



2nd Submission Environmental Impact Study

TACC Mayfield Tullamore

Caledon, Ontario

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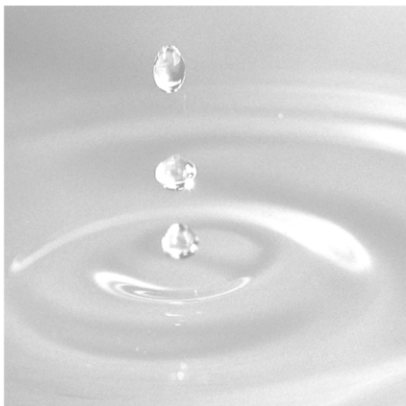


Table of Contents

Record of Revisions	iii
1. Introduction	1
1.1. Project Overview	1
1.2. Purpose of the Report	1
2. Natural Heritage Legislation and Policy Context	3
2.1. Local Policy Context	3
2.1.1. Region of Peel Official Plan	4
2.1.1.1. Settlement Area Boundary Expansion	5
2.1.2. Future Caledon Official Plan (2025)	6
2.2. Natural Heritage Background Review Findings	7
2.2.1. Geospatial Ontario Natural Features Results	7
2.2.2. Species-Specific Background Information	8
3. Summary of the Subwatershed Study Findings	10
3.1. Ecological Field Investigation Summary	10
3.1.1. Terrestrial Habitats	11
3.1.1.1. ELC and Botanical Inventory	11
3.1.1.2. Anthropogenic Structure Screening	12
3.1.1.3. Breeding Bird Studies and Winter Raptor Surveys	12
3.1.1.4. Amphibian Call Count Surveys	13
3.1.1.5. Turtle Surveys	14
3.1.1.6. Snake Surveys	14
3.1.1.7. Bat Surveys	14
3.1.1.8. Monarch Surveys	15
3.1.2. Aquatic Habitats	16
3.1.2.1. Headwater Drainage Feature Assessment	16
3.1.2.2. Fish Community Sampling	18
3.1.2.3. Aquatic Habitat Assessment	18
3.2. Tree Inventory and Arborist Report	19
3.3. Wetland Water Balance Risk Evaluation	19
3.4. Significance and Sensitivity Summary	20
3.4.1. Provincially Significant Features	20
3.4.2. Regionally Significant Features	22
3.4.3. Locally Significant Features	23
3.4.4. Greenbelt Plan Area	24
3.4.5. Natural Hazards	24
4. Proposed Development	25
4.1. Feature Setbacks	25
4.2. Western NHS Block (CUP3-14 Removal)	26

5. Conclusions and Next Steps	27
6. References	28

Appendices

Appendix A	Figures
Appendix B	Tables
Appendix C	Regulation Mapping Update Request

Record of Revisions

Identification	Date	Description of Issued and/or Revision
1 st Submission EIS	November 2024	Initial submission
2 nd Submission EIS	May 2026	Revised to address changes to concept plan

1. Introduction

1.1. Project Overview

GEI Consultants Canada Ltd. (GEI) has been retained by TACC Developments (Armstrong) Ltd. (TACC) to complete an Environmental Impact Study (EIS) for the property located southeast of the intersection of Bramalea Road and Old School Road in Caledon, Ontario, herein referred to as the Subject Lands (**Figure 1, Appendix A**). The Subject Lands are primarily made up of active agricultural lands with two tributaries of the West Humber River running through the site (referred to as the western and eastern tributaries) and Greenbelt Plan Area along the eastern property boundary (**Figure 2, Appendix A**).

The Subject Lands are a participating property within the Mayfield Tullamore Secondary Plan Area; Council for the Town of Caledon passed By-law No. 2026-034 on April 28, 2026, which officially adopts the Mayfield Tullamore Secondary Plan (Official Plan Amendment No. 12) under Section 17 of the *Planning Act*, for these lands. This Secondary Plan area is currently undergoing a Local Subwatershed Study (SWS), which was initiated to support the Secondary Plan submission. To date, Phase 1 and 2 of the Local SWS have been submitted: version 2 of the Phase 1 SWS was submitted in February 2025, and version 1 of the Phase 2 SWS was submitted in April of 2025. Based on Secondary Plan approval in April 2026, a consolidated MESP and SWS will be submitted in the future as part of the Tertiary Plan, and this MESP/Local SWS submission will incorporate Phases 1-3 of the Local SWS. While the Tertiary Plan process is still ongoing, TACC is concurrently working ahead on this site-specific application, which includes a requirement for a site-specific EIS. In 2024 GEI prepared a 1st Submission EIS to support an initial site-specific application. Since that time, changes have been made to the proposed development concept; as such, an updated, 2nd Submission EIS is now required in 2026.

As of April 2026, the proposed development is primarily low-density residential with one retail/mixed use block proposed in the northwest corner, two park blocks, one stormwater management (SWM) pond block near the western watercourse, and one centrally located school block. There are also three sections of Environmental Policy Area on site associated with the aforementioned tributaries of the West Humber River and Greenbelt Plan Area, as well as one watercourse crossing proposed along the western tributary. **Figure 3 (Appendix A)** shows the April 2026 draft plan.

1.2. Purpose of the Report

An EIS is required as part of TACC's site-specific application to assess potential impacts of the proposed development on natural heritage features and their associated functions within the Subject Lands (**Figure 1, Appendix A**). As several associated studies are still ongoing at the time of preparing this report, and their results will need to be integrated into the EIS at a later date (i.e., Functional Servicing and Stormwater Management Report etc.), this 2nd Submission EIS provides a characterization of the Subject Lands and a high-level overview of TACC's 2026 draft plan of subdivision concept plan, with the understanding that a detailed impact assessment will be undertaken as part of subsequent EIS submissions.

Given the detailed and recent nature of the investigations completed as part of the Phase 1 Local SWS (February 2025) and Phase 2 Local SWS (April 2025), this 2nd Submission EIS continues to rely upon the ecological findings of the Phase 1 and 2 Local SWS reports to characterize the Subject Lands. This 2nd Submission EIS also considers applicable policies of the Province of Ontario's Provincial Planning Statement (PPS; Government of Ontario 2024) and associated provincial implementation guidance contained in the Natural Heritage Reference Manual (NHRM; MNR 2010a), as well as the Town of Caledon's OP (Future Caledon OP, 2025) and the Toronto and Region Conservation Authority's (TRCA) regulation and policies to assess the significance of the features identified on the Subject Lands. The forthcoming detailed impact assessment (to be completed as part of future EIS submissions) will review whether any potential direct, indirect or cumulative impacts may occur to the identified candidate and/or confirmed natural heritage features (NHF) within and adjacent to, the Subject Lands. The final EIS will be prepared in accordance with the final SWS.

2. Natural Heritage Legislation and Policy Context

An assessment of the significance and sensitivity of the natural heritage features found on and adjacent to the Subject Lands was undertaken as part of the Phase 1 SWS, which reviewed the documents:

- The Federal *Species At Risk Act* (SARA, 2002, Amended 2017);
- The Federal *Fisheries Act* (1985, Amended 2019);
- The Federal *Migratory Birds Convention Act* (1994, Amended 2024);
- The Provincial Planning Statement (2024);
- The Provincial *Species Conservation Act* (SCA, 2025);
- The Provincial *Fish and Wildlife Conservation Act* (1997, 2024 Consolidation);
- The Region of Peel OP (2024 Consolidation);
- Toronto and Region Conservation Authority's (TRCA's) *Living City Policies* (2014) and *Ontario Regulation 41/24* (Prohibited Activities, Exemptions and Permits under the *Conservation Authorities Act*, 2024); and
- The Future Caledon OP (2025).

For details on relevance of federal and provincial legislation, policies, and regulations as they apply to the entire SWS Study Area, please refer to Section 2.1 of the Phase 1 Local SWS (February 2025). Local policies and regulations specific to the Subject Lands are discussed further in **Section 2.1** of this report.

GEI also reviewed existing background information to gather data for the Subject Lands within the Phase Local 1 SWS. Existing natural heritage features and reported SAR and species of conservation concern in the area were identified through the review of the following information sources:

- Ministry of Natural Resources (MNR) Geospatial Ontario (GEO) Natural Heritage Areas mapping;
- Natural Heritage Information Centre (NHIC) database;
- DFO's Aquatic SAR Map;
- Provincial wildlife atlases; and
- Online citizen science databases.

The following subsections include a summary of relevant policy and background information for the Subject Lands.

2.1. Local Policy Context

The following sections outline key policy considerations specific to the Subject Lands as per the Region of Peel OP (2024 Consolidation) and Future Caledon OP (2025). More general policy considerations (such as the PPS, Greenbelt Plan, SCA etc.) are outlined in the Phase 1 and Phase 2 Local SWS documents.

2.1.1. Region of Peel Official Plan

As of July 1st, 2024, the *Region of Peel Official Plan* (2024 Consolidation, Peel OP) constitutes an official plan of Peel's lower-tier municipalities. As such, the Town of Caledon is now responsible for the interpretation and implementation of this regional OP. Its policies have generally been incorporated into the Future Caledon OP (2025) and where there are conflicts, the policies of the Future Caledon OP will prevail.

Portions of the Subject Lands are identified on Schedule C2 – Core Areas of the Greenlands System of the Peel OP as existing on and within 120 m of the "Greenlands System". The Subject Lands contain both Prime Agricultural Area and Rural Land according to Schedule D-1 – Rural System.

The branches of the West Humber River and associated tributaries on site are noted as part of the Greenlands System as per Schedule C-1 ("Greenlands System"). Further, the eastern tributary on the Subject Lands is designated as Core Areas of the Greenlands System, while the western watercourse is identified as Potential Natural Areas and Corridors (PNAC) in Figure 7 of the Peel OP ("Regional Greenlands System- Core Areas, Natural Areas and Corridors and Potential Natural Areas and Corridors"). The Greenlands System is based on natural heritage features and areas and the linkages among them.

Core Areas of the Greenlands Systems are defined within Section 2.14.12 of the Peel OP as:

- Significant wetlands;
- Significant coastal wetlands;
- Woodlands meeting one or more Core Area woodland criteria in Table 1 of the OP;
- Environmentally sensitive or significant areas;
- Provincial life science Areas of Natural and Scientific Interest (ANSIs);
- Escarpment natural areas of the Niagara Escarpment Plan; and
- Valley and stream corridors meeting one or more of the criteria for Core Area valley and stream corridors in Table 2 of the OP.

Natural Areas and Corridors (NAC) of the Greenland Systems are defined within Section 2.14.18 of the Peel OP as:

- Evaluated non-provincially significant wetlands and coastal wetlands;
- Woodlands meeting one or more of the criteria for NAC woodland in Table 1;
- Significant Wildlife Habitat (SWH);
- Fish habitat;
- Habitat of aquatic SAR;
- Habitat of endangered and threatened species defined in accordance with the *Endangered Species Act*;

- Regionally significant life science ANSIs;
- Provincially significant earth science ANSIs;
- Escarpment Protection Areas of the Niagara Escarpment Plan;
- The Lake Ontario shoreline and littoral zone and other natural lakes and their shorelines;
- Any other valley and stream corridors that have not been defined as part of the Core Areas;
- Sensitive headwater areas and sensitive groundwater discharge areas; and
- Any other natural features and functional areas interpreted as part of the Greenlands System Natural Areas and Corridors by the local municipalities, in consultation with the conservation authorities and MNR, including as appropriate, elements of the Potential Natural Areas and Corridors.

PNAC of the Greenland System are defined within Section 2.14.19 of the Peel OP as:

- Unevaluated wetlands and coastal wetlands;
- Cultural woodlands and cultural savannahs within the Urban Systems meeting one or more of the criteria for PNAC woodland in Table 1;
- Any other woodlands greater than 0.5 ha;
- Regionally significant earth science ANSIs;
- Sensitive groundwater recharge areas;
- Portions of historic shorelines;
- Open space portions of the Parkway Belt West Plan Area;
- Enhancement areas, buffers and linkages; and
- Any other natural features and functional areas interpreted as part of the Greenlands System Potential Natural Areas and Corridors, by the individual local municipalities in consultation with the conservation authorities.

2.1.1.1. Settlement Area Boundary Expansion

The Region of Peel undertook a Settlement Area Boundary Expansion (SABE) study as part of their Region of Peel Official Plan (Peel OP) updates (adopted 2022). The main purpose of the SABE was to summarize findings of technical studies for a broad area in southern part of the Town of Caledon and to assess the most appropriate location for new urban lands and appropriate settlement growth.

As part of the Peel Region SABE Study, a Scoped SWS was conducted to inform recommendations for the natural environment and provide base level guidelines for future, detailed subwatershed studies completed as part of the OPA process. The Local SWS (currently in progress) for the Mayfield Tullamore Secondary Plan area addresses the requirements outlined in the SABE Scoped SWS. Natural heritage features and water resources identified within the SABE Scoped SWS have been assessed and refined through the local SWS for the Secondary Plan area, including the Subject Lands.

One such recommendation outlined in the SABE Scoped SWS is the requirement for “major and minor landscape linkages” and “permeable landscape zones”. Per discussions with the Town in February 2026, and as outlined in the SABE Scoped SWS, there is a major linkage present along the Greenbelt NHS corridor. This linkage requires a vegetated width of 100 m along the Greenbelt NHS, and a 30 m wide permeable landscape zone (PLZ) added to the edge of the 100 m vegetated section. The SABE Scoped SWS identifies that this PLZ should be maintained with at least 30% natural vegetation, and that the remaining 70% of the PLZ can be comprised of compatible uses, such as parks, Stormwater Management (SWM) ponds, trails, etc. This has been incorporated into the proposed development and is discussed further in **Section 4**.

2.1.2. Future Caledon Official Plan (2025)

The Town of Caledon’s *Future Caledon Official Plan* (2025, Caledon OP) was adopted by Council on March 26th, 2024. It was approved by MMAH on October 22, 2025 (with modifications) and is currently in-force.

As per Schedule B2 of the Draft Caledon OP, the Subject Lands are noted as part of the “New Urban Area 2051”. Schedule B4 denotes proposed Land Uses for the New Urban Area. Based on Schedule B4, the Subject Lands include “Natural Features and Areas” (**Figure 2, Appendix A**). Additional land use designations include small portions of “Prime Agricultural Area” associated with the Greenbelt Plan limits (Schedule B3a) and “New Community Area” across the balance of the Subject Lands.

The Caledon OP refers to the Region of Peel Scoped SWS (Wood et al., 2022) in Section 13.10 in reference to the delineation of a preliminary Natural Environment System for New Community Areas and New Employment Areas. Section 13.10 outlines the requirements for a local SWS to be completed for each secondary plan area within these “New Urban Areas” in Section 13.10.1. The “Natural Features and Areas” outlined in Schedule B4 for the New Urban Areas have been preliminarily defined through the SABE; however, it is assumed that these areas will be further refined and updated based on more targeted desktop and field investigations through the local SWS that GEI is currently supporting.

In general, the Caledon OP identifies that the local SWS should provide recommendations for an updated “Natural Environment System” that includes “Natural Features and Areas” including:

- Provincially Significant Wetlands (PSW);
- Woodlands meeting one or more of the criteria for Core Area woodland on Table 1 of the Region of Peel Official Plan;
- Significant Valleylands;
- Environmentally Sensitive or Significant Areas;
- Provincial Life Science Areas of Natural and Scientific Interest (ANSIs);
- Escarpment Natural Area designation of the Niagara Escarpment Plan; and
- Valley and stream corridors meeting one or more of the criteria for Core Area valley and stream corridors in Table 2 of the Region of Peel OP.

As well as “Supporting Features and Areas” inclusive of:

- Evaluated non-provincially significant wetlands;
- Unevaluated wetlands;
- Woodlands meeting one or more of the criteria for a natural areas and corridors woodland in Table 1 of the Region of Peel OP;
- Cultural woodlands and cultural savannahs within the urban system meeting one or more of the criteria for a potential natural area and corridor woodland in Table 1 of the Region of Peel OP;
- Any other woodland greater than 0.5 hectares that does not meet the criteria for a Natural Areas and Corridors (NAC) woodland in Table 1 of the Region of Peel OP;
- SWH meeting one or more of the criteria in the Ministry of Natural Resources and Forestry significant wildlife habitat technical guide, but located outside of an applicable provincial plan area;
- Fish habitat;
- Habitat of aquatic SAR; and
- Habitat of endangered species and threatened species.

The Caledon OP also notes that appropriate buffers for natural heritage features are to be established based on the local SWS assessments.

The 2025 Caledon OP also brings in additional climate change considerations. In 2010, the Town of Caledon created its first Community Climate Change Action Plan (CCCAP), furthering their climate action efforts in 2017 by signing on to the Global Covenant of Mayors for Climate and Energy (GCOM). The Town created a Future Climate Projections Report (2018) to better understand anticipated trends and impacts of climate change on the community. The climate change objectives and policy directions outlined in Chapter 5 of the Draft Caledon OP aim to support the corporate goals, actions, and strategies identified in the newest version of the Resilient Caledon CCCAP, released in 2021. The Resilient Caledon Plan combines adaptation and mitigation actions to reduce GHG emissions and help the community prepare for climate change. The 2025 Caledon OP highlights the need to address climate change through a series of objectives and policy decisions that support the corporate goals, actions, and strategies in the Resilient CCCAP.

2.2. Natural Heritage Background Review Findings

GEI reviewed various background materials to determine existing natural heritage information for the Subject Lands. A summary of the key findings from the natural heritage background review is provided in the sections below.

2.2.1. *Geospatial Ontario Natural Features Results*

Based on the Ministry of Natural Resources and Forestry (MNRF) Geospatial Ontario (GEO) geographic database, the following features were found within and/or adjacent to the Subject Lands (**Figure 2, Appendix A**):

- Greenbelt Plan Natural Heritage System (NHS) is present in the northeast and southwest corners of the Subject Lands; and
- Two tributaries of the West Humber River run through the Subject Lands.

2.2.2. Species-Specific Background Information

GEI reviewed the following wildlife atlases and online resources for species-specific natural heritage information applicable to the Subject Lands:

- Ministry of Natural Resources and Forestry's (MNRF) Natural Heritage Information Centre (NHIC) database (2024):
 - Squares 17NJ9650, 17NJ9649, 17NJ9749, 17NJ9648.
- Bird Studies Canada's Atlas of the Breeding Birds of Ontario (OBBA, BSC et al. 2008):
 - Squares 17TNJ94 and 17TNJ95.
- Ontario Nature's Reptile and Amphibian Atlas (ORAA, 2023):
 - Squares 17NJ94 and 17NJ95.
- Toronto Entomologists' Association's Ontario Butterfly and Moth Atlases (OBMA, 2026, 2025):
 - Squares 17NJ94 and 17NJ95.
- Fisheries and Oceans Canada's (DFO) Aquatic Species at Risk (SAR) Map (2022); and
- Online citizen science databases (e.g., eBird and iNaturalist).

Species of interest noted within these online resources are listed in **Table 2-1**, below. It should be noted that these information sources generally present results on broad geographic areas, and therefore the listed species may not necessarily be found within the Subject Lands. Habitat type, availability, and size are all contributing factors to species presence.

A summary of the key findings from the natural heritage background review and associated with the Subject Lands are described below.

Table 2-1. Species-Specific Background Information

Species	SARA (Schedule 1)	COSEWIC	SCA (Protected Species in Ontario List)	COSSARO	S Rank	L Rank	Source
Redside Dace (<i>Clinostomus elongatus</i>)	END	END	Not listed	END	S1	Not listed	NHIC, aquatic SAR mapping
Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>)	END	END	Not listed	END	S3	L3	OBBA
Prothonotary Warbler (<i>Protonotaria citrea</i>)	END	END	Not listed	END	S1B	L2	OBBA
Jefferson Salamander (<i>Ambystoma jeffersonianum</i>)	END	END	END	END	S2	L1	ORRA, iNaturalist
Loggerhead Shrike (<i>Lanius ludovicianus</i>), Eastern Sub-Species	END	END	Not listed	END	S1B	LX	iNaturalist
Monarch (<i>Danaus plexippus</i>)	END	END	Not listed	SC	S4B	Not listed	OBMA
Chimney Swift (<i>Chaetura pelagica</i>)	THR	THR	Not listed	THR	S3B	L4	OBBA
Bank Swallow (<i>Riparia riparia</i>)	THR	THR	Not listed	THR	S4B	L3	OBBA
Barn Swallow (<i>Hirundo rustica</i>)	THR	SC	Not listed	SC	S4B	L4	OBBA
Golden-winged Warbler (<i>Vermivora chrysoptera</i>)	THR	THR	Not listed	SC	S3B	L2	OBBA
Bobolink (<i>Dolichonyx oryzivorus</i>)	THR	SC	Not listed	THR	S4B	L3	NHIC, OBBA
Eastern Meadowlark (<i>Sturnella magna</i>)	THR	THR	Not listed	THR	S4B	L2	NHIC, OBBA
Wood Thrush (<i>Hylocichla mustelina</i>)	THR	THR	Not listed	SC	S4B	L3	NHIC, OBBA
Eastern Musk Turtle (<i>Sternotherus odoratus</i>)	SC	SC	Not listed	SC	S3	L2	ORRA
Common Nighthawk (<i>Chordeiles minor</i>)	SC	SC	Not listed	SC	S4B	L3	NHIC, OBBA
Eastern Wood-Pewee (<i>Contopus virens</i>)	SC	SC	Not listed	SC	S4B	L4	NHIC, OBBA
Snapping Turtle (<i>Chelydra serpentina</i>)	SC	SC	Not listed	SC	S4	L3	NHIC, ORAA, iNaturalist
Grasshopper Sparrow (<i>Ammodramus savannarum</i>)	SC	SC	Not listed	SC	S4B	L2	OBBA
Northern Map Turtle (<i>Graptemys geographica</i>)	SC	SC	Not listed	SC	S3	L2	ORRA
Upland Sandpiper (<i>Bartramia longicauda</i>)	Not listed	Not listed	Not listed	Not listed	S2B	L2	OBBA
Common Gallinule (<i>Gallinula galeata</i>)	Not listed	Not listed	Not listed	Not listed	S3B	L3	OBBA
American Coot (<i>Fulica americana</i>)	Not listed	Not at Risk	Not listed	Not listed	S3B	L2	OBBA
Ruddy Duck (<i>Oxyura jamaicensis</i>)	Not listed	Not listed	Not listed	Not listed	S3B	Not listed	OBBA
Black Dash (<i>Euphyes conspicua</i>)	Not listed	Not listed	Not listed	Not listed	S4S5	Not listed	OBMA

3. Summary of the Subwatershed Study Findings

3.1. Ecological Field Investigation Summary

An ecological survey program was completed as part of the Phase 1 Local SWS to provide the data required to complete a significance assessment for the natural heritage features present on, and adjacent to, the SWS Study Area. This 2nd Submission EIS summarizes the results of the surveys completed as part of the Local SWS that are applicable to the Subject Lands, including:

- Ecological Land Classification (ELC) and botanical inventory;
- Anthropogenic Structure screening for wildlife habitat – Barn Swallow, snakes, Chimney Swift, SAR bats;
- Breeding bird surveys and a winter raptor survey;
- Turtle basking surveys and a turtle nesting suitability survey;
- Snake surveys;
- Amphibian call count surveys;
- Bat habitat assessment and acoustic surveys;
- Monarch surveys;
- Headwater Drainage Feature Assessments (HDFA);
- Fish community sampling; and
- An Aquatic Habitat Assessment (AHA).

In addition to the above noted investigations, feature staking (top of bank, tree limit and wetland limit) and a tree inventory have been completed. A list of the survey types and dates has been provided in **Table 1 (Appendix B)**. For the methodology employed to conduct the surveys listed above, please refer to the Phase 1 Local SWS. Methodology associated with the tree inventory is outlined in the arborist report under separate cover and briefly discussed in **Section 3.2**.

Given the comprehensive and recent investigations completed as part of the Phase 1 Local SWS, no additional investigations are recommended to characterize the tablelands where development is proposed. In addition, as previously outlined in the Phase 1 Local SWS report, the Local SWS did not complete intensive surveys within the Greenbelt Plan Area as it was assumed that no development or alteration will occur within 30 m of KNHF and KHF (in accordance with the Greenbelt Plan), apart from SWM outlets. The proposed development plan continues to respect the minimum Greenbelt buffers. As a result, no additional studies are required to further characterize the Greenbelt NHS.

3.1.1. Terrestrial Habitats

3.1.1.1. ELC and Botanical Inventory

ELC

The Subject Lands primarily consist of actively managed agricultural fields and hedgerows, with treed and meadow marsh vegetation communities along the two tributaries of the West Humber River. A general description of each ELC type is provided in **Table 2 (Appendix B)**. No provincially rare vegetation communities were identified on the Subject Lands.

As shown in **Figure 4 (Appendix A)**, the limits of the treed areas on the Subject Lands were defined by the feature staking that was completed on May 30, 31 and June 3, 2024, with the Town of Caledon. In addition, the wetland limits within the SWS Study Area were staked by GEI with the TRCA on July 4, 5 and 8, 2024.

Botanical Inventory

A plant species list for the entire Local SWS Study Area is provided in the Phase 1 Local SWS report. The following species of interest are applicable to the Subject Lands:

- Species listed as Threatened or Endangered on the Protected Species in Ontario List:
 - Black Ash (*Fraxinus nigra*; S4, Endangered). This species grows in wetlands or wetland/upland transitional areas, often found in swamps and floodplains. Although the species was not observed during botanical surveys, one potentially suitable deciduous forest community (FOD7-3; Fresh – Moist Willow Lowland Deciduous Forest) is present on the Subject Lands within the eastern NHS block. No development or site alteration is anticipated within the eastern NHS block.
- Locally rare species:
 - Tall Beggarticks (*Bidens vulgata*; R1) – This species was found to occur infrequently to occasionally on the Subject Lands within MAM2-2 community types;
 - Common Bedstraw (*Galium aparine*; R4) – Infrequent occurrences of this species were found within the CUM1-1 communities; and
 - Eastern Red Cedar (*Juniperus virginiana* var. *virginiana*; R5) – Infrequent occurrences of this species were found within the CUM1-1 communities.

No plant species listed as Special Concern per COSSARO or COSEWIC, S1–S3 species, or potentially sensitive species (Coefficient of Conservatism of 8-10) were observed on the Subject Lands.

Invasive Species

Invasive plants are those that can become (or presently are) a serious problem within a defined location. These plants reproduce and spread aggressively, reducing the local biodiversity and threatening ecological function. Depending on existing conditions, some invasive species can outcompete all other species in the vicinity.

In 2025, the Society for Ecological Restoration Ontario (SERO) provided an updated categorical ranking system for plants known to be invasive in southern Ontario. Consistent with the previous ranking system, the SERO ranking system identifies Category 1 plants as priority invasives because they exclude most other species and can dominate a site indefinitely due to their effective reproduction and dispersal mechanisms; however, the 2025 SERO ranking system has revised rankings for several species previously considered Category 1. On the Subject Lands, five Category 1 plants were observed:

- Garlic Mustard (*Alliaria petiolata*);
- European Buckthorn (*Rhamnus cathartica*);
- White Mulberry (*Morus alba*);
- Norway Maple (*Acer platanoides*); and
- Reed Canary Grass (*Phalaris arundinacea*).

3.1.1.2. Anthropogenic Structure Screening

There are several SAR and Species of Conservation Concern that may utilize anthropogenic structures to support various life stages. For example, these structures can provide maternity roosting habitat for Little Brown Myotis (*Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*), Eastern Small-footed Myotis (*Myotis leibii*) and Tri-colored Bat (*Perimyotis subflavus*) and/or provide nesting habitat for Barn Swallows and Chimney Swifts. Structures with access below the frostline can also provide snake hibernacula.

Based on preliminary field observations and aerial imagery, all structures present within the Phase 1 Local SWS Study Area were assessed for their potential suitability for SAR bat roosting habitat, Chimney Swift habitat, snake hibernacula SWH, and Barn Swallow nesting habitat (Habitat of Species of Special Concern SWH). Based on this assessment, several structures on the Subject Lands were identified for further investigation. The results of these investigations are as follows:

- Three anthropogenic structures on the Subject Lands were identified with the potential to support SAR bat roosting habitat (**Figure 5a, Appendix A**). Bat exit surveys are recommended prior to structure removal and should be completed in June the year prior to proposed structure removal;
- No structures were identified as having potentially suitable Chimney Swift habitat;
- One area with the potential to support snake hibernacula habitat was identified on the Subject Lands. This area was screened during targeted snake surveys which are summarized below within **Section 3.1.1.6**. No snakes were observed; and
- Three structures on the Subject Lands were identified as potentially suitable for Barn Swallows. The locations of these barns are shown on **Figure 5a (Appendix A)**. Barn Swallow structure surveys were performed within the active breeding bird window by GEI and are discussed in **Section 3.1.1.3**, below.

3.1.1.3. Breeding Bird Studies and Winter Raptor Surveys

A raptor survey was conducted on February 8, 2024, within the golf courses, cultural meadows, hayfields, and fallow lands within the participating boundaries of the Phase 1 Local SWS Study Area. Row crop fields on agricultural lands outside the SWS Study Area were also surveyed from the roadsides of Bramalea and Torbram Roads by stopping at each land parcel and scanning in all directions for perched and flying raptors. No suitable winter raptor habitat was identified on the Subject Lands.

Two rounds of breeding bird studies were conducted at four stations (BBS12, BBS13, BBS14, and BBS15) on the Subject Lands as part of the Phase 1 Local SWS field program (**Figure 5a, Appendix A**). As described in the Phase 1 Local SWS, no suitable grassland breeding bird habitat was identified within the Local SWS Study Area; therefore, a third round of breeding bird studies was not completed.

The following species of interest were identified on the Subject Lands as a result of the Phase 1 Local SWS field program:

- Bobolink - Threatened per Schedule 1 of SARA and COSSARO, Special Concern per COSEWIC: This species was recorded at BBS14 and BBS15 during the first round of breeding bird surveys. This species was not recorded again during second round. No suitable breeding habitat was identified within the Subject Lands as this property consists of longstanding, actively managed row crop agricultural fields (e.g., corn, soy); and
- Eastern Meadowlark - Threatened per Schedule 1 of SARA, COSEWIC, and COSSARO: This species was recorded at BBS14 and BBS15 during round 1 surveys. The Subject Lands consist of longstanding, actively managed row crop agricultural fields that do not provide suitable breeding habitat.

One additional locally rare species (L1-L3) was documented within the Subject Lands: Horned Lark (*Eremophila alpestris*; L3) - located at BBS13 and BBS14.

Through the Phase 1 Local SWS, three structures on the Subject Lands were identified for additional surveys targeting Barn Swallows (**Figure 5a, Appendix A**). No evidence of breeding Barn Swallow activity was noted at the westernmost structure on the Subject Lands. The remaining two structures were only able to be screened externally, and while no evidence of Barn Swallows was observed during exterior surveys, these structures are recommended to undergo additional screening prior to removal. If Barn Swallows are observed to be using these structures for breeding, removal is recommended to occur outside the active breeding bird window, which occurs from the beginning of April to the end of August.

Full results recorded at the four on-site breeding bird stations are provided in the Phase 1 Local SWS.

3.1.1.4. Amphibian Call Count Surveys

Two amphibian call count stations were surveyed on the Subject Lands as part of the Phase 1 Local SWS: AMC19 and AMC21 (**Figure 5a, Appendix A**). Egg mass visual sweeps were also undertaken in shallow and accessible wetlands where amphibian calling surveys were completed. Suitable salamander habitat was not identified within the participating properties of the SWS Study Area through habitat screening exercises, including evaluation of characteristics such as unsuitable hydroperiod, permanent features that support predatory fish habitat, turbid conditions, and incidental egg mass surveys completed as part of HDFA and turtle basking as needed for each feature. Given that suitable salamander habitat was not identified, amphibian survey protocol emphasized call counts to target frog and toad species, with incidental observations noting where amphibian breeding evidence was documented (e.g., adult observations, observations of tadpoles), rather than egg mass surveys for salamander species. This provided an appropriate characterization of the SWS Study Area's amphibian habitat for participating properties.

The following results were observed at AMC stations on the Subject Lands:

- AMC19:
 - Dry during round 1 surveys, no further surveys conducted at this station.
- AMC21:
 - 1 American Toad was heard calling during round 1 surveys;
 - No amphibians were observed during round 2 surveys; and
 - 1 Gray Treefrog was heard calling during round 3 surveys.

Both observed amphibians are common and secure and/or apparently common and secure species (S5 or S4).

3.1.1.5. Turtle Surveys

No suitable turtle basking habitat was identified on the Subject Lands as part of the Phase 1 Local SWS; therefore, turtle basking survey efforts were concentrated in other portions of the Phase 1 Local SWS Study Area. In addition, the Subject Lands did not appear to provide high quality turtle nesting habitat that would result in successful nesting activities (e.g., the Subject Lands are primarily actively managed agricultural fields).

3.1.1.6. Snake Surveys

One visual encounter survey location was identified on the Subject Lands during the structure screening near a barn with an older foundation (AS2; **Figure 5a, Appendix A**). This survey type was also completed incidentally during other survey efforts.

No snakes were observed during any of the targeted field visits.

3.1.1.7. Bat Surveys

The presence of snags is considered an indicator of high-quality bat maternity roost habitat, and snag surveys are required as the first step in confirming presence of bat maternity colony SWH (as per the PPS). Snags may also indicate the presence of high-quality SAR bat habitat. Therefore, bat habitat assessments are used to determine whether identified features should be considered candidate SWH, or if the habitat provides conditions favourable for SAR bats.

As described within the Phase 1 Local SWS, the majority of treed features within the Local SWS Study Area are contained within the Greenbelt Plan Area. The forested ecosites within the Greenbelt Plan Area are assumed to provide suitable habitat for both bat maternity SWH and SAR bat habitat due to their classification as forest ELC communities (e.g., CUW, FOD, SWD) and their connectivity within the landscape.

All treed vegetation communities outside of the Greenbelt Plan Area were assessed in the field for the presence of bat habitat, including all hedgerows. Candidate snag trees were observed on the Subject Lands and are shown on **Figure 5a (Appendix A)**. An evaluation was then completed as part of the Local SWS to assess which surveyed areas met density requirements for bat maternity colony SWH. No surveyed areas on the Subject Lands met the density requirements to be considered bat maternity colony SWH.

Despite the absence of bat maternity colony SWH within the Subject Lands, the presence of snags could also indicate suitable SAR bat habitat on site; therefore, acoustic monitoring was also conducted as part of the Phase 1 Local SWS. Two bat acoustic recorders were deployed on the Subject Lands: MTLOG-C and MTLOG-D (**Figure 5a, Appendix A**). At MTLOG-C, two recordings with *Myotis* characteristics were detected; however, no identifiable recordings of SAR bats were detected at this station. At MTLOG-D, 22 recordings of Eastern Small-footed *Myotis* (Endangered on the Protected Species in Ontario List) and 7 recordings of Little Brown Bat (Endangered on the Protected Species in Ontario List) were detected. These are relatively low call abundances at both stations, and while numbers of calls recorded do not necessarily correspond to numbers of individuals, it can be assumed the overall abundance of each species is low given that these calls were recorded over ten consecutive evenings.

3.1.1.8. Monarch Surveys

There are two types of SWH that include Monarch butterflies: Migratory Butterfly Stopover Areas (requiring features to be within 5 km of Lake Ontario / Lake Erie and to have a minimum of 10 ha of suitable ecosites) and Habitat for Species of Conservation Concern. As the SWS Study Area is not within 5 km of Lake Ontario or Lake Erie, only the assessment of Habitat for Species of Conservation Concern Significant Wildlife Habitat (SWH) was triggered through Monarch's status of Special Concern per COSSARO.

There are no standard protocols for determining Monarch SWH; however, GEI has completed targeted surveys for previous projects that focus on aligning timing with Journey North (1997 - 2025; a website that works with citizen science efforts to track the migration of wildlife), assessing milkweed patch size, and surveying for all stages of the Monarch lifecycle. The goal is to identify the highest quality habitat for consideration for provincial significance. Monarch timing is variable depending on the conditions of each year, though Monarchs typically reach Canada in late May or early June, and may extend from August to early November before flying south (COSEWIC 2018).

Monarch surveys on the Subject Lands included reviewing natural / naturalized ELC communities for high densities of Milkweed (*Asclepias* spp.), as well as three rounds of targeted visual surveys in areas found to have high Milkweed abundance on July 31, August 21, and September 12, 2024.

As previous commentary on the Phase 1 SWS expressed concerns with the September survey date, peak migration entries and Monarch observations recorded close to the Subject Lands from September to October have been summarized from Journey North below:

- Toronto – September 14, 2024: Small migration number, observed to be the first of the season;
- Goderich – September 14, 2024: Large migration number, likely flying towards Lake Erie;
- Rockwood – September 15, 2024: Three adult sighting;
- Georgetown – September 15, 2024: Adult sighting;
- Ajax – September 19, 2024: Moderate migration number, observed closer to Lake Ontario;
- Georgetown – September 21, 2024: Adult sighting;
- New Tecumseth – September 27, 2024: Adult sighting;
- Whitchurch-Stouffville – September 28, 2024: Adult sighting;

- Toronto – September 28, 2024: Moderate number, observed closer to Lake Ontario;
- New Tecumseth – September 30, 2024: Adult sighting;
- Kitchener – October 6, 2024: Adult sighting;
- Whitchurch-Stouffville – October 10, 2024: Adult sighting; and
- Newmarket – October 20, 2024: Adult sighting.

Given that suitable survey windows may change based on the conditions of a given year, the survey date of September 12, 2024, is considered to be suitable based on the fall observations detailed above.

Milkweed was observed on the Subject Lands along the western watercourse. Two areas on site were identified as having concentrations of Milkweed high enough to potentially provide suitable Monarch breeding habitat: one patch associated with the existing farm (P4-1) and one patch associated with the western NHS block (P4-2, **Figure 5a, Appendix A**).

A total of nine Monarch butterfly observations were noted on the Subject Lands. Of these nine observations, eight consisted of direct breeding evidence (egg or caterpillar). The other observation was associated with an adult Monarch butterfly. Patch P4-2 (within the western NHS) was found to support significant Monarch breeding habitat due to its location within a suitable vegetation community combined with a high number of total breeding observations (i.e., breeding evidence averaged at 1.66 breeding observations / round or greater). Patch P4-1 was found to support general breeding habitat.

3.1.2. Aquatic Habitats

3.1.2.1. Headwater Drainage Feature Assessment

Two Headwater Drainage Features (HDFs) consisting of seven reaches were identified on the Subject Lands as part of the Phase 1 Local SWS fieldwork (**Figure 5b, Appendix A**):

- H18:
 - H18-S1;
 - H18A-S1; and
 - H18A1-S1.
- H19:
 - H19-S1;
 - H19A-S1;
 - H19E-S1; and
 - H19-S2.

In the Phase 1 Local SWS, HDFs H18 and H19 were both characterized as erosional swales across active agricultural fields. These features displayed a complete lack of riparian or terrestrial vegetation and were dry or holding standing water at the time of the Round 2 assessment. HDFs H18 and 19 were also both non-navigable by fish and identified as contributing fish habitat.

In response to comments received from TRCA on the Phase 1 and Phase 2 Local Subwatershed Studies (March 11 and March 24, 2025 (Phase 1) and May 21, 2025 (Phase 2)), GEI provided a supplementary photolog to TRCA on June 11, 2025 to highlight rationale for the redesignation of watercourses to HDFs. On July 10, 2025, email correspondence with TRCA confirmed that the local subwatershed study's differentiation between HDFs and regulated watercourses was supported.

While TRCA's currently available regulatory mapping does not reflect these HDFs, a formal request for the mapping to be revised was submitted by GEI May 1, 2026 (**Appendix C**). It is anticipated that future iterations of TRCA regulatory mapping would incorporate the characterization outlined in the local SWS and reiterated in this report.

The resulting HDFA management recommendations are discussed below based on the preliminary field results available to date. Management recommendations for all HDFs evaluated as part of the Phase 1 Local SWS were decided upon utilizing Part Three of the HDFA Guidelines (CVC and TRCA 2014) and based on GEI's technical experience with similar features (e.g., agriculturally influenced drainage features).

Management Recommendations

Part 2 of the HDFA Guidelines provides an approach to classify HDFs by providing a step-by-step characterization of specific functions that may be associated with the features assessed, including hydrology, riparian function and provision of fish or terrestrial habitat.

Part 3 of the HDFA Guidelines provides guidance on linking the characteristics and functions of features to specific management recommendations that may be applied to those features. To assist, the HDFA Guidelines include Figure 2: "Flowing Chart Providing Direction on Management Options". The flow chart depicts various decision points associated with hydrology, fish habitat, riparian vegetation and terrestrial habitat, and ultimately leads the user to an appropriate management recommendation for each HDF segment. Management recommendations can include the following:

- Protection;
- Conservation;
- Mitigation;
- Maintain Recharge;
- Maintain/Replicate Terrestrial Linkage; or
- No Management Required.

The flow chart was used to determine the management recommendation for the HDFs within the Phase 1 Local SWS Study Area. Within the Subject Lands, all HDFs were identified as mitigation, which corresponds to the following management recommendations:

- Replicate or enhance functions through enhanced lot level conveyance measures, such as well-vegetated swales (herbaceous, shrub and tree material) to mimic online wet vegetation pockets or replicate through constructed wetland features connected to downstream;
- Replicate on-site flow and outlet flows at the top end of system to maintain feature functions with vegetated swales, bioswales etc. If catchment drainage has been previously removed due to diversion of stormwater flows, restore lost functions through enhanced lot level controls (i.e., restore original catchment using clean roof drainage); and
- Replication functions by lot level conveyance measures (e.g. vegetated swales) connected to the NHS, as feasible and/or Low Impact Development (LID) stormwater options.

3.1.2.2. Fish Community Sampling

As part of the Phase 1 Local SWS, spring fish community sampling was completed within all HDFs to determine if any of these features were providing seasonal fish habitat to the local fish community. No fish were collected within these drainage features on the Subject Lands.

During summer fish community sampling, electrofishing was completed within intermittent and permanent watercourses in the Phase 1 Local SWS Study Area. This sampling was limited to watercourses not identified as occupied Redside Dace Habitat; therefore, WHT4(3)3-1 on the eastern side of the Subject Lands was not sampled.

Electrofishing was completed within WHT4(3)4-2 (the western watercourse) on the Subject Lands. At the time of sampling water levels were low within this feature, and several areas had < 5 cm water depth. No fish were caught within WHT4(3)4-2. Offsite to the south, the western watercourse was identified as occupied Redside dace habitat (within WHT4(3)4-1) and therefore was not fished.

Figure 5b, Appendix A, shows the areas that were electrofished within the Subject Lands.

3.1.2.3. Aquatic Habitat Assessment

The SWS Study Area is located within the West Humber River subwatershed. The subwatershed is 20,362 ha in size and represents 22.6% of the entire Humber River watershed. The Humber River Watershed Characterization Report (TRCA 2023) notes the West Humber subwatershed to be in ‘fair’ condition, with significant urbanization occurring within the southern end of the subwatershed. The West Humber River is also noted as having the most intermittent watercourses within the Humber River watershed.

An AHA of the SWS Study Area was completed on August 28, 2024. The AHA generally focused on permanent watercourses within the Study Area and consisted of a visual survey of existing in-stream and riparian habitat conditions along and adjacent to the watercourses. Watercourses on the Subject Lands include:

- WHT4(3)3-1;
- WHT4(3)4-2; and
- WHT4(3)4-3.

Watercourse mapping is depicted on **Figure 5b, Appendix A**.

WHT4(3)4-3 crosses into the western half of the Subject Lands from beneath Old School Road. This reach of watercourse is piped and buried, daylighting at the upstream limit of reach WHT4(3)4-2. No direct fish habitat is present within this reach.

WHT4(3)4-2 is characterized as a narrow drainage swale contained within an approximately 30 m wide corridor of cultural meadow and meadow marsh communities. This reach is ephemeral in nature, conveying flow from seasonal melt and rain-based events. Channel conditions are relatively flat but display moderate sinuosity. Channel substrates consist primarily of finer based sediments, with a general lack of coarse material such as gravel or cobble. The reach provides contributing fish habitat to occupied reaches downstream as no fish were captured during fish community sampling efforts nor were incidentally recorded during targeted ecological investigations.

WHT4(3)3-1 is a permanently flowing reach contained within a healthy riparian corridor along the eastern half of the Subject Lands. This reach is located within the Greenbelt Plan Area. The riparian community consists of mature plantation interspersed with wetland and cultural meadow. The channel is well defined, with a wetted width ranging from 0.5 - 1.6 m. Channel substrates range from silt and clay to gravel and cobble dominant, depending upon the area. Instream habitat is provided by overhanging vegetation and eroded banks. Channel flows are conveyed through a degraded corrugated steel pipe (CSP) beneath a driveway crossing offsite. The damage to the culvert and the surrounding concrete debris within the channel represent a potential barrier to fish passage. Downstream of the driveway crossing, the channel becomes very linear, indicating potential of historical channelization. WHT4(3)3-1 is identified as occupied Redside Dace habitat and provides direct fish habitat to cool-warmwater fish species.

3.2. Tree Inventory and Arborist Report

GEI completed a tree inventory of the Subject Lands on May 31st and June 4th, 2024, and March 13th, 2025, using the accepted standard arboricultural techniques as outlined in the Council of Tree & Landscape Appraisers' Guide for Plant Appraisal (2020), as well as Town of Caledon's Landscape Guidelines (2025a). This did not include an inventory of trees within the Greenbelt Plan Area as it was assumed that no development or alteration will occur within 30 m of KNHF and KHF's (in accordance with the Greenbelt Plan), apart from SWM outlets.

Per the arborist report (under separate cover), 459 trees were inventoried within the Subject Lands. Based on the results of the tree impact analysis, construction activities within the Development Area would lead to the removal of 339 trees (including 43 dead trees) and the injury of 17 trees. The remaining 103 trees are not anticipated to be impacted by the proposed work, provided appropriate tree preservation measures are employed, and are recommended to be preserved. Of the 339 trees to be removed, 287 would currently require compensation based on the Town of Caledon *Landscape Guidelines* (2025a). Accordingly, 806 replacement trees are proposed to be planted as compensation for the recommended removal of non-exempted trees to facilitate the project or, alternatively, cash-in-lieu as determined by the Town of Caledon.

Please refer to the arborist report (GEI 2026), under separate cover, for recommendations regarding tree protection and preservation, and tree mitigation techniques.

3.3. Wetland Water Balance Risk Evaluation

As part of the Phase 2 Local SWS, a wetland water balance risk evaluation (TRCA 2017) was completed for retained wetlands within the entire SWS Study Area to compare pre-development conditions with post-development conditions without mitigation. This risk assessment was completed in accordance with the TRCA's *Wetland Water Balance Risk Evaluation* (2017) guidelines. This included delineation of existing conditions wetland catchment areas and proposed conditions wetland catchment areas by SCS, as well as an evaluation of the expected amount of imperviousness proposed to be introduced within each wetland catchment area. The ecological sensitivity of each wetland was then assessed by GEI ecological staff based on available field and background data presented within the Phase 1 Report (GEI and SCS, 2025). Where there was incomplete ecological data due to site access, the precautionary principle was applied, and the wetland sensitivity was assessed as high. The risk level for each wetland (low, medium, high) was then assessed based on the potential magnitude of hydrological change and sensitivity of each wetland.

Table 3-1, below, summarizes the risk evaluation parameters determined through the Phase 2 SWS for the Reed-Canary Grass Mineral Meadow Marsh (MAM2-2) located along the western tributary (**Figure 4, Appendix A**) which is proposed to be retained on the Subject Lands.

Table 3-1. Summary of Wetland Water Balance Risk Assessment Parameters for the MAM2-2 along the Western Tributary

Pre-Development Wetland Catchment Size (ha)	Post-Development Wetland Catchment Size (ha)	Proportion of Impervious Cover to be Introduced within the Wetland's Catchment (%)	Magnitude of Hydrological Change	Ecological Sensitivity	Overall Risk Assessment
102.73	100.86	11	High	High	High

An additional retained MAM2-2 wetland is present within the Greenbelt Plan Area along the eastern tributary. While the water balance of this particular MAM2-2 feature was not addressed as part of the Phase 2 SWS, this exercise is proposed to be completed as part of future SWS submissions, such as the consolidated MESP/SWS submission referenced in **Section 1.1**.

In addition, during future EIS submissions, a comprehensive wetland water balance is recommended to be completed for impacted wetlands to confirm the appropriate mitigative measures. During that time, phasing opportunities to reduce impacts on the hydrology of retained wetlands are recommended to be explored.

3.4. Significance and Sensitivity Summary

Analysis of the significance and sensitivity of existing natural heritage features was completed as part of the Phase 1 Local SWS to determine whether candidate or confirmed natural heritage features were present within the Local SWS Study Area. Evaluation was completed in accordance with NHRM (MNR 2010), the Greenbelt Plan (2017), Future Caledon OP (2025), Peel Region's OP (2022) and TRCA O. Reg. 41/24 policies.

The following provides a preliminary summary of the natural heritage features identified within or adjacent to the Subject Lands through the Phase 1 Local SWS. Additional information can be found in the Phase 1 Local SWS report.

3.4.1. Provincially Significant Features

Provincially significant features were assessed based on the NHRM and Greenbelt Plan. Per the NHRM, provincially significant features on the Subject Lands include:

- Candidate Provincially Significant Wetlands (PSWs) – Identified within the Greenbelt Plan Area / eastern NHS block;
- Significant Woodlands – Identified within the Greenbelt Plan Area / eastern NHS block;
- Significant Valleylands – Associated with the Greenbelt Plan Area / eastern NHS block;

- Candidate SWH – Identified within the Greenbelt Plan Area / nearby non-participating properties:
 - Raptor Wintering Areas;
 - Bat Maternity Colonies;
 - Turtle Wintering Areas;
 - Colonially-Nesting Bird Breeding Habitat (Tree and Shrub);
 - Waterfowl Nesting Areas;
 - Bald Eagle and Osprey Nesting, Foraging and Perching Habitat;
 - Turtle Nesting Areas;
 - Seeps and Springs;
 - Amphibian Breeding Habitat (wetland and woodland);
 - Marsh Bird Breeding Habitat;
 - Terrestrial Crayfish;
 - Habitat of Special Concern and Rare Wildlife Species:
 - Barn Swallow;
 - Eastern Wood Pewee;
 - Wood Thrush;
 - Common Nighthawk;
 - Golden-winged Warbler;
 - Grasshopper Sparrow;
 - Ruddy Duck;
 - Eastern Musk Turtle;
 - Northern Map Turtle;
 - Snapping Turtle; and
 - Black Dash.
 - Amphibian Movement Corridors.
- Confirmed SWH:
 - Habitat of Special Concern and Rare Wildlife Species:
 - Monarch Butterfly (see **Section 3.1.1.8**).
- Habitat for Endangered and Threatened Species:
 - Redside Dace – The eastern tributary on the Subject Lands is occupied Redside Dace habitat, all other drainage features on site are contributing Redside Dace habitat; and

- SAR bats – Several potentially suitable snag trees and anthropogenic structures were observed on the Subject Lands alongside low abundances of SAR bat acoustic recordings. Consequently, bat exit surveys are recommended to be completed on site prior to identified structure removals. It is also likely that treed communities within the Greenbelt Plan Area support SAR and non-SAR bat species. Greenbelt Plan Areas are not expected to be impacted as part of the proposed development.
- Fish Habitat – Both tributaries of the West Humber River are assumed to provide direct fish habitat; all headwater drainage features provide indirect (contributing) fish habitat.

As part of the Phase 1 Local SWS, Greenbelt Plan Areas within the Local SWS Study Area were reviewed to understand whether these areas contained portions of Greenbelt NHS. As described in the Greenbelt Plan, the Greenbelt NHS is comprised of Key Natural Heritage Features (KNHF) and Key Hydrologic Features (KHF). KNHFs and KHFs present on the Subject Lands align with the provincially significant features listed above, with the addition of the following:

- Wetlands (KNHF and KHF) – In addition to the Candidate PSWs within the Greenbelt Plan Areas described above, other wetlands outside of the Greenbelt Plan Area were reviewed on the Subject Lands and were determined to be non-significant (referred to in OWES as “unevaluated”). These are associated with the western NHS block; and
- Permanent and intermittent streams (KHF) – The western watercourse on the Subject Lands is considered a medium constraint watercourse and is an intermittent stream. The eastern watercourse is a permanent stream.

3.4.2. Regionally Significant Features

Regionally significant features were assessed based on the Peel Region OP and consist of Core Areas, Natural Areas and Corridors (NACs), and Potential Natural Areas and Corridors (PNACs). Regionally significant features present on the Subject Lands include:

Core Areas:

- PSWs – Associated with wetlands within the Greenbelt Plan Area (i.e., wetlands within the eastern NHS block on the Subject Lands);
- Significant woodlands – Associated with woodlands in the Greenbelt Plan Area (i.e., woodlands within the eastern NHS block on the Subject Lands); and
- Valley and Stream Corridors – Associated with both tributaries of the West Humber River on site.

NACs:

- Non-significant (“unevaluated”) wetlands - All wetlands outside of the Greenbelt Plan Area (i.e., wetlands within the western NHS block on the Subject Lands);
- Non-significant woodlands – the woodland units outside of the Greenbelt Plan Area (i.e., woodlands within the western NHS block on the Subject Lands);

- SWH – Candidate SWH associated with the Greenbelt NHS was identified on the Subject Lands as well as confirmed SWH for Monarch butterfly along the western watercourse (see summary of SWH in provincially significant features above);
- Fish habitat – Direct fish habitat was identified within both watercourses on site and indirect fish habitat was identified in all other drainage features;
- Habitat for aquatic SAR – Occupied and contributing Redside Dace habitat is present on the Subject Lands (see summary of provincially significant features above); and
- Habitat for endangered and threatened species – Habitat for Redside Dace and candidate habitat for SAR Bats is present on the Subject Lands (see summary of provincially significant features above).

No PNACs were identified on the Subject Lands.

3.4.3. Locally Significant Features

Locally significant features were assessed based on the Future Caledon OP. Per Section 13.2.1 of the Future Caledon OP, the Town's Natural Environment System is a comprehensive NHS and water resource system consisting of Natural Features and Areas and Supporting Features and Areas. Applicable Natural Features and Areas and Supporting Features and Areas on the Subject Lands include:

- Natural Features and Areas:
 - PSWs – Candidate PSWs are associated with wetlands in the Greenbelt Plan Area / eastern NHS block;
 - Significant woodlands – Associated with woodlands in the Greenbelt Plan Area / eastern NHS block; and
 - Valley and Stream Corridors – Associated with both watercourses on the Subject Lands.
- Supporting Features and Areas:
 - Non-significant wetlands – All wetlands outside of the Greenbelt Plan Area / eastern NHS block;
 - SWH - Candidate SWH was identified within the Greenbelt Plan Area / eastern NHS block on the Subject Lands. Confirmed SWH for Monarch butterfly was identified along the western watercourse on the Subject Lands;
 - Fish habitat - Direct and indirect (see summary of provincially significant features in **Section 3.4.1**);
 - Habitat for aquatic SAR – Redside Dace (see summary of provincially significant features in **Section 3.4.1**); and
 - Habitat for endangered and threatened species – Redside Dace and candidate SAR bat habitat (see summary of provincially significant features in **Section 3.4.1**).

Enhancement areas and linkages are also considered Supporting Features and Areas in the Future Caledon OP. Linkages and enhancement areas are discussed further in the Phase 2 SWS and these components will be addressed, as applicable, in future submissions of the EIS.

3.4.4. Greenbelt Plan Area

As identified in **Sections 3.4.1-3.4.3**, above, several provincial, regional, and local natural heritage features were determined to be associated with the Greenbelt Plan Area on the Subject Lands. The Greenbelt NHS is comprised of KNHFs and KHFS, with the following identified on or adjacent to the Subject Lands:

- KNHFS:
 - PSWs;
 - Habitat for endangered and threatened species (Redside Dace, Candidate SAR Bat habitat);
 - Fish habitat;
 - Significant valleylands;
 - Significant woodlands; and
 - Candidate and confirmed SWH (see summary above).
- KHFS:
 - Permanent streams; and
 - Wetlands.

All KNHFs and KHFS are associated with the eastern tributary and are located within the Greenbelt Plan Area.

3.4.5. Natural Hazards

In addition to the significant features outlined above, the following natural hazards were identified within or adjacent the Subject Lands:

- Wetland hazards – associated with all wetlands on the Subject Lands;
- Flood hazards – associated with both tributaries of the Humber River on the Subject Lands;
- Erosion hazards – associated with the unconfined valleyland along the eastern tributary of the West Humber River on site. The meander belt delineates the hazard limit in this location; and
- Slope stability hazards – associated with the confined valleyland along the western tributary of the West Humber River on site. The greater of the long-term stable top of slope and the staked top of bank defines the hazard limit in this location.

Natural heritage and hazard features identified on and/or adjacent to the Subject Lands are shown on **Figure 6 (Appendix A)**. In 2025 SCS refined TRCA's floodline to incorporate additional site-specific considerations regarding hydraulic conditions. The refined linework was largely consistent with TRCA's floodline. Note that significant wildlife habitat is not depicted on **Figure 6 (Appendix A)** as all SWH on the Subject Lands was identified to be within the Greenbelt Plan Area and/or non-participating properties (where no development or alteration is proposed) aside from Monarch butterfly SWH described in **Section 3.1.1.8**. In addition, 30 m setbacks from candidate PSWs within the Greenbelt Plan Areas are anticipated to adequately buffer any SWH that may be present.

4. Proposed Development

The proposed development is primarily low-density residential with one retail/mixed use block in the northwest corner; a single, centrally located public elementary block; seven parkette/open space/walkway blocks; and one SWM pond block along the western watercourse. In addition, two areas of NHS are planned on the Subject Lands coinciding with the two tributaries of the West Humber River. There is also one watercourse crossing proposed along the western tributary of the West Humber River. See **Figure 3 (Appendix A)** for the proposed concept plan. This concept plan and the associated NHS boundaries align with the NHS outlined in the Phase 2 Local SWS and the Mayfield Tullamore Community Structure and Land Use figure (Schedule H40a, April 2026).

The proposed watercourse crossing and all SWM outfalls will follow MNRF's Guidance for Development Activities in Redside Dace Protected Habitat (2016). The watercourse crossing will also consider TRCA's Crossing Guidelines for Valley and Stream Corridors (TRCA 2015) as applicable, in accordance with the Phase 2 Local SWS recommendations.

Per discussions with the Town in February 2026, a major landscape linkage is present along the Greenbelt NHS corridor. As previously outlined in **Section 2.1.1.1**, this linkage requires a vegetated width of 100 m along the Greenbelt NHS, and a 30 m wide PLZ added to the edge of the 100 m vegetated section. The SABE Scoped SWS identifies that PLZs should be maintained with at least 30% natural vegetation, and that the remaining 70% of the PLZ can be comprised of compatible uses, such as parks, Stormwater Management ponds, trails, etc.; this requirement has been achieved on site as 100% of the PLZ area on the Subject Lands is proposed to be comprised of natural vegetation. The PLZ area on site is depicted in **Figure 3 (Appendix A)**.

Additional details on the proposed hydrogeological strategy, watercourse crossing, and SWM strategy will be provided in subsequent EIS submissions.

4.1. Feature Setbacks

The Phase 1 SWS recommends the following setbacks from natural heritage features applicable to the Subject Lands:

- In accordance with Section 3.2.5.1 of the Greenbelt Plan (2017), wetlands, seepage areas and springs, fish habitat, permanent and intermittent streams, lakes and significant woodlands will have a minimum of a 30 m VPZ applied;
- Valleylands and other features/hazards located outside of the Greenbelt Plan Area will have the following minimum VPZs and setbacks:
 - 30 m from PSWs or 10 m from non-significant wetlands (using the staked wetland boundary);
 - 10 m from non-significant woodlands (using the staked dripline boundary) or 20 m from significant woodlands (using the staked dripline boundary);

- 15 m from significant valleylands or 10 m from non-significant valleylands (using the greater of long-term stable top of slope or staked top of bank boundary for confined systems; or the greater of meander belt or floodline boundary for unconfined systems);
- 15 m from warmwater baitfish habitat (medium constraint watercourses) or 30 m from cool/cold water fish habitat (high constraint watercourses); and
- 30 m from the meander belt width of occupied Redside Dace watercourses.

When prescribing the recommended NHS limits within the local SWS reporting, the greatest constraint and its VPZ guided the recommended limit. Small portions of feature encroachment are proposed on the Subject Lands along the Western NHS Block, as discussed in **Section 4.2**, below.

4.2. Western NHS Block (CUP3-14 Removal)

The proposed development and crossing of the western NHS block will require removal of approximately 0.25 ha of non-significant woodland (Norway Spruce Cultural Plantation; CUP3-14; **Figure 6, Appendix A**). The portion of woodland that is proposed for removal is a culturally influenced monoculture of introduced Norway Spruce and is primarily surrounded by agricultural and residential use. Compensation for this removal has already been contemplated as part of the Phase 2 SWS and is currently proposed to occur within the Greenbelt Plan Area on the Subject Lands (see **Figure 3, Appendix A**). Alternative watercourse crossing structures/design will be considered as part of the MESP/Local SWS submission.

As previously mentioned, the NES limits proposed within the Subject Lands (shown on **Figure 6, Appendix A**), including proposed CUP3-14 removal, reflect the policies outlined in the council approved through the Mayfield Tullamore Secondary Plan and recommendations provided in the Phase 2 Local SWS report. Per Section 40.13.2 of the Mayfield Tullamore Secondary Plan, “Grading may be permitted within buffers, as long as it can be demonstrated that there will be no negative impacts on environmental features, to the satisfaction of the Town and Toronto and Region Conservation Authority.” The detailed impact assessment provided in future EIS reporting will review potential mitigative and restorative measures to prevent adverse impacts to the retained portions of the non-significant woodland. The EIS will also confirm whether a 10 m VPZ is sufficient to protect the retained portion of the non-significant woodland feature from potential impacts, in alignment with the Phase 1 SWS VPZ recommendations (**Section 4.1**).

5. Conclusions and Next Steps

This 2nd Submission EIS has been developed as part of the draft plan of subdivision process for the proposed development of the property located southeast of the intersection of Bramalea Road and Old School Road in Caledon, Ontario. This report provides a characterization of the natural features on Subject Lands and their significance based on the detailed surveys completed through the Phase 1 Local SWS (version 2 submitted February 2025) and reporting provided in the Phase 2 Local SWS (version 1 submitted April 2025).

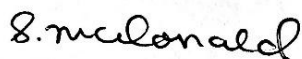
General next steps are summarized below:

- Complete an assessment of impacts on natural features and their associated functions in relation to the PPS, related guidance documents, the Caledon OP and provide mitigative measures and conceptual restoration design etc. as part of future EIS submissions;
- Consult with agencies as required (e.g., regarding Redside Dace and SAR bat habitat), and assess any additional permitting requirements for detailed design (i.e. TRCA and DFO permits; registration under the SCA);
- Provide an overview of invasive species management recommendations. Detailed design would include invasive species mapping within retained features closer to construction to evaluate the presence and extent of Category 1 invasive species. Following the completion of the invasive species mapping, an invasive species management plan may be recommended;
- Restoration and enhancement opportunities were also explored as part of the Phase 2 Local SWS. These will be summarized, and site-specific restoration and enhancement recommendations will be provided, as part of future EIS submissions;
- Detailed design will require complete landscape design plans in accordance with NHS Design Brief. Landscape design plans are to be prepared by a Landscape Architect in good standing with the OALA;
- Preliminary monitoring recommendations, in alignment with the recommendations of the local SWS, will be provided in future submissions of this EIS. A Monitoring Plan that will complement the conceptual restoration design and address invasive species management recommendations, will be prepared as part of detailed design. Within the Monitoring Plan, mapping will be provided to demonstrate where the monitoring stations will be located within both created and retained features; and
- During future EIS submissions a comprehensive wetland water balance is recommended to be completed for impacted wetlands to confirm the appropriate mitigative measures. During that time, it is recommended that phasing opportunities to reduce impacts on the hydrology of wetlands be explored.

If you have any questions about the information presented in this 2nd Submission EIS, please feel free to contact the undersigned.

Sincerely,

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cc: Shelley Lohnes, Vice President, Senior Ecologist, Project Director

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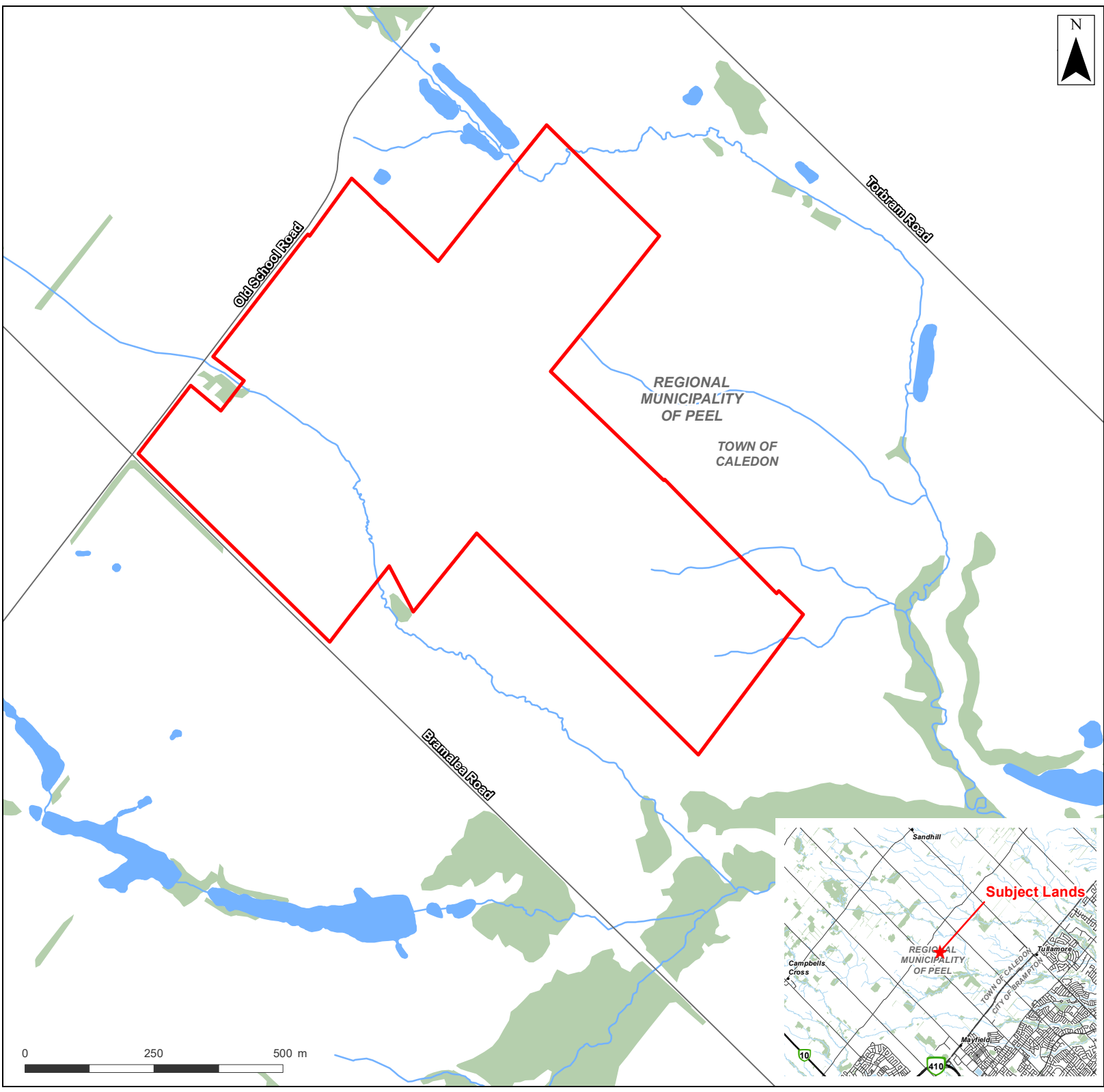
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Appendix A Figures



- Subject Lands
- Road
- Watercourse
- Waterbody
- Wooded Area
- Municipal Boundary, Lower/Single Tier
- Municipal Boundary, Upper Tier

Reference(s):

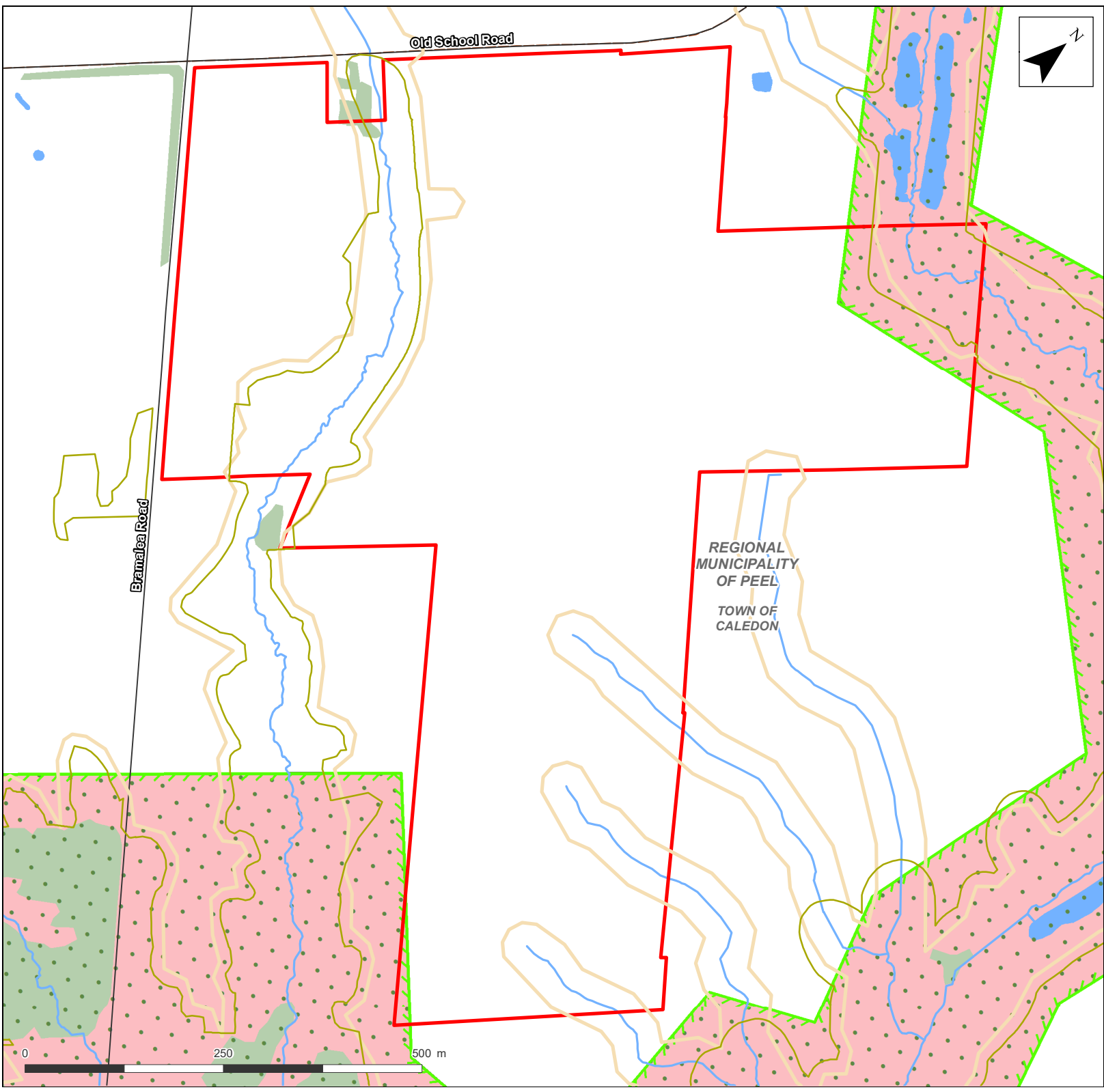
1. Coordinate System: NAD 1983 UTM Zone 17N.
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Figure 1 Location of Subject Lands

Project Name:
TACC Mayfield Tullamore
TACC Mayfield Tullamore EIS

Client Name:
TACC Developments
(Ontario, Canada)

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- ▬ Subject Lands
- Land Information Ontario**
- Road
- Trail Segment (OTN)
- Waterbody
- Wooded Area
- Protected Countryside
- Greenbelt Planning Area**
- ▬ Greenbelt NHS
- Greenbelt Boundary
- Future Caledon Official Plan (Caledon 2025)**
- Preliminary Natural Environment System - Schedule D1 and D2a**
- ▬ Natural Features and Areas
- Toronto and Region Conservation Authority (TRCA)***
- ▬ Toronto and Region Conservation Authority
- ▬ Approximate Regulation Limit
- ▬ Watercourse (TRCA 2022)

Note(s):
*Current TRCA regulatory mapping does not reflect up-to-date characterization of HDFs on the Subject Lands; however, the TRCA has confirmed agreement with HDF designations presented in the Phase 1 SWS and reiterated in the EIS. Future regulatory mapping is anticipated to reflect this.

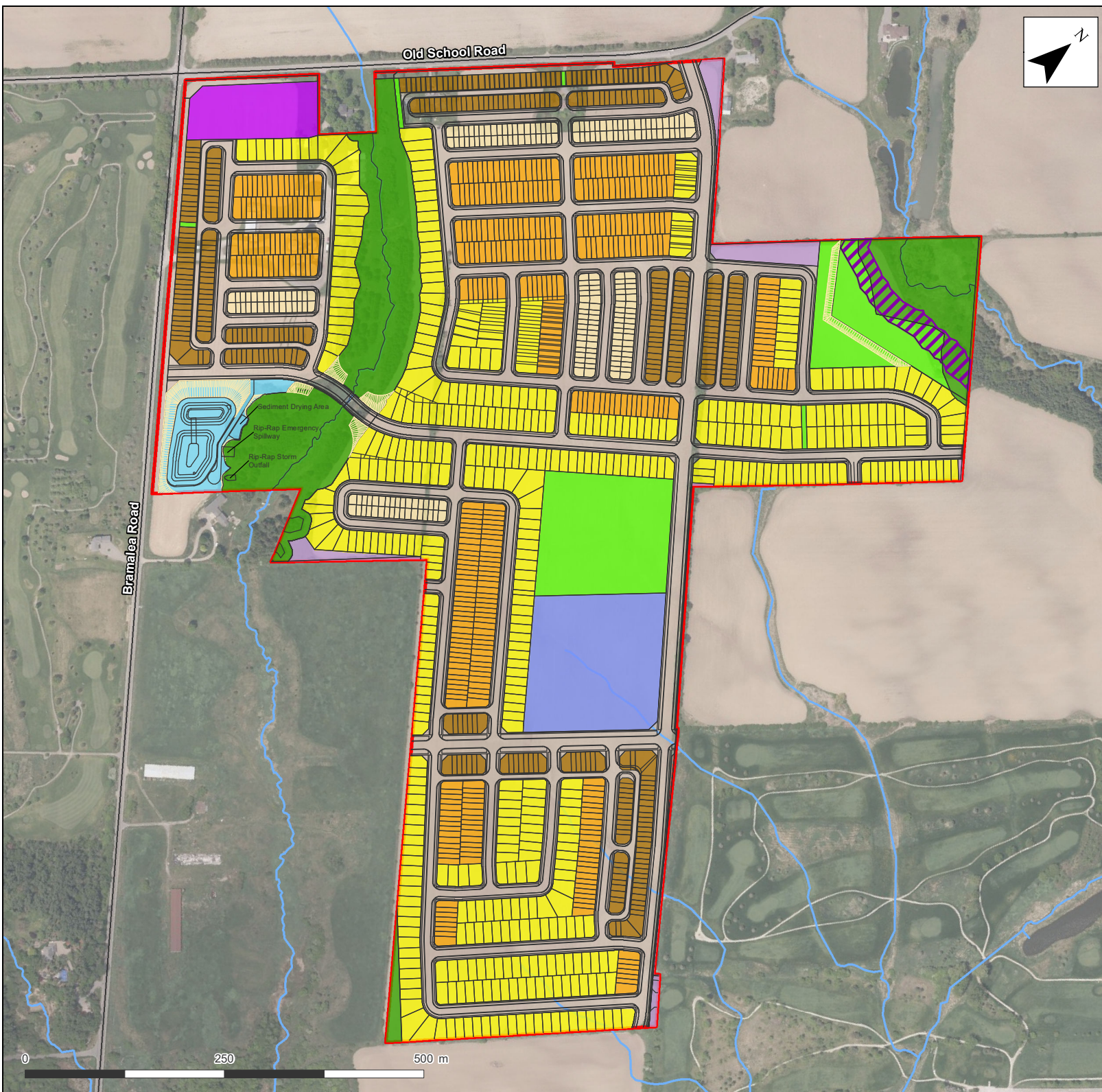
- Reference(s):**
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Figure 2 Landscape Setting

Project Name:
TACC Mayfield Tullamore
TACC Mayfield Tullamore EIS

Client Name:
TACC Developments
(Ontario, Canada)

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- Subject Lands
- Road
- Watercourse (TRCA 2022)
- Site Plan
- Grading Plan
- Concept Plan**
- Back to Back Townhouses
- Mixed Use/Retail
- Environmental Policy Area
- Park/Open Space/Walkway
- Rear Lane Townhouses
- Residential Reserve
- SWM Pond
- School
- Single Detached
- Street Townhouse
- Permeable Landscape Zone

Reference(s):

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Figure 3
Draft Concept Plan

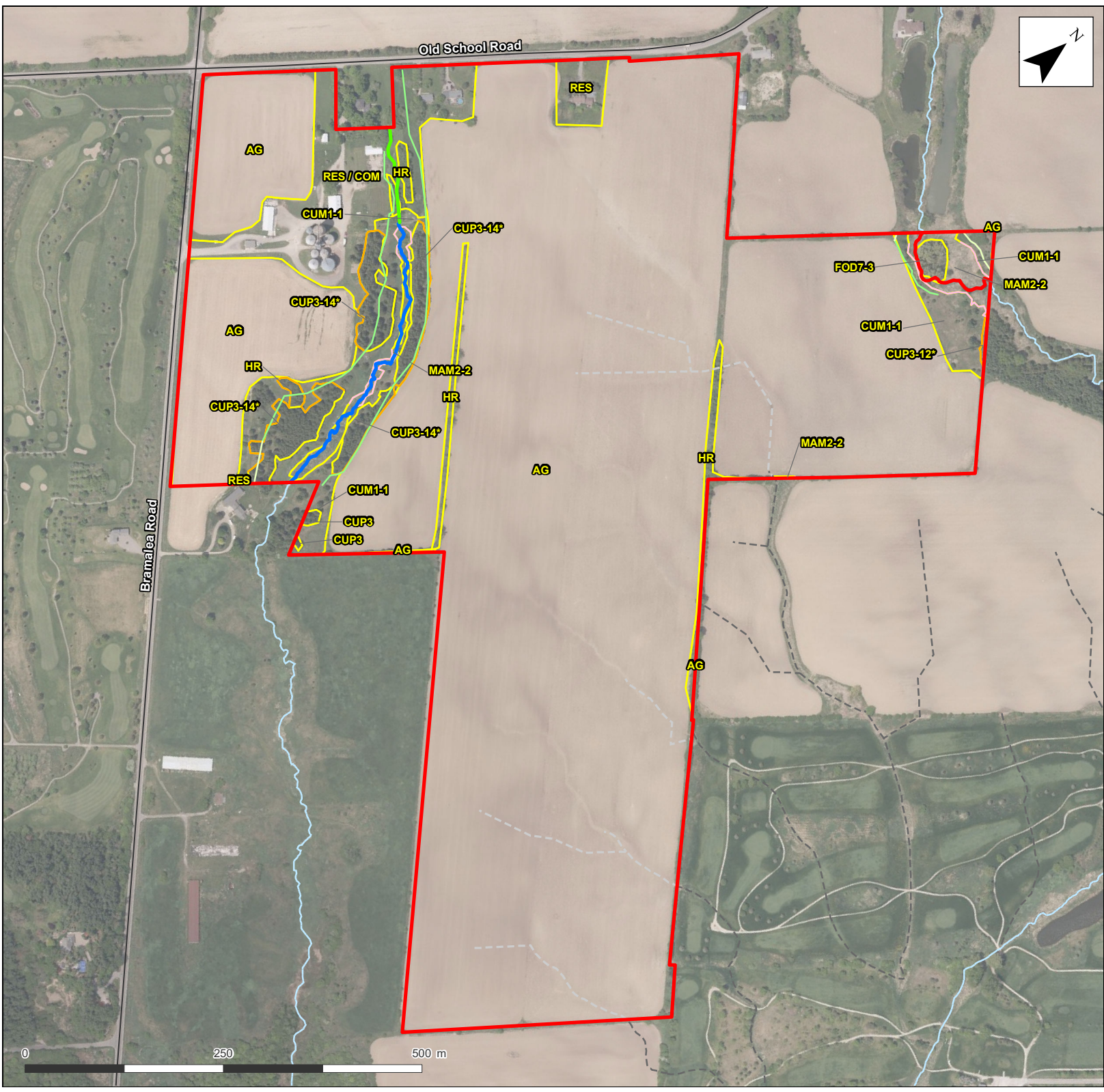
Project Name:
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Client Name:
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Subject Lands

Road

High

Medium

Low

Headwater Drainage Feature (GEI)

Offsite Headwater Drainage Feature

Offsite Watercourse

Staked Tree Limit with Town of Caledon (May 30, 31 and June 3, 2024)

Existing Top of Bank - Lidar (GEI 2024)

Staked Wetland with TRCA (July 4.5.8, 2024)

Staked Top of Bank with TRCA (GEI 2024)

Ecological Land Classification

AG, Agriculture

CUM1-1, Dry-Moist Old Field Meadow

CUP3, Coniferous Plantation

CUP3-12*, White Pine - White Spruce Coniferous Plantation

CUP3-14*, Norway Spruce Coniferous Plantation

FOD7-3, Fresh - Moist Willow Lowland Deciduous Forest

HR, Hedgerow

MAM2-2, Reed-canary Grass Mineral Meadow Marsh

RES / COM, Residential / Commercial

RES, Residential

Reference(s):

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Figure 4
Ecological Land Classification and Staked Feature Limits

Project Name:
TACC Mayfield Tullamore
TACC Mayfield Tullamore EIS

Client Name:
TACC Developments
(Ontario, Canada)

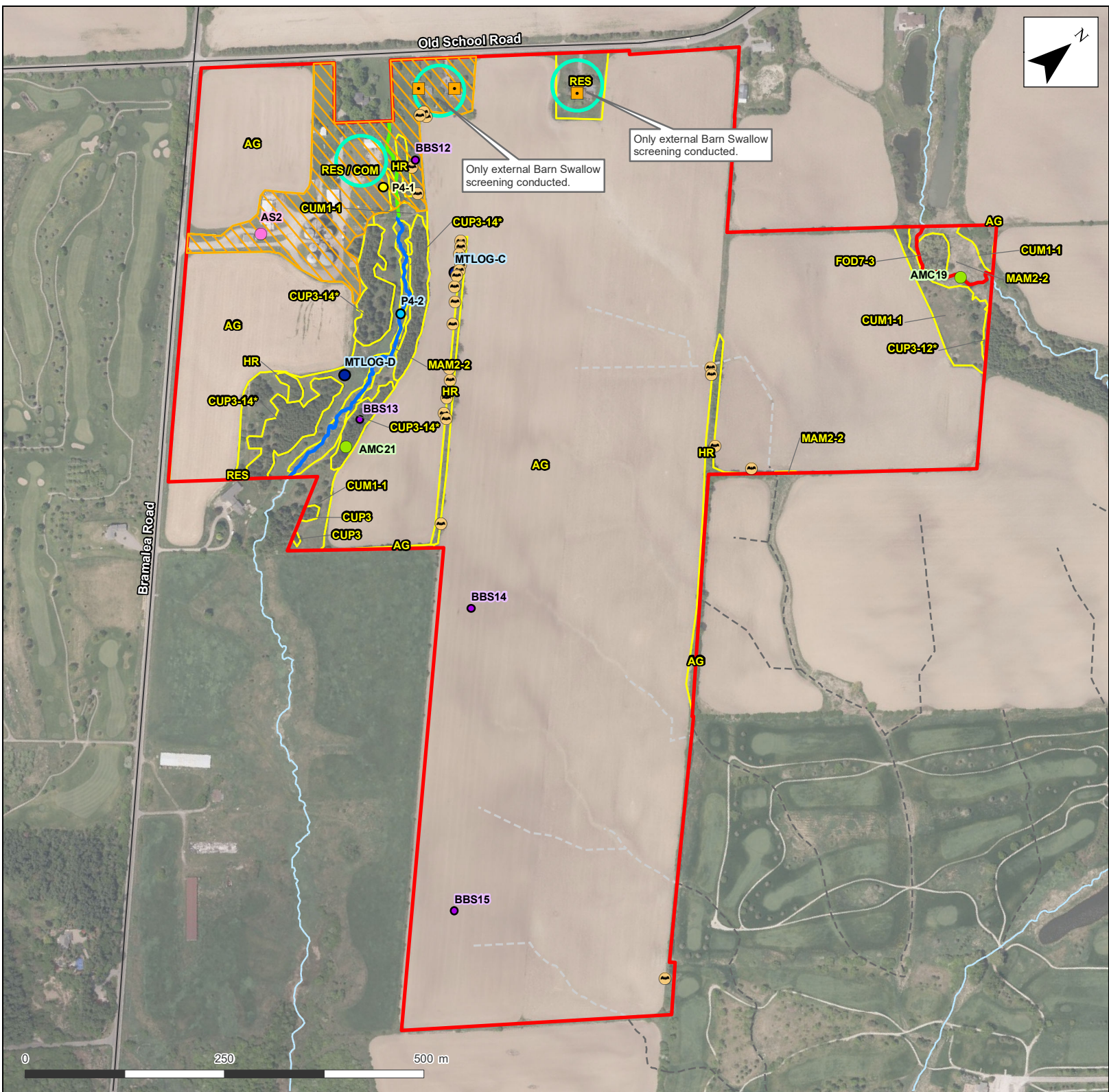
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- Subject Lands
- Road
- Non-significant Monarch Breeding Habitat
- Significant Monarch Breeding Habitat
- Stream Constraints**
- High
- Medium
- Low
- Headwater Drainage Feature (GEI)
- Offsite Headwater Drainage Feature
- Offsite Watercourse
- Ecological Land Classification
- Snake Visual Encounter Surveys (GEI 2024)
- Breeding Bird Stations (GEI 2024)
- Amphibian Call Count Stations (GEI 2024)
- Bat Acoustic Stations (GEI 2024)
- Bat Snags (GEI 2024)
- Bat Exit Structure (GEI 2024)
- Snake VES (GEI 2024)
- Barn Swallow Survey Areas (GEI 2024)

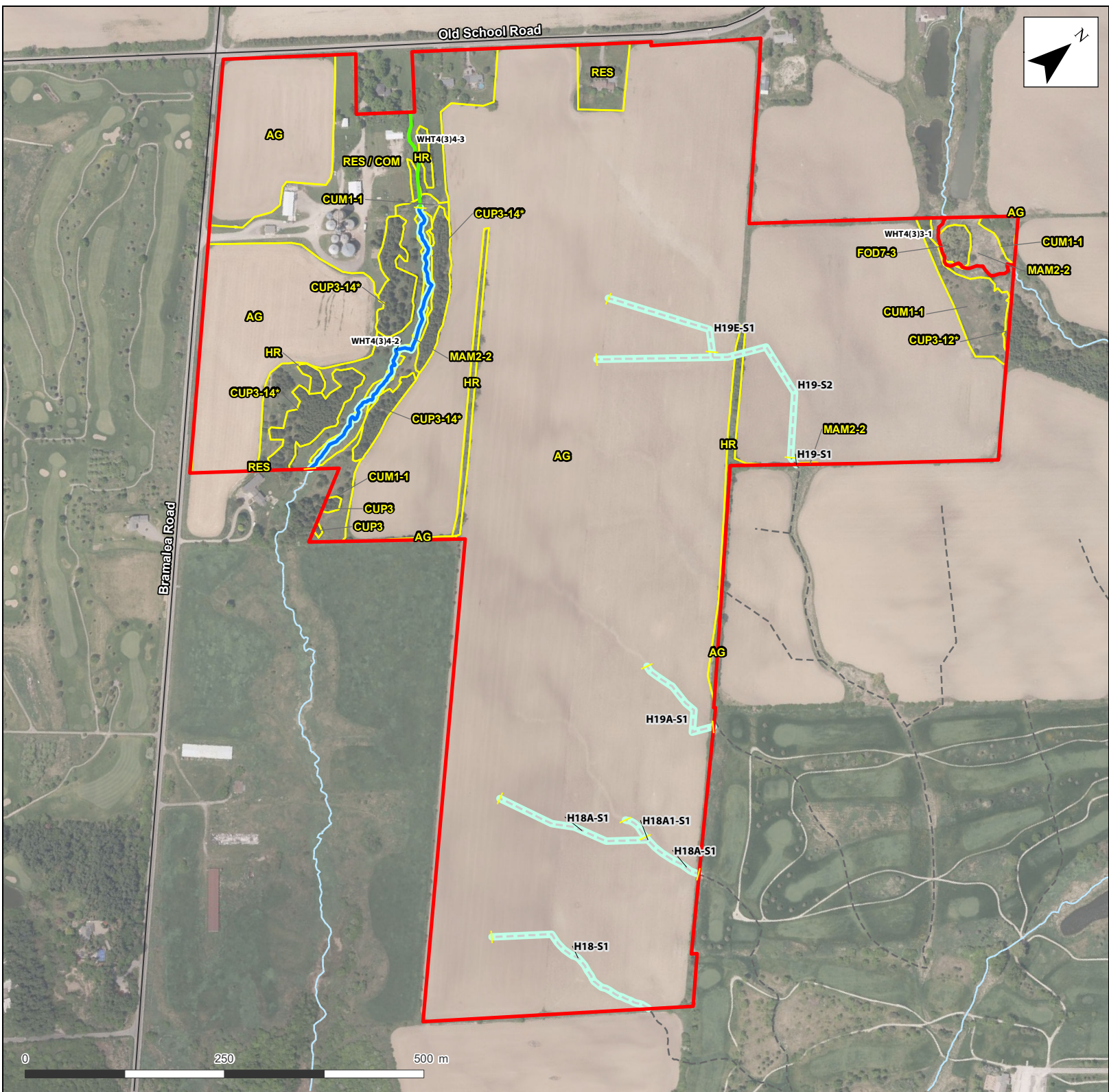
- ELC Legend**
- AG, Agriculture
 - CUM1-1, Dry-Moist Old Field Meadow
 - CUP3, Coniferous Plantation
 - CUP3-12", White Pine - White Spruce Coniferous Plantation
 - CUP3-14", Norway Spruce Coniferous Plantation
 - FOD7-3, Fresh - Moist Willow Lowland Deciduous Forest
 - HR, Hedgerow
 - MAM2-2, Reed-cannary Grass Mineral Meadow Marsh
 - RES / COM, Residential / Commercial
 - RES, Residential

- Reference(s):**
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Figure 5A
Terrestrial Survey Locations

Project Name:
TACC Mayfield Tullamore
TACC Mayfield Tullamore EIS

Client Name:
TACC Developments
(Ontario, Canada)



- Subject Lands
- Road
- Stream Constraints**
- High
- Medium
- Low
- Headwater Drainage Feature (GEI)
- Offsite Headwater Drainage Feature
- Offsite Watercourse
- Reach Breaks
- Electrofishing (GEI 2024)
- Ecological Land Classification

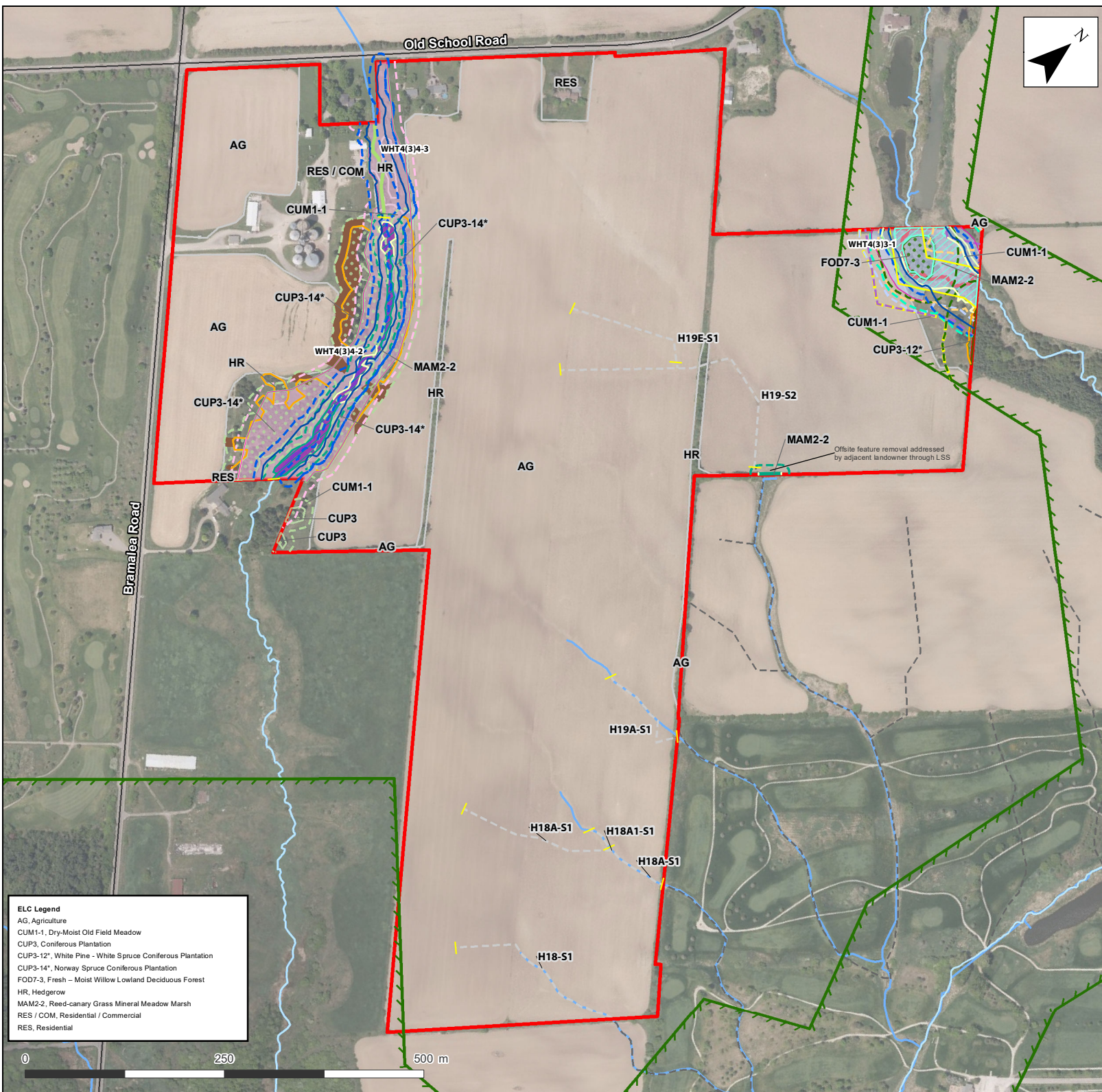
- ELC Legend**
- AG, Agriculture
 - CUM1-1, Dry-Moist Old Field Meadow
 - CUP3, Coniferous Plantation
 - CUP3-12*, White Pine - White Spruce Coniferous Plantation
 - CUP3-14*, Norway Spruce Coniferous Plantation
 - FOD7-3, Fresh - Moist Willow Lowland Deciduous Forest
 - HR, Hedgerow
 - MAM2-2, Reed-cannary Grass Mineral Meadow Marsh
 - RES / COM, Residential / Commercial
 - RES, Residential

- Reference(s):**
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Figure 5B
Aquatic Survey Locations

Project Name:
TACC Mayfield Tullamore
TACC Mayfield Tullamore EIS

Client Name:
TACC Developments
(Ontario, Canada)



ELC Legend	
AG	Agriculture
CUM1-1	Dry-Moist Old Field Meadow
CUP3	Coniferous Plantation
CUP3-12"	White Pine - White Spruce Coniferous Plantation
CUP3-14"	Norway Spruce Coniferous Plantation
FOD7-3	Fresh - Moist Willow Lowland Deciduous Forest
HR	Hedgerow
MAM2-2	Reed-canal Grass Mineral Meadow Marsh
RES / COM	Residential / Commercial
RES	Residential

Subject Lands

Road

Ecological Land Classification

Natural Heritage Features and Natural Hazards

Woodlands (GEI 2024)

Significant Woodlands (GEI 2024)

Candidate Significant Wetlands

Non-Significant Wetlands

Non-Significant Valleyland (GEI 2024)

Significant Valleyland (GEI 2024)

Confirmed Significant Wildlife Habitat (Monarch)

Floodline (SCS 2025)

Meander Belt (GEI 2024)

Occupied Redside Dace Habitat Limit

Staked Tree Limit with Town of Caledon (May 30, 31 and June 3, 2024)

Existing Top of Bank - Lidar (GEI 2024)

Staked Wetland with TRCA (July 4, 5, 8, 2024)

Staked Top of Bank with TRCA (GEI 2024)

Stream Constraints

High

Medium

Low

Headwater Drainage Feature (GEI)

Reach Breaks

Offsite Headwater Drainage Feature

Offsite Watercourse

Natural Heritage Features and Natural Hazards + Setbacks

Woodland + 10m

Significant Woodland + 30m

Non-Significant Wetlands + 10m

Candidate Significant Wetlands + 30m

Non-Significant Valleyland + 10m

Significant Valleyland + 15m

Floodline + 10m

Cool/Cold Water Fisheries Setback (30m)

Limit of Key Natural Heritage and Hydrologic Features within Greenbelt

NHS Refinements - see Section 4.2 of EIS (GEI 2026)

Note(s):

Candidate Significant Wildlife Habitat is not shown on this figure, however it is associated with the Greenbelt KNHFs and KHFs.

Reference(s):

1. Coordinate System: NAD 1983 UTM Zone 17N.

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Figure 6

Natural Heritage/Natural Hazard Features and Associated VPZs

Project Name:

TACC Mayfield Tullamore
TACC Mayfield Tullamore EIS

Client Name:

TACC Developments
(Ontario, Canada)

GEI

Consultants
Canada

Last Updated: May 2026

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Appendix B Tables

Table 1: Field Studies and Natural Inventories

SURVEYORS (SURNAME, INTL)	SURVEY ROUND	SURVEY TYPE	DATE	TIME		AIR TEMP (c°)	HUMIDITY (%)	CLOUD COVER (%)	BEAUFORT WIND SPEED	PRECIPITATION COMMENTS
				START	END					
2024										
Burke, P.	1	Winter Raptor Survey	08-FB	07:15	16:15	6	70	100	0	Freezing Fog
Lee, E. Hunt, N.	1-1	Bat Habitat Assessment & Structure Screening	12-FB	08:40	17:00	0	70	90	2	None
Hunt, N.	1-2	Bat Habitat Assessment & Structure Screening	15-FB	10:05	17:00	-3	70	100	3	None
Kimble, B.	1-1	Headwater Drainage Feature Assessment	18-MR	09:00	15:30	1	65	100	4	None
Kimble, B. Fleming, D.	1-2	Headwater Drainage Feature Assessment	19-MR	09:00	16:00	1	73	90	4	Snow
Kimble, B.	1-3	Headwater Drainage Feature Assessment	22-MR	09:00	16:00	-3	69	100	3	Snow
Kimble, B. Fleming, D.	1-4	Headwater Drainage Feature Assessment	27-MR	09:00	16:00	9	65	75	4	None
Williamson, L. Love, S.	1-1	Turtle Basking and Nesting Survey & Snake Transect Survey	09-AP	09:30	14:30	13	62	10	1	None
Williamson, L. Love, S.	1-2	Turtle Basking Survey & Snake Transect Survey	10-AP	10:00	14:40	17	72	10	1	None
Nieroda, M. Fleming, D.	1	Spring Fish Community Sampling	15-AP	09:00	18:30	16	32	70	4	None
Williamson, L. Love, S.	2-1	Snake Transect Survey & Turtle Basking Survey	16-AP	10:00	14:20	15	67	10	1	None

Table 1: Field Studies and Natural Inventories

SURVEYORS (SURNAME, INTL)	SURVEY ROUND	SURVEY TYPE	DATE	TIME		AIR TEMP (c°)	HUMIDITY (%)	CLOUD COVER (%)	BEAUFORT WIND SPEED	PRECIPITATION COMMENTS
				START	END					
Williamson, L. Love, S.	1-1	Amphibian Call Count Survey	10-AP	20:30	23:45	14	50	50	0	None
Williamson, L. Love, S.	1-2	Amphibian Call Count Survey	17-AP	20:30	22:00	11	38	10	1	None
Williamson, L. Cartwright, C.	2-2	Turtle Basking Survey & Snake Transect Survey	26-AP	13:00	16:00	11	29	5	2	None
Leslie, J.	1-3	Spring Botanical Inventory and Ecological Land Classification (ELC)	2-MA	09:00	16:30	16	61	20	3	None
Williamson, L. Brunelle, P.	3-1	Snake Transect Survey & Turtle Basking Survey	2-MA	12:40	16:45	15	73	5	2	None
Leslie, J.	1-1	Spring Botanical Inventory and ELC	3-MA	09:00	16:00	16	64	80	3	Rain
Leslie J.	1-2	Spring Botanical Inventory and ELC	6-MA	09:00	15:00	18	45	80	3	None
Williamson, L. Love, S.	3-2	Snake Transect Survey & Turtle Basking Survey	6-MA	09:15	13:00	14	60	15	2	None
Leslie, J.	1-3	Spring Botanical Inventory and ELC	7-MA	09:00	15:30	20	45	80	3	None
Leslie, J.	1-4	Spring Botanical Inventory and ELC	8-MA	09:00	14:00	20	54	65	4	None
Williamson, L. Love, S.	2-1	Amphibian Call Count Survey	16-MA	21:00	23:00	17	73	5	1	None

Table 1: Field Studies and Natural Inventories

SURVEYORS (SURNAME, INTL)	SURVEY ROUND	SURVEY TYPE	DATE	TIME		AIR TEMP (c°)	HUMIDITY (%)	CLOUD COVER (%)	BEAUFORT WIND SPEED	PRECIPITATION COMMENTS
				START	END					
Williamson, L. Love, S.	2-2	Amphibian Call Count Survey	17-MA	21:00	23:00	15	100	95	2	Rain, Fog
Robinson, O. Leslie, J. Wiginton, R. Huang, F. TRCA, Town of Caledon	1-1	Staked Top of Bank and Treed Limit	30-MA	09:00	16:00	17	36	0	3	None
Stemberger, H. Lohnes, S. Leslie, J. Wiginton, R. Huang, F. TRCA, Town of Caledon	1-2	Staked Top of Bank and Treed Limit	31-MA	09:00	16:00	21	37	5	2	None
Nieroda, M. Brunelle, P.	1	Bat Acoustic Deployment	31-MA	08:00	18:00	22	36	5	2	None
Teddy, P., Schmeler, M.	1-3	Tree Inventory	31-MA	09:00	17:00	24	37	10	4	None
Robinson, O. Lohnes, S. Doyle, T. Wiginton, R. Huang, F. TRCA, Town of Caledon	1-3	Staked Top of Bank and Treed Limit	03-JN	09:00	16:00	20	88	85	2	Fog

Table 1: Field Studies and Natural Inventories

SURVEYORS (SURNAME, INTL)	SURVEY ROUND	SURVEY TYPE	DATE	TIME		AIR TEMP (c°)	HUMIDITY (%)	CLOUD COVER (%)	BEAUFORT WIND SPEED	PRECIPITATION COMMENTS
				START	END					
Burke, P.	1-1	Breeding Bird Survey	04-JN	05:25	10:00	17	93	75-50	0	None
Nieroda, M. Fleming, D. Kimble, B.	2	Headwater Drainage Feature Assessment	04-JN	08:30	17:00	24	60	80	3	None
Teddy, P., Schmeler, M	2-3	Tree Inventory	04-JN	08:30	17:00	27	73	65	4	None
Burke, P.	1-2	Breeding Bird Survey	05-JN	05:25	10:00	19	77	75	1	None
Burke, P.	1-3	Breeding Bird Survey	06-JN	05:15	09:30	19	100	100	2	Fog
Nieroda, M. Brunelle, P.	1	Bat Acoustic Collection	10-JN	08:30	12:30	13	66	60	3	None
Williamson, L. Brunelle, P.	3-1	Amphibian Call Survey	24-JN	21:30	23:30	23	53	0	3	None
Williamson, L. Brunelle, P.	3-2	Amphibian Call Survey	25-JN	21:30	23:30	23	74	30	3	None
Burke, P.	2-1	Breeding Bird Survey	25-JN	06:30	08:30	19	72	50	3	None
Burke, P.	2-2	Breeding Bird Survey	26-JN	05:35	09:15	18	100	85	4	None
Stemberger, H. Leslie, J. Robinson, O. TRCA	1-1	Staked Wetland Limit	04-JL	09:00	16:00	26	62	80	4	None
Stemberger, H. Leslie, J. TRCA	1-2	Staked Wetland Limit	05-JL	09:00	14:00	26	52	0	1	None
Leslie, J.	2-3	Summer Botanical Inventory and ELC Refinements	05-JL	14:00	17:30	26	52	0	1	None

Table 1: Field Studies and Natural Inventories

SURVEYORS (SURNAME, INTL)	SURVEY ROUND	SURVEY TYPE	DATE	TIME		AIR TEMP (c°)	HUMIDITY (%)	CLOUD COVER (%)	BEAUFORT WIND SPEED	PRECIPITATION COMMENTS
				START	END					
Stemberger, H. Leslie, J. Robinson, O. TRCA	1-3	Staked Wetland Limit	08-JL	09:00	14:00	26	59	75	4	None
Leslie, J.	2-1	Summer Botanical Inventory and ELC Refinements	08-JL	14:00	17:30	26	59	75	4	None
Leslie, J.	2-2	Summer Botanical Inventory and ELC Refinements	09-JL	09:00	15:00	28	N/A	40	3	Period of rain
Leslie, J.	2-3	Summer Botanical Inventory and ELC Refinements	11-JL	09:00	15:00	20	N/A	100	2	Period of rain
Leslie, J.	2-4	Summer Botanical Inventory and ELC Refinements	12-JL	09:00	15:00	26	N/A	10	2	None
Leslie, J.	1	Butternut Health Assessment	24-JL	15:00	16:00	24	N/A	100	3	Period of rain
Williamson, L. Brunelle, P. Love, S.	1	Monarch Breeding Survey	31-JL	8:00	16:00	29	55	80	4	None
Nieroda, M. Fleming, D.	3	Headwater Drainage Feature Assessment	15-AU	09:00	14:30	25	63	0	1	None
Williamson, L. Love, S.	2	Monarch Breeding Survey	21-AU	8:30	17:15	21	44	70	4	None
Kimble, B. Fleming, D. Love, S. Brunelle, P.	1	Summer Fish Community Sampling and Aquatic Habitat Assessment	28-AU	07:30	18:00	25	65	90	2	None

Table 1: Field Studies and Natural Inventories

SURVEYORS (SURNAME, INTL)	SURVEY ROUND	SURVEY TYPE	DATE	TIME		AIR TEMP (c°)	HUMIDITY (%)	CLOUD COVER (%)	BEAUFORT WIND SPEED	PRECIPITATION COMMENTS
				START	END					
Leslie, J.	3-1	Fall Botanical Inventory and ELC refinements	10-SE	09:00	15:00	23	N/A	5	1	None
Leslie, J.	3-2	Fall Botanical Inventory and ELC refinements	11-SE	09:00	15:00	25	N/A	10	2	None
Leslie, J.	3-3	Fall Botanical Inventory and ELC refinements	12-SE	09:00	15:00	28	N/A	10	2	None
Williamson, L. Brunelle, P. Love, S.	3	Monarch Breeding Survey	12-SE	9:00	16:00	23	66	0	2	None
2025										
MacLeod, A., McDonald, C.	3-3	Tree Inventory	13-MR	9:00	16:00	7	54	70	3	None

LEGEND:

BEAUFORT WIND SPEED SCALE		MONTH (CODE)	
0	Calm (<1 km/hr)	JA	January
1		FB	February
2	Light Air (1-5 km/hr)	MR	March
		AP	April
3	Light Breeze (6-11 km/hr)	MA	May
		JN	June
4	Gentle Breeze (12-19 km/hr)	JL	July
		AU	August
		SE	September
	Moderate Breeze (20-28 km/hr)	OC	October
		NO	November
		DE	December

Table 2: Preliminary Ecological Landscape Classification (ELC) Community Descriptions

ELC TYPE	COMMUNITY DESCRIPTION	S Ranks (NHIC 2021)
CULTURAL – communities resulting from, or maintained by, cultural or anthropogenic-based disturbances		
Cultural Plantation		
CUP3	Coniferous Plantation; coniferous tree species comprise more than 75% of canopy.	N/A
CUP3-12*	Coniferous Plantation; comprised primarily of White Spruce.	N/A
CUP3-14*	Coniferous Plantation; comprised primarily of Norway Spruce.	N/A
Cultural Meadow		
CUM1-1	Dry-Moist Old Field Meadow Community with less than 25% tree and shrub cover, and more than 25% cover of forbs and/or graminoids.	N/A
FOREST - communities with >60% tree cover		
Deciduous Forest (FOD): Deciduous tree species make up >75% of canopy		
FOD7-3	Moist lowland deciduous forest comprised predominantly of Willow trees. Often resulting from cultural influences or disturbances; typically associated with riparian zones and terraces, streams, riverbanks, and floodplains.	S4S5
MARSH - communities with <25% tree or shrub cover, with variable flooding regimes		
MAM2-2	Mineral Meadow Marsh comprised predominantly of Reed-Canary Grass.	S5

*Denotes a vegetation type not listed in the Southern Ontario ELC Guide.

Appendix C Regulation Mapping Update Request

April 27, 2026
Project No. 2400278

To: Toronto and Region Conservation Authority
regulationmapping@trca.ca

Re: **Draft TRCA Regulation Mapping Updates**
Mayfield Tullamore Secondary Plan
Caledon, Ontario

GEI Consultants Canada Ltd. was retained by the Mayfield Tullamore Landowners group to deliver environmental technical studies, including natural heritage and fluvial geomorphology, to support the delivery of a local subwatershed study for the Secondary Plan Area. The Study Area/Secondary Plan Area is bounded by Old School Road to the North, Torbram Road to the East, Mayfield Road to the South, and extends west just past Bramalea Road (**Figure 1**).

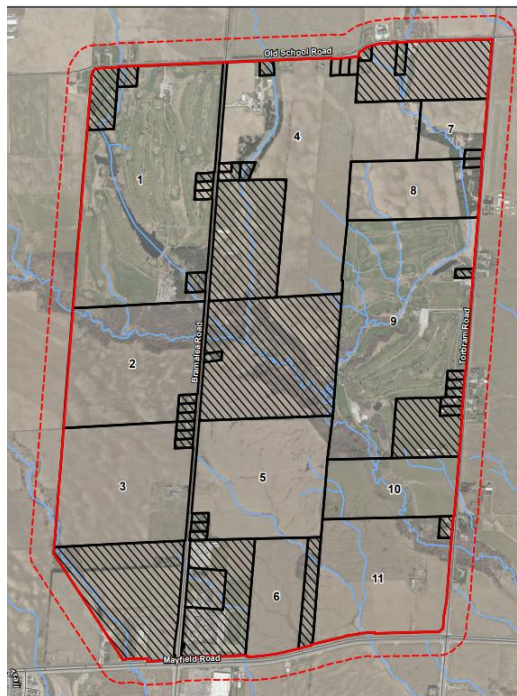


Figure 1: Mayfield Tullamore Secondary Plan Study Area

This memo has been prepared to request a revision to the draft regulation mapping in alignment with the Phase 1 and Phase 2 Local Subwatershed Study for the Mayfield Tullamore Secondary Plan Area (submitted February 2025 and April 2025, respectively).

A three-season headwater drainage feature assessment and/or fluvial geomorphological assessment was completed for all headwater drainage features and watercourses in the Study Area and was documented within **Section 3.2.4** of the Phase 1 Report (February 2025). A link to this document can be found here: [Mayfield Tullamore Phase 1 Local Subwatershed Study](#). GEI's conclusions also coincide with the characterizations of drainage features on the landscape as outlined in the Region of Peel's Settlement Area Boundary Expansion Scoped Subwatershed Study (Wood et al., 2022).

In response to comments received from TRCA on the Phase 1 and Phase 2 Local Subwatershed Studies (received March 11 and March 24, 2025 (Phase 1) and May 21, 2025 (Phase 2)), GEI provided a supplementary photolog on June 11, 2025 (**Appendix B**) to highlight rationale for the redesignation of watercourses to HDFs.

On July 10, 2025, email correspondence with TRCA confirmed that the local subwatershed study's differentiation between HDFs and watercourses was deemed correct (**Appendix C**). As such, we would like to recommend the removal of the below highlighted HDFs on the draft regulation mapping, in alignment with the work completed (**Figure 2**). These correspond to H26, H23, H19, H18, H8, HDF 12 and HDF 11 as shown in **Appendix A**.

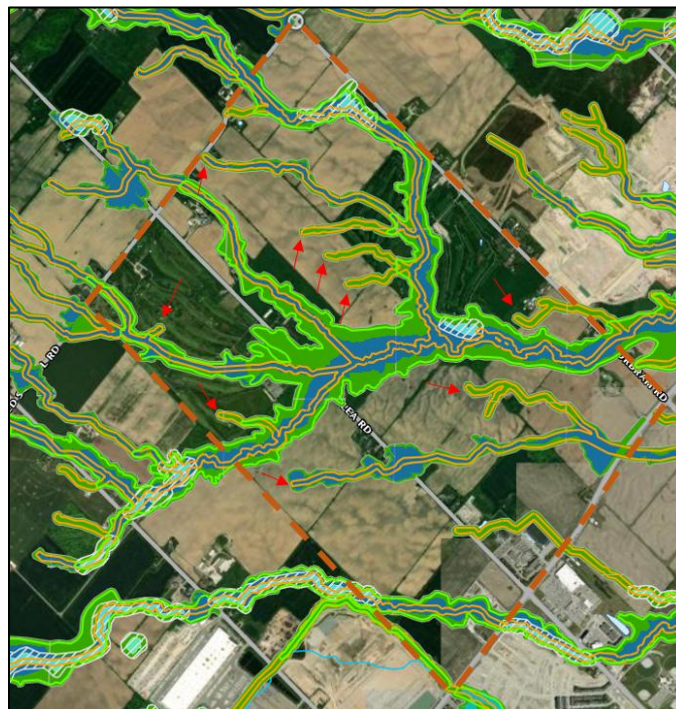


Figure 2: Mayfield Tullamore Secondary Plan Study Area (Orange) and HDFs recommended for removal from TRCA's Draft Regulation Mapping (Red Arrows).

If you have any questions, please feel free to contact the undersigned below.

Sincerely,

GEI Consultants Canada Ltd.



Holly Stemberger
Project Manager
hstemberger@geiconsultants.com



Shelley Lohnes
Project Director
slohnnes@geiconsultants.com

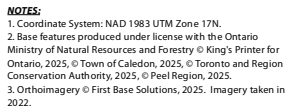
Appendices

- Appendix A Figures
- Appendix B Headwater Drainage Feature Photo Log
- Appendix C Correspondence

cc: Kim Beckman, Mayfield Tullamore Landowners Group Representative

Appendix A Figures

A.1. Watercourses and Headwater Drainage Features



Appendix B Headwater Drainage Feature Photo Log

B.1. Headwater Drainage Feature Photo Log

Photographic Record



Photo 1 – H1-S1, agricultural swale looking downstream towards Bramalea Road. (2024/03/15)



Photo 2 – H2-S1, agricultural swale looking downstream towards NHS corridor of WHT4(3)6-1. (2024/03/15)



Photo 3 – H3-S1, agricultural swale looking upstream. (2024/03/15)



Photo 4 – H4-S1, agricultural swale looking downstream towards NHS corridor of WHT4(3)6-1. (2024/03/15)

Mayfield Tullamore Subwatershed Study

Representative Photos of Headwater Drainage

Features within the Study Area

SPRING FRESHET PHOTOGRAPHIC RECORD





Photo 5 – H5-S1, agricultural swale looking downstream (towards watercourse CCC2). (2024/03/15)



Photo 6 – H6-S1, agricultural swale looking downstream. (2024/03/15)



Photo 7 – H7-S1, looking downstream of agricultural swale. (2024/03/15)



Photo 8 – H7-S3, agricultural swale looking upstream. (2024/03/15)

Mayfield Tullamore Subwatershed Study

Representative Photos of Headwater Drainage

Features within the Study Area

SPRING FRESHET PHOTOGRAPHIC RECORD





Photo 9 – H7-S3/H7B-S1, agricultural swale looking upstream. (2024/03/15)



Photo 10 – H8-S2, poorly defined agricultural drainage feature looking upstream. (2024/03/15)



Photo 11 – H8-S4, agricultural swale looking upstream from confluence with H8C-S1. (2024/03/15)



Photo 12 – H8-S6, agricultural swale looking downstream. (2024/03/15)

Mayfield Tullamore Subwatershed Study

Representative Photos of Headwater Drainage

Features within the Study Area

SPRING FRESHET PHOTOGRAPHIC RECORD





Photo 13 – H8D-S1 (right) and H8-S11 (left), agricultural swales looking upstream. (2024/03/15)



Photo 14 – H8A1-S1, agricultural swale looking downstream. (2024/03/18)



Photo 15 – H9-S1, agricultural swale looking downstream. (2024/03/18)



Photo 16 – H10-S1, agricultural swale looking upstream. (2024/03/18)

Mayfield Tullamore Subwatershed Study

Representative Photos of Headwater Drainage

Features within the Study Area

SPRING FRESHET PHOTOGRAPHIC RECORD





Photo 17 – H11-S1, midstream of agricultural swale. (2024/03/18)



Photo 18 – H18A-S1, agricultural swale looking downstream. (2024/03/27)



Photo 19 – H19-S1, wetland (multi-flow path) within agricultural setting looking upstream. (2024/03/27)



Photo 20 – H19E-S1, agricultural swale looking upstream. (2024/03/27)

Mayfield Tullamore Subwatershed Study
 Representative Photos of Headwater Drainage
 Features within the Study Area
SPRING FRESHET PHOTOGRAPHIC RECORD



Photo 21 – H20-S1, agricultural swale looking downstream towards Mayfield Golf Club. (2024/03/27)



Photo 22 – H21-S1, agricultural swale looking downstream (2024/03/27)



Photo 23 H22A-S1, agricultural swale looking upstream. (2024/03/27)



Photo 24 H23-S1, created golf course pond looking upstream. (2024/03/27)

Mayfield Tullamore Subwatershed Study

Representative Photos of Headwater Drainage

Features within the Study Area

SPRING FRESHET PHOTOGRAPHIC RECORD





Photo 25 – H23-S1, created golf course pond looking downstream. (2024/03/27)



Photo 26 – H24-S1, golf course path depression looking downstream. (2024/03/27)



Photo 27 – H25-S1, constructed golf course drainage looking upstream. (2024/03/27)



Photo 28 H26-S1, piped golf course drainage looking upstream. (2024/03/27)

Mayfield Tullamore Subwatershed Study

Representative Photos of Headwater Drainage

Features within the Study Area

SPRING FRESHET PHOTOGRAPHIC RECORD



Appendix C Correspondence

C.1. GEI Consultants and TRCA Correspondence re: HDFs

From: Maria Parish <Maria.Parish@trca.ca>
Sent: Thursday, July 10, 2025 2:27 PM
To: Robinson, Olivia; Michael Hynes
Cc: Stemberger, Holly; Lohnes, Shelley; Dilnesaw Chekol; Jason Wagler; Siddiqui, Ahmed
Subject: [EXT] RE: Submission of Mayfield Tullamore TAC Meeting Minutes (8 and 9) and HDF Photologs (PN 2400278)

EXTERNAL EMAIL

Hi Olivia

Thanks so much for providing all of this information. It is appreciated.

We have concluded that HDF H8-S11 and H8D-S1 are not watercourses under the Conservation Authorities Act, but are headwater agricultural furrows. We agree that they are HDF's and you can consult with the Town on their management recommendations.

Best regards
Maria

Maria Parish, B.Sc., M.A., CAN-CISEC
Senior Planning Ecologist
Planning Ecology | Policy Planning

T: [\(437\) 880-1969](tel:(437)880-1969)
E: maria.parish@trca.ca
A: [5 Shoreham Drive, Toronto, ON, M3N 1S4 | trca.ca](https://www.trca.ca)



From: Robinson, Olivia <orobinson@geiconsultants.com>
Sent: July 10, 2025 12:31 PM
To: Michael Hynes <Michael.Hynes@trca.ca>
Cc: Stemberger, Holly <HStemberger@geiconsultants.com>; Lohnes, Shelley <slohn@geiconsultants.com>; Maria Parish <Maria.Parish@trca.ca>; Dilnesaw Chekol <Dilnesaw.Chekol@trca.ca>; Jason Wagler <Jason.Wagler@trca.ca>; Siddiqui, Ahmed <ASiddiqui@geiconsultants.com>
Subject: RE: Submission of Mayfield Tullamore TAC Meeting Minutes (8 and 9) and HDF Photologs (PN 2400278)

EXTERNAL SENDER

Hello Michael, Maria and Dil,

Thank you again for the opportunity to connect on HDF H8-S11 and H8D-S1 this morning. I have gone back into our field forms and can confirm the following results from our Round 1 surveys (March 15, 2024):

H8-S11

- Feature type = swale, flow condition = 4 (flowing)
- Feature width measured at 30 cm, wetted width measured at 18 cm, water depth measured at 4 cm in 3 locations
- Bed substrates mixture of silt and clay
- High evidence of sedimentation (sediment deposition type 4), low feature roughness
- Within our comments our field technicians also noted that evidence of straightening was observed

H8D-S1

- Feature type – swale, flow condition = 4 (flowing)
- Feature width measured at 30 cm, wetted width measured at 15 cm, water depth measured between 2-4 cm
- Bed substrates mixture of silt and clay
- High evidence of sedimentation, low feature roughness
- We have the same comment about evidence of alteration (dug/straightened feature)

Let me know if you need any further information!

Best,

Olivia



OLIVIA ROBINSON, CERP, M. Env. Sc. (she/her)
Senior Ecologist and Project Manager
647.988.2849
75 Tiverton Court | Unit 100 | Markham, ON L3R
4M8 | Canada



From: Robinson, Olivia

Sent: Monday, July 7, 2025 3:02 PM

To: Michael Hynes <Michael.Hynes@trca.ca>

Cc: Stemberger, Holly <HStemberger@geiconsultants.com>; Lohnes, Shelley <slohnesh@geiconsultants.com>; Maria Parish <Maria.Parish@trca.ca>; Dilnesaw Chekol <Dilnesaw.Chekol@trca.ca>; Jason Wagler <Jason.Wagler@trca.ca>; Siddiqui, Ahmed <ASiddiqui@geiconsultants.com>

Subject: RE: Submission of Mayfield Tullamore TAC Meeting Minutes (8 and 9) and HDF Photologs (PN 2400278)

Hello Michael,

Happy Monday! Hope you had a nice weekend.

I wanted to touch base to see if you had any further thoughts on whether HDF H8-S11 and HDF H8D-S1 would be considered a regulated watercourse or HDF with the detailed information we provided below. Happy to jump on a call if its easier to discuss!

Best,

Olivia

From: Robinson, Olivia

Sent: Wednesday, June 25, 2025 8:46 AM

To: 'Michael Hynes' <Michael.Hynes@trca.ca>

Cc: Stemberger, Holly <HStemberger@geiconsultants.com>; Lohnes, Shelley <slohn@geiconsultants.com>; Maria Parish <Maria.Parish@trca.ca>; Dilnesaw Chekol <Dilnesaw.Chekol@trca.ca>; Jason Wagler <Jason.Wagler@trca.ca>; Siddiqui, Ahmed <ASiddiqui@geiconsultants.com>

Subject: RE: Submission of Mayfield Tullamore TAC Meeting Minutes (8 and 9) and HDF Photologs (PN 2400278)

Hello Michael,

Thank you very much for your responses back! I wanted to follow up with respect to HDF H8-S11 and HDF H8D-S1, since these are at the upstream extent of the HDF H8 feature (see attached HDF mapping from the Phase 1 Report). Also below is a screenshot from the Spring Photolog, Photo 13.

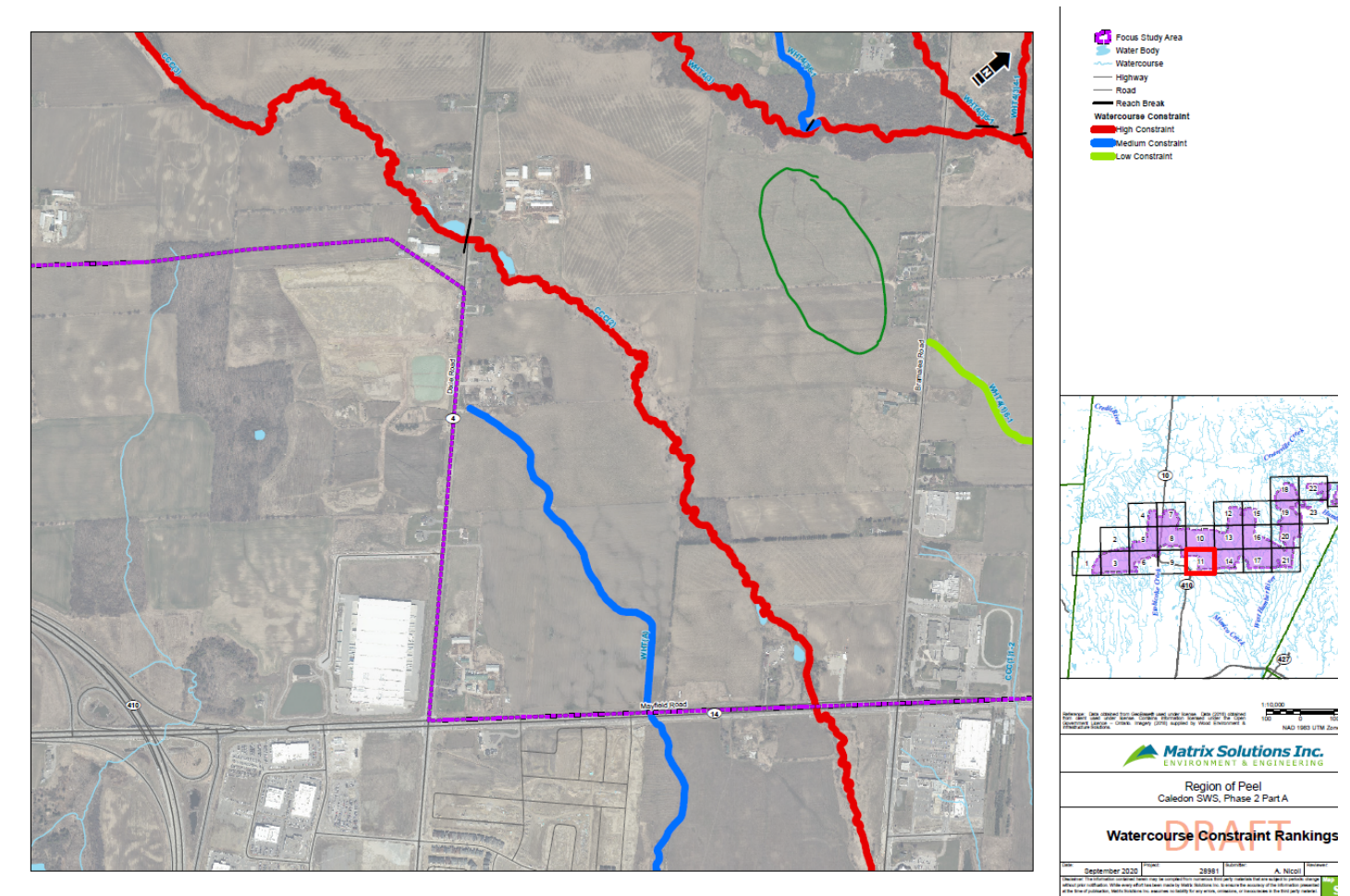


Photo 13 – H8D-S1 (right) and H8-S11 (left), agricultural swales looking upstream. (2024/03/15)

In my opinion these features are as a result of agricultural management, and the potential “defined bed and bank” that are associated with agricultural furrowing to move flows quickly through the site. See the attached aerial photo from March 2024, which aligns with our field visit, where it is apparent that these features were managed, in comparison to the aerial image from April 2016 where definition is not apparent. They are relatively short in length (with small upstream catchment areas), relatively straight with uniform widths, and little to no substrate sorting. In

my experience I haven't seen a defined watercourse upstream of an HDF. The lower reaches of HDF H8 (Photos 10-12) are not regulated watercourses.

Moreover, as part of our background review the Settlement Area Boundary Expansion (SABE) report did not identify this as a watercourse. SABE mapping shown below with the features we are discussing circled in green:



Based off of this, our team continues to recommend that these two HDF reaches should not be considered regulated watercourse features. Does the information above help provide further clarity for your team to determine whether you agree with our interpretation? Happy to chat this through or schedule a site visit if that is helpful.

Best,

Olivia

GEI
Canada

OLIVIA ROBINSON, CERP, M. Env. Sc. (she/her)
Senior Ecologist and Project Manager
647.988.2849
75 Tiverton Court | Unit 100 | Markham, ON L3R
4M8 | Canada

From: Michael Hynes <Michael.Hynes@trca.ca>
Sent: Tuesday, June 24, 2025 7:48 AM

To: Robinson, Olivia <orobinson@geiconsultants.com>

Cc: Stemberger, Holly <HStemberger@geiconsultants.com>; Lohnes, Shelley <slohnnes@geiconsultants.com>; Maria Parish <Maria.Parish@trca.ca>; Dilnesaw Chekol <Dilnesaw.Chekol@trca.ca>; Jason Wagler <Jason.Wagler@trca.ca>

Subject: [EXT] RE: Submission of Mayfield Tullamore TAC Meeting Minutes (8 and 9) and HDF Photologs (PN 2400278)

EXTERNAL EMAIL

Good morning, Olivia,

Please find a synopsis of TRCA comments on the Photologs provided on June 11 identifying either a Head Water Drainage Feature or Watercourse

Water Resources

No issues with the identification in the Photologs.

Ecology

Ecology has reviewed the photos from March, as they are the only ones applicable. The photos from June cannot be used, as the farmer has already plowed the area.

For the March photos Ecology offers the following comments:

Photo 1 H1-S1 – no defined bed and banks

Photos 2 H2-S1 and 3 H3-S1 – small channel appears to have been cut by the farmer, likely in the previous fall. Not considered to be a watercourse.

Photo 4 H4-S1 may have defined bed and banks, also has sinuosity. Having looked at air photos, as well as TRCA's GIS, this is deemed to not be a watercourse due to lack of definition in the air photos and GIS.

Photos 5, 6 and 7 H5-S1, H6-S1, H7-S1 no defined bed and banks

Photo 8 H7-S3 Appears to be a channel cut by the farmer. Not a watercourse.

Photo 9 H7-S3/H7B-S1 Appears to be channels cut by the farmer, not a watercourse.

Photo 10 H8-S2 no defined bed and banks

Photo 11 H8-S4 and Photo 12 H8-S6 appears to only have defined bed and banks where there is gradient in the farm field. Flows tend to pan out where fields flatten out. Not a watercourse.

Photo 13 H8D-S1 and H8-S11 appears to have defined bed and banks, may be a watercourse.

Photos 14, 15 and 16 H8A1-S1, H9-S1, H10-S1 no defined bed or banks for the majority of the drainage. Small sections of definition, not a watercourse.

Photos 17, 18, 19 and 20 H11-S1, H18A-S1, H19-S1, H19E-S1 small sections of definition, not a watercourse.

Photos 21, 22 and 23 H20-S1, H21-S1, H22A-S1 channels cut by the farmer. Not a watercourse.

Photo 26 H24-S1 not a watercourse

Photo 27 H25-S1 cannot evaluate this due to the vegetation.

Hope this helps. Should you have any questions, please contact me.

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From: Robinson, Olivia <orobinson@geiconsultants.com>

Sent: June 23, 2025 5:16 PM

To: Michael Hynes <Michael.Hynes@trca.ca>

Cc: Stemberger, Holly <HStemberger@geiconsultants.com>; Lohnes, Shelley <slohnesh@geiconsultants.com>; Maria Parish <Maria.Parish@trca.ca>; Dilnesaw Chekol <Dilnesaw.Chekol@trca.ca>

Subject: RE: Submission of Mayfield Tullamore TAC Meeting Minutes (8 and 9) and HDF Photologs (PN 2400278)

EXTERNAL SENDER

Hello Michael,

Hope you are staying cool during this insane heat wave we are experiencing! I wanted to check in and see if you had any questions with respect to the HDF Photolog that we prepared (link in below email)?

Let us know if you have any questions or would like to discuss anything further.

Best,

Olivia

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From: Robinson, Olivia

Sent: Wednesday, June 11, 2025 2:21 PM

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Subject: Submission of Mayfield Tullamore TAC Meeting Minutes (8 and 9) and HDF Photologs (PN 2400278)

Hello Mayfield Tullamore TAC,

Please find the attached meeting minutes from our latest TAC Meeting (June 3) and also updated meeting minutes from the May TAC Meeting to reflect some minor changes requested by Jason. As always, we do our best to accurately represent our meetings but if you have any comments or requested edits to the TAC Meeting Minutes please let us know.

We have also prepared the requested photologs for the Headwater Drainage Features (HDFs) located within the Study Area. These photologs as well as the HDF figure from the Phase 1 SWS Report can be downloaded here: [☐ HDF Photologs](#). We have selected representative photos of the drainage features on site, which we continue to recommend are HDFs and not regulated watercourses given their poor definition, ongoing management (golf course, agricultural) and seasonal nature. As we have discussed at previous TAC meetings, a detailed review by GEI's Fluvial Geomorphology team was completed with our approaches and summary provided within Section 3.2.4 of the Phase 1 Report. Our conclusions also coincide with the SABE's characterizations of drainage features on the landscape. Please let us know if there are any further questions regarding the classification of drainage features (HDF vs watercourses) on the site.

Kindest regards,

Olivia

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