Ecological Assessment

Mohawk Inn Property

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Environmental Assessment – Mohawk Inn Property

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Environmental Assessment – Mohawk Inn Property

1.0 BACKGROUND

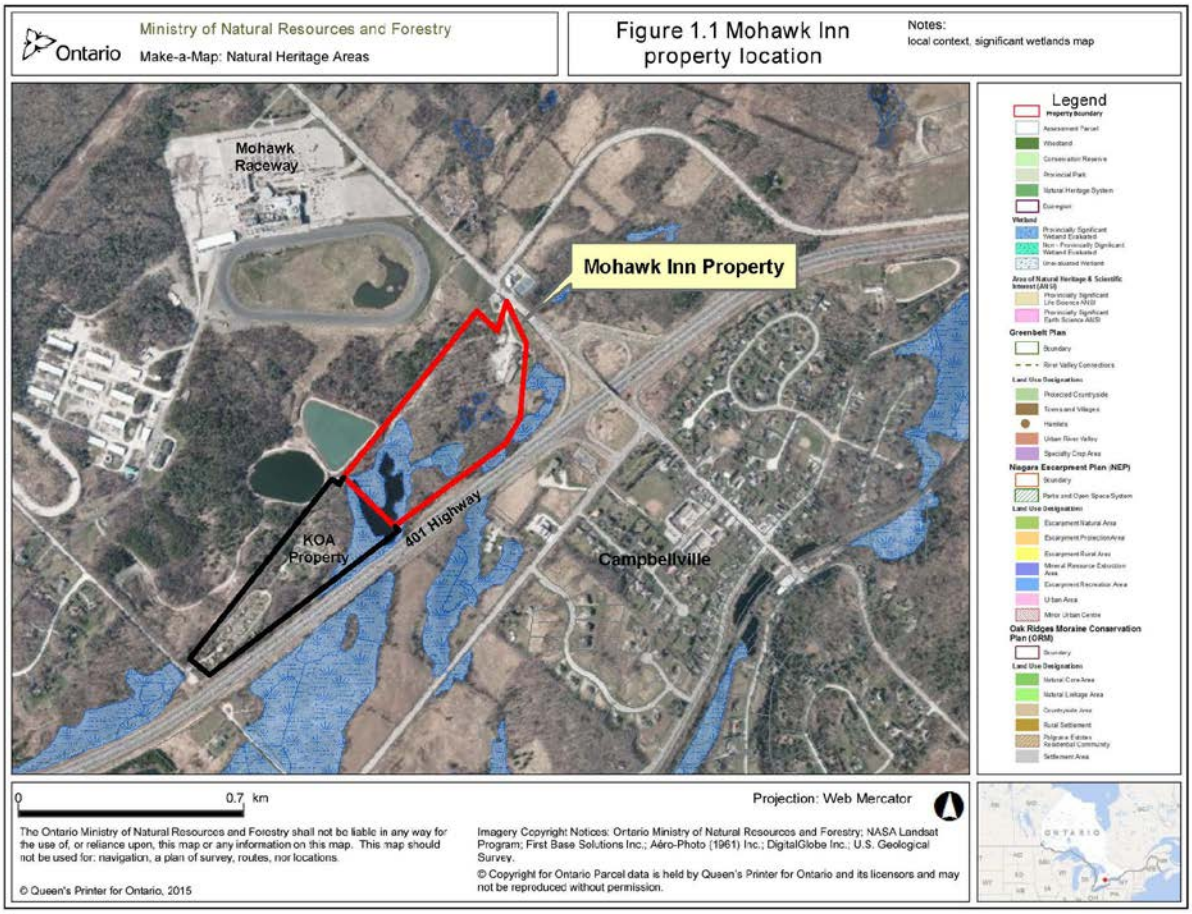
The Mohawk Inn property is located on the west side of Guelph Line between the Highway 401 right of way and the Mohawk Raceway. The Inn was built in the 1960's, and was purchased in 2014 by the current owners. The 3.15 ha eastern part of the property, along Guelph Line, is occupied by the Inn, parking and grounds. The remaining 14.21 ha is occupied by natural forest and ponds. A cabin, used for guest accommodations, is located within the woodland. The woodland has a well-developed road system, which connects through to the KOA property to the west. Walking trails have been developed through the woodland for use by guests and other visitors. Figure 1.1 shows the location of the property, land use context and significant wetlands. Figure 1.2 shows the Mohawk Inn Property and local woodlands.

At settlement, the property was part of a larger farm, which was affected in various ways by the Highway 401 construction/improvements over the years; including some drainage changes and perhaps aggregate extraction. The core woodland was likely cut heavily over 80 years ago to start the existing stand, and agriculture was discontinued on some formerly-cleared land in the 1950's or so. The woodland was high-graded around 2000 and received an improvement thinning/harvest in 2006 (good forestry practices). The woodland suffered significant damage from the 2013 ice storm and many trees came down or were severely damaged. The damaged trees and other hazardous trees were salvaged or trimmed in 2014, and most of the ash was removed at that time to remove them before they died from emerald ash borer. Figure 1.2 shows the Mohawk Inn property and local areas classified as woodland.

The property is located in the Horseshoe Moraines Physiographic Region, located above the Niagara Escarpment to the east (Chapman and Putnam 1951). The soils are Burford Loam, a gravelly loam outwash soil over bedrock or clayey soils at varying depth (Ont. Inst. of Pedology, 1971). The woodland is hummocky with limited relief, resulting in a complex mixture of microsites/vegetation communities over short distances. A rich vegetation and wildlife community is typical of this type of site.

1.1 Objectives

The owners have been considering development options to update facilities and wanted to develop information on the natural systems that might affect development options. Williams & Associates, Forestry Consulting Ltd. (W&A) was retained to coordinate the surveys and after consultations regarding the property with staff of public agencies including the Ontario Ministry of Natural Resources and Forestry (OMNRF), the Regional Municipality of Halton, the Town of Milton, and Conservation Halton. Surveys of flora and fauna in the woodland were conducted using current protocols in order to collect current data for the entire woodland and provide some guidance going forward.


Ontario
Ministry of Natural Resources and Forestry
Make-a-Map: Natural Heritage Areas
Figure 1.1 Mohawk Inn property location
Notes:
local context, significant wetlands map
Mohawk Raceway
Mohawk Inn Property
KOA Property
401 Highway
Campbellville
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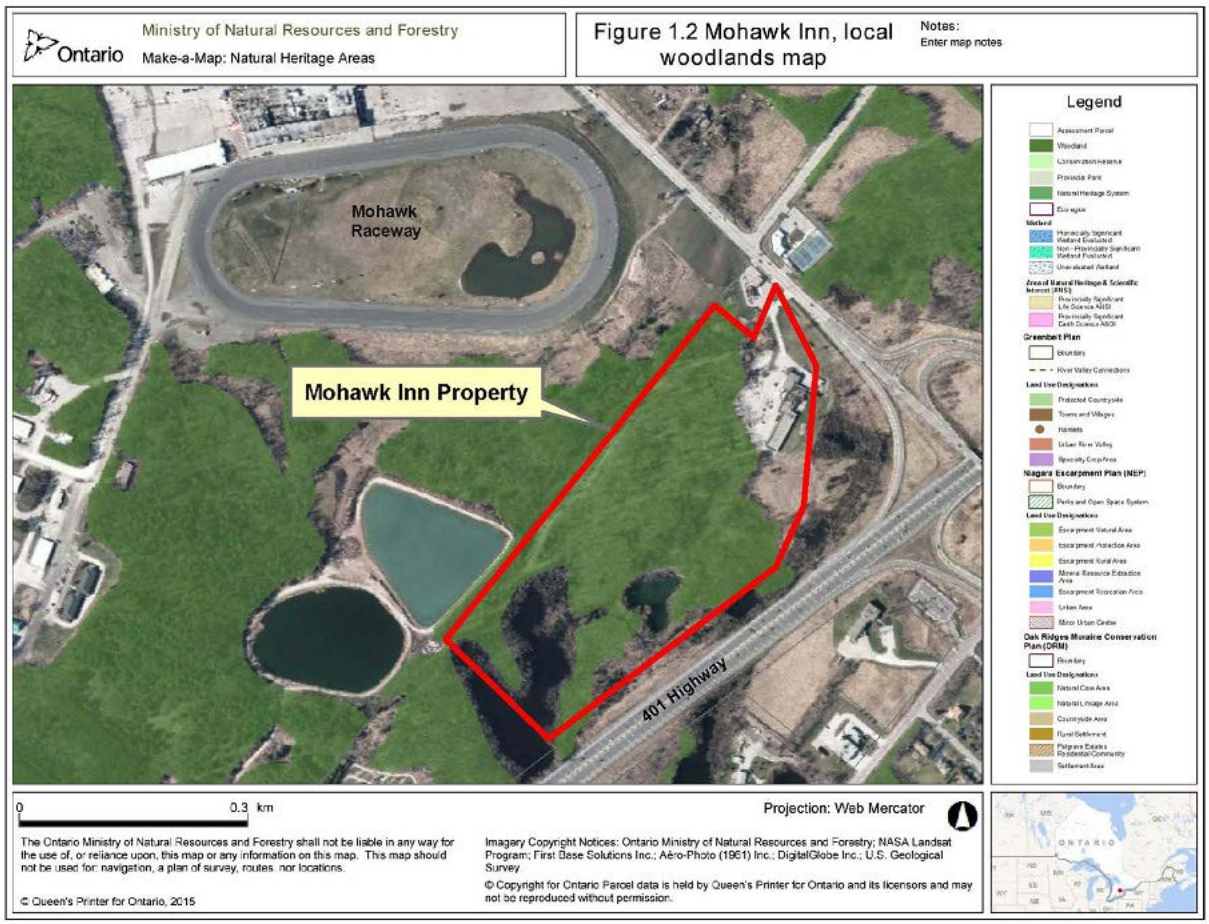
Ontario
Ministry of Natural Resources and Forestry
Make-a-Map: Natural Heritage Areas
Figure 1.2 Mohawk Inn, local woodlands map
Notes:
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Mohawk Raceway
Mohawk Inn Property
401 Highway
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1.2 Assessment Strategy

The undeveloped parts of the property are located within the Greenbelt Plan (2005) Natural Heritage System, which includes several forest types (upland and lowland), ponds and wetlands (provincially significant and unevaluated). The assessment strategy for the property included surveys of flora and fauna in the natural areas of the property through the growing season between April and November, 2015. The surveys conducted and the general sampling periods are provided below. More detailed methods, findings and interpretations are provided in subsequent report sections and the Appendices.

Ecological Land Classification (ELC):	May, 2015
Floristic Surveys:	May - November, 2015
Avian Surveys:	May – August, 2015
Insect/Odonate Survey:	August, 2015
Amphibian Surveys	April – June, 2015

Assessments of flora and fauna (2014) and salamanders (2015) by North-South Environmental (Spitale and Dunn 2015), associated with a proposal for a cell tower at the eastern extremity of the woodland, were reviewed as part of this assessment. The results of the North-South report are discussed in Section 8.0.

2.0 ECOLOGICAL LAND CLASSIFICATION (ELC)

2.1 ELC Survey Methods

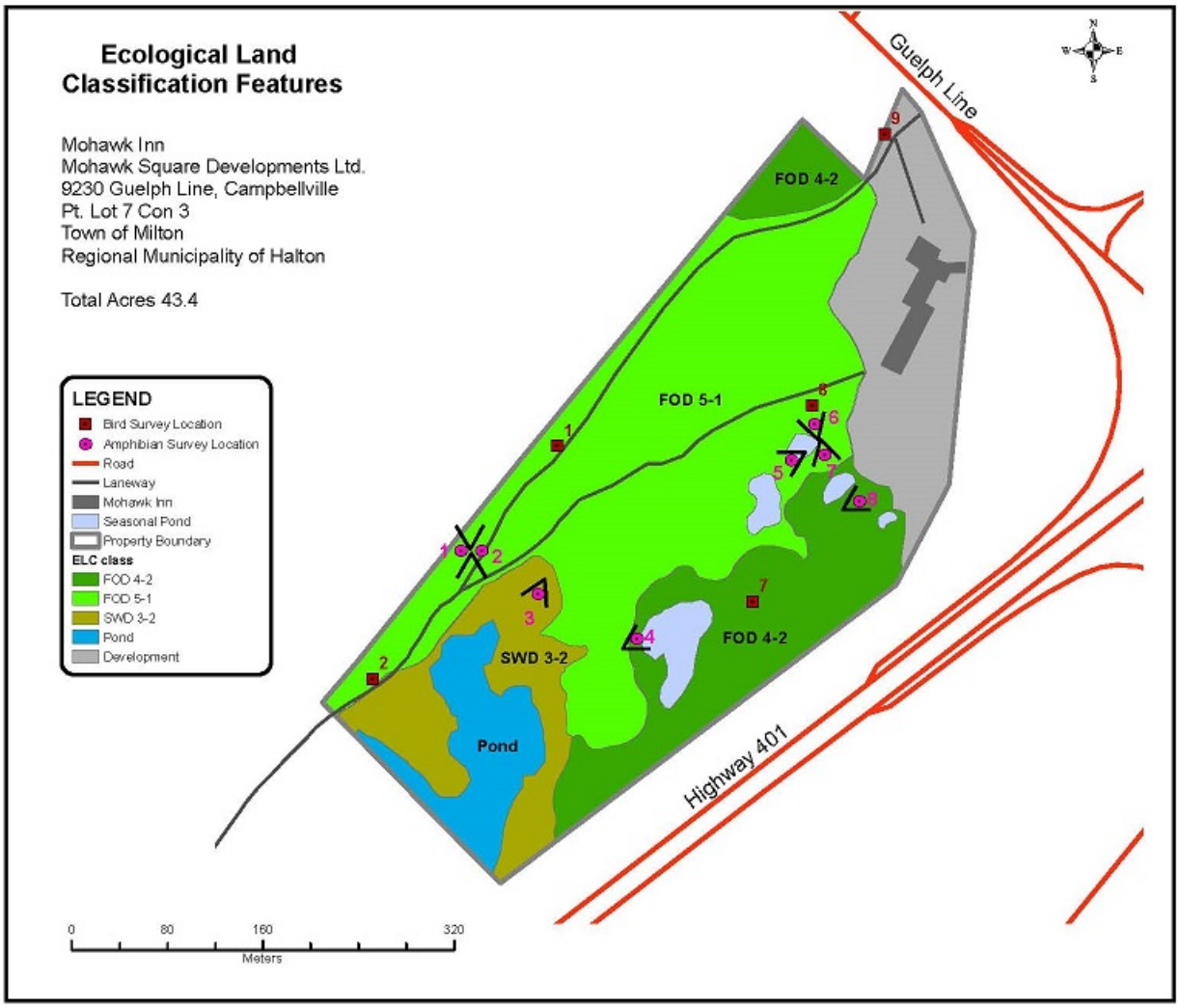
Vegetation communities were classified using standard Ecological Land Classification (ELC) methods developed by the Ontario Ministry of Natural Resources (OMNR) for southern Ontario (Lee, et al., 1998). Field studies were conducted on May 6 and 25, 2015. Physical characteristics, stand description, and dominant vegetation species were recorded for each vegetation community. Remarks on natural disturbances (e.g., evidence of flooding), significant wildlife habitat, and human-made disturbances (e.g., erosion, tracks and trails) were noted if encountered. Information on soils was gathered using a Dutch auger. The survey was completed by T. Schwan RPF (W&A) and C. Marcoux (Ecologist – W&A).

2.2 ELC Survey Results

Three vegetation communities have been delineated within the study area (Figure 2.1). These include a dry-fresh sugar maple deciduous forest (FOD5-1), a dry-fresh white ash deciduous forest (FOD4-2), and a silver maple mineral deciduous swamp (SWD3-2). Descriptions of these vegetation communities are provided below. There was also a large open pond, a smaller cultural pond and four seasonal ponds mapped but not described.

ELC units delineated are described below and copies of field data sheets are available on request.

Figure 2.1 - Ecological Land Classification map with amphibian and bird sampling points.



2.2.1 Dry-fresh Sugar Maple Deciduous Forest Type (FOD5-1)

The Sugar Maple deciduous forest community occupies most of the property, and is located along the northwest edge. Main access trails run the length of the community. This community is dominated by Sugar Maple (*Acer saccharum*) with some Beech (*Fagus grandifolia*). The canopy is greater than 25 m in height and covers more than 60 percent of the community. The sub-canopy is dominated by Sugar Maple with Black Cherry (*Prunus serotina*), White Ash (*Fraxinus americana*), Hemlock (*Tsuga canadensis*), White Pine (*Pinus strobus*), Bitternut Hickory (*Carya cordiformis*) and Ironwood (*Ostrya virginiana*). The sub-canopy is 2 m to 10 m in height and covers 25 to 60 percent of the community. The understory is composed of White Ash, Sugar Maple along with occasional European Buckthorn (*Rhamnus cathartica*), Red Raspberry (*Rubus idaeus* ssp. *melanolasius*), Choke Cherry (*Prunus virginiana*), Norway Maple and Sugar Maple. The understory is 1 m to 2 m in height and covers 35 to 60 percent of the community. The ground layer is composed avens (*Geum* sp.) with occasional Western Poison-ivy (*Toxicodendron radicans* ssp. *rydbergii*), Enchanter's Nightshade (*Circaea lutetiana* ssp. *canadensis*), Zig-zag Goldenrod (*Solidago flexicaulis*), Garlic Mustard (*Alliaria petiolata*), Virginia Strawberry (*Fragaria virginiana* ssp. *virginiana*), Ostrich Fern (*Matteuccia struthiopteris*), and Herb-robert (*Geranium robertianum*). The ground layer is 0.2 m to 0.5 m in height and covers 25 to 60 percent of the forest floor. The community was impacted by the ice storm of 2013. Following this a harvest was done to salvage damaged ash and sugar maple

2.2.2 Dry fresh white ash deciduous forest (FOD4-2)

This forest lies along the southeast side of the property beside Highway 401. This was an old farm field and allowed to grow in. There are two seasonal ponds. There is a small sector in the north corner. The canopy is dominated by Green ash (*Fraxinus pennslyvanica*) with some Sugar Maple, Manitoba Maple (*Acer negundo*) Basswood (*Tilia americana*), Balsam Poplar (*Populus balsamifera*) and Black Cherry. The canopy is 10 to 25 m in height and covers greater than 60 percent of the area. The sub-canopy is Green Ash and Sugar Maple, one meter or less and 25 to 60 percent cover. The understory is composed of European Buckthorn , Common Prickly Ash, Canada Goldenrod, and Red Raspberry. The understory is 35 m to 60 m in height and covers 35 to 60 percent of the community. In the south west part of this community there is a small inclusion of White Pine about 30 years of age.

2.2.3 Silver maple mineral deciduous swamp (SWD3-2)

The silver maple deciduous swamp community is at the west side of the property surrounding the large pond. The canopy is dominated by silver maple (*Acer saccharinum*). It is generally about 25 m in height and covers greater than 60 percent. The sub-canopy is Silver Maple, Sugar Maple, Black Ash (*Fraxinus nigra*), and Green Ash. It is 10 to 25 m in height and covers 25 to 60 percent of the area. The understory is dominated by Prickly Ash. It is 1 to 2 m in height and covers 10 to 25 percent of the area. Large deadfall is abundant (silver maple and ash).

3.0 FLORISTIC SURVEYS

3.1 Floristic Survey Methods

Floristic surveys were completed by A. Goodban (Goodban Ecological Consulting Inc.) on May 21st, July 5th, August 8th, October 6th and November 15th, 2015.

3.2 Floristic Survey Findings

A total of 306 vascular plant taxa were recorded on the Mohawk Inn property. Sixty-one (61) taxa or 20% of the recorded flora are considered non-native and introduced to southern Ontario.

No species at risk (endangered, threatened, special concern) or provincially rare species (Oldham and Brinker 2009) were recorded. Two species listed as rare in Halton Region (Crins et al. 2006) were recorded: Handsome Sedge (*Carex formosa*) and Hackberry (*Celtis occidentalis*). Both species were recorded in proximity to the central pond. Handsome sedge was also observed in areas of disturbance associated with previous harvesting activities.

A list of vascular plant species recorded on the subject property is presented in Appendix A.

4.0 BREEDING BIRD SURVEYS

4.1 Breeding Bird Survey Methods

The point counts followed the Second Ontario Breeding Bird Atlas methodology (Cadman et. al. 2007). The level of breeding evidence was recorded following the atlas protocol. Surveys were conducted between 5 am and 10 am. During a third site visit on August 7th, 2015, all birds present and any breeding evidence were recorded.

Breeding bird surveys were completed on the Mohawk Inn property on May 30th and July 10th, 2015. Five point-count stations were selected in representative habitats within the Mohawk Inn property (Figure 2.1) and the results are provided in Table 1**.** The surveys were completed by T. Hoar (PLAN B Natural Heritage), a senior wildlife biologist.

4.1 Breeding Bird Survey Findings

The mixture of mature deciduous forest, shrub thickets, ponds, and cultural meadow plant communities on the subject property provide habitat that supports a diverse breeding bird community. A total of 51 species were recorded on the property during the breeding bird surveys. Seven of these species had no evidence of breeding and thus were recorded as a visitor to the property to forage. The most common species recorded were American Robin, Red-eyed Vireo, Cedar Waxwing, Song Sparrow, Common Grackle, and American Redstart.

The extensive, mature deciduous forest provided habitat for interior forest species such as Wood Thrush, Scarlet Tanager, Eastern Wood-Pewee, American Redstart and Rose-breasted Grosbeak. The woodlot edge along the central pond contained a small heronry with two active Great Blue Heron nests visible. Three of the species recorded are listed as nationally (Committee on the Status of Endangered Wildlife in Canada - COSEWIC) or provincially (Committee on the Status of Species at Risk in Ontario - COSSARO) Endangered, Threatened or Special Concern. The species recorded included:

- Chimney Swift (Threatened);
- Wood Thrush (Threatened); and,
- Eastern Wood-Pewee (Special Concern).

Chimney Swifts were observed foraging over the site on May 30th, 2015. Given the lack of suitable chimneys present on the subject property, the swifts were probably nesting in the surrounding Campbellville area. A single singing Wood Thrush was recorded on July 10th, 2015 in a section of the mature deciduous forest, which had been recently selectively harvested. Eastern Wood-Pewees were recorded throughout the mature forest habitat located between the KOA campground and the existing Mohawk Inn.

A list of birds observed on the Mohawk Inn property by ELC unit is located in Appendix B. The results of the point-count survey are presented in Table 1 (below).

Table 4.1: Mohawk Inn Breeding Bird Observations

Species Name		Breeding Evidence	Visit 1	Visit 2	Visit 3
Canada Goose	Branta canadensis	confirmed	x		
Wood Duck	Aix sponsa	probable	x		x
Mallard	Anas platyrhynchos	possible			x
Hooded Merganser	Lophodytes cucullatus	probable	x	x	
Great Blue Heron	Ardea herodias	confirmed	x	x	x
Green Heron	Butorides virescens	probable	x		x
Turkey Vulture	Cathartes aura	visitor	x		
Osprey	Pandion haliaetus	visitor	x		x
Ring-billed Gull	Larus delawarensis	visitor	x		
Rock Pigeon	Columba livia	visitor	x	x	
Mourning Dove	Zenaida macroura	probable	x	x	
Chimney Swift	Chaetura pelagica	visitor	x		
Belted Kingfisher	Megaceryle alcyon	visitor	x	x	x
Downy Woodpecker	Picoides pubescens	probable	x	x	
Hairy Woodpecker	Picoides villosus	possible	x		
Northern Flicker	Colaptes auratus	possible		x	
Eastern Wood-Pewee	Contopus virens	probable	x	x	x
Least Flycatcher	Empidonax minimus	possible		x	
Eastern Phoebe	Sayornis phoebe	possible			x
Great Crested Flycatcher	Myiarchus crinitus	probable	x	x	
Eastern Kingbird	Tyrannus tyrannus	possible		x	
Warbling Vireo	Vireo gilvus	probable	x	x	x

Table 4.1. Continued

Red-eyed Vireo	Vireo olivaceus	confirmed	x	x	x
Blue Jay	Cyanocitta cristata	confirmed	x	x	x
American Crow	Corvus brachyrhynchos	probable	x	x	
N. Rough-winged Swallow	Stelgidopteryx serripennis	visitor		x	
Black-capped Chickadee	Poecile atricapillus	confirmed	x	x	x
White-breasted Nuthatch	Sitta carolinensis	possible		x	
House Wren	Troglodytes aedon	probable	x	x	
Blue-gray Gnatcatcher	Polioptila caerulea	possible			x
Wood Thrush	Hylocichla mustelina	possible		x	
American Robin	Turdus migratorius	confirmed	x	x	x
Gray Catbird	Dumetella carolinensis	probable	x	x	x
European Starling	Sturnus vulgaris	probable		x	x
Cedar Waxwing	Bombycilla cedrorum	probable	x	x	x
Northern Waterthrush	Parkesia noveboracensis	possible	x		
Black-and-white Warbler	Mniotilta varia	possible	x		
Mourning Warbler	Geothlypis philadelphia	possible		x	
Common Yellowthroat	Geothlypis trichas	probable	x	x	
American Redstart	Setophaga ruticilla	confirmed	x	x	x
Chestnut-sided Warbler	Setophaga pensylvanica	possible		x	
Chipping Sparrow	Spizella passerina	confirmed	x	x	x
Song Sparrow	Melospiza melodia	confirmed	x	x	x
Scarlet Tanager	Piranga olivacea	possible	x		
Northern Cardinal	Cardinalis cardinalis	probable	x	x	
Rose-breasted Grosbeak	Pheucticus ludovicianus	probable	x	x	x
Indigo Bunting	Passerina cyanea	confirmed	x	x	x
Red-winged Blackbird	Agelaius phoeniceus	possible	x		
Common Grackle	Quiscalus quiscula	probable	x	x	x
Baltimore Oriole	Icterus galbula	probable	x	x	x
American Goldfinch	Spinus tristis	possible		x	x

5.0 INSECT SURVEY

A formal invertebrate survey for Odonates (dragonflies and damselflies) and *Lepidoptera* (butterflies, moths) was undertaken on August 7th, 2015. An open search format was used wherein every individual observed within 5 m of a wandering transect was recorded. Incidental observations were also recorded during the breeding bird surveys. The survey was completed by T. Hoar (PLAN B Natural Heritage).

No Lepidoptera or Odonate species of conservation concern were recorded on the subject property.

5.1 Lepidoptera

During the August 7th survey, a total of 6 species of *Lepidoptera* and 8 species of Odonates were recorded. The species observed and the number of individuals recorded is presented below.

Table 5.1 *Lepidoptera* species and number of individuals

Species	***# Observed***
Giant Swallowtail	4
Black Swallowtail	1
Eastern Tailed Blue	2
Cabbage White	6
Summer Azure	1
Clouded Sulphur	8

The following species were recorded as incidental observations during the breeding bird surveys.

- Spring Azure
- European Skipper
- Canadian Tiger Swallowtail

Table 5.2 Odonate species and number of individuals

Species	***# Observed***
Eastern Forktail	3
Common Spreadwing	1
Familiar Bluet	12
Bluet spp.	14
Ruby Meadowlark	1
Green Darner	2
Swamp Darner	1
Twelve Spotted Skimmer	2

The following species were recorded as incidental observations during the breeding bird surveys.

- Lancet Clubtail
- American Emerald
- Common Baskettail
- Common Whitetail
- Widow Skimmer
- Chalk-fronted Corporal
- Eastern Pondhawk

6.0 AMPHIBIAN SURVEYS

6.1 Amphibian Survey Methods

Methods used in these surveys are described in the Great Lakes Marsh Monitoring Program (MMP), developed by Bird Studies Canada (2015). Surveying for amphibians is an accurate way of determining overall health of surrounding marsh habitats, as amphibians are environmentally sensitive, their presence or lack of presence can be a good indicator of what is happening in that ecosystem.

The protocol recommends that three surveys are to be completed between the months of April and July 5th, with at least 15 days between each survey. Surveys should be conducted when night time air temperatures are greater than 5.0 degrees Celsius (April), 10.0 degrees Celsius (May) and 17. 0 Celsius (June), and with minimal wind. Surveys should begin 30 minutes after sunset and conclude by midnight. Monitoring stations should be 500 meters apart to prevent double-counting of calls between stations, and be conducted using an unlimited distance 180-degree sampling area and stations can be placed back to back (e.g., facing north and south respectively). It should be surveyed for 3 minutes and record calls within or beyond a 100-meter radius.

Eight point-count stations were placed at wetland areas and vernal pools around the property (Figure 2.1). The points were sampled on April 12, May 7 and June 14, 2015. The surveys were completed by L. Marcoux (Ecologist - W&A).

6.2 Amphibian Survey Findings

The April 12 survey started at 20:40 and finished at 21:38. This initial survey resulted in minimal observations of calling amphibians. The May 7 survey started at 21:12 and finished at 22:02. It was noted that there was a greater number of individuals and more species calling than on April 12. The final amphibian survey was completed on June 14th, starting at 21:42 and finishing at 22:43. It was noted that number of individuals and species of species diversity had gone down. Only two species were heard calling, and there was a visual identification of a Northern Leopard Frog.

It should be noted that, on average, the points closest to the Inn (near vernal pools) (SP1, SP3 and SP4) had no observations of calling amphibians, with the exception of SP3 (Point Count #7) on May 7th. A summary of data recorded during each survey is provided in Table 6.1.

	April 12, 2015		**May 7, 2015**		**June 14, 2015**	
Species	*Total # Individuals*	*Incidental Observations*	*Total # Individuals*	*Incidental Observations*	*Total # Individuals*	*Incidental Observations*
Gray Tree Frog	0	Bats flying over. American Robin singing. Canada Geese flying over.	3	Bats flying over. Racoon on road. American Robin singing.	7	Visual observation of Northern Leopard Frog.
Green Frog	0		0		1	
Spring Peeper	4		18		0	
Wood Frog	1		0		0	
American Toad	0		2		0	
Total	**5**		**23**		**8**	

Table 6.1 Mohawk Inn Amphibian Survey Data Survey

6.3 Salamander Surveys

Salamander surveys were conducted by North-South Environmental Inc. (Spitale and Dunn 2015) in 2015 for another project. Their methods and findings are provided below.

Salamander Surveys (Methods) (Spitale and Dunne, 2015)

Salamander surveys were conducted to determine the presence/absence of Jefferson Salamanders in the area. Jefferson Salamanders are listed as Endangered under the Ontario Endangered Species Act, 2007 and Threatened under the federal Species at Risk Act,with the latest Committee of the Status of Endangered Wildlife in Canada (COSEWIC) designation listed asEndangered. The distribution and population size of Jefferson Salamander is not well known and studies targeting this species are complex due to the occurrence of polyploid individuals that breed with Blue-spotted Salamanders. Based on recommendations from the MNRF, two types of salamander surveys were conducted: (1) minnow trapping in suitable vernal pools, and (2) roadside visual encounter surveys along a portion of the access lane within the study area and along a segment of Guelph Line. The minnow trapping surveys were conducted on 5 different occasions while the roadside visual encounter surveys were conducted on 3 different occasions (see Table 1 for specific dates). Tail tip tissue samples were taken from captured and encountered salamanders that appeared to be part of the Jefferson Salamander complex according to the MNRF's *Sampling Protocol for Determining the Presence of Jefferson Salamanders (Ambystoma jeffersonianum) in Ontario*, prepared by the Jefferson Salamander Recovery Team (June 2013). These samples were sent to the University of Guelph for genetic analysis.

Salamanders (Findings) (Spitale and Dunne, 2015)

A total of 21 salamanders were captured. A tail sample was collected for all 21 individuals. Genetic analysis revealed that five of the individuals were Blue-spotted (*Ambystoma laterale*) while the remaining 16 were Blue-spotted dominant polyploids of the Jefferson X Blue-spotted Salamander complex (*Ambystoma jeffersonium/laterale*). More specifically, 5 individuals were Blue-spotted diploid (LL), 15 individuals were Blue-spotted dominated triploid (LLJ) (i.e., two parts Blue-spotted, one part Jefferson), and 1 individual was Blue-spotted dominated tetraploid (LLLJ) (i.e., three parts Blue-spotted, one part Jefferson).

Nineteen individuals were captured using minnow traps throughout the survey period, and 2 individuals were found on a crushed stone drive way part way between the rear of the parking lot associated with the Mohawk Inn and Conference Centre and the earthen laneway during the completion of the roadside survey.

7.0 SUMMARY

A total of 306 vascular plants, 52 birds, 11 *Lepidoptera* (i.e., moths and butterflies), 15 Odonate (i.e., dragonflies and damselflies), and 5 frog species were encountered during surveys for this report. Surveys conducted for this study had a larger study area (i.e., the entire woodland on the property) and more sampling dates for some guilds, compared to surveys conducted by North-South Environmental Inc. (Spitali and Dunn, 2015) (i.e., the eastern portion of the woodland). This likely explains a greater number of species observations in many cases. In addition to the work conducted for this report, Spitali and Dunn (2015) reported observations of two snakes (Dekay's Brown Snake and Eastern Garter Snake), and conducted a rigorous salamander survey.

7.1 Species at Risk/Species of Concern

No plant species at risk (endangered, threatened, special concern) or provincially rare species (Oldham and Brinker 2009) were recorded. Two plants listed as rare in Halton Region (Crins et al. 2006) were recorded: Handsome Sedge (Carex formosa) and Hackberry (Celtis occidentalis). Both species were recorded in proximity to the central pond. Handsome sedge was also observed in areas of disturbance associated with previous harvesting activities.

Interior forest-dependant bird species such as Wood Thrush, Scarlet Tanager and Eastern Wood-Pewee were recorded as well as American Redstart and Rose-breasted Grosbeak, which are interior species but also breed in open woodlands. The woodlot edge along the central pond contained a small heronry with two active Great Blue Heron nests visible. Three of the species recorded are listed as nationally (Committee on the Status of Endangered Wildlife in Canada - COSEWIC) or provincially (Committee on the Status of Species at Risk in Ontario - COSSARO) Endangered, Threatened or Special Concern. The species recorded included:

- Chimney Swift (Threatened);
- Wood Thrush (Threatened); and,
- Eastern Wood-Pewee (Special Concern).

Chimney Swifts were observed foraging over the site but given the lack of suitable chimneys present on the subject property, the swifts were probably nesting in the nearby Campbellville area. A single singing Wood Thrush was recorded in a section of the mature deciduous forest, which had been recently selectively harvested. Eastern Wood-Pewees were recorded throughout the mature forest habitat located between the KOA campground and the existing Mohawk Inn.

Salamander surveys salamanders were not conducted during this study. However, North-South Environmental Inc. (Spitali and Dunn 2015) collected a number of individuals. Genetic analysis revealed that they were Blue-spotted (*Ambystoma laterale*) and Blue-spotted dominant polyploids of the Jefferson X Blue-spotted (*Ambystoma jeffersonium/laterale*). Neither of which are listed as species at risk. During fieldwork for the North-South Report, staff looked for signs that salamanders were migrating across Guelph Line and none were observed (Spitale, Personal Communication).

7.2 Conclusions

The findings of these surveys confirm that the study area supports a diverse woodland that that has been disturbed historically and recently. The woodland has core stands of remnant forests and areas with successional forests that developed after agriculture was discontinued, including Provincially Significant

Wetlands and unevaluated wetlands. With the exception of the Inn, the study area is designated as part of the Greenbelt Plan Natural Heritage System. From a Provincial Policy Statement perspective, the subject property contains the following natural heritage features:

- Significant woodland;
- Significant wetlands (Guelph Junction PSW Complex);
- Significant wildlife habitat; and,
- Habitat of endangered and threatened species.

The surveys conducted for this study were for general purposes, as background information that can be used in conjunction with future development applications by the owners. Therefore, the information from this and other projects were not used to assess the impact of any disturbance on the forest or gauge its findings in any way. When a development project is proposed, this information should form a valuable contribution towards the assessment of impacts of future proposals.

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APPENDIX B. Bird Point Count Results, Mohawk Inn (2015)

Point Counts for May 30th, 2015

Station 1 - 7:55am	<100m	>100m
American Redstart	1	1
American Robin	1	
Black and White Warbler	1	
Chipping Sparrow	1	
Eastern Wood-Pewee	1	
Great Crested Flycatcher	1	
Northern Waterthrush	1	
Red-eyed Vireo	2	2
Station 2 - 8:05am	**<100m**	**>100m**
American Crow		1
American Robin	2	
Baltimore Oriole		1
Downy Woodpecker	1	
Gray Catbird	1	1
Great Crested Flycatcher		1
House Wren	1	1
Northern Cardinal		2
Red-eyed Vireo	1	1
Scarlet Tanager	1	
Warbling Vireo	1	
Station 7 - 9:17am	**<100m**	**>100m**
American Robin		1
Black-capped Chickadee	1	
Downy Woodpecker	1	
Eastern Wood-Pewee	1	1
Indigo Bunting	1	1
Red-eyed Vireo	1	2
Rock Pigeon	1	
Station 8 - 9:29am	**<100m**	**>100m**
American Redstart		1
American Robin		2
Belted Kingfisher		1
Cedar Waxwing	1	
Chimney Swift		1
Common Grackle	2	
Great Crested Flycatcher		1
House Wren		1
Red-eyed Vireo		1

Point Counts for July 10th, 2015

Station 1 - 5:15am	<100m	>100m
American Redstart	2	1
American Robin	2	2
Belted Kingfisher		1
Blue Jay		1
Eastern Wood-Pewee	1	
Gray Catbird		1
Hooded Merganser		1
Least Flycatcher	1	
Red-eyed Vireo	2	1
Song Sparrow	1	1
Station 2 - 5:25am	**<100m**	**>100m**
American Redstart	2	
Cedar Waxwing	2	
Chestnut-sided Warbler		1
Common Grackle		2
House Wren	1	
Indigo Bunting	1	
Mourning Warbler	1	
Song Sparrow		1
Warbling Vireo	1	
Station 7 - 6:40am	**<100m**	**>100m**
American Crow		2
American Robin	1	2
Black-capped Chickadee		1
Blue Jay		1
Cedar Waxwing	9	
Common Grackle		5
Downy Woodpecker	2	
European Starling		1
House Wren	1	1
Indigo Bunting		1
Red-eyed Vireo	3	1
Rose-breasted Grosbeak	2	
Song Sparrow		1
Wood Thrush		1
Station 8 - 6:50am	**<100m**	**>100m**
American Robin	1	2
Baltimore Oriole		2

Red-winged Blackbird		3
Warbling Vireo	1	

Station 9 - 9:39am	<100m	>100m
American Robin	1	1
Baltimore Oriole		1
Chipping Sparrow		1
Mourning Dove	1	1
Red-eyed Vireo		1
Ring-billed Gull		2
Rock Pigeon		4
Song Sparrow	1	

Common Grackle	1	
Eastern Wood-Pewee	1	
House Wren		1
Indigo Bunting	1	
Red-eyed Vireo	1	3
song sparrow		2
Wood Thrush		1

Station 9 - 7:02am	<100m	>100m
American Goldfinch	1	
American Robin	1	1
Baltimore Oriole	1	
Mourning Dove	1	
Rock Pigeon		3
Song Sparrow		1

Appendix C Amphibian Call Survey Data – Mohawk Inn Property

Date: Sunday April 12, 2015 Project: Mohawk Inn Property

Start Time: 20:40 End Time: 21:38

Sunset Time: 20:01

Temperature: 8˚C Surveyor: Leanne Marcoux

Wind: Slight Breeze, SSW 11 km/h

Point Count	Direction	Coordinates	Start Time	End Time	Observations	Incidental
1	West	0581139 4815681	20:40	20:43	No Observations	
2	East	0581198 4815756	20:43	20:46	No Observations	
3	South	0581235 4815703	20:50	20:53	No Observations	
4	East	0581314 4815657	20:57	21:00	SPPE – Chorus 2 – 4 Individuals WOFR – Chorus 1 – 1 Individual	
5	South-West	0581432 4815781	21:11	21:14	No Observations	
6	North	0581453 4815861	-	-		No Water in SP1, Not able to survey. Will check again next visit.
7	South	0581481 4815797	21:20	21:23	No Observations	
8	North-East	0581500 4815772	21:27	21:30	No Observations	

Date: Thursday May 7, 2015 Project: Mohawk Inn Property

Start Time: 21:12 End Time: 22:02

Sunset Time: 20:29

Temperature: 14˚C Surveyor: Leanne Marcoux

Wind: Slight Breeze, SSE 6 km/h

Point Count	Direction	Coordinates	Start Time	End Time	Observations	Incidental
1	West	0581139 4815681	21:12	21:15	GRTF – Chorus 1 – 1 Individual SPPE – Chorus 2 – 4 Individuals AMTO – Chorus 1 – 1 Individual	
2	East	0581198 4815756	21:15	21:18	No Observations	
3	South	0581235 4815703	21:21	21:24	SPPE – Chorus 2 – 4 Individuals	
4	East	0581314 4815657	21:29	21:32	GRTF – Chorus 1 – 2 Individuals SPPE – Chorus 2 – 5 Individuals AMOT – Chorus 1 – 1 Individual	
5	South-West	0581432 4815781	21:41	21:44	SPPE – Chorus 2 – 3 Individuals	
6	North	0581453 4815861	21:46	21:49	No Observations	Adequate water levels present for survey
7	South	0581481 4815797	21:53	21:56	SPPE – Chorus 2 – 2 Individuals	
8	North-East	0581500 4815772	21:59	22:02	No Observations	

Date: Sunday June 14, 2015 Project: Mohawk Inn Property

Start Time: 21:42 End Time: 22:43

Sunset Time: 21:04

Temperature: 17˚C Surveyor: Leanne Marcoux

Wind: Still, SSE 4 km/h, Foggy and Humid

Point Count	Direction	Coordinates	Start Time	End Time	Observations	Incidental
1	West	0581139 4815681	21:42	21:45	GRTF – Chorus 2 – 4 Individuals (2 individuals +100m)	
2	East	0581198 4815756	21:45	21:48	No Observations	
3	South	0581235 4815703	21:52	21:55	GRFR – Chorus 1 – 1 Individual	Northern Leopard Frog (visual), not calling
4	East	0581314 4815657	22:01	22:04	GRTF – Chorus 1 – 3 Individuals	
5	South-West	0581432 4815781	22:14	22:17	No Observations	
6	North	0581453 4815861	22:24	22:27	No Observations	
7	South	0581481 4815797	22:33	22:36	No Observations	
8	North-East	0581500 4815772	22:40	22:43	No Observations	