Natural Heritage Evaluation

Northern Avenue Severance

Noreen Goodliff

5 July 2024

→ The Power of Commitment

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1. Introduction

1.1 Background

GHD was retained by Noreen and Randy Goodliff to complete a Natural Heritage Assessment for a proposed lot severance from a property at 200 Northern Avenue in the Municipality of Trent Lakes, County of Peterborough (otherwise known as Subject Property). The Subject Property is located in a rural/cottage area north of Bald Lakes.

Based on the background review there are several natural features on or within 120 m of the Subject Property, including unevaluated wetlands, adjacent watercourse and potential habitat of a threatened or endangered species and key natural heritage features (as per the new Growth Plan for the Greater Golden Horseshoe) on the retained and/or severed parcels. The Municipality of Trent Lakes has requested that a Natural Heritage Evaluation NHE) be completed. In the Recreational Dwelling Area designation, the maximum number of lots that may be created by consent per land holding shall be two (2) severed lots and one (1) retained lot.

A Preliminary Severance Review was completed by the County of Peterborough and provided to GHD which *outlined the subject property is located within the new Provincial Natural Heritage System. The Natural Heritage System mapping was released by the Ministry of Natural Resources and Forestry (MNRF) on February 9, 2018 and is implemented through the Growth Plan for the Greater Golden Horseshoe (GPGGH), 2017. Using the County GIS, the following key natural heritage features / key hydrologic features have been identified on or adjacent to the proposed severed parcel: wetlands and streams (see maps attached). Section 4.2.3.1 & 4.2.4.3 of the GPGGH prohibits development, including lot creation, and site alteration outside settlement areas within key natural heritage features and key hydrologic features and their related vegetation protection zone (VPZ). For key hydrologic features, fish habitat and significant woodlands, the minimum VPZ is 30 m from the outside boundary of the feature (S. 4.2.4.1(c)).*

Section 4.2.4.1 of the GPGGH states that development, including lot creation, and site alteration within 120 metres of a key natural heritage feature or a key hydrologic feature will require a natural heritage evaluation or hydrologic evaluation that identifies a vegetation protection zone (VPZ). Since the severed parcel is located within 120 metres of these features, a natural heritage evaluation / hydrologic evaluation appears to be required. There is also a woodland feature on the property (see map attached).

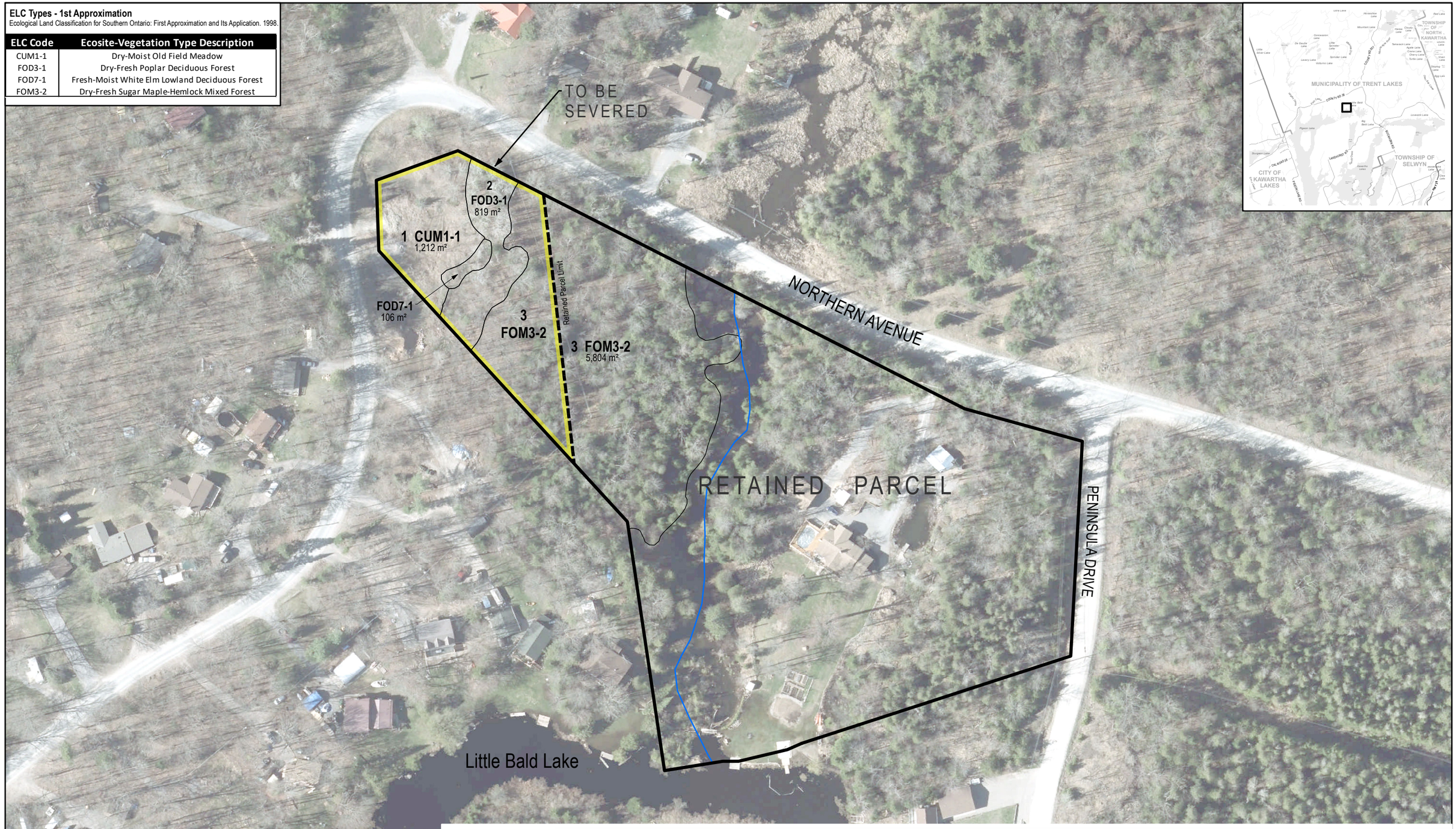
The identification of the woodland as significant (or not) would need to be confirmed as part of the natural heritage evaluation. In accordance with Section 4.2.4.1(c), the VPZ shall be no less than 30 metres from the boundary of key hydrologic features, fish habitat, and significant woodlands. Please note that any technical study submitted to the County (i.e. EIS, traffic impact study, hydrogeological study etc.) will be peer reviewed at the County's request. Upon receipt of Peer Review comments on this EIS and client communications with the County of Peterborough, an additional field visit completed in-season to collect additional data on the feature identified previously as a wetland inclusion. This report has been updated to reflect in-season surveys and additional data collected to confirm the wetland status of this feature.

1.2 Location and Study Area

The Study Area is located at part Lot 17 of Concession 11, Municipality of Trent Lakes in the County of Peterborough. This property is an odd shape and follows Northern Ave Road on the north and west side with Peninsula Drive on the east side. The proposed severance area in approximately 200meters north of Little Bald Lake with the retained property having some frontage on the lake. This property is in ecoregion 6E- Lake Simcoe-Rideau and falls within the Pigeon Lake-Gannon Narrows watershed.

ELC Types - 1st Approximation
Ecological Land Classification for Southern Ontario: First Approximation and Its Application. 1998.

ELC Code	Ecosite-Vegetation Type Description
CUM1-1	Dry-Moist Old Field Meadow
FOD3-1	Dry-Fresh Poplar Deciduous Forest
FOD7-1	Fresh-Moist White Elm Lowland Deciduous Forest
FOM3-2	Dry-Fresh Sugar Maple-Hemlock Mixed Forest



Legend

- Watercourse, OHN
- Proposed Severance Boundary
- Proposed Severance Parcel
- Property Limit
- Vegetation Community

1 cm = 12 meters
0 8 16 24 32
Meters
Map Projection: Transverse Mercator
Horizontal Datum: North American 1983
Grid: NAD 1983 UTM Zone 17N
Paper Size ANSI B

N

GHD

Noreen Goodliff
200 Northern Avenue, Trent Lakes, ON
Municipality of Trent Lakes

Natural Heritage Evaluation
Vegetation Communities, Proposed Severance & Constraints

Project No. 12638522
Revision No.
Date Jul 2, 2024

Figure 1

Q:\GIS\PROJECTS\12638000s\12638522\GIS\Maps\Deliverables\202407_PROP\12638522_202407_PROP_GIS001 - Vegetation Communities, Proposed Severance and Constraints.mxd
Print date: 02 Jul 2024 - 14:55

Data source: Image @ County of Peterborough, 2018.

1.3 Scope and Limitations

This report: has been prepared by GHD for Noreen and Randy Goodliff and may only be used and relied on by Noreen and Randy Goodliff for the purpose agreed between GHD and Noreen and Randy as set out in section [1.6 and 1.7] of this report.

GHD otherwise disclaims responsibility to any person other than Noreen and Randy Goodliff arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (refer section(s) [00] of this report). GHD disclaims liability arising from any of the assumptions being incorrect.

1.4 Study Rationale

This section identifies federal, provincial, and other regulatory legislation, policies, official plans (OP) and OP amendments that are applicable and relevant to the study area and the immediate vicinity. This includes policies that triggered the study. These documents may identify natural features, Species at Risk, and other habitat as well as other features relevant to this study.

1.4.1 Federal Legislation

1.4.1.1 Migratory Birds Convention Act

The purpose of the Migratory Birds Convention Act (MBCA 1994) is to implement the Convention by protecting and conserving migratory birds, as populations and individual birds, and their nests. The MBCA (1994) and Migratory Birds Regulations (MBR; 2022), protect most species of migratory birds and their nests and eggs. General prohibitions under the MBCA and MBR protect migratory birds, their nests and eggs and prohibit the deposit of harmful substances in waters/areas frequented by them. The MBR includes an additional prohibition against incidental take, defined by Environment and Climate Change Canada (ECCC) as: "The inadvertent harming, killing, disturbance or destruction of migratory birds, nests and eggs."

ECCC implements policies and guidelines to protect migratory birds, and guidance on the ECCC website is provided to help to minimize the risk of detrimental effects to migratory birds and to achieve compliance with the law. Compliance with the MBCA and MBR is best achieved through a due diligence approach based on a site-specific analysis in consideration of the avoidance guidelines published by ECCC.

1.4.2 Provincial Legislation

1.4.2.1 Endangered Species Act

The Ontario Endangered Species Act (ESA 2007) serves to:

1. To identify species at risk based on the best available scientific information, including information obtained from Community knowledge and aboriginal traditional knowledge.
2. To protect species that are at risk and their habitats, and to promote the recovery of species that are at risk.

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3. To promote stewardship activities to assist in the protection and recovery of species that are at risk. 2007, c. 6, s. 1. (Government of Ontario 2021)

The ESA clearly defines the five classifications of species status as extinct, extirpated, endangered, threatened, or special concern, and provides guidelines on the process of species status determination.

Regulations made under this act include Ontario Regulation 230/08 and 242/08.

Ontario Regulation 230/08 provides the list of Species at Risk (SAR) in Ontario, which is updated regularly. This list was most recently consolidated on January 26, 2022. Species status provided in the list is assessed by an independent body, the Committee on the Status of Species at Risk in Ontario (COSSARO), based on the best-available science and Aboriginal Traditional Knowledge.

General habitat protection is afforded to all species listed as endangered or threatened. General habitat descriptions are technical, science-based documents that have been developed for some of the species that are most likely to be affected by human activity (Government of Ontario 2021). Further information including a Recovery Strategy or Management Plan is required for each listed species, on a timeline dictated by the species status.

Ontario Regulation 242/08 explains possible exemptions to the ESA and details on how the purpose of the ESA is to be carried out (Government of Ontario 2021b).

1.4.2.2 Provincial Policy Statement 2020

The Provincial Policy Statement, 2020 (PPS) is the statement of the Ontario government's policies on land use planning. It applies province-wide (in the province of Ontario) and provides provincial policy direction on land use planning. Municipalities use the PPS to develop their official plans and to guide and inform decisions on other planning matters. The PPS is issued under Section 3 of the Planning Act and all decisions affecting land use planning matters 'shall be consistent with' the Provincial Policy Statement (Government of Ontario 2020).

Portions of Sections 2.1.4-2.1.8 of the Provincial Policy Statement (PPS 2020) apply to this project.

2.1.4 Development and site alteration shall not be permitted in:

- *a. significant wetlands in Ecoregions 5E, 6E and 7E1; and*
- *b. significant coastal wetlands.*

2.1.5 Development and site alteration shall not be permitted in:

- *a. significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E;*
- *b. significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);*
- *c. significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);*
- *d. significant wildlife habitat;*
- *e. significant areas of natural and scientific interest; and*
- *f. coastal wetlands in Ecoregions 5E, 6E and 7E1 that are not subject to policy unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.*

2.1.6 Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

2.1.7 Development and site alteration shall not be permitted in the habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.

2.1.8 Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 2.1.4, 2.1.5 and 2.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

1.4.2.3 A Place to Grow: Growth Plan for the Greater Golden Horseshoe

A Place to Grow: Growth Plan for the Greater Golden Horseshoe, came into effect on May 16, 2020, replacing the Growth Plan for the Greater Golden Horseshoe, 2017 (OMMAH, 2017). The recent revisions include minor changes to the natural heritage system policies and removing the provincial NHS mapping layers.

The 2020 Growth Plan for the Greater Golden Horseshoe is a long-term plan that works with the Greenbelt Plan, the Oak Ridges Moraine Conservation Plan and the Niagara Escarpment Plan to provide a framework for growth management in the region (OMMAH, 2019).

A Natural Heritage System for the Growth Plan has been mapped by the Province to support long-term planning for the protection of region's natural heritage and biodiversity. Municipalities have been directed to incorporate the Natural Heritage System (NHS) as an overlay in official plans and to apply appropriate policies to maintain, restore, or enhance its diversity and connectivity as well as its ecological and hydrological functions. However, provincial mapping of the NHS does not apply until it has been implemented in the applicable upper or single-tier official plan.

The subject property is mapped as part of the GPGGH Natural Heritage System. However, since neither the Municipality of Trent Lakes, nor Peterborough County have incorporated the NHS as part of their official plans, Section 4.2.2 of the Growth Plan does not apply to the proposed development.

The Growth Plan also includes direction relating to the protection of water resource systems, including key hydrologic features (KHFs) and their functions (Sections 4.2.1, 4.2.3). Outside of settlement areas, development or site alteration is not permitted in key hydrologic features, such as wetlands. Additionally, in lands adjacent to KHF, proposals for new development or site alteration within 120m of these features requires that a natural heritage evaluation be conducted. The presence of a watercourse on the subject property therefore triggers this NHE. Sections 4.2.3 and 4.2.4 of the Growth Plan are applicable in the study area.

1.4.3 Local and Other Regulatory Bodies

1.4.3.1 County of Peterborough Official Plan

As indicated within the PSR *The subject property is described as Shoreland Areas in the County of Peterborough Official Plan. Section 2.6.3.3 of the Plan permits severances within Shoreland Areas provided the requirements of the Health Unit can be met (S.2.6.3.3 (A)); and provided that proposed lots have direct frontage on and access from publicly owned and maintained roads unless otherwise permitted in local Official Plans (S.2.6.3.3 (C)). Water access for recreational uses may be permitted as specified in local Official Plans (S.2.6.3.3 (C)).*

Section 4.1.3.1 of the County of Peterborough Official Plan describes the requirements for an Environmental Impact Assessment (NHE for this report). Which would include:

- *a description of the proposal and statement of rationale for the undertaking;*
- *a description of the existing land use(s) on site and adjacent lands;*
- *the land use designation on site and adjacent lands, as identified by the County and local municipal Official Plans;*
- *a description of alternative development proposals for the site as well as the environmental impacts of the alternatives;*
- *a comprehensive description of the proposal including its direct and indirect effect on*
- *the environment and considering both the advantages and disadvantages of the proposal;*
- *an identification of environmental constraint areas;*
- *an environmental inventory of the area under development consideration (plant life, land-based and aquatic wildlife, wetlands, natural landforms, surface waters, hydrogeological features);*
- *a statement of environmental and ecological significance of the area affected by the proposed development;*

– *a statement on how the development will establish or facilitate the establishment of linkages between natural areas within the watershed and adjacent watersheds and how these linkages will contribute to the preservation and enhancement of the natural areas;*
– *a detailed description of mitigating effects;*
– *any additional information requested by the local municipality;*
– *an assessment of options for servicing the development with full municipal or communal water and sewage services as well as the environmental impacts of the servicing options;*

1.4.3.2 Municipality of Trent Lakes Official Plan Amendment (OPA No. 46 – Adoption of the Township of Galway-Cavendish and Harvey Official Plan)

The subject property is located within an identified Rural designation (Peterborough County – Public GIS, 2022; Schedule 'A1-1' - Land Use & Transportation Plan Harvey, Township of Galway-Cavendish & Harvey Official Plan). Section 5.2 of the Official Plan describes permitted uses for this designation. "*Any development proposal exclusive of severance applications which deviate from the permitted uses of the Rural designation shall be assessed, as part of the Official Plan Amendment and may be the subject of an Environmental Review in accordance with Section 5.1.10 to ensure that the proposed use will have no detrimental affect on the existing environment."* Section 5.1.10 describes the land use polices associated with natural environmental features and areas, including wetlands, fish habitat, significant woodlands and significant wildlife habitat. The presence (or potential presence) of such features on and/or adjacent to the subject property act as a trigger for this Natural Heritage Assessment. The scope of such reports is described in Section 5.1.10.3 of the Official Plan.

1.5 Other Resources Referenced

Prior to field surveys, background information for the study area and surrounding lands was reviewed to provide context for the setting and sensitivity of the site. A variety of sources were reviewed including:

1.5.1 Data Sources

– Aerial imagery
– OMNRF Land Information Ontario (LIO) database mapping and Natural Heritage Information Centre (NHIC) Make a Map tool
– Ontario Breeding Bird Atlas data (Bird Studies Canada, 2007)
– Ontario Ministry of Natural Resources Aquatic Resource Area, Fish Species List (OMNR, 2012)
– Department of Fisheries and Oceans (DFO) Aquatic Species at Risk Mapping (DFO, 2019)

1.5.2 Literature and Resources

– Natural Heritage Reference Manual (MNRF, 2010)
– Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E. Peterborough, 38pp. (OMNRF, 2015)

1.6 Description of Development

The proposal is for a one lot severance with road frontage and access from Northern Avenue. The proposed severance of approximately 0.36 ha would be located on the north end of the current property.

1.7 Scope of Report

The main goals of this NHE report are to confirm the boundaries of key natural features (e.g., wetlands, woodlands) on the property; to confirm and identify the ecological function of any such features; to determine whether any Species at

Risk and/or their habitats occur on the subject property; and, to develop appropriate buffers and mitigation measures to prevent any negative impacts from the proposed development on these features and their functions.

2. Study Methods

2.1 General Approach

Our approach to preparation of the NHE will consist of four distinct phases.

In the first phase, GHD collected and reviewed available information on the site including recent air photography, key natural features GIS mapping from the Ministry of Natural Resources and Forestry (MNRF), wetland mapping, Official plan schedules and other correspondence or files available from the Municipality of Trent Lakes, County of Peterborough, MNRF in addition to several on-line data sources.

The second phase consisted of a site visit by GHD's terrestrial and wetland biologists to confirm the data collected in the literature review, gather new site-specific information, and determine or confirm the boundaries of natural heritage and hydrological features. The boundary of any wetlands on or adjacent to the property were confirmed and GPS readings taken. The focus of the site visit was on the area proposed for the severance.

As per the Municipalities direction we also completed an assessment of any key hydrologic features (wetlands/watercourses). The significance of the features and the ecological functions was determined during our field survey. In addition, GHD staff noted incidental observations of birds, mammals and amphibians. They also conducted searches for habitat of potential species at risk habitat, including bats, woodland birds, snakes and turtles. GHD looked for any direct impacts and determined whether the new lot could directly or indirectly impact key natural heritage features or their ecological functions.

The third phase was the preparation of this NHE with specific mitigation measures for protecting any sensitive species, natural features or key hydrologic features on or adjacent to the study site. Recommendations and mitigation have been included to protect any key natural heritage features. This report includes a figure that shows the location of all natural features, including confirmed wetland boundary lines, our recommended building envelope, and other mitigation measures and recommendations. If the proposed severances are constrained by the wetlands and their buffers, we will work with the client and planners on modifying those lot sizes and shapes to meet the provincial policies. The report will follow the content requirements of the Municipality of Trent Lakes Official Plan, County of Peterborough Official Plan and the 2020 Growth Plan.

The final phase will involve a review of our NHE report by the Municipality of Trent Lakes and County of Peterborough.

2.2 Study Site Methodology

2.2.1 Physical Site Characteristics

Site characteristics were assessed during our field visits. This included general documentation of existing disturbances, age of vegetation cover, accessibility, topography, watercourse form and function and other natural features.

2.2.2 Biophysical Inventory

2.2.2.1 Vegetation

All vegetation encountered in the study area (i.e., the proposed severances) was inventoried during the site visits. Delineation and classification of the vegetation Community types was based on the Ecological Land Classification for

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Southern Ontario (Lee et al., 1998). General notes on disturbance, topography, soil types, soil moisture and state of each vegetation community were also compiled.

Rare, significant, or unusual species were searched for. Species significance or rarity on a national, provincial, regional and local level was based on published literature and standard status lists. These included SARA (2022), COSEWIC (2021), SARO (2021) and Oldham (1999).

2.2.2.2 Birds

Area Searches

Birds detected while GHD's biologists were conducting other surveys in the study area were recorded, along with a breeding evidence code if evident. This search effort was made in all the vegetation communities within the study area.

2.2.2.3 Other Wildlife

While biologists were on site, they recorded incidental observations of any other wildlife (e.g., amphibians, reptiles, and mammals) encountered. Documentation included notes about the species, location and type of observation (e.g., direct sightings and indirect evidence such as calls, tracks, scat, burrows, dens and browse).

2.2.2.4 Significant Wildlife Habitat

The identification of Significant Wildlife Habitat (SWH) is completed in a few stages. As part of the background review, natural areas in the study area were examined along with aerial photography. A candidate list of SWH criteria/feature was then determined. During the field visits, GHD staff looked for evidence of those identified candidate features. When found, these features are assessed.

After the field inventories, GHD biologists analysed the information collected and determined which SWH features were confirmed based on the Ecological Land Classification communities and habitats present on the subject property using the criteria for Significant Wildlife Habitat in Ecoregion 6E (2015).

3. Survey Results

3.1 Physical Site Characteristics

Although the entire property is approximately 2.05 hectares in size, GHD's focus was on the proposed severance area and the natural features in that portion of the property. Topography of the land was relatively flat across the Subject Property. The north part of the property, where the severance is currently proposed is open with minimal trees and is currently a disturbed area. Further east, the property becomes mostly treed.

3.2 Biological Inventories

3.2.1 Vegetation

3.2.1.1 Level of Effort

The vegetation communities were delineated within the study by GHD biologists according to the methodologies outlined in Section 2.2.2.1. A summary of the level of effort and environmental conditions have been provided in **Table 1**.

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Table 1 Vegetation Survey – Level of Effort and Environmental Conditions

Survey Date	Survey Type	Weather	Start Time	Effort (person hrs)
November 3, 2022	ELC, vegetation surveys	12°C, cloud cover 0%, wind scale 1, no precipitation	11:15	1hrs (x2 biologists)
June 11, 2024	ELC, vegetation survey	12°C, cloud cover 0%, wind scale 1, no precipitation	10:00	1hr

3.2.1.2 ELC Code Descriptions

Three (3) vegetation communities were identified within the study area. Each of the communities is described below and illustrated on **Figure 1**.

A total of 59 plant species were identified during field surveys. The dominant plant species in each community are described below and a complete plant list is found in **Appendix A**.

Community 1 - Dry- Moist Old Field Meadow Type (ELC Code- CUM1-1)

Community 1 is the northern portion of the property where the road bends. This section is a disturbed area and classified as an old field meadow type. The ground cover here was old topsoil from garden dumping's and exposed bedrock. This section of the property also had dredging dumping from 8-10 years ago. This community had the most species identified with 30 species. Some of these species are thimbleberry (*Rubus occidentalis),* purple-flowering raspberry (*Rubus odoratus)* and common mullein (*Verbascum Thapsus).* Five species of ferns were also identified and included spinulose wood-fern (*Dryopteris carthusiana*) and marginal wood-fern (*Dryopteris marginalis*). Only two tree species were identified, and these were white oak (*Quercus alba*) and balsam fir (*Abies balsamea*).

Photo 1:Community 1 (Photo Date: November 3, 2022)

Community 2 - Dry- Fresh Popular Deciduous Forest Type (ELC Code- FOD3-1)

Community 2 weaves south and separates communities 1 and 3. This Fresh Popular Deciduous Forest Type was made up of white birch (*Betula papyrifera*), balsam poplar (*Populus balsamifera*) and, trembling aspen (*Populus tremuloides*). Some herbaceous plants identified in this community were, scarlet-fruited horse-gentian (*Triosteum aurantiacum*), Canada goldenrod (*Solidago canadensis*), bottlebrush sedge (*Carex lurida*) and Pennsylvania sedge (*Carex pensylvanica*).

As previously defined in GHD's NHE (2022) as a small wetland inclusion (approximately 106 m^2) along the eastern borders of this community, additional field investigations were completed in-season (June 11, 2024) to further identify characteristics of this feature. The original assessment was completed in November with a lack of vegetation present. This area was historically blasted which created an inundated piece of land unique from the rest of its ecosite. This community was dominated by American elm (*Ulmus Americana*) with 80% canopy cover, and a variety of ground species present. The ground layer was dominated by Canada goldenrod (*Solidago canadensis*) with 80% relative abundance. Ostrich fern (*Matteuccia struthiopteris*) was identified with 15% relative abundance, the second most abundant ground species. Other species identified in the ground layer in much lesser quantities included common dandelion (*Taraxacum officinale*), heart-leaved aster (*Symphyotrichum cordifolium*), early meadow rue (*Thalictrum dioicum*), rosy sedge (*Carex rosea*) and fringed sedge (*Carex crinita*). Some shrub species were identified within the understory and included virginia creeper (*Parthenocissus quinquefolia*), purple flowering raspberry (*Rubus odoratus*) and European buckthorn (*Rhamnus cathartica*). Three soil cores were completed within this community which did not indicate hydric soils with no mottles or gley were identified. Based on the characteristics identified during June 11, 2024 surveys this community was classified as a fresh-moist white elm lowland deciduous forest type (FOD 7-1). This determination was made based on the lack of hydric soils and dominance of greater than 50% non-wetland vegetation (Canada goldenrod) as identified within the ground layer. This is in line with the OWES definition of wetland (Ontario Government, 2022).

Photo 2: Community 2 (Photo Date: November 3, 2022)

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Photo 3: Lowland forest Inclusion (Photo Date: June 11, 2024)

Community 3 - Dry-Fresh Sugar Maple- Hemlock Mixed Forest Type (ELC Code- FOM3-2)

This mixed forest is dominated by Eastern Hemlock (*Tsuga canadensis*) and Sugar Maple (*Acer saccharum*). Other trees included tamarack (*Larix laricina*), black cherry (*Prunus serotina*) and green ash (*Fraxinus pennsylvanica*). Some of the shrubs and herbaceous plants that were identified in this community were Alleghany blackberry (*Rubus allegheniensis*), drooping wood sedge (*Carex arctata Boott*), Pennsylvania sedge (*Carex pensylvanica*) and hairy agrimony (*Agrimonia pubescens*).

Photo 4: Community 3 (Photo Date: November 3, 2022)

3.2.2 Birds

3.2.2.1 Area Searches

Three bird species were identified by GHD's Terrestrial and Wetland Biologists while they were conducting ELC surveys in the Study Area. A black-capped chickadee (*Poecile atricapillus*) and a hairy woodpecker (*Leuconotopicus villosus*) were observed in community 1. In community 3, a northern flicker (*Colaptes auratus*) was heard calling and observed.

3.2.3 Other Wildlife

GHD biologists also kept records of mammal and/or herpetofauna species encountered during their visit to the subject property. No wildlife species were seen including no tracks and no scat.

3.2.4 Wetlands

One wetland inclusion was previously classified during a field visit on November 3, 2022. An additional in-season field visit on June 11, 2024 examined the characteristics further and determine based on the Ontario Wetland Evaluation System guidelines this small inclusion did not meet the definition of wetland based on the absence of wetland

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vegetation of greater than 50% relative abundance and hydric soils. See details within the description of Community 2 in **Section 3.1.2**. No other wetlands were identified during field surveys on November 3, 2022.

3.2.5 Watercourse

A watercourse was identified running through the retained parcel. This watercourse was determined to be a tributary of Little Bald Lake and ran north-south through the property.

3.2.6 Significant Wildlife Habitat (SWH)

Specialized wildlife habitat, seasonal concentration areas for animals, rare vegetation communities, habitat for species of conservation concern or animal movement corridors were assessed for the following candidate SWH.

Candidate SWH assessed included:

– woodland raptor nesting habitat,
– bat maternity colonies,
– area sensitive bird breeding,
– deer yarding areas (Deer wintering area Stratum ii)
– Special Concern and Rare wildlife species.

Table 1 in Section 4.2 of this report provides a summary of the criteria for candidate status as well as our conclusions regarding presence of confirmed SWH.

4. Discussion and Analysis

4.1 Species and Communities

4.1.1 Vegetation

GHD biologists found no plant species at risk on the subject property, both within the proposed severance. No regionally rare plant species were found by GHD during the field inventories (**Appendix B**). None of the ecological community types identified on the property are considered provincially rare (MNRF, 2015).

4.1.2 Birds

None of the species detected during GHD's breeding bird surveys are listed as Species at Risk provincially or nationally nor as Special Concern (SARO 2021; COSEWIC 2021).

Ontario's Natural Heritage Information Centre (NHIC) maintains records of species at risk, rare species, and rare vegetation communities in Ontario. This information can be obtained on-line, with results being presented according to a series of 1km x 1km grid squares. This property does not have a square associated with it but has two squares that border the southern property line (17QK0539 and 17QK0639). The records of species at risk in these squares were for least bittern, which was not recorded while on site (MNRF – NHIC, 2022).

The Ontario Breeding Bird Atlas (OBBA) is a series of 10km x 10km grid squares in which volunteers have conducted breeding bird surveys. One 10 km x 10 km square overlaps the property (17TQK04) and this square included 7 bird species that are considered significant at the provincial level (SARO 2021). Records were for: common nighthawk (*Chordelis minor* – Special Concern), eastern whip-poor-will (*Antrostomus vociferous* – Threatened), barn swallow (*Hirdundo rustica* – Threatened), wood thrush (Special Concern), Canada warbler (*Wilsonia Canadensis* – Threatened

nationally, Special Concern provincially), eastern wood-pewee (Special Concern) and eastern meadowlark (Threatened).

Many of these OBBA records were associated with larger natural features outside of the immediate Study Area and therefore the study area will not necessarily provide suitable habitat for these species. No species at risk were detected on site. No structures suitable for barn swallow nesting were found. The habitat is not appropriate for eastern meadowlark (which prefers early successional areas) or common nighthawk.

Suitable habitat did exist for special concern species, wood thrush and eastern wood-pewee within the deciduous and mixed forests, however the presence/absence of species could not be confirmed due to the out of season surveys.

No area sensitive birds were noted during the site visit. Area sensitive species are those that require a large area for habitat and suitable nesting habitat to survive. The OBBN Atlas lists seven (7) area sensitive species for the square that this property covers. They are, yellow-bellied sapsucker (*Sphyrapicus varius),* blue -headed vireo (*Vireo solitariu*s), winter wren (*Troglodytes hiemalis*), veery (*Catharus fuscescens*), ovenbird (*Seiurus aurocapilla),* scarlet tanager (*Piranga olivacea*) and piliated woodpecker (*Dryocopus pileatus*). There is potential for some of these species to inhabit the contiguous woodland on and adjacent the property however due to the timing of the field visits, presence/absence could not be confirmed.

4.1.3 Herpetozoa

No amphibians were detected during GHD's site visit. The Ontario Reptiles and Amphibian Atlas square that covers this property (17QK04) lists 2 amphibian species considered threatened or at risk and these included, Blanding's turtle and common snapping turtle (COSEWIC, 2021; SARO, 2021). Ontario's NHIC had one record of provincial species at risk in the 1km x 1km squares that overlap the Study Area (NDMNRF – NHIC 2022) which was the snapping turtle.

Snapping turtles and Blanding's turtles spend most of their lives in shallow waters. During the nesting season, females travel overland in search of suitable nesting sites, usually gravelly or sandy areas along streams or along railway lines and shoulders of roadways. Suitable nesting habitat for snapping turtles may be present due to the closeness of Little Bald Lake. The Ontario Reptiles and Amphibian Atlas square lists one species of snake that is currently listed as threatened (COSEWIC 2021; SARO 2021). Hog-nosed snakes prefer sandy, well-drained habitats such as beaches and dry forests, particularly in areas where there are abundant toads. Suitable habitat for this species is present, however the status of toad populations is unknown.

4.1.4 Other Wildlife

No other wildlife, including mammal species at risk were detected during GHD's surveys (COSEWIC 2021; SARO 2021).

4.2 Natural Features

4.2.1 Wetlands

According to the most recent information from MNRF-NHIC, 2022 there are no Provincially Significant Wetlands within 120m of the Subject Project. Surveys completed on June 11, 2024 identified the wetland inclusion as previously identified did not meet the definition of wetland according to the OWES protocols (Ontario Government, 2024).

4.2.2 Watercourse

As mentioned in previous sections a watercourse was identified running through the retained parcel. This watercourse was determined to be a tributary flowing into Little Bald Lake and ran north-south through the property.

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4.2.3 Significant Wildlife Habitat

Significant Wildlife Habitat often occurs within other natural heritage features and areas covered by Policy 2.1 of the Provincial Policy statement (e.g., significant wetlands). Therefore, it has been suggested that identification and evaluation of Significant Wildlife Habitat is best undertaken after other natural heritage features have been identified (Natural Heritage Reference Manual, 2010).

GHD biologists analysed the information collected from the ecological communities on the subject property using the criteria for Significant Wildlife Habitat in Ecoregion 6E (2015) and confirmed three candidate types of SWH on the property. A fourth, deer wintering congregation areas, has been identified by MNRF. A summary of the habitat criteria and confirmed data is found in Table 1.

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Table 2 List of Candidate SWH and Confirmation of Habitat on Site

Specialized Wildlife Habitats			
1. Areas that support wildlife species with highly specific habitat requirements **2. Areas with exceptionally high species diversity or community diversity** **3. Areas that provide habitat that greatly enhances a species' survival**			
Specialized Wildlife Habitat Criteria	**Candidate and Confirmed Habitat Criteria**	**Found – Yes/Probable**	**Found - No**
Area sensitive bird breeding habitat	Forest or swamp communities 200 m of Interior Forest within mature forest Confirmed if Presence of 3 or more of the listed species	Possible, no area sensitive birds were identified on site as surveys were completed outside of the breeding bird window, however the contiguous woodland in this area would likely provide habitat for a variety of area sensitive species	
Habitat for Special Concern and Rare Species	Element occurrence within 1 or 10 km grid Targeted surveys at appropriate time of year Confirmed if identified on site	Possible-suitable habitat for eastern wood-pewee and wood thrush was identified during field surveys	
Bat maternity colonies	Maternity colonies can be found in tree cavities, vegetation and often in buildings xxii (buildings are not considered to be SWH). – Maternity roosts are not found in caves and mines in Ontario xxii. – Maternity colonies located in Mature deciduous or mixed forest stands ccix, ccx, ccv with >10/ha large diameter (>25cm dbh) wildlife trees ccvii – Female Bats prefer wildlife tree (snags) in early stages of decay, class 1-3 ccxiv or class 1 or 2 ccxii – Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred		No cavity/snag trees identified during field surveys
Deer Wintering Yard Stratum II	Deer yarding areas or winter concentration areas (yards) are areas deer move to in response to the onset of winter snow and cold. This is a behavioural response and deer will establish traditional use areas. The yard is composed of two areas referred to as Stratum I and Stratum II. Stratum II covers the entire winter yard area and is usually a mixed or deciduous forest with plenty of browse available for food. Agricultural lands can also be included in this area. Deer move to these areas in early winter and generally, when snow depths reach 20 cm, most of the deer will have moved here. If the snow is light and fluffy, deer may continue to use	The MNRF has listed this area as a probable deer wintering yard, stratum II. Activity Type: White-tailed Deer Wintering Area (Stratum 2) Habitat Class: Overwintering Qualification: Presently Suitable Habitat Rank: Forage Type: Species Evidence Flag: Yes Verification Date: 2/18/2010	May provide foraging habitat but no dense areas of conifers on this site, that would be used as a deer yard.

Specialized Wildlife Habitats			
1. Areas that support wildlife species with highly specific habitat requirements **2. Areas with exceptionally high species diversity or community diversity** **3. Areas that provide habitat that greatly enhances a species' survival**			
Specialized Wildlife Habitat Criteria	**Candidate and Confirmed Habitat Criteria**	**Found – Yes/Probable**	**Found - No**
	this area until 30 cm snow depth. In mild winters, deer may remain in the Stratum II area the entire winter. – The Core of a deer yard (Stratum I) is located within the Stratum II area and is critical for deer survival in areas where winters become severe. It is primarily composed of coniferous trees (pine, hemlock, cedar, spruce) with a canopy cover of more than 60%cxciv. – OMNRF determines deer yards following methods outlined in "Selected Wildlife and Habitat Features: Inventory Manual" Woodlots with high densities of deer due to artificial feeding are not significant	Location Class: Comments: Feb. 4-19, 2010. Flown in a turbo beaver following the UTM lines on a 1:50,000 NTS map in north and south directions. Started at the western end of the district. Initially every line (1000m) then changed to every other line(2000m). Snow depth was 50cm	

5. Impact Assessment and Recommendations

The following section provides a description of potential impacts that could result from the proposed development. It also identifies mitigation measures, which if implemented, would avoid and/or minimize adverse effects to the natural features within or near the Study Area (Table 5). A full list of mitigation measures is provided in Section 7 of this report.

5.1 Watercourse

The proposed severance will be located greater than 30 meters from watercourse, with any future development being located a minimum of 60 meters from this feature. The proposed severance and future building envelope, to be located on the northwestern side of the severed parcel will not have a significant negative impact on the functions of the watercourse. Recommendations, such as silt fencing have been recommended around the proposed future building envelope to prevent any impacts to the key hydrological features (i.e. Watercourses) on the subject property.

5.2 Significant Wildlife Habitat

One confirmed (deer wintering yard stratum II) and two possible (area sensitive bird species and special concern and rare wildlife species) SWH were identified on the site. The best course of action to reduce the potential impacts of the proposed development to SWH is to avoid having the development/severance line encroach into identified features. Where avoidance was not possible, additional measures have been described below.

5.2.1 Deer Wintering Congregation Areas (Stratum 2)

The proposed severance will not impact the deer winter congregation area (Stratum 2). The severance line will bisect the woodland. Currently a dwelling exists on the retained portion of the property, with seasonal and permanent residents along Little Bald Lake. The deer will continue to utilize the forested lands for wintering.

The removal of a portion of the edge of community 1 and 2 will not significantly impact the MNRF classified deer wintering congregation area (Stratum 2). Single lot development has the potential to disrupt wintering habitat functions if a significant portion of the habitat is affected. However, deer are known to commonly winter in forests containing cottages along shorelines and appear to be adapting to low-density residential areas in New York state (Significant Wildlife Habitat Mitigation Tool, OMNRF 2014). GHD recommends minimizing the development footprint to the extent possible and situating it (them) along the edge of the forest. The understorey of the remaining woodland should be left undisturbed. The proposed dwelling is to be located along the edge of Northern Ave and has been adapted to minimize impact on deer wintering habitat.

5.2.2 Habitat for Special Concern and Rare Wildlife Species

Suitable habitat existed on the property for special concern eastern wood-pewee and wood thrush within the woodland on the retained and proposed severed parcel. Although the presence/absence of the use on the property could not be confirmed as surveys were completed outside of the breeding bird season. The proposed severance and building envelope will not significantly impact any potential habitat for these species. The future building envelope will be located on the north end of the severed parcel and along the edge of the forested communities. GHD recommends the building envelope be located within community 1 as much as possible. The proposed dwelling and severed lot should maintain trees wherever possible.

Where there has been vegetation clearing on the property, it is recommended that areas outside of the building envelope be restored/replanted with trees indigenous to the study area. The planting of trees will help support

additional habitat for the special concern wood thrush and eastern wood-pewee. These birds will continue to utilize the existing forests and seasonally developed around along Pigeon Lake.

5.2.3 Area Sensitive Bird Breeding Habitat

Due to the location of the property with contiguous forest overlapping the greater area, the potential for area sensitive bird breeding habitat may be on the property. Based on the timing of the field visits the presence/absence could not be identified. Habitat loss and habitat fragmentation are both possible side-effects of development. GHD is recommending that the proposed future building envelope be situated along the forest edge (i.e., next to the existing road) in order to prevent habitat fragmentation. We also recommend that the building envelopes minimized to the extent possible (to reduce habitat loss). Woodland trees, shrubs and groundcover outside of the building envelopes should be maintained. Where vegetation clearing occurs as a result of development activities, it is recommended that areas outside of the building envelope be restored/replanted using self-sustaining vegetation indigenous to the study area. These measures will ensure that the retained habitat is large enough to support sensitive species. The future building envelope should be located within community 1 as much as possible outside of the forested areas. Area sensitive bird species will continue to utilize the adjacent forests and the existing seasonal residential area.

6. Policies and Legislative Compliance

The following section describes how the Proposed Development will be in conformance with the relevant federal, provincial and other regulatory legislation, policies, official plans and OP amendments that are applicable and relevant to the Study Area and the immediate vicinity.

6.1 Federal Legislation

6.1.1 Migratory Birds Convention Act

The core breeding period in Ontario for migratory birds under the MBCA for Bird Conservation Region 13 (i.e., the one the subject property lies within) extends from April 15th to August 31st (Environment and Climate Change Canada, 2014). As such clearing of trees and other vegetation for the development cannot occur during this timing window.

6.2 Provincial Legislation

6.2.1 Endangered Species Act

No Species at risk or their habitat covered under the ESA was identified within the Study Area.

6.2.2 Provincial Policy Statement 2020

The subject property does not contain any provincially identified significant wetlands, significant coastal wetlands, significant woodlands, significant valleylands, significant areas of natural and scientific interest. As a result, Sections 2.1.4, 2.1.5 (parts a, b, c, e and f) of the Provincial Policy Statement are not applicable. For recommendations that would permit the Proposed Development to proceed in a manner that complies with Sections 2.1.5 d, 2.1.6 2.1.7 and 2.1.8 of the Provincial Policy Statement, refer to Sections 5.1 (Significant Wildlife Habitat), 5.2 Table 3 and Section 7 of this NHE report.

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6.2.3 A Place to Grow: Growth Plan for the Greater Golden Horseshoe

The subject property is mapped as part of the GPGGH Natural Heritage System. However, since neither the Municipality of Trent Lakes, nor Peterborough County have incorporated the NHS as part of their official plans, Section 4.2.2 of the Growth Plan does not apply to the proposed development.

The Growth Plan also includes direction relating to the protection of water resource systems, including key hydrologic features (KHFs) and their functions (Sections 4.2.1, 4.2.3). Outside of settlement areas, development or site alteration is not permitted in key hydrologic features, such as wetlands. Additionally, in lands adjacent to KHF, proposals for new development or site alteration within 120m of these features requires that a natural heritage evaluation be conducted. This NHE study has been completed to meet the requirements of the Growth Plan. Sections 5 and 7 of this NHE would allow the development to proceed while maintaining compliance with the Growth Plan. Appropriate buffers have been applied to key hydrological features identified on the subject property.

6.3 Local and Other Regulatory Bodies

6.3.1 County of Peterborough Official Plan (Consolidated to March 2020)

This NHE has been prepared in accordance with direction provided in the County of Peterborough Official Plan for such studies (i.e., Section 4.1.3.1 General). This NHA is in compliance with the Country of Peterborough Official Plan as it demonstrates: a) no development has been proposed in provincially significant wetlands and b) there will be no negative impacts on other natural features or ecological functions for which the area is identified as long as the recommendations and mitigation measures outlined in Sections 5, Table 3 and Section 7.0 are implemented.

6.3.2 Municipality of Trent Lakes Official Plan Amendment (OPA No.46: Adoption of the Township of Galway-Cavendish and Harvey OP)

Sections 5 and 7 of this report identify mitigation measures that would allow the Proposed Development to proceed in a manner that complies with the Municipality of Trent Lakes Official Plan. No negative impacts on natural features or their functions are anticipated. This report follows the OP's requirements as outlined in Section 5.9.8.1 of that document.

7. Summary of Recommendations

7.1 General

1. The development limit (of each building envelope) must be clearly defined and delineated and a line staked and clearly marked in the field prior to any development activities occurring on the site. Grading of the site and removal or addition of fill shall be restricted to the proposed work area.
2. Building footprints shall be minimized to the extent possible, with buildings being situated along the edge of the forest.
3. Functioning erosion and sediment control measures shall be installed along the development limit prior to the commencement of any site preparation activities (e.g., grading, placement of fill). The silt fence should be inspected and maintained throughout the construction phase and remain in place until the soils are stabilized and re-vegetated. The silt fence also serves as a visual and physical barrier for construction crews.
4. The overall existing drainage patterns for the lots will be maintained.
5. Removal of vegetation within the building envelope and/or along access routes shall be done outside of the peak breeding bird season (April 15th – August 15th) as per Environment and Climate Change Canada's guidelines.
6. Any areas outside of buildings and built infrastructure shall be vegetated as soon as possible after construction to stabilize the soils and re-establish vegetation cover.
7. Where feasible, self-sustaining trees, shrubs, grasses and/or wildflower seed mixes native to the study area shall be used to re-establish vegetation cover. Consideration should be given to tree species that would provide cover for overwintering deer.
8. Client to obtain relevant permits from the County of Peterborough and Municipality of Trent Lakes.
9. Future proposed buildings shall be designed to ensure much of the precipitation captured by the roofs will be infiltrated back into the ground on-site to maintain the recharge and discharge functions of the area. For example, buildings could include downspouts that spill out onto grassed or gravel surfaces off the roofs. This would convey the rainfall captured by the roof away from hard surfaces and permit on-site infiltration.
10. For the future building envelope, sediment control measures shall be installed prior to the commencement of work and shall be maintained throughout the project to prevent the entry/outward flow of sediment into adjacent hydrologic features.
11. Should any Species At Risk (SAR) be encountered during work related activities, or if there is potential to negatively impact SAR, or wildlife more generally, contact MECP immediately for guidelines on how to proceed.
12. Natural vegetation cover shall be allowed to grow wild, and downed woody debris (i.e., fallen sticks, logs) shall not be removed from woodland habitats retained on site.
13. Tree cutting shall be kept to a minimum so as to retain the habitat for potential area sensitive birds or special concern species (eastern wood-pewee and wood thrush).
14. Area outside of the building footprint(s) to be planted with cover species such as cedar, hemlock and spruce to provide habitat in the longer-term.
15. No supplemental feeding of white-tailed deer is recommended.
16. Existing vegetation/trees in the proposed lots should be retained to the extent possible
17. Where there has been vegetation clearing, areas outside of the building envelope are to be restored/replanted using self-sustaining vegetation indigenous to the study area.

8. Conclusion

This NHE report was prepared to address potential environmental issues associated with an application to create one new lot on a property located at 200 Northern Avenue, Municipality of Trent Lakes in the County of Peterborough. Within the study area GHD staff confirmed the boundaries of key natural features, confirmed their ecological functions, assessed Species at Risk habitat and have recommended appropriate buffers (setbacks) and other mitigation measures to prevent impacts from the proposed development.

Based on our analysis, there will be no significant impact to the natural features on, or adjacent to the subject property (i.e. watercourses), provided the mitigation measures and recommendations (as described in Sections 5 and 7 of this report) are implemented. Additionally, no significant impacts on Species at Risk or area sensitive species are anticipated.

A number of recommendations were made in order to prevent the loss of natural features and/or their functions on the property. Recommendations were also made to minimize potential impacts during the site preparation, construction and post-construction period. Additional dialogue with the County of Peterborough and Municipality of Trent Lakes will need to occur so that the appropriate permitting processes are put in place.

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Appendices

Appendix A

Plant List by Community

Appendix A Plant Distribution By Community

Families and genera for the plant species found in this appendix are listed in taxonomic order. The species are listed alphabetically within each genus.

Three standard reference works were used for the botanical nomenclature and taxonomy (Newmaster et. al., 1998; Gleason and Cronquist 1991; Voss 1980; 1985). Other published works for botanical names included; ferns (Cody and Britton 1989); grasses (Dore and McNeill 1980); orchids (Whiting and Catling 1986); shrubs (Soper and Heimburger 1982) and trees (Farrar 1995).

Community 1 **ComID:** 5430 **ELC Code:** CUM1-1

Common Name	*Scientific Name*	Remarks
PINE FAMILY	*PINACEAE*	
balsam fir	*Abies balsamea*	
CYPRESS FAMILY	*CUPRESSACEAE*	
common juniper	*Juniperus communis var. depressa*	
BEECH FAMILY	*FAGACEAE*	
white oak	*Quercus alba*	
WILLOW FAMILY	*SALICACEAE*	
balsam poplar	*Populus balsamifera*	
ROSE FAMILY	*ROSACEAE*	
common strawberry	*Fragaria virginiana*	
old-field cinquefoil	*Potentilla simplex*	
thimbleberry	*Rubus occidentalis*	
purple-flowering raspberry	*Rubus odoratus*	
PEA FAMILY	*FABACEAE*	
black medick	*Medicago lupulina*	
alfalfa	*Medicago sativa ssp. Sativa*	
CASHEW FAMILY	*ANACARDIACEAE*	
staghorn sumac	*Rhus typhina*	
CARROT FAMILY	*APIACEAE*	
Queen-Anne's lace	*Daucus carota*	
MILKWEED FAMILY	*ASCLEPIADACEAE*	
swallow-wort	*Cynanchum rossicum*	
BORAGE FAMILY	*BORAGINACEAE*	
Viper's bugloss	*Echium vulgare*	
PLANTAIN FAMILY	*PLANTAGINACEAE*	
broad-leaved plantain	*Plantago major*	
FIGWORT FAMILY	*SCROPHULARIACEAE*	
common mullein	*Verbascum thapsus*	

ASTER FAMILY	*ASTERACEAE*	
common yarrow	*Achillea millefolium*	
ox-eye daisy	*Chrysanthemum leucanthemum*	
grass-leaved goldenrod	*Euthamia graminifolia*	
Canada goldenrod	*Solidago canadensis*	
early goldenrod	*Solidago juncea*	
New England aster	*Symphyotrichum novae-angliae*	
common dandelion	*Taraxacum officinale*	
coltsfoot	*Tussilago farfara*	
GRASS FAMILY	*POACEAE*	
orchard grass	*Dactylis glomerata*	
witch grass	*Panicum capillare*	
reed canary grass	*Phalaris arundinacea*	
Kentucky blue grass	*Poa pratensis*	
green foxtail	*Setaria viridis*	

Plant Species Per Community 29

Community 2

ComID: 5431

ELC Code: FOD3-1

Common Name	***Scientific Name***	**Remarks**
BRACKEN FERN FAMILY	*DENNSTAEDTIACEAE*	
eastern bracken fern	*Pteridium aquilinum*	
WOOD FERN FAMILY	*DRYOPTERIDACEAE*	
marginal wood-fern	*Dryopteris marginalis*	
BIRCH FAMILY	*BETULACEAE*	
white birch	*Betula papyrifera*	
WILLOW FAMILY	*SALICACEAE*	
balsam poplar	*Populus balsamifera*	
trembling aspen	*Populus tremuloides*	
ROSE FAMILY	*ROSACEAE*	
hairy agrimony	*Agrimonia pubescens*	
wild red raspberry	*Rubus idaeus*	
HONEYSUCKLE FAMILY	*CAPRIFOLIACEAE*	
scarlet-fruited horse-gentian	*Triosteum aurantiacum*	
ASTER FAMILY	*ASTERACEAE*	
Canada goldenrod	*Solidago canadensis*	
coltsfoot	*Tussilago farfara*	
rough goldenrod	*Solidago radula*	
SEDGE FAMILY	*CYPERACEAE*	
bottlebrush sedge	*Carex lurida*	
Pennsylvania sedge	*Carex pensylvanica*	

Plant Species Per Community 13

Community 3

ComID: 5432 **ELC Code:** FOM3-2

Common Name	*Scientific Name*	Remarks
HORSETAIL FAMILY	*EQUISETACEAE*	
field horsetail	*Equisetum arvense*	
BRACKEN FERN FAMILY	*DENNSTAEDTIACEAE*	
eastern bracken fern	*Pteridium aquilinum*	
WOOD FERN FAMILY	*DRYOPTERIDACEAE*	
spinulose wood-fern	*Dryopteris carthusiana*	
marginal wood-fern	*Dryopteris marginalis*	
sensitive fern	*Onoclea sensibilis*	
PINE FAMILY	*PINACEAE*	
tamarack	*Larix laricina*	
eastern hemlock	*Tsuga canadensis*	
ROSE FAMILY	*ROSACEAE*	
hairy agrimony	*Agrimonia pubescens*	
black cherry	*Prunus serotina*	
Alleghany blackberry	*Rubus allegheniensis*	
thimbleberry	*Rubus occidentalis*	
barren strawberry	*Waldsteinia fragarioides*	
MAPLE FAMILY	*ACERACEAE*	
sugar maple	*Acer saccharum ssp.saccharum*	
OLIVE FAMILY	*OLEACEAE*	
white ash	*Fraxinus americana*	
green ash	*Fraxinus pennsylvanica var. subinteg*	
ASTER FAMILY	*ASTERACEAE*	
Canada goldenrod	*Solidago canadensis*	
rough goldenrod	*Solidago radula*	
SEDGE FAMILY	*CYPERACEAE*	
drooping wood sedge	*Carex arctata Boott*	
Pennsylvania sedge	*Carex pensylvanica*	

Plant Species Per Community 19

Community 4

ComID: 5582 **ELC Code:** FOD7-1

Common Name	*Scientific Name*	Remarks
WOOD FERN FAMILY	*DRYOPTERIDACEAE*	
bulbet bladder fern	*Cystopteris bulbifera*	
ostrich fern	*Matteuccia struthiopteris*	
sensitive fern	*Onoclea sensibilis*	
PINE FAMILY	*PINACEAE*	
balsam fir	*Abies balsamea*	
CYPRESS FAMILY	*CUPRESSACEAE*	
eastern white cedar	*Thuja occidentalis*	

ELM FAMILY	*ULMACEAE*	
American elm	*Ulmus americana*	80% CANOPY
BEECH FAMILY	*FAGACEAE*	
white oak	*Quercus alba*	
DOGWOOD FAMILY	*CORNACEAE*	
red-osier dogwood	*Cornus stolonifera*	
OLIVE FAMILY	*OLEACEAE*	
green ash	*Fraxinus pennsylvanica var. subinteg*	
ASTER FAMILY	*ASTERACEAE*	
Canada goldenrod	*Solidago canadensis*	80% COVER
common dandelion	*Taraxacum officinale*	
SEDGE FAMILY	*CYPERACEAE*	
fringed sedge	*Carex crinita*	
stellate sedge	*Carex rosea*	

Plant Species Per Community 13

Total Number of Plant Species 59


GHD