

Original Report

Stage 1 and 2 Archaeological Assessment

for the

CarbonFree Solar Farm Project - Kynoch

Part of Lot 5, Concession 1, Geographic Township of Grasett,
Part of Lots 6-8, Concession 6 and Part of Lots 8-9, Concession 5,
Geographic Township of Parkinson, District of Algoma, Ontario
Robinson-Huron Treaty Lands

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PIF#: P307-0244-2025

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Limitations

The information in this report documents methods and data collection that were conducted in a manner consistent with a level of care and skill commonly exercised by members of the professional archaeological community licenced to conduct archaeology in Ontario. No other warranty expressed or implied is made.

The fieldwork and information contained within has been prepared for the specific project as described to Woodland Heritage Northwest by CarbonFree Kynoch Ltd. The data contained in this report, interpretations and recommendations provided are intended for the CarbonFree Kynoch Ltd. and the Stage 1 and 2 Archaeological Assessment for the CarbonFree Solar Farm Project – Kynoch, Part of Lot 5, Concession 1, Geographic Township of Grasett, Part of Lots 6-8, Concession 6 and Part of Lots 8-9, Concession 5, Geographic Township of Parkinson, District of Algoma, Ontario, Robinson-Huron Treaty Lands and are not intended for any other site or location. Unless otherwise stated the interpretation, descriptions and recommendations given in this report are intended only for the guidance of the Client in the design of this specific project.

It should be noted that any sampling and/or testing program employed, other than complete excavation, may fail to detect all or certain archaeological resources. The assessment strategies that were employed for the use in this project comply and adhere to those outlined in the Ministry of Citizenship and Multiculturalism's *Standards and Guidelines for Consultant Archaeologists* (MCM, 2011).

This report contains information based on the material remains uncovered from past archaeological investigations and does not contain land use knowledge (traditional or current) of local Indigenous or First Nations communities who might have additional data for this study area. This information could alter the recommendations outlined in this report. It is suggested that the proponent engage with local Indigenous and First Nation communities to determine if there are any concerns for the proposed development.

Executive Summary

Woodland Heritage Northwest (WHNW) was contracted by CarbonFree Kynoch Ltd. (Client) to conduct a combined Stage 1 and 2 Archaeological Assessment (AA) for the CarbonFree Solar Farm Project – Kynoch. This project is located within Part of Lot 5, Concession 1, Geographic Township of Grasett, Part of Lots 6-8, Concession 6 and Part of Lots 8-9, Concession 5, Geographic Township of Parkinson, District of Algoma, Ontario (Map 1 and Map 2). This land falls within the Robinson-Huron Treaty (Treaty #61) area.

The Stage 1 and 2 AA is being completed as part of the Renewable Energy Approval (REA) process under Sections 19-23 (Protected Properties, Archaeological, and Heritage Resources) of O. Reg. 359/09, in support of the *Ontario Heritage Act* (R.S.O., 1990). All archaeological consulting activities were performed under the Professional Archaeological Licence of David Norris under PIF P307-0244-2025. David Norris (P307) and Stefan Bouchard (P476) acted as the Field Directors, with Justin Lamadeleine acting as Assistant Field Director. All archaeological activities were conducted in accordance with the *Standards and Guidelines for Consultant Archaeologists* (SGCA, MCM, 2011).

The study area is comprised of five parcels of land, identified in Map 2 as A-E. Three land parcels consist of cleared farmland with some forested areas; the remaining two parcels consist entirely of a forest landscape. Several residential properties are situated within and adjacent to the boundaries of the study areas, with no other developments observed.

The Stage 1 AA consisted of archival research, review of local history, aerial imagery, and historic and topographic maps. The database for known archaeological sites registered in the province was queried to identify previous sites within the properties and within a 1 km radius of the properties.

The Stage 1 property inspection and Stage 2 property survey were completed concurrently on August 26th, 2025, and between September 25th to 30th, 2025. Permission to access the properties was arranged by the Client and no limits were in place regarding archaeological fieldwork. Mississauga First Nation (MFN) and Thessalon First Nation (TFN) were engaged throughout the process. TFN participated in the study and provided some guidance during project planning and a representative from TFN was present during the latter segment of fieldwork.

The following archaeological recommendations are made based on the results of the Stage 1 background research and property inspection and the Stage 2 property survey. These recommendations are in accordance with the *SGCA* (MCM, 2011) and are as follows:

- No further archaeological assessment is required for parcels C, D, and E (Map 8c-e).
- Parcel A and B require test pit survey for the lands within 150 m of the relic riverbank (Map 8a-b).
 - Partial clearance is recommended for these parcels.
 - Land within 150 m of the relic riverbank, plus an additional 20 m buffer, cannot be impacted by the development until test pit survey has been completed.
 - Land beyond 150 m of the relic riverbank, plus an additional 20 m buffer, does not hold archaeological potential. Therefore, no further archaeological assessment is required for these lands.

- Should there be any alteration to the plans of this development as it is represented in this report, additional archaeological assessment may be required based on the presence of archaeological potential as outlined in the *2011 Standards and Guidelines for Consulting Archaeologists Section 1.3.1* (MCM, 2011).

The Ontario Ministry of Citizenship and Multiculturalism (MCM) is asked to review the results presented and to accept this report into the Ontario Public Register of Archaeological Reports. Archaeological sites recommended or further archaeological fieldwork or protection remain subject to Section 48 (1) of the Ontario Heritage Act and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence with local community authorization.

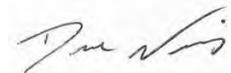
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Woodland Heritage Northwest would like to extend its appreciation and thanks to Mississauga First Nation who provided support and Thessalon First Nation for participating with us while we completed this work within their traditional territories. We would like to extend our thanks to Doug Deeks and Lewis Angel from CarbonFree Kynoch Ltd. for coordination during fieldwork to complete this assessment.

Miigwetch



David Norris
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Abbreviations

AA	Archaeological Assessment
AAR	Alpena-Amberley Ridge
ASL	Above Sea Level
C.E.	Common Era
B.P.	Before Present
B.C.E.	Before Common Era
CHVI	Cultural Heritage Value or Interest
CPR	Canadian Pacific Railway
DEM	Digital Elevation Model
DTM	Digital Terrain Model
ha	Hectare
HBC	Hudson Bay Company
LiDAR	Light Detection and Ranging
MCM	Ministry of Citizenship and Multiculturalism
NOEGTS	Northern Ontario Engineering Geology Terrain Study
NWC	North West Company
OASD	Ontario Archaeological Sites Database
O. Reg.	Ontario Regulation
PIF	Project Information Form
PIN	Property Identification Number
REA	Renewable Energy Approval
SGCA	<i>Standards and Guidelines for Consultant Archaeologists</i>
WHNW	Woodland Heritage Northwest

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1 Project Context

1.1 Development Context

Woodland Heritage Northwest (WHNW) was contracted by CarbonFree Kynoch Ltd. (Client) to conduct a combined Stage 1 and 2 Archaeological Assessment (AA) for the CarbonFree Solar Farm Project – Kynoch. This project is located within Part of Lot 5, Concession 1, Geographic Township of Grasett, Part of Lots 6-8, Concession 6 and Part of Lots 8-9, Concession 5, Geographic Township of Parkinson, District of Algoma, Ontario (Map 1 and Map 2). This land falls within the Robinson-Huron Treaty (Treaty #61) area.

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Permission to access the properties was arranged by the Client and no limits were in place regarding archaeological fieldwork. Mississauga First Nation (MFN) and Thessalon First Nation (TFN) were informed of the work and updated throughout the process. A representative from TFN was present during the latter segment of fieldwork.

1.2 Objectives of Archaeological Assessment

The objectives of a Stage 1 AA are:

- To provide information about the property's geography, history, previous archaeological fieldwork, and current land condition;
- To evaluate in detail the property's archaeological potential, which will support recommendations for Stage 2 survey for all or parts of the property; and
- To recommend appropriate strategies for Stage 2 survey.

These objectives are primarily accomplished by conducting detailed documentary research providing a record of the property's archaeological and land use history, and present condition. A property inspection may also be completed, which is a visit to the property to gain first-hand knowledge of its geography, topography, and current condition, and to evaluate and map archaeological potential. It is a visual inspection only and does not include excavation or collection of archaeological resources.

The objectives of a Stage 2 AA, as outlined by the are:

- To document all archeological resources on the property.
- To determine whether the property contains archaeological resources requiring further assessment; and
- To recommend appropriate Stage 3 assessment strategies for archaeological sites identified.

The objectives of the Stage 2 archaeological assessment are accomplished by completing a property survey of the study area, which is the on-site documentation and inventory of all archaeological resources through systematic means as appropriate to the characteristics of the property but will consist of either a pedestrian survey or a test pit survey. Based on the characteristics of the property (i.e. non-agricultural lands), test pit survey is the appropriate methodology for this project.

1.3 Historical Context

The study area is situated within the Geographic Townships of Grasett and Parkinson, District of Algoma, approximately 80 km to the east of present-day Sault Ste. Marie and 20-25 km north of the north channel of Lake Huron.

Indigenous peoples have occupied the land surrounding Lake Huron (Gichi-aazhoogami-gichigami) and Georgian Bay (Mnidoo Gamii) since time immemorial. The study area is located within the traditional territories of MFN and TFN, whose ancestors lived in deep connection to the vast resources of the land through traditional practices of hunting, trapping, fishing, and harvesting, with many community members continuing these practices to this day.

Early fur trade journals present the earliest Euro-centric perspectives of north-central Ontario. As the fur trade expanded, posts and forts were established in key trading areas and reported on important information (e.g. pelts harvested, indigenous people who came to the fort for trade, often commenting on their health), that provide insight into the lifeways of the Indigenous people at the time, as well as the bounty of resources available. These early fur traders also travelled along important water corridors, long used by the local Indigenous populations, that acted as highways for thousands of years. These primary documents have been the source of several publications, including the works of Voorhis (1930a) and Lytwyn (1981).

The following sections present the current understanding of the history of the region based on archaeological sites and historic documentation. As new sites are discovered, and new studies conducted, our understanding of the lifeways and cultural sequences may change.

In northern-central Ontario, the archaeological record is divided into the following periods: (1) Paleoindigenous period (10,000 to 7,000 BP); (2) Middle period (7,000 to 2,200 BP); (3) Woodland period (2,200 to 300 BP); and (4) Historic period (300 BP to Present). The first three periods are categorized into the Pre-Contact period. Their division is based on differences noted in the archaeological record, including artifact morphologies, artifact typologies, lithic preference, and migration patterns that represent technological and cultural changes through time. The latter is categorized into the Post-Contact period since the introduction of Europeans and their material culture to the area had significant impact to the history of the region.

1.3.1 Pre-Contact Period

The Pre-Contact Period of north-central Ontario covers the time prior to significant European contact with and influence on local Indigenous populations. Through archaeological investigations, three major cultural periods have been established based on similarities and then changes in material cultural that can be observed in the archaeological record (i.e., the material that survives taphonomic processes). The earliest period, the Paleoindigenous period, encompasses the first cultural groups in the region, who were generally highly mobile, big game hunter-gatherers with finely manufactured lanceolate point technology. This was followed by the Middle period, where mobility is reduced, lithic selection more local and of more varying quality,

and the introduction of notched projectile points and ground stone tools. In some areas, copper technology is also introduced. The change from the Middle period to the Woodland period is observed by the introduction of pottery technology in the archaeological record. These periods are expanded on in the following sections.

1.3.1.1 Paleoindigenous Period

The Paleoindigenous period is the earliest stage of human occupation of North America and lasted between ca. 13,000 to 8,000 BP. This date range, however, shifts depending on the region and environment and is dependent on deglaciation rates of the region. In north-central Ontario it is speculated to have lasted between ca 10,000 – 7,000 BP.

While southern Ontario has evidence of cultures attributed to the Early Paleoindigenous period (11,000 B.P. to 10,000 B.P.), only Late Paleoindigenous groups have been identified in north-central Ontario. Prior to 10,000 B.P., the Laurentide Ice Sheet covered the region. As deglaciation occurred and the glacier retreated northward, a tundra environment formed. This landscape was suitable for big game species (e.g., caribou herds), which attracted mobile groups of hunter-gatherers into the area. As the glacier melted, proglacial and glacial lakes formed, some of which were short-term or changing as new drainage channels would open as isostatic rebound occurred (Boyd, 2024). Around 7,000 B.P., a pine-birch forest developed, which likely contributed to the change in material culture from the Paleoindigenous period to the Middle period (S. Hamilton, 1981).

Specific subsistence strategies varied, based on specific environmental parameters, but human groups were generally organized into groups of mobile hunter gatherers, who used stone and bone tools to acquire the resources needed to survive within the environment. Initially, they tended to focus on megafauna when available, and large groups of big game. During this time, much of the continent and environments allowed for large herds of game to roam. In northern Ontario, Paleoindigenous sites are largely associated with beach/shoreline areas associated with glacial lakes (S. Hamilton, 2004; Julig, 2002; Ross, 1995). The majority of Paleoindigenous sites in northern Ontario have been identified in the Lake Superior Basin region around Thunder Bay along the ancient shorelines of glacial Lake Minong (Dawson, 1983; S. Hamilton, 1996; Julig, 1994; Norris, 2012).

In north-central Ontario, the earliest evidence of Paleoindigenous activity is from the Sheguindah site (BIHI-2). The site is located on Manitoulin Island and situated along a relic shoreline. Excavations in the 1990s support the earliest date of occupation as 9,500 BP, but very water-worn artifacts may represent human occupation prior to the major outflow of Lake Agassiz ca. 10,500 BP. This site is unique as it represents an undisturbed stratigraphic record of occupation from the Paleoindigenous Period into the Middle Period, represented by in situ projectile points, among other lithic materials (P. J. Julig, 2002).

A more recently discovered site is associated with the Alpena-Amberley Ridge (AAR). Roughly 9,000 B.P., water levels within the Lake Huron basin were low enough to expose the AAR, a narrow strip of land that connects the east and west shores of the Lake Huron basin (O’Shea et al., 2014). This once-exposed land would have been habitable and would have provided ample opportunity for Indigenous peoples to collect various resources, as well as serving as a travel corridor for animals and people. Archaeologists employed a variety of methodologies to investigate the potential presence of archaeological materials on the ridge, and this led to the discovery of over 60 preserved hunting structures created for the purpose of hunting caribou.

Within the Great Lakes region, the AAR represents the best-preserved hunting structures associated with a glacial lake. The preservation of these structures can be attributed to the rapid inundation of the basin approximately 8,000 B.P. following the Lake Stanley low stand; also, their depth of 12 to 45 m and distance from the modern Lake Huron shoreline, which prevented the deposition of modern sediments and preservation of ancient materials (Lemke & O'Shea, 2019). The preservation of organic materials, which is uncommon in the Boreal Forest, allows archaeologists to study the post-glacial environment of the AAR, and therefore, how Paleoindigenous peoples were living and adapting to the changing landscape.

Another Paleoindigenous site within the Lake Huron region is the Giant site (BIHI-1). Although little information is available on the OASD, the site is reported to be a quarry site and potentially a habitation area. The site is located approximately 1.8 km northwest of the Sheguiandah site, and the two sites are believed to be associated with one another. Other Paleoindigenous sites in the area include the George Lake Site, near Killarney (ASI, 2011; Conway, 1985; Julig, 2002).

Due to the antiquity of the sites and the relative acidic nature of boreal forest soils, wood, bone, skins, bark, and other natural materials which were commonly used are rarely preserved on such sites, eliminating valuable evidence that can be used to interpret the early lifeways of the people occupying the sites. This also produces a problem when trying to place sites into a chronological sequence. With sparse organic materials surviving the archaeological record, there is little material for radiometric absolute dating and other dating techniques have not been attempted until recently. Therefore, establishing a firm chronology of the occupation of northern Ontario is not possible at the present time. Fortunately, the association of many Paleoindigenous sites with the shorelines of Lake Minong, Lake Agassiz, and Lake Algonquin indicates that these sites cannot predate the formation of these features. This is not to say that there are no sites inland, along smaller lakes and rivers. However, beaches, bay mouth bars, and spits of post-glacial shorelines permitted easy movement of people and provided access to ample subsistence resources, so sites are most often found on these types of landforms.

1.3.1.2 Middle Period

The Middle Period is estimated to have lasted between ca. 7,000 to 2,200 BP. Although in northern Ontario, there is a large gap of incomplete information. The period is generally divided into the Early and Late phases. The change from the Paleoindigenous period to the Middle period represents a transition from big game hunting to a broader, more generalized subsistence strategy better suited to the forested environment. In the archaeological record, the Middle period is characterized by the following traits (Ellis et al., 1990): (1) an increase in stone tool variation and greater reliance on local stone sources; (2) the emergence of notched and stemmed projectile point morphologies; (3) a reduction in extensively flaked tools; (4) the use of native copper; (5) the use of bone tools for hooks, gorges, and harpoons; (6) an increase in extensive trade networks; (7) the production of ground stone tools. It is important to note that not all these traits are expressed by more northern Middle period cultures (S. Hamilton, 1991).

In the subarctic region of Ontario, the Shield culture is the most prevalent throughout the Middle period. Unfortunately, the Shield culture is more of a 'catch-all' term used to categorize the archaeological material for the various Middle period cultures spread across the Canadian Shield. Similarities in stone tool assemblages is likely the product of similar environmental adaptations. Current interpretation for this period is that people operated in small nomadic kin-based units who moved around between various locations based on available resources and seasonal requirements. A broad-spectrum foraging strategy was adapted to survive in the harsh

and fluctuating dependency of the boreal forest. Representative toolkits for the Shield culture in northwestern Ontario include side-notched lanceolate projectile points and a wide variety of unifacial scrapers (S. Hamilton, 1991; Wright, 1972).

1) The Early Middle Period

In northern Ontario, the term Early Middle period is used to describe the time between the end of the Late Paleoindigenous period (ca. 7,000 B.P.) and the beginning of the Late Middle period (ca. 4,700 B.P.). It is a transitory period whereby some characteristics of the Late Paleoindigenous period still appear, but it is mixed with new types of technology not previously seen.

The earliest phases of the Middle period that succeeded the Late Paleoindigenous period are poorly known. Most of what is known is surmised from areas outside of northern Ontario, thus the information presented here is subject to change.

Lake levels in northern Ontario were constantly changing due to the retreat of the Laurentide ice sheet. As the ice margin retreated further to the north, new exposed land became available for groups of people as well as animals and plants to utilize.

Groups of people that were concentrated to the south along the ice margin followed this retreat north into the new exposed landscape. As this happened, different types of technology began to appear. The reliance on a few, high quality stone tool materials is abandoned in the Early Middle period for the use of cobble cherts of lesser quality stone. The trihedral adze appears as a tool for woodworking. Although the period that these artifacts were used during has not been well dated, it seems to coincide with a period of warming in northern Ontario; a period when large white pines are known to have been common in the boreal forests. Such tools may have been used in the manufacturing of dugout canoes, or for other heavy duty woodworking tasks. Projectile points (spearpoints) also change in shape. What were once long, lanceolate shaped tools, become smaller with corner or side notching along the bottom portions. This is an indication that hafting technology is changing, becoming different across the landscape.

About 8,500 B.P., people started to make use of copper, which was cold hammered to form spear points, knives, gaff hooks and elaborate jewelry. One of the most complete copper assemblages for northern Ontario comes from a cache south of Lake Nipigon that was uncovered in the 1960s (Griffin & Quimby, 1961).

A significant Early Middle period archaeological site within the Lake Huron region is the Killarney site (BIHj-1), also known as the Speigel site (Brose et al., 2021; P Julig Surveys, 2016). The Killarney site is located on the north shore of Georgian Bay on a strandline related to the Lake Nipissing high-water stand. Burials have been documented at this site, and it also believed to have functioned as a campsite (Brose et al., 2021).

2) The Late Middle Period

In northern Ontario, the late Middle period is usually defined as having occurred between the time lake levels temporarily stabilized at Nipissing levels, and the time when pottery was first introduced into northwestern Ontario. It includes the 'Old Copper' complex during the early part of the period. The Late Middle is generally accepted as having occurred between approximately 4,700 BP and 2,200 BP.

Reliable dates from archaeological sites of this period are comparatively rare; most have been dated by their position relative to the Nipissing (or later) shoreline features. Fortunately, in a few

rare instances such as those at the Renshaw Site on the shores of Lake Superior (~5,300–5,000 cal. B.P.) and South Fowl Lake (~6,800 cal. B.P), adequate dating evidence has been acquired (Boyd, 2024).

During the later phases of the Late Middle period (ca. 3,500 - 2,500 BP) declining lake levels in the Lake Superior basin exposed some lake shore zones which had formerly been submerged under the highwater levels of post glacial Lake Nipissing. Although specific research into sites of this period is still limited, there is some evidence to suggest that, in keeping with what was occurring elsewhere in the region - particularly to the south, populations were gradually increasing, and new influences and contacts were being made at this time.

When differences in lake level are considered, archaeological sites of this period are generally found in similar locations to those of both earlier and later periods. The lands surrounding river mouths, inshore islands and small bays behind sandy beaches appear to have been favoured site locations suggesting that site selection criteria were essentially unchanged.

1.3.1.3 Woodland Period

Perhaps the most active period in precontact history, the Woodland period represents a vast technological revolution with the introduction of pottery, the shift from spear points to the bow and arrow, and the large-scale use of wild rice as a staple food. The Woodland period is divided into Early, Middle, and Late phases and each designation is represented by more advanced technological innovation.

1) Early Woodland

In northern Ontario, there is little to no evidence of Early Woodland cultures. Either sites haven't been found, or the criteria used to identify Early Woodland sites are not present in the region. Criteria for establishing Early Woodland sites include the presence of pottery and projectile points which are small, well-shaped and used with bow and arrow hunting rather than as spear points.

2) Middle Woodland

The Middle Woodland period is represented in northern Ontario by the appearance of pottery assigned to the Laurel Configuration (after Reid & Rajnovich, 1991). This type of pottery is thought to have diffused into northern Ontario from the southwest in Minnesota (Wright, 1999). Geographically, the distribution of Laurel sites ranges from northeast central Saskatchewan, through a large portion of central Manitoba and northern Minnesota to northern Michigan and northern Ontario (a central-west appearance in Saskatchewan was identified by Dr. David Meyer (per comm. 2004)).

The first appearance of Laurel pottery comes from Minnesota (Wilford, 1955); thus, it appears to represent a migration of peoples or ideas north into Ontario. The broad distribution means that there are many styles of pottery representing regional expressions. Reid and Rajnovich (1991) summarized Laurel pottery into three main complexes: (1) Manitoba Lakes; (2) Boundary Waters, and (3) Superior. Characteristics of Laurel pottery include thick, conoidal vessels made by coiling with pseudo-scallop and linear stamping in short vertical motifs around the upper portions and smoothed out bodies on the remaining portions of the vessel (Reid & Rajnovich, 1991). Although the chronological span of Laurel pottery is contentious, it is estimated to have begun in approximately 100 BCE and lasted to approximately 1300 CE (C. S. P. Reid & Rajnovich, 1991).

3) Late Woodland

The Late Woodland period in northern Ontario represents a wide dispersal of technological traits in terms of pottery styles and manufacturing techniques that did not occur uniformly across northern Ontario and surrounding regions. The most predominate pottery style is from the Blackduck horizon. The geographical distribution of Blackduck pottery ranges from west-central Saskatchewan, through Manitoba, into Minnesota, northwest Michigan, and northern Ontario (Lenius & Olinyk, 1990). Blackduck vessels are typically thin-walled globular vessels (made by paddle and anvil technique) with constricted necks, wedge-shaped lips, and out-flaring rims. They have textile-impressed globular bodies with the neck, rim, and lip areas often decorated with complex and highly variable patterns of cord wrapped object impressions, punctates, and/or bosses that may be found on the exterior, on the lip, and sometimes on the interior of the vessel. Some vessels also have vertically oriented combing as the surface finish (S. Hamilton et al., 2012). Anfinson (1979) suggests that Blackduck first emerges at 800 C.E. and lasts until approximately 1400 CE. However, Lenius and Olinyk (1990) reviewed C¹⁴ dates and suggest that an appearance around 500 CE to 1000 CE is more appropriate.

After the disappearance of Blackduck pottery, there were many different styles which began to appear in the Late Woodland. Although a discussion of these styles is beyond the scope of this report, the taxonomy should be mentioned as these cultures are important to the history of northern Ontario.

The settlement pattern for this period consisted of more frequent movement during the spring, summer, and fall months, with summer being the main season for major cultural gatherings and congregations. The abundance of food resources and stable weather allowed Indigenous people to come together for trade, conduct ceremonies, and to socialize, fostering connections between family groups (Hamilton, 2013). During these warmer months habitation and shelter most likely consisted of structures made from wood and animal hide supplemented with other natural implements such as birch bark and/or pitch (Wright, 1999). Remnants of these structures show up in the archaeological record as post moulds, hearth features, and weight stones. In the winter months, Indigenous populations would separate into extended families moving back into the dense boreal forest for shelter. This decreases site size, as structures become smaller as community groups became a fraction of the size. From an archaeological perspective, winter sites in northern Ontario are difficult to define, identify and find.

****Note:** this history is based off material remains found within an archaeological context, discussions and engagement with local Indigenous Communities could result in a more robust or altered narrative of the history of the area.

1.3.2 Post-Contact Period

The Post-Contact period for Ontario is generally considered to begin ca. 1650 CE¹. However, at a regional level this period truly begins following the settlement of an area by European colonizers, or in the least regular interaction between Indigenous populations and Euro-Canadians. A transitory period exists, termed the Proto-Contact, that represents the period when European impacts or influence begin to appear at Indigenous sites (e.g., metal cookware, trade items, firearms, European diseases), but before more intense European-Indigenous interaction took place. In northwestern Ontario, the Proto-Contact period correlates to the time

¹ Dates herein are in CE.

of European exploration and early fur trade endeavours, while the Historic period correlates to the more established fur trade era (the Late Fur Trade) and Euro-Canadian colonization and industrial pursuits of the 19th and 20th centuries.

1.3.2.1 *Proto-Contact Period*

The Proto-Contact period of Ontario begins at the end of the Pre-Contact period with the expeditions of Jacques Cartier down the St. Lawrence River. Cartier embarked on three exploration voyages, with minimal settlement efforts in Québec along the St. Lawrence. The first voyage in 1534. explored the Gulf of the St. Lawrence, where he encountered Iroquoian-speaking people attending to their annual seal hunt and began trade relations with the Iroquoian-speaking community of Stadacona (modern Québec City). His second voyage in 1535-1536 saw him return to Stadacona, then travel further upriver to Hochelaga (modern Montréal). His third and final voyage lasted from 1541-1542 and was the first attempt to establish a colony along the St. Lawrence, under the direction of Sieur de Roberval. The colony was established at the confluence of the Cap Rouge and St. Lawrence Rivers, upriver from Stadacona. Conflict with the people from Stadacona forced Cartier to abandon the settlement in May of 1542 (Allaire, 2013). Roberval took over the colony but was ordered to abandon the fort and return to France in 1543 (Allaire, 2008).

The next major attempts at exploration came from the voyages of Samuel de Champlain. Champlain first arrived at the St. Lawrence River in 1603, where he encountered Algonquin people, rather than Iroquoian. He explored the east coast for a few years before being ordered to establish the settlement of Québec (Québec City) (Trudel & d'Avignon, 2013).

In 1613, Champlain reached the mouth of the Ottawa River but did not explore further until his expedition to Huronia (southern end of Georgian Bay and Lake Simcoe area) in 1615-1616. This expedition saw him journey up the Ottawa River, across Lake Nipissing and down the French River into Lake Huron (Trudel & d'Avignon, 2013).

Prior to these expeditions, however, Champlain sent a young Étienne Brûlé to live among the Algonquin people, likely in 1610, to learn the language, allowing him to act as an interpreter and intermediary. He was likely the first European to see Lakes Ontario, Huron, and Superior. He visited Sault Ste. Marie – Bawating - in 1621-1622 (Marsh, 2008).

1.3.2.2 *Early Fur Trade Period*

The first European to arrive at Sault Ste. Marie is believed to be Étienne Brûlé, a French *Trenchement*, in the early 1600's. A *Trenchement* is a young Frenchman sent to live among Indigenous peoples to establish good relations and learn the language. Brule may have travelled to the area during his 1617-1618 exploration of the Lake Huron area (his journal lacked specific details), but during his 1621-1622 exploration he did record the rapids of the St. Mary's River (F. Heath, 1988). Champlain's map of 1632 also shows an Indigenous village where Sault Ste. Marie now stands. By the time of the Joliet map of 1674, the village was called in French Sault Ste. Marie or "Rapids of the St. Mary" in English (C. Reid, 1977). The Anishinabek name for the place was "Boweting" which means turbulent waters or place of the rapids (Hudson Bay Company archive document).

In the late 1700's and early 1800's, Sault Ste. Marie was a fur trading post of the North West Company. Historical records dating to 1784 describe a J.B. Cadot who had a permit from the company to trade a value of up to 1,000-pound sterling at Sault Ste Marie (Davidson 1967:24). A post at the rapids had been established the year before (Mika & Mika, 1983a).

During the war of 1812 and specifically in July 1814, the Americans destroyed the North West Company's trading post, canal, farm, sawmill and other buildings they had built on the Canadian side of the rapids near present day St. Mary's Paper and the later site of the Francis H. Clerque Blockhouse. The American troops destroyed the buildings in retaliation for the attack on Fort Mackinac (Manitoba-Hudson Bay Company archives document).

The Early Fur Trade followed with the *coureurs des bois* establishing trading posts at key locations. Within the Lake Huron region, several posts were established by the HBC and the NWC on Whitefish Lake, Georgian Bay, and Lake Huron.

Fort La Cloche, established by the NWC prior to 1790, was originally located on La Cloche Island. When the NWC expanded its trading operations during the 1790s, the fort was relocated further east, on the east bank of the outlet for La Cloche Lake (Lytwyn, 2016).

Furthermore, Fort Mississagi was established in 1789 by the NWC, located on the north shore of Lake Huron at the mouth of the Mississagi River (*Our History*, n.d.). This post operated until the decline of the fur trade caused widespread closures, finally ceasing operations by 1900 (*Native History of the Mississagi River Valley*, n.d.).

During their explorations, the Europeans recorded their observations of both the land and the people who lived there. This information has been compiled and presented on a series of Canada-wide maps to provide a broad overview. The three maps represent information correlating to 1630, 1740, and 1823, and represent the change in Indigenous populations and linguistics over time (Geographical Services Division, 1988a, 1988b, 1990). As of 1630, northern Ontario remained largely unknown to Europeans, with exploration not extending west of Bawating, and knowledge through Indigenous accounts extending as far west as Long Lac. Archaeological sites in the region of the study area that are depicted on this map are defined as part of Blackduck culture. Populations near the study area are defined as belonging to the Saulteaux with a population between 500 and 1000 (Oj 5), Mississauga with a population between 500 and 1000 (Oj 6), Nikiuk with a population between 200 and 500 (Oj 7), and Amikwa with a population between 200 and 500 (Oj 8) belonging to the Ojibwa-speaking language group.

By 1740, northwestern Ontario had been explored by Europeans from the Albany River to Lake Nipigon, the shoreline of Lake Superior, and a wide swath of land along the boundary waters, around Lake of the Woods, and the Winnipeg River. Accounts from Indigenous contacts provided second-hand knowledge of the rest of northwestern Ontario. Indigenous populations in proximity to the study area of this project included Algonquin-speaking peoples belonging to Ojibway language groups. A population of approximately 100 to 200 Mississauga (Oj 5) Ojibway-speaking people and a population of less than 100 Amikwa (Oj 6) Ojibway-speaking are shown inhabiting the north shore of Lake Huron.

The final map of interest depicts Canada as of 1823 and is based on census data from 1822, resulting in a fairly complete and descriptive record. By this time, direct European knowledge of northwestern Ontario expanded, covering the same basic area as the 1740 map, but extending further inland from rivers and shorelines, as well as another major trade route from the Albany River to Lac Seul, then along the English River to the Winnipeg River. Algonquin-speaking people are still depicted throughout northwestern Ontario; however, it is predominantly Ojibway, with select areas of Cree-speaking people in the far north of Ontario. A population of 436 Sault

Sainte-Marie (Oj 51) Ojibway-speaking people, and a population of 225 La Cloche/Mississauga River (Oj 68) Ojibway-speaking people inhabiting the north shore of Lake Huron.

1.3.2.3 *Late Fur Trade Period*

Fort La Cloche was operated by the NWC until its merger with the HBC in 1821, and the fort was then utilized as a main trading post in the region up until its closure in 1890. The fort was named *La Cloche* after a stone found on La Cloche Island that resembled a ringing bell was struck (Simpson, 1847).

Within Whitefish Lake area, two separate fur trading posts were established: both by the HBC. The post located in Whitefish Lake was established no later than 1824 and operated until 1887 when it was relocated further north, to Naughton (*Whitefish Lake Post*, n.d.). In 1896, the relocated post was closed as a result of the declining fur trade. Next, the post established on the east bank of Wakemi Lake, roughly 0.44 km east of the Whitefish Lake trading post (Voorhis, 1930b). Although it is reported that a post was established at this location by the HBC, there is no information available related to the date of establishment or how long the post was operational.

1.3.2.4 *Métis History in Northwestern Ontario*

During the Post-Contact period, a new culture emerged through the ethnogenesis of European and First Nation relations. Domestic relationships were entered by European-descendent men involved in the Fur Trade and First Nation women from the communities where they operated. Despite the numerous cultural groups amongst both the First Nations (e.g., Ojibwe, Cree, etc.) and Europeans (e.g., French, English, Scottish), the Métis culture emerged as a distinct entity, separate from either founding culture (Gaudry et al., 2023; Métis Nation of Ontario, n.d.-h; Supernant, 2018).

Métis identity is a complex topic, both politically and socially. During the 19th century the Métis Nation emerged out of western Canada as a political entity. The Métis National council formed to represent the Métis Nation and defines Métis as “a person who self-identifies as Métis, is distinct from other Aboriginal peoples, is of historic Métis Nation ancestry and who is accepted by the Métis Nation.” Those who are members of the Métis Nation are connected by an extensive kin-relations network, a common culture and the *Michif* language, as well as common history and political tradition (Gaudry et al., 2023).

Relations between First Nation women and European men likely began following the initial European exploration of North America. However, it was not until the start of the fur trade and early European settlement attempts that it became common enough for ethnogenesis to occur. This resulted in several families of mixed ancestry forming. At this time, however, the term Métis, although sometimes used, had not been established and other terms were employed (e.g., Bois-Brules, Chicots, Acadiens, Canadiens, Settlers, Michifs, Voyageurs, etc.). With roots in the fur trade industry, many early Métis families lived adjacent to fur trade forts and posts, and often worked at these establishments. However, the Métis were typically a self-sufficient people, engaging in farming, hunting, gathering, fishing, and trading (Gagnon, 2016).

The birthplace of the Métis culture, however, is recognised as the Red River Settlement, now the location of downtown Winnipeg. The Red River Settlement was established at the confluence of the Red and Assiniboine Rivers by Thomas Douglas, 5th Earl of Selkirk, in 1812, following the granting of approximately 300,000 km² of land in the Winnipeg Basin by the Hudson’s Bay Company (HBC). The settlement was initially intended for Scottish immigrants.

Shortly before this, the North West Company (NWC) established a fort in the area, and several Métis families were already living in the area. As the settlement grew, the Métis population became the majority (Bumsted & Smyth, 2015).

By the end of the 19th century, however, the Métis of Red River were unsure of the protection of their rights by the newly formed Dominion of Canada, based on the lack of distinction made to Métis people in the treaties signed by the Crown and Indigenous peoples. This resulted in two resistance movements, the Red River Resistance of 1869-70 and the North-West Resistance of 1885. The outcome of the former was supposed to be the federal recognition of Métis rights in the new province of Manitoba and Métis land titles for 607,000 hectares of land (Bumsted et al., 2021). However, the resultant land scrips were ineffective in ensuring the protection of this land for the Métis (Robinson & Filice, 2019). The latter resulted in significantly more bloodshed and the permanent enforcement of Canadian law in the West (Beal et al., 2021).

Unfortunately, the negative opinion towards the Métis from their resistance resulted in some hiding their Métis heritage. However, throughout the 20th and into the 21st Century, Métis cultural resurgence and political representation had increased. During the 1930s, the first provincial Métis organization was founded, the Métis Association of Alberta, who were responsible for securing land for Métis settlements and the *Métis Population Betterment Act, 1938*. Following this act, the Saskatchewan Métis Society was also founded. During the 1960s, other provinces followed suit with the founding of provincial Métis organizations, such as the Manitoba Métis Federation, the Ontario Métis and Non-Status Indian Association, and the Louis Riel Métis Association of BC. The increased political activism led to the Métis ensuring their including as one of three Indigenous peoples recognized in Section 35 of the *Constitution Act, 1982* (Gaudry et al., 2023).

During the 20th and 21st centuries, Métis people continued to lobby for their rights, particularly for their hunting rights. These efforts culminated in the *R. v. Powley* case (2003) where the Supreme Court of Ontario recognized the rights of members of the Métis Nation to hunt for food that is protected under Section 35 of the *Constitution Act, 1982*. The Métis Nation of Ontario (MNO), which was established in 1993 to create a Métis-specific governance structure for Ontario Métis communities and established a centralized Métis registry, in conjunction with the Ontario Ministry of Natural Resources created the Harvester's card system for Métis hunters. In 2008, the MNO and the Government of Ontario signed a framework agreement recognizing that the Métis communities in Ontario have a unique history and way of life (Métis Nation of Ontario, n.d.-h).

1.3.2.5 Métis in Ontario

In Ontario, historic Métis communities developed near prominent fur trade posts where Métis peoples were commonly employed. Fur trade records show Métis individuals serving in several capacities, such as blacksmith, tinsmith, cooper, boat/canoe builder, interpreters, runners, winterers, or quite commonly food provisioners (acquired through fishing, hunting, trapping, agriculture, gathering, etc.). The merger of the HBC and NWC in 1821 resulted in the loss of employment for many fur trade workers at numerous forts and posts, such as Fort William. Outside of the fur trade, Métis continued to work their specializations, but also worked as guides, interpreters, in the survey and lumber industry, military and commercial fishing. Fishing, hunting, trapping, maple syrup production, farming and gathering continued to be important lifeways (Métis Nation of Ontario, n.d.-c, n.d.-h, n.d.-d, n.d.-b, n.d.-a, n.d.-g, n.d.-e, n.d.-f)

There are seven historic Métis communities within Ontario. They are: 1) Rainy River/Lake of the Woods/ Treaty 3 Historic Métis Community; 2) Northern Lake Superior Historic Métis Community; 3) Abitibi Inland Historic Métis Community; 4) Sault Ste. Marie and Environs Métis Community; 5) Killarney and Environs Historic Métis Community; 6) Georgian Bay and Environs Historic Métis Community; and 7) Mattawa/Ottawa River and Environs Historic Métis Community. In northwestern Ontario, along the shores of Lake Superior, within the Robinson Superior Treaty of 1850 lands, the Red Sky Métis Independent Nation traces land use by their citizens to this area. The following are communities related to the study area:

Sault Ste. Marie and Environs Métis Community

The Sault Ste. Marie and Environs Métis Community is a historic Métis developed from the inter-connected Métis populations at Sault Ste Marie, Batchewana, Goulais Bay, Garden River, Bruce Mines, Desbarates, Bar River, St. Joseph's Island, Sugar Island, and adjacent parts of Northern Michigan. The fur trade was active in the area from the late 17th century, throughout the 18th century and into the 19th century. Relations between the early French and Jesuit traders initiated the presence of Métis people in the area. A Jesuit mission was established in the mid 1700s at Saint-Marie-du-Sault. In 1750, the French established a trading post on the south bank of the St. Mary's River, which attracted the already present Métis population to settle there. In 1821, the HBC began operating a post on the north side of the river, which employed several Métis who lived nearby with their families. Local Anishinaabeg and Métis protested the Quebec Mining Companies operations in Mica Bay, which led to the development of the Robinson treaties of 1850. However, the Métis were excluded as a distinct Indigenous group from the treaties, and it was left to the local First Nation chiefs to allocate treaty allotments to Métis people. At the time the treaty, the population of Sault Ste. Marie was predominantly Métis. After the treaty, many Métis families relocated to the smaller towns and surrounding countryside, hence why so many communities are listed above. The latter half of the 19th century saw an increase in Euro-Canadian and American settlers, but the local Métis people continued to live in the area and engage in their traditional lifeways (e.g., hunting, fishing, trapping, and harvesting) (Metis Nation of Ontario, n.d.g).

1.3.2.6 Post-Treaty Period

Following the fur traders came the loggers and lumbermen who created a thriving industry during the 1800's throughout the area. In the late 1800's, there was considerable interest in mining, especially copper mining and quarrying.

Just prior to the treaties, interest in Euro-Canadian settlement in the Sault Ste. Marie area prompted Alexander Vidal, Deputy Provincial Surveyor, to conduct a survey in 1846 for Sault Ste. Marie. Permission was granted by Chief Shingwauk to complete the survey, and Vidal also recorded the existing properties of those who had already established homesteads in the area. The mid-nineteenth century settlers continued to be involved in the fur trade (Hele, 2020).

The Robinson Treaties were signed between representatives of the Crown and the leaders of local Indigenous communities in 1850. The motivation for signing this treaty was to open the area to Euro-Canadian settlement, mineral exploration, and potential mining. The Crown preceded the treaty with claims of authority over the north shore of Lake Superior and Lake Huron in 1845 and began issuing mining licences and surveying for town plots. Local Indigenous leaders pushed back, with the conflict culminating in the Mica Bay Incident in November of 1849 when a group of Anishinaabeg and Métis warriors forced the Quebec and

Lake Superior Mining Association to cease operations at Mica Bay, approximately 100 km northwest of Sault Ste. Marie on Lake Superior (Hele, 2020).

Both the Robinson-Superior Treaty and the Robinson-Huron Treaty outlined reservation lands, as well as hunting and fishing rights for lands not taken up for settlement or development. Subsequent acts in the late 19th and early 20th centuries reduced the effectiveness of the treaties and negatively impacted the Indigenous communities (Hele, 2020).

District of Algoma

The District of Algoma was first settled by Europeans in the mid-17th century during the fur trade. As the French and English battled for domain, they each established their own fur trading posts across the region. After the signing of the Robinson-Huron Treaty of 1850, the district was surveyed and divided into smaller parcels of land to accommodate the influx of settlers to the region. After the decline of the fur trade, Europeans began to develop industry related to logging and mining. The first European settlements in the district were work camps related to the construction of the CPR; once construction was completed, these work camps were abandoned but were later reoccupied by workers within the logging and mining industries (Mika & Mika, 1977, 1983b). As industry grew, the work camps slowly evolved into larger settlements and became towns and cities, such as the community of Kynoch. There were sporadic farms and homesteads, but as industry grew these smaller settlements declined.

The district was named by Indian Agent and ethnologist Henry Rowe Schoolcraft; he named the district after the word *Algonquin* and the English version of the Ojibwe word *gomee*, *goma* (Hamilton, W., 1978). This district was first surveyed in 1850, prior to the signing of the Robinson-Huron Treaty, but it was officially designated in 1858 (Gentilcore & Head, 1984; *The Changing Shape of Ontario: The Districts of Northern Ontario*, n.d.). The district was reorganized again in 1869, and later in 1871 when the District of Thunder Bay was created (*The Changing Shape of Ontario: The Districts of Northern Ontario*, n.d.). The District of Algoma encompasses over 5,082,434 ha (Mika & Mika, 1977). Notably, the construction of the CPR which connected the district to other parts of northwestern Ontario was completed in 1887.

Kynoch

The rural community of Kynoch is located in the Township of Grasett, which was first surveyed in 1886 (Mika & Mika, 1981). Kynoch was initially settled in 1888 when workers, employed by the CPR during the construction of the railway, noticed that the area may be suitable for farming. In 1887, prospective settlers began clearing forested land and building their homesteads, eventually sending for their families to join them. Although the topography of the area was not ideal for farming, many families persisted; they grew crops in the summers, and men found work within the lumber industry during the winters. The expansion of the logging industry created a market for pulpwood, and this provided another form of income for the settlers of Kynoch (*History of Kynoch*, n.d.).

The community of Kynoch prevailed, and eventually more homes were built, as well as a church, school, and post office. The church was built in 1897 and is still in use today; the school was built in 1907 and closed 60 years later; the post office opened in 1912 and closed in 1933. Notably, the introduction of electricity to Kynoch in 1963 marked a significant milestone in the community's history office (*History of Kynoch*, n.d.).

1.3.2.7 Indigenous Communities

In present day, three Indigenous communities lie within approximately 50 km of the study areas. These include MFN, TFN, and Garden River First Nation.

Mississauga First Nation

The Mississagas settled on a river on the north shore of Lake Huron, originating from the Shawness group of the Ojibwe from present day Ohio Valley (Mississauga First Nation, n.d.). MFN is a signatory of the Robinson-Huron Treaty and a member of the Mississauga Nation. Located at the mouth of the Mississauga River on the north Shore of Lake Huron. MFN's traditional territory includes land north of Lake Huron within the Huron Watershed, encompassing the Mississaugi headwaters and beyond (Mississauga First Nation, n.d.).

Thessalon First Nation

TFN is located along the north shore of Lake Huron, approximately 10 km east of the mouth of the Thessalon River. The TFN reservation lands were created out of the Robinson-Huron Treaty of 1850. Unfortunately, the details of the treaty were not upheld by the Crown as TFN understood the terms, and as was the case of the Robinson Treaties, the reserve land was smaller than understood (Thessalon First Nation, n.d.).

Garden River First Nation

Garden River First Nation or Ketegaunseebee is also an Ojibway First Nation, created in 1850 with the signing of the Robinson-Huron Treaty. The history of the ancestors of Garden River First Nation was passed down in the form of legends prior to colonization, when non-natives began keeping written records (Garden River First Nation, n.d.). Today, the community of Garden River is situated along St. Mary's River.

1.3.3 Study Area Specific History

Ontario land property records are accessible through onland.ca, including historical parcel abstracts that provide information on the record of property transfer (e.g., bill of sale, grants, etc.) from when the lot is first created. A review of this data could not find any information specific to the properties that are the subject of this report.

1.4 Archaeological Context

1.4.1 Current Land Use

The study area is comprised of five parcels of land, identified in Map 2 as A-E. Three land parcels consist of cleared lands with some forested areas; the remaining two parcels are entirely forested. Several residential properties are situated within and adjacent to the boundaries of the study area. Information specific to each parcel is provided below.

Parcel A is located further east of highway 554, and there is an old logging that travels southwest to northeast through the parcel. The parcel is entirely forested, and there is a residential area located in the southwest corner on the study area. The Little White River is located approximately 82 m to the east.

Parcel B encompasses 113.33 ha, consisting of forested land with minor road development related to logging. Kynoch Creek travels through a portion of the eastern border of the study area. There is a residential property located just outside of the western boundary of the study

area, and another residential property located just outside the northwestern corner of the study area.

Parcel C encompasses 44.75 ha, consisting of cleared lands and some forested areas, which is predominantly situated in the western-most section of the study area and bordering Kynoch Creek. Kynoch Creek intersects the northwest corner of the parcel, with a smaller tributary extending along its northern border. A residence is located within the study area, adjacent to highway 554.

Parcel D encompasses 24.84 ha, consisting of cleared lands and forested lands. Kynoch Creek travels through the centre of the parcel.

Parcel E encompasses 30.20 ha, consisting predominantly of cleared land with forested land located along its southern and eastern borders.

1.4.2 Physiography and Environment

The study area is situated upon the Canadian Shield, which refers to the exposed portion of continental crust that North America is situated upon. The Canadian Shield stretches from Labrador, west through northern Quebec and northern Ontario, and then northwest through Manitoba and Saskatchewan into the Northwest Territories and most of Nunavut. Much of the shield is covered by Canada’s Boreal Forest, which includes thousands of lakes, and is full of various minerals. Boreal forests are dominated by coniferous trees (mostly pines and spruces), but birch trees are also common. The lakes that formed on the shield are often poorly drained, but extensive water corridors exist throughout the area that served as travel corridors for centuries.

1) Northern Ontario Engineering Geology Terrain Study (NOEGTS)

The NOEGTS Data Set is a map of engineering geology terrain studies, which are evaluations of near-surface geological conditions with a view to determining the engineering capability of the terrain. The data is at a reconnaissance level and designed to provide an overview of the terrain conditions, and a database on which to undertake more site-specific studies.

The study area encompasses five properties and a variety of landforms. These landforms include ground moraine, alluvial plain, outwash plain/valley train, and bedrock knob (Map 3; Table 1) (Ontario Geological Survey, 2005).

Table 1: Landforms encompassed by the study area, based on the NOEGTS Data Set for Ontario (Ontario Geological Survey, 2005).

Parcel	Landform	Relief	Drainage	Primary Material	Secondary Material	Terrain
A	Bedrock Knob	High	Dry	Bedrock	-	Jagged, rugged, cliffed
	Ground Moraine	Moderate	Dry; mixed wet and dry	Till	-	Undulating to rolling
	Alluvial Plain	Low	Wet; dry, suspected high water table	Sand	Gravel	-

Parcel	Landform	Relief	Drainage	Primary Material	Secondary Material	Terrain
B	Ground Moraine	Moderate	Dry; mixed wet and dry	Till	-	Undulating to rolling
	Bedrock Knob	High	Dry	Bedrock	-	Jagged, rugged, cliffed
C	Ground Moraine	Moderate	Dry; mixed wet and dry	Till	-	Undulating to rolling
	Alluvial Plain	Low	Wet; dry, suspected high water table	Sand	Gravel	-
D	Outwash Plain, Valley Train	Low	Dry	Sand	-	-
	Ground Moraine	Moderate	Dry; mixed wet and dry	Till	-	Undulating to rolling
	Alluvial Plain	Low	Wet; dry, suspected high water table	Sand	Gravel	-
E	Outwash Plain, Valley Train	Low	Dry	Sand	-	-
	Ground Moraine	Moderate	Dry; mixed wet and dry	Till	-	Undulating to rolling

2) Quaternary Geology

The Quaternary Geology Data Set is a digital interpretation of surficial geology for the Province of Ontario and illustrates the general distribution of the various types of Quaternary sediments and the major landforms associated with them. Tills, glaciofluvial, glaciolacustrine, glaciomarine, fluvial, lacustrine, and organic deposits are represented by 30 distinct geological units illustrating the Quaternary stratigraphy of Ontario. Also shown are landform deposits such as drumlins, moraines, eskers, sand dunes, and glacial-related escarpments.

The study area is expansive and is shown to lie predominantly on Pleistocene till deposits with small sections overlying Precambrian bedrock (Map 4; Table 2) (Ontario Geological Survey, 2000).

Table 2: Quaternary geological deposits, based on Quaternary Geology Data Set for Ontario (Ontario Geological Survey, 2000).

Parcel	Deposit	Time Period	Material	Description	Percentage Covered
A	Bedrock	Precambrian	Undifferentiated igneous and metamorphic rock	Exposed at the surface or covered by thin layer of drift	87.3%
	Till	Pleistocene	Undifferentiated sand to silty matrix	High content of clasts, low in carbonate content	12.7%
B	Till	Pleistocene	Undifferentiated sand to silty matrix	High content of clasts, low in carbonate content	94.7%
	Bedrock	Precambrian	Undifferentiated igneous and metamorphic rock	Exposed at the surface or covered by thin layer of drift	5.3%
C	Till	Pleistocene	Undifferentiated sand to silty matrix	High content of clasts, low in carbonate content	100%
D	Till	Pleistocene	Undifferentiated sand to silty matrix	High content of clasts, low in carbonate content	100%
E	Till	Pleistocene	Undifferentiated sand to silty matrix	High content of clasts, low in carbonate content	100%

3) Topography

Two sources of topographic data have been consulted. The first is based on the Ministry of Natural Resources and Forestry’s best available topographic data and imagery of Ontario that is publicly available through the provincial government website. The second is LiDAR data from the Forest Resource Inventory that is used to create a LiDAR-derived Digital Terrain Model (DTM) of the study area and the surroundings. Combined, these provide an overview of the topography of this study area.

The Ministry of Natural Resources and Forestry’s topographic imagery of Ontario shows that the study area has varied elevation across the five properties, ranging between 230 m and 318 m ASL (Map 5). Parcel A has an elevation between 230 m and 318m; parcel B has an elevation between 240 m and 280 m; parcel C has an elevation between 240 m and 260 m; parcel D has an elevation between 230 m and 252 m; and parcel E has an elevation between 232 m and 240 m.

A LiDAR-derived DTM from the Forest Resource Inventory allows for assessment of the topography of the study area. The DEM map (Map 6) shows a distinct former river valley associated with the Little White River, which intersects Parcel A.

1.4.2.1 Soils

The Ontario Soil Survey Complex database contains descriptive information including, but not limited to, soil classification, slope, stoniness, drainage, and texture. The data is intended to be used as a broad use planning tool and not necessarily for field-level management.

The five properties within the study area exhibit several different soil types (Map 7). The various soil types and relevant information is listed in Table 3 below.

Table 3: Soils encompassed by the Study Area, based on the Soil Survey Complex Data Set for Ontario and Soil Survey Report No 50 (Gillespie et al., 1983).

Parcel	Soil Name	Surface Texture	Classification	Material	Drainage	Slope
A	Wendigo	Sandy loam, sand, gravelly sandy loam, gravel	Orthic Humo-Ferric Podzol	Noncalcareous medium to coarse sand and gravelly sand outwash of Precambrian materials	Good	Gently sloping to moderately rolling and hilly
	Rockland	Nonsoil	-	Exposed bedrock or covered by less than 10 cm of soil	-	Moderately rolling to very hilly
	Medette	Sand, sandy loam, loamy sand, silt loam	Gleyed Humo-Ferric Podzol	Noncalcareous fine sand outwash or deltaic	Imperfect	Very gently sloping
	Dokise	Fine sandy loam, fine sand, sandy loam	Orthic Humo-Ferric Podzol	Noncalcareous fine sandy outwash or deltaic deposits	Good	Nearly level to moderately sloping
B	Baldwin	Silt loam, sandy loam, gravelly sandy loam	Orthic Gray Luvisol	Noncalcareous silt loam over silty clay loam lacustrine deposits	Very poor	Level
	Dokise	Fine sandy loam, fine sand, sandy loam	Orthic Humo-Ferric Podzol	Noncalcareous fine sandy outwash or deltaic deposits	Good	Nearly level to moderately sloping
	Rockland	Nonsoil	-	Exposed bedrock or covered by less than 10 cm of soil	-	Moderately rolling to very hilly
	Medette	Sand, sandy loam, loamy sand, silt loam	Gleyed Humo-Ferric Podzol	Noncalcareous fine sand outwash or deltaic	Imperfect	Very gently sloping
C	Warren	Silt loam, fine sandy loam, sandy loam, sand	Orthic Humic Gleysol	Non calcareous fine sand outwash or deltaic deposits	Poor	Level
	Baldwin	Silt loam, sandy loam, gravelly sandy loam	Orthic Gray Luvisol	Noncalcareous silt loam over silty clay loam lacustrine deposits	Very poor	Level
D	Wendigo	Sandy loam, sand, gravelly sandy loam, gravel	Orthic Humo-Ferric Podzol	Noncalcareous medium to coarse sand and gravelly sand outwash of Precambrian materials	Good	Gently sloping to moderately rolling and hilly
	Killaby	Sandy loam, silt loam	Orthic-Humo Ferric Podzol	Noncalcareous very fine sandy outwash or deltaic	Moderately well	Gently sloping
	Baldwin	Silt loam, sandy loam, gravelly sandy loam	Orthic Gray Luvisol	Noncalcareous silt loam over silty clay loam lacustrine deposits	Very poor	Level

Parcel	Soil Name	Surface Texture	Classification	Material	Drainage	Slope
E	Killaby	Sandy loam, silt loam	Orthic-Humo Ferric Podzol	Noncalcareous very fine sandy outwash or deltaic	Moderately well	Gently sloping
	Wendigo	Sandy loam, sand, gravelly sandy loam, gravel	Orthic Humo-Ferric Podzol	Noncalcareous medium to coarse sand and gravelly sand outwash of Precambrian materials	Good	Gently sloping to moderately rolling and hilly

1.4.2.2 Ecozone and Ecoregion

The study area falls within the Georgian Bay (5E) Ecoregion of the Ontario Shield Ecozone (Crins et al., 2009). The Georgian Bay ecoregion has a humid and cool climate, with a mean annual temperature of 2.8°C to 6.2°C, a mean growing season of 183-219 days, and a mean annual precipitation between 204 and 304 mm.

Within the Georgian Bay ecoregion, mixed forest covers most of the landscape (32.0%), followed by deciduous forest (22.2%) and coniferous forest (12.1%). Being within the Great Lakes-St. Lawrence Forest Region, tree species tend to include eastern white pine, red pine, yellow birch, eastern hemlock, balsam fir, jack pine, and sugar maple (Rowe, 1972). In terms of fauna, the little brown bat, American black bear, moose, North American river otter, beaver, common loon, and pileated woodpecker are among common species in the area. For fish, lake trout, brook trout, lake whitefish, walleye, bluntnose minnow, and rock bass, among many others, are common in the lakes and rivers (Crins et al., 2009).

1.4.2.3 Water Courses and Bodies

All parcels composing the study area lie within the Northern Lake Huron secondary watershed of the Great Lakes – St. Lawrence River primary watershed. The associated tertiary and quaternary watersheds for the study area is indicated in Table 4 below. In terms of proximity to waterbodies and watercourses, the Kynoch Creek travels through two of the five properties. The Little White River comes within 85 m of parcel A.

Table 4: Tertiary and Quaternary watershed for the study area.

Parcel	Tertiary Watershed	Quaternary Watershed
A-E	Lower Mississagi River	Little White River

1.4.2.4 Past Water Sources

The archaeological history of northern Ontario in general is expansive, extending back approximately 9,000 years when deglaciation opened the area for habitation. At this time in the Paleoindigenous period in northern Ontario, glacial Lake Algonquin formed where present-day Lake Huron is. Over the subsequent thousands of years, the lake experienced numerous level fluctuations resulting in an array of shorelines across different elevations that can be appreciated today through wave-cut features in the landscape (A. J. Heath & Karrow, 2007).

It is necessary to consider past water sources when identifying archaeological potential as past peoples in the area would have used these areas for travel and subsistence gathering. Following deglaciation, glacial Lake Algonquin formed at the front of the Laurentide glacier as discharge water poured southward. Archaeological evidence seems to suggest that past groups

migrating into the region favoured the beaches that formed on the margins of Lake Algonquin as they most likely provided an excellent source of both terrestrial and aquatic food resources. The Lake Algonquin high stand represents a period of time when water levels were significantly higher than they are today and was directly influenced by the Laurentide Ice Sheet. The Lake Stanley low stand occurred as the glacier retreated further northward, and less glacial meltwater was draining into the basin as other outlets were exposed. Notably, the Lake Stanley low stand exposed large expanses of land that were habitable, such as the AAR, which bisected the Lake Huron basin and created two distinct lakes. Following this low stand, water levels began to rapidly rise during the Lake Nipissing high stand, then eventually stabilized to resemble modern-day Lake Huron.

As the water levels fluctuated, people moved accordingly and continued to move along the contemporary shoreline of the lake. Relic shorelines related to the evolution of glacial Lake Algonquin have not been well documented, although dates associated with these past lake stages have been reported through the analysis of recovered organic materials; these dates are listed in Table 5 below.

Table 5: Past lake levels of Lake Huron, based on Lemke & O’Shea, 2019, and O’Shea & Meadows, 2009.

Lake Level	Date cal BP (calendar yr BP)	RCYBP (radiocarbon yr BP)	Associated Elevation (m asl)
Algonquin (high-water stand)	~14,000-12,000	12,000-10,500	~184-185
Stanley (low-water stand)	~11,200-8,300	9,900-7,500	~55-95
Nipissing (high-water stand)	~7,600-4,000	6,000-3,500	~182

1.4.3 Previous Archaeological Assessments

A search of the *Ontario Public Register of Archaeological Reports* on September 17, 2025, identified no archaeological assessments within 50 m of the study area.

1.4.4 Registered Archaeological Sites

In Ontario, information concerning archaeological sites is stored in the *Ontario Archaeological Sites Database* (OASD) and is maintained by the MCM. A search for site data was made on September 17, 2025, and identified no archaeological sites within 1 km of the study area.

The nearest registered archaeological site is located approximately 7 to 10 km away on Cumming’s Lake (CcHu-1, Cumming Lake).

2 Methodology

2.1 Desktop Analysis

Several factors are used to determine archaeological potential. Criteria for pre-contact archaeological potential is focused on physiographic variables that include distance from the nearest source of water, the nature of the nearest source/body of water, distinguishing features in the landscape (e.g., ridges, knolls, eskers, wetlands), the types of soils found within the area of assessment and resource availability as outlined in the *SGCA* (MCM, 2011; 22). Additionally, previously recorded archaeological sites within or in the vicinity of the study area are also used in determining archaeological potential. Historic and archival research provides the basis for determining historic archaeological potential.

Finally, criteria set out in Section 1.3.1 *Features indicating archaeological potential* of the *SGCA* (MCM, 2011) include the following:

- Previously identified archaeological sites
- Modern water sources including primary sources (lakes, rivers, streams) and secondary sources (intermittent streams and creeks, springs, marshes, swamps)
- Features indicating past water sources (e.g., glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels, shorelines of drained lakes or marshes)
- Accessible or inaccessible shoreline (e.g., high bluffs, swamp, or marsh fields by edges of lakes, sandbars stretching into marsh)
- Elevated topography (e.g., eskers, drumlins, large knolls)
- Pockets of well drained sandy soils, especially near areas of soil or rocky ground
- Distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings
- Resource areas, including:
 - Food or medicinal plants (e.g., migratory routes, spawning areas, prairie)
 - Scarce raw materials (e.g., quartz, copper, ochre, or outcrops of chert)
 - Early Euro-Canadian industry (e.g., fur trade, logging, prospecting, mining)
- Areas of early Euro-Canadian settlement. These include places of early military or pioneer settlement (e.g., pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches and early cemeteries. There may be commemorative markers of their history, such as local, provincial, or federal monuments or heritage parks
- Early historical transportation routes (e.g., trails, passes, roads, railways, portage routes)
- Property listed on a municipal register or designated under the Ontario Heritage Act or that is a federal, provincial, or municipal historic landmark or site

For this Stage 1 AA, the proposed study area was plotted on satellite imagery using GIS software and examined. This analysis includes the review of the highest quality available topographic data as well as geospatial layers from Ontario GeoHub or OGS Earth to identify possible existing features of archaeological potential within or near the study area. LiDAR was used to assess the terrain and to examine the existence of landscape features of archaeological potential. A property inspection was conducted to determine the conditions of the study area and assess the nature, extent, and degree of disturbance (see Section 2.2).

2.2 Property Inspection

A property inspection was completed for all parts of the study areas (Parcels A-E). The Stage 1 property inspection was conducted concurrently with the Stage 2 property survey on August 26th, 2025, and between September 25th-30th, 2025 under the direction of Dave Norris (P307) and Stefan Bouchard (P476), respectively. All fieldwork was conducted under suitable weather conditions for completing archaeological fieldwork (Table 6). The study area was systematically inspected to confirm the presence or absence of features of archaeological potential identified by the Stage 1 background research, and to document features not previously identified.

Table 6: Weather conditions during fieldwork.

Date	Temp Low	Temp High	Conditions	Impacts	Task	Parcel
26/08/2025	15 °C	20 °C	Sunny	None	Property Inspection	A, E
25/09/2025	15 °C	21 °C	Overcast, light rain (am)	None	Property Inspection Test Pit Survey	D D
26/09/2025	14 °C	20 °C	Overcast, partly sunny	None	Test Pit Survey	D
27/09/2025	11 °C	19 °C	Overcast	None	Property Inspection Test Pit Survey	C C
28/09/2025	9 °C	21 °C	Sunny	None	Property Inspection Test Pit Survey	B C
29/09/2025	16 °C	24 °C	Sunny	None	Test Pit Survey	C, D
30/09/2025	11 °C	20 °C	Sunny	None	Test Pit Survey	D

Parcel A

The Stage 1 property inspection was completed on August 26th, 2025, in adequate weather conditions which were suitable for conducting archaeological fieldwork with temperatures averaging between 15 and 20 °C and clear skies with minimal cloud coverage.

Access was granted by the landowners provided by the client with no constraints in place. Beginning in the southeastern portion of the property – access was gained by a low-grade gravel road that extends along the western portion of the property and cuts in east as it heads north (Photograph 1). Heavily forested, the landscape consisted of ferns and coniferous trees that populate the landscape (Photograph 2 and Photograph 3). The terrain is generally flat with a gentle slope that graduates to steeper incline as one moves east (Photograph 4). Pockets of open landscape were observed throughout the property.

The forest that covers the northern portion of the landscape opens up about mid-portion of the property and more deciduous trees were observed (Photograph 5 to Photograph 7). There is greater slope to the north and east in this portion of the study area with vegetation consisting of low-lying swamp (Photograph 8 and Photograph 9). The low-grade gravel road cuts east and heads northeast in this section and older modern abandoned buildings were observed (Photograph 10 and Photograph 11). These were observed to be more utility type buildings for storage of large equipment or other materials.

The western bank of a relic river intersects the southwest corner of the parcel. As a feature of archaeological potential, test pit survey is required for part of the parcel. No other feature of archaeological potential was observed during the property inspection.

Parcel B

The background research identified modern water in the northwest section of the parcel. A small portion of the northeast corner of the parcel is within 150 m of the mapped bank of a potential relic river located to the east of the parcel. The DEM model shows a distinct river valley associated with the Little White River. It appears that small sections of the eastern edge of the parcel are within 150 m of this feature of archaeological potential.

The property inspection for parcel B was conducted on September 28th, 2025. The inspection began along the southern of the parcel. The terrain in this area was consistently low-lying and wet (Photograph 12) with bedrock-controlled relief noted further to the north (Photograph 13). Land was fairly sloped in this area (Photograph 14) with small pockets of exposed bedrock (Photograph 15). The bedrock dropped abruptly near the east end of the study area and the land in this area has predominantly low-lying and wet (Photograph 16).

Heading north from the southeastern corner, areas of disturbance associated with logging and aggregate activity were noted (Photograph 17 to Photograph 19). The soil in this area was observed to be very sandy. The terrain sloped down to the east, which led to low-lying and wet terrain, including some of the land within 150 m of the relic river bank (Photograph 20 to Photograph 23). The land within 150 m of the relic riverbank shows a complex combination of archaeological potential, with some areas suitable for test pit survey, and other areas exempt from survey (e.g., low-lying and wet terrain).

Heading along the north edge of parcel B, the terrain remained level with jack pine forest (Photograph 24 and Photograph 25). Logging roads, created by clearing vegetation and driving over the sandy substrate, provided access throughout the interior of the property (Photograph 26 and Photograph 27). No features of archaeological potential were observed in the interior of the property.

The elevation dropped abruptly near the northwest corner of the parcel (Photograph 28), leading to a low-lying and wet environment (Photograph 29). The creek noted in the background review is located in this area. This section of the creek is the starting point for the drainage and consists of a wide, low-lying and wet area with no distinct channel or banks (Photograph 30 and Photograph 31). The land adjacent to the creek was sloped and uneven (Photograph 32 and Photograph 33). It was determined that the landscape surrounding this creek held low archaeological potential due to its complex combination of low-lying and wet terrain and sloped terrain.

No features of archaeological potential were noted during the property inspection. However, portions of the eastern edge of the parcel are within 150 m of the western bank of a relic river. Therefore, test pit survey is required.

Parcel C

The background research identified modern water along the northern edge of the parcel. The Kynoch Creek bisects the northwest corner, and a small, unnamed tributary branching off Kynoch Creek to extend across the north portion of the parcel. At this location, Kynoch creek appears to be a few metres wide and an unknown depth (creek bottom was not visible, Photograph 34). The unnamed tributary is The DEM model shows a wider river valley to be considered.

The property survey documented the fallow field, which consisted of a slightly rolling topography (Photograph 35 and Photograph 36). The western portion of the parcel consisted of a mixed forest environment (Photograph 37 and Photograph 38). The terrain was fairly level with no features of archaeological potential observed. Forested environment also surrounded the tributary along the north side of the parcel (Photograph 39 to Photograph 41). An older log and board structure was situated along the tributary just off the highway (Photograph 42).

In the northwest corner of the parcel, near Kynoch Creek, the land sloped steeply down towards the creek (Photograph 43). The vegetation in this area was indicative of more poorly drained soils (Photograph 44). However, areas along Kynoch Creek and its tributary retained archaeological potential.

Parcel D

The background research identified modern water bisecting the middle of the parcel. This modern water is the Kynoch Creek. At this location, the creek appears to be a few metres wide and varying between shallow and unknown depth (creek bottom was not always visible, Photograph 45). The DEM model shows a wider river valley to be considered, as well as a potential drainage at the western end of the parcel.

The property survey began along the creek basin, observing a level topography bordered by steep, but short creek banks (Photograph 46 and Photograph 47). To the east of the creek, the land consists of level pasture, elevating abruptly at the east end of the parcel where forest resumes (Photograph 48 to Photograph 50). A small area of pasture is located at the far east end of the parcel (Photograph 51).

To the west of the creek, the landscape consists of young growth vegetation (Photograph 52 and Photograph 53) leading to a more mature forest at the western edge of the parcel. The drainage noted in the DEM was observed in a few locations (Photograph 54 and Photograph 55) but was very small or surrounded by poorly drained low-lying and wet terrain. Therefore, it is not considered a feature of archaeological potential. A few cleared areas were also observed, indicating recent use of the land for pasture or garden (Photograph 56 and Photograph 57).

The property inspection confirmed archaeological potential along Kynoch Creek. No other features of archaeological potential were noted.

Parcel E

The Stage 1 property inspection was completed August 26th, 2025, in adequate weather conditions which were suitable for conducting archaeological fieldwork with temperatures averaging between 15 and 20 °C and clear skies with minimal cloud coverage.

This property consists of approximately 30 ha of mixed landscape. Access to the property was gained from the western side off the highway via a driveway (Photograph 58). Approximately 10 ha of the land is forested (Photograph 59) while the remaining portion has been cleared of trees but presently consists of overgrown grasses (Photograph 60 to Photograph 62). The property is flat with slope along the south edge where a driveway had been constructed for access to a residential house on the eastern side. This was not part of the assessment. To the north the highway winds around the western and northern sides of the property. The western side of the property consists of low-lying wetland and semi-clear forest (Photograph 63 and Photograph 64), with a dried-up drainage channel that had been constructed in the past (Photograph 65).

No features of archaeological potential were noted during the property inspection, and therefore it was determined that no test pit survey was required.

2.3 Property Survey

The Stage 2 property survey was conducted from September 25 to September 30 under the direction of Stefan Bouchard (P476). Fieldwork was conducted in adequate weather conditions which were suitable for conducting archaeological fieldwork (Table 6). Permission to access the properties were arranged by CarbonFree Kynoch Ltd. with no limits in place. All archaeological fieldwork was completed in accordance with the SGCA (MCM, 2011).

2.3.1 Test Pit Survey

The test pit survey was conducted in accordance with the Standards outlined in Sections 2.1.5 *Alternative strategies for special survey conditions: Test pit survey in northern Ontario and on Canadian Shield terrain* and Sections 2.1.6 *Alternative strategies for special survey conditions: Test pit survey in areas with complex combinations of archaeological potential of the SGCA* (MCM, 2011). Test pit intervals were spaced at 5 m within 50 m and at 10 m within 50 to 150 m of the feature of archaeological potential identified in the Stage 1 archaeological assessment. Where evidence of disturbance or low-lying and wet conditions were encountered in areas where test pit intervals were 5 m, the intervals were lengthened to 10 m to confirm the continuation of conditions that are exempt from test pit survey, as per Section 2.1 of the SGCA (MCM, 2011).

All test pits were excavated by hand and were measured at least 30 cm in diameter. Test pits were excavated at least 5 cm into subsoil. All excavated soil was sieved through 6 mm mesh and examined for archaeological resources. Test pits were also examined to understand local stratigraphy and to identify the presence of cultural features or evidence of fill. Test pit soil horizons consistently included a thin organic (O) horizon, over a topsoil (A) horizon, and a (B) subsoil horizon, with occasional eluviated (E) horizon. All test pits were backfilled once completed.

Parcel A

Test pit survey was not completed for this parcel due to scheduling constraints. Archaeological potential is retained with recommendations for test pit survey presented in *Section 4: Recommendations* of this report.

Parcel B

Test pit survey was not completed for this parcel due to scheduling constraints. Archaeological potential is retained with recommendations for test pit survey presented in *Section 4: Recommendations* of this report.

Parcel C

Parcel C measured a total of 44.75 ha in size. Stage 1 recommendations were to complete a Stage 2 test pit survey at 5 m intervals within 50 m of Kynoch Creek and a small tributary branching off the creek (Photograph 66 to Photograph 71). The creek and its tributary are located at the north end of the property and represent the main feature of archaeological potential in parcel C. The test pit survey covered an area of 5.76 ha.

The test pit area can be divided into two areas: a small portion on the eastern side of Kynoch Creek, and the north and south sides of the tributary river.

On either side of the tributary river are low-lying and wet wooded terrain consistent with occasional flooding and poor drainage along the creek and edge of the parcel (Photograph 72), levelled wooded terrain at the farther west portion of the southern side of the tributary (Photograph 73), sloped wooded terrain leading to a fallow or grazing open field with some drainage ditches (Photograph 74 and Photograph 75). A small parcel near HWY 554 also featured a small wood structure surrounded by vegetation and a gravel lot covered in vegetation.

The eastern side of Kynoch Creek, on the far western side of the parcel, featured low-levelled terrain with some low-lying and wet areas adjacent to the creek (Photograph 76), and steep forested slope leading to a narrow elevated wooded ridge (Photograph 77 to Photograph 80).

Test pit soil conditions in the open field areas on either side of the tributary creek show a consistent thin organic horizon, over a pale brown and light-grey clay loam horizon, and a light-grey and white clay loam subsoil. Test pit soil conditions near the small, wood structure showed a consistent disturbance horizon, over a light-grey and white subsoil horizon (Photograph 81).

Test pit soil conditions adjacent to Kynoch Creek showed a consistent thin organic horizon, over a moist light-grey clay loam horizon, and a light-grey silty clay subsoil horizon (Photograph 82). Test pit soil conditions on top of the ridge near Kynoch Creek showed a consistent thin organic horizon, some light grey ash over a mottled brown and red-brown silty loam eluviated horizon (AE), and a red-brown and pale brown subsoil (B) horizon (Photograph 83).

Parcel D

Parcel D measured a total of 24.84 ha in size. Stage 1 recommendations were to complete a Stage 2 test pit survey at 5 m intervals within 50 m of Kynoch Creek (Photograph 84 to Photograph 87). The creek is in the center of the parcel and represents the main feature of archaeological potential in parcel D. The test pit survey covered an area of 3.33 ha.

The test pit area can be divided into two areas: the eastern side of the creek, and the western side of the creek. The eastern side of the creek featured low-lying and wet conditions (Photograph 88) and dry levelled pasture terrain (Photograph 89) surrounded by sloped forested terrain leading to an elevated open field which is accessible by sloped pathways (Photograph 90). The western side of the creek featured some low-lying and wet areas, dry levelled pasture terrain, sloped forested terrain, and a small elevated forested plateau (Photograph 91 and Photograph 92).

Test pit soil conditions in levelled pasture terrain showed a consistent thin organic horizon, over a moist light-brown and light-grey clay loam topsoil, and a light-grey and white sandy subsoil (Photograph 93). There are some instances of test pits with a thin light-brown organic horizon, over a moist mottled brown, light-red brown and grey sandy loam topsoil horizon, on top of a light-yellow brown sandy clay subsoil horizon (Photograph 94).

Soil conditions in test pits near sloped forested terrain and on the forested plateau showed a consistent thin organic horizon composed of a thin root mat, over a dry brown silty loam horizon, on top of a light red brown and pale brown silty loam subsoil horizon (Photograph 95).

Parcel E

Test pit survey was not required for this parcel.

2.4 Inventory of Documentary Records

The following documentation was collected during fieldwork:

- 31 pages of field notes
- 465 digital photographs
- GPS waypoints for observations

3 Analysis

3.1 Determination of Archaeological Potential

Table 7 provides a list of the features of archaeological potential that must be considered in determining the archaeological potential of a study area and whether they are within 50 m or 150 m of the study area. This determination is based both on the results of the background research and observations made during the property inspection. The study area is located in Northern Ontario and on Canadian Shield terrain and therefore subject to the special conditions outlined in Section 2.1.5 of the *SGCA* (MCM, 2011). These conditions state that test pit survey is required at 5 m intervals within 50 m of all features of archaeological potential and at 10 m intervals between 50 m and 150 m of all features of archaeological potential, except modern water sources.

Table 7: Features of archaeological potential near the study area.

Feature of Archaeological Potential	Within 50 m	Within 150 m
Previously identified archaeological sites	No	No
Modern water sources	Yes	N/A
Past water sources	Yes	Yes
Accessible or inaccessible shoreline	No	No
Elevated Topography	No	No
Pockets of well-drained sandy soils	No	No
Distinctive land formations	No	No
Resource areas	No	No
Early Euro-Canadian settlement	No	No
Early historical transportation routes	No	No
Property listed on a municipal register or designated under the Ontario Heritage Act	No	No
Property identified in local histories or by informants as having archaeological or historical potential	No	No

Based on the desktop analysis, the following feature of archaeological potential is present within All factors, whether present or not, and their meaning are discussed below.

1) Previously identified archaeological sites

There are no archaeological sites within 150 m of the study area. The nearest registered archaeological site is located approximately 7 to 10 km away on Cumming's Lake (CcHu-1, Cumming Lake).

2) Modern water sources including primary sources (lakes, rivers, streams) and secondary sources (intermittent streams and creeks, springs, marshes, swamps)

Kynoch Creek travels through Parcel C and D, with associated tributaries also in Parcel c and extending into Parcel B. The land within 50 m of these modern water features represent a complex mix of archaeological potential. Therefore, it was determined that test pit survey at 5 m intervals, as the conditions allowed, was required.

The Little White River is located approximately 82 m east of Parcel A, which is too distant to trigger archaeological potential, as per Section 2.1.5 of the SGCA.

3) Features indicating past water sources (e.g., glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels, shorelines of drained lakes or marshes)

A distinct relic river channel associated with the Little White River is visible in the quaternary data and DEM. This feature intersects parcel A and comes within 150 m of parcel B. A significant portion of the land within 150 m of the western bank of the relic river within parcel A was observed to be low-lying and wet terrain and therefore exempt from test pit survey. The remaining land retains archaeological potential and therefore requires test pit survey. The land at the eastern edge of parcel B is low-lying and wet in the southeast corner, but the land along the edge further to the north can largely be subject to test pit survey at 10 m intervals.

4) Accessible or inaccessible shoreline (e.g., high bluffs, swamp, or marsh fields by edges of lakes, sandbars stretching into marsh)

No additional accessible or inaccessible shorelines were identified aside from the modern water source.

5) Elevated topography (e.g., eskers, drumlins, large knolls)

Although there is varying elevation within the study area, there is no distinct elevated topography within the study area that stands out amongst the surrounding area. To the west of the study area is an escarpment that does overlook the landscape, but this is beyond 150 m of the study area. Therefore, this feature of archeological potential is not present in or within 150 m of the study area.

6) Pockets of well drained sandy soils, especially near areas of soil or rocky ground

Sandy soils are present across several of the parcels. No pockets of well drained sandy soils were observed that would result in their being considered a feature of archaeological potential.

7) Distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings.

This feature of archaeological potential is not present in or within 150 m of the study area. Further information from local indigenous communities could alter this conclusion, however.

8) Resource areas, including:

- a. Food or medicinal plants (e.g., migratory routes, spawning areas, prairie)
- b. Scarce raw materials (e.g., quartz, copper, ochre, or outcrops of chert)
- c. Early Euro-Canadian industry (e.g., fur trade, logging, prospecting, mining)

This feature of archaeological potential is not present in or within 150 m of the study area.

9) Areas of early Euro-Canadian settlement. These include places of early military or pioneer settlement (e.g., pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches and early cemeteries. There may be commemorative markers of their history, such as local, provincial, or federal monuments or heritage parks).

This feature of archaeological potential is not present in or within 150 m of the study area.

10) Early historical transportation routes (e.g., trails, passes, roads, railways, portage routes).

This feature of archaeological potential is not present in or within 150 m of the study area.

11) Property listed on a municipal register or designated under the Ontario Heritage Act or that is a federal, provincial, or municipal historic landmark or site.

This feature of archaeological potential is not present in or within 150 m of the study area.

12) Property that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations

At this stage, there have not been any specific identified areas. Engagement with local communities is encouraged to gather relevant traditional use data.

3.2 Test Pit Survey Results

Test pit survey is still required for a portion of parcel A and parcel B.

No archaeological resources were recovered from the test pit survey of parcel C and parcel D.

Test pit survey was not required for parcel E.

3.3 Conclusions

No further archaeological assessment is required for parcels C, D, or E. Test pit survey is still required for parcel A and parcel B. Partial clearance is recommended for these parcels, with a 20 m buffer applied to the areas noted to retain archaeological potential.

4 Recommendations

The following archaeological recommendations are made based on the results of the Stage 1 background research and property inspection and the Stage 2 property survey. These recommendations are in accordance with the *SGCA* (MCM, 2011) and are as follows:

- No further archaeological assessment is required for parcels C, D, and E (Map 8c-e).
- Parcel A and B require test pit survey for the lands within 150 m of the relic riverbank (Map 8a-b).
 - Partial clearance is recommended for these parcels.
 - Land within 150 m of the relic riverbank, plus an additional 20 m buffer, cannot be impacted by the development until test pit survey has been completed.
 - Land beyond 150 m of the relic riverbank, plus an additional 20 m buffer, does not hold archaeological potential. Therefore, no further archaeological assessment is required for these lands.
- Should there be any alteration to the plans of this development as it is represented in this report, additional archaeological assessment may be required based on the presence of archaeological potential as outlined in the *2011 Standards and Guidelines for Consulting Archaeologists Section 1.3.1* (MCM, 2011).

The Ontario Ministry of Citizenship and Multiculturalism (MCM) is asked to review the results presented and to accept this report into the Ontario Public Register of Archaeological Reports. Archaeological sites recommended or further archaeological fieldwork or protection remain subject to Section 48 (1) of the Ontario Heritage Act and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence with local community authorization.

5 Advice on Compliance with Legislation

This report is submitted to the Minister of Citizenship and Multiculturalism as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the *Standards and Guidelines for Consultant Archaeologists* (2011) that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection, and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Citizenship and Multiculturalism, a letter will be issued by the Ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

Should previously undocumented archaeological resources be discovered, there may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the *Ontario Heritage Act*.

The *Cemeteries Act*, R.S.O. 1990 c.C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

6 Advice on Compliance with Indigenous Communities and Métis

The following summarizes protocols and measures that need to be taken when engaging Indigenous Peoples and completing Archaeological Assessments in their homelands. These are not mandated, nor are they supported by the Ministry of Citizenship and Multiculturalism but have been developed by Woodland Heritage Northwest in conjunction with the many First Nation communities and projects that have been completed in northern Ontario. It is strongly recommended that these considerations be undertaken prior and during any assessment in northwestern Ontario.

All archaeological assessments must be completed by a licenced archaeologist with seasoned experience in northern Ontario and a boreal forest setting who is familiar with identification of artifacts originating in the north. This includes stone tools, raw material and pottery styles that are indicative of northern Indigenous peoples as well as artifacts that can be classified as Métis.

When completing fieldwork, archaeologists must maximize the use of trained Indigenous archaeologists or support staff and hire Indigenous Community Members, or Métis citizens, to assist with the field work. Progress and finds must be reported on a regular basis to the nearest Indigenous Community, including the immediate reporting of the discovery of any and all human remains. In the event that human remains are discovered, **ALL WORK MUST CEASE** until the appropriate measures can be taken. All artifacts and finds must be handled consistent with the nearest indigenous community protocols and may be transferred or repatriated to the community for storage and safe keeping.

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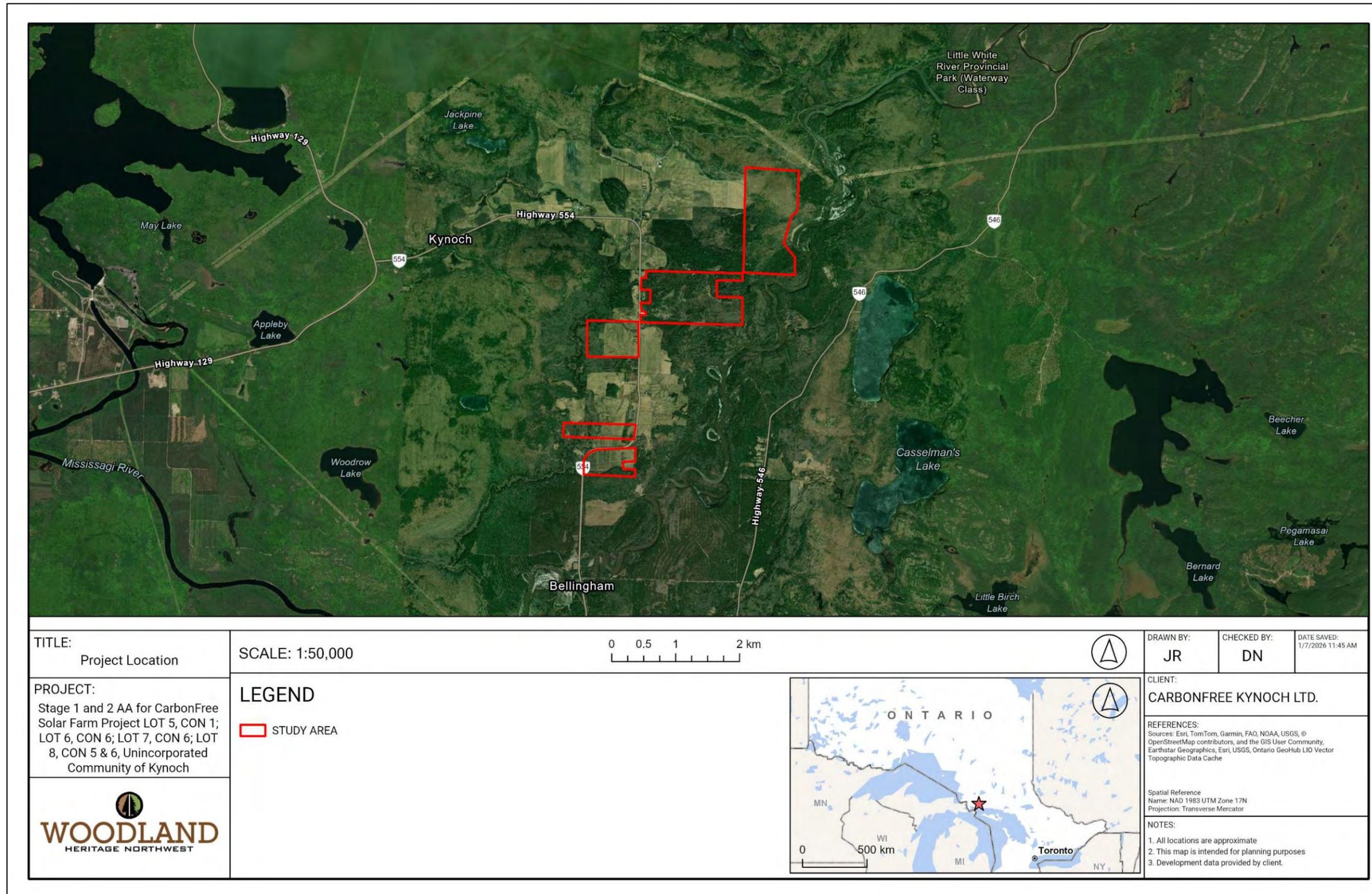
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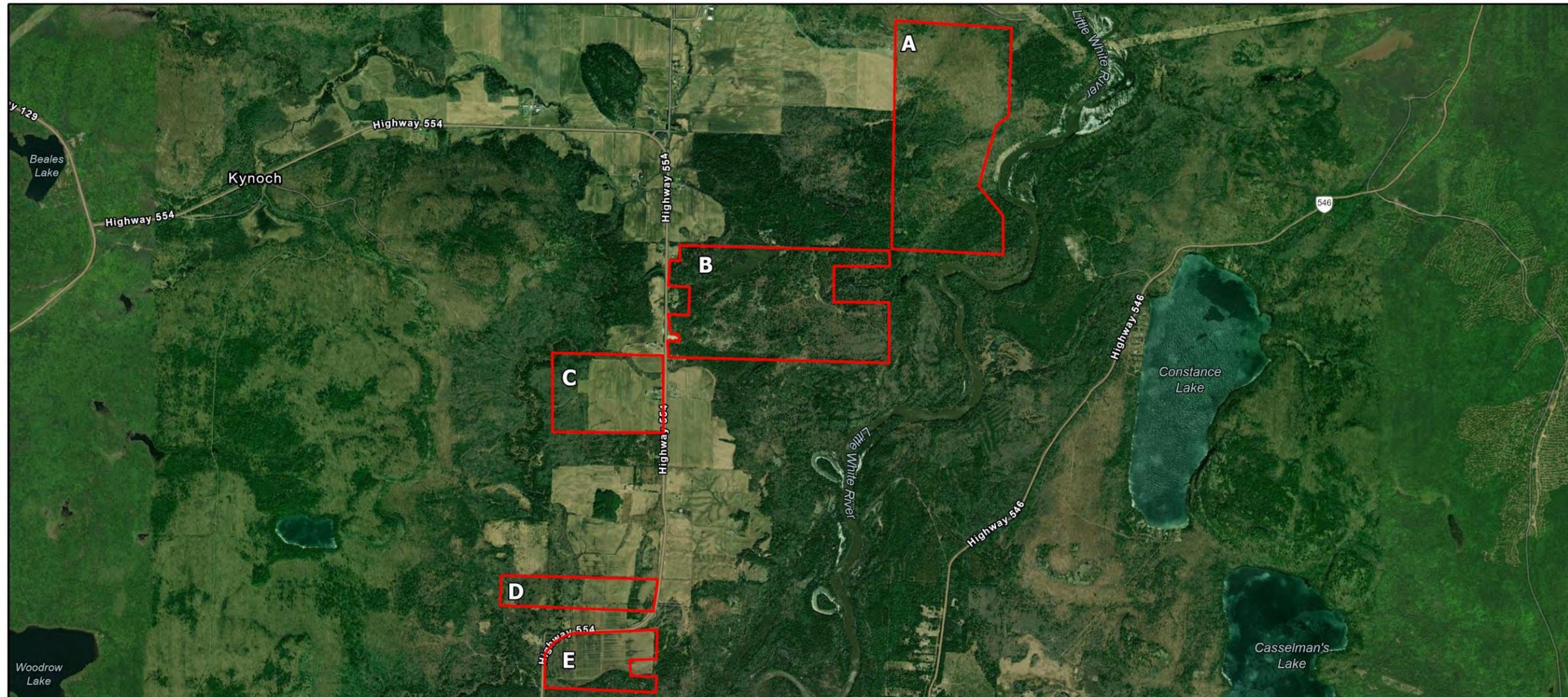
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8 Maps

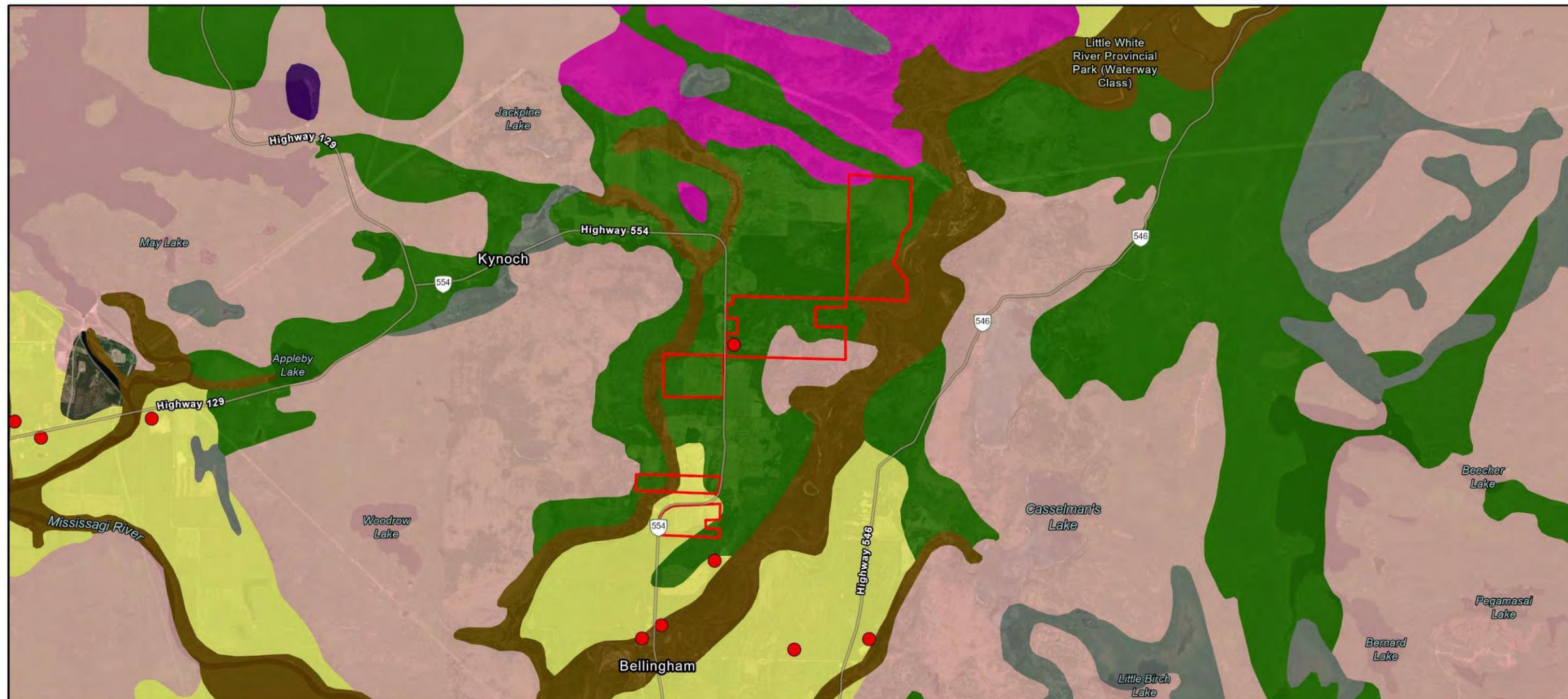


Map 1: Project Location



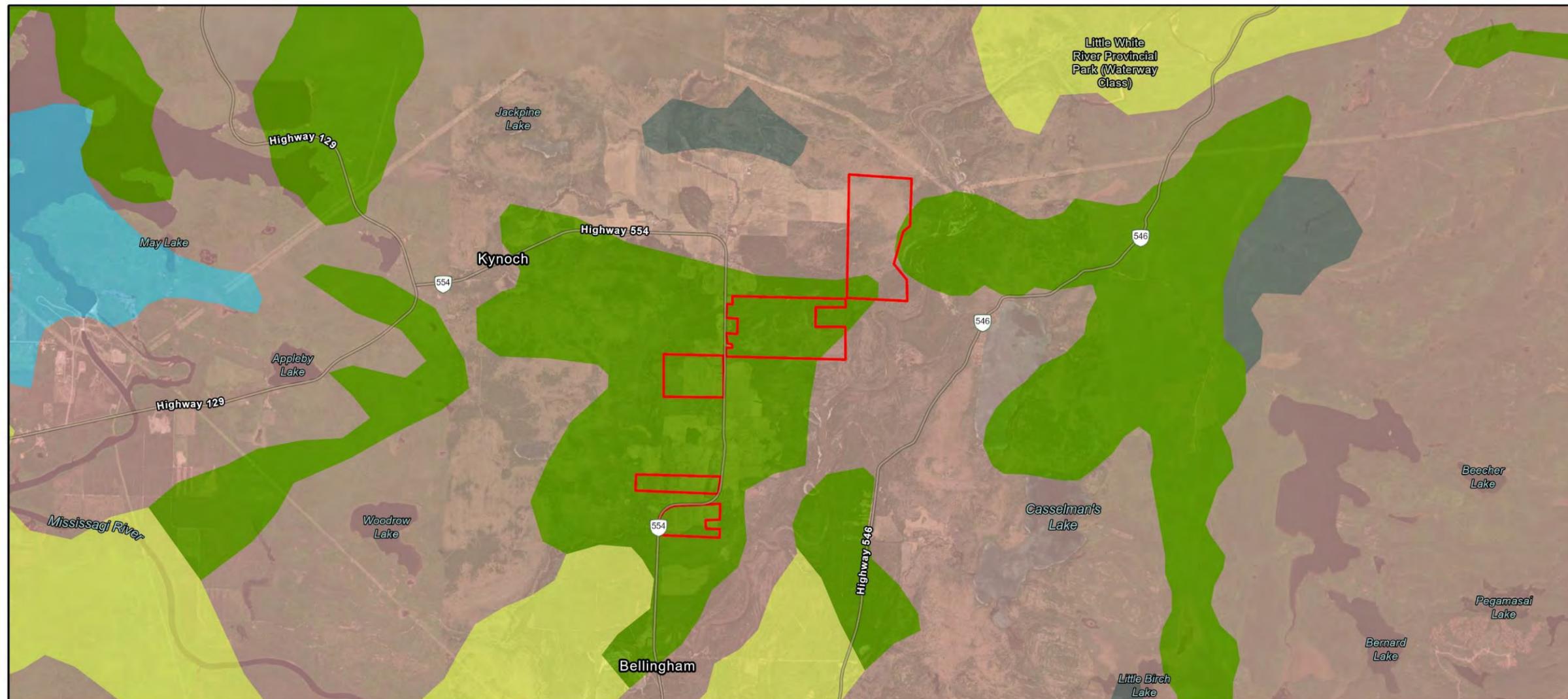
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						REFERENCES: <small>Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Earthstar Geographics, Esri, USGS, Ontario GeoHub L10 Vector Topographic Data Cache</small>		
						NOTES: 1. All locations are approximate 2. This map is intended for planning purposes 3. Development data provided by client.		

Map 2: Study Area



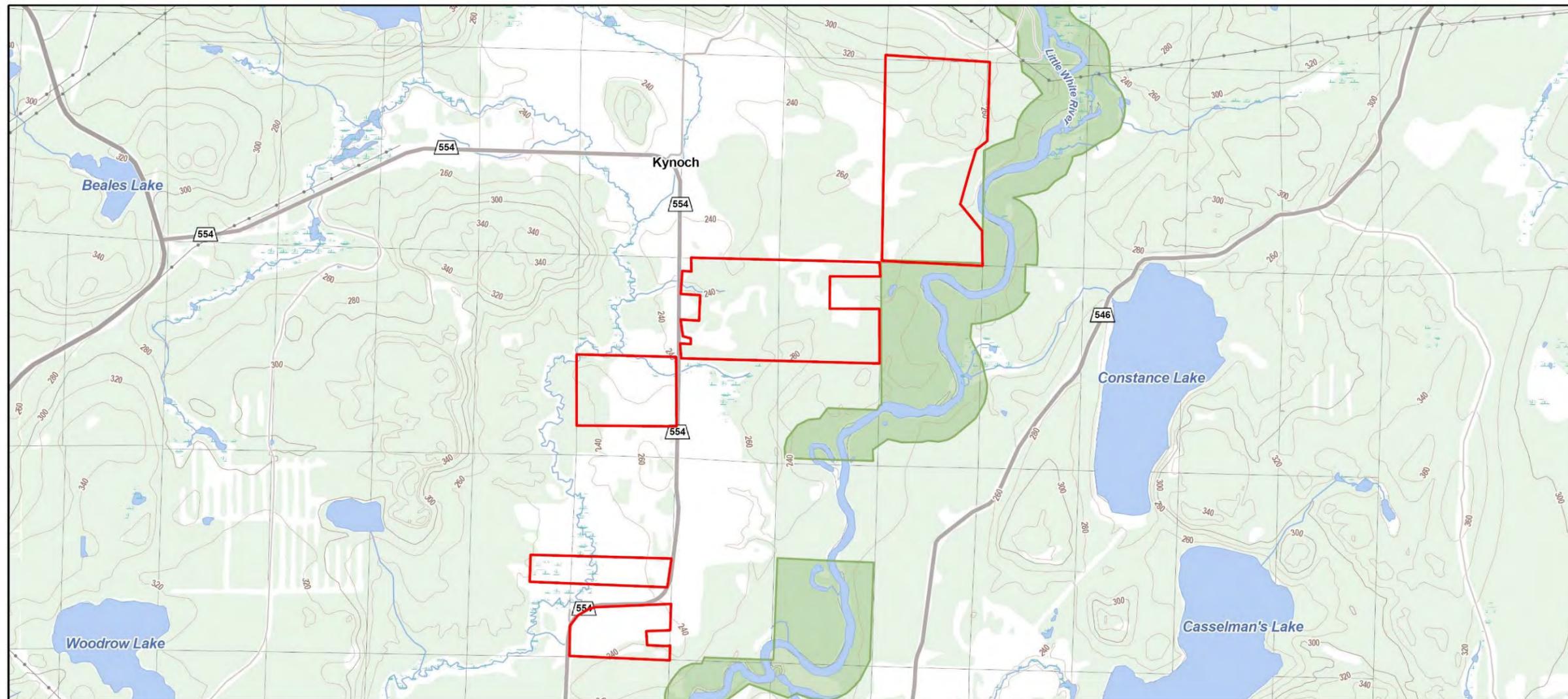
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		STUDY AREA	OUTWASH PLAIN	BEDROCK KNOB	REFERENCES: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Earthstar Geographics, Esri, USGS, Ontario GeoHub L10 Vector Topographic Data Cache, OGSEarth NOEGTS			
		ALLUVIAL	TALUS PILE	BEDROCK RIDGE	Spatial Reference Name: NAD 1983 UTM Zone 17N Projection: Transverse Mercator			
		GROUND MORAINE	ORGANICS	SAND/GRAVEL PIT	NOTES: 1. All locations are approximate 2. This map is intended for planning purposes 3. Development data provided by client.			

Map 3: NOEGTS.



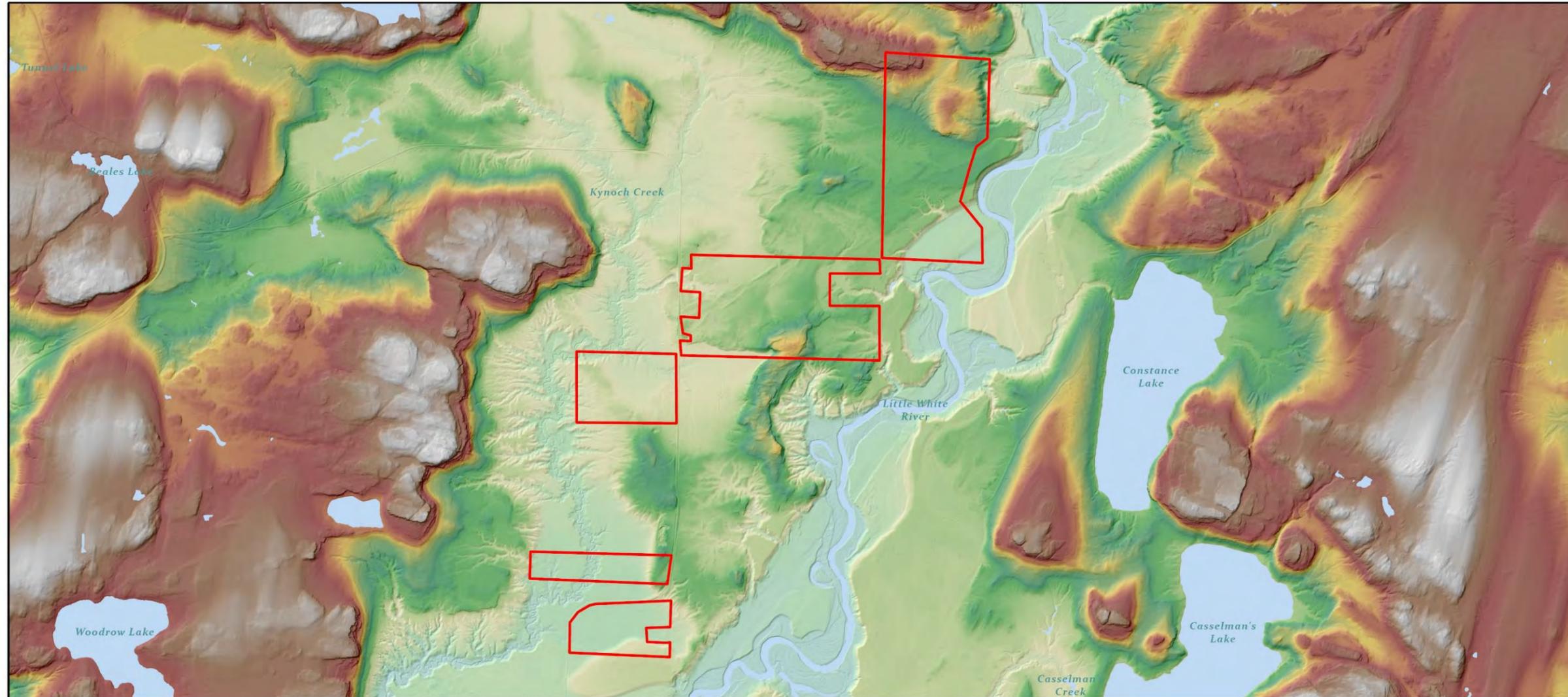
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NOTES: 1. All locations are approximate 2. This map is intended for planning purposes 3. Development data provided by client.					

Map 4: Quaternary Geology.



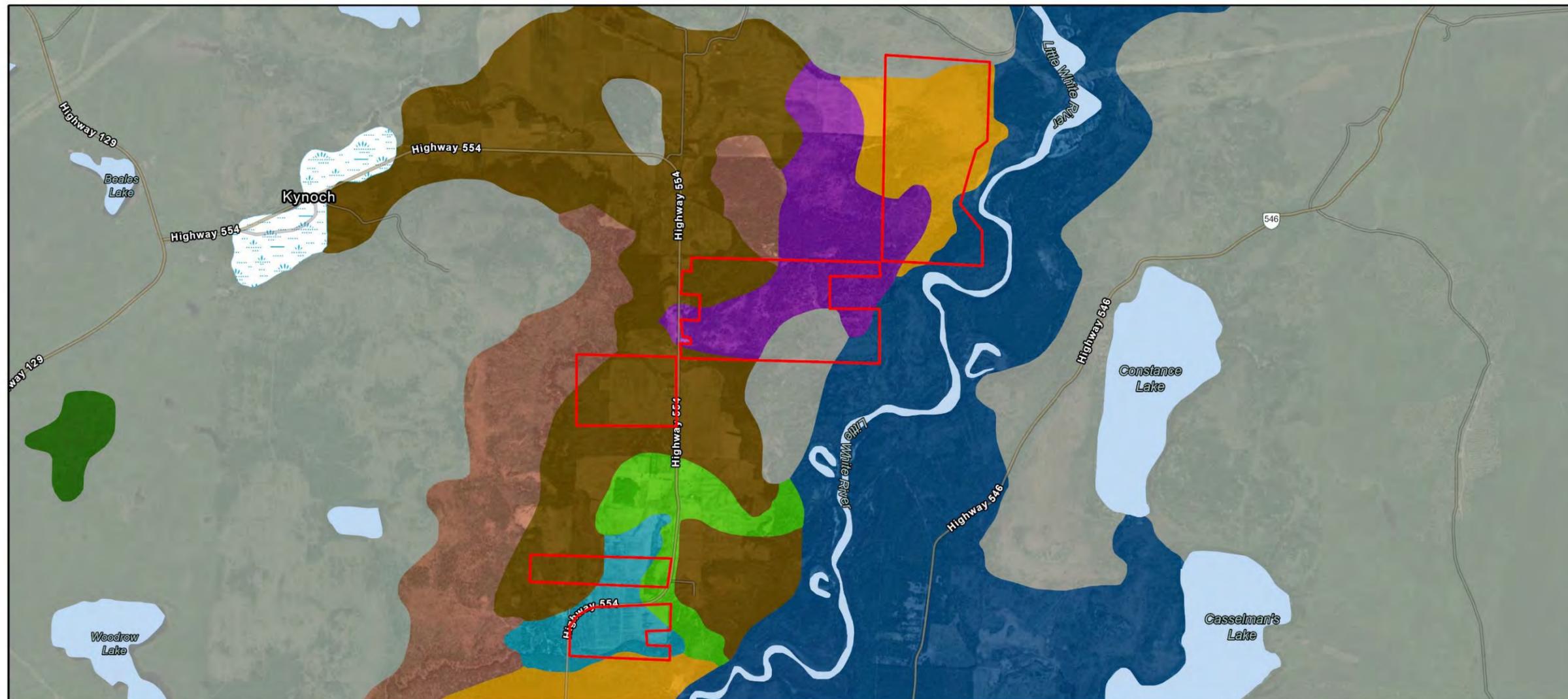
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			REFERENCES: <small>Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS, Ontario GeoHub LIO Vector Topographic Data Cache</small>		
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Map 5: Ontario Topography.



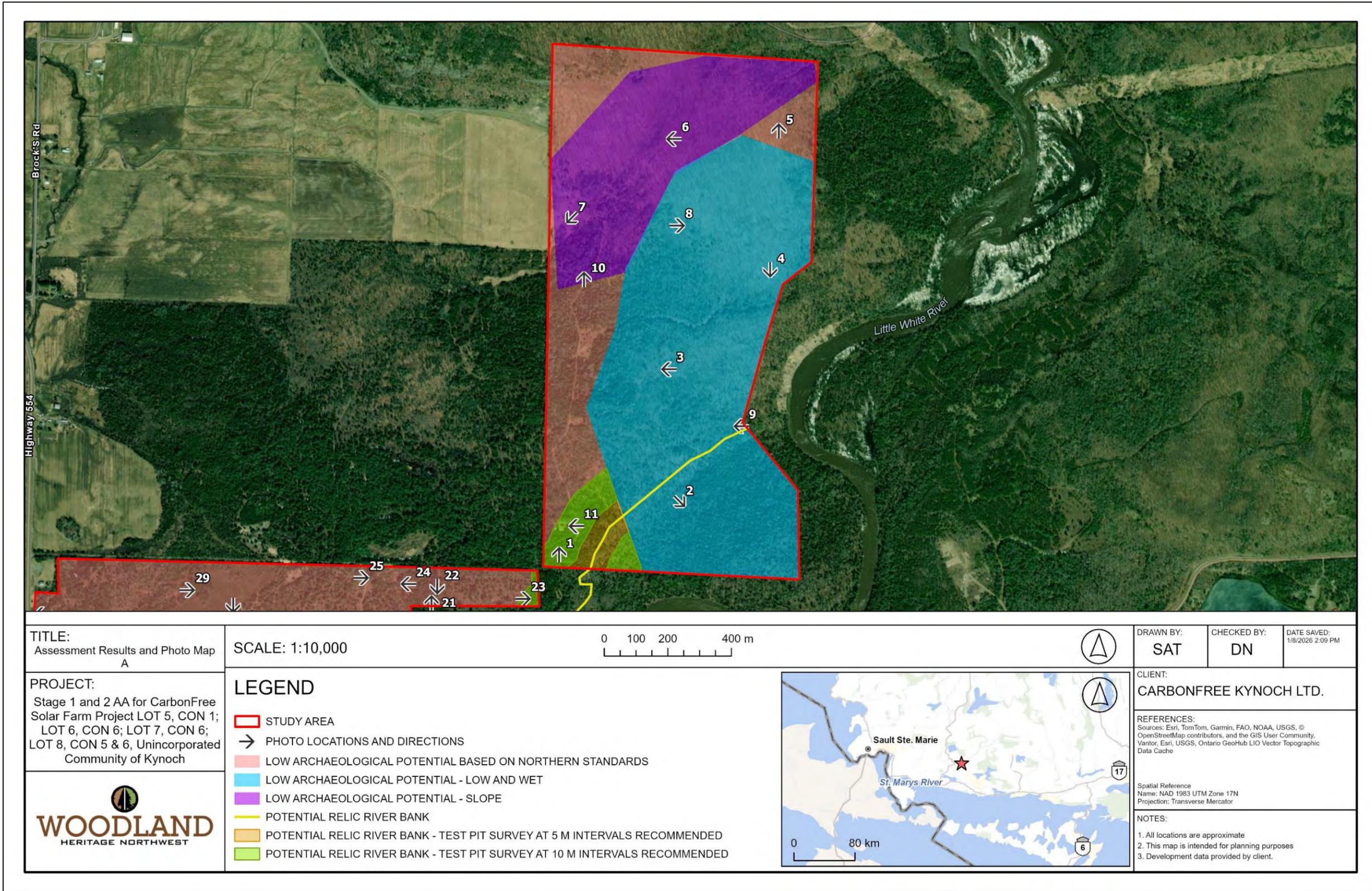
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						REFERENCES: <small>Earthstar Geographics, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS, Ontario GeoHub L10 Vector Topographic Data Cache, Ontario GeoHub FRI DTM, Ontario GeoHub Waterbodies</small>		
				NOTES: 1. All locations are approximate 2. This map is intended for planning purposes 3. Development data provided by client.				

Map 6: Digital Elevation Model (DEM).

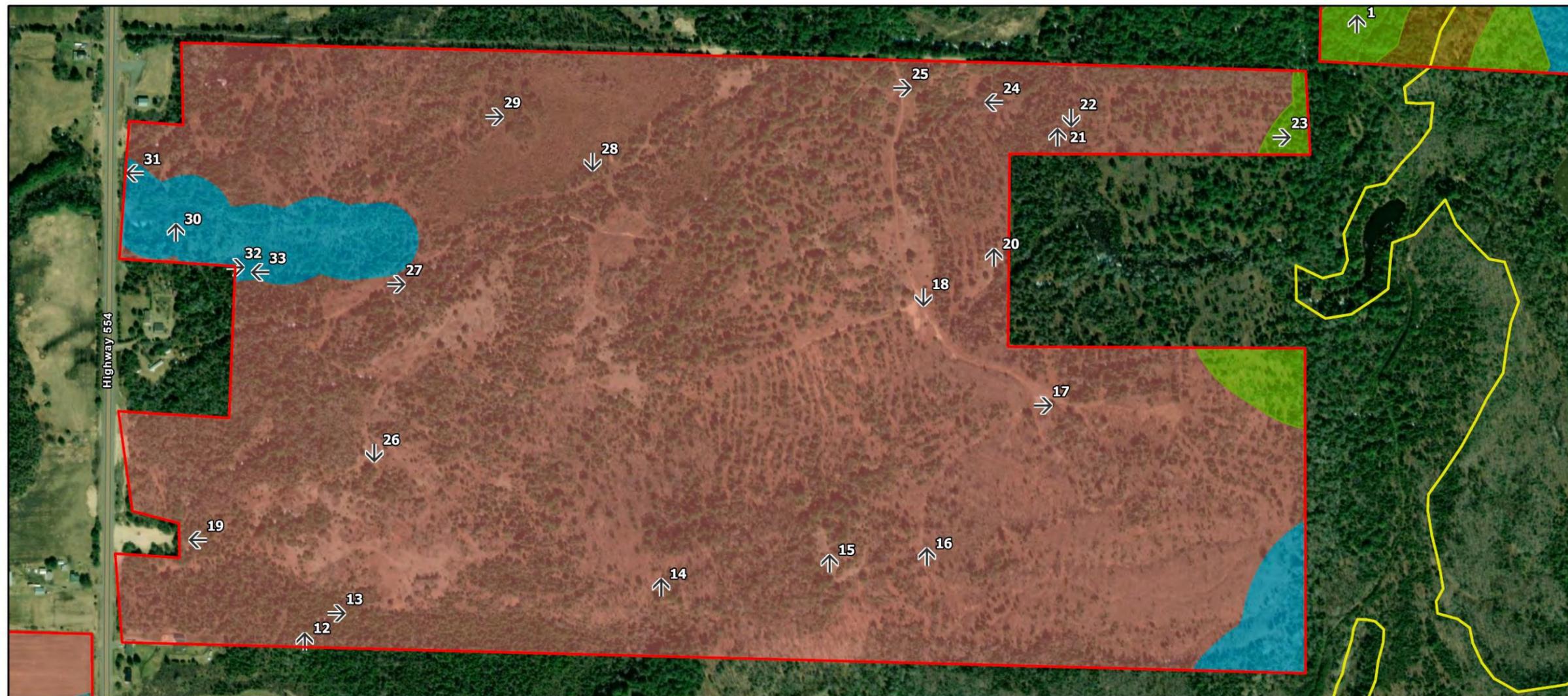


TITLE: Soil Survey Complex	SCALE: 1:30,000 		DRAWN BY: JR	CHECKED BY: DN	DATE SAVED: 1/7/2026 11:45 AM																					
PROJECT: Stage 1 and 2 AA for CarbonFree Solar Farm Project LOT 5, CON 1; LOT 6, CON 6; LOT 7, CON 6; LOT 8, CON 5 & 6, Unincorporated Community of Kynoch	LEGEND <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;"> STUDY AREA</td> <td style="width: 33%;"> NOELVILLE SILTY LOAM</td> <td style="width: 33%;"> ROCKLAND</td> </tr> <tr> <td>SOIL NAME</td> <td> WARREN SAND</td> <td> WATER</td> </tr> <tr> <td> BALDWIN SILTY LOAM</td> <td> WENDIGO GRAVELLY SANDY LOAM</td> <td> WENDIGO SANDY LOAM</td> </tr> <tr> <td> DOKISE SAND</td> <td> WENDIGO SANDY LOAM</td> <td></td> </tr> <tr> <td> KILLABY VERY FINE SANDY LOAM</td> <td></td> <td></td> </tr> <tr> <td> MARSH</td> <td></td> <td></td> </tr> <tr> <td> MELETTE SANDY LOAM</td> <td></td> <td></td> </tr> </table>	STUDY AREA	NOELVILLE SILTY LOAM	ROCKLAND	SOIL NAME	WARREN SAND	WATER	BALDWIN SILTY LOAM	WENDIGO GRAVELLY SANDY LOAM	WENDIGO SANDY LOAM	DOKISE SAND	WENDIGO SANDY LOAM		KILLABY VERY FINE SANDY LOAM			MARSH			MELETTE SANDY LOAM				CLIENT: CARBONFREE KYNOCH LTD.		
STUDY AREA	NOELVILLE SILTY LOAM	ROCKLAND																								
SOIL NAME	WARREN SAND	WATER																								
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MELETTE SANDY LOAM																										
			REFERENCES: <small>Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Earthstar Geographics, Esri, USGS, Ontario GeoHub L10 Vector Topographic Data Cache, Ontario GeoHub Soil Survey Complex</small>																							
NOTES: 1. All locations are approximate 2. This map is intended for planning purposes 3. Development data provided by client.																										

Map 7: Soil Survey Complex.

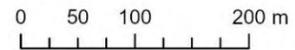


Map 8a: Assessment Results and Photo Locations – Parcel A.



TITLE:
Assessment Results and Photo Map
B

SCALE: 1:5,000



DRAWN BY:
SAT

CHECKED BY:
DN

DATE SAVED:
1/8/2026 2:02 PM

PROJECT:
Stage 1 and 2 AA for CarbonFree Solar Farm Project LOT 5, CON 1; LOT 6, CON 6; LOT 7, CON 6; LOT 8, CON 5 & 6, Unincorporated Community of Kynoch

LEGEND

- STUDY AREA
- PHOTO LOCATIONS AND DIRECTIONS
- COMPLEX COMBINATION OF MIXED ARCHAEOLOGICAL POTENTIAL - TEST PIT SURVEY AT 5 M INTERVALS COMPLETED WHERE APPROPRIATE
- LOW ARCHAEOLOGICAL POTENTIAL BASED ON NORTHERN STANDARDS
- LOW ARCHAEOLOGICAL POTENTIAL - LOW AND WET
- LOW ARCHAEOLOGICAL POTENTIAL - SLOPE
- POTENTIAL RELIC RIVER BANK
- POTENTIAL RELIC RIVER BANK - TEST PIT SURVEY AT 5 M INTERVALS RECOMMENDED
- POTENTIAL RELIC RIVER BANK - TEST PIT SURVEY AT 10 M INTERVALS RECOMMENDED



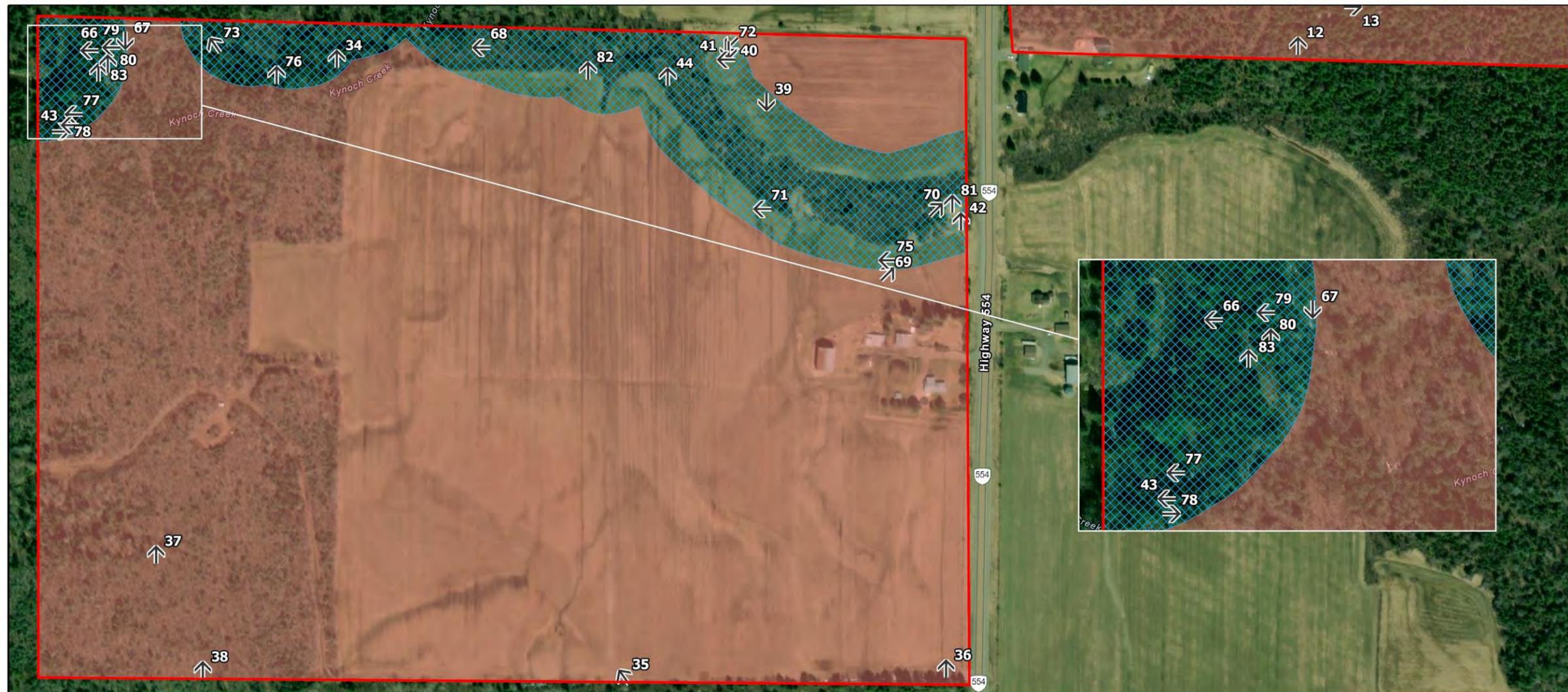
CLIENT:
CARBONFREE KYNOCH LTD.

REFERENCES:
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Vantor, Esri, USGS, Ontario GeoHub LIO Vector Topographic Data Cache

Spatial Reference
Name: NAD 1983 UTM Zone 17N
Projection: Transverse Mercator

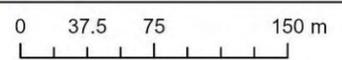
NOTES:
1. All locations are approximate
2. This map is intended for planning purposes
3. Development data provided by client.

Map 8b: Assessment Results and Photo Locations – Parcel B.



TITLE:
Assessment Results and Photo Map
C

SCALE: 1:3,200



DRAWN BY:
JR

CHECKED BY:
DN

DATE SAVED:
1/8/2026 2:02 PM

PROJECT:
Stage 1 and 2 AA for CarbonFree Solar Farm Project LOT 5, CON 1; LOT 6, CON 6; LOT 7, CON 6; LOT 8, CON 5 & 6, Unincorporated Community of Kynoch

LEGEND

- STUDY AREA
- PHOTO LOCATIONS AND DIRECTIONS
- COMPLEX COMBINATION OF MIXED ARCHAEOLOGICAL POTENTIAL - TEST PIT SURVEY AT 5 M INTERVALS COMPLETED WHERE APPROPRIATE
- LOW ARCHAEOLOGICAL POTENTIAL - LOW AND WET
- LOW ARCHAEOLOGICAL POTENTIAL BASED ON NORTHERN STANDARDS



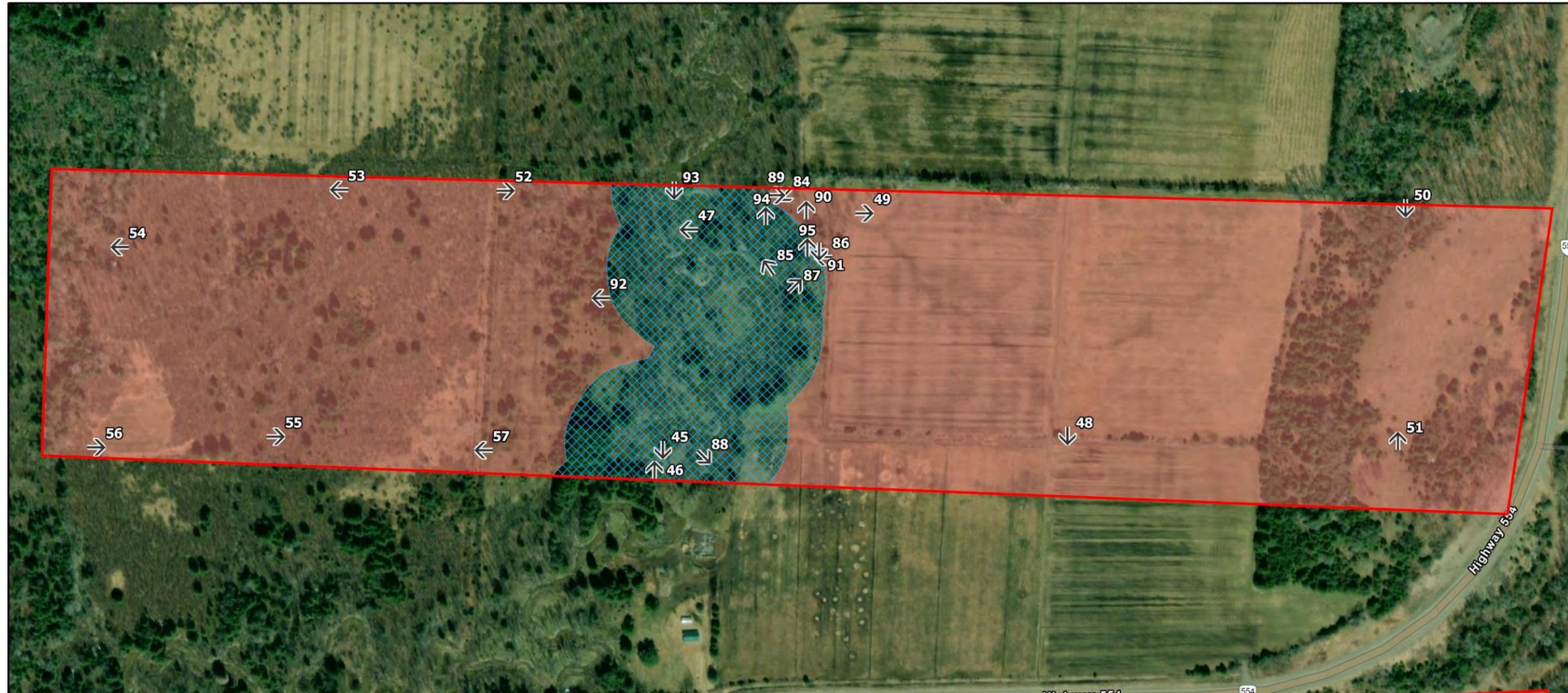
CLIENT:
CARBONFREE KYNOCH LTD.

REFERENCES:
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Vantor, Esri, USGS, Ontario GeoHub L10 Vector Topographic Data Cache

Spatial Reference
Name: NAD 1983 UTM Zone 17N
Projection: Transverse Mercator

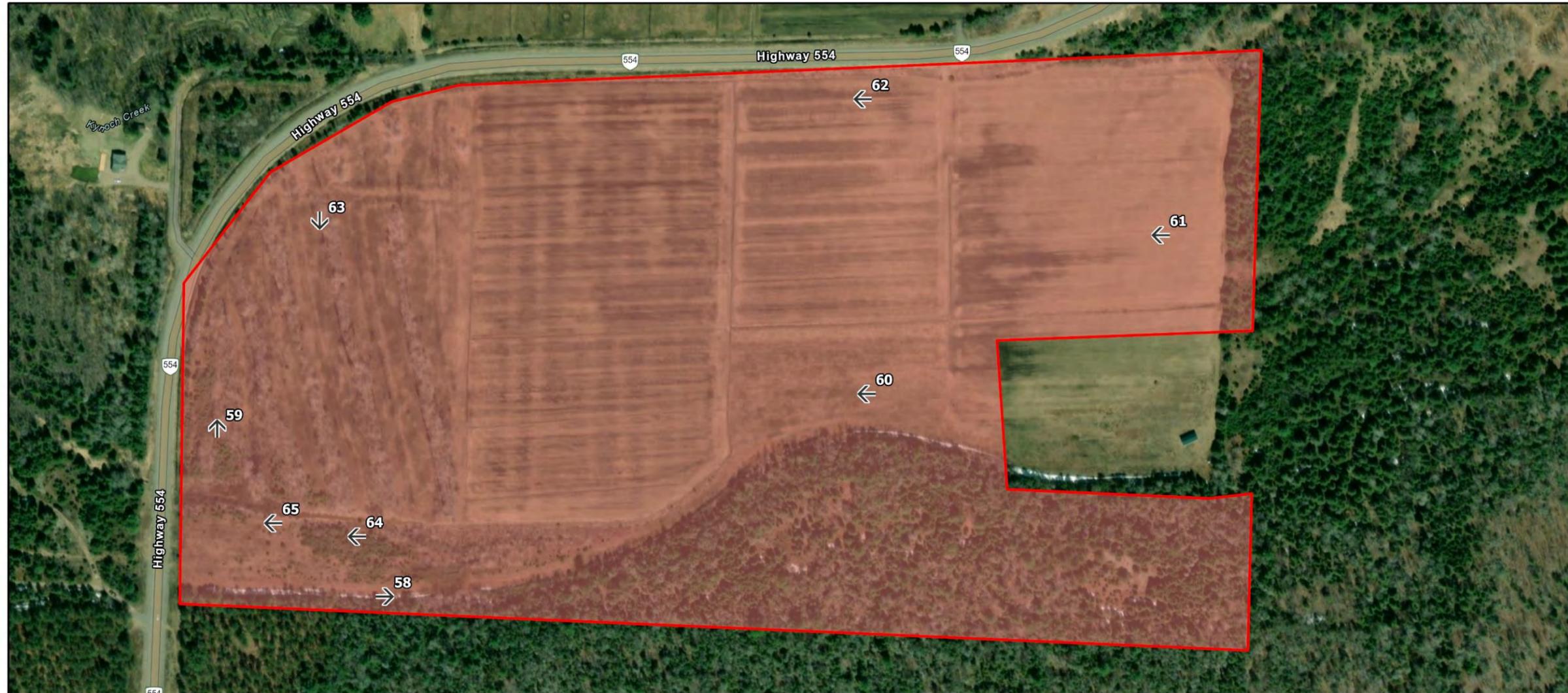
NOTES:
1. All locations are approximate
2. This map is intended for planning purposes
3. Development data provided by client.

Map 8c: Assessment Results and Photo Locations – Parcel C.



TITLE: Assessment Results and Photo Map D		SCALE: 1:2,800 				DRAWN BY: SAT	CHECKED BY: DN	DATE SAVED: 1/8/2026 2:09 PM
PROJECT: Stage 1 and 2 AA for CarbonFree Solar Farm Project LOT 5, CON 1; LOT 6, CON 6; LOT 7, CON 6; LOT 8, CON 5 & 6, Unincorporated Community of Kynoch		LEGEND <ul style="list-style-type: none"> STUDY AREA PHOTO LOCATIONS AND DIRECTIONS COMPLEX COMBINATION OF MIXED ARCHAEOLOGICAL POTENTIAL - TEST PIT SURVEY AT 5 M INTERVALS COMPLETED WHERE APPROPRIATE LOW ARCHAEOLOGICAL POTENTIAL - LOW AND WET LOW ARCHAEOLOGICAL POTENTIAL BASED ON NORTHERN STANDARDS 				CLIENT: CARBONFREE KYNOCH LTD.		
						REFERENCES: <small>Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Vantor, Esri, USGS, Ontario GeoHub LIO Vector Topographic Data Cache</small>		
						NOTES: 1. All locations are approximate 2. This map is intended for planning purposes 3. Development data provided by client.		

Map 8d: Assessment Results and Photo Locations – Parcel D.



TITLE: Assessment Results and Photo Map E		SCALE: 1:2,800 				DRAWN BY: JR	CHECKED BY: DN	DATE SAVED: 1/8/2026 2:09 PM
PROJECT: Stage 1 and 2 AA for CarbonFree Solar Farm Project LOT 5, CON 1; LOT 6, CON 6; LOT 7, CON 6; LOT 8, CON 5 & 6, Unincorporated Community of Kynoch		LEGEND STUDY AREA PHOTO LOCATIONS AND DIRECTIONS LOW ARCHAEOLOGICAL POTENTIAL BASED ON NORTHERN STANDARDS				CLIENT: CARBONFREE KYNOCH LTD.		
						REFERENCES: <small>Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Microsoft, ValUSGS, Ontario GeoHub LIO Vector Topographic Topographic</small>		
						NOTES: 1. All locations are approximate 2. This map is intended for planning purposes 3. Development data provided by client.		

Map 8e: Assessment Results and Photo Locations – Parcel E.

9 Photographs



Photograph 1: Gravel road providing access to parcel A, facing north.



Photograph 2: Example of vegetation, parcel A, facing southeast.



Photograph 3: Example of vegetation, parcel A, facing west.



Photograph 4: Example of sloped terrain, parcel A, facing south.



Photograph 5: Example of landscape, parcel A, facing north.



Photograph 6: Example of landscape, parcel A, facing west.



Photograph 7: Example of landscape, parcel A, facing southwest.



Photograph 8: Example of low-lying and wet terrain, facing east.



Photograph 9: Example of low-lying and wet terrain, facing west.



Photograph 10: Gravel road associated with older modern buildings. Facing north.



Photograph 11: Older modern building. Facing west.



Photograph 12: Example of low-lying and wet terrain, parcel B. Facing north.



Photograph 13: Example of low-lying and wet terrain, parcel B. Facing east.



Photograph 14: Example of steeply sloped terrain, parcel B. Facing north.



Photograph 15: Example of exposed bedrock, parcel B. Facing north.



Photograph 16: Example of low-lying and wet terrain, parcel B. Facing north.



Photograph 17: Example of disturbance from aggregate activity, parcel B. Facing east.



Photograph 18: Example of logging activity, parcel B. Facing south.



Photograph 19: Example of disturbance from aggregate activity, parcel B. Facing west.



Photograph 20: Land sloping down into low-lying and wet terrain, parcel B. Facing north.



Photograph 21: Example of low-lying and wet terrain, parcel B. Facing north.



Photograph 22: Example of low-lying and wet terrain, parcel B. Facing south.



Photograph 23: Example of low-lying and wet terrain, parcel B. Facing east.



Photograph 24: Example of terrain, parcel B. Facing west.



Photograph 25: Example of terrain, parcel B. Facing east.



Photograph 26: Logging road within parcel B. Facing south.



Photograph 27: Logging road within parcel B. Facing east.



Photograph 28: Example of sloped terrain, parcel B. Facing south.



Photograph 29: Example of low-lying and wet terrain, parcel B. Facing east.



Photograph 30: Example of low-lying and wet terrain, parcel B. Facing north.



Photograph 31: Example of low-lying and wet terrain, parcel B. Facing west



Photograph 32: Example of sloped and uneven terrain, parcel B. Facing east.



Photograph 33: Example of low-lying and wet terrain, parcel B. Facing west.



Photograph 34: Kynoch Creek, parcel C. Facing north.



Photograph 35: Example of terrain and topography, parcel C. Facing northwest.



Photograph 36: Example of terrain and topography, parcel C. Facing north.



Photograph 37: Example of terrain and environment, parcel C. Facing north.



Photograph 38: Example of terrain and environment, parcel C. Facing north.



Photograph 39: View of the forested tributary, parcel C. Facing southeast.



Photograph 40: Example of terrain adjacent to tributary, parcel C. Facing south.



Photograph 41: Section of the tributary, parcel C. Facing west.



Photograph 42: Older (but seemingly modern) log cabin, parcel C. Facing north.



Photograph 43: Example of slope, parcel C. Facing west.



Photograph 44: Example of vegetation, parcel C. Facing north.



Photograph 45: Section of Kynoch Creek, parcel D. Facing south.



Photograph 46: Example of terrain adjacent to Kynoch Creek, parcel D. Facing north.



Photograph 47: Example of terrain adjacent to Kynoch Creek, parcel D. Facing west.



Photograph 48: Cleared field showing level topography, parcel D. Facing south.



Photograph 49: Cleared field showing level topography, parcel D. Facing east.



Photograph 50: Example of steeply sloped terrain, parcel D. Facing south.



Photograph 51: Smaller clear area, parcel D. Facing north.



Photograph 52: Flagged parcel boundary, parcel D. Facing east.



Photograph 53: Example of low-lying and wet terrain, parcel D. Facing west.



Photograph 54: Small drainage channel, parcel D. Facing south.



Photograph 55: Small drainage channel, parcel D. Facing east.



Photograph 56: Cleared area, parcel D. Facing east.



Photograph 57: Cleared area, parcel D. Facing west.



Photograph 58: Access for parcel E. Facing east.



Photograph 59: Example of terrain and vegetation, parcel E. Facing north.



Photograph 60: Example of terrain and vegetation, parcel E. Facing west.



Photograph 61: Example of terrain and vegetation, parcel E. Facing west



Photograph 62: Example of terrain and vegetation, parcel E. Facing west.



Photograph 63: Example of terrain and vegetation, parcel E. Facing south.



Photograph 64: Example of low-lying and wet terrain, parcel E. Facing west.



Photograph 65: Dried-up drainage channel, parcel E. Facing west.



Photograph 66: West facing, crew test pitting at 5 m intervals along Kynoch Creek.



Photograph 67: South facing, crew test pitting at 5 m intervals on top of ridge.



Photograph 68: West facing, crew test pitting at 5m intervals on levelled forest ground.



Photograph 69: Northeast facing, crew test pitting at 5m intervals in open field.



Photograph 70: Northeast facing, crew test pitting at 5 m interval along wood structure.



Photograph 71: West facing, crew test pitting at 5m interval in open field along tributary creek.



Photograph 72: Southwest facing, low-lying and wet area on the edge of open field and forested area.



Photograph 73: Northeast facing, levelled forested area along the tributary creek.



Photograph 74: South facing, open field and forest area.



Photograph 75: West facing, open field and forest area.



Photograph 76: North facing, low-lying and wet area along Kynoch Creek.



Photograph 77: West facing, steep slope in forested area.



Photograph 78: East facing, steep slope in forested area.



Photograph 79: Steep slope from top of the ridge.



Photograph 80: West facing, top of the ridge.



Photograph 81: North facing, test pit near wood structure.



Photograph 82: North facing, test pit showing O, A, B horizons.



Photograph 83: North facing, test pit showing O, eluviated AE, B horizons.



Photograph 84: Southwest facing, crew test pitting at 5 m intervals on levelled pasture grounds.



Photograph 85: Northwest facing, crew test pitting at 5 m intervals on levelled pasture grounds.



Photograph 86: West facing, crew test pitting at 5 m intervals on levelled pasture grounds.



Photograph 87: Northeast facing, crew test pitting at 5 m intervals in wooded pasture.



Photograph 88: Southeast facing, standing water and low-lying and wet areas.



Photograph 89: East facing, levelled pasture grounds surrounded by slope and elevated ground.



Photograph 90: North facing, steep slope in forested pasture grounds.



Photograph 91: South facing, levelled pasture grounds.



Photograph 92: West facing, levelled forested area.



Photograph 93: South facing, deep test pit showing O, A, B horizons.



Photograph 94: North facing, test pit showing O, mottled A, B horizons.



Photograph 95: North facing, test pit showing O, A, B horizons.