

ENVIRONMENTAL IMPACT STUDY



August 27, 2026

163 and 164 Edward Street East
Township of Clearview
County of Simcoe

Prepared for: Lamb Creemore Inc.



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1 INTRODUCTION

Roots Environmental Inc. (“Roots”) has been retained by Lamb Creemore Inc. to complete an Environmental Impact Study (EIS) for the properties located at 163-164 Edward Street East in the Village of Creemore, Township of Clearview, County of Simcoe as illustrated in *Figure 1 – Site Location*.

The proposed development of the site is for mixed commercial and residential uses. An EIS is required to support an Official Plan Amendment (OPA), Zoning By-Law Amendment (ZBA) and Plan of Subdivision per policies of the Township of Clearview Official Plan.

The purpose of the EIS is to identify the presence of any natural heritage features on the site or adjacent lands of 120 metres, assess any impacts resulting from the proposed development, and identify any preventative, mitigative or remedial measures to ensure no negative impacts.

2 POLICY AND LEGISLATION OVERVIEW

A detailed review of relevant environmental legislation and policies will be included in Section 8 of this EIS. This review will include the:

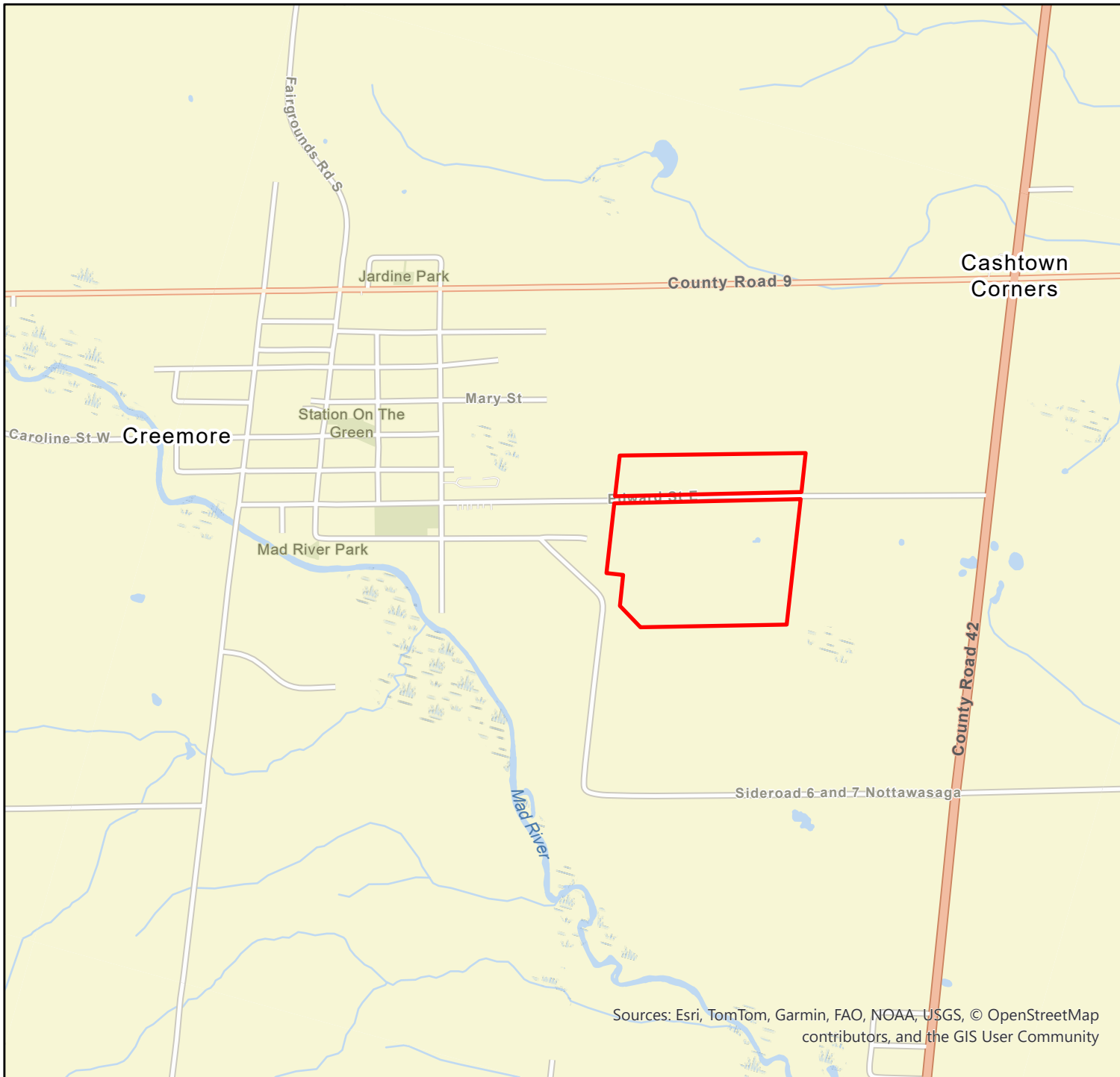
- Provincial Planning Statement (PPS);
- County of Simcoe Official Plan;
- Township of Clearview Official Plan;
- *Species Conservation Act* (SCA); and
- *Migratory Birds Convention Act*.

3 METHODOLOGY

Preparation for the EIS involves a desktop review of available information, field investigations and consultation with applicable agencies. The following provides a summary of tasks completed for the EIS.

3.1 Consultation with Agencies

Terms of Reference for the EIS were submitted on July 3, 2025 to the applicable agencies. The Township and Nottawasaga Valley Conservation Authority (NVCA) subsequently provided comments which were accepted and included in this report. The Terms of Reference are included in Appendix A.



Legend

 Property Boundaries

ENVIRONMENTAL IMPACT STUDY

Figure 1
Site Location

163-164 Edward St. E.
Town of Creemore
Township of Clearview



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community



375 187.5 0 375 750 1,125 1,500
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3.2 Desktop Review

A desktop review was completed to identify previously known natural features and occurrences of rare species or SAR in the Study Area. Sources included the following:

- The Ministry of Natural Resources (MNR) Natural Heritage Information Centre (NHIC) Make A Map: Natural Heritage Areas;
- County of Simcoe and Township of Clearview Official Plans;
- Ontario Nature Reptile and Amphibian Atlas;
- Ontario Breeding Bird Atlas;
- iNaturalist; and
- NVCA Regulation Mapping (Ontario Regulation 41/24).

3.3 Site Investigation

Site investigations were completed on August 5, 2025, and June 24, 2026, to confirm existing conditions within the proposed development area and adjacent lands. As development will occur entirely within agricultural fields (corn), detailed site surveys are not warranted. All site investigations were limited to the subject property. Adjacent lands of 120 metres were investigated through roadside observations where feasible, aerial photography and background mapping in order to avoid any contravention of the *Trespass to Property Act*.

The site investigation included a roving transect through all areas proposed for development and along the edges of the development area to identify any Species at Risk (SAR) or rare species that could be impacted.

As development will occur within an active agricultural field, no classification of vegetation communities is available using the Ecological Land Classification (ELC) for Southern Ontario, First Approximation (Lee et al., 1998).

Incidental observations were made for wildlife during field investigations through physical evidence (i.e., direct and auditory detections, scats, tracks) and for shelter, feeding and breeding sites (e.g., vernal pools, rock piles, etc.).

As the site is being utilized for agricultural purposes with no trees and/or treed areas that could support roosting bats, roost surveys were limited to dripline trees located in a hedgerow abutting the south limits of the site. General criteria for the identification of suitable roost trees were based on MECP protocols in the Species at Risk Bats Survey Note (MECP 2022).

4 EXISTING CONDITIONS

4.1 Desktop Review

4.1.1 MNRF NHIC Make-A-Map: Natural Heritage Areas

The NHIC geographic search for the subject property and adjacent lands of 120-metres (Squares 17NK7208 and 17NK7209) was completed to identify previous records for natural features and species in the area as shown on *Figure 2 – NHIC Natural Areas Map*. Occurrences documented by NHIC may include those beyond the site and on habitats suitable to those species. The following records were found:

- Eastern Milksnake (*Lampropeltis Triangulum*) (S4) (COSSARO – Special Concern) (SC)

Unevaluated wetlands are mapped within adjacent lands to the southeast of the subject lands. No Provincially Significant Wetlands or other natural heritage features (i.e., ANSI) were identified in the review. A summary of the records is included in Appendix A.



Figure 2: NHIC Make-a-Map (subject property illustrated in red border)

4.1.2 Township of Clearview Official Plan

The Township of Creemore Official Plan Schedule B-4 (Land Use Plan Creemore) designates the properties as Residential and Future Development. A Greenland – Hazard Lands Area is noted on adjacent lands to the south and west of the site.

Schedule C (Natural Heritage System) illustrates a watercourse along the west limits of 164 Edward St. E., which crosses Edward St. E and travels through 163 Edward St. E. Schedule C-1 (Natural Heritage System Wetlands) and Schedule C -2 (Natural Heritage System Woodlands) identifies unevaluated wetlands and significant woodlands to the southeast of the subject lands.

4.1.3 Ontario Nature Reptile and Amphibian Atlas

A geographic query of occurrence square 17NK70 was completed using the Ontario Nature Reptile and Amphibian Atlas for observations of species collected from 1970-2019. Observations will include observations beyond the site and on habitats suitable to those species.

The following records of rare species or SAR were found:

- Snapping Turtle (*Chelydra serpentina*) (S4) (SC)

Other species noted in the search are common to Ontario. A summary of the records is included in Appendix A.

4.1.4 Ontario Breeding Bird Atlas

A geographic query was completed using the Atlas Breeding Birds of Ontario for observations of species collected from 2001-2024. It is noted that these occurrence records may include those beyond the subject property and on habitats suitable to those species. No rare species or SAR were identified in available records. All species noted in the search are common to Ontario.

4.1.5 iNaturalist

A geographic query was completed for iNaturalist records within the site and adjacent lands. All species were found to be common (S4 or higher) and non-at-risk in Ontario.

4.1.6 NVCA Regulation Mapping

A review of NVCA regulation mapping illustrates a mapped watercourse (tributary of the Mad River) within both subject properties. NVCA regulatory area is also found within both properties. A permit will be required from the NVCA for any development or site alteration within an area subject to O. Reg. 41/24 of the *Conservation Authorities Act*.

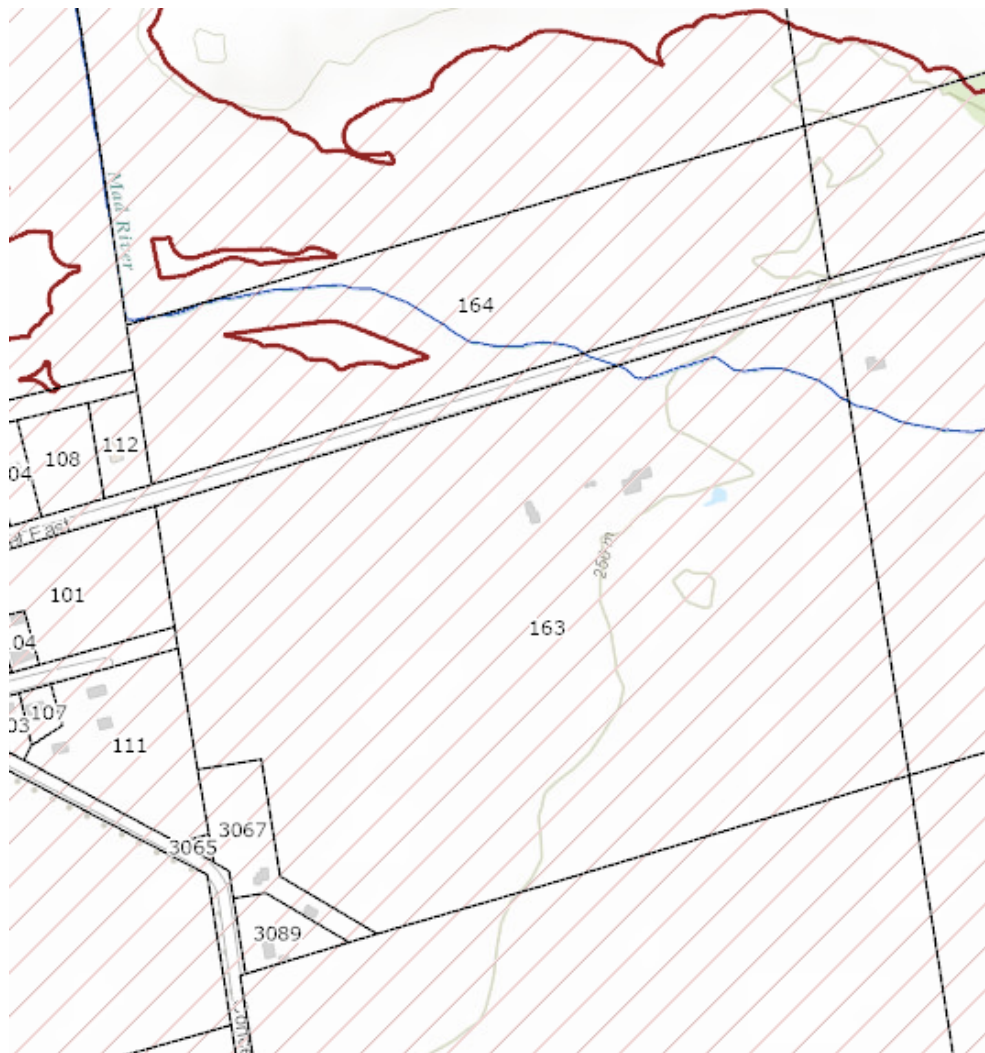


Figure 3: NVCA Regulation Mapping

4.2 Site Conditions

The proposed development is largely active agricultural field, planted in corn in 2025 and soybean in 2026, as illustrated in *Figure 4 – Existing Conditions* and *Table 1 – Site Photos*.

Hedgerows or tree-rows are present along the north limit of 164 Edward St. E., and south and west limits of 163. It could not be confirmed if trees along these boundaries are on the subject properties or adjacent lands. Species present in these tree-rows include Hard Maple (*Acer saccharum*), Basswood (*Tilia americana*), White Elm (*Ulmus americana*), Manitoba Maple (*Acer negundo*) with understory of Lilac (*Syringa vulgaris*), Tartarian Honeysuckle (*Lonicera tatarica*), Staghorn Sumac (*Rhus typhina*), Wild Grape (*Vitis riparia*) and cultural meadow groundcover including Smooth Brome (*Bromus arvensis*), Kentucky Bluegrass (*Poa pratensis*), Wild Carrot (*Daucus carota*), Bull Thistle (*Cirsium vulgare*), Orchard Grass (*Dactylis glomerata*) and Common Milkweed (*Asclepias syriaca*).

Trees within hedgerows and in the previous residential area were inspected for the potential to support bat roost habitat. Within the residential area, trees were found to be primarily Manitoba Maple and

were not large enough and did not contain suitable cavities or snags. Trees along the edges of the property were not inspected as they appear to be on the adjacent properties.

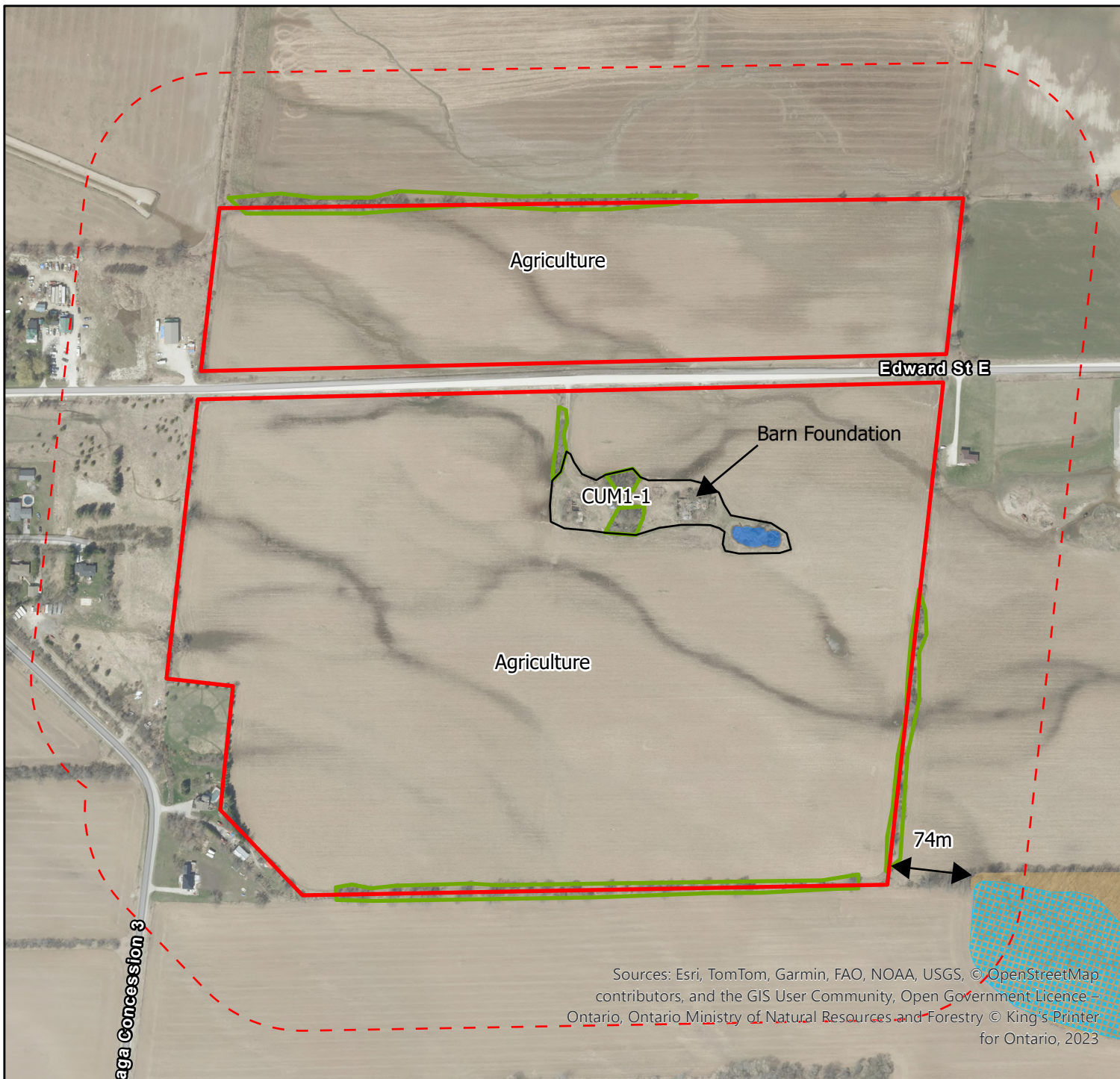
In north-central part of #163 are remnants of a previous residence, barn, driveway and outbuildings. Based on historic imagery, structures (house, barn) were removed between 1989-1997 and the area has become naturalized with largely cultural meadow and pockets of Manitoba Maple with occasional smaller Red Oak (*Quercus rubra*) and White Elm (*Ulmus americana*). Cultural meadow species included Smooth Brome, Wild Carrot, Canada Goldenrod (*Solidago canadensis*), Red Raspberry (*Rubus idaeus*), Orchard Grass and Cow Vetch (*Vicia cracca*).

The foundation of the barn was inspected for the potential to support Species at Risk (SAR) bat species and migratory birds. Openings are present to facilitate the use of the foundation; however, most of the interior of the structure has collapsed and overgrown vegetation is present. The remaining structures, two tin sheds, would not provide habitat for bats or bird species, as the roof and sides are metal, and not preferred for roosting due to excessive heating.

At the east limit of the residential area, a small wetland/agricultural pond is present. This pond/wetland is the result of a previous excavation and likely provided livestock with a water source when the barn and residential area were in operation. The wetland has an area of 668m² (0.07ha) and was found to primarily be composed of Broad-leaved Cattail (*Typha latifolia*), Reed Canary Grass (*Phalaris arundinacea*), European Reed (*Phragmites australis*), and Duckweed (*Lemna minor*). Flooded areas of this wetland are limited due to infilling, which created small pockets of cultural meadow with species such as Bittersweet Nightshade (*Solanum dulcamara*), Smooth Brome, Cow Vetch, Wild Oats and Orchard Grass. There is no connection to any natural habitats within adjacent lands. The closest woodland and wetland to the southeast is approximately 339 metres away.

A tributary of the Mad River is mapped within both properties. Site review found no watercourse present. O. Reg. 41/24 to the *Conservation Authorities Act* defines a watercourse as “means a defined channel, having a bed and banks or sides, in which a flow of water regularly or continuously occurs”. No channel, bed or banks were found anywhere on the properties. Based on the site review and aerial imagery, early spring drainage is present in the agricultural fields; however, it appears to be retained on site. A culvert was found under Edward St. E. (see Table 1), there was no scouring or indication of any watercourse that regularly conveys flow.

No rare species or SAR were found within the development area or adjacent lands. All species were found to be common to similar habitats found in Ontario or are listed as non-native/exotic species.



Legend

- Property Boundaries
- Adjacent Lands (120m)
- Tree Rows/Patches
- Locally Significant Wetland (MNR)
- Significant Woodlands
- Cultural Meadow (CUM1-1)
- Pond/Wetland (MAS2-1)

ENVIRONMENTAL IMPACT STUDY

Figure 4
Existing Conditions

163-164 Edward St. E.
Town of Creemore
Township of Clearview

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Open Government Licence - Ontario, Ontario Ministry of Natural Resources and Forestry © King's Printer for Ontario, 2023



Table 1: Site Photos (K Fleming 2025-2026).

	
Existing agricultural uses (corn) in the development area.	Small wetland in the central part of the site.
	
Looking downstream of culvert crossing Edward St. E. No channel or indication of consistent flow present.	Hedgerow along south boundary of 164 Edward St. E.
	
Remnants of barn on 164 Edward St. E.	Small treed community in location of previous residence and barn at 164 Edward St. E.

5 ASSESSMENT OF NATURAL HERITAGE FEATURES/AREAS

Identification of natural heritage features is based on the PPS, the MNRF “Natural Heritage Reference Manual” (2nd Edition) (MNRF 2010), Township of Clearview Official Plan, “Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E” (MNRF January 2015), and listings and habitat descriptions for species listed in the SCA.

5.1 Significant Wetlands (and Coastal Wetlands)

A review of the MNR NHIC mapping found no Provincially Significant Wetlands within the subject property or adjacent lands.

5.2 Other Wetlands (Unevaluated, Non-Provincially Significant)

A review of available mapping and aerial photography identifies the presence of an unevaluated wetland within adjacent lands to the southeast of the subject lands. This wetland is identified in Schedule C-1 (Natural Heritage System Wetlands) to the Official Plan.

A small pond/wetland (0.07ha) was identified in the central part of 163 Edward St. E. This wetland is the result of past excavation and is isolated due to existing agriculture surrounding it on all sides. There is no connection to any other natural features (i.e., woodlands, wetlands) in the area. Section 5.2.3.8 of the Official Plan provides criteria for locally significant wetlands. This small, isolated wetland does not meet those criteria, and no retention of this wetland is warranted.

It is noted that all wetlands are regulated by the NVCA under O. Reg. 41/24 to the *Conservation Authorities Act*. Further consultation with the NVCA will be required to determine permitting requirements for removal of the small wetland in the central part of the site.

Due to the presence of these wetlands within adjacent lands to the proposed development area, an impact assessment is provided in Section 7 of this report.

5.3 Significant Woodlands

Schedule C -1 (Natural Heritage System Woodlands) to the Official Plan identifies a Significant Woodland within adjacent lands to the southeast of the subject lands. Due to the presence of these wetlands within adjacent lands to the proposed development area, an impact assessment is provided in Section 7 of this report.

5.4 Significant Valleylands

No significant valley land features were identified during the desktop review or found during the field survey on the site.

5.5 Significant Wildlife Habitat

An assessment of candidate Significant Wildlife Habitat (SWH) has been completed using the “Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E” (MNRF 2015) based on the results of the desktop review, habitats present and field investigation. The assessment is provided in Appendix B. Two types of

candidate SWH have potential to occur within a woodland (FOD) located on adjacent lands (120 metres) to the proposed development:

- Bat Maternity Colonies; and
- Special Concern and Rare Wildlife Species.

Due to the presence of this habitat within adjacent lands to the proposed development area, an impact assessment is provided in Section 7 of this report.

5.6 Significant Areas of Natural and Scientific Interest

A desktop review of available information found no Provincially Significant ANSI within the subject property or adjacent lands.

5.7 Fish Habitat/Watercourses

A watercourse, identified as a tributary to the Mad River, is mapped by the NVCA and Township within both properties as illustrated in Figure 4. As discussed in Section 4.2, a site review found no evidence of a watercourse within the properties. Based on aerial photography, drainage does appear to occur on site in the early spring; however, there is no defined channel, bed or bank that would classify it as a watercourse under O. Reg. 41/24 or other provincial criteria. As no watercourse is present, no impact assessment is warranted.

5.8 Habitat of Endangered Species and Threatened Species

A SAR Assessment was completed for existing records within the property and adjacent lands obtained through the desktop review, habitats present within the development area and field investigation.

Mature trees within hedgerows along the edges of the subject property and the barn found in the central part of the site may have the ability to support SAR bat roosting habitat. Further confirmation of the status of trees along the edges, as to whether they are located on site and will be removed, or adjacent properties and may be preserved, has not been confirmed.

No other SAR or potential habitat is present within the proposed development.

Habitat for endangered and threatened species in Ontario is governed by the *Species Conservation Act*. This Act provides protection for species listed as threatened and endangered and their habitat. Habitat may be present within adjacent lands to the proposed development; however, neither the PPS or SCA require assessment of impacts within adjacent lands to habitat for threatened or endangered species.

6 PROPOSED DEVELOPMENT OVERVIEW

The proposed development will include a mix of single and townhomes units, mixed uses, hotel, stormwater management facilities, internal roads and laneways, parks, and drainage blocks as illustrated in Figure 4 – *Coordination Plan*. Access to the development will be from Edward St. E., and Grove and Elizabeth Streets to the west.



KEY PLAN

LAND USE SCHEDULE			
DESCRIPTION	LOT / BLOCK	Nb. OF UNITS	AREA
SINGLE DETACHED (12.0m)	LOT 1-34	34	3.562ha
SINGLE DETACHED (8.1m)	LOT 35-218	122	3.869ha
SEMI-DETACHED (7.6m)	LOT 217-288	154	4.502ha
TOWN-HOMES (6.1m)	289-347	349	7.171ha
MIXED USE	348-352	TBD	0.779ha
HOTEL	353		0.093ha
PARKING	354-358		0.349ha
VILLAGE SQUARE / PARK	359-369		2.202ha
DRAINAGE	360-364		1.878ha
STORMWATER POND	365-367		1.769ha
RETAINING WALL	368-370		0.094ha
LANEWAY	371-381		2.738ha
WALKWAY	382-383		0.028ha
ROADS			8.654ha
TOTAL		729	37.04ha

ROAD LENGTH	
20m R.O.W.	1126.5m
15m R.O.V.	3056.0m

MIXED USE FLOOR AREA SCHEDULE	
TOTAL COMMERCIAL GCA	8,069sq.m
RESIDENTIAL GCA WITHIN MIXED USE BLOCKS (INCLUDING HOTEL ROOMS)	16,119sq.m
TOTAL GCA	24,179sq.m

NOTES:
 Typical ROW is 15m unless otherwise stated
 Typical laneway is 6.5m
 4m x 4m flagging triangle provided on all ROW intersections

Nb.	DATE	REVISIONS
1	18/09/2025	—

CLIENT: LAMB CREEMORE INC.
 SITE ADDRESS: 163 - 164 EDWARD STREET EAST
 CREEMORE
 TOWNSHIP OF CLEARVIEW
 COUNTY OF SIMCOE



162 Guelph Street, Suite 209
 Georgetown, ON L7G 5X7

TITLE: COORDINATION PLAN

SCALE: 1:1200
 DATE: APRIL 2026
 DRAWN: B.C.
 CHECKED: R.R.
 PROJECT No.: XXXX
 DRAWING No.: DC-01

7 IMPACT ASSESSMENT

Four natural heritage features have been identified within the subject property and adjacent lands based on the desktop review, field investigation and habitat assessment:

- Unevaluated Wetlands;
- Significant Woodlands;
- Candidate Significant Wildlife Habitat; and
- Potential Habitat for Endangered and Threatened Species.

This section will assess potential impacts to these features and ecological functions resulting from the proposed development and provides mitigation measures to ensure no negative impacts. This report utilizes the definition of a “negative impact” in the PPS (Page 48) *“in regard to other natural heritage features and areas, degradation that threatens the health and integrity of the natural features or ecological functions for which an area is identified due to single, multiple or successive development or site alteration activities.”*

7.1 Unevaluated Wetlands

The wetland feature is located approximately 74-metres or greater from the southeast corner of 163 Edward St. E. as illustrated in Figure 4. There will be no direct removal of this wetland resulting from the proposed development.

Section 5.2.3 of the Official Plan states that development maintain a minimum buffer of 30-metres to all wetlands. The setback of 74-metres or greater exceeds this requirement. The setback is currently comprised of a tree row and agricultural uses on those adjacent lands to the east. No enhancement or restoration of this buffer area is feasible.

Potential indirect impacts to the wetland on adjacent lands resulting from the proposed development during and post-construction could include the following:

- Changes in drainage patterns would reduce hydrological input to the wetland.
- Sediments and/or contaminants leaving the site and entering the wetland.

To reduce potential impacts during construction, it is recommended that Erosion/Sediment Control (ESC) fence be installed at the limit of grading prior to any site works and maintained until all construction and landscaping of the restoration is completed. This fence will assist in capturing any sediments from the construction area to prevent sedimentation into the wetland and setback area.

It is recommended that a water balance be completed to ensure pre-development flow and contributions to this wetland are met in post-construction conditions.

As there will be no direct impacts, setbacks of 110-metres or greater will be maintained and mitigation measures will be implemented to minimize potential impacts during construction, we anticipate no negative impacts to these wetlands resulting from the proposed development.

7.2 Significant Woodlands/Significant Wildlife Habitat

Significant Woodlands and potential Significant Wildlife Habitat may be present in a woodland on adjacent lands to the southeast of the proposed development area. There will be no direct impact on this feature (i.e., removal).

Potential indirect impacts to the Significant Woodlands and Significant Wildlife Habitat on adjacent lands resulting from the proposed development during and post-construction could include the following:

- Noise and light pollution to local wildlife within the adjacent woodland habitat; and
- Changes in drainage patterns to the woodland.

A 74-metre or greater setback to the woodland will be maintained from the development limit as illustrated in Figure 4. The setback is currently comprised of a tree row and agricultural uses on those adjacent lands to the east. No enhancement or restoration of this buffer area is required or feasible.

The development may result in some ambient noise from the development and roadways. A SWM pond will be located in the southeast corner of 163 Edward Street. This pond in conjunction with the 74-metre setback to the woodland habitats will negate any significant noise and light impacts.

Based on a setback of 74-metres or greater and agricultural uses on adjacent lands that will continue between the development and the woodland, no negative impacts are anticipated resulting from the proposed development.

7.3 Habitat of Endangered and Threatened Species

Habitat for SAR bat species may be present in mature trees along the edges of the properties and within the foundation of a barn on site.

Ontario Regulation (O. Reg.) 75/26 to the SCA allows for the registration of activities that may impact habitat for listed species at risk provided requirements of that registration are completed. This includes a mitigation plan, monitoring and implementation of conservation measures.

If trees along the edges of the property are to be removed and/or impacted by the development, it is recommended that an assessment be completed to current Ministry of Environment, Conservation and Parks (MECP) protocols to determine potential suitability as SAR bat habitat. If suitable habitat is found, the development (or activity under O. Reg. 75/26) should be registered under the SCA prior to any removal.

Prior to removal of the barn foundation on site, an assessment shall also be completed to current MECP protocols to determine potential suitability as SAR bat habitat. If suitable habitat is found, the development (or activity under O. Reg. 75/26) should be registered under the SCA prior to any removal.

The assessments, and if required, confirmation of registration, shall be provided to the Township.

7.4 Additional Recommendations

To avoid potential direct impacts to bird species (i.e. destruction of nests) protected under the *Migratory Birds Convention Act*, it is recommended that no clearing of vegetation occurs between April 1 – August 31st.

7.5 Summary of Technical Recommendations

The following provides a summary of technical recommendations for mitigation measures made in this EIS to ensure no negative impacts to identified natural heritage features and their ecological functions, and for conformity with applicable municipal Official Plans and consistency with provincial policy/legislation.

- Erosion/Sediment Control (ESC) fencing be installed at the limit of grading prior to any site works and maintained until all construction is completed and the site is stabilized.
- A water balance be completed to ensure pre-development flow and contributions to the wetland southeast of the development are met in post-construction conditions.
- An assessment of trees to be removed and/or impacted along the edges of the properties be completed for potential SAR bat roost habitat.
- An assessment is completed for the barn foundation in the central part of the site to confirm presence or absence of bat habitat.
- Registration under O. Reg. 75/26 to the SCA be completed if bat habitat is confirmed in trees to be removed and/or impacted and the barn foundation.
- No clearing of vegetation occurs between April 1 – August 31st.

8 POLICY AND LEGISLATION COMPLIANCE

8.1 Environmental Planning Policies

The following tables provide a summary of planning policies and rationale for consistency with the Provincial Planning Statement, and conformity with the County of Simcoe Official Plan and Township of Clearview Official Plan. This environmental policy review was undertaken by Charles F. Burgess, MCIP, RPP of Burgess Gleason Environmental Inc.

Table 2: Provincial Planning Statement (2024)

Section	Policy	Policy Consistency
4.1.1-4.1.2	Natural features and areas shall be protected and their diversity and connectivity should be maintained.	This EIS has identified and recognized the natural heritage features in the area. All new development will be located outside any natural heritage features.
4.1.3	Natural heritage systems shall be identified in Ecoregions 6E and 7E ¹ recognizing that they will vary in size and	The Natural Heritage System (NHS) is illustrated on Provincial mapping and maps to the municipal Official Plans. The subject

	form in settlement areas, rural areas, and prime agricultural areas.	property is devoid of any Natural Heritage System based on this mapping.
4.1.4	Development and site alteration shall not be permitted in significant wetlands and significant coastal wetlands.	There are no significant wetlands on the subject property.
4.1.5	Development and site alteration shall not be permitted in valleylands, woodlands, wildlife habitat, and ANSI that are significant including coastal wetlands unless it has been demonstrated that there will be no negative impacts on the natural feature and their ecological functions.	There are no natural heritage features listed in Policy 4.1.5 on the subject property.
4.1.6	Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.	Notwithstanding mapping to the Township's Official Plan, no watercourses exist on the subject properties based on field investigations.
4.1.7	Development and site alteration shall not be permitted in habitat of endangered species and threatened species except in accordance with provincial and federal requirements.	Prior to any development and site alterations, the provisions of the <i>Species Conservation Act</i> will be met through the planning and development process. Refer to Section 7.3 of this EIS for greater detail and analysis.
4.1.8	Development and site alteration shall not be permitted on adjacent lands to features identified in 4.1.4, 4.1.5, and 4.1.6 unless it has been demonstrated that there will be no negative impacts.	The proposed development will be located adjacent to a significant woodland located to the southeast of 163 Edward Street. Given that all new development will be located a minimum of 74 metres from this woodland area, it is anticipated that there will be no negative impacts on this natural heritage feature. Please refer to Section 7.2 for greater detail and analysis.

Table 3: County of Simcoe Official Plan (Consolidation 2023)

Section	Designation	Conformity
Schedule 5.1 to the Official Plan	The subject property is designated Settlements according to the Land Use Schedule to the Official Plan.	The Settlements designation in the County Official Plan is intended to reflect Settlement Areas. The Community of Creemore is a defined Settlement Area where growth and development should be directed. On this basis, the proposed urban development within the Settlement Area of Creemore complies with the County of Simcoe Official Plan. It should be noted that the County's Greenlands System and policies do not apply in Settlement Areas.

Schedule 5.2.2	This Schedule illustrates the streams and evaluated wetlands within the County.	Based on this Schedule and site evaluations, the subject lands are devoid of any evaluated wetlands. However, a watercourse is shown on the properties on Schedule 5.2.2. The site inspections have shown that no watercourse exists on the properties.
Schedule 5.2.3	Schedule 5.2.3 shows the ANSI within the County.	There are no ANSI on the subject lands based on provincial and County mapping.
Schedule 5.2.5	This Schedule illustrates the Highly Vulnerable Aquifers (HVA) within the County of Simcoe.	Based on this Schedule, the subject property is located outside any HVA.
Schedule 5.2.6	This Schedule shows the Significant Groundwater Recharge Area (SGRA) within the County.	The subject lands are within a SGRA. Through the planning and development process, proper studies and plans will be undertaken to ensure that the SGRA will be maintained. This includes storm water management, servicing, hydrogeological, and drainage plans that will be prepared to the satisfaction of the Township and applicable agencies.
3.3.15vi)	Development and site alteration shall not be permitted on adjacent lands unless it has been demonstrated that there will be no negative impact on the natural feature or its ecological function. Adjacent lands are generally defined as 120 metres dependent upon the feature.	It has been demonstrated that there will be no negative impacts on the adjacent Significant Woodland given that all new development and site alteration will be setback a minimum of 74 metres. Refer to Section 7.2 of this EIS for greater detail and analysis.
4.5.6	In Settlement Areas, potential environmental impacts shall be mitigated using all reasonable methods within Significant Groundwater Recharge Areas.	Through the planning and development process, proper studies and plans will be undertaken to ensure that the SGRA will be maintained. These include storm water management, servicing, hydrogeological, and drainage plans that will be prepared to the satisfaction of the Town and applicable agencies.

Table 4: Township of Clearview Official Plan (Consolidation 2024)

Schedule	Designation	Conformity
Schedule A Municipal Structure	This Schedule shows the countryside and Settlement Areas within the Township.	The subject properties are within the Settlement Area of Creemore based on this Schedule. It is noted that growth and development should be directed to Settlement Areas.
Schedule B Land Use	Schedule B illustrates the land use within the municipality.	Based on this Schedule, the subject lands are within the Settlement Area of Creemore.
Schedule B-4 Land Use Plan Creemore	This Schedule shows the land use designations within the Settlement Area of Creemore.	The subject lands are designated Residential and Future Development based on Schedule B-4. An Official Plan amendment is required to further support the principle for development and urban uses established with these land use designations.
Schedule C Natural Heritage System	This Schedule shows the ANSI, watercourses, and Township's Natural Heritage System.	This Schedule illustrates a watercourse on the subject properties. The site inspections have determined that no watercourse exists on the subject lands.
Schedule C-1 Natural Heritage System Wetlands	Schedule C-1 illustrates the wetlands within the municipality.	The subject lands are devoid of any wetland based on Schedule C-1. However, a small wetland (0.07ha) was identified on the subject lands through field investigations. Given its lack of connectivity, small size, and minimal ecological significance, this wetland area will be removed.
Schedule C-2 Natural Heritage System Woodlands	Schedule C-2 shows the woodlands within the Township.	The subject properties are devoid of any woodlands based on Schedule C-2 and the site inspections. However, a significant woodland is identified to the southwest of the subject lands. All new development and site alteration will be setback a minimum of 74 metres from this woodland area.
Schedule D-1 Water Resources Highly Vulnerable Aquifers (HVA)	This Schedule illustrates the Highly Vulnerable Aquifers (HVA) within the Township.	Based on this Schedule, the subject property is located outside any HVA.

Schedule D-2 Water Resources Significant Groundwater Recharges Areas (SGRA)	This Schedule shows the Significant Groundwater Recharge Areas within the municipality.	The subject lands are within a SGRA. Through the planning and development process, proper studies and plans will be undertaken to ensure that the SGRA will be maintained. This includes storm water management, servicing, hydrogeological, and drainage plans that will be prepared to the satisfaction of the Township and applicable agencies.
Schedule SP-2 Special Policy Areas Area 2 Creemore	A Special Policy Area exists on the subject lands based on this Schedule.	A part of the subject lands may be within the flood plain of the Mad River. The policies of section 13.2.1 of the Official Plan will need to be addressed prior to any development on the properties. A Permit from the NVCA under Ontario Regulation 41/24 will also be required prior to any development and site alteration within the natural hazard lands.
Section 5.2.3.8 of the OP	This Section defines locally significant wetlands.	Based on the criteria identified in this section, the small wetland (0.07ha) on site would not be classified as locally significant. As a result, this wetland area can be removed from the landscape.
Section 5.4 of the OP	Section 5.4 provides a framework for the preparation of Environmental Impact Studies.	This EIS has been prepared in the context of this Official Plan section.

8.2 Species Conservation Act

Provided assessments are completed for the barn foundation and mature trees along the edges of the property that will be impacted or removed by development, and if required, registrations completed under O. Reg. 75/26 to the SCA, we anticipate no contravention of the *Species Conservation Act*.

8.3 Migratory Birds Convention Act

If any naturalized vegetation is to be removed that could support nesting migratory birds as defined under the *Migratory Birds Convention Act*, the removal should occur outside the nesting season of April 1 – August 31st to avoid contravention of the *Migratory Birds Convention Act*.

9 CONCLUSIONS

Roots Environmental Inc. has been retained by Lamb Creemore Inc to complete an Environmental Impact Study in support of applications for development of the properties known as 163 and 164 Edward Street East in the Community of Creemore, Township of Clearview for urban uses.

Four natural heritage features were identified within adjacent lands to the proposed development:

- Unevaluated Wetlands;
- Significant Woodlands;
- Significant Wildlife Habitat; and
- Habitat of Endangered and Threatened Species.

Provided development occurs as shown on the development plan, and mitigation measures and recommendations in this report are implemented, we anticipate no negative impacts to the identified natural heritage features.

Respectively submitted by Roots Environmental Inc.:

A handwritten signature in blue ink, appearing to read "Kyle Fleming", with a stylized flourish at the end.

Kyle Fleming, BSc. (Wildlife)
Senior Ecologist

Copy: Burgess Gleason Environmental Inc., Charles F. Burgess, MCIP, RPP

REFERENCES

Government of Ontario. 2024. Provincial Planning Statement. Queen's Printer of Ontario.

Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P.Uhlig and S. McMurray. 1998. Ecological Land Classification for Southern Ontario: First Approximation and its Application. Ontario Ministry of Natural Resources, Southcentral Science Section, Science Development and Transfer Branch. SCSS Field Guide FG-02.

Natural Heritage Information Centre (NHIC) Database. 2021. Provincial Status of Plants, Wildlife and Vegetation Communities Database. Ministry of Natural Resources and Forestry, Peterborough.

Ontario Ministry of Natural Resources and Forestry. January 2015. Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E.

Ontario Ministry of Natural Resources and Forestry. March 2010. Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005.

APPENDIX A

Desktop Review

July 3, 2025

Building & Planning
Township of Clearview
217 Gideon Street
Stayner, ON L0M 1S0

Attention: Danielle Waters
Community Planner

RE: Terms of Reference - Environmental Impact Study
(Township File # 2024-065PC)
163 & 164 Edward Street East
Township of Clearview

1. Introduction/Background

Roots Environmental ('Roots') has been retained by Lamb Creemore Inc. to complete an Environmental Impact Study (EIS) in support of a development applications for the above-mentioned properties.

The Township of Clearview provided an 'Issues Summary & Completeness Requirements' as part of pre-consultation on proposed development of the properties. Those comments provided a list of studies required for the applications, which included an EIS. The following is provided as Terms of Reference for the EIS.

The subject property is designated Residential and Future Development in Schedule B (Land Use) to the Official Plan. A Hazard Land Special Policy Overlay is present in the west part of 163 Edward St. E. A watercourse is also illustrated on Schedules within 163 and 164 Edward St E.

A preliminary desktop review of the Ministry of Natural Resources (MNR) Natural Heritage Information Centre (NHIC) Natural Heritage Areas mapping tool was completed for the property and adjacent lands of 120 metres. A watercourse is mapped in both properties. No other natural heritage features (i.e., Provincially Significant Wetlands, ANSI's, etc.) are found in the properties. Adjacent lands may contain unevaluated wetlands. Records for Species at Risk (SAR) were also noted in the review.

The subject property is largely active agriculture (Figure 2), with corn being present in 2023 based on Google Streetview imagery. Narrow hedgerows are present along the edges of both properties, and a small clearing is also present in 163 Edward St. E., with the downed remains of remnant buildings.

Review of 2024 aerial imagery identifies drainage through the properties in the location of the mapped watercourse. No clear indication of a defined channel, consisting of a bed and bank, is visible. This will be confirmed through site investigations and consultation with Nottawasaga Valley Conservation Authority (NVCA).

The purpose of this EIS will be to identify all natural heritage features and ecological functions that could be impacted by the proposed development, assess those impacts and provide mitigation measures as necessary to ensure compliance with all policies in the applicable municipal and Provincial plans, and legislation.



Figure 1: MNR NHIC Natural Heritage Areas mapping.



Figure 2: Current Aerial Photography (Township of Clearview Interactive Map)

2. Work Plan

The following work plan is recommended based on requirements in the Township of Clearview Official Plan and a preliminary review of habitats and potential natural features present within the subject property and adjacent lands. As the subject property and adjacent lands have been historically used for agricultural row crops and lack any native habitats, it is our opinion that the EIS can be scoped to the following:

1. Desktop Review:

- Current aerial photography.
- Land Information Ontario (LIO).
- Natural Heritage Information Centre.
- Wildlife Atlases.

- Citizen Science Databases.
- Township of Clearview Official Plan.

2. Field Investigations:

- *Botanical Survey*: One survey to take place in summer growing season (July - August) to identify any rare species or Species at Risk (SAR) in hedgerows and small clearings on the properties.
- *Ecological Land Classification* (ELC): The vegetation communities on the properties will be identified during the spring/summer using the Ecological Land Classification (ELC) for Southern Ontario (1st Approximation) to vegetation type, where possible.
- *Incidental Wildlife Observations*: Incidental observations for wildlife during field investigations through observations of physical evidence (scats, tracks) and for shelter, feeding and breeding sites (e.g., wetlands, rock piles, etc.).

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2. Policy and Legislation Overview
3. Methodology
4. Existing Conditions
 - 4.1. Desktop Review
 - 4.2. Physiography
 - 4.3. Vegetation
 - 4.3.1. Ecological Land Classification (ELC)
 - 4.3.2. Botanical Inventory
 - 4.4. Wildlife
 - 4.4.1. Incidental Observations
 - 4.5. Aquatic Habitats
 - 4.6. Species at Risk
5. Assessment of Natural Heritage Features/Areas
 - 5.1. Wetlands (Provincially Significant, Evaluated Non-Provincially Significant and Unevaluated)
 - 5.2. Significant Wildlife Habitat
 - 5.3. Significant Woodlands
 - 5.4. Areas of Natural and Scientific Interest (ANSI)
 - 5.5. Significant Valleylands
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6. Impact Assessment
 - 6.1. Proposed Development
 - 6.2. Impact Assessment
 - 6.3. Summary of Recommendations
7. Policy Compliance
8. Conclusions

Technical studies beyond the EIS, such as but not limited to, the hydrogeological assessment, stormwater management, grading plan, erosion and sediment control plans will be reviewed to identify any potential impacts and to ensure recommendations in those reports are consistent with those in the EIS.

We ask that you provide any comments that should be incorporated into this Terms of Reference or provide confirmation at your earliest convenience.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kyle Fleming", with a stylized flourish at the end.

Kyle Fleming, BSc. (Wildlife)
Senior Ecologist

cc: Lamb Creemore Inc.

APPENDIX B

Significant Wildlife Habitat Assessment

Seasonal Concentration of Areas of Animals				
Type	ELC Codes	Habitat Criteria	Defining Criteria	Presence/Absence of Candidate SWH?
Waterfowl Stopover and Staging Areas (Terrestrial)	CUM1 CUT1 *With evidence of annual flooding from melt water or run-off	Fields with sheet water during Spring (mid-March to May). Agricultural fields with waste grains are commonly used by waterfowl, these are not considered SWH unless they have spring sheet water available.	Any mixed species aggregations of 100 or more individuals required. The flooded field ecosite habitat plus a 100-300m radius area, dependant on local site conditions and adjacent land use is the significant wildlife habitat.	Not present – no flooding and habitat is not suitable.
Waterfowl Stopover and Staging Areas (Aquatic)	MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7	Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration. Sewage treatment ponds and storm water ponds do not qualify as a SWH, however a reservoir managed as a large wetland or pond/lake does qualify. These habitats have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water)	Aggregations of 100 or more of listed species for 7 days, results in > 700 waterfowl use days. Areas with annual staging of ruddy ducks, canvasbacks, and redheads are SWH. The combined area of the ELC ecosites and a 100m radius area is the SWH.	Not present – Suitable ecosites not present in the development area or adjacent lands.
Shorebird Migratory Stopover Area	BBO1 BBO2 BBS1 BBS2 BBT1 BBT2 SDO1 SDS2 SDT1 MAM1 MAM2 MAM3 MAM4 MAM5	Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. Sewage treatment ponds and storm water ponds do not qualify as a SWH.	Presence of 3 or more of listed species and > 1000 shorebird use days during spring or fall migration period. Any site with >100 Whimbrel used for 3 years, or more is significant. The area of significant shorebird habitat includes the mapped ELC shoreline ecosites plus a 100m radius area.	Not present – Ecosites not present in the development area or adjacent lands.
Raptor Wintering Area	<u>Hawks/Owls</u> : Combination of ELC Community Series; need to have present one Community Series from each land class: Forest: FOD FOM FOC Upland: CUM CUT CUS CUW <u>Bald Eagle</u> : Forest community Series: FOD, FOM, FOC, SWD, SWM or SWC on shoreline areas adjacent to large rivers or adjacent to lakes with open water (hunting area).	The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors. Raptor wintering sites (hawk/owl) need to be > 20 ha with a combination of forest and upland. Least disturbed sites, idle/fallow or lightly grazed field/meadow (>15ha) with adjacent woodlands. Field area of the habitat is to be wind swept with limited snow depth or accumulation. Eagle sites have open water, large trees and snags available for roosting.	One or more Short-eared Owls or one or more Bald Eagles or At least 10 individuals and two of the listed hawk/owl species. To be significant a site must be used regularly (3 in 5 years) for a minimum of 20 days by the above number of birds. The habitat area for an Eagle winter site is the shoreline forest ecosites directly adjacent to the prime hunting area.	Not present – Treed areas within the study area are not large enough to meet size criteria for significance. No raptor nests observed during site investigations in 2025.
Bat Hibernacula	CCR1 CCR2 CCA1 CCA2 Buildings are not considered to be SWH.	Hibernacula may be found in caves, mine shafts, underground foundations and Karsts. Active mine sites should not be considered as SWH	All sites with confirmed hibernating bats are SWH. The habitat area includes a 200m radius around the entrance of the hibernaculum for most development types.	Not present – no hibernacula are found on site.
Bat Maternity Colonies	FOD FOM SWD SWM	Maternity colonies can be found in tree cavities, vegetation and often in buildings (buildings are not considered to be SWH).	Maternity Colonies with confirmed use by; >10 Big Brown Bats >5 Adult Female Silver- haired Bats	Potential (Adjacent Lands) – No suitable habitat was identified in the development area. Adjacent woodland to

		Maternity colonies located in Mature deciduous or mixed forest stands with >10/ha large diameter (>25cm dbh) wildlife trees. Female Bats prefer wildlife tree (snags) in early stages of decay, class 1-3. Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred.	The area of the habitat includes the entire woodland or a forest stand ELC Ecosite or an Eco element containing the maternity colonies.	the southeast may be suitable based on presence of deciduous cover.
Turtle Wintering Areas	Snapping and Midland Painted Turtles; ELC Community Classes; SW, MA, OA and SA, ELC Community Series; FEO and BOO. Northern Map Turtle: Open Water areas such as deeper rivers or streams and lakes with current can also be used as over-wintering habitat.	For most turtles, wintering areas are in the same general area as their core habitat. Water has to be deep enough not to freeze and have soft mud substrates. Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen. Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH.	Presence of 5 over-wintering Midland Painted Turtles is significant. One or more Northern Map Turtle or Snapping Turtle over-wintering within a wetland is significant. The mapped ELC ecosite area with the over wintering turtles is the SWH. If the hibernation site is within a stream or river, the deep-water pool where the turtles are over wintering is the SWH.	Not present – No suitable ELC units found within the subject properties or adjacent lands based on aerial photography.
Reptile Hibernaculum	For all snakes, habitat may be found in any ecosite other than very wet ones. For Five-lined Skink, ELC Community Series of FOD and FOM and Ecosites: FOC1 FOC3	For snakes, hibernation takes place in sites located below frost lines in burrows, rock crevices and other natural or naturalized locations. The existence of features that go below frost line; such as rock piles or slopes, old stone fences, and abandoned crumbling foundations assist in identifying candidate SWH. Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover. Five-lined skink prefer mixed forests with rock outcrop openings providing cover rock overlaying granite bedrock with fissures.	Presence of snake hibernacula used by a minimum of five individuals of a snake sp. or individuals of two or more snake spp. Congregations of a minimum of five individuals of a snake sp. or individuals of two or more snake spp. near potential hibernacula (e.g. foundation or rocky slope) on sunny warm days in Spring (Apr/May) and Fall (Sept/Oct) If there are Special Concern Species present, then site is SWH. The feature in which the hibernacula is located plus a 30 m radius area is the SWH.	Not present – No burrows, fissures, crevices or anthropogenic habitats (i.e., rock piles) were present. There are no records for five-lined skink in the immediate area and rock outcrops are not present.
Colonially - Nesting Bird Breeding Habitat (Bank and Cliff)	Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles. Cliff faces, bridge abutments, silos, barns. Habitat found in the following ecosites: CUM1 CUT1 CUS BLO1 BLS1 BLT1 CLO1 CLS1 CLT1	Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area. Does not include man-made structures (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles. Does not include a licensed/permitted Mineral Aggregate Operation.	Presence of 1 or more nesting sites with 8 or more cliff swallow pairs and/or rough-winged swallow pairs during the breeding season. A colony identified as SWH will include a 50m radius habitat area from the peripheral nests.	Not present – suitable habitats (i.e., banks, hills, etc.) not present on site.
Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs)	SWM2 SWM3 SWM5 SWM6 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7 FET1	Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used. Most nests in trees are 11 to 15 m from ground, near the top of the tree.	Presence of 5 or more active nests of Great Blue Heron or other listed species. The habitat extends from the edge of the colony and a minimum 300m radius or extent of the Forest Ecosite containing the colony or any island <15.0ha with a colony is the SWH.	Not present – larger wetlands or waterbodies are not present on site or within adjacent lands to support this habitat. MNR does not identify any wildlife

				concentration areas in NHIC records.
Colonially - Nesting Bird Breeding Habitat (Ground)	Any rocky island or peninsula (natural or artificial) within a lake or large river. Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer's Blackbird) MAM1 – 6 MAS1 – 3 CUM CUT CUS	Nesting colonies of gulls and terns are on islands or peninsulas associated with open water or in marshy areas. Brewer's Blackbird colonies are found loosely on the ground in low bushes in close proximity to streams and irrigation ditches within farmlands.	Presence of > 25 active nests for Herring Gulls or Ring-billed Gulls, >5 active nests for Common Tern or >2 active nests for Caspian Tern. Presence of 5 or more pairs for Brewer's Blackbird. Any active nesting colony of one or more Little Gull, and Great Black-backed Gull is significant. The edge of the colony and a minimum 150m radius area of habitat, or the extent of the ELC ecosites containing the colony or any island <3.0ha with a colony is the SWH.	Not present – islands and peninsulas not present.
Migratory Butterfly Stopover Areas	Combination of ELC Community Series; need to have present one Community Series from each land class: Field: CUM CUT CUS Forest: FOC FOD FOM CUP	Minimum of 10 ha in size with a combination of field and forest habitat present and will be located within 5 km of Lake Ontario. Habitat is typically a combination of field and forest. The habitat should not be disturbed, fields/meadows with an abundance of preferred nectar plants and woodland edge providing shelter are requirements for this habitat.	The presence of Monarch Use Days (MUD) during fall migration (Aug/Oct). MUD of >5000 or >3000 with the presence of Painted Ladies or Red Admiral's is to be considered significant.	Not present – site not within 5km of Lake Ontario.
Landbird Migratory Stopover Areas	FOC FOM FOD SWC SWM SWD	Woodlots need to be >10 ha in size and within 5 km of Lake Ontario. If multiple woodlands are located along the shoreline those Woodlands <2km from Lake Ontario are more significant. Woodlots and forest fragments are important habitats to migrating birds, these features located along the shore and located within 5km of Lake Ontario are Candidate SWH cxlviii.	Use of the habitat by >200 birds/day and with >35 spp. with at least 10 bird spp. recorded on at least 5 different survey dates.	Not present - site not within 5 km of Lake Ontario.
Deer Yarding Areas	OMNRF to determine this habitat. FOM FOC SWM SWC CUP2 CUP3 FOD3 CUT	The yard is composed of two areas referred to as Stratum I and Stratum II. Stratum II covers the entire winter yard area and is usually a mixed or deciduous forest with plenty of browse available for food.	Deer Yards are mapped by MNR District offices.	Not present – MNR does not identify this site as part of a Deer Yard.
Deer Winter Congregation Areas	FOC FOM FOD SWC SWM SWD Conifer plantations much smaller than 50 ha may also be used.	Woodlots will typically be >100 ha in size. Woodlots <100ha may be considered as significant based on MNR studies or assessment.	Deer winter congregation areas considered significant will be mapped by MNR.	Not present – MNR does not identify this site as part of a Deer Yard.
Rare Vegetation Communities				
Cliffs and Talus Slopes	TAO CLO TAS CLS TAT CLT	A Cliff is vertical to near vertical bedrock >3m in height. Most cliff and talus slopes occur along the Niagara Escarpment.	ELC Vegetation Type for Cliffs or Talus Slopes.	Not present – applicable ELC units are not present.
Sand Barren	SBO1 SBS1 SBT1	A sand barren area >0.5ha in size	ELC Vegetation Type for Sand Barrens. Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.)	Not present – applicable ELC units are not present.

Alvar	ALO1 ALS1 ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1 CUW2	An Alvar site > 0.5 ha in size.	Field studies that identify four of the five Alvar Indicator Species at a Candidate Alvar site is Significant. Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.).	Not present – applicable ELC units are not present.
Old Growth Forest	FOD FOC FOM SWD SWC SWM	Woodland areas 30 ha or greater in size or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest .	If dominant trees species of the are >140 years old, then the Ecosite or eco-element within an ecosite containing these trees is SWH. The forested area containing the old growth characteristics will have experienced no recognizable forestry activities.	Not present – Woodlands on site or adjacent lands are not > 30ha.
Savannah	TPS1 TPS2 TPW1 TPW2 CUS2	A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60%. No minimum size to site. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH.	Confirm one or more of the Savannah indicator species. Area of the ELC Ecosite is the SWH. Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.).	Not present – applicable ELC units are not present.
Tallgrass Prairie	TPO1 TPO2	An open Tallgrass Prairie habitat has < 25% tree cover. No minimum size to site. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH.	Field studies confirm one or more of the Prairie indicator species. Area of the ELC Ecosite is the SWH. Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.).	Not present – applicable ELC units are not present.
Other Rare Vegetation Communities	Provincially Rare S1, S2 and S3 vegetation communities.	The MNR/NHIC will have up to date listing for rare vegetation communities.	Area of the ELC Vegetation Type polygon is the SWH.	Not present – ELC units found on site are not provincially rare (S1-S3).
Specialized Habitat for Wildlife				
Waterfowl Nesting Area	All upland habitats located adjacent to these wetland ELC Ecosites are Candidate SWH: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SWT1 SWT2 SWD1 SWD2 SWD3 SWD4	A waterfowl nesting area extends 120 m from a wetland (> 0.5 ha) or a wetland (>0.5ha) and any small wetlands (0.5ha) within 120m or a cluster of 3 or more small (<0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur. Upland areas should be at least 120 m wide so that predators such as racoons, skunks, and foxes have difficulty finding nests. Wood Ducks and Hooded Mergansers utilize large diameter trees (>40cm dbh) in woodlands for cavity nest sites.	Presence of 3 or more nesting pairs for listed species excluding Mallards, or; Presence of 10 or more nesting pairs for listed species including Mallards. Any active nesting site of an American Black Duck is considered significant.	Not present – wetlands found on adjacent lands do not meet criteria for significance.
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	ELC Forest Community Series: FOD, FOM, FOC, SWD, SWM and SWC directly adjacent to riparian areas – rivers, lakes, ponds and wetlands.	Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water. Nests located on man-made objects are not to be included as SWH (e.g. telephone poles and constructed nesting platforms).	For an Osprey, the active nest and a 300 m radius around the nest or the contiguous woodland stand is the SWH. For a Bald Eagle the active nest and a 400-800 m radius around the nest is the SWH. Area of the habitat from 400-800m. To be significant a site must be used annually. When found inactive, the site must be known to be inactive	Not present – woodland communities on site are not adjacent to larger rivers, lakes or wetlands.

			for > 3 years or suspected of not being used for >5 years before being considered not significant.	
Woodland Raptor Nesting Habitat	May be found in all forested ELC Ecosites.	All natural or conifer plantation woodland/forest stands >30ha with >10ha of interior habitat. Interior habitat determined with a 200m buffer.	Presence of 1 or more active nests from species list is considered significant. Red-shouldered Hawk and Northern Goshawk – A 400m radius around the nest or 28 ha area of habitat is the SWH. Barred Owl – A 200m radius around the nest is the SWH. Broad-winged Hawk and Coopers Hawk – A 100m radius around the nest is the SWH. Sharp-Shinned Hawk – A 50m radius around the nest is the SWH.	Not present – woodland communities are not large enough to meet criteria. No raptor nests observed on site.
Turtle Nesting Areas	Exposed mineral soil (sand or gravel) areas adjacent (<100m) or within the following ELC Ecosites: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 BOO1 FEO1	Must provide sand and gravel that turtles are able to dig in and are in open, sunny areas. Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH.	Presence of 5 or more nesting Midland Painted Turtles. One or more Northern Map Turtle or Snapping Turtle nesting is a SWH. The area or collection of sites within an area of exposed mineral soils where the turtle's nest, plus a radius of 30-100m around the nesting area is the SWH. Travel routes from wetland to nesting area are to be considered within the SWH as part of the 30-100m area of habitat.	Not present – applicable ELC units are not present within adjacent woodlands based on aerial photography.
Seeps and Springs	Seeps/Springs are areas where ground water comes to the surface. Often, they are found within headwater areas within forested habitats. Any forested Ecosite within the headwater areas of a stream could have seeps/springs.	Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system.	Presence of a site with 2 or more seeps/springs should be considered SWH. The area of a ELC forest ecosite or an Eco element within ecosite containing the seeps/springs is the SWH.	Not present – no seeps/springs were observed.
Amphibian Breeding Habitat (Woodland)	FOC FOM FOD SWC SWM SWD	Presence of a wetland, pond or woodland pool (including vernal pools) >500m ² within or adjacent (within 120m) to a woodland (no minimum size). Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat.	Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog species with at least 20 individuals (adults or eggs masses) or 2 or more of the listed frog species with Call Level Codes of 3. The habitat is the wetland area plus a 230m radius of woodland area.	Not present – no vernal pools or swamp communities found within the subject property. Based on aerial photography, no vernal pooling is present in the wetland on adjacent lands that would support breeding habitat.
Amphibian Breeding Habitat (Wetlands)	Classes SW, MA, FE, BO, OA and SA.	Wetlands>500m ² (about 25m diameter). Bullfrogs require permanent water bodies with abundant emergent vegetation.	Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog/toad species with at least 20 individuals (adults or eggs masses) or 2 or more of the listed	Not present – the small wetland found in the central part of the site is the result of past agricultural operations

			frog/toad species with Call Level Codes of 3; or; Wetland with confirmed breeding Bullfrogs are significant. The ELC ecosite wetland area and the shoreline are the SWH.	and is isolated by active agriculture on all sides of the feature. No linkages or corridor functions are present. Minimal flooding was observed pond/wetland that would provide suitable habitat for amphibian species.
Area-Sensitive Bird Breeding Habitat	FOC FOM FOD SWC SWM SWD	Habitats where interior forest breeding birds are breeding, typically large mature (>60 yrs old) forest stands or woodlots >30 ha. Interior forest habitat is at least 200 m from forest edge habitat.	Presence of nesting or breeding pairs of 3 or more of the listed wildlife species. Any site with breeding Cerulean Warblers or Canada Warblers is to be considered SWH.	Not Present – woodland habitat on adjacent lands contain no interior habitat of > 200 m from an edge.
Habitat for Species of Conservation Concern (not including Endangered or Threatened Species.)				
Marsh Breeding Bird Habitat	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SAS1 SAM1 SAF1 FEO1 BOO1 For Green Heron: All SW, MA and CUM1 sites.	All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present. For Green Heron, habitat is at the edge of water such as sluggish streams, ponds and marshes sheltered by shrubs and trees.	Presence of 5 or more nesting pairs of Sedge Wren or Marsh Wren or or 1 pair of Sandhill Cranes; or breeding by any combination of 5 or more of the listed species. Any wetland with breeding of 1 or more Black Terns, Trumpeter Swan, Green Heron or Yellow Rail is SWH. Area of the ELC ecosite is the SWH.	Not present – no applicable ELC units found.
Open Country Bird Breeding Habitat	CUM1 CUM2	Large grassland areas (includes natural and cultural fields and meadows) >30 ha. Grasslands not Class 1 or 2 agricultural lands, and not being actively used for farming (i.e. no row cropping or intensive hay or livestock pasturing in the last 5 years).	Presence of nesting or breeding of 2 or more of the listed species. A field with 1 or more breeding Short-eared Owls is to be considered SWH.	Not present – no applicable ELC units found.
Shrub/Early Successional Bird Breeding Habitat	CUT1 CUT2 CUS1 CUS2 CUW1 CUW2	Large field areas succeeding to shrub and thicket habitats >10ha in size. Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e. no row-cropping, haying or live-stock pasturing in the last 5 years).	Presence of nesting or breeding of 1 of the indicator species and at least 2 of the common species. Habitat with breeding Yellow- breasted Chat or Golden-winged Warbler is to be considered as SWH. The area of the SWH is the contiguous ELC ecosite field/thicket area.	Not present – no applicable ELC units found.
Terrestrial Crayfish	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 MAS1 MAS2 MAS3 SWD SWT SWM CUM1 with inclusions of above meadow marsh or swamp ecosites can be used by terrestrial crayfish.	Wet meadow and edges of shallow marshes (no minimum size).	Presence of 1 or more individuals of species listed or their chimneys (burrows) in suitable meadow marsh, swamp or moist terrestrial sites. Area of ELC ecosite or an Eco element area of meadow marsh or swamp within the larger ecosite area is the SWH.	Not present – no applicable ELC units found.
Special Concern and Rare Wildlife Species	All plant and animal element occurrences (EO) within a 1 or 10km grid.	When an element occurrence is identified within a 1 or 10 km grid for a Special Concern or provincially Rare species; linking candidate habitat on the site needs to be completed to ELC Ecosites.	The area of the habitat to the finest ELC scale that protects the habitat form and function is the SWH.	Potential (Adjacent Lands) – No suitable habitat was identified in the development area. Adjacent woodland to the southeast may be suitable

				based on presence of deciduous cover.
Animal Movement Corridors				
Amphibian Movement Corridors	Corridors may be found in all ecosites associated with water. Corridors will be determined based on identifying the significant breeding habitat.	Movement corridors between breeding habitat and summer habitat. Movement corridors must be determined when Amphibian breeding habitat is confirmed as SWH.	Corridors should consist of native vegetation, with several layers of vegetation. Corridors unbroken by roads, waterways or bodies, and undeveloped areas are most significant. Corridors should have at least 15m of vegetation on both sides of waterway or be up to 200m wide of woodland habitat and with gaps <20m.	Absent – no Amphibian Breeding Habitat was identified within the subject property.
Deer Movement Corridors	Corridors may be found in all forested ecosites.	Movement corridor must be determined when Deer Wintering Habitat is confirmed as SWH.	Corridors that lead to a deer wintering habitat should be unbroken by roads and residential areas. Corridors should be at least 200m wide with gaps <20m and if following riparian area with at least 15m of vegetation on both sides of waterway.	Not present – no deer wintering habitat has been identified on site by MNRF.
Exceptions for EcoRegion 6E				
6E-14 Mast Producing Areas for Black Bear	FOM FOD	Woodland ecosites >30ha with mast-producing tree species, either soft (cherry) or hard (oak and beech).	All woodlands > 30 ha with a 50% composition of these ELC Vegetation Types are considered significant: FOM1-1 FOM2-1 FOM3-1 FOD1-1 FOD1-2 FOD2-1 FOD2-2 FOD2-3 FOD2-4 FOD4-1 FOD5-2 FOD5-3 FOD5-7 FOD6-5	N/A
6E- 17 Lek for Sharp-tailed Grouse	CUM CUS CUT	Grasslands (field/meadow) are to be >15ha when adjacent to shrubland and >30ha when adjacent to deciduous woodland. Grasslands are to be undisturbed with low intensities of agriculture (light grazing or late haying).	Any site confirmed with sharp-tailed grouse courtship activities is considered significant. The field/meadow ELC ecosites plus a 200 m radius area with shrub or deciduous woodland is the lek habitat.	N/A

APPENDIX C

CV – Kyle Fleming (Roots Environmental Inc.)



Kyle Fleming, BSc. (Wildlife)

Senior Ecologist/President

Qualifications

Kyle has over 20 years experience as an ecologist where he has been responsible completing over 350 Environmental Impact Studies, Species at Risk Assessments, environmental monitoring, and related projects throughout Central, Southern and Eastern Ontario. He is a Qualified Wetland Evaluator & Certified Butternut Assessor by the MNRF, is trained and experienced in the use of Ecological Land Classification (ELC) and has been qualified as an expert at the Ontario Municipal Board/LPAT. His work is readily accepted by municipalities, conservation authorities and government agencies, and he is very familiar with provincial and federal policies and legislation.

Professional Experience

MAY 2019 - PRESENT

Senior Ecologist/President / Roots Environmental Inc., Barrie, ON

As the Senior Ecologist with Roots Environmental, Kyle is responsible the managing and implementation of environmental impact assessments, species at risk assessments and related studies for private and public sector clients throughout Ontario.

MAY 2004- MAY 2019

Senior Terrestrial Ecologist / Skelton, Brumwell & Associates, Barrie, ON

Responsible for completing Natural Environmental Reports, Environmental Impact Studies, Species at Risk Assessments for private and public sector clients throughout Ontario.

APRIL – AUGUST 2003

Project Supervisor/Field Biologist / Hamer Environmental L.P., Mt. Vernon, WA, USA

Responsible for supervising and managing a threatened seabird monitoring project on state lands.

NOVEMBER 2002 – JANUARY 2003

Environmental Technician / Aqua-Terre Solutions Inc., Toronto, ON

Responsible for data management of water and soil sampling for sites across the GTA.

APRIL – AUGUST 2002

Field Biologist / Hamer Environmental L.P., Mt. Vernon, WA, USA

Conducted threatened seabird surveys on state lands to determine presence/absence relative to forestry activities.

MAY – AUGUST 2001

Field Technician/ University of Washington, Forks, WA, USA

June-August 2001, Field Technician

Research project on nest predation of threatened seabirds and impacts of forestry practices on nesting sites.

Education

2002

Bachelor of Science in Wildlife Biology / University of Northern British Columbia, Prince George, BC

1998

Diploma in Fish and Wildlife Technology / Sir Sandford Fleming College, Lindsay, ON

Certifications/Courses

- Ontario Wetland Evaluation Training Course, 2004.
- Ecological Land Classification for Southern Ontario Training Course, 2005.
- Certificate of Participation: Wildlife Acoustics Bat Detector & Analysis Course, 2015.
- Ministry of Natural Resources (MNR) Butternut Assessment Course, 2009, 2014 & 2019.
- OPPI- The Planner at the Ontario Municipal Board Seminar, 2006.