ORIGINAL REPORT

Stage 1 and 2 Archaeological Assessment:
Highland Line Pit
Part Lot 5, Concession 10,
Geographic Township of Dalhousie,
Township of Lanark Highlands
Lanark County, Ontario

Prepared For
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PIF: P369-0485-2024

Ben Mortimer (License Number P369)

Report: MH1277-REP.01

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1.0 Executive Summary

Matrix Heritage, on behalf of Thomas Cavanagh Construction Limited (Cavanagh), undertook a combined Stage 1 and 2 archaeological assessment of the proposed Highland Line Pit on Part Lot 5 Concession 10 in the Geographic Township of Dalhousie, Township of Lanark Highlands, Lanark County (Map 1). This assessment was required as per the *Aggregate Resources Act* as a component of a new license application. This assessment was completed in accordance with the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011). Portions of the area to be licensed were previously assessed and cleared of archaeological concern (Golder Associates Ltd 2020; 2021a; 2021b; 2021c; 2021d). The objectives of this investigation were to assess the archaeological potential of additional lands being added to license area (Map 2) and to determine whether further archaeological study was required.

The Stage 1 assessment included a review of the Ontario Ministry of Citizenship and Multiculturalism's (MCM) archaeological site databases, a review of relevant environmental, historical, and archaeological literature, as well as primary historical research including: historical maps, land registry, and census records. The Stage 1 background assessment concluded that, based on criteria outlined in the MCM's *Standards and Guidelines for Consultant Archaeologists* (Section 1.3, 2011), the study area has both pre-contact Indigenous as well as historical Euro-Canadian archaeological potential.

The Stage 2 archaeological assessment of areas of archaeological potential involved subsurface testing consisting of hand excavated test pits at 5 metre intervals as per Standard 2., Section 2.1.2 (MCM 2011). Field work took place over four days (June 3 to 5, 7, and 28, 2024). Weather conditions during fieldwork were mostly sunny with average temperatures of over 30°C. Permission to access the property was provided by the owner. No artifacts or features with cultural heritage value or interest were encountered during the Stage 2 assessment.

Based on the results of this investigation it is recommended that:

1. No further archaeological study is required for the area to be licensed as delineated in Map 1.

2. Due to the nature of archaeological assessments, the potential exists to miss information; and if any artifacts of Indigenous interest or human remains are encountered during the development of the subject property, please contact:

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2.0 Table of Contents

3.0 Project Personnel

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Report Review	Ben Mortimer, MA (P369)

4.0 Project Context

4.1 Development Context

Matrix Heritage, on behalf of Thomas Cavanagh Construction Limited (Cavanagh), undertook a combined Stage 1 and 2 archaeological assessment of the proposed Highland Line Pit on Part Lot 5 Concession 10 in the Geographic Township of Dalhousie, Township of Lanark Highlands, Lanark County (Map 1). This assessment was required as per the *Aggregate Resources Act* as a component of a new license application. This assessment was completed in accordance with the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011). Portions of the area to be licensed were previously assessed and cleared of archaeological concern (Golder Associates Ltd 2020; 2021a; 2021b; 2021c; 2021d). The objectives of this investigation were to assess the archaeological potential of additional lands being added to license area (Map 2) and to determine whether further archaeological study was required. At the time of the assessment formal mapping had not been completed and draft mapping provided by the client (Map 2) was used to delineate the study area.

At the time of the archaeological assessment, the study area was under the ownership of Cavanagh. Permission to access the study property was granted by the owner prior to the commencement of any field work; no limits were placed on this access.

4.2 Historical Context

4.2.1 Historic Documentation

Notable histories of the Algonquins include: *Algonquin Traditional Culture* (Whiteduck 1995) and *Executive Summary: Algonquins of Golden Lake Claim* (Holmes and Associates 1993a).

Notable references include: *A Pioneer History of the County of Lanark* (McGill 1984); *In Search of Lanark* (McCuaig and Wallace 1980); *Lanark Legacy, Nineteenth Century Glimpses of an Ontario County* (Brown 1984), and; *Beckwith: Irish and Scottish Identities in a Canadian Community* (Lockwood 1991). Another useful resource is the Lanark Supplement in the *Illustrated Atlas of the Dominion of Canada* (Belden & Co 1880).

4.2.2 Pre-Contact Period

Territory of the Anishinaabe Algonquins

Archaeological information suggests that ancestral Anishinaabe people lived in the Ottawa Valley for at least 8,000 years before the Europeans arrived in North America. This traditional territory is generally considered to encompass the Ottawa Valley on both sides of the river, in Ontario and Quebec, from the Rideau Lakes to the headwaters of the Ottawa River. The Ottawa Valley is dominated by the Canadian Shield which is characterized by low rolling land of Boreal Forest, rock outcrops and muskeg with innumerable lakes, ponds, and rivers. This environment dictated much of the traditional culture and lifestyle of the Anishinaabe Algonquin peoples. At the time of European contact, the Anishinaabe territory was bounded on the east by the Montagnais people, to the west by the Nipissing and Ojibwa, to the north by the Cree, and to the south by the lands of the Iroquois.

Naming

The Anishinaabe Algonquins' name for themselves is Anishinabeg, which means "human being." The word Algonquin supposedly came from the Malecite word meaning "they are our relatives", which French explorer Samuel de Champlain recorded as “Algoumequin” in 1603. The name stuck and the term “Algonquin” refers to those groups that have their traditional lands around the Ottawa Valley. Some confusion can arise regarding the term “Algonquian” which refers to the broader language family, of which the dialect of the Algonquin is one. The Algonquian linguistic group stretches across a significant part of North America and comprises scores of Nations related by language and customs (Algonquins of Ontario).

Early Human Occupation

The earliest human occupation of the Americas has been archaeologically documented to predate 14,000 years ago, however at this time much of eastern Canada was covered by thick and expansive glaciers. The Laurentide Ice Sheet of the Wisconsinian glacier blanketed the Ottawa area until about 11,000 B.P. when then the glacial terminus receded north of the Ottawa Valley, and water from the Atlantic Ocean flooded the region to create the Champlain Sea. This sea encompassed the lowlands of Quebec on the north shore of the Ottawa River and most of Ontario east of Petawawa, including the Ottawa Valley and Rideau Lakes. By 10,000 B.P. the Champlain Sea was receding and within 1,000 years has drained from Eastern Ontario (Watson 1990:9). Indigenous histories speak to the advance and retreat of glaciers and their presence on the land since time immemorial.

The northern regions of eastern Canada were still under sheets of glacial ice as the first archaeologically visible small groups of hunters moved into the southern areas following the receding ice and water. By circa 11,000 B.P., when the Ottawa area was emerging from glaciations and being flooded by the Champlain Sea, northeastern North America was home to what are commonly referred to as the Paleo people. In Ontario the Paleo period is divided into Early (11,000 - 10,400 B.P.) and (10,500-9,400 B.P.) Late periods based on changes in tool technology (Ellis and Deller 1990). The Paleo people, who had moved into hospitable areas of southwest Ontario, likely consisted of small groups of exogamous hunter-gatherers relying on a variety of plants and animals who ranged over large territories (Jamieson 1999). The few possible Paleo period artifacts found, as surface finds or poorly documented finds, in the broader Eastern Ontario region are from the Rideau Lakes area (Watson 1990) and Thompson's Island near Cornwall (Ritchie 1969:18). In comparison, little evidence exists for Paleo occupations in the immediate Ottawa Valley, as can be expected given the environmental changes the region underwent, and the recent exposure of the area from glaciations and sea. As Watson suggests (Watson 1999:38), it is possible Paleo period people followed the changing shoreline of the Champlain Sea, moving into the Ottawa Valley in the late Paleo Period, although archaeological evidence is absent.

Archaic Period

As the climate continued to warm, the glacial ice sheet receded further northwards allowing areas of the Ottawa Valley to be travelled and occupied in what is known as the Archaic Period (9,500 – 2,900 B.P.). In the Boreal forests of the Canadian Shield this cultural period is referred to as the “Shield Archaic” while in the neighbouring Canadian biotic province transition zone between the deciduous forests to the south and the boreal forests to the north it is referred to as the “Laurentian Archaic”. This latter region included northern New York State, the upper St. Lawrence Valley across southern Ontario and Quebec, and the state of Vermont. The Archaic period is generally characterized by increasing populations, developments in lithic technology (e.g., ground stone tools), and emerging trade networks.

Archaic populations remained hunter-gatherers with an increasing emphasis on fishing. People began to organise themselves into small family groups operating in a seasonal migration, congregating annually at resource-rich locations for social, religious, political, and economic activities. Sites from this period in the Ottawa Valley region include Morrison's Island-2 (BkGg-10), Morrison's Island-6 (BkGg-12) and Allumette Island-1 (BkGg-11) near Pembroke, the Lamoureaux site (BiFs-2) in the floodplain of the South Nation River (Clermont 1999), and the BiFw-20 and BiFw-91 sites on the Ottawa River near the mouth of the Gatineau River (Laliberté 2000; Pilon 2006; 2008). Often sites from this time are located on islands, waterways, and at narrows on lakes and rivers where caribou and deer would cross, suggesting a common widespread use of the birchbark canoe that was so prominent in later history (McMillan 1995). It is suggested that the Algonquin peoples in the Ottawa Valley area developed out of this Shield Archaic culture.

Woodland / Pre-European Contact Period

Generally, the introduction of the use of ceramics marks the transition from the Archaic Period into the Woodland period. Populations continued to participate in extensive trade networks that extended across much of North America. Social structure appears to have become increasingly complex with some status differentiation recognized in burials. Towards the end of this period domesticated plants were gradually introduced to the Ottawa Valley region. This coincided with other changes including the development of semi-permanent villages. The Woodland period is commonly divided into the Early Woodland (1000 – 300 B.C.), Middle Woodland (400 B.C. to A.D. 1000), and the Late Woodland (A.D. 900 – European Contact) periods.

The Early Woodland is typically noted via lithic point styles (i.e., Meadowood bifaces) and pottery types (i.e., Vinette I). Early Woodland sites in the Ottawa Valley region include Deep River (CaGi-1) (Mitchell 1963), Constance Bay I (BiGa-2) (Watson 1972), and Wyght (BfGa-11) (Watson 1980). The Middle Woodland period is identified primarily via changes in pottery style (e.g., the addition of decoration). Some of the best documented Middle Woodland Period sites from the region are from Leamy Lake Park (BiFw-6, BiFw-16) (Laliberté 1999).

The identification of pottery traditions or complexes (Laurel, Point Peninsula, Saugeen) within the Northeast Middle Woodland, the identifiers for the temporal and social organizational changes signifying the Late Woodland Period, subsequent phases within the Late Woodland, and the overall 'simple' culture history model assumed for Ontario at this time (e.g. Ritchie 1969; Wright 1966; Wright 2004) are much debated in light of newer evidence and improved interpretive models (Engelbrecht 1999; Ferris 1999; Hart 2011; Hart and Brumbach 2003; Hart and Brumbach 2005; Hart and Brumbach 2009; Hart and Englebrecht 2011; Martin 2008; Mortimer 2012). Thus, the shift into the Late Woodland period is not well defined. There are general trends for increasingly sedentary populations, the gradual introduction of agriculture, and changing pottery and lithic styles. However, nearing the time of contact, Ontario was populated with somewhat distinct regional populations that broadly shared many traits. In the southwest, in good cropland areas, groups were practicing corn-bean-squash agriculture in semi-permanent, often palisaded villages which are commonly assigned to Iroquoian peoples (Wright 2004:1297–1304). On the shield and in other non-arable environments, including portions of the Ottawa Valley, there seems to remain a less sedentary lifestyle often associated with the Algonquin groups noted in the region at contact (Wright 2004:1485–1486).

The Woodland Period Algonquin peoples of the Ottawa Valley area had a social and economic rhythm of life following an annual cyclical pattern of seasonal movements. Subsistence was based on small independent extended family bands operating an annual round of hunting,

fishing, and plant collecting. Families returned from their winter hunting camps to rejoin with other groups at major fishing sites for the summer. The movements of the people were connected with the rhythm of the natural world around them allowing for efficient and generally sustainable subsistence. Annual congregations facilitated essential social, political, and cultural exchange.

The Woodland Period Algonquin peoples in the Ottawa Valley also established significant trade networks and a dominance of the Ottawa River (in Algonquian the “Kitchissippi”) and its tributaries. The trade networks following the Ottawa River connected the Algonquins to an interior eastern waterway via Lake Timiskaming and the Rivière des Outaouais to the St. Maurice and Saguenay as well as the upper Great Lakes and interior via Lake Nipissing and Georgian Bay. From there their Huron allies would distribute goods to the south and west. The Iroquois and their allies along the St. Lawrence River and the lower Great Lakes dominated the trade routes on those waterways to the south thus leading to a rivalry that would escalate with European influence (Moreau et al. 2016).

European Contact

The addition of European trade goods to artifacts of native manufacture in archaeological material culture assemblages’ ushers in a new period of history. Archaeological data shows that European goods were introduced from the coastline into North American territory by European fishermen and whalers in the early 1500s (Lackenbauer et al. 2010). These European materials spread inland to the Canadian Shield as early as 1590 and the trade was well entrenched by 1600 through the trade routes established by the Algonquin peoples along the Ottawa River (Moreau et al. 2016).

The first recorded meeting between Europeans and Algonquins occurred at the first permanent French settlement on the St. Lawrence at Tadoussac in the summer of 1603. Samuel de Champlain came upon a party of Algonquins, the Kichesipirini under Chief Tessouat, who were celebrating a recent victory over the Iroquois with their allies the Innu (Montagnais) and Malecite (Hessel 1993). Champlain made note of the “Algoumequins” and his encounter with them, yet the initial contact between Champlain and the Algonquin people within their own territory in the Ottawa Valley was during his travels of exploration in 1613.

By the time of Champlain’s 1613 journey, the Algonquin people along the Ottawa River Valley were important middlemen in the rapidly expanding fur-trade industry. Champlain knew this and wanted to form and strengthen alliances with the Algonquins to further grow the fur-trade, and to secure guidance and protection for future explorations inland and north towards a potential northwest passage. Further, involving the Algonquins deeper in the fur trade promised more furs filling French ships and more Indigenous dependence on European goods. For their part, the French offered the promise of safety and support against the Iroquois to the south.

Early historical accounts note many different Algonquian speaking groups in the region at the time. Of note for the lower Ottawa Valley area were the Kichesipirini (focused around Morrison Island); Matouweskarini (upstream from Ottawa, along the Madawaska River); Weskarini (around the Petite Nation, Lièvre, and Rouge rivers west of Montreal), Kinounchepirini (in the Bonnechere River drainage); and the Onontchataronon, (along the South Nation River) (Holmes and Associates 1993a; Morrison 2005; Pilon 2005). However, little archaeological work has been undertaken regarding Algonquins at the time of contact with Europeans (Pilon 2005).

Fur Trade, Early Contact with the French

Champlain understood that interactions with the Algonquins would be vital to his eventual success in making his way inland, exploring, and expanding the fur trade. This was partially due to their language being the key to communication with many other groups, as well as their dominance over trade routes surrounding the Ottawa River and the connection with the Huron in the west.

When the French arrived, there was already a vast trade network in place linking the Huron and the Algonquins extending from the Saguenay to Huronia. This route existed at least from the very early beginnings of agricultural societies in Ontario around A.D. 1000 (Moreau et al. 2016). This trade increased rapidly after the arrival of the Europeans with the introduction of European goods and the demand for furs. The Huron held a highly strategic commercial location controlling the trade to the south and the west, and the Algonquin were their critical connection to goods from the east, including European products.

By the mid-17th century, the demands of the fur trade had brought major impacts to the traditional way of life including a change in tools, weapons, and a shift to a more European diet as hunting was more for furs and not for food. This dependence on European food, ammunition, and protection tied people to European settlements (McMillan 1995). The summer gathering sites shifted from prominent fishing areas to trading posts. This further spurred social changes in community structure and traditional land distribution and use.

The well-situated Algonquin, particularly the Kitchesipirini who controlled passage around Allumette Island, were originally reluctant to cede any of their dominance in fear of being cut out of their lucrative middleman role in the trade economy. However, an alliance with the French meant additional protection and assistance against the Iroquois. The French, as well as other Europeans like the Dutch and English, were able to align their own political and economic rivalries with those of the Indigenous populations. The competitive greed and obsession with expanding the fur trade entrenched the rivalries that were already in place, and these were intensified by European weapons and economic ambition.

Iroquois Wars

Little information exists about inter-tribal warfare prior to European contact, however, there was existing animosity between the Iroquois and the Algonquins when Champlain first arrived in the Ottawa Valley. Like his fellow Europeans, Champlain was able to use this existing rivalry to make a case for an alliance, thus gaining crucial access to the established trade networks and economic power of the Algonquin. Prior to European contact, the hostilities had been mainly skirmishes and raids, but everything changed as European reinforcement provided deadlier weapons and higher economic stakes with the introduction of the fur trade.

Along with the French, the Algonquin were allied against the Iroquois with their trade partners to the west, the Huron and the Nipissing. French records suggest that at the end of the sixteenth century the Algonquins were the dominant force and were proud to have weakened and diminished the Iroquois. The first Algonquin campaign the French took part in was a 1609 attack against the Mohawk. The use of firearms in this fight marked the beginning of the escalation of brutality between these old enemies. The Iroquois corn stalk shields could stop arrows but not bullets or French swords (Hessel 1993).

Eventually the tide changed and as the Iroquois exhausted the beaver population in their own territory they became the aggressors, pushing into the lands of the Algonquin and Huron with

the added strength of Dutch weaponry. Through the 1630s and 40s constant and increased raiding into Algonquin territory by the Iroquois nations forced most of the Algonquin people to leave their lands in the Ottawa Valley and seek protection from their French allies in places like Trois Rivieres and Sillery while others fled to the north. By 1650, Huronia, the home of the long-time allies of the Algonquin, had been destroyed by the Iroquois Nation. The once powerful Algonquins of the Ottawa Valley had largely been scattered or displaced, reduced through war and disease to small family groups under the protection of the French missions only fifty years after the first Europeans had travelled the Ottawa River (Morrison 2005:26).
There is some evidence that Algonquins did not completely abandon the Ottawa Valley but withdrew from the Ottawa River to the headwaters of its tributaries and remained in those interior locations until the end of the century. Taking advantage of the Algonquin absence, the Ottawa people, originally from the area of Manitoulin Island, used the river for trade during this time and their name became historically applied to the river.

Aftermath of War

As the Iroquois raiding continued and the Algonquin sought refuge amongst their French allies, other factors came into play that significantly contributed to their displacement and near destruction. The introduction of European diseases, the devastating influence of alcohol, and the increasing pressure to convert to Christianity massively contributed to the weakening of the Algonquin people and their traditional culture.

The Algonquins thought of themselves as part of the natural world with which they must live in harmony. The traditional stories of Algonquin folklore contained lessons and guides to behaviour. The French missionaries regarded them as “heathens” and dismissed their religion as superstition (Day 2005). Algonquin chief Tessouat had seen his Huron neighbours become ill and die after interactions with the European missionaries and had thus originally warned his people about abandoning their old beliefs and the dangers of conversion (Hessel 1993). Eventually the French imposed laws allowing only those converted to Christianity to remain within the missions and under French protection. This created divisions amongst the Algonquin themselves which weakened the social structure as some settled into a new religion and new territory.

Starting in the 1630s and continuing into the 1700s, European disease spread among the Algonquin groups along the Ottawa River, bringing widespread death (Trigger 1986:230). As disease spread through the French mission settlements the priests remained certain that the suffering was punishment for resisting Christianity.

The Long Way Back

After the Iroquois Wars, the remaining Algonquin people were generally settled around various French trading posts and missions from the north end of the Ottawa Valley to Montreal. A large settlement at Oka was the first mission established on Algonquin lands in 1720 (Hessel 1993). This settlement included people from many groups who had been collected and moved around from various locations. It became a type of base camp; occupied during the summer while the winters were spent at their traditional hunting territories in the upper Ottawa Valley. This arrangement served the French well, since the Algonquin converts at Oka maintained close ties with the northern bands and could call upon the inland warriors to join them in case of war with the British or Iroquois League.

As the British gained control of Canada from the French in 1758-1760 they included in the Articles of Capitulation, a guarantee that the Indian allies of the French would be maintained in

the lands they inhabited (Hessel 1993). Many of the Algonquin and other native groups that had been living on French mission settlements were shuffled around to new reserves while others began to migrate back to their traditional territories (Holmes and Associates 1993a; Holmes and Associates 1993b; Sarazin). Those who had remained on the land and continued to be active in the fur trade, now did so with the English through companies in Montreal like the North West Company, and in the north with the Hudson Bay Company.

Some Algonquin people began to return to their traditional territory to join those groups who had remained in the lower Ottawa Valley and continued their traditional lifeway through to the influx of European settlement in the late 1700s and early 1800s. This included bands noted to be living along the Gatineau River and other rivers flowing into the Ottawa (Hessel 1993). These traditional bands maintained a seasonal round focused on harvesting activities into the 1800s when development pressures and assimilation policies implemented by the colonial government saw Indigenous lands taken up, albeit under increasing protest and without consideration for Indigenous claims, for settlement and industry. Algonquin lands began to be encroached upon by white settlers involved in the booming lucrative logging industry or having been granted the land as Loyalist soldiers or through other settler groups.

As some Algonquins had been redistributed to lands in Quebec, their traditional territory within the Ottawa Valley was included in multiple land transfer deals, agreements, and sales with the British Crown beginning in the 1780s and continuing till the 1840s. The Algonquin were not included in these transactions and numerous petitions and inquiries on behalf of their interests were often overruled or ignored (Holmes and Associates 1993a; Holmes and Associates 1993b; Sarazin). The Constitution Act of 1791 divided Quebec into the Provinces of Upper and Lower Canada with Ottawa River as the division line, thus the lands claimed by the Algonquins fell under two separate administrations creating more confusion, exclusion, and oversight.
Two “protectorate” communities were eventually established in the nineteenth century for the Algonquin people at Golden Lake in Ontario and River Desert (Maniwaki) in Quebec. One of the last accounts of the Algonquins living traditionally was from 1865. The White Duck family was living just west of Arnprior when they were forced to leave their wigwams as surveyors arrived to tell them the railway was being expanded through their land (Hessel 1993).

Prior to the establishment of political provincial boundaries, the Algonquins lived on both sides of the Ottawa River and its many tributaries. Algonquin people continue to live in the Ottawa Valley and there are still many speakers of several Algonquian dialects. Outside of the officially recognized bands there are an unspecified number of people of Algonquin descent throughout the Ottawa Valley unaffiliated with any reserve. Today there are ten Algonquin communities that comprise the Algonquins of Ontario: The Algonquins of Pikwakanagan First Nation, Antoine, Kijicho Manito Madagouskarini, Bonnechere, Greater Golden Lake, Mattawa/North Bay, Ottawa, Shabot Obaadjiwan, Snimikobi, and Whitney and area. Nine Algonquin bands are present in Quebec including: Kitigan Zibi Anishinabe Algonquin, Timiskaming First Nation, Nation Anishnabe du Lac Simon, Conseil de la Premiere Nation Abitibiwinn, Eagle Village First Nation, Long Point First Nation, Algonquins of Barriere Lake, Communaute anicinape de Kitcisakik, and Wolf Lake First Nation.

Struggles to officially secure title to traditional lands, as well as fights for hunting and fishing rights, have continued into modern times. The Algonquins of Ontario (AOO) and the Governments of both Canada and Ontario are working together to resolve this through a negotiated land claim settlement. The claim includes an area of 9 million acres of unceded territory within the watersheds of the Ottawa and Mattawa Rivers in Ontario including the city of Ottawa and most of Algonquin Park. The signing of the Agreement-in-Principle in 2016 by the

AOO and the provincial and federal governments, signifying a mutual intention for a lasting partnership, was a key step towards a final agreement to clarify the rights and nurture new economic and development opportunities in the area.

4.2.3 Post-Contact Period

The area that is now Lanark County was originally part of the Johnstown District, which was formed in 1798 when the new Parliament of Upper Canada subdivided the territory of the Eastern District. In 1822, the Johnstown District territory was reduced with the creation of the Bathurst District, the northernmost portion of the former district. In 1824, Lanark County was created from part of Carleton County, which originally comprised ten townships and the remainder of unsurveyed lands within the Bathurst District including what would become Renfrew County. In 1838, Carleton County was withdrawn to create the Dalhousie District, and the Bathurst District was reorganized. Renfrew County was removed from the remaining portion of Lanark County, but the two remained united for electoral purposes. In 1850, the Bathurst District was abolished, and the "United Counties of Lanark and Renfrew" replaced it for municipal and judicial purposes. The United Counties were dissolved in 1866 (Smallfield and Campbell 1914:191).

The area was first settled by European settlers when British authorities prompted immigration to Lanark County in the early 19th century. The county was formed from the southern part of the old Bathurst District. Many of the settlers who came to Lanark County in the early 1800s came from Lanarkshire, Scotland, thus giving the county its name. Most European settlement in the County began in 1816 when Drummond, Beckwith, and Bathurst Townships were first surveyed. In the summer of 1821, a large influx of settlers arrived from an organized settlement society (Mississippi Mills 2020). These settlers were collectively known as the Lanark Society Settlers that belonged to approximately forty settlement societies from the Glasgow area of Scotland that organised and managed the assisted emigration of a large number of Scottish families to Lanark County, Upper Canada. The immigrants were granted undeveloped land in the townships of Dalhousie, Lanark, North Sherbrooke, and Ramsay. Many of the families that emigrated were weavers from the Glasgow area. In 1823, a second major influx of settlers arrived in an organized emigration of mostly Irish Roman Catholics from the County Cork area of Ireland.

The geographic township of Dalhousie was first surveyed in 1820 and open for European settlement in 1823 (Middleton 1927). The township was named after Sir George Ramsay, the 9th Earl of Dalhousie who had served for Wellington during the Napoleonic Wars and had held offices in the colonial governance for India, Nova Scotia, and Canada. The early European settlers to the area belonged to approximately forty settlement societies from the Glasgow area of Scotland that assisted the immigration of a large number of Scottish families to Lanark County. The new arrivals were granted land in the townships of Dalhousie, Lanark, North Sherbrooke, and Ramsay.

The two main villages that grew in the township were Watson's Corners and McDonald's Corners. Watson's Corners, originally called "Granny Cumming's Corners", was named after William Watson, the owner and operator of the Watson Inn and the village's first postmaster (Lanark County Tourism 2011:32). In 1828, the local St. Andrew's Philanthropic Society in Watson's Corners petitioned the Earl of Dalhousie for a grant to build a library in their community. Dalhousie provided 100 pounds sterling and 120 novels which initiated the establishment of the earliest rural library in Ontario. In addition to the donation, local residents collected books from their personal collections and by 1843, the library boasted over 800 books (Lanark County Tourism 2011:33).

McDonald's Corners was named after the multiple McDonald families that lived in the village having been the first European settlers there in 1821. The Agricultural Association of Upper Canada was formed in 1846, however, township farmers wanted an organization that dealt with more pressing local issues. In 1853, the Dalhousie Agricultural Society was established with their headquarters at the McDonald's Corners Agricultural Hall (Lanark County Tourism 2011:28). In 1965 the society's name was changed to the McDonald Corners Agricultural Society.

The original Dalhousie Township joined with the neighbouring townships of Lavant and North Sherbrooke in 1850. Almost 150 years later, in 1997, the townships of Darling and Lanark, and the village of Lanark, amalgamated with the former township of Lavant, Dalhousie, and North Sherbrooke to become the Township of Lanark Highlands.

4.2.4 Study Area Specific History

The study area is located south of Highland Line, between 12th Concession Road and 9th Concession Road, just south of the village of McDonald's Corners. It consists of six sub-operation areas within Lot 5, Concession 10, in the Geographic Township of Dalhousie, Lanark County. The historic Walling map from 1863 shows the road following a route similar to the current Highland Line, dipping south, likely to avoid the creek and marshland to the north. The house of J. Duncan is depicted in the western portion of the lot, while the house of A. Turnbull is shown in the eastern portion (Map 3). Historic mapping from 1880 does not list an owner for the lot, but the road is depicted along the same route, and Barber's Lake is shown in the same location (Map 3).

The Crown patent for the eastern half of Lot 5 was granted to John Campbell in 1857 (OLR, (27)). Census records from 1851 list a John Campbell, aged 44, born in Scotland, living with his wife Marion and their eight children, aged two to 21, in a one-story log house (Statistics Canada 1851). The Campbell family appears in the census immediately beside a family named Barber, likely the namesake of "Barber's Lake" just southeast of the lot. Only two years after acquiring the land, John Campbell sold the property to Alexander Turnbull (OLR, (27)). This rapid turnaround, along with the census record predating the patent, suggests that the Campbell family, while local, did not reside on the property but likely held the land for financial reasons.

Alexander Turnbull was born in Scotland in 1805 and appears in the 1861 census records as a 51-year-old farmer living with his wife Margaret, aged 31, their three young children, and two boarders, Mary and Christy MacFarlane, in a one-story log house (Statistics Canada 1861). By the 1871 census, Alexander had passed away, and his widow Margaret, then 44, had moved to Almonte, where her older children worked in the textile mill to support the family. In the census, Margaret's eldest daughter, 18-year-old Ellen, is listed as a carder, her 16-year-old son Alexander as a spinner, and her 14-year-old daughter Elizabeth as a spooler (Statistics Canada 1871).

Elizabeth married James Gordon in 1875 (Ancestry.com 2017), and in 1877 the couple sold the eastern portion of the subject lot to Henry Watson (OLR, (27)). Although subsequent transactions in the land registry are somewhat illegible, it appears that John Duncan acquired the land around the turn of the century (OLR, (27)).

Meanwhile, the Crown patent for the western portion of Lot 5 was granted to James Duncan in 1873 (OLR, (27)). James Duncan was born in Dalhousie Township in 1837 to Scottish immigrants James Duncan Sr. and Jane Purdon (Ancestry.com 2012). He married Janet Turnbull in 1859 (Ancestry.com 2017), and their son, John Duncan, born in 1875, later acquired

the eastern portion of the lot (OLR, (27)). While the exact lineage is unclear, it can be assumed that some family connection to the Turnbulls—previous owners of the property—enabled John Duncan to acquire the eastern portion. James was killed by a horse in 1905 (Ancestry.com 2012), and through his will, the western portion of the lot was passed to his children, with John Duncan gaining sole possession by the 1920s (OLR, (27)).

In 1928 John Duncan granted the whole lot to his son John Duncan Jr (OLR, (27)). Over four decades later, in 1973, John Jr. granted the land to his brother Lindsay Duncan (OLR, (27)). Following the death of Lindsay in 1981, his widow and executor of his will, Annette, deeded the property to their sons William and Herel Duncan (OLR, (27)).

4.3 Archaeological Context

4.3.1 Current Conditions

The area to be licensed is an approximately 43.4 ha parcel located south of Highland Line between 12th Concession Road and 9th Concession Road south of the village of McDonald's Corners on Lot 5, Concession 10, in the Geographic Township of Dalhousie, in Lanark County. The area to be licensed is a mix of woodlot with sporadic steep slopes and open, rolling to undulating grassy fields. A small wetland extends slighting into the area from Barbers Lake to the east. The property is bounded to the north by the Highland Line and is surrounded by mixed open fields and woodlot with a marshland and creek to the south. Most of the area to be licensed had been previously assessed and was excluded from further field assessment. The Stage 2 assessment under this project therefore focussed on six areas being added to the area to be licensed formerly assessed. Those six areas were composed of narrow, overgrown field edges, often with shallow bedrock, or wooded areas. Current conditions are shown in Map 4 and Figures Figure 1to Figure 28.

4.3.2 Physiography

The study area lies within the Algonquin Highlands physiographic region (Map 5). The Algonquin Highlands physiographic region is characterized by a generally shallow stony, sandy, and acid soil underlain by granite and other hard Precambrian rocks forming a relief of rough, rounded knobs and ridges. The depth of the soil can vary greatly over short distances and there are frequent outcrops of bare rock as well as low lying swamp and bog areas in the hollows. The majority of soil in this region is forested, being mainly non-agricultural due to the shallow acidic low nutrient soil, rough topography with rocky outcrops, and boggy swamp areas. The trees in the area can range from sugar maple, yellow birch, pine, hemlock, balsam, spruce and cedar depending on the varying soil conditions (Chapman and Putnam 2007).

There are two soil types within the study area, mainly White Lake soils with Tweed soils in the northeast and southwest (Map 5). The White Lake soil series is a varied textured sand and gravel glacial till characterized by a very rough and uneven topography which restricts its use as arable agricultural land. (Gillespie and Wicklund 1964:43). The Tweed soil series consists of a loose stony, sandy loam glacial till with many outcrops of limestone bedrock. The landscape is quite variable due to soil coverings alternating with bare rock outcrops and loose boulders. In general, Tweed soils are not considered arable, and the most productive use is for forestry. (Gillespie and Wicklund 1964:40-41).

Barbers Lake is just over 100 m to the east of the study area. Long Sault Creek and a surrounding marshland is about 200 m south of the study area and 300 m to the north of the study area.

4.3.3 Previous Archaeological Assessments

Previous archaeological assessments have been conducted within the development property, with the sub-operations of the current study area representing the portions that were not previously assessed (Map 1 and 4). A Stage 1 and 2 assessment was undertaken by Golder Associates in 2020 (P1107-0027-2020) (Golder Associates Ltd 2020). This assessment identified two archaeological sites (the Turnbull Site (BfGd-8) and the Duncan Site (BfGd-9)) which were subject to subsequent Stage 3 assessments (P1107-0029-2020 and P1107-0030-2020) and Stage 4 mitigation of development impact (P1107-0032-2020 and P1107-0033-2020) (Golder Associates Ltd 2021b; Golder Associates Ltd 2021a; Golder Associates Ltd 2021c; Golder Associates Ltd 2021d). Through the Stage 4 mitigation, both sites were fully excavated and documented and therefore have no further cultural heritage value or interest and require no further archaeological assessment. More details on the sites are provided below.

Archaeological assessments in the area are sparse. Assessments were conducted for the McKinnon-Crain Pit, situated approximately 170 meters north of the current study area. Adams Heritage performed a Stage 1 archaeological assessment for the eastern half of Lot 6, Concession 11, and the southwest half of Lot 6, Concession 10 (P003-111-2006). Subsequently, Kinickinick Heritage Consultants completed a Stage 2 assessment (P039-097-2006), which led to the identification of two potential pre-contact sites with no further CHVI. Kinickinick carried out a Stage 3 assessment for the BfGd-3 site (P039-125-2007). Unfortunately, the reports for the McKinnon-Crain Pit were not available and therefore details of the findings and recommendations were unavailable.

Past Recovery Archaeological Services (2022) undertook a Stage 2 assessment for the McKinnon Pit expansion in Dalhousie Township on Part Lot 5, Concession 10 which included the area of the BfGd-3 site. Testing in areas closer to BfGd-3 was intensified to 1-meter intervals to ensure thorough coverage. Despite thorough testing, no artifacts or significant archaeological resources were identified within the study area and the report recommends no further work.

4.3.4 Registered Archaeological Sites and Commemorative Plaques

A search of the Ontario Archaeological Sites Database indicated five registered archaeological sites located within a 1 km radius of the study area (Table 1). These sites consist of three possible pre-contact lithic scatters (BfGd-3, BfGd-4, and BfGd-5), and the two post-contact Euro-Canadian farmstead sites: the Duncan Site (BfGd-9) and the Turnbull Site (BfGd-8). These two sites are within the previously assessed portion of the area to be licensed (Map 4) and were detailed through a sequence of reports. The Stage 1 and 2 assessment was undertaken by Golder Associates in 2020 (P1107-0027-2020) (Golder Associates Ltd 2020) that identified the sites which were subject to subsequent Stage 3 assessments (P1107-0029-2020 and P1107-0030-2020) and Stage 4 mitigation of development impact (P1107-0032-2020 and P1107-0033-2020) (Golder Associates Ltd 2021b; Golder Associates Ltd 2021a; Golder Associates Ltd 2021c; Golder Associates Ltd 2021d).

Borden Number	Site Name	Time Period	Affinity	Site Type	Current Development Review Status
BfGd-9	Duncan Site	Post-Contact	Euro-Canadian	Scatter	No Further CHVI
BfGd-8	Turnbull Site	Post-Contact	Euro-Canadian	Farmstead/Homestead	No Further CHVI
BfGd-5		Archaic, Early		Scatter	No Further CHVI
BfGd-4		Pre-Contact		Scatter	No Further CHVI
BfGd-3		Pre-Contact		Scatter	Further CHVI

Table 1: Registered Archaeological Sites within 1 km.

The following site summary is from the Stage 4 mitigation report (Golder Associates Ltd 2021d). The Turnbull Site (BfGd-8), located on part of Lot 5, Concession 10 in Dalhousie Township, Lanark County, Ontario, is thought to represent the mid-19th century Turnbull homestead, first documented on the 1863 map of Lanark County. Initial identification of the site occurred during Golder's 2020 Stage 1 and 2 archaeological assessments, which determined that the site likely corresponded to the historical Turnbull homestead. Stage 3 assessments further supported this interpretation, revealing 1,534 artifacts and identifying two cultural features suggestive of domestic occupation, including structural remains and items from daily life. During Stage 4 archaeological mitigation, a combination of hand excavation and mechanical topsoil removal led to the recovery of 1,914 artifacts, including ceramics, glassware, faunal remains, and personal items typical of a mid-19th-century rural household. The excavation uncovered seven cultural features, including a chimney base and outbuilding foundations, as well as fence post moulds, which altogether illustrate the layout and activities of the Turnbull homestead. The findings indicate that the site was occupied until at least the 1880s and has now been fully documented and excavated, concluding the need for further assessment.

The following site summary is from the Stage 4 mitigation report (Golder Associates Ltd 2021c). The Duncan Site (BfGd-9), also within Lot 5, Concession 10 in Dalhousie Township, Lanark County, Ontario, is associated with the Duncan family farmstead depicted on an 1863 map. Golder's Stage 1 and 2 assessments in 2020 identified this site as a likely mid-19th century domestic area after surface collection during the pedestrian survey revealed 106 artifacts, prompting further investigation. Stage 3 assessment confirmed its cultural heritage value, identifying an additional 291 artifacts and one possible cultural feature. During the Stage 4 mitigation, mechanical topsoil removal exposed this feature for further investigation; however, analysis suggests that it may be the result of more recent ground disturbance rather than historical activity. The artifacts recovered, including ceramics and other domestic items, align with mid-19th century occupation, likely from the Duncan family's presence in the area until 1895. The site has been fully excavated and documented, with no further assessment needed.

The remaining three sites within 1 km are pre-contact Indigenous sites identified by Kinickinick Heritage Consultants, however the identification of many of their pre-contact sites has been called into question. Many of the sites are identified by Kinickinick Heritage Consultants are based primarily on the presence of debateable expedient tools made of locally available stone; a lithic industry not widely accepted in the province. Unfortunately, the Kinickinick Heritage Consultants reports were not available so the validity of the identified sites could not be confirmed.

Two of the sites (BfGd-4 and BfGd-5) are listed in the Ontario Archaeological Sites Database as having no further CHVI due to disturbance. One site, BfGd-3, was subject to Stage 3 assessment. Notably, these site record forms are all listed as "In Database - Awaiting Ministry Review", indicative of their questionable identifications. Past Recovery does note that "BfGd-3 (a 30 m by 20 m scatter located on Lot 6, Concession 10) was found to have further cultural heritage value or interest following a Stage 3 assessment (Kinickinick 2008), but this was over-ridden by MHSTCI with the site determined to have no further archaeological concerns" (2022:20).

There are no commemorative plaques or monuments located near the subject property.

4.4 Archaeological Potential

Potential for pre-contact Indigenous sites is based 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. The study area has high potential for pre-contact Indigenous archaeological sites due to the well-drained soils and the proximity to Barbers Lake and Long Sault Creek, and the presence of eskers and moraines.

Potential for historical Euro-Canadian sites is based on proximity to historical transportation routes, community buildings such as schools, churches, and businesses, and any known archaeological or culturally significant sites. The study area has potential for historical period Euro-Canadian archaeological sites due to the historic occupation by the Duncan and Turnbull families and the known sites representing those farmsteads within the larger development property as well as the proximity to a historic road, Highland Line. While both historic farmsteads on the lot have already been fully excavated, some potential remains for earlier settlement or additional components to the known sites.

4.1 Indigenous Engagement

Engagement with the Algonquins of Ontario and the Algonquins of Pikwakanagan was undertaken as a component of this project. A representative from the Algonquins of Pikwakanagan was present during the fieldwork. Communities were provided the opportunity to review and provide comments which were addressed prior to the submission of this report to the MCM. A record of engagement is provided in the Record of Indigenous Engagement.

5.0 Field Methods

The 43.4 ha area to be licensed consisted of woodlots and overgrown fields and was therefore not suitable for ploughing as per Section 2.1.2, Standard 1.a. (MCM 2011) (Map 4).

Small portions of the area to be licensed were deemed to be of low to now potential and were excluded from Stage 2 field assessment due to being deeply disturbed (0.5 ha) as per Section 2.1, Standard 2.b. or sloped greater than 20 degrees (0.2 ha) as per Section 2.1, Standard 2.a.iii (MCM 2011) (Map 4).

A small potion (400 m^2) was believed to be disturbed and was shovel tested at judgmental intervals to confirm the deep disturbance and its extents as per Section 2.1.8, Standard 2 (Map 4).

A large portion (37.3 ha) of the overall area to be licensed was previously assessed and determined to no longer have CHVI warranting further archaeological assessment as per the 2011 Standards and Guidelines (Map 4). Accordingly, this area was excluded from this assessment.

The remained of the study area (5.4 ha) retained potential was therefore shovel tested at 5 m intervals as per Section 2.1.2 (Map 4). All test pits were a minimum of 30 cm in diameter and were excavated 5 cm into subsoil and extended to within 1 m of structures. All soil was screened using 6 mm mesh screens. All test pits were examined for cultural features and stratigraphy then backfilled upon completion. The test pitting survey produced no positive test pits.

All field activity and testing areas were mapped using an iPad 9th Generation with ArcGIS Field Map. Average accuracy at the time of survey was approximately 5 m horizontal. Study area boundaries were determined in the field using property boundaries digitized from a georeferenced plan provided by the proponent overlaid in ArcGIS Field Map on an iPad. All survey data is compiled into ArcGIS and every survey point has a UTM Zone 18T NAD 83 coordinate.

Field notes and photographs were taken during fieldwork to document the current land conditions (see Map 4 for photo locations mapped by figure number) as per Standard 1.a., Section 7.8.6 (MCM 2011). Photo catalogue, inventory of daily field notes (including sketch maps drawn in the field), and map inventory are listed in Appendix A, B, and C.

Field work took place on June 3 to 5, 7 and June 28, 2024. Weather conditions were mostly sunny with very high temperatures over 30° C. Fieldwork was stopped on the afternoon of June 7 due to rain. Permission to access the property was provided by the owner prior to the commencement of any field work; no limits were placed on this access.

6.0 Record of Finds

Despite the archaeological potential of the area, no archaeological remains, artifacts, or soil profiles with cultural heritage value or interest were encountered during the Stage 2 investigations. A collection of 20th-century refuse—including machine-made bottles and jars, machine-made cans, crown closures, wire nails, plastics, and lithographed vitrified ceramics—was noted in the northwest corner of the study area around a concrete and limestone house foundation and outbuildings; however, nothing of cultural heritage value or interest was identified nor retained. According to a longtime local resident who briefly visited during the assessment, the location was occupied into at least the 1950s, which was confirmed by the objects found.

7.0 Conclusions and Recommendations

The Stage 1 assessment included a review of the updated Ontario Ministry of Citizenship and Multiculturalism's (MCM) archaeological site databases, a review of relevant environmental, historical, and archaeological literature, as well as primary historical research including: historical maps, land registry, and census records. The Stage 1 background assessment concluded that, based on criteria outlined in the MCM's *Standards and Guidelines for Consultant Archaeologists* (Section 1.3, 2011), the study area had both pre-contact Indigenous as well as historical Euro-Canadian archaeological potential.

The Stage 2 archaeological assessment involved subsurface testing consisting of hand excavated test pits at 5 metre intervals in areas of archaeological potential (Standard 2., Section 2.1.2 (MCM 2011)). No artifacts or features with cultural heritage value or interest were encountered during the Stage 2 assessment.

Based on the results of this investigation it is recommended that:

1. No further archaeological study is required for the study area as delineated in Map 1.

2. Due to the nature of archaeological assessments, the potential exists to miss information; and if any artifacts of Indigenous interest or human remains are encountered during the development of the subject property, please contact:

Algonquins of Pikwakanagan First Nation
3-469 Kokomis Inamo
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Tel: 613-625-1551
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31 Riverside Drive, Suite 101
Pembroke, ON K8A 8R6
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Email: algonquins@tanakiwin.com

8.0 Advice on Compliance with Legislation

a. This report is submitted to the *Minister of Citizenship and Multiculturalism* as a condition of licencing 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 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.

b. It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licenced 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 Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

c. Should previously undocumented archaeological resources be discovered, they 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 licenced consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.

d. 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.

9.0 Closure

Matrix Heritage has prepared this report in a manner consistent with the time limits and physical constraints applicable to this report. No other warranty, expressed or implied is made. The sampling strategies incorporated in this study comply with those identified in the Ministry of Citizenship and Multiculturalism's *Standards and Guidelines for Consultant Archaeologists* (2011) however; archaeological assessments may fail to identify all archaeological resources.

The present report applies only to the project described in the document. Use of this report for purposes other than those described herein or by person(s) other than Cavanagh or their agent(s) is not authorized without review by this firm for the applicability of our recommendations to the altered use of the report.

This report is pending Ministry approval.

We trust that this report meets your current needs. If you have any questions or we may be of further assistance, please contact the undersigned.

Matrix Heritage Inc.

Ben Mortimer, M.A., A.P.A.
Senior Archaeologist

Andrea Jackson, M.Litt.
Staff Archaeologist

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2021b *Stage 3 Archaeological Assessment, Duncan Site (BfGd-9), Part Lot 5, Concession 10, Dalhousie Township, Lanark County, Ontario*.

2021c *Stage 4 Archaeological Mitigation, Duncan Site (BfGd-9), Part of Lot 5, Concession 10, Dalhousie Township, Lanark County, Ontario*.

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11.0Images

Figure 1: Overview of shovel testing area conditions in easternmost area (MH1277-D077).

Figure 2: Overview of shovel testing area conditions in easternmost area with adjacent wet area (MH1277-D078).

Figure 3: Overview of shovel testing area conditions in easternmost area (MH1277-D097).

Figure 4: Overview of shovel testing area conditions in central eastern area (MH1277-D079).

Figure 5: Overview of shovel testing area conditions along bottom of a moderately sloped area in central eastern area (MH1277-D080).

Figure 6: Overview of shovel testing area conditions in central eastern area (MH1277-D081).

Figure 7: Overview of conditions along tree line on south side of area to be licensed (MH1277-D082).

Figure 8: Overview of testing conditions in the west end of the southern testing area (MH1277-D085).

Figure 9: Overview of testing conditions along western edge of central testing area (MH1277-D089).

Figure 10: Overview of testing conditions along western edge of central testing area (MH1277-D090).

Figure 11: Disturbed gravel road through central testing area (MH1277-D091).

Figure 12: Overview of steep slope on southern end of central testing area (MH1277-D093).

Figure 13: Overview of disturbance in central western testing area (MH1277-D002).

Figure 14: Disturbance and testing to confirm disturbance in western testing area (MH1277-D013).

Figure 15: Overview of conditions in central western testing area with glacial erratic (MH1277-D006).

Figure 16: Overview of testing conditions in central western testing area (MH1277-D018).

Figure 17: Overview of testing conditions in central western testing area (MH1277-D012).

Figure 18: Overview of testing conditions in central western testing area (MH1277-D020).

Figure 19: Steeply sloped area in central western testing area (MH1277-D022).

Figure 20: Overview of testing conditions in westernmost testing area (MH1277-D075).

Figure 21: Overview of testing conditions in westernmost testing area (MH1277-D071).

Figure 22: Overview of testing conditions in along roadway westernmost testing area (MH1277-D042).

Figure 23: Overview of testing conditions in westernmost testing area (MH1277-D054).

Figure 24: Overview of testing conditions in westernmost testing area (MH1277-D039).

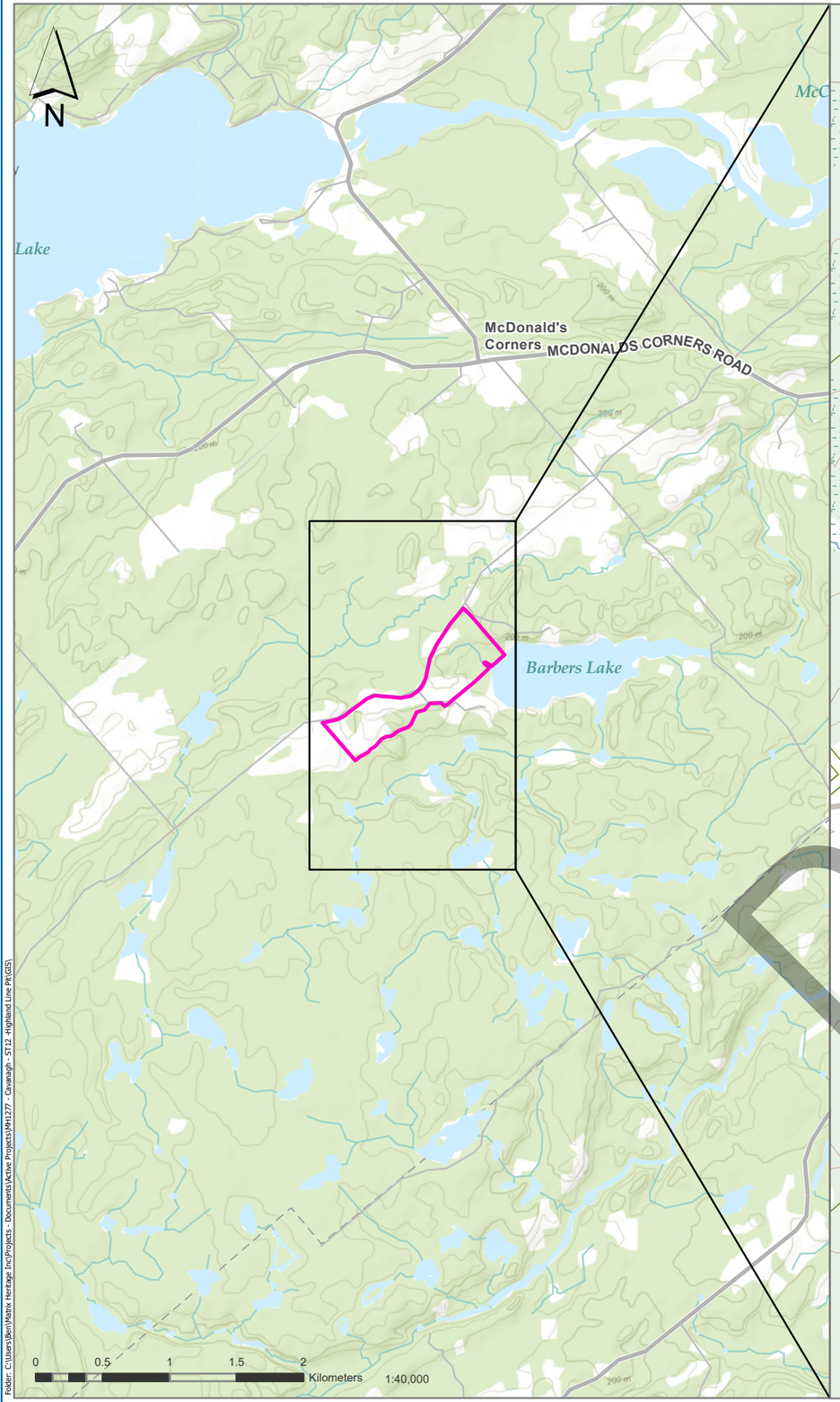
Figure 25: Overview of disturbance from gravel road through the westernmost testing area (MH1277-D053).

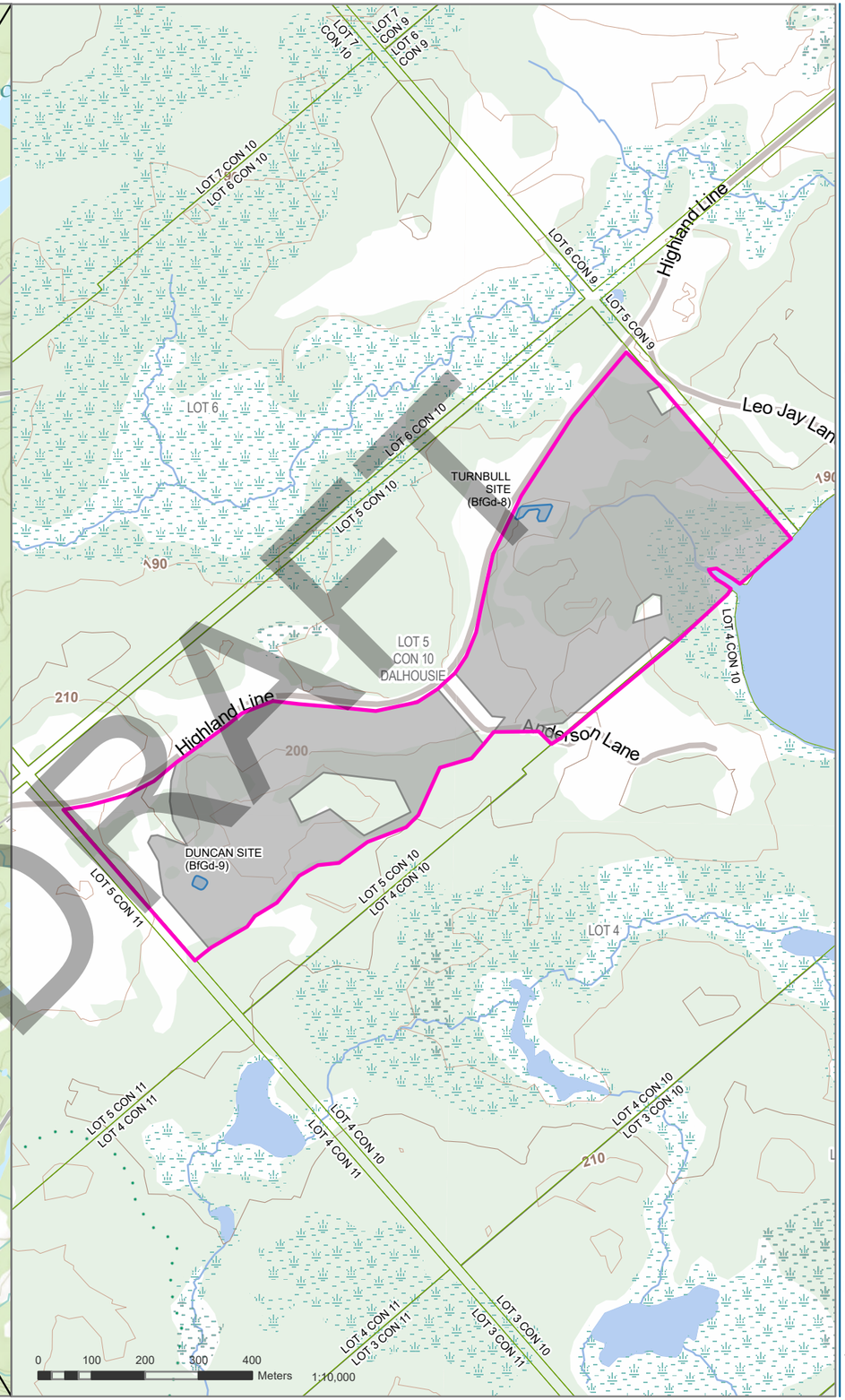
Figure 26: Overview of testing along the road in westernmost testing area (MH1277-D044).

Figure 27: Deep disturbances at the entrance and roadside in westernmost testing area (MH1277-D064).

Figure 28: Overview from top of small steep slope in the westernmost testing area (MH1277-D060).

12.0Maps





LEGEND

- AREA TO BE LICENSED
- PREVIOUSLY ASSESSED - NO FURTHER CHVI
- ARCHAEOLOGICAL SITE LOCATION - NO FURTHER CHVI

Matrix

REFERENCES:
ESRI, NASA, NGA, USGS, ESRI, NASA, NGA, USGS, FEMA, ESRI, CGIAR, USGS, ESRI COMMUNITY MAPS CONTRIBUTORS, PROVINCE OF ONTARIO, ESRI CANADA, ESRI, TOMTOM, GARMIN, SAFEGRAPH, GEOTECHNOLOGIES, INC, METI/NASA, USGS, EPA, NPS, US CENSUS BUREAU, USDA, USFWS, NRCAN, PARKS CANADA, PROVINCE OF ONTARIO, ESRI CANADA, ESRI, TOMTOM, GARMIN, SAFEGRAPH, FAO, METI/NASA, USGS, EPA, NPS, USFWS, NRCAN, PARKS CANADA, PROVINCE OF ONTARIO, ESRI CANADA, ESRI, TOMTOM, GARMIN, SAFEGRAPH, GEOTECHNOLOGIES, INC, METI/NASA, USGS, EPA, NPS, USDA, USFWS, NRCAN, PARKS CANADA

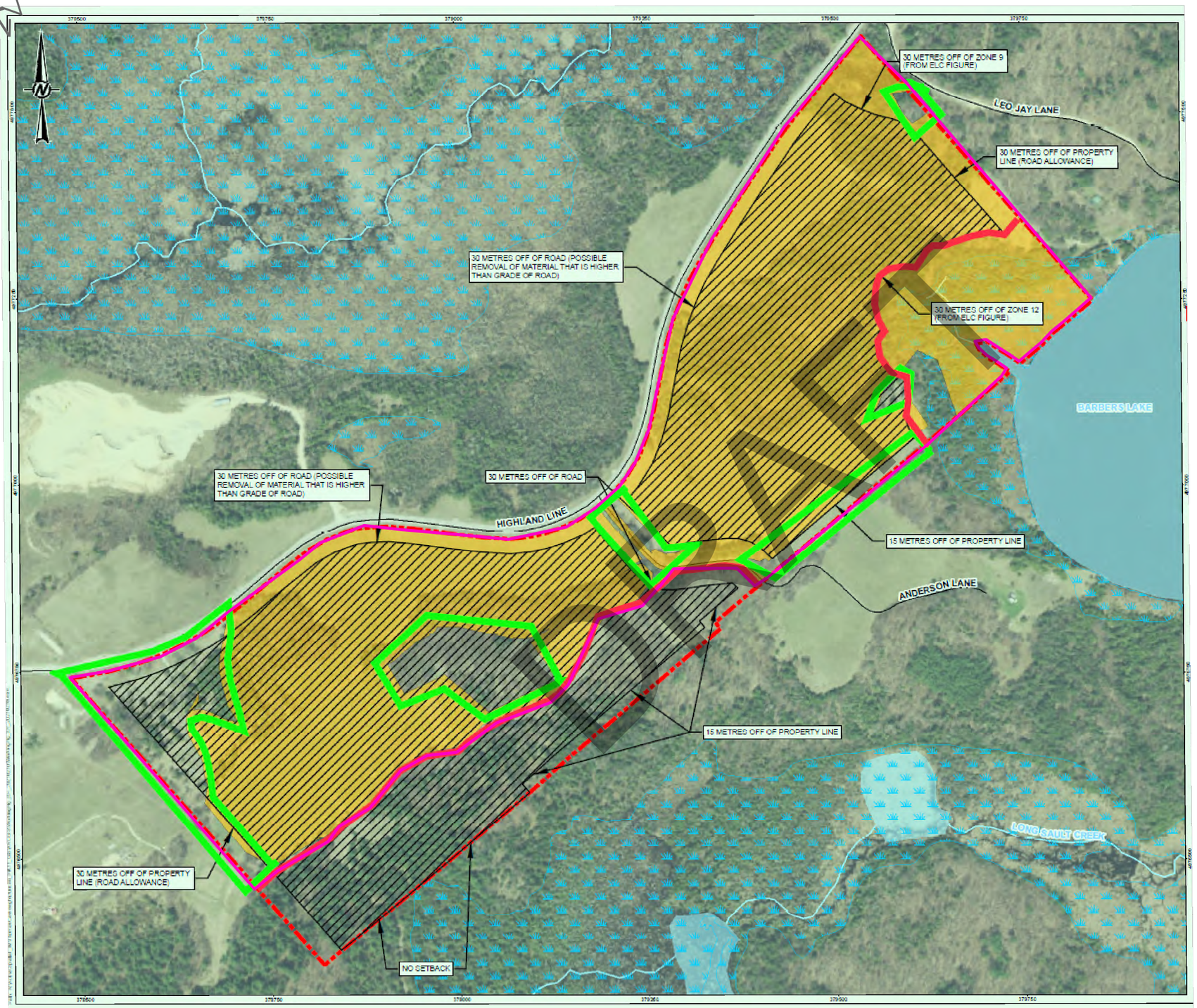
FILE MH1277 DATE 2024-11-05
CREATED BY: DW
PROJECTION: NAD 1983 UTM Zone 18N CHECKED BY: BM

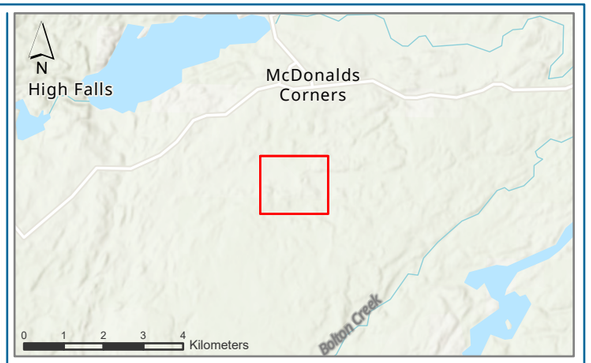
PROJECT
STAGE 1 & 2 ARCHAEOLOGICAL ASSESSMENT
HIGHLAND LINE, LANARK, ONTARIO

TITLE
LOCATION

MAP
1

Folder: C:\Users\Ben\Matrix Heritage Inc\Projects - Documents\Active Projects\MH1277 - Cavanagh - ST12 -Highland Line PA\GIS\





LEGEND

STUDY AREA

Matrix

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REFERENCES:
PROVINCE OF ONTARIO, ESRI CANADA, ESRI, TOMTOM, GARMIN, SAFEGRAPH, METI/ NASA, USGS, EPA, NPS, USDA, USFWS, NRCAN, PARKS CANADA, ESRI, NASA, NGA, USGS, FEMA
PLAN PROVIDED BY PROPONENT ILUSTRATING AREAS TO BE ADDED TO THE AREA TO BE LICENSED OUTLINED IN GREEN

FILE MH1277

DATE 2024-05-22

CREATED BY: DW

PROJECTION: NAD 1983 UTM Zone 18N

CHECKED BY: BM

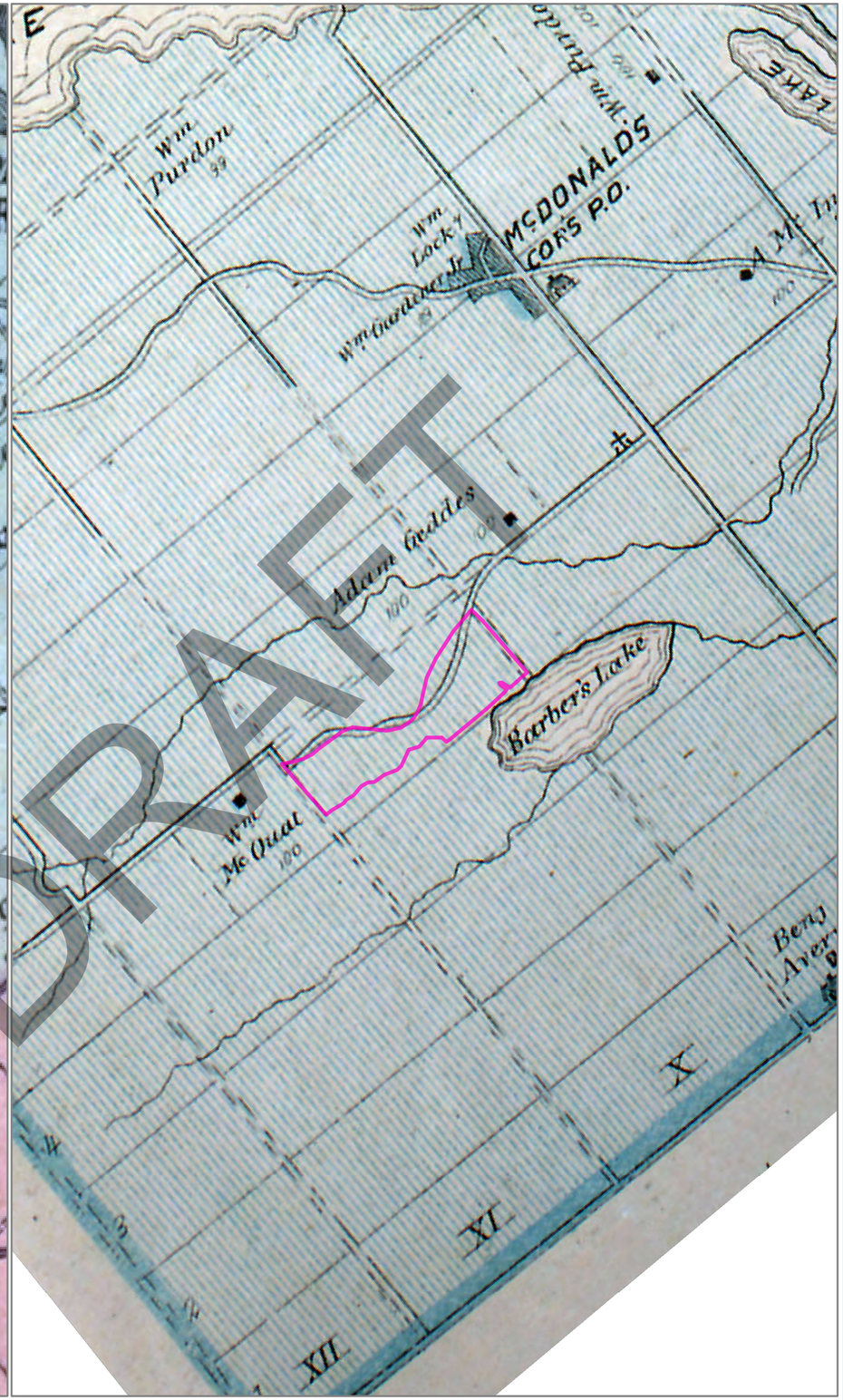
PROJECT
STAGE 1 & 2 ARCHAEOLOGICAL ASSESSMENT
HIGHLAND LINE, LANARK, ONTARIO

TITLE
DRAFT PLAN

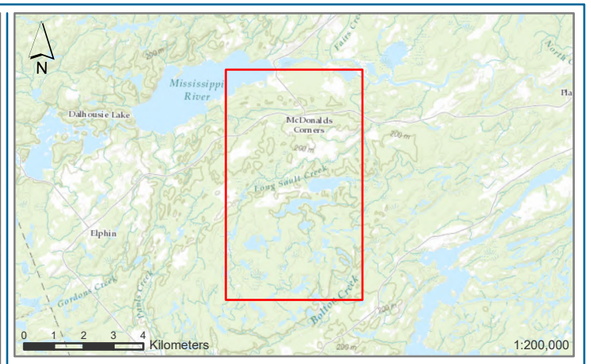
MAP
2

Folder: C:\Users\DuncanWilliams\Matrix Heritage Inc\Projects - Documents\Active Projects\MH1277 - Cavanagh - ST12 -Highland Line P\GIS\

WALLING 1863



BELDEN 1880



LEGEND

STUDY AREA

Matrix

0 500 1,000 1,500 2,000 Meters

1:30,000

REFERENCES:
COUNTY OF FRONTENAC, PROVINCE OF ONTARIO, ONTARIO MNR, ESRI CANADA, ESRI, HERE, GARMIN, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA, AAFC, NRCAN

MAP OF THE COUNTIES OF LANARK AND RENFREW, CANADA WEST FROM ACTUAL SURVEYS UNDER THE DIRECTION OF H.F. WALLING. PRESCOTT, C.W.: PUTNAM, 1863.

DALHOUSIE TOWNSHIP FROM LANARK SUPPLEMENT IN ILLUSTRATED ATLAS OF THE DOMINION OF CANADA. TORONTO: BELDEN & CO., 1880.

FILE MH1277

DATE 2024-07-18

CREATED BY: DW

PROJECTION: NAD 1983 UTM Zone 18N

CHECKED BY: BM

PROJECT

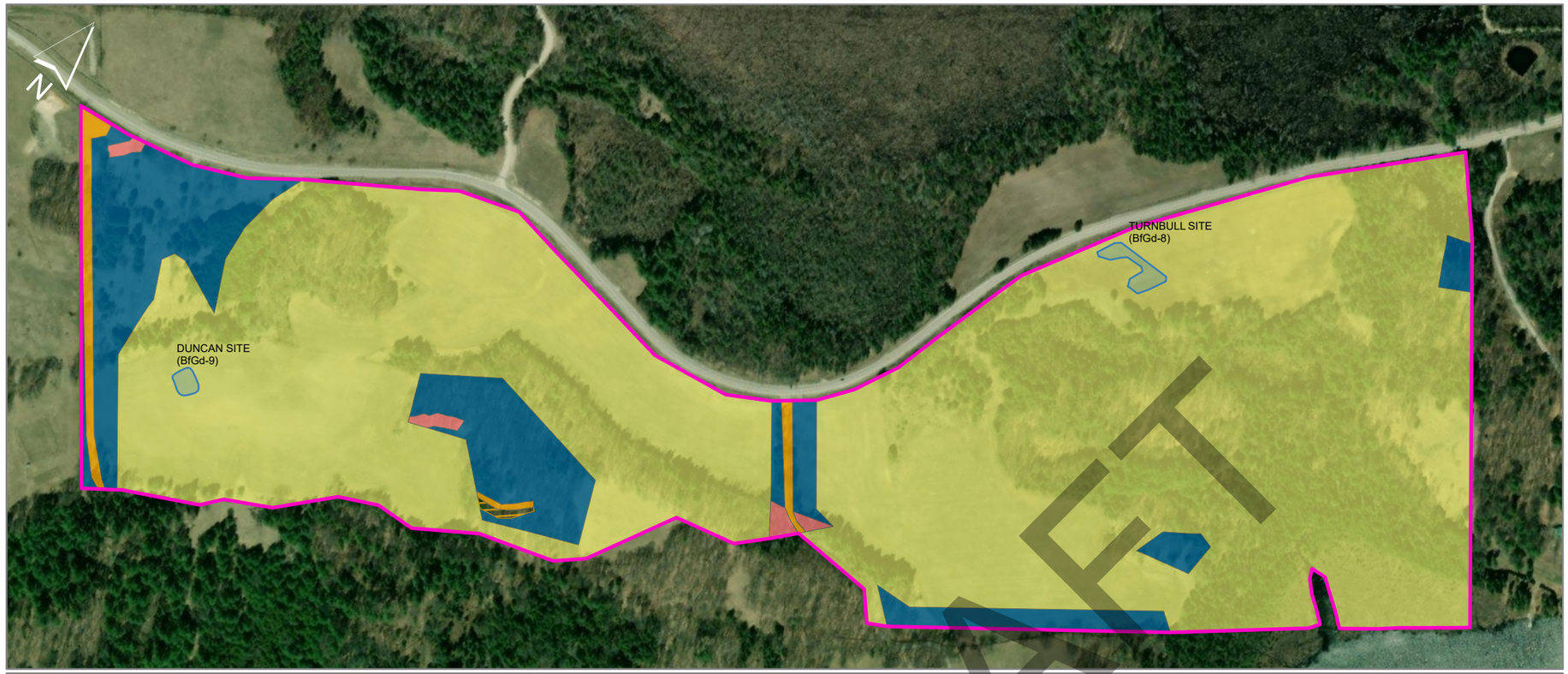
STAGE 1 & 2 ARCHAEOLOGICAL ASSESSMENT
HIGHLAND LINE, LANARK, ONTARIO

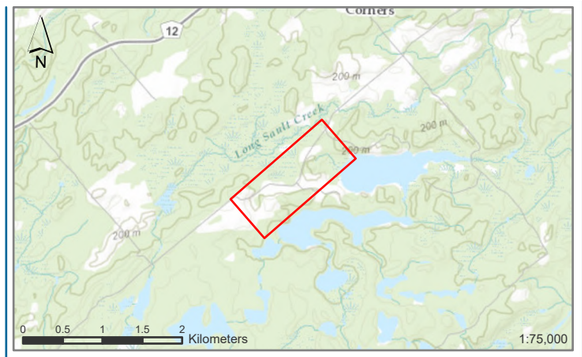
TITLE

HISTORIC

MAP

3





LEGEND

- STUDY AREA

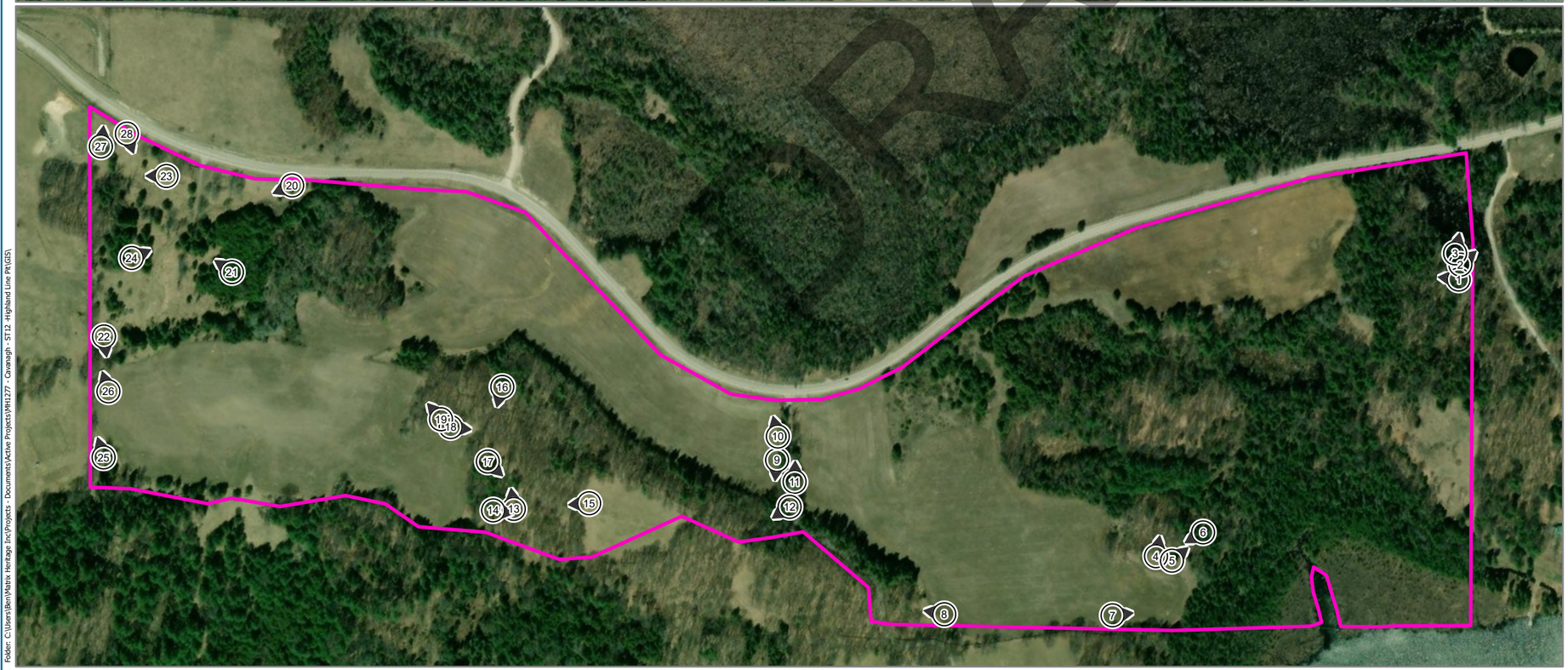
ASSESSMENT METHODS

- SHOVEL TEST (5 M INTERVAL)
- SHOVEL TEST TO CONFIRM DISTURBANCE (JUDGMENTAL)

EXCLUDED FROM ASSESSMENT

- DEEPLY DISTURBED - LOW/NO POTENTIAL
- STEEP SLOPE (>20 DEGREES) - LOW/NO POTENTIAL -
- PREVIOUSLY ASSESSED - NO FURTHER CHVI
- ARCHAEOLOGICAL SITES (NO FURTHER CHVI
- PHOTO LOCATION, DIRECTION, AND FIGURE NUMBER

Matrix



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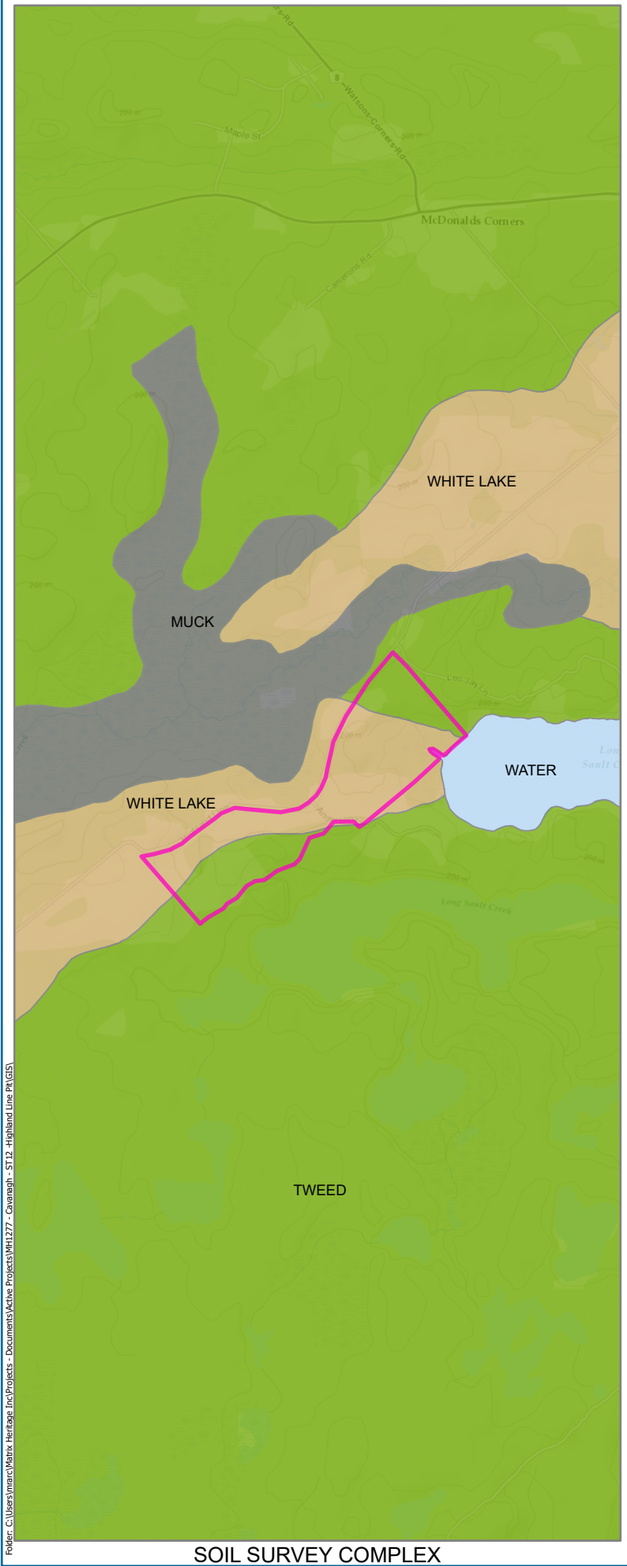
REFERENCES:
COUNTY OF FRONTENAC, PROVINCE OF ONTARIO, ONTARIO MNR, ESRI CANADA, ESRI, HERE, GARMIN, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA, AAFC, NRCAN, MAXAR

FILE MH1277 DATE 2024-11-05
CREATED BY: DW
PROJECTION: NAD 1983 UTM Zone 18N CHECKED BY: BM

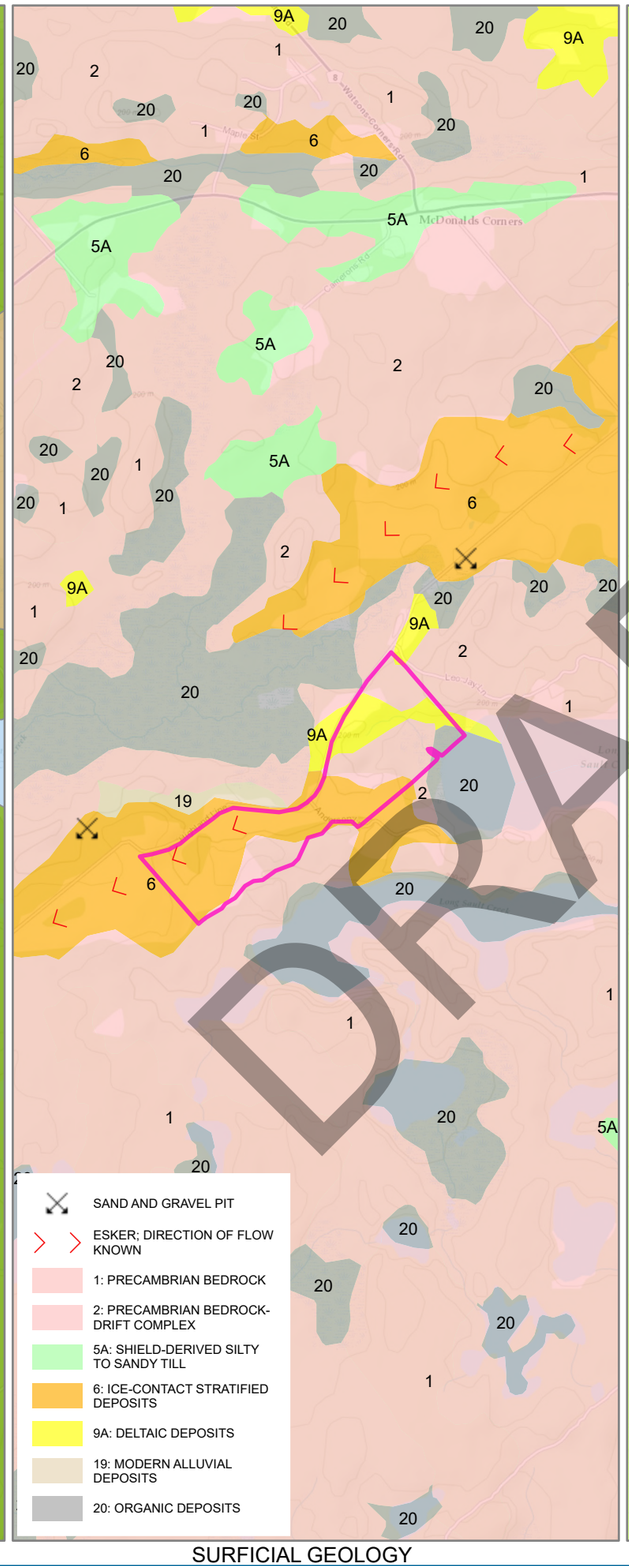
PROJECT
STAGE 1 & 2 ARCHAEOLOGICAL ASSESSMENT
HIGHLAND LINE, LANARK, ONTARIO

TITLE **METHODS, CONDITIONS, KEY** MAP 4

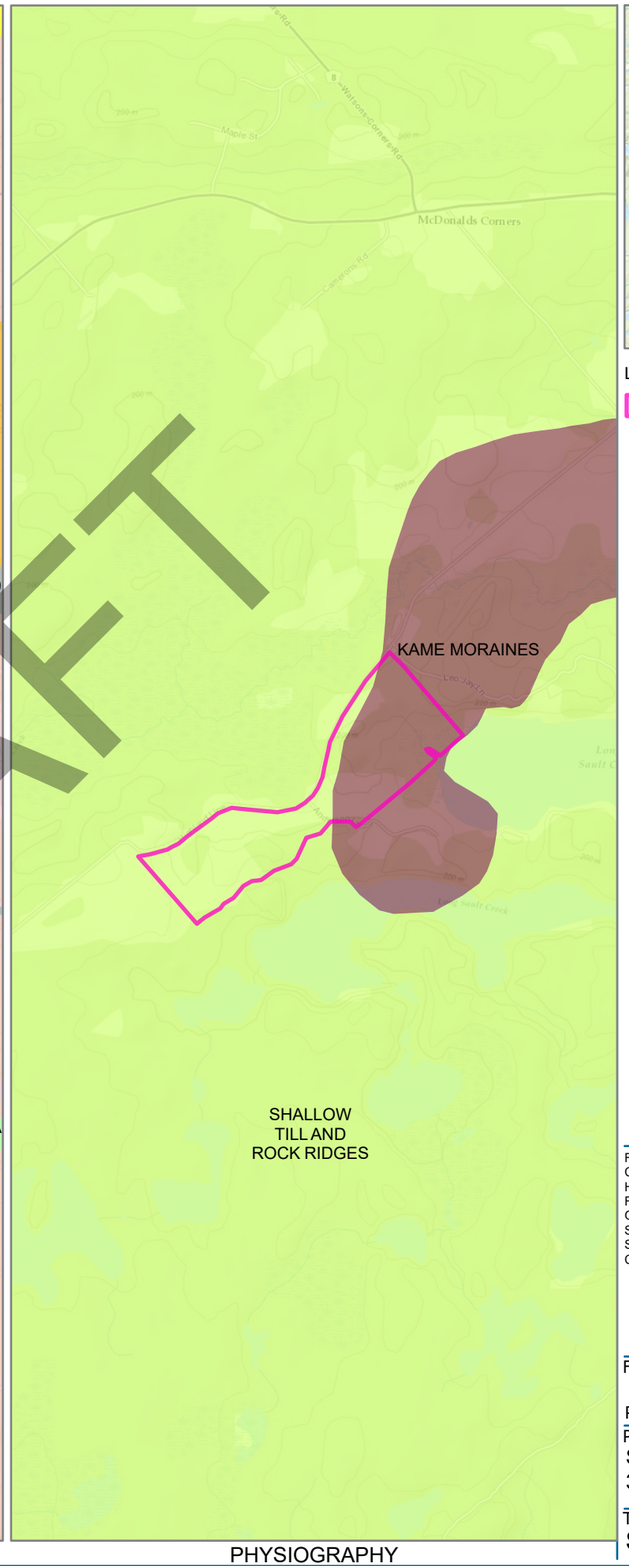
Folder: C:\Users\Ben\Matrix Heritage Inc\Projects - Documents\Active Projects\MH1277 - Cavanagh - ST12 -Highland Line Pit\GIS\



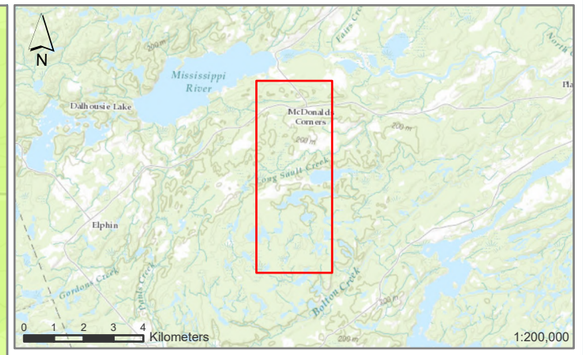
SOIL SURVEY COMPLEX



SURFICIAL GEOLOGY



PHYSIOGRAPHY



LEGEND

STUDY AREA

Matrix

0 375 750 1,125 1,500
Meters
1:25,000

REFERENCES:
COUNTY OF FRONTENAC, PROVINCE OF ONTARIO, ONTARIO MNR, ESRI CANADA, ESRI, HERE, GARMIN, INCREMENT P, USGS, METI/NASA, EPA, USDA, AAFC, NRCAN, COUNTY OF FRONTENAC, PROVINCE OF ONTARIO, ONTARIO MNR, ESRI CANADA, ESRI, HERE, GARMIN, USGS, NGA, EPA, USDA, NPS, AAFC, NRCAN
SOIL SURVEY COMPLEX LIO
SURFICIAL GEOLOGY OF SOUTHERN ONTARIO 2003
CHAPMAN AND PUTNAM 2007 PHYSIOGRAPHY OF SOUTHERN ONTARIO

FILE MH1277
DATE 2024-11-04
CREATED BY: DW
PROJECTION: NAD 1983 UTM Zone 18N
CHECKED BY: BM

PROJECT
STAGE 1 AND 2 ARCHAEOLOGICAL ASSESSMENT
3894 PRINCE OF WALES DRIVE, OTTAWA, ON

TITLE
SOILS AND GEOLOGY

MAP
5

Folder: C:\Users\mario\Matrix Heritage Inc\Projects - Documents\Active Projects\MH1277 - Cavanagh - ST12 -Highland Line PK\GIS\

Appendix A: Photo Catalogue

Photo #	Description	Dir.	Date	Photographer
MH1277-D01	General conditions in Area 5 outside the forested area	E	28-Jun	M. Champagne
MH1277-D02	Erosion along the disturbed road	N	28-Jun	M. Champagne
MH1277-D03	Testing in field portion in SE section	SE	28-Jun	M. Champagne
MH1277-D04	Testing in field portion in SE section	S	28-Jun	M. Champagne
MH1277-D05	Large boulder at SE section of study area, outside disturbed section	NE	28-Jun	M. Champagne
MH1277-D06	Testing on E side of study area	SW	28-Jun	M. Champagne
MH1277-D07	NE corner, with piled brush	N	28-Jun	M. Champagne
MH1277-D08	General conditions in E side of study area	S	28-Jun	M. Champagne
MH1277-D09	General conditions along the northern boundary of Area 5	SE	28-Jun	M. Champagne
MH1277-D10	Exposed bedrock outcroppings throughout the study area	W	28-Jun	M. Champagne
MH1277-D11	Testing through midsection of Area 5	NW	28-Jun	M. Champagne
MH1277-D12	Testing above roadway disturbance	NE	28-Jun	M. Champagne
MH1277-D13	Roadway and berms piled along the south side	NE	28-Jun	M. Champagne
MH1277-D14	General composition of berms along south side of roadway	N	28-Jun	M. Champagne
MH1277-D15	Roadway cut through south side of Area 5	E	28-Jun	M. Champagne
MH1277-D16	Testing through N sections	SE	28-Jun	M. Champagne
MH1277-D17	General conditions on NE section	S	28-Jun	M. Champagne
MH1277-D18	General conditions in NW section of area 5	E	28-Jun	M. Champagne
MH1277-D19	Exposed bedrock outcropping in W side	E	28-Jun	M. Champagne
MH1277-D20	Testing through W side of study area	E	28-Jun	M. Champagne
MH1277-D21	Exposed bedrock ridge	SW	28-Jun	M. Champagne
MH1277-D22	Testing at the base of the bedrock ridge	W	28-Jun	M. Champagne
MH1277-D23	Study area 5	E	07-Jun	M. Champagne
MH1277-D24	Bedrock in NW corner	W	07-Jun	M. Champagne
MH1277-D25	Testing through old growth section in the north of Area 5	SW	07-Jun	M. Champagne
MH1277-D26	General conditions in NW section of area 5	NW	07-Jun	M. Champagne
MH1277-D27	Bedrock and sloping conditions on the W side	N	07-Jun	M. Champagne
MH1277-D28	Sloping, rocky sections on the W side of study area	E	07-Jun	M. Champagne
MH1277-D29	Exposed bedrock outcroppings in SW side of study are	E	07-Jun	M. Champagne
MH1277-D30	Testing S of fenced off area along N side of study Area 6	NW	07-Jun	M. Champagne
MH1277-D31	Testing through Area 6	S	07-Jun	M. Champagne
MH1277-D32	Testing in proximity to existing structure S of foundations	SW	07-Jun	M. Champagne
MH1277-D33	Existing structure with concrete foundation	S	07-Jun	M. Champagne
MH1277-D34	Testing through treed area along W side of Area 6	S	07-Jun	M. Champagne
MH1277-D35	Discarded farm equipment on surface in N section of study area	NW	07-Jun	M. Champagne
MH1277-D36	Concrete foundations in treed area midway through Area 6	N	07-Jun	M. Champagne
MH1277-D37	Timbers and metal object in collapsed structure in treed section of Area 6	SW	07-Jun	M. Champagne
MH1277-D38	Concrete foundations in treed area midway through Area 6	N	07-Jun	M. Champagne
MH1277-D39	Testing through midsection of Area 6	NW	07-Jun	M. Champagne
MH1277-D40	General topography of midsection, Area 6	E	05-Jun	M. Champagne
MH1277-D41	General conditions of midsection, Area 6	N	05-Jun	M. Champagne
MH1277-D42	General conditions along W boundary of study area	SE	05-Jun	M. Champagne
MH1277-D43	Erosion along the driveway on west side of study area 6	W	05-Jun	M. Champagne
MH1277-D44	Testing through the west side of Area 6	NW	05-Jun	M. Champagne
MH1277-D45	Conditions in Area 6 midsection	S	04-Jun	M. Champagne
MH1277-D46	Conditions in Area 6 midsection	NW	04-Jun	M. Champagne
MH1277-D47	General conditions towards the S end of Area 6	W	04-Jun	M. Champagne
MH1277-D48	Rise in the landscape towards the S end of Area 6	SE	04-Jun	M. Champagne
MH1277-D49	General conditions in S section of Area 6	E	04-Jun	M. Champagne
MH1277-D50	General conditions in S section of Area 6	W	04-Jun	M. Champagne
MH1277-D51	Testing in S section of Area 6	SW	04-Jun	M. Champagne
MH1277-D52	Gravel driveway on W side of Area 6	NW	04-Jun	M. Champagne
MH1277-D53	Gravel driveway on W side of Area 6	NW	04-Jun	M. Champagne
MH1277-D54	Testing on N side of Area 6 in smaller structure SW of foundation	SW	04-Jun	M. Champagne
MH1277-D55	Conditions in Area 6 midsection	N	04-Jun	M. Champagne
MH1277-D56	Conditions in Area 6 midsection	W	04-Jun	M. Champagne
MH1277-D57	Conditions in Area 6 midsection	NW	04-Jun	M. Champagne
MH1277-D58	Conditions around foundation	W	04-Jun	M. Champagne
MH1277-D59	Intact walls in foundation	NE	04-Jun	M. Champagne
MH1277-D60	Rise along the NW side of the study area	SE	04-Jun	M. Champagne
MH1277-D61	Rise in the landscape along Highland Line Road	E	04-Jun	M. Champagne
MH1277-D62	Topsoil piled in NW section, along gravel driveway	NE	04-Jun	M. Champagne
MH1277-D63	Gravel driveway on W side of Area 6	SE	04-Jun	M. Champagne
MH1277-D64	Disturbed area alongside the gravel driveway with entrance to Highland Line	W	04-Jun	M. Champagne

Photo #	Description	Dir.	Date	Photographer
MH1277-D65	Disturbed area alongside the gravel driveway on Highland Line	N	04-Jun	M. Champagne
MH1277-D66	Fenced in area on the E side of limestone foundations	SE	04-Jun	M. Champagne
MH1277-D67	Testing inside the fenced area	SE	04-Jun	M. Champagne
MH1277-D68	General conditions along Highland Line, E side of Area 6	N	04-Jun	M. Champagne
MH1277-D69	General conditions in the E side of Area 6	NW	04-Jun	M. Champagne
MH1277-D70	General conditions of cedar forest on the E side of Area 6	S	04-Jun	M. Champagne
MH1277-D71	Testing through the E side of Area 6	NW	04-Jun	M. Champagne
MH1277-D72	Testing through the E side of Area 6	S	03-Jun	M. Champagne
MH1277-D73	Testing along Highland Line on the E side of Area 6	NE	03-Jun	M. Champagne
MH1277-D74	General conditions on E side of Area 6	S	03-Jun	M. Champagne
MH1277-D75	General conditions on E side of Area 6	S	03-Jun	M. Champagne
MH1277-D76	Wet area on NE side of Area 6	SW	03-Jun	M. Champagne
MH1277-D77	Sloping in Area 4	SW	03-Jun	M. Champagne
MH1277-D78	Wet area in N side	N	03-Jun	M. Champagne
MH1277-D79	Testing in Area 4	S	03-Jun	M. Champagne
MH1277-D80	Testing in Area 3	NE	03-Jun	M. Champagne
MH1277-D81	New growth and sloping conditions in Area 3	W	03-Jun	M. Champagne
MH1277-D82	General conditions of Area 2 and Area 3	NE	03-Jun	M. Champagne
MH1277-D83	Testing through Area 2	SW	03-Jun	M. Champagne
MH1277-D84	Testing through SW section of Area 2	SW	03-Jun	M. Champagne
MH1277-D85	SW section of Area 2	SW	03-Jun	M. Champagne
MH1277-D86	General conditions of Area 2	NE	03-Jun	M. Champagne
MH1277-D87	Testing on W side of the driveway near monitoring well	SW	03-Jun	M. Champagne
MH1277-D88	General conditions of Area 1	SW	03-Jun	M. Champagne
MH1277-D89	General conditions of W side of Area 1	SE	03-Jun	M. Champagne
MH1277-D90	General condition of W side of Area 1	NW	03-Jun	M. Champagne
MH1277-D91	Gravel driveway in Area 1	NW	03-Jun	M. Champagne
MH1277-D92	Slope on S side of Area 1	S	03-Jun	M. Champagne
MH1277-D93	General conditions of slope in Area 1	SE	03-Jun	M. Champagne
MH1277-D94	General conditions on E side of Area 1	NW	03-Jun	M. Champagne
MH1277-D95	Area 3	N	03-Jun	M. Champagne
MH1277-D96	General conditions in Area 3	NW	03-Jun	M. Champagne
MH1277-D97	General conditions in Area 4	NW	03-Jun	M. Champagne

Appendix B: Document Catalogue

Project	Description	Created By
MH1277	Highland Line Pit Stage 1 and 2 Field Notes (One Note File)	M. Champagne

Appendix C: Map Catalogue

Map Number	Description	Created By
1	Location	B. Mortimer
2	Sketch from Client of Area to be Licensed	B. Mortimer
3	Historic	B. Mortimer
4	Current conditions, method, photo key	B. Mortimer
5	Soils and Geology	B. Mortimer