and small mammal species in the Ottawa area and not species of significance (i.e., species that are at risk, rare, or provincially or federally significant).

3.3 Other Natural Environment Elements

3.3.1 Surface Water Features

The surface water feature characterization exercise undertaken for the Site identified two headwater drainage features and one constructed pond on the Site. The HDFs convey surface flows from a storm sewer under the SmartCentres shopping centre on Innes Road. The HDF immediately connected to the storm sewer conveys flows into a constructed pond in the northwest portion of the Site, which controls the quantity of water that flows not the HDF south of the pond and ultimately into the stormwater pond southwest of the Site. Deciduous treed swamps and deciduous thicket swamps are situated in the southwest corner and along the south edge of the Site.

3.3.2 Steep Slopes

No steep slopes occur on or near the Site. There is a small slope on the north Site boundary, sloping down to the Site from adjacent commercial developments and adjacent parking areas.

3.3.3 Valued Woodlots

The Site itself does not contain any valued woodlots. UNA #87 (Innes Park Woods) is situated immediately north of the northern Site boundary. UNA #87 is characterized as a dry, upland deciduous forest on bedrock, measuring approximately 10.9 ha. It is rated as Moderate and is identified as an isolated feature with limited interior habitat (Muncaster Environmental Planning Inc. & Brunton Consulting Services, 2005)

3.3.4 Significant Woodlands

The Site itself does not contain any Significant Woodlands per *Significant Woodlands: Guidelines for Identification, Evaluation, and Impact Assessment* (City of Ottawa, 2022), though the adjacent UNA #87 does qualify as one.

3.3.5 High-Quality Specimen Trees

No high-quality specimen trees were noted on the Site.

3.3.6 Hazardous Trees

A formal risk assessment for hazardous trees (e.g., Tree Risk Assessment) was not completed for the Site, however, it is not expected that the retained trees on adjacent properties will pose a hazard.

3.3.7 Unique Ecological Features

The snake overwintering hibernacula within the alvar ecosite qualifies as Significant Wildlife Habitat (SWH). As such, the snake hibernacula, and a 30 m buffer from the habitat is protected and will be preserved. Per the East Urban Community Phase 3 (Richcraft Group of Companies, 2020), the extension of Frank Bender Street will be permitted through the snake hibernacula, so long as construction mitigation measures are in place during the extension of that road, and eco passages are constructed to allow for snake movement between the two snake hibernacula habitat areas on Site.

3.3.8 Species at Risk

No at-risk trees were observed directly on the Site. Wildlife studies were undertaken as part of the EIS, and five SAR were detected. Eastern Wood-pewee (*Contopus virens*; Special Concern under the ESA and SARA) was detected at BBS Station 6, situated within the FODM6-4 unit adjacent to UNA #87. Eastern Red Bat (*Lasiurus borealis*), Hoary Bat (*Lasiurus cinereus*), and Silver-haired Bat (*Lasionycteris noctivagans*), all to be listed as Endangered under the ESA as of January 2025, and no status under SARA) were detected at survey station KB01 and KB05, situated within the THDM2-6 unit adjacent to UNA #87. Monarch (*Danaus plexippus*; Special Concern under the ESA and SARA) was observed incidentally within the thicket swamp (SWDM2-2) along the south edge of the Site.

4.0 PROPOSED DEVELOPMENT

The proposed project is a plan of subdivision application for the Richcraft Trailsedge Phase 5 development. The development is comprised of mixed density residential units, including single detached homes, low-density multi-block units, medium density units, townhomes (front-loaded, dual frontage, and back-to-back townhomes), and high-density units. Commercial/employment lands will be concentrated on the eastern portion of the Site. The future design includes two parks distributed across the Site to enhance accessibility to the surrounding neighbourhood. The East Urban Community Phase 3 CDP (Richcraft Group of Companies, 2020) outlines a target of 30% canopy cover in urban parks, consistent with the City of Ottawa Park Development Manual (City of Ottawa, 2017). The park areas onsite will incorporate tree plantings to increase wherever operational requirements do not preclude tree planting. Access to the new community will be provided by extensions of Frank Bender Street from the north, Fern Casey Street from the south, Jargeau Road from the west, and Vanguard Drive from the east.

UNA #87 will remain unaffected by the proposed development, with adjacent lands designated as a Natural Heritage Feature (NHF). The alvar ecosite and snake hibernacula within the ecosite surrounding UNA #87 will be preserved as part of the NHF with its associated 35 m protected buffer and setback.

Consistent with the East Urban Community Phase 3 CDP (Richcraft Group of Companies, 2020), wetlands on the Site are not designated natural heritage features and, as such, their removal does not pose a

constraint to development. As such, it is anticipated that the wetland areas (i.e., treed and thicket swamps) will be removed to accommodate future development. Permit approvals from the relevant regulatory agencies will be required for the impact to these surface water features.

It is anticipated that tree clearing will occur in fall 2025 of the Phase 1 area on the eastern portion of the Site (outlined in Blue in Figure 2), and future site clearing will occur in the western portion of the Site in 2027+ (outlined in Red in Figure 2).

The application process for a Net Benefit Permit to support work near the Black Ash individual within UNA #87 is preceded by the submission of a Black Ash Health Assessment (BAA) and *Information Gathering Form* (IGF) to the MECP. The Net Benefit Permit would permit tree clearing work within the 30 m protected buffer.

5.0 MITIGATION MEASURES

5.1 Site Preparation and Construction

To effectively minimize the impacts on the site trees, the following mitigation measures must be applied during site preparation and construction: (City of Ottawa, 2015, 2020)

- Tree removal will be limited to include only those necessary to accommodate construction.
    - Trees that occur on the property boundary or on adjacent lands will be retained when possible.
- 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*, 1994 protects the nests and young of migratory breeding birds in Canada. No clearing of vegetation shall occur during the breeding bird window (April 15 and August 15) to prevent impacts to birds. Combining the breeding bird window with the bat roosting season (May to September; MNRF, 2017), no clearing of vegetation shall occur between April 15 and September 30 inclusive to prevent impacts to both birds and bats. If vegetation clearing is to occur between April 1 and 15, a pre-clearing survey for active stick nests and cavity nests must be conducted to identify and protect early-nesting owls and raptors.
    - Tree clearing in the snake hibernacula on Site must respect the snake overwintering period from October 1st to May 15th (inclusive), during which period the snake hibernacula, and trees within the alvar habitat cannot be directly disturbed
    - Snake exclusion fencing (per MECP Guidelines for Reptile and Amphibian Exclusion Fencing guidelines, 2021) must be placed adjacent to the snake hibernacula on Site to minimize the potential for snakes to migrate to the work area. This fencing must be

geotextile material, at least 100 cm in height and buried 10-20cm to ensure proper exclusion of snakes from the tree clearing area.

- To minimize impacts to remaining trees during development:
    - Erect a fence beyond the CRZ of retained trees that have roots that may extend into the project area. 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;
    - Do not attach any signs, notices, or posters to any trees unless otherwise approved;
    - Do not raise or lower the existing grade within the CRZ of trees unless otherwise approved;
    - Do not extend any hard surface or significantly change landscaping within the CRZ of trees unless otherwise approved;
    - Do not damage the root system, trunk, or branches of any remaining trees unless otherwise approved;
    - Ensure that exhaust fumes from equipment are not directed towards any tree's canopy.

6.0 CLOSURE

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

Respectfully submitted,

KILGOUR & ASSOCIATES LTD.

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Appendix F Breeding Bird Survey Results

Common Name	Scientific Name	Station Observed	Date(s) Observed	Highest Breeding Evidence
Alder Flycatcher	*Empidonax alnorum*	BBS1, BBS5	2024-06-12; 2024-06-19	Possible
American Crow	*Corvus brachyrhynchos*	BBS2, BBS4, BBS6	2024-06-12; 2024-06-19	Observed
American Goldfinch	*Spinus tristis*	BBS1, BBS2, BBS3, BBS4, BBS5, BBS6, BBS7	2024-06-12; 2024-06-19; 2024-07-02	Probable
American Robin	*Turdus migratorius*	BBS1, BBS2, BBS3, BBS5, BBS6	2024-06-12; 2024-06-19; 2024-07-02	Probable
Belted Kingfisher	*Megaceryle alcyon*	BBS6	2024-06-12	Possible
Black-capped Chickadee	*Poecile atricapillus*	BBS2	2024-07-02	Possible
Blue Jay	*Cyanocitta cristata*	BBS1, BBS6	2024-06-12; 2024-06-19	Probable
Brown Thrasher	*Toxostoma rufum*	BBS3	2024-06-19	Possible
Brown-headed Cowbird	*Molothrus ater*	BBS1, BBS2	2024-06-12; 2024-06-19	Possible
Cedar Waxwing	*Bombycilla cedrorum*	BBS1	2024-06-19	Possible
Common Grackle	*Quiscalus quiscula*	BBS1, BBS2, BBS5	2024-06-12; 2024-06-19	Possible
Common Yellowthroat	*Geothlypis trichas*	BBS1, BBS2, BBS3, BBS4, BBS5, BBS6, BBS7	2024-06-12; 2024-06-19	Possible
Downy Woodpecker	*Dryobates pubescens*	BBS1	2024-06-19	Possible
Eastern Wood-pewee	*Contopus virens*	BBS6	2024-07-02	Possible
Gray Catbird	*Dumetella carolinensis*	BBS1, BBS2, BBS5	2024-06-12; 2024-06-19	Possible
Hermit Thrush	*Catharus guttatus*	BBS1	2024-06-12; 2024-06-19	Possible
House Finch	*Haemorhous mexicanus*	BBS1, BBS5	2024-06-12	Possible
House Wren	*Troglodytes aedon*	BBS1	2024-06-19	Possible
Least Flycatcher	*Empydonax minimus*	BBS4	2024-06-12; 2024-07-02	Possible
Mourning Dove	*Zenaida macroura*	BBS2, BBS6	2024-06-19	Possible
Northern Cardinal	*Cardinalis cardinalis*	BBS3, BBS6	2024-06-12	Probable
Northern Flicker	*Colaptes auratus*	BBS1	2024-06-19	Possible
Purple Finch	*Haemorhous purpureus*	BBS4	2024-06-12	Possible
Red-breasted Nuthatch	*Sitta canadensis*	BBS7	2024-06-19	Possible
Red-tailed Hawk	*Buteo jamaicensis*	BBS3	2024-06-12	
Red-winged Blackbird	*Agelaius phoeniceus*	BBS1, BBS2, BBS3, BBS7	2024-06-12; 2024-06-19; 2024-07-02	Observed
Ring-billed Gull	*Larus delawarensis*	BBS1	2024-06-19	Possible
Song Sparrow	*Melospiza melodia*	BBS1, BBS2, BBS3, BBS4, BBS5, BBS6, BBS7	2024-06-12; 2024-06-19; 2024-07-02	Probable

Common Name	Scientific Name	Station Observed	Date(s) Observed	Highest Breeding Evidence
Swamp Sparrow	*Melospiza georgiana*	BBS1, BBS2, BBS3, BBS4, BBS6, BBS7	2024-06-12; 2024-06-19; 2024-07-02	Probable
Veery	*Catharus fuscenscens*	BBS1, BBS2	2024-06-12; 2024-07-02	Possible
White-breasted Nuthatch	*Sitta carolinensis*	BBS4	2024-06-12	Possible
Willow Flycatcher	*Empidonax traillii*	BBS1, BBS2, BBS4	2024-06-19	Possible
Yellow Warbler	*Setophaga petechia*	BBS1, BBS2, BBS3, BBS4, BBS6, BBS7	2024-06-12; 2024-06-19	Probable