Environmental Impact Study

Kawartha Downs Events Site Plan Update

RCI (KDL) Inc.

9 September 2022

→ **The Power of Commitment**

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Executive Summary

GHD Limited has been retained to complete and Environmental Impact Study (EIS) as is required as part of the planning applications for the planned development of this property. The property is located at 1382 County Road 28, also referred to as Lot 23, Concession 8 in the Township of Cavan Monaghan. It is approximately 49.8 hectares in size and is rectangular in shape. To the immediate south of the property is Syer Line, while to the immediate east is County Road 28. This parcel of lands includes disturbed areas, thicket swamp, a hedgerow and old field meadow.

The proposed development for Kawartha Downs includes the demolition of several existing buildings and the construction of an approximately 43,000 square foot multi-use event centre, which include indoor multi-use field changerooms, public social space, office and administration space and permanent seating for 1,000. The proposal also includes the construction of an approximately 35,000 square foot horse/cattle barn, a 26,500 square foot future hotel, two stormwater retention ponds and a water treatment facility. An additional asphalt parking lot (534 spaces), overflow gravel parking (1900 spaces) and pedestrian pathways are also proposed. (Appendix A – Site Plan).

The main goals of this EIS report are: to confirm the boundary of natural features (e.g., significant wetlands) identified in the study area; to identify the ecological functions of any natural features found; to determine whether any Species at Risk and/or their habitats are found on the subject property and; to recommend appropriate buffers and/or mitigation measures to prevent impacts on natural features and their functions.

This report is subject to, and must be read in conjunction with, the limitations set out in section 1.3, 1.6 and 1.7 in addition to the assumptions and qualifications contained throughout the Report.

Four (4) vegetation communities were delineated and inventoried by GHD staff in July 2022. The locations of these communities can be found on Figure 1 and a comprehensive plant list can be found in Appendix B. An additional three (3) communities had been previously delineated and identified by Cambium Inc. in 2021. These communities are depicted on Figure 1 of this EIS.

Four wetlands identified in the study area are not currently mapped by the agencies as they are unevaluated. These include wetland a SWT2-2, which was delineated by GHD Ltd. in 2022 and MAS2-1, SWD6-2 and SWM3-2, as delineated by Cambium Inc. (2022). They are adjacent to a provincially significant wetland (PSW) and are hydrologically connected. This wetland, the Cavan Creek PSW is located to the northwestern corner of the subject property. Among its functions, the PSW supports a coldwater fishery and provides breeding and foraging/ feeding habitat for provincially and regionally significant species.

Various policy documents recommend 30-metre buffer areas (or set-backs) in order to protect the ecological functions of wetlands. However, many areas of the existing development are already within that buffer, including the proposed location of the stormwater management pond. A 30-metre buffer has been depicted on the identified wetlands as an area of constraint (Figure 1.1). There is one area for the stormwater pond where a lesser buffer is recommended, but additional plantings and restoration of current disturbed or unvegetated areas is proposed. The installation of heavy-duty silt fencing along the perimeter of the development envelope will protect the features and functions and maintain the buffer's integrity. The existing buffer will be enhanced with self-sustaining vegetation that is indigenous to the study area.

GHD staff did not find any woodlands in the study area. That said, in 2021 Cambium Inc. delineated three forest/swamp communities at the very north end of the property, labelled as Communities 5, 6 and 7 in Figure 1. GHD staff used the Natural Heritage Reference Manual Second Edition (OMNRF 2010) to assess the significance of woodlands in the study area. Our analysis indicates that none of the wooded areas on site would be considered significant.

We conclude, the proposed development will not result in negative impacts on identified natural heritage features or their functions, provided the mitigation measures described in Sections 5 and 7 of this report are implemented. In particular, obtaining the relevant permits from the Township of Cavan Monaghan, the Ministry of Northern

Development, Mines, Natural Resources and Forestry and MECP. These recommendations have been made to address potential impacts to natural features (i.e., identified wetlands, wildlife habitat, Species at Risk) and/or their functions during the site preparation, construction and post-construction period.

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1. Introduction

1.1 Background

GHD Limited has been retained to complete and Environmental Impact Study (EIS) as is required as part of the planning applications for the planned redevelopment of this property. The property is located at 1382 County Road 28 in the Township of Cavan Monaghan. This parcel of lands includes disturbed areas, thicket swamp, a hedgerow and old field meadow.

1.2 Location and Study Area

The property is located at 1382 County Road 28, also referred to as Lot 23, Concession 8 in the Township of Cavan Monaghan. The property is approximately 49.8 hectares in size and is rectangular in shape. To the immediate south of the property is Syer Line, while to the immediate east is County Road 28.

1.3 Scope and limitations

This report: has been prepared by GHD for RCI (KDL) Inc. and may only be used and relied on by RCI (KDL) Inc. for the purpose agreed between GHD and RCI (KDL) Inc. as set out in sections 1.6 and 1.7 of this report.

GHD otherwise disclaims responsibility to any person other than RCI (KDL) Inc. 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) 1 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 (OPs) and official plan 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 Species at risk, natural features and habitats or other features relevant to this study.

1.4.1 Federal Legislation

Migratory Birds Convention Act

The purpose of the Migratory Birds Convention Act (MBCA - Government of Canada 1994) is to implement the Convention by protecting and conserving migratory birds — as populations and individual birds — and their nests.

No work is permitted to proceed that would result in the destruction of active nests (i.e., nests with eggs or young birds) or the wounding or killing of bird species protected under the MBCA and/or Regulations under that Act.

1.4.2 Provincial Legislation

Endangered Species Act, 2007

The purposes of the Ontario Endangered Species Act (ESA 2007) are 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.
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 in Ontario, which is updated regularly. This list was most recently consolidated on January 26, 2022 (Government of Ontario 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).

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.

A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2019)

A Place to Grow: Growth Plan for the Greater Golden Horseshoe 2019 came into effect on May 16, 2019 replacing the Growth Plan for the Greater Golden Horseshoe 2017 (Office Consolidation August 2020). The 2019 Growth Plan for the Greater Golden Horseshoe (GPGGH) is a strategic, long-range, comprehensive and integrated approach to guide future growth in Ontario. It includes planning for infrastructure, land use, economic development and population health (Government of Ontario 2020b).

The study area is adjacent to but does not fall within an identified settlement area associated with Fraserville. Instead, the subject property is mapped as part of the GPGGH Natural Heritage System. As a result, Sections 4.2.2, 4.2.3, and 4.2.4 of the GPGGH 2019 are applicable in the study area.

1.4.3 Local and Other Regulatory Bodies

County of Peterborough Official Plan (Consolidated to March 2020)

The County of Peterborough sets the context for planning in the County and also functions as the lower tier Official Plan for four local municipalities; however these four do not include the Township of Cavan Monaghan. The Township of Cavan Monaghan has identified four different land use designations in the study area: Agricultural, Commercial Entertainment, Natural Core Area and Natural Linkage Area (Peterborough County – Public GIS 2022). Natural Core Areas and Natural Linkage Areas are discussed in Section 4.1.3.4 (Natural Heritage Features) of the Peterborough County Official Plan. Section 2.6.3.4 discusses Agricultural Areas, while the Commercial Sector is discussed in Section 4.6.3.2 (County of Peterborough Official Plan 2020).

"*The County recognizes the important contribution that natural systems, natural heritage features and natural resources make to the social, economic and environmental health of local municipalities. In this regard, the County has identified … [certain] areas to ensure that the appropriate land use and resource management policies are applied to them*." (Section 4.1 County of Peterborough Official Plan). Amongst these features are wetlands, habitat of endangered and threatened species and wildlife habitat. "*Development and site alterations within provincially significant wetlands and in significant portions of the habitat of endangered and threatened species is not permitted. However, with the exception of the Oak Ridges Moraine Policy, development or site alteration such as filling, grading and excavating may be permitted within or adjacent to the remaining natural heritage features listed in Section 4.1 of this plan, provided it has been demonstrated by and Environmental impact assessment that there will be no negative impacts on the natural features or ecological functions for which the area is identified."* The potential presence of features such as wetlands, wildlife habitat and the habitat of threatened and endangered species act as triggers for this EIS (Environmental Impact Assessment/EIA).

Township of Cavan Monaghan Official Plan (Amendments to October 2021)

Schedule 'A' (Land Use) of the Cavan Monaghan Official Plan shows that the property includes four different designations. Two of these designations are Natural Core Area and Natural Linkage Area and both are considered to be a part of the Township's Natural Heritage System. The Township's Natural Heritage System is discussed in Section 6.0 of the OP. The presence of the Township's Natural Heritage System on the subject property acts as a trigger for this EIS (Section 6.2). Natural Core Areas are discussed in Section 6.3 and Natural Linkage Areas in Section 6.4 of Cavan Monaghan's Official Plan.

Schedule ‘B’ (Natural Heritage System and Environmental Constraints) indicates the property contains Significant Woodlands and Provincially Significant Wetlands in the northern portion of the property. Section 3.8 (Natural Heritage System and Environmental Constraints) of the Official Plan states the following,

“The purpose of identifying these features is to prevent development or site alteration on lands that are hazardous due to flooding, poor drainage, deep organic soils, erosion, steep slopes, contamination or any other physical condition that could cause loss of life, personal injury, property damage or degradation of the environment.

Within these areas the following policies apply:

a. No *buildings or structures, with the exception of essential structural works required for flood and/or erosion or sediment control are permitted;*

b. The boundaries of these features are intended to reflect the limits of flooding of rivers, streams and wetlands. Where development is proposed adjacent to these features precise boundaries will be established through a survey identifying the appropriate flooding elevation as determined by the Conservation Authority; and,

c. *Expansion or alterations of any existing building or structure located within an identified feature may be permitte*d provided that:

i. The building or structure is not located within the floodplain;

ii. New or existing hazards or environmental impacts are not created or aggravated;

iii. The Township and the Province have approved a Special Policy Area and/or an erosion control plan as outlined in Section 4.8.4;

iv. The development does not pose a threat to public health and safety or property;

v. Vehicles and people must have a way of safely entering and exiting the area during times of flooding; and,

vi. The Township has adopted a site-specific amendment to the Implementing Zoning By-law.

d. The Township will consult the Conservation Authority where development occurs adjacent to these features;

e. Where development occurs adjacent to these features, the development shall be designed and constructed to preserve the natural function and flow characteristics of the adjacent waterway; and,

f. Lands within the natural heritage system or identified as having an environmental constraint shall not be accepted as parkland dedication in the development process. However, the Township will encourage the transfer of these lands to a public authority.”

Otonabee Region Conservation Authority

The Conservation Authority whose jurisdiction the study area falls under is the Otonabee Region Conservation Authority (ORCA). Under the Conservation Authorities Act, Ontario Regulations 167/06 Development, Interference with Wetlands and Alterations to Shorelines and Watercourses is applicable (Government of Ontario 2013). A permit is required from ORCA for regulated areas to complete any works that are within 30 m of an unevaluated wetland or within 30 m of a watercourse or waterbody.

There are three ways through which Conservation Authorities address wetlands within the regulations.

They regulate:

– activities within wetlands to ensure that they do not interfere with its natural features and hydrologic and ecological functions;
– development within wetlands to ensure that it does not impact the control of flooding, erosion, dynamic beaches, pollution or the conservation of land; and
– development adjacent to a wetland to ensure that the hydrologic function of the adjacent wetland is not affected.

1.5 Other Resources Referenced

Prior to field surveys, background information for the study area and surrounding lands from a variety of sources was reviewed to provide context for the setting and sensitivity of the site. Background information sources included:

1.5.1 Data Sources

- Aerial imagery
- OMNRF Land Information Ontario (LIO) database mapping and Natural Heritage Information Centre (NHIC) Make a Map tool (2022)
- County of Peterborough's online Public Geographic Information System – Let Me Map Mobile and recent aerial photography (County of Peterborough 2022)
- Ontario Breeding Bird Atlas data (Bird Studies Canada 2007)
- Ontario Reptile and Amphibian Atlas data (Ontario Nature 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)
- Environmental Impact Study – 1382 and 1490 County Road 28 and 1683 Moore Drive, Fraserville, Cavan-Monaghan, County of Peterborough, Ontario (Cambium Inc. 2022)

1.6 Description of Development

The proposed development for Kawartha Downs includes the demolition of several existing buildings and the construction of a multi-use event centre, which includes indoor multi-use fields, changerooms, public social space, office and administration space and permanent seating. The proposal also includes the construction of a horse/cattle barn, a 2 future hotel, two stormwater retention ponds and a water treatment facility. An additional asphalt parking lot, overflow gravel parking and pedestrian pathways are also proposed. (Appendix A – Site Plan- Sept 8, 2022).

1.7 Scope of Report

The main goals of this EIS report are: to confirm the boundary of natural features (e.g., significant wetlands) identified in the study area; to identify the ecological functions of any natural features found; to determine whether any Species at Risk and/or their habitats are found on the subject property and; to recommend appropriate buffers and/or mitigation measures to prevent impacts on natural features and their functions.

This report will only deal with the suitability of the site from a biological perspective and the constraints due to the presence of the key natural heritage features and natural heritage system policies. Any other approvals or constraints due to zoning, flood and fill regulations, hazard lands, archaeology, health regulations, minimum distance separation (MDS), other approvals for the municipality and other agencies are the responsibility of the owner.

2. Study Approach

Our approach to preparation of the EIS consisted of four distinct phases.

In the first phase, we collected available information on the site including recent air photography, Township of Cavan Monaghan Official Plan, County of Peterborough Official Plan, provincial key natural heritage system GIS mapping, MNRF GIS database mapping and other correspondence or files, as well as our previous work in the area. This includes a review of the raw data and the EIS from Cambium Inc. for the adjacent subdivision.

In the second phase we prepared a Terms of Reference document to confirm the scope of the field surveys and the content of the EIS report with the Township and ORCA. The TOR document outlined our field methodologies, timing of any additional site visits/season, the natural features to be confirmed/mapped and the content of the EIS, including the relevant sections of the agency policies.

Our third phase consisted of a site visit by our terrestrial/ wetland biologists to perform the following tasks:

– Botanical inventory and vegetation community mapping (according to the Ecological Land Classification System for Southern Ontario);
– Search for significant trees and/or regionally rare plants;
– Conduct general surveys (incidental observations) of other wildlife;
– Assess habitat on the site for wildlife (including wildlife linkages);
– Assess the ecological functions of any natural features found in the study area;
– Determine the presence/absence of habitat of threatened or endangered species in the existing buildings, buildings to be demolished and property;
– Assess any hydrologic features, functions or connections related to the subject property.

The Ontario Endangered Species Act places more responsibility on municipalities to prove presence/ absence of species at risk when reviewing development proposals. GHD reviewed the list of potential Species at Risk (SAR) and determined which may have suitable habitat on the property. We used data provided to us from Cambium Inc. as well as information from our 2022 site visit to assess current habitat and conditions.

The third phase consisted of preparing this EIS report based upon both the literature review and field surveys completed. This included utilizing some data collected by Cambium Inc. in 2021 on adjacent lands. This report follows the requirements in the County of Peterborough and Township of Cavan Monaghan Official Plans as well as the ORCA policy requirements for an EIS report.

We have mapped all of the key natural heritage features and key hydrologic features, as well as the recommended buffers/setbacks (refer to Figure 1). The impact assessment and mitigation section focused on the natural features found, habitat for SAR species in the structures, wildlife use of trees or existing buildings, maintaining water balance and natural linkage and corridors in the larger landscape. We have updated all aspects of the report so that it is current and is in the GHD format for reports, figures and appendices.

2.1 Site Study Methodology

2.1.1 Physical Site Characteristics

Site characteristics were assessed during visits to the study area. Documented characteristics included existing disturbances, current use of the site, age of vegetation cover, trails, general topography and soils.

2.1.2 Biophysical Inventory

2.1.2.1 Vegetation

ELC Survey Method

All vegetation in the study area was inventoried during the site visit. Delineation and classification of the vegetation community types was based on the Ecological land Classification for Southern Ontario (Lee et al., 1998). Rare, significant or unusual species were searched for. Species significance or status 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 and Brinker (2009).

2.1.2.2 Birds and Other Wildlife

Breeding Bird Survey

A single breeding bird survey was conducted during the breeding season (April 15 - August 15). It was mainly conducted according to the protocols of the Ontario Breeding Bird Atlas point count (June 2021). The survey was conducted in the early morning under acceptable weather parameters. All birds seen or heard within each five-minute station period were documented and breeding evidence codes reported. Searches for stick nests (woodland hawks and owls) and cavity trees were also conducted. Two survey stations were established on the property. The location of the survey stations is shown on Figure 1. Due to the timing of the acquisition of this project (late June) GHD was unable to conduct two breeding bird surveys, as recommended by the protocol. However Cambium conducted an EIS last year for the northern part of this property. That information was reviewed and was used to assist with our breeding bird database and determination of the presence/absence of Species At Risk.

Targeted Species at Risk Surveys – Bobolink and Eastern Meadowlark

A single survey was conducted according to the protocol developed by the OMNRF for eastern meadowlark (*Sturnella magna*) and bobolink (*Dolichonyx oryzivorus*). A transect with two stations was established in appropriate habitat for these species (i.e., old field habitats with tall grasses). GPS locations were recorded at both point count stations. Surveys began in the early morning. Each point contained a ten-minute observation period specifically focusing on detection of the target species (either bobolink or eastern meadowlark). The information recorded included variables such as species observed (by site or sound), species location, direction, distance, and interactions with other bird species.

Area Searches and Incidental Observations

Area searches/counts were conducted while GHD biologists were on site completing vegetation surveys. Any observations of any other wildlife (e.g., birds, amphibians, reptiles and mammals) encountered were documented. Records 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).

2.1.2.3 Wetlands

The presence of wetlands in the study area were confirmed in the field by GHD staff familiar with the methodologies described in the Ontario Wetland Evaluation System Southern Manual, Third Edition (OMNR 2014 and updates, version 3.3). Subsequently the boundaries of these wetlands were delineated using a high-accuracy hand-held GPS unit.

2.1.2.4 Woodlands

The treed communities that are on the property were evaluated according to the Significant Woodland Evaluation Criteria and Standards in Table 7-2 of OMNR's Natural Heritage Reference Manual. The boundaries of these woodlands and associated woodland characteristics were confirmed by GHD biologists in the field.

2.1.2.5 Significant Wildlife Habitat (SWH)

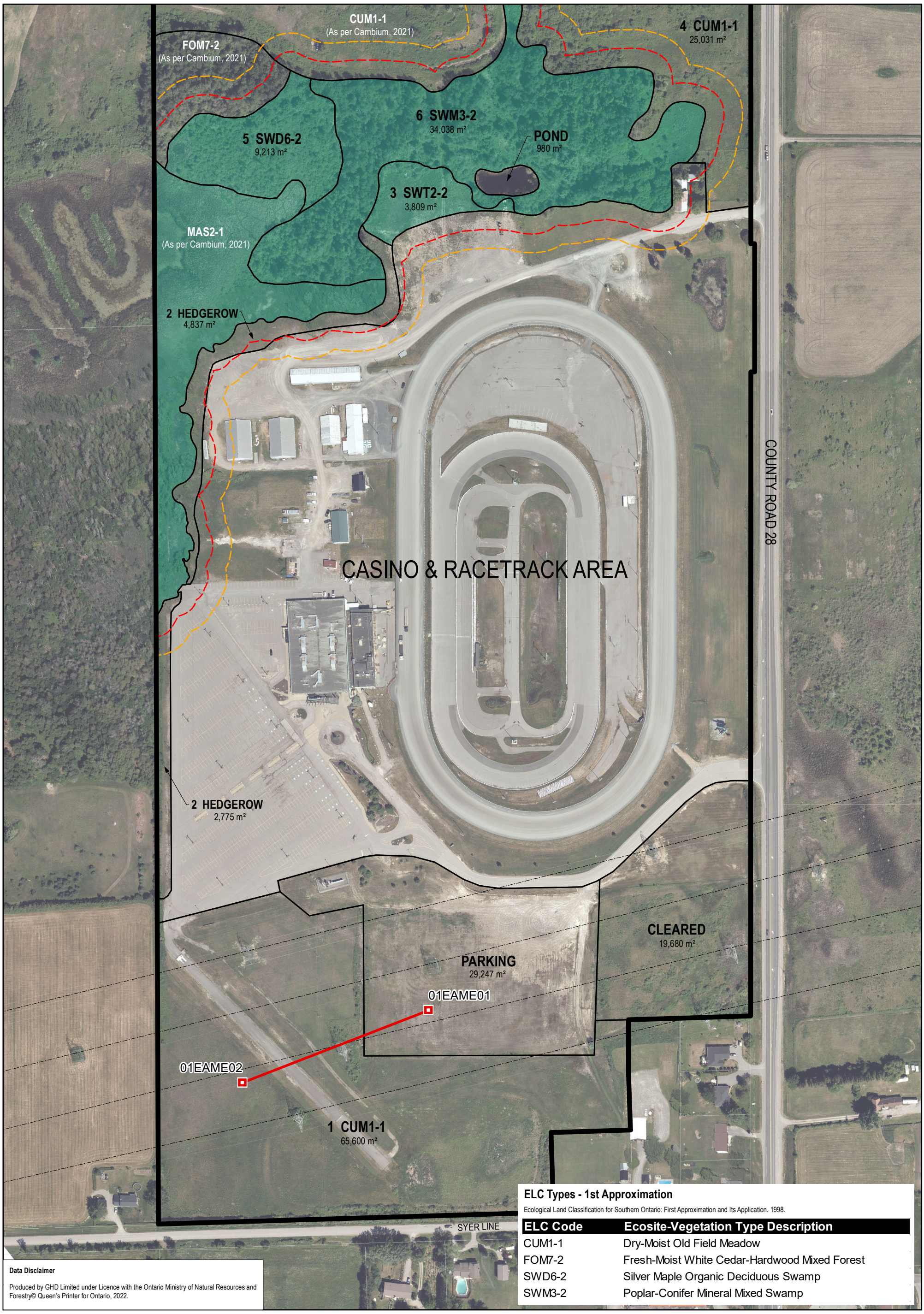
SWH Site Assessment

Prior to site visits, a candidate list of Significant Wildlife Habitat (SWH) features was created using the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E, 2015. During site visits, the confirmation (presence/absence) of those natural features was conducted. In particular, GHD biologists looked for: tree cavities or other evidence of bat maternity colonies; rock piles, stone fences and other evidence of reptile hibernacula; large stick nests and other evidence of woodland raptors; seeps and springs; vernal pools, ponds and other potential amphibian habitat. All field survey data was reviewed and assessed to determine if additional candidate SWH are present the study area.

3. Survey Results

3.1 General Site Characteristics

The property is relatively flat, though it slopes downward slightly in the southern end. At the north end of the property is treed area that includes upland deciduous forests and lowland mixed swamps and thicket swamps. The central portion of the property is largely disturbed and includes the existing racetrack and associated infrastructure (e.g., roads, parking, buildings, barns) and the casino. The southern end includes a large, mowed area, parking area and hedgerows.



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
FOM7-2	Fresh-Moist White Cedar-Hardwood Mixed Forest
SWD6-2	Silver Maple Organic Deciduous Swamp
SWM3-2	Poplar-Conifer Mineral Mixed Swamp

Legend

- EAME - Eastern Meadowlark Station
- EAME Transect Survey
- Utility Line
- Property Limit
- 15 m Wetland Setback
- 30 m Wetland Setback
- Vegetation Communities
- Wetland Communities

1 cm = 28 meters

0 20 40 60 80

Meters

Map Projection: Transverse Mercator
Horizontal Datum: North American 1983
Grid: NAD 1983 UTM Zone 17N
Paper Size ANSI B

RCI (KDL) Inc.
1490 County Road 28, Fraserville, ON
County of Peterborough

Environmental Impact Assessment

Vegetation Communities, Surveys & Constraints

Project No. 12589617
Revision No.
Date Aug 12, 2022

Figure 1

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Print date: 12 Aug 2022 - 11:14

Data source: Image @ City of Peterborough, 2021

3.1.1 Vegetation

3.1.1.1 Level of Effort

The vegetation communities were delineated within the study area by GHD biologists according to the methodologies outlined in Section 2. A summary of the level of effort and environmental conditions at the time of the ELC surveys have been provided in Table 1.

Table 1 Vegetation Surveys – Level of Effort and Environmental Conditions

Survey Date	Survey Type	Weather	Start Time	Effort (person hours)
21-July-2022	Ecological Land Classification, Vegetation Inventory Wetland boundary delineation	23°C, cloud cover 4/10, wind scale 1, no precipitation	8:45am	2.25 hours x 2 biologists

3.1.1.2 ELC Code Descriptions

Four vegetation communities were delineated and inventoried by GHD staff in July 2022. The locations of these communities can be found on Figure 1 and a comprehensive plant list can be found in Appendix B. An additional three communities had been previously delineated and identified by Cambium Inc. in 2021. (These communities, depicted as Communities 5, 6 and 7 in Figure 1. of this EIS, were referred to as Communities 14, 10 and 16 in Cambium Inc. 2022).

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

Community 1 was the largest vegetation community located in the southern portion of the property. Grasses and forbs were both observed in the herbaceous layer of the community, though they had been mowed part-way through the growing season. Species observed included bird's-foot trefoil (*Lotus corniculatus*), which was dominant, Kentucky blue grass (*Poa pratensis*), pineapple weed (*Matricaria matricarioides*) and common dandelion (*Taraxacum officinale*).

Photo 1: Community 1 – Dry-Fresh Old Field Meadow (Photo date: July 21, 2022)

Community 2 - Hedgerow (No applicable ELC Code)

Community 2 was a thin stretch of trees that was located to the west and northwest of the racetrack. The dominant canopy species were eastern white cedar (*Thuja occidentalis*) and European buckthorn (*Rhamnus cathartica*). The subcanopy layer was made up of European buckthorn, while the only shrub species detected was red-osier dogwood (*Cornus serisea*). The groundcover layer had several species including coltsfoot (*Tussilago farfara*), heal all (*Prunella vulgaris*), Philadelphia fleabane (*Erigeron philadelphicus*) and swallow-wort (*Cynanchum nigrum*).

Photo 2: Community 2 – Hedgerow (Photo date: July 21, 2022)

Community 3 – Willow Mineral Thicket Swamp Type (ELC Code: SWT2-2)

Community 3 was located to the north of the racetrack. This small shrub-dominated swamp also contained several young trees including trembling aspen (*Populus tremuloides*), balsam poplar (*Populus balsamifera*) and crack willow (*Salix fragilis*). The shrub layer included three different types of willow: beaked/Bebb's (*Salix bebbiana*), slender (*Salix petiolaris*) and crack. Groundcover species included water horsetail (*Equisetum fluviatile*), spotted jewelweed (*Impatiens capensis*), great water dock (*Rumex hydrolapathum*) and tufted loosestrife (*Lysimachia thyrsiflora*).

Photo 3: Community 3 – Willow Mineral Thicket Swamp Type (Photo date: July 21, 2022)

Community 4 – Dry-Moist Old Field Meadow Type (ELC Code: CUM1-1)

Community 4 was located in the northeast corner of the study area. This abandoned field also contained a few wetland inclusions. Beaked/Bebb's willow was the only tree or shrub species documented in this area of the property. Groundcover species included curled dock (*Rumex crispus*), tall buttercup (*Ranunculus acris*), hemp-nettle (*Galeopsis tetrahit*) and wool grass (*Scirpus cyperinus*).

Photo 4: Community 4 – Dry-Fresh Old Field Meadow Type (Photo date: July 21, 2022)

Communities 5, 6 and 7

The remaining three vegetation communities in the northern portion of the study area had been previously inventoried and delineated (Cambium Inc. 2022). These communities were identified as SWM3-2 (Poplar-Conifer Mineral Mixed Swamp), SWD3-2 (Silver Maple Mineral Deciduous Swamp) and FOM7-2 (Fresh-Moist White Cedar-Hardwood Mixed Forest). These communities are depicted on Figure 1 as Communities 6, 5 and 7, respectively. For photos and a list of vegetation species found in each community, refer to Cambium Inc. 2022 (field sheets for Communities 16, 10 and 14). Records of the species found in these communities are considered in Section 4 of this report (i.e., the Discussion section).

3.1.2 Birds

3.1.2.1 Level of Effort

Breeding birds were identified within the study by GHD biologists according to the methodology outlined in Section 2.1.2.2. A summary of the level of effort and environmental conditions have been provided in Table 2.

Table 2 Bird Surveys – Level of Effort and Environmental Conditions

Survey Date	Survey Type	Weather	Start Time	Effort (Person hours)
July 21, 2022	Point Count and Area Search	23°C, cloud cover 4/10, wind scale 1, no precipitation	8:45am	0.5 hours x 2 biologists
July 21, 2022	Eastern Meadowlark/Bobolink Survey	24°C, cloud cover 3/10, wind scale 4, no precipitation	9:00am	0.5 hours x 2 biologists

3.1.2.2 Breeding Bird Surveys

A total of 15 bird species were detected by GHD staff during the bird survey on July 21, 2022. Two survey stations were established in the study area, one in the northern portion of the study area and one in the south. The locations of these stations are depicted on Figure 1.

Eight (8) species were detected from breeding bird survey station 1, one of which was off-site. The majority of these birds are often associated with early successional habitat, such as old fields and young thicket shrub communities. Among the species detected were American crow (*Corvus brachyrhynchos*), gray catbird (*Dumetella carolinensis*), savannah sparrow (*Passerculus sandwichensis*) and song sparrow (*Melospiza melodia*).

Nine (9) species were detected from breeding bird survey station 2. Many of these species find suitable habitat along the edges of forests and swamps. Among the species detected from BBS2 were great-crested flycatcher (*Myiarchus crinitus*), black-capped chickadee (*Poecile atricapillus*), American goldfinch (*Spinus tristis*) and purple finch (*Haemorhous purpureus*).

3.1.2.3 Targeted SAR Survey for Eastern Meadowlark and Bobolink

Field and meadow, which are the preferred habitat of eastern meadowlark and bobolink could be found both on the study site and on adjacent properties. As a result, GHD biologists conducted a survey targeting these species according to the methodology described in Section 2.1.2.2. One transect with two survey stations was established in the southern portion of the property (Figure 1). Table 2 shows the date and level of effort of this survey.

Eastern meadowlarks were observed in the southwest corner of the study area. Bobolinks were not detected.

3.1.2.4 Area Searches

Four (4) additional bird species were detected while GHD biologists were on-site conducting surveys. These species were: killdeer (*Charadrius vociferous*), mourning dove (*Zanaida macroura*), red-winged blackbird (*Agelaius phoeniceus*) and barn swallow (*Hirundo rustica*). A complete list of the birds detected by GHD staff in the study area can be found in Appendix C.

In addition, in 2021 Cambium Inc. established a single point count station on the adjacent property, just north of the current study area, in SWM3-2 (their Community 16) (Cambium Inc. 2022). Records from their breeding bird survey work are included in the Discussion section of this report.

3.1.3 Other Wildlife

Two types of amphibians and one species of reptile were found by GHD in the study area. Two of these classes were observed in Community 3 (SWT2-2): green frog (*Lithobates clamitans*) and eastern garter snake (*Thamnophis sirtalis*). The other amphibian, the leopard frog (*Rana pipiens*) was detected in Community 4 (CUM1-1). No mammals were detected while GHD biologists were conducting their site visit.

Additionally, in 2021 Cambium Inc. established three amphibian survey stations at the northern end of the study area, i.e., in the Communities labelled 4, 5 and 6 on Figure 1. (See Cambium Inc. 2022). Records from their amphibian survey work are included in the Discussion section of this report.

3.1.4 Wetlands

One wetland ELC vegetation type was identified in the northern portion of the study area. This community is identified as Community 3 (SWT2-2) and is described in Section 3.1.2 of this EIS report.

In 2021, Cambium Inc. delineated and inventoried three additional wetland communities in the north and northwest portions of the study area. These communities are identified as MAS2-1, SWD3-2 and SWM2-2 (Figure 1). These communities are labelled Community 10, 16 and 20 in Cambium Inc. 2022.

3.1.5 Woodlands

None of the ELC vegetation types identified would be considered woodland.

3.1.6 Significant Wildlife Habitat

In Ecoregion 6E, OMNRF has developed criteria that can be used to confirm five broad categories of Significant Wildlife Habitat (SWH): seasonal concentration areas of animals, rare vegetation communities, specialized habitat for wildlife, habitat for species of conservation concern (not including endangered or threatened species) and animal movement corridors. Within each category, there can be more than one specific type of significant wildlife habitat (for example, seeps and springs are considered one type of specialized habitat for wildlife which is a category of SWH).

GHD biologists identified seven (7) candidate types of SWH in the study area: turtle wintering areas, reptile hibernaculum, seeps and springs, amphibian breeding habitat (woodland), amphibian breeding habitat (wetland), woodland area-sensitive bird breeding habitat and special concern and rare wildlife species. Of these, none were confirmed by GHD, but one (amphibian breeding habitat woodland) was confirmed in Cambium Inc. 2022.

4. Discussion and Analysis

4.1 Physical Site Characteristics

4.1.1 Geology and Topography

The subject property is located within Ecoregion 6E: Lake Simcoe Rideau, which falls within the Great Lakes-St. Lawrence Forest Region. Ecoregion 6E is characterized my mixed geology, including shallow soils areas, bedrock plains and deep soil areas. According to the Paleozoic Geology of Ontario (Armstrong and Dodge 2007), the site is situated on Unit: Verulam, Formation: Verulam, Group: Simcoe. This group consists of interbedded bioclastic to very-fine grained limestone and grey-green calcareous shale. The upper layer contains coarse-grained, cross-bedded calcarenites. According to the Physiography of Ontario (Chapman and Putnam 1984), historically, the area was sand plain that was found between the drumlins of the Peterborough Drumlin Field physiographic region. The study area is relatively flat, with elevations between 200 and 202m above sea level (ASL).

4.2 Species and Communities

4.2.1 Vegetation

GHD biologists found 52 species of plant in the study area, none of which are considered to be nationally and/or provincially significant (SARA 2022; COSEWIC 2021; SARO 2021). One regionally rare species was detected in Community 4: *Carex lupulina* (hop sedge) (Oldham 1999).

Cambium Inc. found 3, 10, 18 and 22 plant species in the vegetation communities they inventoried in August 2021 (Their Communities numbered 10 (SWD3-2), 16 (SWM3-2), 18 (FOM7-2) and 20 (MAS2-1). None of the species detected are considered to be nationally, provincially or regionally significant (SARA 2022; COSEWIC 2021; SARO 2021; Oldham 1999).

None of the ecological community types identified on the property are considered provincially rare (MNRF, 2015).

4.2.2 Birds

Two bird species detected during GHD surveys are considered to be significant at the national (SARA 2022; COSEWIC 2021; SARO 2021) or provincial level (SARO 2021) (Appendix B). These species are the barn swallow (*Hirundo rustica*) and eastern meadowlark (*Sturnella magna*). None of the 12 species detected by Cambium Inc.at the point count station in Community 6 (their Community 16) are considered to be nationally or provincially significant (SARA 2022; SARO 2021) (Cambium Inc. 2022).

Eastern meadowlarks are listed as threatened species at both the provincial and national levels (SARO 2021; SARA 2022). This species prefers grassy meadows and pastures with tall, dense grasses. Suitable habitat for these species was found adjacent to the subject property (to the west), but three individuals were observed on the subject property in Community 1.

The Barn Swallow is listed as a threatened species at both the national and provincial levels (SARA 2022; SARO 2021). This species nests in structures such as barn or sheds, and prefers open country foraging habitats, such as grasslands and old fields. GHD biologists searched all the structures in the study area, but saw no evidence of nesting. The individual observed was flying over Community 1.

None of the species detected during field inventories are considered to be area-sensitive. Area sensitive species are species that require a minimum area of suitable habitat to successfully breed.

Species recorded within the 1km x 1km squares overlapping the subject property (17QJ0898 and 17QJ0897) included three bird species at risk. These are eastern meadowlark, bobolink (*Dolichonyx oryzivorus* – special concern nationally, threatened provincially) and Canada warbler (*Wilsonia canadensis* – threatened nationally, special concern provincially*).*

Bobolinks can be found in habitats similar to eastern meadowlarks (i.e., areas with tall dense grasses and an open canopy). Suitable habitat for this species can likely be found either on, or adjacent to the subject property. Canada warblers inhabit many different kinds of forests, particularly those near water and/or have a well-developed shrub layer and moss. Suitable habitat for this species was absent on the subject property.

Species records for the 10km x 10km Ontario Breeding Bird Atlas square overlapping the subject property (17QJ09) include the following: common nighthawk (*Chordeiles minor* – special concern); eastern whip-poor-will (*Antrostomus vociferous* - threatened); chimney swift (*Chaetura pelagica* - threatened); eastern wood-pewee (*Contopus virens* – special concern); bank swallow (*Riparia riparia* – threatened); barn swallow; wood thrush (*Hylocichla mustelina* – threatened federally, special concern provincially); golden-winged warbler (*Vermivora chrysoptera* – threatened nationally, special concern provincially); grasshopper sparrow (special concern), bobolink and eastern meadowlark. Many of these records were associated with larger natural features outside of the immediate study area. GHD biologists did not observe suitable nesting habitat for most of these species within the study area. As has been previously mentioned, old field meadows on the property contain appropriate breeding habitat for grassland species

such as grasshopper sparrow, eastern meadowlark and bobolink. It is also possible that aerial foraging birds such as barn swallows and bank swallows might find suitable feeding habitat over the fields and meadows on the property; however, these species were not detected during GHD's survey efforts.

4.2.3 Amphibians and Reptiles

None of the amphibian species detected by GHD staff are considered to be nationally and/or provincially significant (SARA 2022; COSEWIC 2021; SARO 2021). Similarly, the only reptile species detected on site is not listed provincially or federally (SARO 2021; SARA 2022). None of the amphibian species detected by Cambium in 2021 are listed federally or provincially (SARA 2022; COSEWIC 2021; SARO 2021); (Cambium Inc. 2022).

Species recorded within the 1km x 1km squares overlapping the subject property (17QJ0898 and 17QJ0897) list two reptile species at risk. These the midland painted turtle (*Chrysemys picta marginata*) and the snapping turtle (*Chelydra serpentina*). No amphibian SAR were listed.

Snapping turtles are listed both federally and provincially as special concern (SARA 2022; SARO 2021). Snapping turtles spend most of their lives in shallow waters with only their noses exposed to the surface to breathe. 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 (Government of Ontario 2021c). It is possible that this species might make use of the pond at the north end of the study area, but this is unlikely.

The midland painted turtle is listed nationally as of special concern (COSEWIC 2021). Painted turtles are excellent swimmers and avid baskers (Ontario Nature 2022). To thrive, they require fresh water with soft bottoms, aquatic vegetation and basking sites. No suitable habitat was observed in the study area.

The Ontario Reptile and Amphibian Atlas (Ontario Nature 2019) records for the 10 km x 10 km square that overlaps the property (17QJ09) include five species that are considered significant at either the provincial (SARO 2021) or national (SARA 2022; COSEWIC 2021) levels. These records were for snapping turtle, midland painted turtle, northern map turtle (*Graptemys geographica*), eastern hog-nosed snake (*Heterodon platirhinos*) and western chorus frog (*Pseudacris triseriata*). As was the case with records from the OBBA, most of these observations were associated with larger natural features outside of the immediate study area. None of these species were identified by GHD during the 2022 field surveys.

The northern map turtle is listed as special concern at both the federal level (SARA 2022) and the provincial level (SARO 2021). Map turtles inhabit large rivers and medium to large sized lakes. Suitable habitat for this species was absent from the study area.

The eastern hog-nosed snake is listed as threatened provincially and nationally (SARO 2021; SARA 2022). This species prefers sandy well-drained habitats such as beaches and dry forests, particularly if these areas are close to a source of water (e.g., marshes and swamps). These snakes lay their eggs, burrow and hibernate in the well-drained habitats and forage/hunt in marshes and swamps. Suitable habitat for this species was absent in the study area.

The western chorus frog is listed federally as threatened (SARA 2022). It inhabits forest openings around woodland ponds and can also be found in or near damp meadows, marshes, bottomland swamps and temporary ponds in open country environments. It is possible this species might find habitat to the north of the study area, but no frogs were detected by GHD during survey work.

No listed species of mammal were detected by GHD Ltd. in 2022 or Cambium Inc. in 2021 (Cambium Inc. 2022).

4.3 Wetlands

The wetlands identified in the study area are not currently mapped by the agencies as they are unevaluated. These include wetland Community 3 (SWT2-2) which was delineated by GHD Ltd. in 2022 and MAS2-1, SWD6-2, SWT2-2 and SWM3-2, as delineated by Cambium Inc. They are adjacent to a provincially significant wetland (PSW) and are hydrologically connected. This wetland, the Cavan Creek PSW is located to the northwestern corner of the subject property. Among its functions, the PSW supports a coldwater fishery and provides breeding and foraging/ feeding

habitat for provincially and regionally significant species. Buffer recommendations are discussed in later sections of this report.

4.4 Woodlands

GHD staff did not find any woodlands in the study area. That said, in 2021 Cambium Inc. delineated three forest/swamp communities at the very north end of the property, labelled as Communities 5, 6 and 7 in Figure 1. Woodlands are a natural heritage feature listed under Section 4.1 (Natural Environment) in the County of Peterborough's Official Plan (Office Consolidation March 2020). The OP permits development or site alteration in and adjacent to (within 50m) significant woodlands south and east of the Canadian Shield so long as it has been demonstrated there will be no new negative impacts on the woodland or its ecological functions. Although woodlands within the County have not yet been evaluated to determine their significance, the Official Plan indicates, "*significance may be determined using criteria recommended by the Ministry of Natural Resources, or using alternative approaches approved by the local municipality that obtain the same objective.*" As a result, GHD staff used the Natural Heritage Reference Manual Second Edition (OMNRF 2010) to assess the significance of woodlands in the study area. GHD's analysis indicates that none of the wooded areas identified would be considered significant.

4.5 Other Natural Features

There are no provincially significant Areas of Natural and Scientific Interest (ANSI) located within 120m of the subject property. The nearest ANSI, the regionally significant Cavan Creek Life Science ANSI, is located more than 1.2km to the north and west of the study area. No provincially significant valleylands have been previously identified in the study area.

4.6 Significant Wildlife Habitat

In the Provincial Policy Statement (2020) wildlife habitat is defined as, *"… areas of the natural environment where plants, animals, and other organisms live, and find adequate amounts of food, water, shelter and space needed to sustain their populations.*" This document also states, *"specific wildlife habitats of concern may include areas where the species concentrate at a vulnerable point in their annual or life cycle; and areas which are important to migratory and non-migratory species*."

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 and significant woodlands). Therefore, it has been suggested that identification and evaluation of SWH is best undertaken after other natural heritage features have been identified (Natural Heritage Reference Manual, 2010).

GHD biologists analyzed the information collected from the ecological communities in the study area using the criteria for Significant Wildlife Habitat in Ecoregion 6E (2015). Based on our field data, none of the seven candidate types of SWH could be confirmed in the study area. Cambium Inc.'s fieldwork in 2021 confirmed one SWH type: amphibian breeding habitat woodland (Cambium Inc. 2022).

5. Impact Assessment and Recommendations

The following section provides a description of the predicted impacts that may result from the proposed development. It also identifies mitigation measures to be implemented to avoid and/or minimize adverse effects to the natural environment features within or near the project.

5.1 Wetlands

Four unevaluated wetlands were identified in the study area by GHD Ltd. and Cambium Inc. Among the wetlands for which detailed vegetation assessments were conducted were Communities 3, 5 and 6. Under the Ontario Wetland Evaluation System 3rd edition (OWES), they would be called tall shrub swamp (tsS), hardwood swamp (hS), mixedwood swamp (hS/cS). The fourth vegetation community delineated in 2021 by Cambium Inc. would be called a robust emergent marsh (reM). Under the ELC system, these wetland communities were considered to be willow mineral thicket swamp type, silver maple mineral deciduous swamp type, poplar-conifer mineral mixed swamp type and cattail mineral shallow marsh type. These wetlands are found within 750m of the provincially significant Cavan Creek Wetland Complex and are hydrologically connected. Based on the complexing criteria described in OWES, it GHD's opinion that these wetlands could be complexed (formal complexing must be approved by the Ministry of Northern Development, Mines, Natural Resources and Forestry/NDMNRF).

Various policy documents recommend 30-metre buffer areas (or set-backs) in order to protect the ecological functions of wetlands. However, many areas of the existing development and active uses are already within that buffer area. The site plan shows that the development limits have been setback 30 m from the wetland on the west and northwest sides. This includes the parking lots, future hotel, treatment facility and roadways.

The exception being the pinch point north of the existing barns where a laneway that is demarcated as a fire route on the site plans. In that area a 15 m buffer is proposed to maintain a solid surface for fire department access and access north of the new building.

The stormwater pond has been shown on the site plan. At this time it is mostly outside of the buffer area but outside of the wetland itself. During detail design, GHD will work with the engineers on options to naturalize the pond area and other measures. This will include the design and location of the outfall.

The installation of heavy-duty silt fencing along the perimeter of the development envelope will protect the features and functions and maintain the buffer's integrity. The existing buffer will be enhanced with self-sustaining vegetation that is indigenous to the study area.

The current area that is part of the 30 m wetland buffer is used for various uses associated with the current facility. There is an opportunity to restore, rehabilitate and enhance parts of that buffer area. This would include demarcating that area and installation of native tree, shrub and plant species. This would assist in buffering the noise, activity and construction works for the wetland features and ecological functions. Planting a diversity of plants would provide for a buffer that would have use for wildlife and increase the native species component of the adjacent natural features. Buffers also provide attenuation for dust, runoff and an edge habitat for various wildlife species.

5.2 Significant Wildlife Habitat

One type of significant wildlife habitat was confirmed to occur in the study area: amphibian breeding habitat woodland (Cambium Inc. 2022). The best mitigation measure to reduce the potential impacts of the proposed development on all types of significant wildlife habitat is to avoid having the development encroach into identified features. The 30-metre buffer that has been placed on the wetland communities in this area will protect their function as breeding habitat for amphibians. This includes a pond directly north of the racetrack that may provide overwintering habitat and foraging habitat for turtles and frogs.

5.3 Species at Risk

Eastern meadowlarks were identified during field surveys in Community 1 to the southwest of the racetrack. Although GHD Ltd. did not locate any nests, it is likely that Category 2 and 3 habitat occurs on the subject property (depending on how close the species nests on the adjacent farm field). As a result, a permit and/or other authorization under the Endangered Species Act may be required. The Ministry of the Environment, Conservation and Parks (MECP) will be contacted for guidance.

Table 3 Impact Assessment and Recommendation Summary

Feature or Function	Impact to Feature or Function	Mitigation	Residual Effect
Unevaluated wetlands	Potential loss of wetland area. Potential changes to moisture regime due to vegetation clearing and built infrastructure on adjacent lands. Potential release of contaminants via surface runoff.	A minimum 15-metre buffer from the boundary of wetland communities 3, 5 and 6. The development plan will strive, wherever possible, to achieve a 30-metre setback requirement. Buffer to be supplemented with native trees and shrubs in those areas where such vegetation is absent, particularly around the proposed stormwater management pond. Heavy-duty silt fencing to be installed around the active development area, to prevent sediment from silt flowing into wetlands. LID approaches to be incorporated into the development plan.	Low
Significant Wildlife Habitat – Amphibian Breeding Habitat (Woodlands)	Potential loss of wildlife habitat	A buffer has been established from the outer boundary of the wetlands (i.e., Communities 3, 5 and 6). However, the development plan will strive, to achieve a 30-metre setback requirement wherever possible. Buffer to be supplemented with native trees and shrubs in those areas where such vegetation is absent, particularly around the proposed stormwater management pond.	None
Species at Risk	Potential loss of suitable habitat	MECP to be contacted for guidance.	None
Stormwater Management	Potential changes to water quantity and quality	Stormwater ponds to remain outside of the wetland All structural components and actively managed components of the stormwater management facility are located out of identified wetland communities. Stormwater management should have a multiple treatment approach and included low impact development features. Pollution and sedimentation control during construction and post-construction phases are minimized using best management practices.	Moderate but can be mitigated

6. Policies and Legislative Compliance

6.1.1 Federal Legislation

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 15th (Environment and Climate Change Canada, 2014). As such clearing of the trees and other vegetation for the development cannot occur during this timing window.

6.2 Provincial Legislation

Endangered Species Act (2007)

In order to maintain compliance with Section 23.2 of the Endangered Species Act, a number of steps may be required. These steps may include: preparing a development plan in accordance with subsection 23.2(3) of the Act; submitting this plan to MECP; not carrying out any development activity that is likely to destroy the habitat of bobolink or eastern meadowlark between May 1 and July 31 of any year. GHD would be able to prepare the necessary documentation for submission to the MECP for review and approval.

Provincial Policy Statement (2020)

The subject property does not contain any provincially significant coastal wetlands, significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E, significant woodlands, significant valleylands or significant ANSIs. Further no fish habitat was documented on the subject property. As a result Sections 2.1.4b), 2.1.5 a), b), c), e) and f) of the Provincial Policy Statement (PPS 2020) do not apply to this project. Sections 5.1, 5.2 and 5.3 as well as Section 7 of this EIS report include mitigation measures and recommendations that would allow the proposed development to proceed while not having an impact on the natural features and functions listed in Section 2.1.4a), 2.1.5d), 2.1.7 and 2.1.8 of the PPS.

A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2019)

Sections 5.1, 5.2 and 5.3 as well as Section 7 of this EIS report include mitigation measures (including buffers) and recommendations that would allow the proposed development to proceed while not having an impact on the natural features and functions listed in Section 4.2.2 of the GPGGH 2019. These sections also describe measures which, if implemented, would permit development and/or site alteration on the subject property while adhering to Sections 4.2.3 and 4.2.4 of the GPGGH 2019.

6.3 Local and Other Regulatory Bodies

County of Peterborough Official Plan (Consolidated to March 2020)

In this EIS report, measures are described in Sections 5.1 (Wetlands), 5.2 (Significant Wildlife Habitat), Section 5.3 (Species at Risk), Table 3 and Section 7 (Summary of Recommendations) that would ensure the proposed development adheres to Sections 4.1.1, 4.1.2 and 4.1.3 of the Peterborough County Official Plan. It has been prepared according to the direction for such reports in Section 4.1.3.

6.3.1.1 Township of Cavan Monaghan Official Plan (Amendments to October 2021)

In Sections 5.1, 5.2. 5.3., Table 3 and Section 7 GHD Ltd. identifies mitigation measures and recommendations that would permit the proposed development to proceed while conforming to Sections 3.8, 6.2, 6.3, 6.4 and 6.7 of the

Township's Official Plan. It has been prepared according to the direction provided in Section 3.7 of the Township's Official Plan.

Otonabee Region Conservation Authority (ORCA) and Ontario Regulation 167/06

Sections 5.1, 5.2 and 5.3 describe measures that would permit the proposed development to proceed in a manner that complies with ORCA policies and Ontario Regulation 167/06. Section 7.0 includes both general and specific recommendations to be implemented during the site preparation, construction and post-construction periods.

7. Summary of Recommendations

7.1 General

1. The construction envelope must be clearly defined and delineated and a line be staked and clearly marked in the field prior to any construction activities occurring in the study area.
2. Prior to any site preparation activities (grading, placement of fill) erosion and sediment control measures should be installed along the construction envelope to ensure sediment laden runoff does not enter interfere with adjacent natural heritage and hydrologic features. The silt fence should be inspected and maintained throughout the construction phase and remain in place until the soils are stabilized and re-vegetated.
3. Client to obtain relevant permits from the County of Peterborough, Otonabee Region Conservation Authority, Ministry of Northern Development, Mines, Natural Resources and Forestry and Ministry of the Environment, Conservation and Parks.
4. Any vegetation clearing required for site access prior to construction shall be completed outside of the Breeding Bird timing window of April 15th to August 15th (as per Environment and Climate Change Canada regulations).
5. The Project Manager and Contractor are obligated to ensure that all mitigation measures are strictly observed.
6. Construction should be undertaken during normal weather conditions, to the extent possible, and the project shall be designed to appropriate specifications to withstand variable weather conditions.
7. Opportunity for restoration, rehabilitation and enhancement of the wetland buffer.

7.2 Wetlands

1. A 30 m buffer and in some areas a minimum 15 m buffer (setback) will be established from the outermost edge of the unevaluated wetland communities MAS2-1, SWD3-2, SWM3-2 and SWT2-2 as per Figure 1.
2. Wherever possible, this setback (buffer) will be increased.
3. The buffer distance may need to be confirmed through a staking exercise in cooperation with ORCA.
4. No development, grading, fill or building envelopes are to intrude into this buffer (setback), which shall consist of natural self-sustaining vegetation indigenous to the study area.
5. Low impact development (LID) practices will be incorporated into the proposed development so as to maintain surface water flow to wetlands.

7.3 Significant Wildlife Habitat

1. A minimum 30 m buffer (setback) will be established from the outermost edge of the unevaluated wetland communities MAS2-1, SWD3-2, SWM3-2 and SWT2-2 as per Figure 1.
2. Wherever possible, this setback (buffer) will be increased.
3. No development, grading, fill or building envelopes are to intrude into this buffer (setback), which shall consist of natural self-sustaining vegetation indigenous to the study area.

4. Downed woody debris (i.e., fallen sticks, logs) shall not be removed from wooded habitats retained on site.
5. Tree cutting shall be kept to a minimum so as to retain the function of the area for migratory land birds and other wildlife.

7.4 Species at Risk

1. MECP must be consulted to for guidance regarding permits, notices or other documents for eastern meadowlark.
2. Should any other 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.

7.5 Stormwater

1. All structural components and actively managed components of the stormwater management facility are located out of identified wetland communities.
2. Stormwater ponds to remain outside of the wetland communities and buffer from the MAS2-1, SWM3-2 SWD6-2 and SWT2-2 communities,
3. Stormwater management should have a multiple treatment approach onsite and include low impact development practices to manage run-off.
4. Pollution and sedimentation control during construction and post-construction phases are minimized using best management practices.

7.6 Sediment and Erosion Control

1. All sediment and erosion control products will be selected for the site based on the manufacturer's product specifications. Product installation and maintenance will follow the manufactures guidelines.
2. 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 hydrologic features.
3. All sediment and erosion control measures shall be inspected regularly during the construction phase and periodically thereafter to ensure they are functioning properly, maintained, and upgraded as required. Sediment fence to be checked regularly to ensure they are maintained and working properly. Accumulated silt and debris will be removed from the fence and site after every precipitation event.
4. Construction will be undertaken during normal weather conditions, to the extent possible, and will avoid large precipitation events to minimize the risk of sedimentation off-site.
5. In the event that sediment and erosion control measures are not functioning, the construction supervisor shall order the work to be stopped. No further work shall be carried out until the construction methods and/or the sediment control plan is adjusted to address the sediment/erosion problem(s). Such occurrences should be document by the site inspector and provided to a qualified biologist.
6. Should work conditions change such that it is possible that fish or fish habitat may potentially be impacted, all works shall cease until the problem has been corrected or authorization has been obtained from the appropriate authorities.

8. Conclusion

This Environmental Impact Study report was prepared to address potential environmental issues associated with an application to develop a property located at 1382 County Road 28, also referred to as Lot 23, Concession 8, in the Township of Cavan Monaghan, County of Peterborough. Within this area GHD staff confirmed the boundaries of key

natural features and 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.

The proposed development will not result in negative impacts on identified natural heritage features or their functions, provided the mitigation measures described in Sections 5 and 7 are implemented. In particular obtaining the relevant permits from the Township of Cavan Monaghan, NDMNRF and MECP. These recommendations have been made to address potential impacts to natural features (i.e., identified wetlands, wildlife habitat, Species at Risk) and/or their functions during the site preparation, construction and post-construction period.

9. References

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Appendices

Appendix A

Kawartha Downs Preliminary Site Plan

KAWARTHA DOWNS SITE PROPOSAL STATISTICS

GENERAL:
SITE AREA: 115 acres
EXISTING PARKING: 570 spaces
EXISTING OVAL INFIELD: 13 acres
EXISTING BARNES/SERVICE BUILDINGS: 36,400 sf total

SPECTATORS:
EXISTING GRANDSTAND: 2,000

EVENT CENTRE: 3,200

AMPHITHEATRE: 6,423 raked + 10,000 grass
SOCCER PITCHES: 2,800

EXISTING CASINO AND GRANDSTAND: 50,000 SF

PUBLIC WC'S: 5,000 SF

EVENT CENTRE:
48,300 SF FOOTPRINT
58,500 SF GFA

INDOOR MULTI-USE FIELD
CHANGEROOMS
PUBLIC SOCIAL SPACE
OFFICE AND ADMINISTRATION
PERMANENT SEATING FOR 1,000

EVENT STAGE
BACK-OF HOUSE
RETRACTABLE SEATING FOR 1,000
FLOOR-LEVEL SEATING FOR 1,200

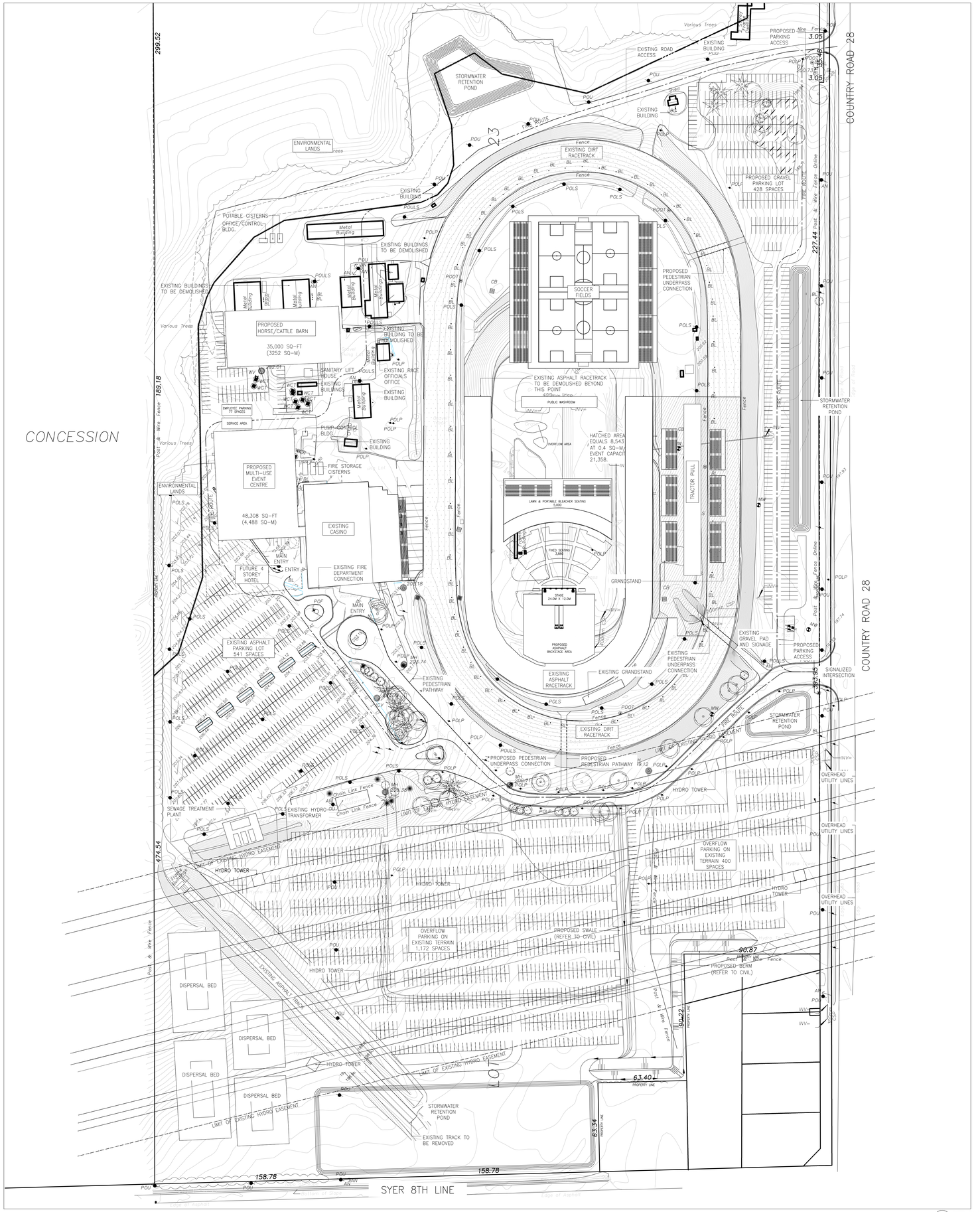
FUTURE HOTEL:

HOTEL STATISTICS

- NUMBER OF FLOORS: 4
- BUILDING HEIGHT 12.2m (EXCLUDING MECHANICAL PENTHOUSE)
- GROUND FLOOR AREA: 1,910 SQ-M (20,559 SQ-FT)
- TOTAL GROSS FLOOR AREA: 5,838 SQ-M (62,840 SQ-FT)
- PROPOSED PARKING: DELETE 56 SPOTS FROM EXISTING LAYOUT

MECHANICAL NOTES 220714

- Peak domestic water demand = 185.1 gpm. We anticipate a 3in water service pipe to support this flow.
- Peak sanitary drainage = 113.7 gpm. We anticipate a 6in sanitary service at 1% slope.
- 15min Storm event per OBC = 2337.8 gpm. We anticipate a single 15in storm connection at 1% slope but I would expect it is more realistic to utilize multiple smaller connections. 4x 10in connections is possible.
- Fire flow = 500 gpm via 6in pipe. Expected water service duration is 90min per NFPA-13 and we recommend adding additional storage to accommodate fire pump testing requirement. 2-3hrs of storage would be appropriate.



1 SITE PLAN 1:1000

Contractor must check and verify all dimensions on the job, and report any discrepancies to the Architect before proceeding with the work.

Do not scale this drawing.

REVISIONS AND ISSUES

REV	DESCRIPTION	DATE
1	ISSUED FOR SPA	06 SEPT 2022

MJMA
maclennan jaunkalns miller architects
425 adelaide street west level 6
toronto ontario m5v 3c1
416.593.6796
www.mjmarchitects.com

KAWARTHA DOWNS SITE STUDY
1352 County Rd. #28
FRASERVILLE, ON , K0L 1V0
t: 705.939.6316
f: 705.939.6276

KEYPLAN

NORTH ARROW

SEAL

PROJECT TITLE
KAWARTHA DOWNS SITE STUDY

DRAWING TITLE
SITE PLAN
ROOF PLAN

SCALE
1:1000

DATE
06 SEPT 2022

PROJECT NUMBER
2110

DRAWING NUMBER
SPA A001

Appendix B

Plant Species by Community

APPENDIX B Plant Species by Community

Families and genera for the plant species found in this appendix are listed in taxonomic order. The species are listed alphabetically by scientific name 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).

Total: Number of communities where plant species was recorded
X : Plant species recorded

Common Name	*Scientific Name*	Total	COMMUNITY NUMBER			
			1	2	3	4
HORSETAIL FAMILY	*EQUISETACEAE*					
water horsetail	*Equisetum fluviatile*	1			X	
BRACKEN FERN FAMILY	*DENNSTAEDTIACEAE*					
eastern bracken fern	*Pteridium aquilinum*	1			X	
BEECH FERN FAMILY	*THELYPTERIDAE*					
marsh fern	*Thelypteris palustris*	1				X
WOOD FERN FAMILY	*DRYOPTERIDACEAE*					
sensitive fern	*Onoclea sensibilis*	1				X
PINE FAMILY	*PINACEAE*					
tamarack	*Larix laricina*	1			X	
white spruce	*Picea glauca*	1			X	
CYPRESS FAMILY	*CUPRESSACEAE*					
eastern white cedar	*Thuja occidentalis*	1		X		
BUTTERCUP FAMILY	*RANUNCULACEAE*					
thimbleweed	*Anemone virginiana*	1		X		
tall buttercup	*Ranunculus acris*	1				X
NETTLE FAMILY	*URTICACEAE*					
American stinging nettle	*Urtica dioica ssp. Gracilis*	1				X
BIRCH FAMILY	*BETULACEAE*					
white birch	*Betula papyrifera*	1			X	
BUCKWHEAT FAMILY	*POLYGONACEAE*					
pale smartweed	*Polygonum lapathifolium*	1				X
lady's thumb	*Polygonum persicaria*	1			X	
curled dock	*Rumex crispus*	2			X	X
great water dock	*Rumex orbiculatus*	2			X	X

Common Name	*Scientific Name*	Total	COMMUNITY NUMBER			
			1	2	3	4
WILLOW FAMILY	*SALICACEAE*					
balsam poplar	*Populus balsamifera*	1			X	
trembling aspen	*Populus tremuloides*	1			X	
Bebb's willow	*Salix bebbiana*	2			X	X
crack willow	*Salix fragilis*	1			X	
slender willow	*Salix petiolaris*	1			X	
PRIMROSE FAMILY	*PRIMULACEAE*					
tufted loosestrife	*Lysimachia thrysiflora*	1			X	
PEA FAMILY	*FABACEAE*					
bird's-foot trefoil	*Lotus corniculatus*	1	X			
white clover	*Trifolium repens*	1	X			
LOOSESTRIFE FAMILY	*LYTHRACEAE*					
purple loosestrife	*Lythrum salicaria*	2		X		X
EVENING PRIMROSE FAMILY	*ONAGRACEAE*					
narrow-leaved willow-herb	*Epilobium leptophyllum*	1				X
DOGWOOD FAMILY	*CORNACEAE*					
red-osier dogwood	*Cornus stolonifera*	1		X		
BUCKTHORN FAMILY	*RHAMNACEAE*					
European buckthorn	*Rhamnus cathartica*	1		X		
GRAPE FAMILY	*VITACEAE*					
Virginia creeper	*Parthenocissus inserta*	1		X		
MAPLE FAMILY	*ACERACEAE*					
Manitoba maple	*Acer negundo*	2		X	X	
TOUCH-ME-NOT FAMILY	*BALSAMINACEAE*					
spotted jewelweed	*Impatiens capensis*	1			X	
CARROT FAMILY	*APIACEAE*					
spotted water hemlock	*Cicuta maculata*	1			X	
MILKWEED FAMILY	*ASCLEPIADACEAE*					
swamp milkweed	*Asclepias incarnata*	1			X	
swallow-wort	*Cynanchum rossicum*	1		X		
VERVAIN FAMILY	*VERBENACEAE*					
blue vervain	*Verbena hastata*	1				X
MINT FAMILY	*LAMIACEAE*					
heal-all	*Prunella vulgaris ssp. Lanceolata*	1		X		
PLANTAIN FAMILY	*PLANTAGINACEAE*					
narrow-leaved plantain	*Plantago lanceolata*	1	X			
broad-leaved plantain	*Plantago major*	1	X			
OLIVE FAMILY	*OLEACEAE*					
green ash	*Fraxinus pennsylvanica var. subinteg*	1		X		
HONEYSUCKLE FAMILY	*CAPRIFOLIACEAE*					
common elderberry	*Sambucus canadensis*	1			X	

Common Name	*Scientific Name*	Total	COMMUNITY NUMBER			
			1	2	3	4
ASTER FAMILY	*ASTERACEAE*					
common mugwort	*Artemisia vulgaris*	1				X
Philadelphia fleabane	*Erigeron philadelphicus ssp. philadel*	1		X		
pineapple weed	*Matricaria matricarioides*	1	X			
common dandelion	*Taraxacum officinale*	1	X			
coltsfoot	*Tussilago farfara*	1		X		
RUSH FAMILY	*JUNCACEAE*					
path rush	*Juncus tenuis*	1				X
SEDGE FAMILY	*CYPERACEAE*					
drooping wood sedge	*Carex arctata Boott*	1				X
hop sedge	*Carex lupulina*	1				X
retrorse sedge	*Carex retrorsa*	1				X
awl-fruited sedge	*Carex stipata*	1				X
wool-grass	*Scirpus cyperinus*	2		X		X
GRASS FAMILY	*POACEAE*					
Kentucky blue grass	*Poa pratensis*	1	X			
CATTAIL FAMILY	*TYPHACEAE*					
narrow-leaved cattail	*Typha angustifolia*	1			X	
Total Number of Plant Species	52		7	13	20	18
			Number of Plant Species Per Community			

Appendix C

Bird Status List - Comprehensive

APPENDIX C Bird Status Report - Comprehensive

Bird species observed by GHD are listed in the order followed the American Ornithologists' Union (AOU) Check-list of North American birds (7th edition, 1999, 47th Supplement). Common and scientific nomenclature are based on those used by AOU. Breeding status and breeding evidence code are listed when observed. Any significant status for a species on national and provincial lists is displayed as well as those from relevant regional lists.

List Status :	**END - endangered**	A wildlife species facing imminent extirpation or extinction.
	END-R -endangered regulated	A wildlife species facing imminent extirpation or extinction in Ontario which has been regulated under Ontario's Endangered Species Act (ESA).
	THR - threatened	A wildlife species likely to become endangered if limiting factors are not reversed.
	SC - special concern	A wildlife species that may become threatened or an endangered species because of a combination of biological characteristics and identified threats.
	YES - Area Sensitive	A wildlife species that requires large areas of suitable habitat in order to sustain their population numbers.

*** Other status levels are not displayed**

List Sources:	**COSEWIC**	The Committee on the Status of Endangered Wildlife in Canada, October 2021.
	COSSARO	The Committee on the Status of Species at Risk in Ontario, June 2021.
	SARA	Species At Risk Act, Schedule 1, Government of Canada, February 2022.
	Area Sensitive	Significant Wildlife Technical Guide, Appendix C, OMNR, Oct. 2000
	Region 6	Southern Ontario Wetland Evaluation Appendix 11B, Version 3.2, March 2013

Breeding Status: (Observed By GHD)

B -species observed in breeding season in suitable habitat with some evidence of breeding (confirmed, probable or possible as per Ontario Breeding Bird Atlas, 2002).
F -species observed in breeding season but no evidence of breeding or suitable nest sites available on the study site (includes flyovers, migrants and foraging colonial breeders).
M -species observed outside of breeding season for that species and in area outside of the known breeding range for that species.

Breeding Evidence Code: (Observed By GHD)

OBSERVED
X -species observed in its breeding season (no evidence of breeding).

POSSIBLE BREEDING
H -species observed in its breeding season in suitable nesting habitat
S -singing male present, or breeding calls heard, in its breeding season in suitable nesting habitat

PROBABLE BREEDING
P -pair observed in their breeding season in suitable nesting habitat
T -permanent territory presumed through registration of territorial song on at least 2days, a week or more apart, at the same place
D -courtship or display between a male and a female or 2 males, including courtship feeding or copulation
V -visiting probable nest site
A -agitated behaviour or anxiety calls of an adult
B -brood patch on adult female or cloacal protuberance on adult male
N -nest-building or excavation of nest hole

CONFIRMED BREEDING
DD -distraction display or injury feigning
NU -used nest or egg shell found (occupied or laid within the period of study)
FY -recently fledged young or downy young, including young incapable of sustained flight
AE -adults leaving or entering nest site in circumstances indicating occupied nest
FS -adult carrying fecal sac
CF -adult carrying food for young
NE -nest containing eggs
NY -nest with young seen or heard

SOURCE: Ontario Breeding Bird Atlas March 2001

AOU Code	Common Name	Scientific Name	Observed Breeding Status	Breed Evidence Code	COSEWIC	COSSARO	SARA	Area Sensitive	Region 6		
KILL	Killdeer	*Charadrius vociferus*	B	X				No			
MODO	Mourning Dove	*Zenaida macroura*	B	X				No			
BEKI	Belted Kingfisher	*Megaceryle alcyon*	B	H				No			
GCFL	Great Crested Flycatcher	*Myiarchus crinitus*	B	S				No			
AMCR	American Crow	*Corvus brachyrhynchos*	B	H				No			
CLSW	Cliff Swallow	*Petrochelidon pyrrhonota*	B	H				No			
BARS	Barn Swallow	*Hirundo rustica*	B	X	THR	THR	THR	No			
BCCH	Black-capped Chickadee	*Poecile atricapillus*	B	H				No			
GRCA	Gray Catbird	*Dumetella carolinensis*	B	S				No			
YEWA	Yellow Warbler	*Dendroica petechia*	B	S				No			
COYE	Common Yellowthroat	*Geothlypis trichas*	B	S				No			
CHSP	Chipping Sparrow	*Spizella passerina*	B	S				No			
SASP	Savannah Sparrow	*Passerculus sandwichens*	B	S				No			
SOSP	Song Sparrow	*Melospiza melodia*	B	S				No			
SWSP	Swamp Sparrow	*Melospiza georgiana*	B	S				No			
RWBL	Red-winged Blackbird	*Agelaius phoeniceus*	B	X				No			
EAME	Eastern Meadowlark	*Sturnella magna*	B	S	THR	THR	THR	No			
PUFI	Purple Finch	*Carpodacus purpureus*	B	S				No			
AMGO	American Goldfinch	*Carduelis tristis*	B	P				No			
TOTAL SPECIES OBSERVED:	**19**	**BREEDING SPECIES OBSERVED:**	**19**		**2**	**2**	**2**	**0**	**0**	**0**	**0**

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The Power of Commitment