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Environmental Impact Statement
Proposed Commercial Lot Line Adjustment
106 and 122 Reis Road
Geographic Township of Huntley
Ottawa, Ontario

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Submitted to:

1694027 Ontario Inc.
106 Reis Road
Carp, Ontario
K0A 1L0

Environmental Impact Statement
Proposed Commercial Lot Line Adjustment
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Geographic Township of Huntley
Ottawa, Ontario

October 5, 2023
Project: 100165.024

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EXECUTIVE SUMMARY

GEMTEC Consulting Engineers and Scientists Limited (GEMTEC) was retained by 1694027 Ontario Inc. to complete an Environmental Impact Statement (EIS) for the property located at 106 and 122 Reis Road in the Geographic Township of Huntley, City of Ottawa, Ontario. This EIS has been completed in support of a proposed lot line adjustment and was completed in accordance with all federal, provincial and municipal policies and guidelines, as applicable.

In support of this EIS a desktop review and a field investigation were completed April 26, 2023, to identify the presence or absence of natural heritage features and Species at Risk (SAR) on-site. The focus of the site investigation was to describe, in general, the natural and physical setting of the subject property with a focus on confirming the presence or absence of natural heritage features and potential SAR or their habitat as identified in the desktop review.

Following completion of the desktop review and site investigations no natural heritage features were identified on-site or within the study area. The following SAR and their habitat were identified as having a potential to occur on-site: eastern small-foot myotis, little brown myotis, tri-colored bat and loggerhead shrike. No butternut trees were observed on-site. No regulated habitat was identified on-site.

Proposed future development includes minor grading for the creation of a drainage swale and the installation of a chain-link fence along the new property line between 106 and 122 Reis Road. A 15 m setback from the on-site watercourse has been proposed for the protection of fish habitat. The development of the drainage swale and the chain-link fence are to be permitted within the setback as to meet stormwater management and City of Ottawa requirements. All proposed work within the setback and watercourse is to be completed above the highwater mark. If no further development is permitted within the 15 m setback, no negative long-term impacts are anticipated to occur to natural heritage features on-site. Short term construction related impacts are considered to be negligible given the existing industrial and commercial land use in the study area.

Additionally, to provide protection to potential SAR and their habitat on-site, should any SAR be discovered throughout the course of the proposed works, operations should stop and the species at risk biologist with the local MECP district should be contacted immediately for further direction. Furthermore, to ensure compliance with all applicable legislation, where required, all best management practices and adherence to vegetation clearing windows for birds and bats, outlined in Section 7 should be followed to ensure no negative impacts occur to natural heritage features on-site in the event future development is to occur.

The proposed project complies with the natural heritage policies of the Provincial Policy Statement and the City of Ottawa Official Plan. No negative impacts to identified natural heritage features or

their ecological functions are anticipated as a result of the proposed project as long as all mitigation measures in Section 7 are enacted and best management practices followed.

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1.0 INTRODUCTION

GEMTEC Consulting Engineers and Scientists Limited (GEMTEC) was retained by 1694027 Ontario Inc. to complete an Environmental Impact Statement (EIS) for the properties located at 106 and 122 Reis, in the Geographic Township of Huntley, City of Ottawa, Ontario (hereafter referred to as "the subject property"). The location of the subject property is illustrated on Figure A.1 in Appendix A.

1.1 Purpose

The proponent is seeking a proposed lot line adjustment located along Reis Road, between Carp Road and Tansley Drive. Based on the information provided, a parcel of land is to be severed from 122 Reis Road and added to 106 Reis Road. In their existing state, the property at 122 Reis Road has an approximate area of 0.85 ha, while the property at 106 Reis Road has an approximate area of 0.98 ha. The proposed lot line adjustment would reduce the parcel at 122 Reis Road to 0.57 ha and increase the parcel at 106 Reis Road to 1.26 ha. Future proposed development includes minor grading for the creation of a drainage swale and the installation of a chain-link fence along the new property line between 106 and 122 Reis Road. Based on *Section 4.8 – Natural Heritage, Greenspace and the Urban Forest* of the City of Ottawa Official Plan (Ottawa, 2022) an EIS is required demonstrating that the proposed lot line adjustment will not negatively impact any potential natural heritage features, which may be present within the study area. The study area is defined as the property boundary (~ 1.83 ha) and the adjacent lands encompassing an area of 120 m beyond the property boundary. The subject project and the extents of the study area are illustrated on Figure A.2 in Appendix A.

1.2 Objective

The 2020 Provincial Policy Statement (PPS) (MMAH, 2020) issued under Section 3 of the Planning Act states that "development and site alteration shall not be permitted in: significant wetlands in Ecoregions 5E, 6E and 7E." Furthermore, the 2020 Provincial Policy Statement dictates "development and site alteration shall not be permitted in: significant wetlands in the Canadian Shield north of Ecoregion 5E, 6E and 7E, significant woodlands in 6E and 7E, significant valleylands in 6E and 7E, significant wildlife habitat and significant areas of natural and scientific interest unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions." Similarly, the PPS dictates that "development and site alteration shall not be permitted in" fish habitat or habitat of endangered or threatened species "except in accordance with provincial and federal requirements."

The objective of the work presented herein is twofold; 1) to identify and evaluate the significance of any natural heritage features, as defined in the Provincial Policy Statement (MMAH, 2020), on the subject property and within the broader study area and; 2) to assess the potential impacts from the proposed site plan control application on any natural heritage features identified and to

recommend appropriate and defensible mitigation measures to ensure the long-term protection of any natural heritage features identified.

To meet these objectives, the EIS presented herein has been completed in accordance with the following provincial and municipal regulations, policies and guidelines:

- Provincial Policy Statement (MMAH, 2020);
- Endangered Species Act (Ontario, 2007);
- Conservation Authorities Act (Ontario, 1990);
- Natural Heritage Reference Manual (OMNR, 2010);
- City of Ottawa Official Plan (Ottawa, 2022); and
- City of Ottawa EIS Guidelines (Ottawa, 2023)

1.3 Physical Setting

The subject property is comprised of two parcels municipally addressed as 122 and 106 Reis Road, in the Geographic Township of Huntley, City of Ottawa, Ontario. The subject property currently consists of cultural thicket and a light industrial sector. To the north the site is bound by both 2770 Carp Road and 124 Reis Road, and to the south and west by Carp Road. To the east the site is bound by Reis Road.

1.4 Land Use Context

The subject property is situated within a larger peri-urban area consisting of commercial, light industrial, mineral extraction, residential and agricultural land uses. The existing land use designation from the City of Ottawa is general rural area. The City of Ottawa zoning by-law is rural general industrial zone, specifically the Carp Road corridor subzone (RG5).

2.0 METHODOLOGY

2.1 Desktop Review

A desktop information gathering exercise was completed to aid in the scoping of field investigations and to gather information relating to natural heritage features which may be present on the subject project or within 1 km of the subject property. An additional component of the desktop review was to assess the potential presence of SAR to occur on the subject property or within the study boundary based on a review of publicly accessible occurrence records and a review of SAR habitat requirements and range maps.

Information regarding the potential presence of natural heritage features and SAR within the vicinity of the site was obtained from the following sources:

- Make a Map: Natural Heritage Areas (OMNRF, 2014a)
- Land Information Ontario (OMNRF, 2011);
- City of Ottawa Official Plan (City of Ottawa, 2022)
- Mississippi Valley Conservation Authority (MVCA, 2021)
- Ontario Geological Survey (OGS, 2019);
- Fisheries and Oceans Canada SAR Maps (DFO, 2019);
- Natural Heritage Information Centre Biodiversity Explorer (OMNRF, 2013);
- Breeding Bird Atlas of Ontario (Cadman et al., 2007)
- Ontario Herpetofaunal Atlas (Oldham and Weller, 2000);
- Carp River Watershed/Subwatershed Study (Robinson, 2004);
- Carp Road Corridor Community Design Plan (City of Ottawa, 2004);
- Wildlife Values Area (OMNRF, 2020a);
- Wildlife Values Site (OMNRF, 2020b); and
- Ontario Reptile and Amphibian Atlas (Ontario Nature, 2019).

2.2 Field Investigations

A field investigation was undertaken to describe, in general, the natural and physical setting of the subject property with a focus on identifying natural heritage features and any potential SAR or their habitat that may exist at the subject property.

A single field investigation was completed in support of this EIS on April 26, 2023. Site conditions during the site investigation were as follows: 5°C, sunny (80% cloud cover), Beaufort wind 2, light precipitation. Photographs of site features taken during field investigations are provided in Appendix B. A summary of all wildlife observed during the site investigation is provided in Table C.1 of Appendix C.

2.2.1 Ecological Land Classification

Vegetation communities on the subject property were delineated during the desktop review stage of this EIS using publicly available air photos and confirmed in the field on April 26, 2023, following the Ecological Land Classification System for Southern Ontario (Lee et al., 2008). Vegetation communities were confirmed in the field by employing the random meander methodology while documenting dominant vegetation species within the various vegetation community forms.

2.3 Data Analysis

An evaluation of the significance of natural heritage features, the sensitivity of identified flora and fauna and the potential impacts posed by the proposed development was undertaken through an analysis of desktop and field investigation data using the approaches and criteria outlined in the following documents:

- Natural Heritage Reference Manual (OMNR, 2010);
- Significant Wildlife Habitat Technical Guide (OMNR, 2000);
- Significant Wildlife Habitat Ecoregion Criterion Schedules (OMNRF, 2015a); and
- Significant Wildlife Habitat Mitigation Support Tool (OMNRF, 2014b).

3.0 EXISTING ENVIRONMENT

3.1 Ecoregion

The site is situated Ecoregion 6E-11 (Lake Simcoe-Rideau), which extends from Lake Huron in the west to the Ottawa River in the east. The climate of Ecoregion 6E is categorized as humid, high to moderate temperate ecoclimate with a mean annual temperature range between 4.9°C to 7.8°C with annual precipitation ranging between 759 mm to 1,087 mm (Crins et al., 2009).

The eastern portion of the Ecoregion, which the subject property is located, is underlain by glaciomarine deposits as a result of the brief post-glacial incursion of salt water from the Champlain Sea along the St. Lawrence Valley. This Ecoregion falls with Rowe's (1972) Great Lakes-St. Lawrence Forest Region, including its Huron-Ontario and Upper St. Lawrence sections, and a small part of the Middle Ottawa Forest section (Crins et al., 2009).

3.2 Study Area Land Use

Figure 1 below provides an illustration of the temporal changes in land use within the study area from 2004, 2008, 2016, and 2021 aerial imagery available from GeoOttawa.

In 2004, the subject site was in a regenerative state from past agricultural uses. No structures existed on site. A topographical low along the western property boundary and within the eastern portion of site appear to be holding standing water. Some shrub level vegetation is scattered throughout the northern portion of the property. Surrounding area land-use predominantly dominated by agricultural, some rural-residential, and industrial. Quarries are present both northwest and south of the subject site.

By 2008, development has occurred on the subject property. Both parcels of 106 and 122 Reis Road have been significantly altered with a commercial/warehouse structure on each parcel. The remaining unpaved sections of site are comprised of manicured lawn, with some partially regenerated areas along the boundary of 106 and 122 Reis Road. The surrounding area has remained predominantly the same with some further industrial development occurring north of the subject property.

In 2016, the subject site is unchanged since 2008, and remains in its present-day state. Development in the surrounding area expands to include more industrial/commercial buildings.

By 2021, the subject site is unchanged since 2016, and remains in its present-day state. Industrial and commercial development continues in the surrounding area, with minor changes to the northeast of the subject property.

Figure 1 – Temporal Changes in Land Use within Study Area

3.2.1 Carp River Watershed/Subwatershed Study & Carp Road Corridor Community Design Plan

The Carp River Watershed/Subwatershed Study (Robinson, 2004) was completed to provide, in part, initial guidance on approaches required to protect and restore environmental values within the Carp River watershed. The Carp River watershed encompasses an area of approximately 30,600 ha surrounding the former municipalities of West Carleton, Kanata and Goulbourn. The Carp River Watershed/Subwatershed Study (CRSWS) identifies opportunities and constraints for improvement of the Carp River Watershed while providing a series of Best Management Practices (BMPs) that may be implemented in order to protect, enhance or restore the environment. The desktop review identified a single watercourse/drainage ditch within the study area, however the CRSWS has not classified it as a cold-water stream. As such, under the recommendations provided by the CRSWS, the watercourse should receive a 15 m setback and revegetating up to 50% of the total stream length with native wood, riparian vegetation.

The Carp Road Corridor Community Design Plan (CRC CDP) is a Council approved guide to the long-term growth and development of the Carp Road Corridor. The CRC CDP provides guidelines

for the day-to-day decision-making on land use planning and sets out the community's priorities for the future (Ottawa, 2004). The Carp Road Corridor extends from Stittsville to Fitzroy Harbour and is a significant rural employment area. Schedule 2 of the CRC CDP identifies the subject property as a high recharge area, and therefore requires a groundwater impact assessment.

3.3 Landforms, Soils and Bedrock Geology

The topography of the site is relatively flat, with a very slight dip in elevation towards the northeast. The site has a topographical high of 115 mASL along the northwestern boundary of the site and a topographical low of 113 mASL in the eastern portion of site.

A single topographical landform, as mapped by Chapman and Putnam (1984) is described on the subject property, sand plains of the Ottawa Valley Clay Plains.

The Ontario Geological Survey (OGS, 2019) identifies one surficial soil unit on the subject property, coarse textured glaciomarine deposits. These deposits consist of sand, gravel, minor silt and clay with littoral, foreshore, and basinal deposits. Part of the study area in the northeast corner is situated over stone-poor sandy silt to silty sand-textured till on Paleozoic terrain.

Bedrock on the site is composed of the Ottawa Group, Simcoe Group and Shadow Lake Formation comprised of limestone, dolostone, shale, arkose and sandstone.

3.4 Surface Water, Groundwater and Fish Habitat

The desktop review identified a single unnamed watercourse mapped by GeoOttawa and the MVCA within the study area and within the eastern portion of the subject property.

The field investigation conducted on April 26, 2023 confirmed the presence of the surface water feature as mapped by GeoOttawa and the MVCA. Aerial photography indicates the unnamed watercourse has been present since at least 2004.

The watercourse was observed to have slow flowing to standing water, and dry areas limiting connectivity were observed throughout. The water was observed to be mostly clear, and to have depths of 3 – 5 cm at the time of the site investigation. Barriers to fish passage were observed through out in the form of build ups of organic debris and dry patches. The watercourse was observed to offer little fish habitat, with the banks being mostly evenly graded and no erosion present. In water vegetation was limited to green algae, reflective of eutrophic conditions. Riparian vegetation was difficult to assess at the time of the site investigation but was observed to be dense during the summer months based on the abundance of decaying herbaceous vegetation. Based on observations during the site investigation and the desktop review, the unnamed watercourse appears to be a relic of drainage or irrigation channels created for the historical agricultural land use. Based on the mapping by GeoOttawa and the MVCA, the unnamed watercourse originates approximately 1 km west of the subject property and discharges into Huntley Creek approximately 275 metres southeast of the subject property.

No other surface water or fish habitat features were identified on-site.

A fisheries assessment was not conducted as part of this EIS and no fish were directly observed during the field investigation. However, based on observations from the field investigations primarily associated with limited hydrology and connectivity outside of the spring freshet and storm events, the watercourse does not support direct fish habitat. However, based on the connectivity to known downstream fish habitat, the unnamed watercourse is assumed to provide indirect fish habitat by contributing to baseflows of downstream fish habitat within Huntley Creek.

Groundwater investigations were not completed in support of this EIS.

3.5 Vegetation Communities

Vegetation communities on-site were characterized by GEMTEC on April 26, 2023, following protocols utilized in the Southern Ontario Ecological Land Classification System (Lee et al., 2008). Two vegetation communities are described on-site, a cultural thicket (CUT) and a light industrial sector (CVC_2). A summary of the vegetation communities identified on-site is provided below, and the communities are illustrated on Figure A.3 in Appendix A.

A single vegetation community was identified on-site, that of constructed commercial and institutional light industry (CVC_2), occupying 1.71 ha. Most of this community was unvegetated and occupied by stone working businesses (stone/marble storage, inventory, and parking). Some trees were present along the western and eastern edges of the community, consisting of young, planted oak (*Quercus sp.*), poplar (*Populus sp.*) and white spruce (*Picea glauca*). Shrub level vegetation was absent. Some ground cover vegetation was present and mainly consisted of manicured lawn, wild carrot (*Daucus carota*), dogwood (*Cornus sp.*), staghorn sumac (*Rhus thyphina*), and reeds (*Phragmites sp.*).

A small area of cultural thicket was observed along the northern boundary of the property, extending along the eastern boundary for a total of 0.12 ha. As this community is less than 0.5 ha in-size, it is considered an inclusion within the light industry area community. The watercourse on-site is located within this cultural thicket area. This community was sparsely covered with trees, including willow (*Salix sp.*), poplar, and white birch (*Betula papyrifera*). Shrub level vegetation was dominant and included common buckthorn (*Rhamnus cathartica*), dogwood, and speckled alder (*Aldus incana*). Ground cover vegetation was reflective of riparian habitats and included cattails (*Typha sp.*), reeds, and red osier dogwood (*Cornus sericea*). In-water vegetation included cattails, reeds, and an abundance of green algae.

3.6 Wildlife

Wildlife observed on-site and within the study area during field investigation completed in 2023 are summarized in Table C.1 in Appendix C.

4.0 NATURAL HERITAGE FEATURES

Natural heritage features are defined in the PPS as “features and areas, including *significant wetlands, significant coastal wetlands, fish habitat, significant woodlands* south and east of the Canadian Shield, *significant valleylands* south and east of the Canadian shield, *significant habitats of endangered species and threatened species, significant wildlife habitat* and *significant areas of natural and scientific interest*, which are important for their environmental and social values as a legacy of the natural landscape of an area”.

4.1 Significant Wetlands

As described in the Natural Heritage Reference Manual (OMNR, 2010), wetlands mean “lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface.” While *significant* in regards to wetlands means “an area identified as provincially significant by the Ontario Ministry of Natural Resources and Forestry using evaluation procedures established by the Province, as amended from time to time.” As mentioned in Section 1.2, the PPS dictates “development or site alteration shall not be permitted in significant wetlands in Ecoregion 5E, 6E, 7E”

No provincially significant wetlands or local wetlands were identified during the desktop review, nor were they identified on-site.

As no provincially significant wetlands, or local wetlands were identified on-site, they are not discussed or evaluated further in this EIS.

4.2 Significant Woodlands

Significant woodlands are defined in the Natural Heritage Reference Manual (OMNR, 2010) as “an area which is ecologically important in terms of features such as species composition, age of trees and stand history; functionally important due to its contribution to the broader landscape because of its location, size or due to the amount of forest cover in the planning area; or economically important due to site quality, species composition, or past management history.”

At the local scale, significant woodlands are defined and designated by the local planning authority. Generally, most planning authorities have defined significant woodlands as any woodland that contains any of the four criteria listed in Section 7.2 of the natural heritage reference manual (OMNR, 2010), including: woodland size, ecological functions, uncommon characteristics and economic and social functional values. Furthermore, the City of Ottawa provides a supplementary document *Significant Woodland: Guidelines for Identification, Evaluation, and Impact Assessment* (Ottawa, 2023) to evaluate woodlands and ensure compliance with the city’s policies.

As outlined in Section 3.5 above, the site is primarily vacant with sparse treed hedgerow along the northern and eastern property boundaries. No woodland or forest communities have been

identified on-site or within the study area during the desktop review or site investigation. As such, significant woodlands are not present on-site or within the study area and they are not discussed or evaluated further in this EIS.

4.3 Significant Valleylands

Valleylands are defined in the natural heritage reference manual (OMNR, 2010) as ‘a natural area that occurs in a valley or other landform depression that has water flowing through or standing for some period of time”. The identification and evaluation of significant valleys lands in Ontario is based on the recommended criteria from the MNRF and is the responsibility of local planning authorities.

In Southern Ontario, conservation authorities have identified valleylands as part of their regulation mapping (i.e., floodplain mapping); however, where valleys lands have not been defined, their physical boundaries are generally determined as the ‘top-of-bank’ or ‘top-of-slope’ associated with a watercourse. For less well-defined valleys, the physical boundary may be defined by riparian vegetation, flooding hazard limits, ordinary high water marks or the width of the stream meander belt (OMNR, 2010).

As discussed in Section 3.2, the site is relatively flat. Furthermore, no valleylands were identified on-site during the desktop review or the site investigations. As such, significant valleylands are not discussed or evaluated further in this EIS.

4.4 Significant Areas of Natural and Scientific Interest

The MNRF identifies two types of areas of natural and scientific interest (ANSI) in Ontario: life sciences ANSIs typically represent significant segments of Ontario’s biodiversity and natural landscapes, while earth science ANSIs typically represent significant examples of bedrock, fossils or landforms in Ontario (OMNR, 2010).

No ANSI have been identified on-site or adjacent to the site during the desktop review or during site investigations. Therefore, ANSI are not discussed or evaluated further in this EIS.

4.5 Significant Wildlife Habitat

The natural heritage reference manual (OMNR, 2010), in combination with the significant wildlife habitat technical guide (MNRF, 2000) and the significant wildlife habitat ecoregion criterion schedules (MNRF, 2015) were used to identify and evaluated potential significant wildlife habitat on-site. The significant wildlife habitat is broadly categorized as habitats of seasonal concentration of animals, rare vegetation communities, specialized habitats for wildlife, habitats of species of conservation concern and animal movement corridors. Table C.2, C.3, C.4 and C.5 in Appendix C, provide the screening rationale for each category of significant wildlife habitat, respectively.

4.5.1 Habitats of Seasonal Concentrations of Animals

Seasonal concentration areas are habitats where large numbers of species congregate at one particular time of the year. The significant wildlife habitat technical guides (OMNR, 2000) and significant wildlife habitat ecoregion criterion schedules (OMNRF, 2015a) identify 12 types of seasonal concentration habitats that may be considered significant wildlife habitat. These 12 types of seasonal habitat are presented in Table C.2 in Appendix C, including a brief description of the rationale as to why they are or are not assessed further in this EIS.

Following review of Table C.2 in Appendix C, no habitats of seasonal concentrations of animals have been identified on-site, as such they are not discussed or evaluated further in this EIS.

4.5.2 Rare Vegetation Communities

Rare vegetation communities in the province are described generally as those with an S1 to S3 ranking by the NHIC, and typically include communities such as sand barrens, alvars, old growth forests, savannahs and tallgrass prairies.

The vegetation communities identified on-site and described in Section 3.4 of this report are not ranked by the NHIC as S1, S2 or S3 and are therefore not considered to be rare vegetation communities. As such, rare vegetation communities are not discussed or evaluated further in this EIS.

4.5.3 Specialized Habitats for Wildlife

Specialized wildlife habitats are microhabitats that provide a critical resource to some groups of wildlife. The significant wildlife habitat technical guide (OMNR, 2000), defines eight specialized habitats that may constitute significant wildlife habitat, these eight types of specialized wildlife habitats are evaluated in Table C.3 in Appendix C.

Following review of Table C.3 in Appendix C, no specialized habitats for wildlife have been identified on-site or within the study area and are not evaluated or discussed further in this EIS.

4.5.4 Habitats of Species of Conservation Concern

Provincial rankings are used by the Natural Heritage Information Centre to set protection priorities for rare species, similar to those described in Section 4.5.2 above for vegetation communities. Provincial rankings (S-ranks), are not legal designations such as those used to define the various protection statuses of species at risk, they are only intended to consider factors within the political boundaries of Ontario that might influence a particular species abundance, distribution or population trend.

Based on the guidance provided in the Significant Wildlife Habitat Ecoregion Criterion Schedules (MNRF, 2015), when a plant or animal element occurrence is recorded for any species with an S-rank of S1 (extremely rare), S2 (very rare), S3 (rare to uncommon) or SH (historically present),

the corresponding vegetation ecosite is considered to provide *candidate* habitat for species of conservation concern and further consideration within the EIS is warranted.

The Significant Wildlife Habitat Ecoregion Criterion Schedules (OMNRF, 2015), provides five general habitat types known to support a wide range of species of conservation concern in Ontario. The five general habitat types for Ecoregion 6E-11 are provided in Table C.4 in Appendix C, including a brief rationale as to why they are or are not considered further in this EIS. Following review of Table C.4 in Appendix C, no habitat of species of conservation concern have been identified on-site or within the study area and are not evaluated or discussed further in this EIS.

4.5.5 Animal Movement Corridors

Animal movement corridors are elongated areas used by wildlife to move from one habitat to another and allow for the seasonal migration of animals (OMNRF, 2015). The Significant Wildlife Habitat Ecoregion Criterion Schedules for Ecoregion 6E-11 (OMNRF, 2015), identifies two types of animal movement corridor: amphibian movement corridors and deer movement corridors. As per guidance presented in MNRF, 2015, animal movement corridors should only be identified as significant wildlife habitat when a *confirmed or candidate* significant wildlife habitat has been identified by the MNRF district office or by the regional planning authority.

Following review of Table C.5 in Appendix C, no animal movement corridors have been identified on-site. Furthermore, the MNRF has not identified any animal movement corridors on the publicly available data sets for wildlife values area (OMNRF, 2020a) or wildlife values site (OMNRF, 2020b). As such, animal movement corridors are not discussed or evaluated further in this EIS.

4.6 Fish Habitat

The protection of fish and fish habitat is a federal responsibility and is administered by the Department of Fisheries and Oceans Canada (DFO). Fish habitat as defined in the Fisheries Act (Canada, 1985) means, “spawning grounds and nursery, rearing food supply and migration areas on which fish depend directly or indirectly in order to carry out their life processes.”

When development is unable to avoid resulting in the harmful alteration, disturbance or destruction of fish habitat from typical project impacts such as temperature change, sedimentation, infilling, reduction of nutrient and food supply, etc., an authorization under the Fisheries Act is required for the project to proceed.

As identified during the desktop review of GeoOttawa and the MVCA, and confirmed during the site investigation, an unnamed watercourse occurs within the study area and follows the northern and eastern property boundaries before continuing south where it discharges in Huntley Creek.

Observations from the site investigation indicate the on-site watercourse was in a eutrophic state, with noted barriers to fish passage, limited connectivity and hydroperiod, low water depths, and a lack of fish habitat elements. No direct observations of fish were noted. Furthermore, due to the

nature of the proposed development; a drainage swale and chain fence along the new lot, only minor impacts associated with short term construction are anticipated. No long-term impacts on the function of the watercourse are anticipated to occur from the proposed development.

A fisheries assessment was not conducted as part of this EIS, however, based on observations (limited hydrology and connectivity outside of the spring freshet and storm events, the on-site surface water feature is not likely to support direct fish habitat, and is more reflective of a municipal drainage ditch. Based on connectivity to confirmed downstream fish habitat (Huntley Creek), the watercourse is assumed to provide fish habitat in an indirect nature (contributing baseflows, limited functions outside of the freshet or following storm events). Indirect fish habitat on-site is illustrated on Figure A.4 in Appendix A. Potential impacts to indirect fish habitat on-site are discussed in Section 6 below.

4.7 Species at Risk

The probability of occurrence for species at risk to occur on-site and within the broader study area was determined through the desktop review stage of this EIS, as described in Section 2.1, and through the site specific surveys conducted as part of this EIS, outlined in Section 2.2.

Table C.6 in Appendix C, provides a summary of all species at risk which were determined to have the potential to occur on-site or within the broader study area, their protection status under the provincial Endangered Species Act (Ontario, 2007), their regional distribution, their probability of occurrence and a brief rationale of that probability. Impacts to endangered or threatened SAR determined to have a moderate or high potential to occur on-site or within the broader study area are discussed further in the Section 6.3.

5.0 PROPOSED PROJECT

The proposed project assessed for potential impacts on the natural heritage features determined to be present within the broader study area includes the proposed lot line adjustment that would see a 0.28 ha parcel of land severed from 122 Reis Road and added to 106 Reis Road, and subsequent extension of gravel storage area within the newly enlarged parcel at 106 Reis Road.

The act of severing lots from the existing property parcel at 122 Reis Road and subsequent lot enlargement of 106 Reis Road is not expected to result in any physical alteration to the subject property.

Following the land severance and lot enlargement, future development at the property is limited to the creation of a drainage swale and installation of a chain link fence along the new property line. This work is anticipated to require vegetation grubbing, fill placement, and elevation grading. No new buildings, laneways, driveways or other development outside of the proposed ditch and fence are proposed.

The proposed lot line adjustment and future development are displayed on Figure A.5 in Appendix A.

6.0 IMPACT ASSESSMENT

Potential impacts to natural heritage features on-site and within the broader study area are assessed for direct, indirect and cumulative effects based on the proposed project outlined in Section 5. Natural heritage features identified in Section 4 of this report as present or likely to be present are discussed in the subsections below.

As mentioned in Section 5, the act of severing lots and the subsequent lot enlargement is not anticipated to negatively impact natural heritage features on-site. However, the effects from the subsequent enlargement of gravel storage area may include a minor increase in storm water generation, potentially increased nutrient loading to adjacent surface water features, and a minor loss of cultural thicket habitat.

6.1 Fish Habitat

According to the Provincial Policy Statement (MMAH, 2020), “development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.” Fish habitat as defined in the Fisheries Act (Canada, 1985) means “spawning grounds and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly in order to carry out their life processes.”

When activities are unable to avoid or mitigate harm to fish or fish habitat from typical project impacts such as temperature change, sedimentation, infilling, reduction of nutrient and food supply, etc., an authorization under Subsection 35 (2) of the Fisheries Act is required for the project to proceed without contravening the Act.

The unnamed watercourse on-site is assumed to provide indirect fish habitat during the spring freshet or other large storm events by contributing to baseflow conditions of downstream fish habitat. The proposed project, a lot line adjustment, proposed drainage swale, and fencing along the new lot line is anticipated to require minor direct impacts to indirect fish habitat on-site.

Impacts to fish habitat during the excavation of the drainage swale and installation of the fence include increases in sediment loading and construction debris, and removal of riparian and aquatic vegetation and cover along the proposed swale banks. Following construction, the swale and fence will not impede the continued indirect fish habitat function of the unnamed watercourse.

To ensure no further work is conducted within the watercourse post-development, mitigation by means of a setback from the watercourse is recommended. Details regarding the setback are provided in Section 7 below.

6.2 Species at Risk

As outlined in the Endangered Species Act (Ontario, 2007), only species listed as threatened or endangered and their general habitat receive automatic protection. When a species-specific

recovery strategy is developed, a specific habitat regulation will be established, which eventually replaces the automatic habitat protection. Species of special concern and their habitat do not receive protection under the ESA.

Potential impacts associated with the proposed project to threatened or endangered species identified as having a moderate or high potential to occur on-site in Section 4.7, are discussed on a species-by-species basis in the subsections below.

6.2.1 Loggerhead Shrike

Loggerhead shrike (*Lanius ludovicianus*) is a medium-sized grassland songbird of about 21-23 cm in length, referred to as a passerine raptor (Cadman et al., 2007). The top of the head, back, and rump area are dark grey with the underparts being white to greyish. The wings are black with a white patch that is easily perceived during flight. A black facial mask covers the eye and extends over the beak. Loggerhead shrikes are notable for its raptor-like beak and its predatory behavior, often impaling prey for ease of consumption and to store in times of food scarcity (Cadman et al., 2007).

The loggerhead shrike was once well established in southern Ontario, likely as a result of the clearing of land for agriculture throughout the late 19th century (Cadman et al., 2007). The population has seen a significant decline in Ontario in part due to habitat loss from the natural succession of abandoned agricultural fields transitioning back to forested habitat on the Canadian shield and through the northern portion of the Lake Simcoe-Rideau region. However, suitable unoccupied habitat continues to exist within the region, indicating other factors than habitat loss are contributing to decline, which are thought to include road mortality, pesticides, predation, weather extremes, and the West Nile virus (Cadman et al., 2007; COSEWIC, 2014). Between the first and second breeding bird atlas, the probability of observation declined by 63% province wide (Cadman et al., 2007). The current distribution of loggerhead shrike is concentrated through the Lake Simcoe-Rideau region, primarily within the Carden and Napanee core breeding areas (Cadman et al., 2007).

The loggerhead shrike prefers open areas dominated by grasses and/or forbs, interspersed with scattered shrubs or trees and bare ground for its breeding habitat. Suitable habitat generally includes pasture, old fields, prairie, savannah, pinyon-juniper woodland, shrub-steppe, and alvars (COSEWIC, 2014). Winter and migration habitat are typically similar to breeding habitat requirements (COSEWIC, 2014). Territory size ranges from 2.7 to 47.0 ha and is corelated to the abundance of trees and shrubs – increasing perch density will decrease territory size (COSEWIC, 2014). In the eastern United States and Ontario, shrikes appear to prefer areas with relatively short grass, in which they may have greater foraging success or where they can forage with more energetic efficiency (COSEWIC, 2014).

While the species has historic observations within the broader surrounding area, the subject site and immediate surrounding study area do not provide the necessary habitat conditions as detailed

in the General Habitat Description “large, open, frequently grazed grasslands situated on limestone bedrock with shallow soil or other substrates” (MECP, 2021). As suitable habitat does not occur on-site, loggerhead shrike are not expected to occur on-site and no negative impacts are anticipated to occur to loggerhead shrike or their regulated habitat from the proposed project. As such, loggerhead shrike are not discussed or evaluated further in this EIS.

6.2.2 Eastern Small-footed Myotis

Eastern small-footed myotis (*Myotis leibii*) is the smallest (typically 3-5 g), insectivorous bat found in Ontario. The fur of an eastern small-footed myotis is golden-brown in colour, with a distinct black mask across the face. The eastern small-footed myotis is very similar in appearance to the little brown myotis, and is distinguishable by their small foot and keeled calcar (Fraser, MacKenzie & Davy, 2007).

The eastern small-footed myotis is found throughout eastern North America. In Ontario the species has been observed in the areas sough of Lake Superior across to the Ontario-Quebec border (Humphrey, 2017).

Eastern small-footed myotis overwinter primarily in caves and abandoned mines with low humidity and temperatures and stable microclimates (Humphrey, 2017). In comparison to other Ontario bat species, they are able to tolerate much colder temperatures, drier conditions and draftier locations for hibernating (Humphrey, 2017). During the spring and summer months, they utilize a variety of habitats for roosting, including under rocks or rock outcrops, in buildings, under bridges, or in caves, mines or hollow trees (Ontario, 2019a).

Although the habitat on-site does not meet the requirements to support bat maternity colonies, given the availability of habitat and buildings on-site and within the study area, there is a potential for eastern small-footed myotis to occur on the property, primarily for foraging or non-maternal roosting. Impacts to eastern small-footed myotis are primarily associated with encroachment and increased wildlife-human interaction. Mitigation measures intended to protect eastern small-footed myotis from impacts of the proposed development are discussed in Section 7.

6.2.3 Little Brown Myotis

Little brown myotis (*Myotis lucifugus*) is a small (typically 4-11 g), insectivorous bat. The fur of a little brown myotis is bi-coloured; fur is a glossy brown with a darker coloured base. The tragus of the little brown myotis is long and thin, with a rounded tip (Fraser, MacKenzie & Davy, 2007).

In Canada, little brown myotis’ occur throughout all of the provinces and territories (except Nunavut), with its range extending south through the majority of the United States as well. In Ontario, the little brown myotis is widespread in southern Ontario and has been found as far north as Moose Factory and Favourable Lake (Ontario, 2019b).

Little brown myotis overwinter in caves and abandoned mines, they require highly humid conditions and temperatures that remain above the freezing mark (Ontario, 2019b). During the summer months, maternity colonies are often located in buildings or large-diameter trees. Little brown myotis roost in trees and buildings. Foraging occurs over water and along waterways, forest edges and in gaps in the forest. Open fields and clear-cuts are not typically utilized for foraging (COSEWIC, 2013b).

Although the habitat on-site does not meet the requirements to support bat maternity colonies, given the availability of habitat and buildings on-site and within the study area, there is a potential for little brown myotis to occur on the property, primarily for foraging or non-maternal roosting. Impacts to little brown myotis are primarily associated with encroachment and increased wildlife-human interaction. Mitigation measures intended to protect little brown myotis from impacts of the proposed development are discussed in Section 7.

6.2.4 Tri-colored Bat

Tri-colored bat (*Perimyotis subflavos*) is a small (typically 5-7 g), insectivorous bat. The fur is uniformly coloured on the ventral and dorsal sides, however when parted fur shows three distinct colour bands. The base of the hair is blackish, with a blonde middle and brownish tip. The snout of the tri-coloured bat is also distinct, with swollen bulbous glands present (Fraser, MacKenzie & Davy, 2007).

In Canada, the tri-colored bat has only been recorded in southern parts of Nova Scotia, New Brunswick, Quebec and central Ontario. In Ontario it occurs primarily from the southern edge of Lake Superior across to the Ontario-Quebec border and south (COSEWIC, 2013).

Tri-colored bat overwinter in in caves or mines, and have very rigid habitat requirements; they typically roosting the deepest parts where temperatures are the least variable, and have the strongest correlation with humidity levels and warmer temperatures (COSEWIC, 2013). In the spring and summer, tri-colored bat utilize trees, rock crevices and buildings for maternity colonies. Foraging is mainly done over watercourses and streamside vegetation (COSEWIC, 2013).

Although the habitat on-site does not meet the requirements to support bat maternity colonies, given the availability of summer roost habitat and buildings on-site and within the study area, there is a potential for tri-colored bat to occur on the property, primarily for foraging or non-maternal roosting. Impacts to tri-colored bat are primarily associated with encroachment and increased wildlife-human interaction. Mitigation measures intended to protect tri-colored bat from impacts of the proposed development are discussed in Section 7.

6.3 Cumulative Impacts

Potential cumulative impacts associated with the proposed project include a minor loss of cultural thicket habitat, primarily for avian species.

It should be noted that the cultural thicket inclusion on-site is heavily fragmented by surrounding industrial land use and is of poor quality to support animal presence.

Cumulative impacts such as those listed above can be mitigated by implementing the proposed best practice timing windows and recommended mitigation measures outlined in Section 7 below.

7.0 RECOMMENDED AVOIDANCE AND MITIGATION MEASURES

The following avoidance and mitigation measures have been recommended by GEMTEC in order to minimize or eliminate potential environmental impacts identified in Section 6.

For the purpose of this report, a setback is defined as the minimum required distance between any structure, development or disturbance and a specified line. A buffer, for the purpose of this report, is defined as the area located between a natural heritage feature and the prescribed setback. For the purpose of the following subsections, buffers should be located between natural heritage features and lands subject to development or alteration, be permanently vegetated by native or non-invasive, self-sustaining vegetation and protect the natural heritage feature against the impact of the adjacent land use.

Vegetated buffers, particularly buffers that are vegetated with a mix of grassy herbaceous vegetation and shrubby or woody vegetation are most effective in mitigating impacts associated with anthropogenic activities in adjacent lands (Beacon, 2012). Buffers recommended in the following subsections and illustrated on Figure A.6 of Appendix A. In the subsections below, where possible, literature references for studies used as the basis of the recommended buffer widths are provided.

Beacon Environmental Review of Ecological Buffers (2012), provides a range for buffer widths to protect various NHFs based on the current science. The buffers are presented in a way that determines the risk of not achieving the desired buffer function (i.e. high, moderate and low). The functions analysed include water quantity, water quality, screening or human disturbance/changes in land use, hazard mitigation zone and core habitat protection.

7.1 Fish Habitat

No negative impacts on fish habitat are anticipated as a result of this project if all compensation and mitigation measures recommended below are enacted and best management practices followed.

Watercourse buffer widths have a moderate risk of not providing adequate mitigation for water quality impacts and for human disturbance/land use change impacts at widths between 11 metre and 30 metre and high risk at widths of less than 5 metre to 10 metre. Watercourse buffer widths have a high risk of not providing adequate mitigation for core habitat protection at widths between 5 metre and 20 metre (Beacon, 2012). In consideration of the on-site watercourse and the nature of the proposed development, a minimum 15 metre setback from the watercourse is recommended and is sufficient to protect the watercourse and its associated habitat. No development, site alteration or vegetation removal other than the proposed drainage swale and fence, is permitted within this 15 metre setback. The 15 m setback is consistent with the recommendations from the Carp River Watershed/Subwatershed Study (Robinson, 2004).

As no new buildings, laneways, parking lots, etc., are proposed as part of this project, impacts to fish habitat are limited to the creation of the drainage swale and fence installation. It is understood that the development within the proposed setback will be limited to the minor vegetation grubbing, grading, and fill placement associated with the creation of a drainage swale and installation of a chain-link fence. The drainage swale will be required as per the stormwater management plan prepared for the properties by McIntosh Perry under different cover. The chain-link fence will be required to address a City of Ottawa requirement that gravel storage areas be fenced off from the street. All work to complete the drainage swale and chain-link fence will be done above the highwater mark. No further future development, site alteration or vegetation removal is permitted within this 15 metre setback. The 15 m setback is consistent with the recommendations from the Carp River Watershed/Subwatershed Study (Robinson, 2004).

The following mitigation measures are provided by GEMTEC in order to minimize or eliminate potential impacts to fish and fish habitat. General mitigation measures recommended for the protection of water quality and fish habitat include:

- A 15 metre wide buffer from the identified watercourse should be adhered to in order to protect ecological function and associated habitat.
- Buffers should be comprised of a mixture of native and non-invasive, self-sustaining trees, shrubs and tall grasses.
- All future development and construction activities within the study area, including ditching, culvert installation, erosion and sediment control and storm water management should be completed in accordance with the Ontario Provincial Standard Specification 182 and OPSS 805.
- No in-water work should occur between March 15 and June 30 of any year to protect spawning fish habitat adjacent to the development area. All in-water habitat features, including aquatic vegetation, natural woody debris and boulders should be left in their current locations in the near shore area.
- Any in-water work must be completed in the dry. If in-water work is required to permit the ditching, a DFO Request for Review maybe required.
- Silt fencing should be installed along all setbacks to provide visual demarcation of the setbacks and to prevent machinery encroachment and sediment transport.
- Install and maintain effective sediment and erosion control measures before starting work in or around water.
- Schedule work to avoid wet, windy and rainy periods.
- When native soil is exposed, sediment and erosion control work in the form of heavy-duty sediment fencing shall be positioned along the down gradient edge of any construction envelopes adjacent to waterbodies.
- In order to protect fish habitat from contamination, it is recommended that all machinery be maintained in good working condition and that all machinery be fueled a minimum of 30 m from the high water mark.

- Any temporary storage of aggregate material shall be set back from the water's edge by no less than 40 m and be contained by heavy-duty silt fencing.
- Maintain as much permeable surface area as possible in future development plans to limit the generation of stormwater runoff.

7.2 Species at Risk

7.2.1 Eastern Small-footed Myotis, Little Brown Myotis & Tri-colored Bat

In addition to no SAR observations, no critical habitat for SAR bats (cave, crevice or maternity roosts) were identified on-site. While tree and vegetation removal is not anticipated to be required, in accordance with MECP best management practices, to protect roosting and foraging bats, tree removal where required should take place outside of the spring and summer active season (typically April 1 to September 30), when bats are more likely to be using forest habitat. Similarly, prior to removal of existing site structures, a bat exit survey should be completed if removal cannot adhere to the spring and summer active season. If vegetation clearing must be conducted during the spring and summer timing window than a roost survey should be conducted be a qualified professional.

In GEMTECs experience on similar development applications and consultation with the MECP for projects and properties of similar size and scale, the above mitigation/avoidance measures are sufficient to ensure no negative impacts to SAR bats. In eastern Ontario habitat is not a limiting factor, as such the MECP recommends the use of avoidance timing window for clearing of trees (>10cm in diameter) in order to avoid impacts to SAR bat species. As long as timing windows can be adhered to, the project will not impact SAR bats, and it is GEMTECs opinion that no further consultation with the MECP is required to address impacts to SAR bats.

Should any components of the proposed project require tree clearing within between April 1 and September 30, further consultation with the MECP may be required.

7.3 Wildlife

As per Section 5, it is not anticipated that the proposed development will result in the physical alteration of the property. The following avoidance and mitigation measures are provided in the event that any further development or construction is to occur within the subject property in an effort to minimize impacts to on-site and off-site wildlife:

- To protect wildlife during construction of the additional gravel storage areas and any future proposed developments, construction should be completed in accordance with the best practices outlined in Protocols for Wildlife Protection During Construction, from the City of Ottawa (Ottawa, 2022).

- While no new structural development is proposed at this time, should any construction activities be required, site plans should incorporate the City of Ottawa Bird Safe Guidelines to inform landscape and lighting design to minimize the threat of bird collisions.
- Vegetation removal, if required, should occur outside of April 1 to September 30 to avoid the key breeding bird period and bat summer active season. The timing window provides protection of migratory birds, roosting bats and avoids contravention of the Migratory Bird Convention Act and Endangered Species Act. If vegetation clearing activities must take place during the aforementioned timing window than a nest and roost survey shall be conducted by a qualified professional.
- Should any species at risk be discovered throughout the course of the proposed project, the species at risk biologist with the local MECP district shall be contacted immediately and operations ceased to avoid any negative impacts to species at risk or their habitat until further direction is provided by the MECP.

7.4 Best Practice Measures for Mitigation of Cumulative Impacts

The following best practice measures are provided for the mitigation of general cumulative impacts should further development occur on-site.

- To protect trees identified to be retained during the proposed project, the Critical Root Zone (CRZ) should be identified and fenced. The CRZ is defined as 10 cm from the base of the tree for every centimetre in diameter of the tree trunk measured at breast height.
- Silt fencing should be installed along all setbacks to provide visual demarcation of the setbacks and to prevent machinery encroachment and sediment transport.
- Erosion and sediment control measures should be maintained until all disturbed ground has been permanently stabilized.
- Consideration should be given to landscape planting with native tree species indicative of the Great Lakes – St. Lawrence Forest Region, such as white cedar, white spruce, red maple, and red oak.

7.5 Carp River Watershed/Subwatershed Study & Carp Road Corridor Community Design Plan BMPs

As discussed in Section 5, It is understood that the development within the proposed setback will be limited to the minor vegetation grubbing, grading, and fill placement associated with the creation of a drainage swale and installation of a chain-link fence.

The site contains a single watercourse, accordingly BMPs relating to watercourse buffers and stream restoration apply to the proposed project. As outlined by Carp River Watershed/Subwatershed BMPs, the recommended setback of 15 metres and revegetating up to 50% of the total stream length with native woody, riparian vegetation should be adhered to. As mentioned in Section 7.1, a 15 metre buffer is recommended to protect the watercourse identified

within the study area, which will satisfy the BMP outlined in the Carp River Watershed/Subwatershed study. No development beyond the proposed drainage swale and fence are to be permitted within the 15 m setback.

With respect to terrestrial systems, the CRC CDP (Robinson, 2004) highlights the need for the protection of core woodland areas (woodlands greater than 50 years of age), riparian habitats and natural linkage corridors. However, as the site does not contain significant urban woodlands, riparian habitat or natural linkage corridors, the environmental protection recommendations from the CRC CDP do not directly apply to the site or the proposed development. Furthermore, the environmental protection measures of the CRC CDP relate to environmental features shown on Schedule 2 of the CRC CDP; none of which occur on the site.

8.0 CONCLUSIONS

The proposed project supported by this EIS is the proposed lot line adjustment that would see a 0.28 ha parcel of land severed from 122 Reis Road and added to 106 Reis Road. Future development is anticipated in the form of a drainage swale and a chain-link fence along the new property line.

Based on the results of the impact analysis, impacts to the natural environment are anticipated to be minimal to non-existent. Provided that mitigation measures recommended in Section 7 are implemented as proposed, no significant residual negative impacts are anticipated from the proposed future development.

Following review of the information pertaining to the natural heritage features of the site, the following general conclusions are provided by GEMTEC in regards to the Environmental Impact Statement.

- No significant negative impacts to natural heritage features identified on-site, including surface water features, significant wildlife habitat, and habitats of species at risk, from the proposed lot line adjustment and enlargement of gravel storage areas are anticipated.
- The proposed project complies with the natural heritage policies of the Provincial Policy Statement.
- The proposed development complies with the natural heritage polices of the City of Ottawa Official Plan, the Carp Road Corridor Community Development Plan and the Carp River Watershed/Subwatershed Study.

9.0 LIMITATION OF LIABILITY

This report and the work referred to within it have been undertaken by GEMTEC Consulting Engineers and Scientists Ltd (GEMTEC) and prepared for 1694027 Ontario Inc. and is intended for the exclusive use of 1694027 Ontario Inc.. This report may not be relied upon by any other person or entity without the express written consent of GEMTEC and 1694027 Ontario Inc. Nothing in this report is intended to provide a legal opinion.

The investigation undertaken by GEMTEC with respect to this report and any conclusions or recommendations made in this report reflect the best judgements of GEMTEC based on the site conditions observed during the investigations undertaken at the date(s) identified in the report and on the information available at the time the report was prepared.

This report has been prepared for the application noted and it is based, in part, on visual observations made at the site, all as described in the report. Unless otherwise stated, the findings contained in this report cannot be extrapolated or extended to previous or future site conditions, or portions of the site that were unavailable for direct investigation.

Should new information become available during future work or other studies, GEMTEC should be requested to review the information and, if necessary, re-assess the conclusions presented herein.

We trust this report provides sufficient information for your present purposes. If you have any questions concerning this report, please do not hesitate to contact our office.

Sincerely,

Luca Fiorindi, B.A., G.Cert.
Junior Biologist

Taylor Warrington, B.Sc.
Biologist

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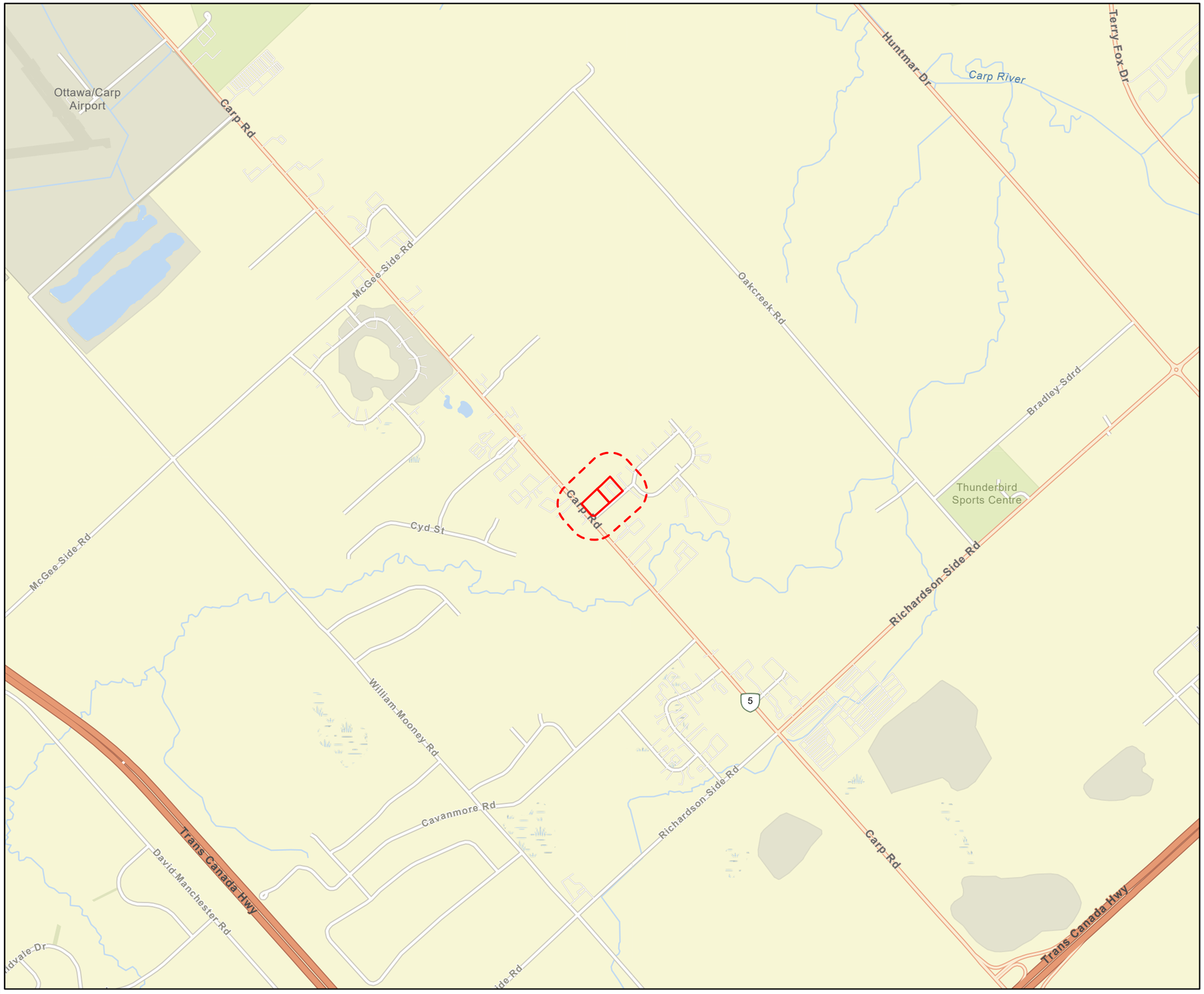
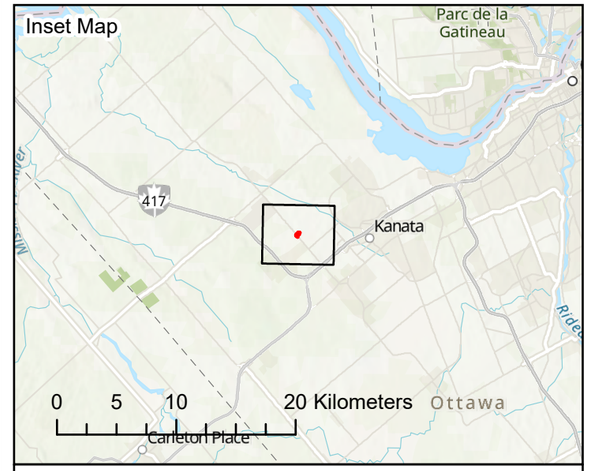
APPENDIX A

Report Figures
Figure A.1 – Site Location
Figure A.2 – Site Layout
Figure A.3 – Vegetation Communities
Figure A.4 – Natural Heritage Features
Figure A.5 – Development Concept
Figure A.6 – Mitigation Measures



Legend

- Study Area
- Property Boundary



Scale
1:20,000
0 300 600 1,200 Meters

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Location
106, 122 Reis Road
Ottawa, Ontario

Drwn By:	Chkd By:	
CZ	TW	Site Location

Date: October 2023	Rev.	
	0	Figure: A.1

Coordinate System: NAD 1983 UTM Zone 18N
Service Layer Credits: World Topographic Map: City of Ottawa, Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, NRCan, Parks Canada
World Street Map: City of Ottawa, Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

Legend

- Study Area
- Property Boundary
- Proposed Lot Addition
- Watercourse

Scale
1:2,000
0 30 60 120 Meters

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Location
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Drwn By:	Chkd By:	
CZ	TW	Site Layout

Date: October 2023	Rev.	
	0	Figure: A.2

Coordinate System: NAD 1983 UTM Zone 18N

Legend

- Study Area
- Property Boundary
- Proposed Lot Addition
- Watercourse
- Vegetation Communities

CVC_2: Light Industry
CUT: Cultural Thicket

Scale
1:2,000
0 30 60 120 Meters

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Drwn By:	Chkd By:	Vegetation Communities
CZ	TW	

Date: October 2023	Rev.	Figure: A.3
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Coordinate System: NAD 1983 UTM Zone 18N

Legend

- Study Area
- Property Boundary
- Proposed Lot Addition
- Watercourse
- New Property Boundary

Scale
1:2,000
0 30 60 120 Meters

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Location
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Drwn By:	Chkd By:	
CZ	TW	Natural Heritage Features

Date: October 2023	Rev.	
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Coordinate System: NAD 1983 UTM Zone 18N
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Bing Maps Aerial: © 2023 Microsoft Corporation © 2023 Maxar ©CNES (2023) Distribution Airbus DS

Legend

- Study Area
- New Property Boundary
- Existing Property Boundary
- Watercourse
- Proposed Drainage Easement
- Proposed Drainage
- Proposed Chain Link Fence
- Gravel Area
- Concrete/ Brick Area
- Asphalt Area

Scale
1:2,000
0 30 60 120 Meters

GEMTEC
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Client: 1694027 Ontario Inc.

Project: 100165.024

Location: 106, 122 Reis Road
Ottawa, Ontario

Drwn By: CZ | Chkd By: TW | Development Plan

Date: October 2023

Rev. 0

Figure: A.5

Coordinate System: NAD 1983 UTM Zone 18N

Legend

- Study Area
- Existing Property Boundary
- New Property Boundary
- Watercourse
- Proposed Drainage Easement
- Proposed Drainage
- Proposed Chain Link Fence
- 15 m Setback
- Gravel Area
- Concrete/ Brick Area
- Asphalt Area

Scale
1:2,000
0 30 60 120 Meters

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Client:	Project:
1694027 Ontario Inc.	100165.024

Location
106, 122 Reis Road
Ottawa, Ontario

Drwn By:	Chkd By:	
CZ	TW	Mitigation Measures

Date: October 2023	Rev.	Figure: A.6
	0	

Coordinate System: NAD 1983 UTM Zone 18N

APPENDIX B

Site Photographs

Site Photograph 1 – Commercial and Institutional Light Industry (CVC_2)

Site Photograph 2 – Commercial and Institutional Light Industry (CVC_2)

Site Photograph 3 – Commercial and Institutional Light Industry (CVC_2)

Site Photograph 4 - Commercial and Institutional Light Industry (CVC_2)

GEMTEC Consulting Engineers and Scientists	Project Environmental Impact Statement Proposed Commercial Development 106 and 122 Reis Road Ottawa, Ontario	**APPENDIX B** File No. 100165.024	**Site Photographs**

Site Photograph 5 – Unnamed Watercourse, Within Cultural Thicket (CUT)

Site Photograph 6 – Unnamed Watercourse, Within Cultural Thicket (CUT)

Site Photograph 7 – Unnamed Watercourse, Within Cultural Thicket (CUT)

Site Photograph 8 – Unnamed Watercourse, Within Cultural Thicket (CUT)

APPENDIX C

Report Summary Tables

TABLE C.1
SUMMARY OF WILDLIFE OBSERVED ON-SITE AND ADJACENT TO SITE

Common Name	Scientific Name	S-Rank	Evidence
Avian Species			
Black-capped chickadee	*Poecile atricapillus*	S5	Heard calling
European starling	*Sturnus vulgaris*	SNA	Heard calling
Northern cardinal	*Cardinalis cardinalis*	S5	Heard calling
Red-winged blackbird	*Agelaius phoeniceus*	S4	Heard calling
Song sparrow	*Melospiza melodia*	S5B	Heard calling

Notes:
Subnational Conservation Status Ranks:
S1 - Critically Imperilled, at very high risk of extirpation, very few populations or occurrences or very steep population decline
S2 - Imperiled, at high risk of extirpation, few populations or occurrences or steep population decline
S3 - Vulnerable, at moderate risk of extirpation, relatively few populations or occurrences, recent and widespread population decline
S4 - Apparently Secure, at a family low risk of extirpation, many populations or occurrences, some concern for local population decline
S5 - Secure, at very low or no risk of extirpation, abundant populations or occurrences, little to no concern for population decline

Qualifiers:

S#B - Conservation status refers to the breeding population of the species

S#N -Conservation status refers to the non-breeding population of the species

S#M - Migrant species, conservation status refers to the aggregating transient population of the species

TABLE C.2
SCREENING RATIONALE FOR HABITATS OF SEASONAL CONCENTRATION AREAS

Wildlife Habitat	Further Considered in EIS	Rationale
Winter Deer Yard	No	No significant stands of mast producing trees, no large coniferous forest stands on-site to provide protection and cover from winter elements. As outlined in the Significant Wildlife Habitat Criteria Schedules (OMNRF, 2015) winter deer yards and deer management are an MNRF responsibility. Based on review of publicly available data from the OMNRF on Land Information Ontario Geo-hub, no Stratum I deer yards, Stratum II deer yards, or winter congregation areas have been identified on-site or within the broader study area.
Colonial Bird Nesting Habitat	No	No suitable habitat located on-site or within the study area to support colonial bird nesting.
Waterfowl Stopover and Staging Areas	No	No suitable cultural meadow habitat located on-site or within the study area, not sufficient to meet the defining use criteria for waterfowl use (i.e. no fields with sheet water).
Shorebird Migratory Stopover Area	No	Shorebird stopover sites are typically well-known and have a long history of use. The site does not contain suitable shoreline habitat for shorebird foraging.
Raptor Wintering Area	No	The site does not contain a suitable mix of forest and upland habitat to meet the defining use criteria for raptor wintering.
Bat Hibernacula	No	Cave and crevice habitat is not present on-site or within the study area.
Bat Maternity Colonies	No	No suitable treed habitat on-site or in the study area to support bat maternity colonies. Treed habitat consists of a sparsely vegetated woodlot along the north and eastern boundaries of the site.
Turtle Wintering Area	No	No suitable aquatic habitat on-site or within the study area to support turtle wintering area. Surface water features on-site consist of shallow drainage ditch features that do not provide overwintering habitat.
Reptile Hibernaculum	No	No structures such as large rock piles, bedrock outcrops, cervices or other karstic features have been identified on-site.
Migratory Butterfly Stopover Area	No	The site is not located within 5 km of Lake Ontario and therefore does not meet the defining criteria.
Landbird Migratory Stopover Area	No	The site is not located within 5 km of Lake Ontario and therefore does not meet the defining criteria.

TABLE C.3
SCREENING RATIONALE FOR SPECIALIZED WILDLIFE HABITATS

Specialized Wildlife Habitat	Further Considered in EIS	Rationale
Waterfowl Nesting Area	No	The site lacks suitable upland habitat adjacent to wetlands necessary to support waterfowl nesting.
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	No	The site lacks suitable forest community adjacent to a riparian area to support nesting, foraging and perching habitat for Bald Eagle and Osprey.
Woodland Nesting Raptor Habitat	No	No suitable forested habitat has been identified on-site.
Turtle Nesting Habitat	No	No suitable wetland habitat adjacent to suitable soil types exists on-site or within the greater study area.
Seeps and Springs	No	No seeps or springs were indentified on-site.
Woodland Amphibian Breeding Habitat	No	No suitable wetland or pond habitat is present on-site to support woodland amphibian breeding habitat.
Wetland Amphibian Breeding Habitat	No	No wetland habitat or surface water on-site or within the study area to support wetland amphiban breeding.
Woodland Area-Sensitive Bird Breeding habitat	No	No woodlands of adequate size occur on-site to support woodland area-sensitive bird breeding habitat. Needs large mature forest > 30 ha, with interior habitat at least 200 m from forest edge

TABLE C.4
SCREENING RATIONALE FOR HABITAT FOR SPECIES OF CONSERVATION CONCERN

General Habitats of Species of Conservation Concern	Further Considered in EIS	Rationale
Marsh Breeding Bird Habitat	No	No suitable wetlands have been identified on-site or adjacent to site to support marsh breeding bird habitat.
Open Country Breeding Bird Habitat	No	No suitable meadow habitat on-site to support open country bird breeding due to recent (< 5 years) agricultural disturbances.
Shrub/Early Successional Breeding Bird Habitat	No	Candidate early successional breeding bird habitat typically includes fallow fields transitioning to early successional forest habitats that are > 10 ha but have not been actively used for farming. Habitat on-site does not meet the defining use criteria to support shrub/early successional breeding bird habitat.
Terrestrial Crayfish Habitat	No	Terrestrial crayfish are only found within southwestern Ontario (MNRF, 2012).
Special Concern and Rare Wildlife Species	No	No species of special concern or rare wildlife species were identified as having potential to occur on-site or within the study area.

TABLE C.5
SCREENING RATIONALE FOR ANIMAL MOVEMENT CORRIDORS

General Habitats of Species of Conservation Concern	Further Considered in EIS	Rationale
Amphibian Movement Corridor	No	No *confirmed* wetland amphibian breeding habitat has been identified on-site.
Deer Movement Corridor	No	No winter deer yards have been identified on-site by the OMNRF.

TABLE C.6
SCREENING RATIONALE FOR POTENTIAL SPEICES AT RISK ON-SITE OR WITHIN STUDY AREA

Species	ESA Status	Habitat Use	Probability of Occurrence On-Site or Within Study Area	Rationale
Avian				
Bald Eagle	Special Concern	Nest in mature forests near open water.	Low	No suitable forest habitat adjacent to suitable open water and foraging area to support Bald Eagle activity on-site.
Bank Swallow	Threatened	Colonial nester, burrows in eroding silt, to sand banks, sand pit walls, etc.	Low	No suitable silt or sand bank habitat on-site or within study area.
Barn Swallow	Special Concern	Nests in barns and other semi-open structures. Forages over open fields and meadows.	Low	No suitable nesting habitat or structures located on-site or within study area.
Bobolink	Threatened	Nests in dense tall grass fields and meadows, low tolerance for woody vegetation.	Low	Potential low quality agricultural habitat within study area. No historical occurrence records within 1 km of site. Species not encountered during the field investigation.
Canada Warbler	Special Concern	Prefers wet forests with dense shrub layers	Low	No preferred wet forest habitat present on-site or within the study area.
Cerulean Warbler	Threatened	Prefers mature deciduous forest habitat.	Low	Preferred mature deciduous forest habitat is not present on-site or within study area.
Chimney Swift	Threatened	Nests in traditional-style open brick chimneys.	Low	No suitable nesting habitat or structures located on-site or within study area.
Common Nighthawk	Special Concern	Nests in a variety of open sites: beaches, fields and grave rooftops.	Low	Suitable open habitat may be present within the cultural meadow and open habitat on-site. No historical occurrence records within 1 km of site. Species was not encountered during the field investigation.
Eastern Meadowlark	Threatened	Nests and forages in dense tall grass fields and meadows, higher tolerance to woody vegetation.	Low	No suitable grassland or agricultural field habitat on-site or within study area.
Eastern Whip-poor-will	Threatened	Nests on the ground in open deciduous or mixed woodlands with little underbrush, and bedrock outcrops.	Low	No suitable woodland habitat occurs on-site or within study area.
Eastern Wood-Pewee	Special Concern	Woodland species, often found near clearings and edge habitat.	Low	No suitable woodland or wood-edge habitat occurs on-site or within study area.
Golden Eagle	Endangered	Nests on remote, bedrock cliffs, overlooking large burns, lakes or tundras	Low	Suitable nesting habitat is not present on-site or within the study area.
Golden-winged Warbler	Special Concern	Ground nesting, edge species. Breeds in successional scrub habitats surrounded by forests.	Low	No suitable scrub habitat present on-site or within the study area.
Evening Grosbeak	Special Concern	Nests in trees or large shrubs, preference to large coniferous forests, will use deciduous. Overwinters in Ottawa.	Low	No suitable woodland or large shrub habitat occurs on-site or within study area.
Henslow's Sparrow	Endangered	Prefers open, moist, tallgrass fields.	Low	Preferred grassland habitat is not present on-site or within the study area.
Least Bittern	Threatened	Occupies a variety of wetland habitats with a preference for cattail marshes with open pools and channels.	Low	Suitable wetland habitat is not present on-site or within the study area.
Loggerhead Shrike	Endangered	Prefers grazed pastures with short grass and scattered shrubs, especially hawthorn.	Moderate	Suitable habitat is not present on-site, however suitable short grass and scattered scrub habitat may be present within the study area. NHIC identifies occurrence records within 1 km of site. Species was not encountered during the field investigation.
Olive-sided Flycatcher	Special Concern	Forest edge species, forages in open areas from high vantage points in trees.	Low	No suitable woodland or wood-edge habitat occurs on-site or within study area.
Peregrine Falcon	Special Concern	Nests on cliffs near water and on more anthropogenic structures such as tall buildings, bridges, and smokestacks.	Low	Site lacks suitable nesting structure for peregrine falcon.
Red Knot	Endangered	Nests in the far north, migrant along the shorelines and lagoons of the Ottawa River.	Low	Site lacks suitable shoreline or lagoon habitat.
Red-headed Woodpecker	Special Concern	Prefers open deciduous woodlands.	Low	No suitable woodland habitat occurs on-site or within study area.
Rusty Blackbird	Special Concern	Wet wooded or shrubby areas (nests at edges of Boreal wetlands)	Low	Suitable wet wooded or shrubby habitat does not occur on-site.
Short-eared Owl	Special Concern	Ground nester, prefers open habitats, fields and marshes.	Low	No suitable open field or open marsh habitat on-site.
Wood Thrush	Special Concern	Prefers deciduous or mixed woodlands.	Low	No suitable woodland habitat occurs on-site or within study area.
Mammalian				
Eastern small-footed Myotis	Endangered	Roosts in rock crevices, barns and sheds. Overwinters in abandoned mines. Summer habitats are poorly understood in Ontario, elsewhere prefers to roost in open, sunny rocky habitat and occasionally in buildings (Humphrey, 2017).	Moderate	Potentially suitable anthropogenic structures adjacent to site. Potential summer habitat present within study area.
Little Brown Myotis	Endangered	Maternal colonies known to use buildings, may also roost in trees during summer. Affinity towards anthropogenic structures for summer roosting habitat and exhibit high site fidelity (Environment Canada, 2015).	Moderate	Potentially suitable anthropogenic structures adjacent to site. Potential summer habitat present within study area.
Northern myotis (Northern Long-eared Bat)	Endangered	Occurs throughout eastern North America in associated with Boreal forests. Roosts mainly in trees, occasionally anthropogenic structures during summer (Environment Canada, 2015). Overwinters in caves and abandoned mines.	Low	Species affinity is for Boreal forests and species rarely roosts in anthropogenic structures.
Tri-colored Bat	Endangered	Roosts in trees, rock crevices and occasionally buildings during summer. Overwinters in caves and mines.	Moderate	Potentially suitable anthropogenic structures adjacent to site. Potential summer habitat present within study area.
Reptilian				
Blanding's Turtle	Threatened	Inhabits quiet lakes, streams and wetlands with abundant emergent vegetation. Frequently occurs in adjacent upland forests.	Low	No historic occurrence data for species on NHIC database for the site. No critical habitat has been identified on-site. The site does provide potentially suitable aquatic habitat for Blanding's turtle.
Snapping Turtle	Special Concern	Highly aquatic species, found in a wide variety of wetlands, water bodies and watercourses.	Low	No historic occurrence data for species on NHIC database for the site. No critical habitat has been identified on-site. The site does provide potentially suitable aquatic habitat for snapping turtle.
Plants				
American Ginseng	Endangered	Rich, moist, relatively mature deciduous forests.	Low	Suitable habitat does not occur on-site.
Black Ash	Endangered	Predominantly a wetland species, found in swamps, floodplains and fens.	Low	Species was not observed on-site. Currently ESA protections for the species and its habitat have been suspended until January 2024. During this time proponents will not need to seek authorizations for activities that impact black ash and its habitat.
Butternut	Endangered	Inhabits a wide range of habitats including upland and lowland deciduous and mixed forests.	Low	Majority of the site is open and in a regenerative state. No occurrence records within 1 km of site. No butternuts were observed on-site during the field investigation.
Lichens				
Pale-bellied Frost Lichen	Endangered	Grows on the bark of hardwood trees such as white ash, black walnut, American elm and ironwood. Can also be found growing on fence posts and boulders.	Low	Species believed to be extirpated from the Ottawa area.
Insects				
Bogbean Buckmoth	Endangered	Preferred food plant is bog bean, present in a variety of wetlands including bogs, swamps and fens.	Low	Preferred wetland habitat is not present on-site. Only known populations are extant and located south of White Lake, Arnprior and within the Richmond Fen.
Gypsy Cuckoo Bumble Bee	Endangered	Inhabits a wide range of habitats: open meadows, agricultural and urban areas, boreal forests and woodlands.	Low	Currently the only known population is in Pinery Provincial Park
Monarch Butterfly	Special Concern	Caterpillars require milkweed plants confined to meadow and open areas. Adult butterflies use more diverse habitat with a variety of wildflowers	Low	Site lack suitable vegetation growth to support foraging habitat.
Mottled Duskywing	Endangered	Larval food plant (New Jersey Tea) found in sandy areas and alvars.	Low	Sandy areas and alvars not present in the study area.
Nine-spotted Lady Beetle	Endangered	Habitat generalist	Low	No recent occurrence reports in the area, thought to be locally extirpated.

TABLE C.6
SCREENING RATIONALE FOR POTENTIAL SPEICES AT RISK ON-SITE OR WITHIN STUDY AREA

Species	ESA Status	Habitat Use	Probability of Occurrence On-Site or Within Study Area	Rationale
Rusty-patched Bumble Bee	Endangered	Habitat generalist	Low	Currently the only known population occurs in Pinery Provincial Park.
Traverse Lady Beetle	Endangered	Habitat generalist	Low	No new records of traverse lady beetle in Ontario, species thought to be absent in former habitats.
West Virginia White Butterfly	Special Concern	Requires mature moist deciduous woods with larval host plant toothwort.	Low	Necessary vegetation and toothwort plant not present on-site or within study area.
Yellow-banded Bumble Bee	Special Concern	Habitat generalist; mixed woodlands, variety of open habitat	Low	Site lack suitable vegetation growth to support foraging habitat.

experience • knowledge • integrity

civil	civil
geotechnical	géotechnique
environmental	environnementale
field services	surveillance de chantier
materials testing	service de laboratoire des matériaux

expérience • connaissance • intégrité